



PROVERTHA[®]
CONNECTORS, CABLES & SOLUTIONS

**FITTING YOUR
APPLICATION**

CATALOGUE NO. 14

About us

Connectors, cases & cable manufacture
with highest quality standard



More than
35
years of
experience

- Products for highest physical stability in extremely challenging networks
- Many innovations
- Customer-specific solutions



850
employees

- German-Hungarian company
- Production in Hungary
- Customer Service in Germany
- Happy customers



**Certifi-
cates**

- For your safety
 - IATF 16949
 - ISO 9001
- For our environment
our production locations
are ISO 14001 certified
- UL-approvals

Provertha is a manufacturer and supplier of electro-mechanical components. As a successful company with many years of experience, we have specialized in providing our products for the highest physical stability in extremely demanding networks - especially if these external disruptive factors such as exposed to heat, moisture, vibration or harmful substances.

Our product range includes high quality D-Sub connectors and D-hoods, M12 and M8 connectors and compact distribution systems.

With our expertise, we also implement tailor-made, customer-specific solutions for you.

Electromechanical components with many advantages

When developing and manufacturing electromechanical components, we attach great importance to functional reliability, simple assembly and a compact design. E.g. our M12 connector with its reliable 360° shielding and our large range of housings with tested, partly patented, quick connectors.

Our extensive product range offers solutions for YOUR application.

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APPLICATION**

Our services

We make your data network safe

Provertha is a manufacturer of electromechanical components with innovative solutions that ensure maximum functional reliability under demanding environmental conditions.

Provertha was the first company to develop the fully shielded Profibus bus connector with Plug & Play M12 quick connection, as well as the M12 and M8 connectors with crimp flange / crimp sleeve system for vibration-proof shield connection and vibration-proof cable strain relief.

Our focus is on the development and production of connectors, housings, complex cable assemblies from the D-Sub and M12 / M8 areas, as well as customer-specific components.

D-Sub

Our very wide range of products in the D-Sub area offers e.g. Connectors with turned contacts for high current carrying capacity, TMC High Performance PCB connectors, D-Sub filter connectors, a large selection of full metal and plastic covers and accessories.

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Circular connector

Our M12 cable connectors with crimp flange / crimp barrel system and our M12 Mini is the most compact M12 connector with cable gland, 90 ° adapters, device plugs and fully shielded M12 T and M12 Y distributors, the M12 range offers comprehensive range giving the right solution for your application.

The M8 range offers cable connectors with a crimp flange / crimp barrel system and connectors with cable glands a comprehensive range for the right solution for your application.

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Cable assembly

The production of our cable products takes place in our factories in Hungary, which are certified according to IATF 16949 and DIN ISO 9001.

The UL approval confirms the quality level of PROVERTHA cable assembly.

Our production sites include equipped with:

- Cutting machines for sheathed and coaxial cables
- State-of-the-art automatic crimping machines with crimping force monitoring for reliable production
- Modern laboratories for validating the crimp connections
- High quality overmoulding of cables and connectors
- Automatic soldering machine
- X-ray system
- Winding technology

Assembly production

The production of complete assemblies and devices to customer orders takes place in our factories in Hungary. Our customers benefit from the experience and skills of our other company areas. We support you in the development of your specific products so that the requirements are reliably met.

All production is organized according to the requirements of IATF 16949. The use of FMEAs and Six Sigma tools to avoid errors as well as the constant optimization of all processes is a natural part of our manufacturing and quality principles.

With our modern PPS system, our logistics ensures the availability of the individual parts and plans the production for you in such a way that maximum flexibility with the shortest delivery times is ensured.

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Circular connectors

Fieldbus

Compact fully shielded distribution systems

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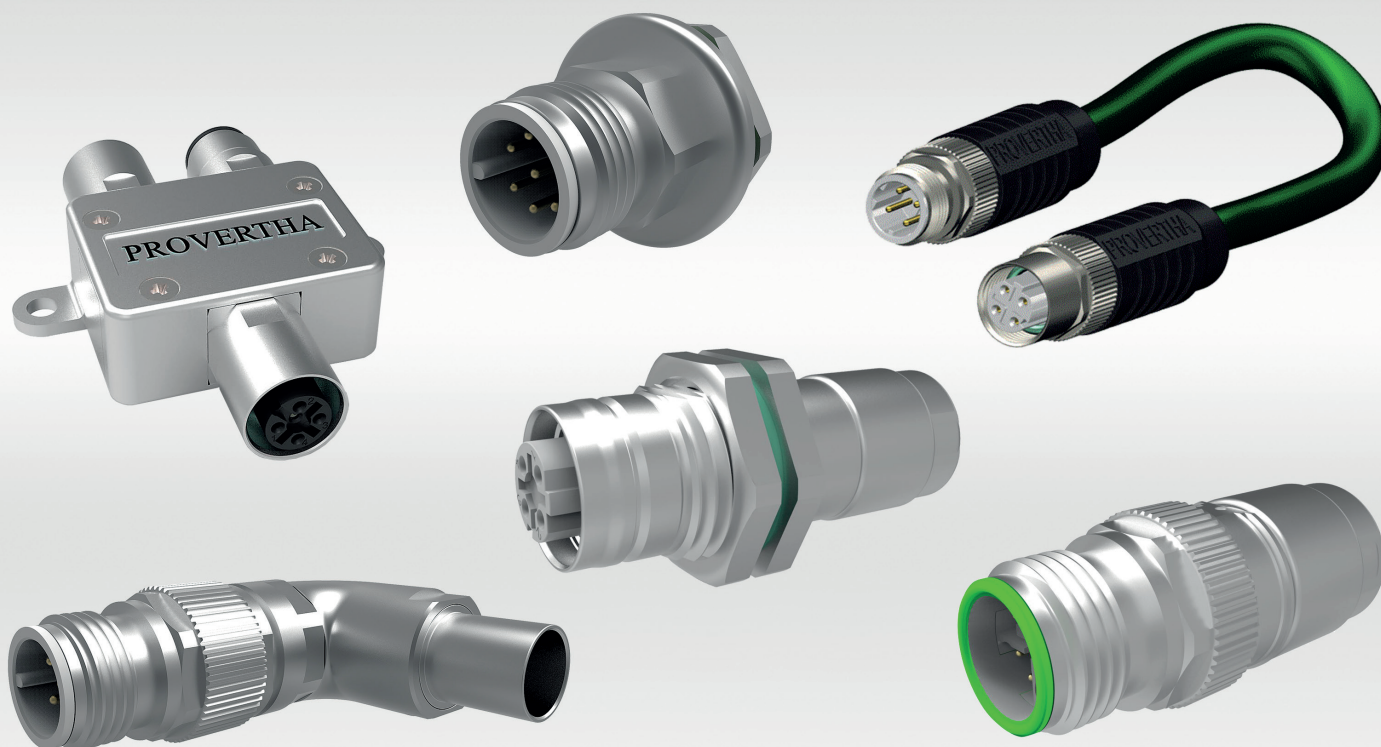
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**Vibration- and
torsion-proof
connections**



Circular connectors

Vibration- and torsion-proof connectors with 360° shielding



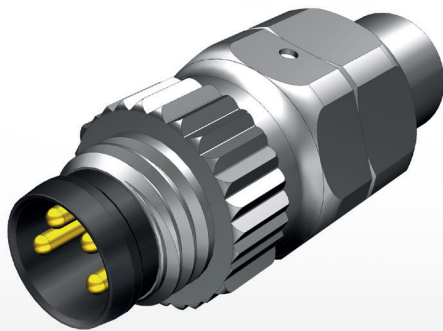
Functional and fail-safe solution thanks to a special cable connector design
 Fast and easy field assembly through pre-assembled units and crimp snap-in contacts
 Crimp flange / crimp barrel system: Torsion and vibration-proof cable strain relief and shield transfer
 Validated versions for different cable diameters
 Cable gland: Wide cable clamping area with good strain relief and shield transfer
 Vibration and shock test according to DIN 61373 for railway technology and increased requirements
 M8 coding: D, A-3 and A-4
 M12 codings: A-5, A-8, B, D and X
 Cable connectors and bulkhead connectors for cabinet door and panel mounting
 Panel mount connectors with crimp contacts

Technical data

Nominal voltage/current	
M8 Coding A	30 V / 4 A
M12 Coding A-5, B, D	50 V / 4 A
M12 Coding A-8	30 V / 2 A
M12 Coding X	48 V / 0,5 A
Resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
	250 Mating cycles
Temperature range	w/o grip cap: - 40° C to + 85° C with grip cap: - 40° C bis + 70° C
Protection class	IP 67 (screw-locked)
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated

M8 A-Code 3 and 4-pole

Vibration- and torsion-proof connectors with 360° shielding



Safe Industrial Ethernet in miniature format with M 8 crimp connector / crimp sleeve

- Functional and fail-safe solution thanks to a special cable connector design
- Quick and easy field assembly through pre-assembled units and crimp snap-in contacts
- Full metal housing for high quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Cable connectors with crimp flange / crimp sleeve system for the highest requirements

Torsion and vibration-proof cable strain relief and shield transfer

Safe shield contact with crimp connector / crimp sleeve

- Cable connectors with cable gland

Wide cable clamping range of 3 - 5.7 mm

Technical data

Connector and coding	M8 A-Code acc. to IEC 61076-4-104
Pin number	3 and 4
Nominal current	4 A
Nominal voltage	30 V
Termination style	Crimp technology
Wire size	AWG 26 - 22
Protection class	IP 67 (screw-locked)
Mechanical lifetime	250 Mating cycles
Cable diameter crimp flange	4,5 - 6,9 mm
Cable diameter cable gland	3,5 - 5,5 mm
Temperature range	-20° C to +85° C
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated

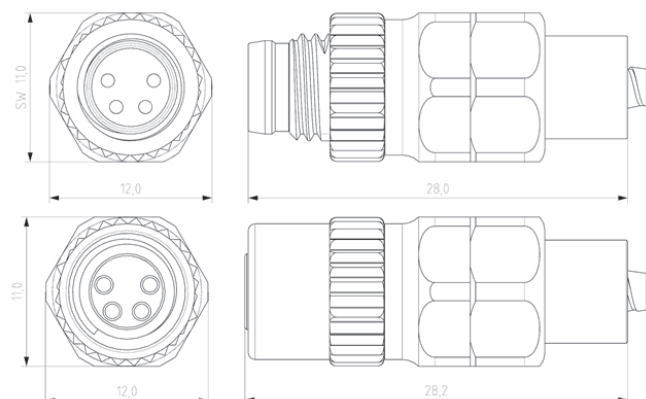


M8 A-4 Ethernet connector crimp flange

360° shielding and vibration-/torsion-proof

- The vibration-/torsion-proof M8 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with crimp technology for signal and shield
- 360° shielding with crimp flange(CF) and crimp sleeve(CH) system
- Shielding and strain relief torsion- and vibration-proof due to CF/CH
- Very compact dimensions: Ø 12 x 28
- Certified plastics acc. to EN 45545-2 for railway applications
- Easy assembly due to only a few single parts

Dimensions



Technical data (mutual data on pages 7 & 8)

Nominal voltage/ current	30 V / 4 A
Degree of protection	IP 67 (screw-locked)
Temperature range	-20 °C to + 85 °C
Cable diameter/wire size	4,5 - 6,9 mm / AWG 26 - 22

Order information

82-200012	M8 Male Cat5e drag chain AWG26/7 4,8 Helu 82838
82-200013	M8 Female Cat5e drag chain AWG26/7 4,8 Helu 82838
82-200014	M8 Male Cat5e drag chain AWG 26/19 4,9 Nexans 44457379
82-200015	M8 Female Cat5e drag chain AWG 26/19 4,9 Nexans 44457379
82-200016	M8 Male Cat5e drag chain AWG26/7 4,8 LAPP 2170431
82-200017	M8 Female Cat5e drag chain AWG26/7 4,8 LAPP 2170431

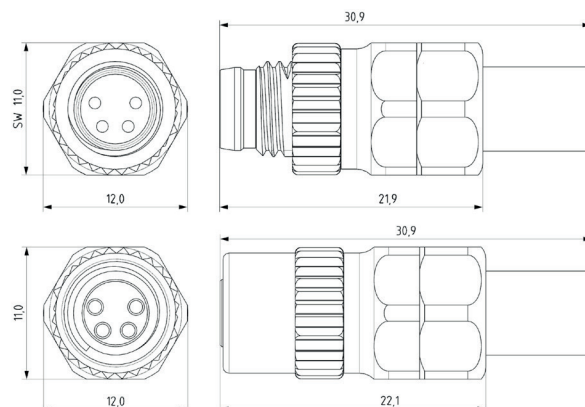


M8 A-4 Ethernet and A-3 Connectors cable gland

Very compact and cable clamp range 3,5 - 5,5 mm

- The reliable M8 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with crimp contacts
- Secure strain relief and shield termination with cable gland
- Very compact dimensions: Ø 12 x 30,9
- Ethernet cables with Ø 3,5 - 5,5 can be used
- Certified plastics acc. to EN 45545-2 for railway applications
- Easy assembly due to only a few single parts

Dimensions



Technical data (mutual data on pages 7 & 8)

Nominal voltage/ current	30 V / 4 A
Degree of protection	IP 67 (screw-locked)
Temperature range	-20 °C to + 85 °C
Cable diameter/wire size	3,5 - 5,5 mm / AWG 26 - 22

Order information

82-100000	M8 A-3 Male 3,5-5,5
82-100001	M8 A-3 Female 3,5-5,5
82-200000	M8 A-4 Male 3,5-5,5
82-200001	M8 A-4 Female 3,5-5,5

M12 B-Code



M12 B-code cable connectors

- Functional and fail-safe solution thanks to a special cable connector design
- Quick and easy field assembly through pre-assembled units and crimp snap-in contacts
- Full metal housing for high quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Cable connectors with crimp flange / crimp sleeve system for the highest requirements
- Torsion and vibration-proof cable strain relief and shield transfer
- Cable connectors with cable gland

Wide cable clamping range 4 - 9 mm for various Profibus cables

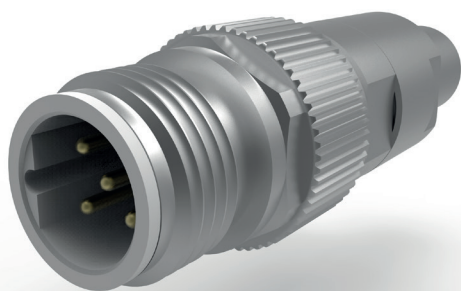
- Versions with cable outlet 180 ° and versions with cable outlet 90 °
- Version 90 ° with 8 (8 x 45 °) adjustable cable outlet directions
- Pin and socket versions
- Certified test according to DIN 61373 vibration and shock test

M12 B-code panel mount connectors

- Full metal housing for high quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Custom made lengths of the single wires fit the application through crimp contacts
- Functionally reliable
- No potential faults due to cold solder joints
- Versions for front panel mounting and for rear panel mounting
- Protection class IP 67 screw-locked
- Optional versions with encapsulation for protection class IP 67 with open mating face

Technical data

Nominal voltage/current	50 V / 4 A
Resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Protection class	IP 67 (screw-locked)
Temperature range	w/o grip cap: - 40° C to + 85° C with grip cap: - 40° C to + 70° C
Mechanical lifetime	250 Mating cycles
Wire size	AWG 18 - 28
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated
Grip cap	TPE S3/ST2/SR2 acc. to DIN 5510-2

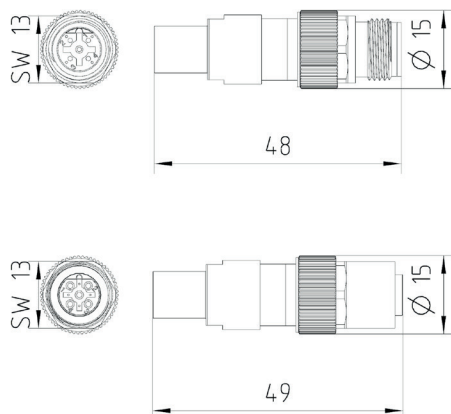


M12 B connector crimp flange

360° Shielding and vibration-/torsion-proof

- The most reliable M12 Profibus field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof shield connection and strain relief with crimp flange / crimp sleeve
- Certified qualification acc. to DIN EN 61373 for railway applications
- Very compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in harsh environment
- Easy assembly due to only a few single parts

Dimensions



Technical data (mutual data on pages 7 & 10)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-100021	M12 Male Profibus NEXANS 44484889
42-100022	M12 Female Profibus NEXANS 44484889

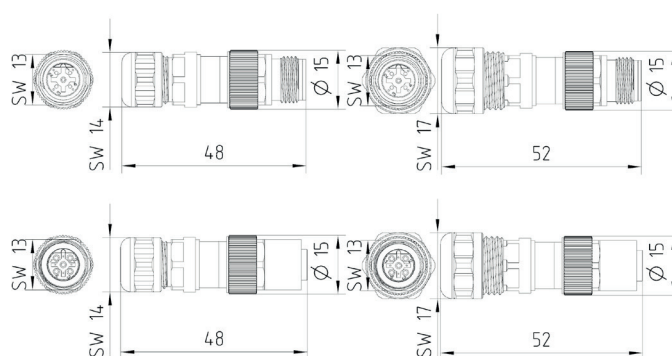


M12 B Profibus connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The reliable M12 Profibus field assembly connector
- Reliable fault-free data transmission for high demands
- Secure strain relief and shield termination with cable gland
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- Compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in rough environment
- Easy assembly due to only a few single parts
- Contacts not included in delivery

Dimensions

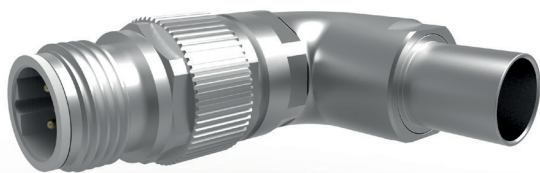


Technical data (mutual data on pages 7 & 10)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-100120	M12 Female crimp KV Ø 4-6,5 mm
42-100121	M12 Male crimp KV Ø 4-6,5 mm
42-100122	M12 Female crimp KV Ø 5,5 - 9 mm
42-100123	M12 Male crimp KV Ø 5,5 - 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-000340G2	M12 Crimp contact female AWG 18 - 20

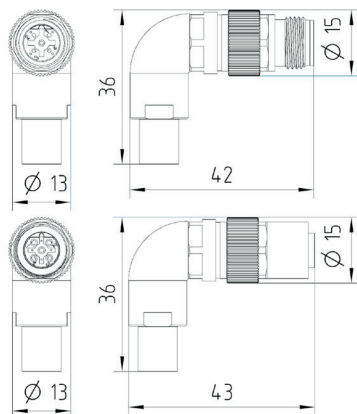


M12 B Profibus 90° connector crimp flange

360° Shielding and vibration-/torsion-proof

- The compact right angle M12 Profibus field assembly connector
- Reliable fault-free data transmission for high demands
- Vibration-proof shield connection and strain relief with crimp flange system
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- High safety in the network with machined crimp contacts
- Full metal housing protects against malfunction in rough environment
- Very compact dimensions for applications with small installation space

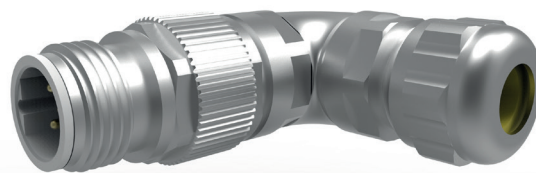
Dimensions

**Technical data** (*mutual data on pages 7 & 10*)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-120001	M12 Male 90° Nexans 44848xx
42-120002	M12 Female 90° Nexans 44848xx

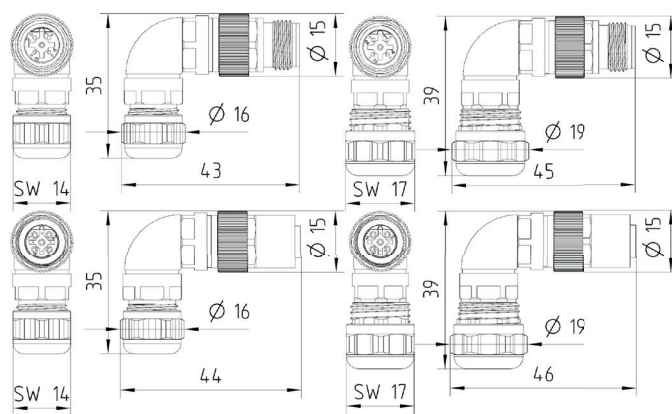


M12 B Profibus 90° connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The compact M12 Profibus 90° field assembly connector
- Reliable fault-free data transmission for high demands
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Secure strain relief and shield termination with cable gland
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- Full metal housing protects against malfunction in rough environment
- Contacts not included in delivery

Dimensions

**Technical data** (*mutual data on pages 7 & 10*)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-120120	M12 Female crimp KV Ø 4-6,5 mm
42-120121	M12 Male crimp KV Ø 4-6,5 mm
42-120122	M12 Female crimp KV Ø 5,5 - 9 mm
42-120123	M12 Male crimp KV Ø 5,5 - 9 mm
42-00001562	M12 Crimp contact male AWG 22 - 24
42-00003562	M12 Crimp contact male AWG 20 - 22
42-00033062	M12 Crimp contact male AWG 18 - 20
42-00003662	M12 Crimp contact female AWG 22 - 24
42-00003762	M12 Crimp contact female AWG 20 - 22
42-00034062	M12 Crimp contact female AWG 18 - 20

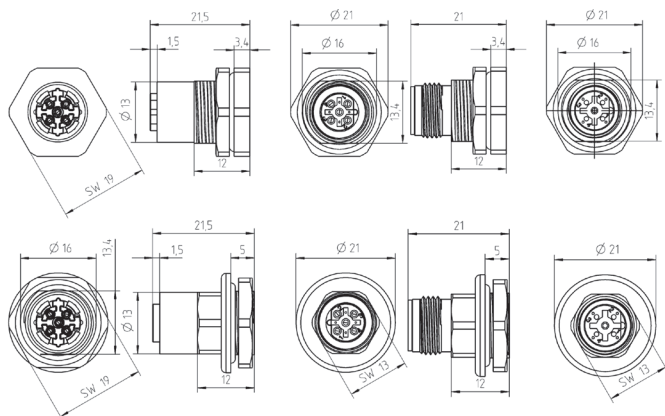


M12 B Profibus Panel mount crimp connector

Custom made solutions offering choice for wire length

- Versions for front panel and rear panel mounting
- Rotation-proof assembly due to flat faces on housing
- Reliable termination with vibration-proof crimp technology
- Full metal housing and crimp contacts protect against malfunction
- Easy snap-in assembly of harnesses wired with free length
- Mounting thread M16x1,5 for wall thickness up to 3 mm
- Contacts not included in delivery
- Harnessed versions with potting upon request

Dimensions



Technical data (mutual data on pages 7 & 10)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-100110	M12 Female rear panel
42-100111	M12 Female front panel
42-100112	M12 Male rear panel
42-100113	M12 Male front panel
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-000340G2	M12 Crimp contact female AWG 18 - 20

M12 D-Code

Vibration- and torsion-proof connectors with 360° shielding

Circular connectors



M12 D-code cable connectors

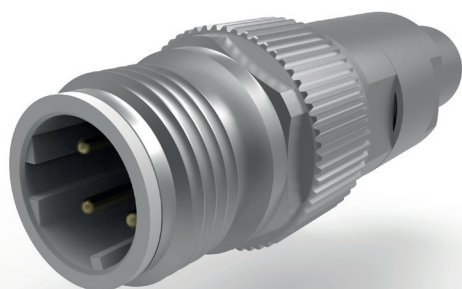
- Functional and fail-safe solution thanks to a special cable connector design
- Quick and easy field assembly through pre-assembled units and crimp snap-in contacts
- Full metal housing for high-quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Cable connectors with crimp flange / crimp sleeve system for the highest requirements
- Torsion and vibration proof cable strain relief and shield transfer
- Safe shield contact through crimp flange / crimp sleeve
- M12 Mini: Most compact cable connector with cable gland
- Wide cable clamping range 4 - 9 mm for various Profibus cables
- Versions with cable outlet 180 ° and versions with cable outlet 90 °
- Version 90 ° with 8 (8 x 45 °) adjustable cable outlet directions
- Pin and socket versions
- Certified test according to DIN 61373 vibration and shock test

M12 D-code panel mount connectors

- Full metal housing for high quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Custom made lengths of the single wires match the application through crimp contacts
- Functionally reliable
- No potential faults due to cold solder joints
- Versions for front panel mounting and for rear panel mounting
- Protection class IP 67 screw-locked
- Optional versions with encapsulation for protection class IP 67 with open mating face

Technical data

Nominal voltage/current	50 V / 4 A
Resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Transmission properties	Class D acc. to IEC 11801:2002
Transmission rate	10/100 Mbit/s
Protection class	IP 67 (screw-locked)
Temperature range	w/o grip cap: - 40° C to + 85° C with grip cap: - 40° C to + 70° C
Mechanical lifetime	250 Mating cycles
Wire size	AWG 18 - 28
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated
Grip cap	TPE S3/ST2/SR2 acc. to DIN 5510-2

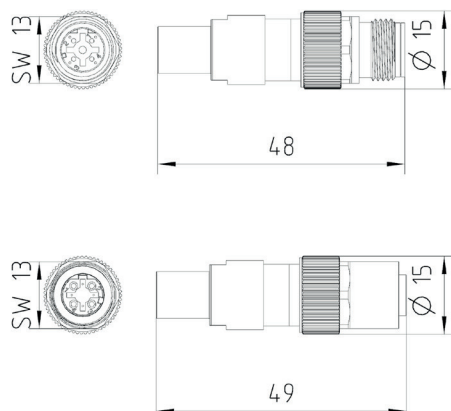


M12 D Ethernet connector crimp flange

360° Shielding and vibration-/torsion-proof

- The vibration-proof and reliable M12 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof shield connection and strain relief with crimp flange
- Very compact dimensions for applications with small installation space
- Certified plastics acc. to EN 45545-2 for railway applications
- Certified qualification acc. to EN 61373 for railway applications
- Easy assembly due to only a few single parts

Dimensions

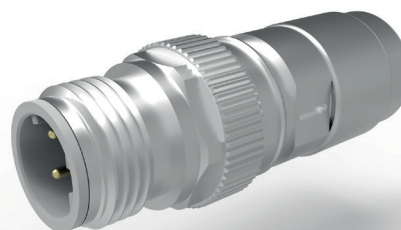


Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300051	M12 Male Cat 5 Radox 6,6 H+S 12584038
42-300052	M12 Female Cat 5 Radox 6,6 H+S 12584038
42-300053	M12 Male Cat 5 Radox 7,3 H+S 12568935
42-300054	M12 Female Cat 5 Radox 7,3 H+S 12568935
42-300055	M12 Male Cat 5 Radox 8,3 H+S 12585489
42-300056	M12 Female Cat 5 Radox 8,3 H+S 12585489
42-300067	M12 Male Cat 5 6,7 Profinet Type C HELU 800655
42-300068	M12 Female Cat 5 6,7 Profinet Type C HELU 800655
42-300073	M12 Male Cat 5 Betatrans 6,6 Leoni 303195
42-300074	M12 Female Cat 5 Betatrans 6,6 Leoni 303195

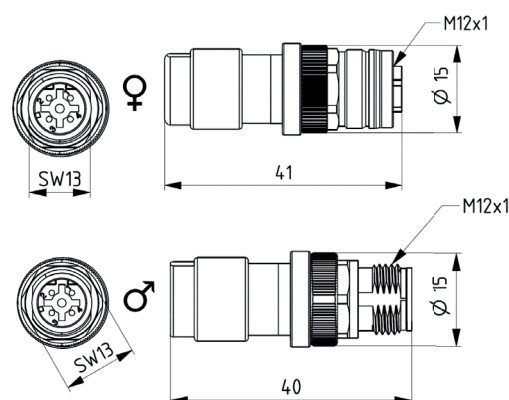


M12 Mini D Ethernet connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The most compact, reliable M12 Ethernet and Profinet field connection
- Functionally reliable, error-free data transmission with high requirements
- Safe strain relief and shield connection with cable gland
- Large cable clamping range of 4 - 9 mm
- Full metal housing protects against interference and in harsh environments
- Simple assembly with few individual parts
- Contacts not included
- Certified plastics according to EN 45545-2 for railway applications

Dimensions



Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300124	M12 Female Crimp KV Ø 4- 9 mm
42-300125	M12 Male Crimp KV Ø 4- 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000340G2	M12 Crimp contact female AWG 18 - 20

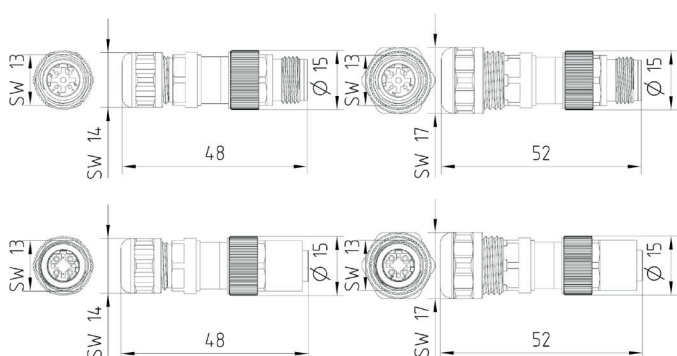


M12 D Ethernet connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The reliable M12 Ethernet and Profinet field assembly connector
- Reliable fault-free data transmission for high demands
- Secure strain relief and shield termination with cable gland
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- Compact dimensions for applications with small installation space applications with small installation space
- Full metal housing protects against malfunction in rough environment
- Easy assembly due to only a few single parts

Dimensions

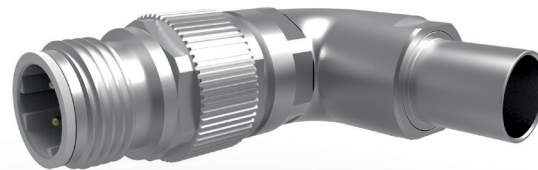


Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300120	M12 Female crimp KV Ø 4-6,5 mm
42-300121	M12 Male crimp KV Ø 4-6,5 mm
42-300122	M12 Female crimp KV Ø 5,5 - 9 mm
42-300123	M12 Male crimp KV Ø 5,5 - 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-000340G2	M12 Crimp contact female AWG 18 - 20

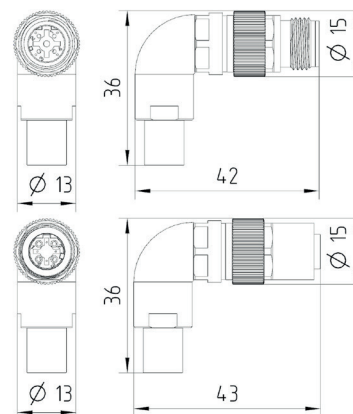


M12 D Ethernet 90° connector crimp flange

360° Shielding and vibration-/torsion-proof

- The compact right angle M12 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof crimp technology for shield and signals
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Certified plastics acc. to EN 45545-2 for railway applications
- Very compact dimensions for applications with small installation space

Dimensions

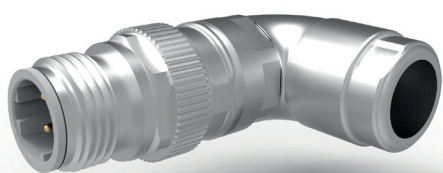


Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-320051	M12 Male Cat 5 Radox 6,6 H+S 12584038
42-320052	M12 Female Cat 5 Radox 6,6 H+S 12584038
42-320053	M12 Male Cat 5 Radox 7,3H+S 12568935
42-320054	M12 Female Cat 5 Radox 7,3 H+S 12568935
42-320055	M12 Male Cat 5 Radox 8,3 H+S 12585489
42-320056	M12 Female Cat 5 Radox 8,3 H+S 12585489
42-320065	M12 Male Cat 5 6,7 Belden BE 43769
42-320066	M12 Female Cat 5 6,7 Belden BE 43769
42-320073	M12 Male Cat 5 Betatrans 6,6 Leoni 303195
42-320074	M12 Female Cat 5 Betatrans 6,6 Leoni 303195

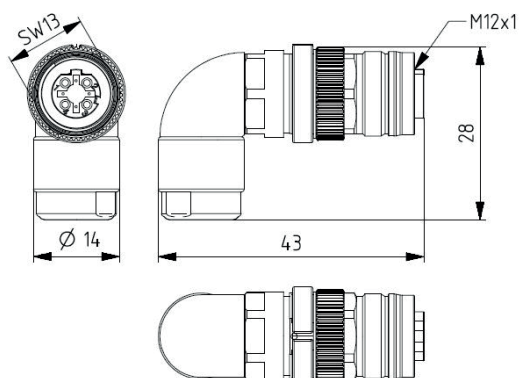


M12 Mini D Ethernet 90° connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The most compact angled M12 Ethernet and Profinet field connection
- Functionally reliable, error-free data transmission with high requirements
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Safe strain relief and shield connection with cable gland
- Full metal housing protects against interference and in harsh environments
- Certified plastics according to EN 45545-2 for railway applications
- Contacts not included

Dimensions

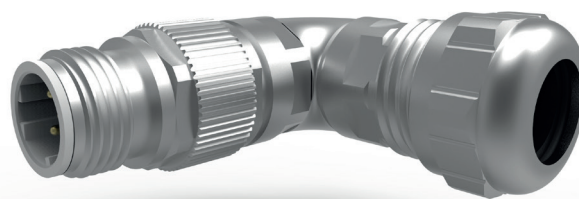


Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-320124	M12 Female Crimp KV Ø 4- 9 mm
42-320125	M12 Male Crimp KV Ø 4- 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000340G2	M12 Crimp contact female AWG 18 - 20

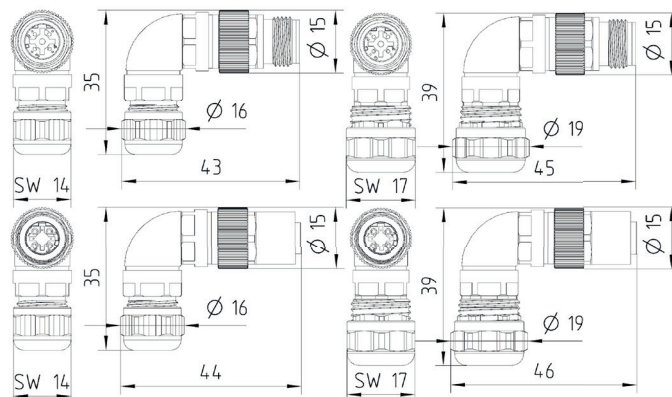


M12 D Ethernet 90° connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The compact right angle M12 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- Vibration-proof crimp technology for signals
- Full metal housing protects against malfunction in rough environment
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Easy assembly due to only a few single parts
- Contacts not included in delivery

Dimensions



Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-320120	M12 Female crimp KV Ø 4-6,5 mm
42-320121	M12 Male crimp KV Ø 4-6,5 mm
42-320122	M12 Female crimp KV Ø 5,5 - 9 mm
42-320123	M12 Male crimp KV Ø 5,5 - 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000340G2	M12 Crimp contact female AWG 18 - 20

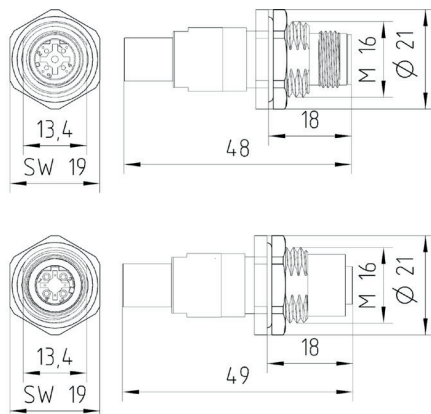


M12 D Ethernet bulkhead crimp flange

360° Shielding and vibration-/torsion-proof

- The reliable M12 field assembly connector for bulkhead applications
- Reliable due to crimp technology for contact and cable shield
- 360° EMI/RFI shielding due to crimp flange and crimp sleeve system
- Vibration- and torsion-proof shield connection and strain relief
- Rotation-proof mounting due to plane faces on housing
- Full metal housing protects against malfunction in rough environment
- Certified plastics acc. to EN 61373 for railway applications
- Mounting thread M16x1,5 for wall thickness up to 3 mm

Dimensions

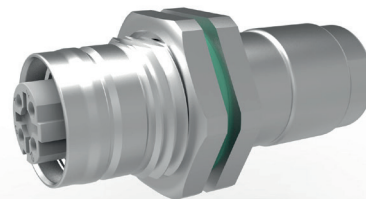


Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300069	M12 HM Male Cat 5 Radox 7,3H+S 12568935
42-300070	M12 HM Female Cat 5 Radox 7,3 H+S 12568935

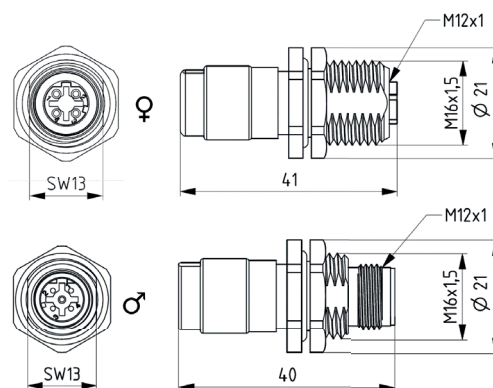


M12 Mini D Ethernet bulkhead connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- Very compact M12 field connection for control cabinet door
- Functionally reliable, error-free data transmission with high requirements
- Safe strain relief and shield connection with cable gland
- Large cable clamping range of 4 - 9 mm
- Rotation-proof mounting due to plane faces on housing
- Mounting thread M16x1,5 for wall thickness up to 3 mm
- Certified plastics according to EN 45545-2 for railway applications

Dimensions

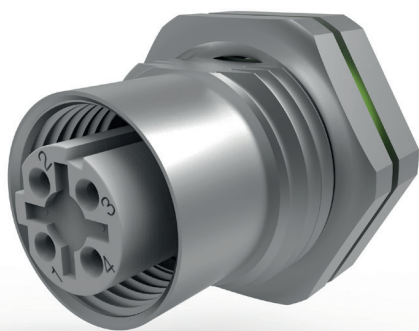


Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300224	M12 Female Crimp KV Ø 4- 9 mm
42-300225	M12 Male Crimp KV Ø 4- 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000340G2	M12 Crimp contact female AWG 18 - 20

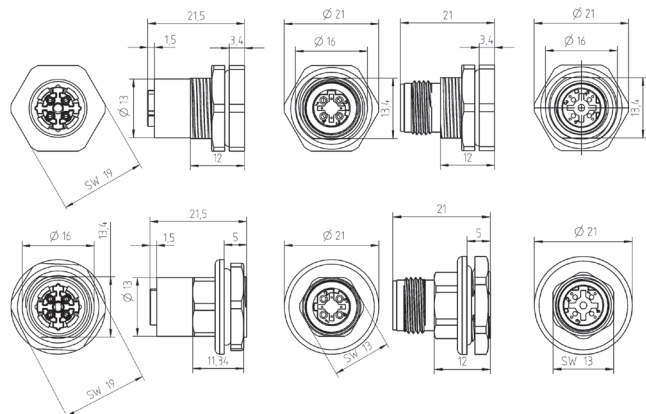


M12 D Ethernet panel mount crimp connectors

Custom made solutions offering choice for wire length

- Versions for front panel and rear panel mounting
- Rotation-proof assembly due to flat faces on housing
- Reliable termination with vibration-proof crimp technology
- Full metal housing and crimp contacts protect against malfunction
- Easy snap-in assembly of harnessed wires with free length
- Mounting thread M16x1,5 for wall thickness up to 3 mm
- Contacts not included in delivery
- Harnessed versions with potting upon request

Dimensions



Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300110	M12 Female rear panel
42-300111	M12 Female front panel
42-300112	M12 Male rear panel
42-300113	M12 Male front panel
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-000340G2	M12 Crimp contact female AWG 18 - 20

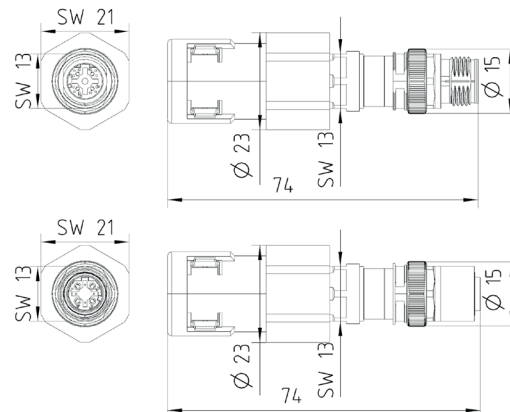


M12 D Ethernet connector crimp flange conduit NW10

Connector and cable protection for extremely high requirements

- PMA conduit adapter NW10 with IP 68 (conduit side) and EN 45545-2
- The reliable M12 Ethernet field assembly connector for conduits
- High safety in the network with machined crimp contacts
- Reliable fault-free data transmission for high demands
- Vibration-proof shield connection and strain relief with crimp flange
- Certified plastics acc. to EN 45545-2 for railway applications
- Recommended conduit: PMA PCST-10B.50

Dimensions



Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked) / IP 68 (conduit side)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300051-1	M12 Male Cat 5 Radox 6,6 H+S 12584038 WR
42-300052-1	M12 Female Cat 5 Radox 6,6 H+S 12584038 WR
42-300053-1	M12 Male Cat 5 Radox 7,3 H+S 12568935 WR
42-300054-1	M12 Female Cat 5 Radox 7,3 H+S 12568935 WR
42-300055-1	M12 Male Cat 5 Radox 8,3 H+S 12585489 WR
42-300056-1	M12 Female Cat 5 Radox 8,3 H+S 12585489 WR
42-300067-1	M12 Male Profinet Type C HELU 800655 WR
42-300068-1	M12 Female Profinet Type C HELU 800655 WR
42-300073-1	M12 Male Cat 5 Betatrans 6,6 Leoni 303195 WR
42-300074-1	M12 Female Cat 5 Betatrans 6,6 Leoni 303195 WR

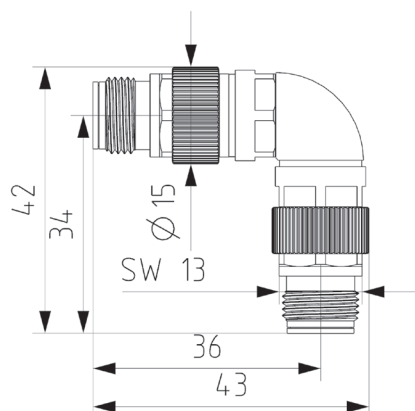


M12 D Ethernet 90° Adapter

Fully shielded compact versions

- Use of straight cable assemblies for small installation depth
- Functionally reliable connection with vibration-proof crimp technology
- Secure due to fully shielded metal housing
- Compact dimensions: 43 x 42
- Pin assignment 1:1 (customized versions on request)
- Standard coding: coding position on top (0 h)
- 8 Coding positions possible
- M12 Coupling nut with combined hex knurl for defined tightening torque

Dimensions



Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-320130	Mating side: male / 90° cable exit: male
42-320131	Mating side: male / 90° cable exit: female
42-320140	Mating side: female / 90° cable exit: male
42-320141	Mating side: female / 90° cable exit: female

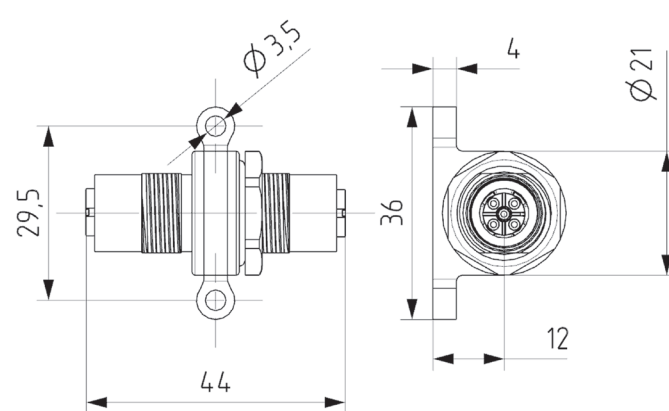


M12 D Ethernet Gender Changer

Fully shielded rear panel version female/female

- Interference-free data transmission at interconnection points like cabinets
- Functionally reliable connection with vibration-proof crimp technology
- Secure due to fully shielded metal housing
- Compact dimensions: 44 x Ø 21
- Rotation-proof mounting due to plane surfaces on housing
- Certified plastics acc. to EN 45545-2 for railway applications
- Rear panel mounting (w/o flange) or wall mounting (with flange)
- Rear panel mounting: mounting thread M16x1,5 for wall size up to 3 mm

Dimensions

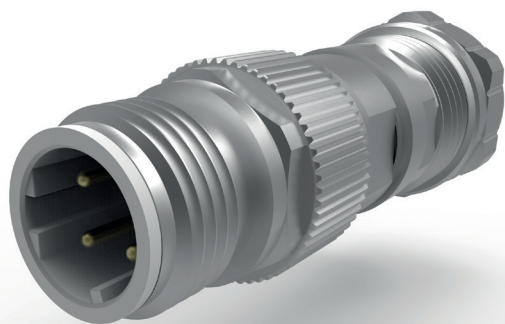


Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-300141	Female/female wall mounting (on request)
42-300140	Female/female rear panel mounting

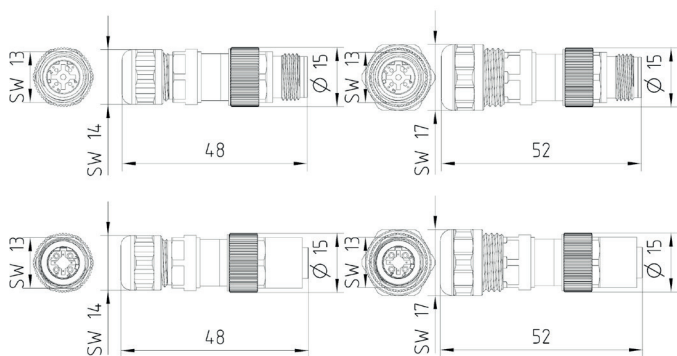


M12 V4A D Ethernet Connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The reliable M12 V4A Ethernet and Profinet field assembly connector
- Reliable fault-free data transmission for high demands
- V4A for maritime plus process and food technology applications
- Secure strain relief and shield termination with cable gland
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- V4A full metal housing protects against malfunction in rough environment
- Compact dimensions for applications with small installation space
- Contacts not included in delivery

Dimensions



Technical data (mutual data on pages 7 & 14)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

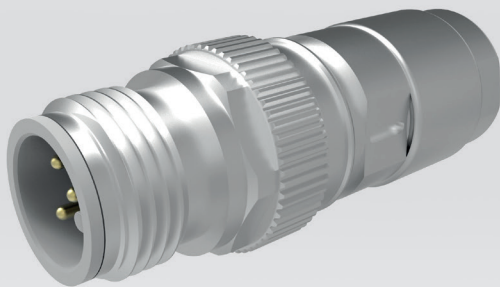
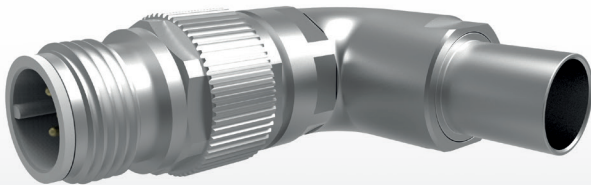
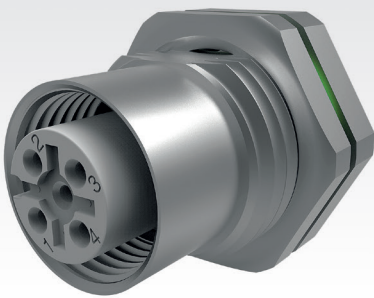
Order information

44-300120	M12 Female crimp KV Ø 4-6,5 mm
44-300121	M12 Male crimp KV Ø 4-6,5 mm
44-300122	M12 Female crimp KV Ø 5,5 - 9 mm
44-300123	M12 Male crimp KV Ø 5,5 - 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000334G2	M12 Crimp contact male AWG 26 - 28
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000344G2	M12 Crimp contact female AWG 26 - 28

M12 A-Code, 5 pole

Vibration- and torsion-proof connectors with 360° shielding

Circular connectors



M12 A-5 code cable connectors

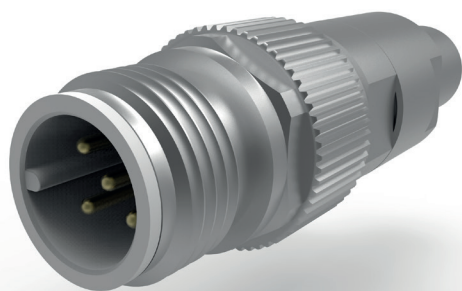
- Functional and fail-safe solution thanks to a special cable connector design
- Quick and easy field assembly through pre-assembled units and crimp snap-in contacts
- Full metal housing for high-quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Cable connectors with crimp flange / crimp barrel system for the highest requirements
- Torsion and vibration proof cable strain relief and shield transfer
- Safe shield contact through crimp flange / crimp sleeve
- M12 Mini: Most compact cable connector with cable gland
- Wide cable clamping range 4 - 9 mm for various cable types
- Versions with cable outlet 180 ° and versions with cable outlet 90 °
- Version 90 ° with 8 (8 x 45 °) adjustable cable outlet directions
- Pin and socket versions
- Certified test according to DIN 61373 vibration and shock test

M12 A-5 code panel mount connectors

- Full metal housing for high quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Custom made lengths of the single wires match the application through crimp contacts
- Functionally reliable
- No potential faults due to cold solder joints
- Versions for front panel mounting and for rear panel mounting
- Protection class IP 67 screw-locked
- Optional versions with encapsulation for protection class IP 67 with open mating face

Technical data

Nominal voltage/current	50 V / 4 A
Resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Protection class	IP 67 (screw-locked)
Temperature range	w/o grip cap: - 40° C to + 85° C with grip cap: - 40° C to + 70° C
Mechanical lifetime	250 Mating cycles
Wire size	AWG 18 - 28
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated
Grip cap	TPE S3/ST2/SR2 acc. to DIN 5510-2

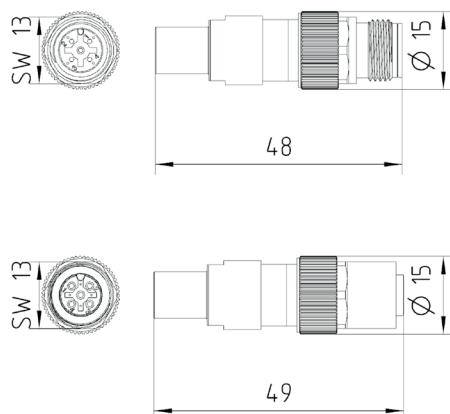


M12 A-5 connector crimp flange

360° Shielding and vibration-/torsion-proof

- The vibration-proof and reliable M12 CAN-Bus/DeviceNet field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof shield connection and strain relief with crimp flange / crimp sleeve
- Certified plastics acc. to EN 45545-2 for railway applications
- Very compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in harsh environment
- Easy assembly due to only a few single parts

Dimensions

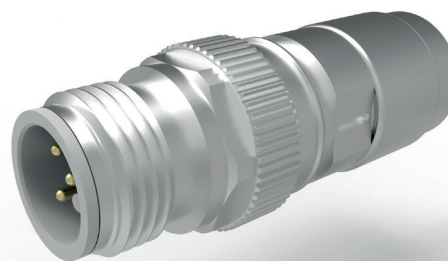


Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-500033	M12 Male CAN drag chain 7,5 Helu 802339
42-500034	M12 Female CAN drag chain 7,5 Helu 802339
42-500041	M12 Male Cat 5 Radox 7,3 H+S 12568935
42-500042	M12 Female Cat 5 Radox 7,3 H+S 12568935
42-500043	M12 Male Cat 5 Radox 8,3 H+S 12585489
42-500044	M12 Female Cat 5 Radox 8,3 H+S 12585489
42-500047	M12 Male DeviceNet DN 658 6,6 SAB 06582242
42-500048	M12 Female DeviceNet DN 658 6,6 SAB 06582241
42-500053	M12 Male Dataflamm-C 6,6 Helu 52414
42-500054	M12 Female Dataflamm-C 6,6 Helu 52414

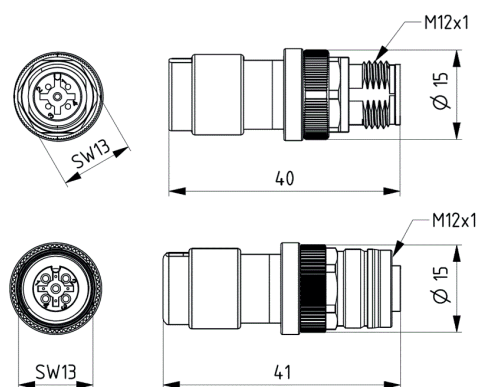


M12 Mini A-5 connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The most compact, reliable M12 CAN/DeviceNet and Power field connection
- Functionally reliable, error-free data transmission with high requirements
- Safe strain relief and shield connection with cable gland
- Large cable clamping range of 4 - 9 mm
- Full metal housing protects against interference and in harsh environments
- Simple assembly with few individual parts
- Certified plastics according to EN 45545-2 for railway applications
- Contacts not included

Dimensions

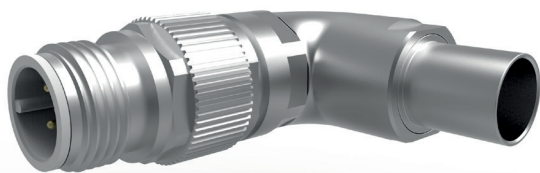


Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-500124	M12 Female Crimp KV Ø 4- 9 mm
42-500125	M12 Male Crimp KV Ø 4- 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000340G2	M12 Crimp contact female AWG 18 - 20

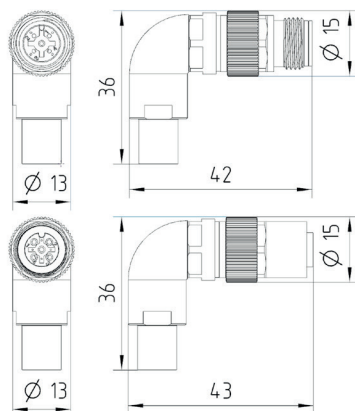


M12 A-5 90° connector crimp flange

360° Shielding and vibration-/torsion-proof

- The compact right angle M12 CAN/DeviceNet field assembly connector
- Reliable fault-free data transmission for high demands
- Vibration-proof shield connection and strain relief with crimp flange system
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- High safety in the network with machined crimp contacts
- Full metal housing protects against malfunction in rough environment
- Certified plastics acc. to EN 45545-2 for railway applications
- Very compact dimensions for applications with small installation space

Dimensions

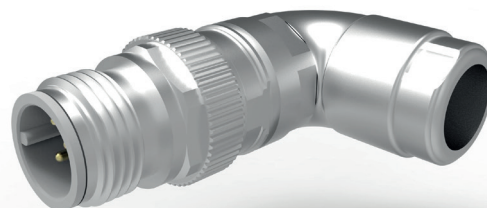


Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-520033	M12 Male CAN Schlepp 7,5 Helu 802339
42-520034	M12 Female CAN Schlepp 7,5 Helu 802339
42-520041	M12 Male Cat 5 Radox 7,3 H+S 12568935
42-520042	M12 Female Cat 5 Radox 7,3 H+S 12568935
42-520043	M12 Male Cat 5 Radox 8,3 H+S 12585489
42-520044	M12 Female Cat 5 Radox 8,3 H+S 12585489
42-520047	M12 Male DeviceNet DN 658 6,6 SAB 06582242
42-520048	M12 Female DeviceNet DN 658 6,6 SAB 06582241
42-520053	M12 Male Dataflamm-C 6,6 Helu 52414
42-520054	M12 Female Dataflamm-C 6,6 Helu 52415

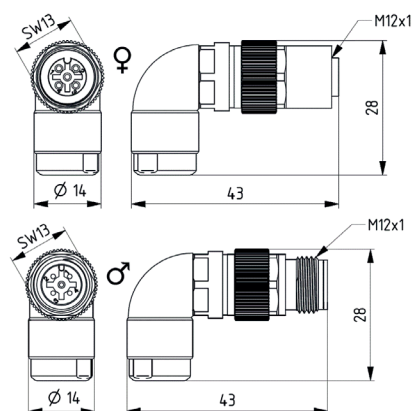


M12 Mini A-5 90° connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The most compact angled M12 CAN/DeviceNet and Power field connection
- Functionally reliable, error-free data transmission with high requirements
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Safe strain relief and shield connection with cable gland
- Full metal housing protects against interference and in harsh environments
- Certified plastics acc. to EN 45545-2 for railway applications
- Contacts not included

Dimensions

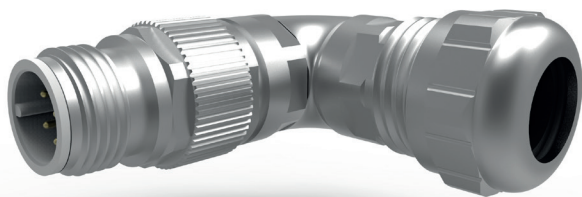


Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-520124	M12 Female Crimp KV Ø 4- 9 mm
42-520125	M12 Male Crimp KV Ø 4- 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000340G2	M12 Crimp contact female AWG 18 - 20

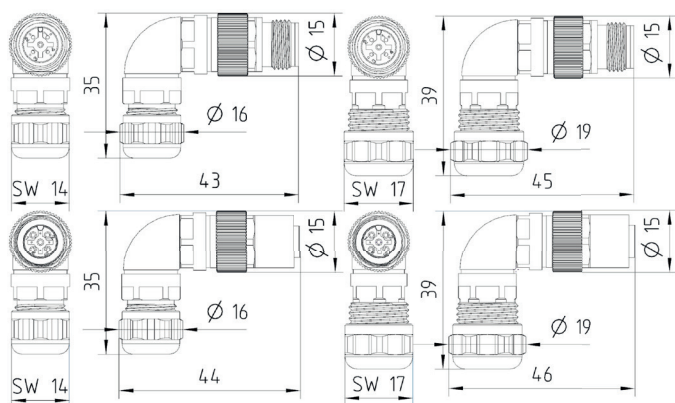


M12 A-5 Connector 90° cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The compact right angle M12 CAN/DeviceNet field assembly connector
- Reliable fault-free data transmission for high demands
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Full metal housing protects against malfunction in rough environment
- Easy assembly due to only a few single parts
- Certified plastics acc. to EN 45545-2 for railway applications
- Contacts not included in delivery

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-520120	M12 Female crimp KV Ø 4-6,5 mm
42-520121	M12 Male crimp KV Ø 4-6,5 mm
42-520122	M12 Female crimp KV Ø 5,5 - 9 mm
42-520123	M12 Male crimp KV Ø 5,5 - 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-000340G2	M12 Crimp contact female AWG 18 - 20

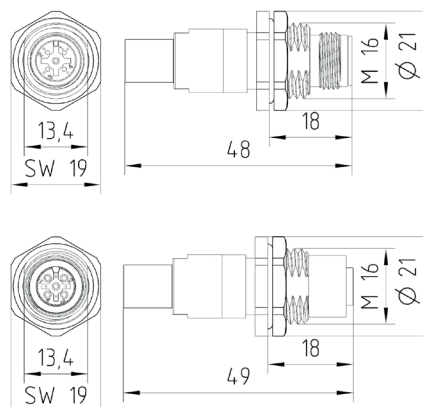


M12 A-5 bulkhead crimp flange

360° Shielding and vibration-/torsion-proof

- The reliable M12 field assembly connector for bulkhead applications
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof shield connection and strain relief with crimp flange
- Rotation-proof mounting due to plane faces on housing
- Full metal housing protects against malfunction in rough environment
- Certified plastics acc. to EN 45545-2 for railway applications
- Mounting thread M16x1,5 for wall thickness up to 3 mm

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-500049	M12 HM Male Cat 5 Radox 7,3 H+S 12568935
42-500050	M12 HM Female Cat 5 Radox 7,3 H+S 12568935

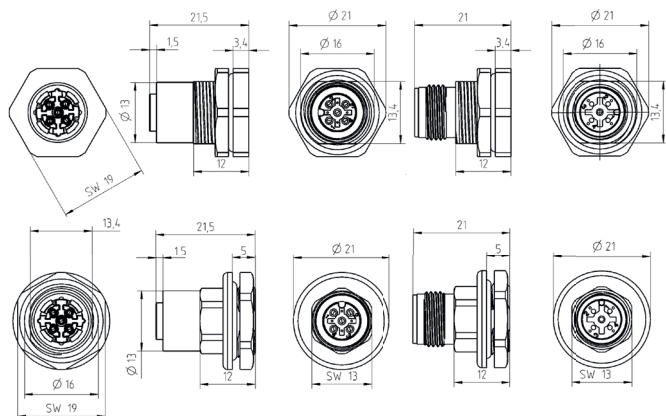


M12 A-5 panel mount crimp connectors

Custom made solutions offering choice for wire length

- Versions for front panel and rear panel mounting
- Rotation-proof assembly due to flat faces on housing
- Reliable termination with vibration-proof crimp technology
- Full metal housing and crimp contacts protect against malfunction
- Easy snap-in assembly of harnessed wires with free length
- Mounting thread M16x1,5 for wall thickness up to 3 mm
- Contacts not included in delivery
- Harnessed versions with potting upon request

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-500110	M12 Female rear panel
42-500111	M12 Female front panel
42-500112	M12 Male rear panel
42-500113	M12 Male front panel
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-000340G2	M12 Crimp contact female AWG 18 - 20

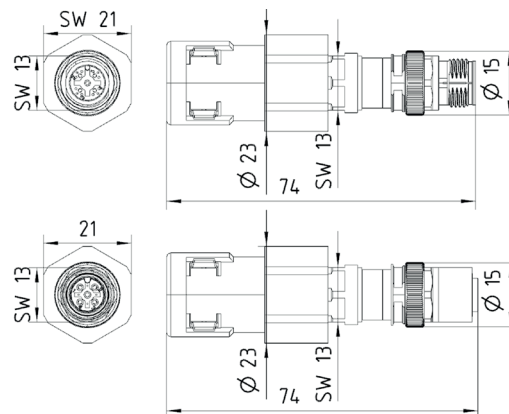


M12 A-5 Connector crimp flange conduit NW10

Connector and cable protection for extremely high requirements

- PMA conduit adapter NW10 with IP 68 (conduit side) and EN 45545-2
- The reliable M12 CAN/DeviceNet field assembly connector for conduit
- High safety in the network with machined crimp contacts
- Reliable fault-free data transmission for high demands
- Vibration-proof shield connection and strain relief with crimp flange
- Certified plastics acc. to EN 45545-2 for railway applications
- Recommended conduit: PMA PCST-10B.50
- Easy assembly due to only a few single parts

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked) / IP 68 (conduit side)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-500033-1	M12 Male CAN Schlepp 7,5 Helu 802339 WR
42-500034-1	M12 Female CAN Schlepp 7,5 Helu 802339 WR
42-500041-1	M12 Male Cat 5 Radox 7,3 H+S 12568935 WR
42-500042-1	M12 Female Cat 5 Radox 7,3 H+S 12568935 WR
42-500043-1	M12 Male Cat 5 Radox 8,3 H+S 12585489 WR
42-500044-1	M12 Female Cat 5 Radox 8,3 H+S 12585489 WR
42-500047-1	M12 Male DN 658 6,6 SAB 06582241 WR
42-500048-1	M12 Female DN 658 6,6 SAB 06582241 WR
42-500053-1	M12 Male Dataflamm-C 6,6 Helu 52414 WR
42-500054-1	M12 Female Dataflamm-C 6,6 Helu 52414 WR

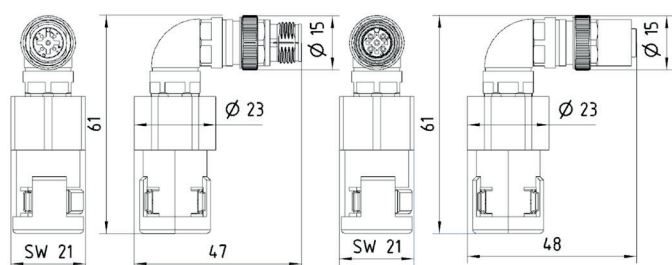


M12 A-5 90° Connector crimp flange conduit NW10

Connector and cable protection for extremely high requirements

- PMA conduit adapter NW10 with IP 68 (conduit side) and EN 45545-2
- The reliable M12 CAN/DeviceNet field assembly connector for conduit
- High safety in the network with machined crimp contacts
- Reliable fault-free data transmission for high demands
- Vibration-proof shield connection and strain relief with crimp flange
- Certified plastics acc. to EN 45545-2 for railway applications
- Recommended conduit: PMA PCST-10B.50
- Easy assembly due to only a few single parts

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked) / IP 68 (conduit side)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-520033-1	M12 Male CAN Schlepp 7,5 Helu 802339 WR
42-520034-1	M12 Female CAN Schlepp 7,5 Helu 802339 WR
42-520041-1	M12 Male Cat 5 Radox 7,3 H+S 12568935 WR
42-520042-1	M12 Female Cat 5 Radox 7,3 H+S 12568935 WR
42-520043-1	M12 Male Cat 5 Radox 8,3 H+S 12585489 WR
42-520044-1	M12 Female Cat 5 Radox 8,3 H+S 12585489 WR
42-520047-1	M12 Male DN 658 6,6 SAB 06582241 WR
42-520048-1	M12 Female DN 658 6,6 SAB 06582241 WR
42-520053-1	M12 Male Dataflamm-C 6,6 Helu 52414 WR
42-520054-1	M12 Female Dataflamm-C 6,6 Helu 52414 WR

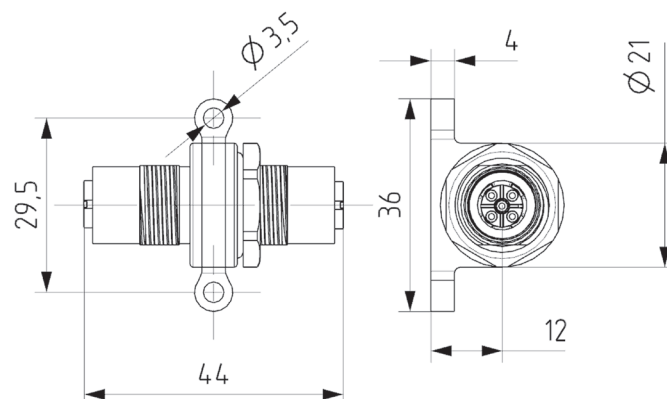


M12 A-5 Gender Changer

Fully shielded rear panel version female/female

- Interference-free data transmission at interconnection points like cabinets
- Functionally reliable connection with vibration-proof crimp technology
- Secure due to fully shielded metal housing
- Compact dimensions: 44 x ø 21
- Rotation-proof mounting due to plane surfaces on housing
- Certified plastics acc. to EN 45545-2 for railway applications
- Rear panel mounting (w/o flange) or wall mounting (with flange)
- Rear panel mounting: mounting thread M16x1,5 for wall size up to 3 mm

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-500141	Female/female wall mounting (on request)
42-500140	Female/female rear panel mounting

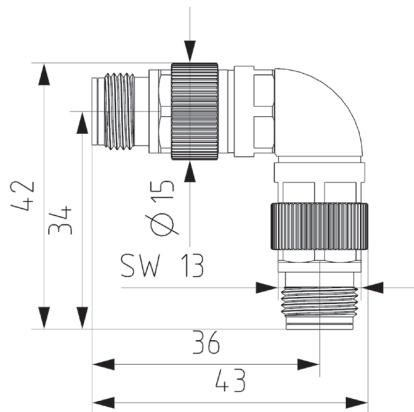


M12 A-5 90° Adapter

Fully shielded compact versions

- Use of straight cable assemblies for small installation depth
- Functionally reliable connection with vibration-proof crimp technology
- Secure due to fully shielded metal housing
- Compact dimensions: 43 x 42
- Pin assignment 1:1 (customized versions on request)
- Standard coding: coding position on top (0 h)
- 8 Coding positions possible
- M12 Coupling nut with combined hex knurl for defined tightening torque

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-520130	Mating side: male / 90° cable exit: male
42-520131	Mating side: male / 90° cable exit: female
42-520140	Mating side: female / 90° cable exit: male
42-520141	Mating side: female / 90° cable exit: female

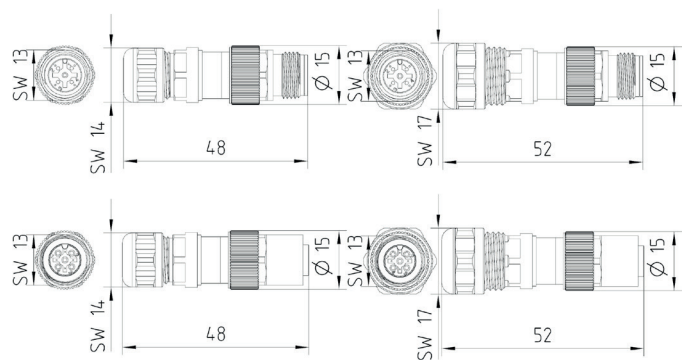


M12 V4A A-5 Connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The reliable V4A M12 CAN/DeviceNet und Ethernet Power field assembly connector
- Reliable fault-free data transmission for high demands
- V4A for maritime plus process and food technology applications
- Secure strain relief and shield termination with cable gland
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- V4A full metal housing protects against malfunction in rough environment
- Compact dimensions for applications with small installation space
- Easy assembly due to a few single parts

Dimensions



Technical data (mutual data on pages 7 & 22)

Nominal voltage/ current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

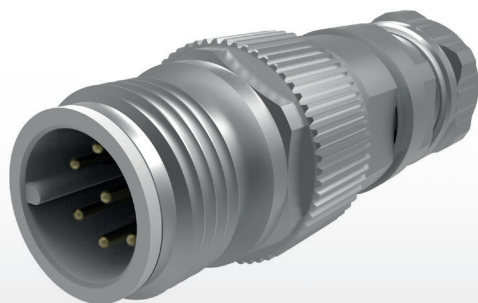
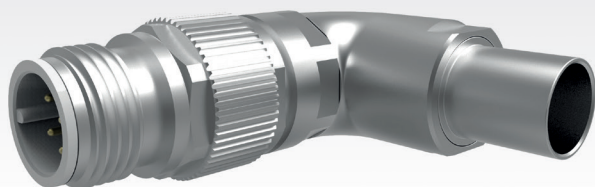
Order information

44-500120	M12 Female crimp KV Ø 4-6,5 mm
44-500121	M12 Male crimp KV Ø 4-6,5 mm
44-500122	M12 Female crimp KV Ø 5,5 - 9 mm
44-500123	M12 Male crimp KV Ø 5,5 - 9 mm
42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-0000330G2	M12 Crimp contact male AWG 18 - 20
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-0000340G2	M12 Crimp contact female AWG 18 - 20

Your notes

M12 A-Code, 8 pole

Vibration- and torsion-proof connectors with 360° shielding



M12 A-8 code cable connectors

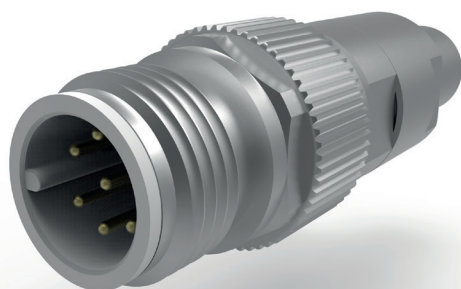
- Functional and fail-safe solution thanks to a special cable connector design
- Quick and easy field assembly through pre-assembled units and crimp snap-in contacts
- Full metal housing for high-quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Cable connectors with crimp flange / crimp barrel system for the highest requirements
- Torsion and vibration proof cable strain relief and shield transfer
- Safe shield contact through crimp flange / crimp sleeve
- Cable connectors with cable gland
- Wide cable clamping range 4 - 9 mm for various cable types
- Versions with cable outlet 180 ° and versions with cable outlet 90 °
- Version 90 ° with 8 (8 x 45 °) adjustable cable outlet directions
- Pin and socket versions
- Certified test according to DIN 61373 vibration and shock test

M12 A-8 code panel mount connectors

- Full metal housing for high quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Custom made lengths of the single wires match the application through crimp contacts
- Functionally reliable
- No potential faults due to cold solder joints
- Versions for front panel mounting and for rear panel mounting
- Protection class IP 67 screw-locked
- Optional versions with encapsulation for protection class IP 67 with open mating face

Technical data

Nominal voltage/current	30 V / 2 A
Resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Protection class	IP 67 (screw-locked)
Temperature range	w/o grip cap: - 40° C to + 85° C with grip cap: - 40° C to + 70° C
Mechanical lifetime	250 Mating cycles
Wire size	AWG 22 - 28
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated
Grip cap	TPE S3/ST2/SR2 acc. to DIN 5510-2

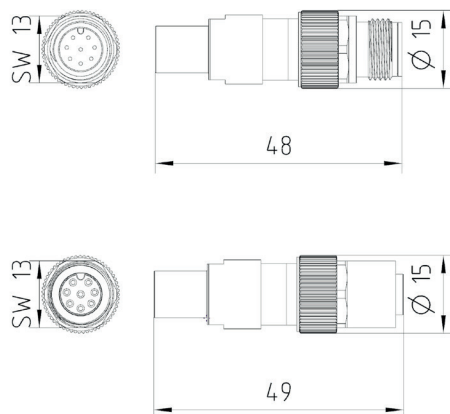


M12 A-8 Ethernet connector crimp flange

360° Shielding and vibration-/torsion-proof

- The very compact reliable M12 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof shield connection and strain relief with crimp flange
- Very compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in rough environment
- Certified plastics acc. to EN 45545-2 for railway applications
- Easy assembly due to only a few single parts

Dimensions



Technical data (mutual data on pages 7 & 30)

Nominal voltage/ current	30 V / 2 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-800001	M12 Male Cat 5 Radox 7,3 H+S 12568935
42-800002	M12 Female Cat 5 Radox 7,3 H+S 12568935
42-800013	M12 Male Cat 7 Radox 8,2 H+S 84124806
42-800014	M12 Female Cat 7 Radox 8,2 H+S 84124806
42-800015	M12 Male Cat 7 Betatrans 8,8 Leoni 302834
42-800016	M12 Female Cat 7 Betatrans 8,8 Leoni 302834
42-800017	M12 Male Cat 5 Radox 6,6 H+S 12584038
42-800018	M12 Female Cat 5 Radox 6,6 H+S 12584038
42-800019	M12 Male Cat 5 Megaline 5,3 Leoni 20123
42-800020	M12 Female Cat 5 Cat 5 Megaline 5,3 Leoni 20123

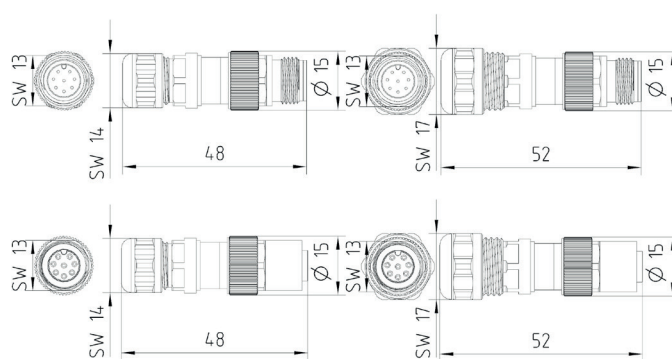


M12 A-8 Ethernet connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The reliable M12 Ethernet und DRIVE-CLiQ field assembly connector
- Reliable fault-free data transmission for high demands
- Secure strain relief and shield termination with cable gland
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- Compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in rough environment
- Easy assembly due to only a few single parts
- Contacts not included in delivery

Dimensions



Technical data (mutual data on pages 7 & 30)

Nominal voltage/ current	30 V / 2 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-800120	M12 Female Crimp KV Ø 4-6,5 mm
42-800121	M12 Male Crimp KV Ø 4-6,5 mm
42-800122	M12 Female Crimp KV Ø 5,5 - 9 mm
42-800123	M12 Male Crimp KV Ø 5,5 - 9 mm
42-000151G2	M12 Crimp contact female AWG 22 - 24
42-000139G2	M12 Crimp contact female AWG 26 - 28
42-000135G2	M12 Crimp contact male AWG 22 - 24
42-000136G2	M12 Crimp contact male AWG 26 - 28

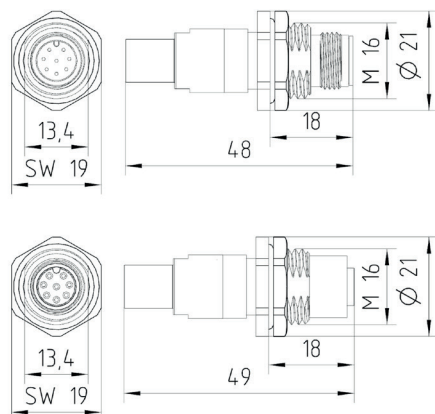


M12 A-8 Ethernet bulkhead crimp flange

360° Shielding and vibration-/torsion-proof

- The reliable M12 field assembly connector for bulkhead applications
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof shield connection and strain relief with crimp flange
- Very compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in rough environment
- Certified plastics acc. to EN 45545-2 for railway applications
- Mounting thread M16x1,5 for wall thickness up to 3 mm

Dimensions

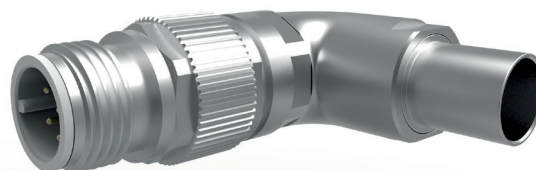


Technical data (mutual data on pages 7 & 30)

Nominal voltage/ current	30 V / 2 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-800023	M12 HM Male Cat 5 Megaline 5,3 Leoni 20123
42-800024	M12 HM Female Cat 5 Cat 5 Megaline 5,3 Leoni 20123
42-800025	M12 HM Male Cat 7 Radox 8,2 H+S 84124806
42-800026	M12 HM Female Cat 7 Radox 8,2 H+S 84124806

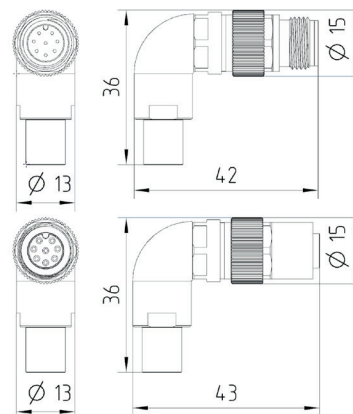


M12 A-8 Ethernet 90° connector crimp flange

360° Shielding and vibration-/torsion-proof

- The compact right angle M12 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Vibration-proof crimp technology for shield and signals
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Certified plastics acc. to EN 45545-2 for railway applications
- Very compact dimensions for applications with small installation space

Dimensions

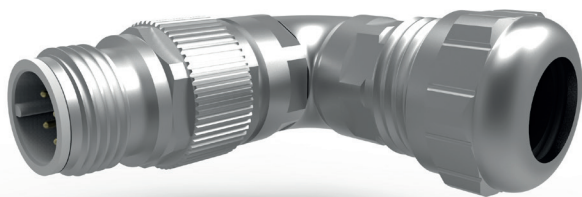


Technical data (mutual data on pages 7 & 30)

Nominal voltage/ current	30 V / 2 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-820013	M12 90° Male Cat 7 Radox 8,2 H+S 84124806
42-820014	M12 90° Female Cat 7 Radox 8,2 H+S 84124806

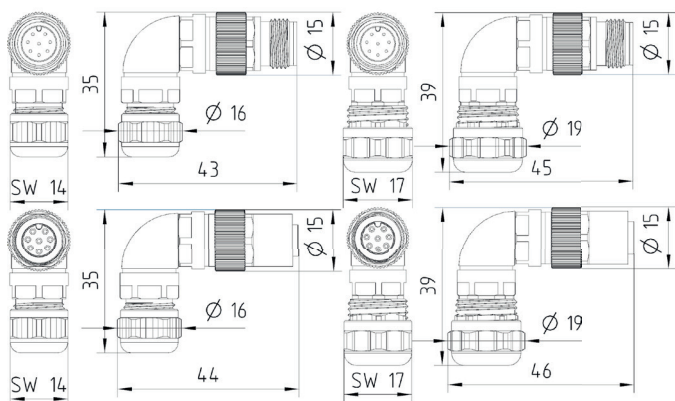


M12 A-8 Ethernet 90° connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The compact right angle M12 Ethernet field assembly connector
- Reliable fault-free data transmission for high demands
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Secure strain relief and shield connection with cable gland
- Wide cable clamping range from 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- Compact dimensions for applications with small installation space
- Contacts not included in delivery

Dimensions



Technical data (mutual data on pages 7 & 30)

Nominal voltage/ current	30 V / 2 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-820120	M12 Female Crimp KV Ø 4-6,5 mm
42-820121	M12 Male Crimp KV Ø 4-6,5 mm
42-820122	M12 Female Crimp KV Ø 5,5 - 9 mm
42-820123	M12 Male Crimp KV Ø 5,5 - 9 mm
42-000151G2	M12 Crimp contact female AWG 22 - 24
42-000139G2	M12 Crimp contact female AWG 26 - 28
42-000135G2	M12 Crimp contact male AWG 22 - 24
42-000136G2	M12 Crimp contact male AWG 26 - 28

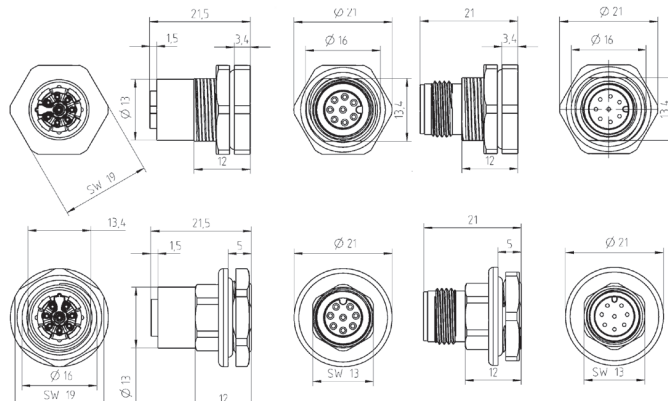


M12 A-8 Ethernet Panel mount crimp connectors

Custom made solutions offering choice for wire length

- Versions for front panel and rear panel mounting
- Rotation-proof assembly due to flat faces on housing
- Reliable termination with vibration-proof crimp technology
- Full metal housing and crimp contacts protect against malfunction
- Easy snap-in assembly of harnessed wires with free length
- Mounting thread M16x1,5 for wall thickness up to 3 mm
- Contacts not included in delivery
- Harnessed versions with potting upon request

Dimensions



Technical data (mutual data on pages 7 & 30)

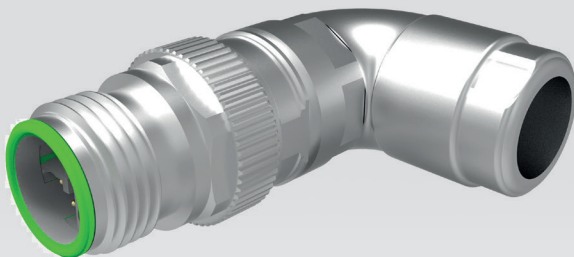
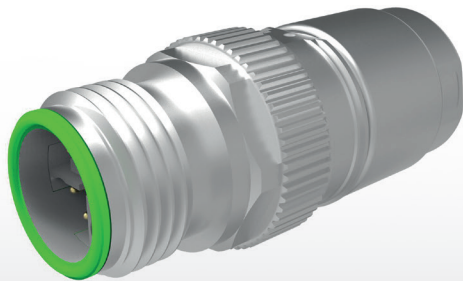
Nominal voltage/ current	30 V / 2 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-800110	M12 Female rear panel
42-800111	M12 Female front panel
42-800112	M12 Male rear panel
42-800113	M12 Male front panel
42-000151G2	M12 Crimp contact female AWG 22 - 24
42-000139G2	M12 Crimp contact female AWG 26 - 28
42-000135G2	M12 Crimp contact male AWG 22 - 24
42-000136G2	M12 Crimp contact male AWG 26 - 28

M12 X-Code

Vibration- and torsion-proof connectors with 360° shielding



M12 X-code cable connectors

- Functional and fail-safe solution thanks to a special cable connector design
- Quick and easy field assembly through pre-assembled units and crimp snap-in contacts
- Full metal housing for high-quality shielding and harsh environmental requirements
- Machined crimp contacts with 4-point crimp for vibration-proof connection
- Cable connectors with crimp flange / crimp barrel system for the highest requirements
- Torsion and vibration proof cable strain relief and shield transfer
- Safe shield contact through crimp flange / crimp sleeve
- M12 Mini: Most compact cable connector with cable gland
- Wide cable clamping range 4 - 9 mm for various cable types
- Versions with cable outlet 180 ° and versions with cable outlet 90 °
- Version 90 ° with 8 (8 x 45 °) adjustable cable outlet directions
- Pin and socket versions
- Certified test according to DIN 61373 vibration and shock test

Technical data

Nominal voltage/current	48 V / 0,5 A
Resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Overvoltage category	III
Degree of pollution	3
Category	Cat. 6A
Transmission rate	10Gbit acc. to IEC 802.3an
Protection class	IP 67 (screw-locked)
Temperature range	w/o grip cap: - 40° C to + 85° C/ with grip cap: - 40° C to + 70° C
Mechanical lifetime	250 Mating cycles
Wire size	AWG 22 - 26
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated
Grip cap	TPE S3/ST2/SR2 acc. to DIN 5510-2

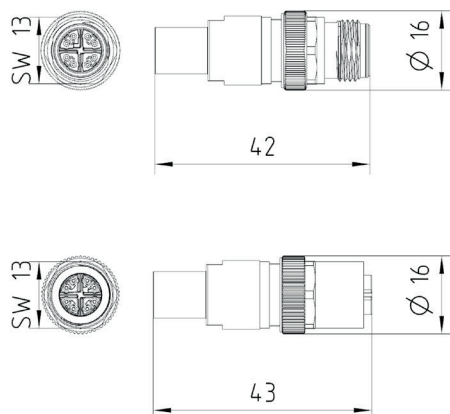


M12 X 10 Gbit Ethernet connector crimp flange

360° Shielding and vibration-/torsion-proof

- The vibration-proof 10 Gbit Ethernet and Profinet M12 field assembly connector
- Reliable fault-free data transmission for high demands
- Vibration-/shock-proof shield connection and strain relief with crimp flange / crimp sleeve
- Torsion-proof shield connection and strain relief with crimp flange
- Very compact dimensions for applications with small installation space
- Certified plastics acc. to EN 45545-2 for railway applications
- Full metal housing protects against malfunction in harsh environment

Dimensions

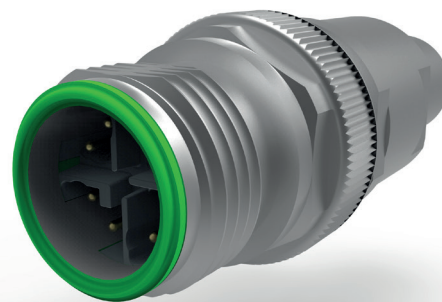


Technical data (mutual data on pages 7 & 34)

Nominal voltage/ current	48 V / 0.5 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-900001	M12 Male X8/8 H+S 84124806 PVH
42-900002	M12 Female X8/8 H+S 84124806 PVH
42-900003	M12 Male X8/8 TE TECC0011C7 PVH
42-900004	M12 Female X8/8 TECC0011C7 PVH
42-900005	M12 Male X8/8 Leoni 307704 PVH
42-900006	M12 Female X8/8 Leoni 307704 PVH
42-900011	M12 Male X8/8 LAPP 2170483 PVH
42-900012	M12 Female X8/8 LAPP 2170483 PVH
42-900013	M12 Male X8/8 LAPP 2170931 PVH
42-900014	M12 Female X8/8 LAPP 2170931 PVH

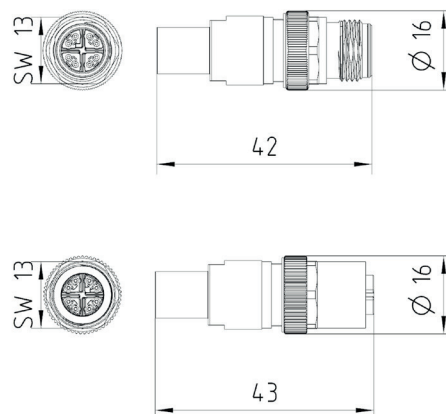


M12 X 10 Gbit Ethernet crimp flange Crossover

360° Shielding and vibration-/torsion-proof

- The vibration-proof 10 Gbit Ethernet and Profinet M12 field assembly connector
- Reliable fault-free data transmission for high demands
- Vibration-/shock-proof shield connection and strain relief with crimp flange / crimp sleeve
- Crossover version for 1:1 wiring for patch cords
- Very compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in harsh environment
- Easy assembly due to only a few single parts

Dimensions

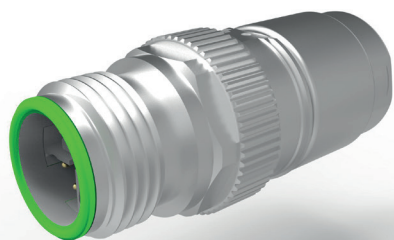


Technical data (mutual data on pages 7 & 34)

Nominal voltage/ current	48 V / 0.5 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-900001-X	M12 Male X8/8POL H+S 84124806 PVH
42-900003-X	M12 Male X8/8POL TE TECC0011C7 PVH
42-900005-X	M12 Male X8/8POL Leoni 307704 PVH
42-900011-X	M12 Male X8/8POL LAPP 2170483 PVH
42-900013-X	M12 Male X8/8POL LAPP 2170931 PVH

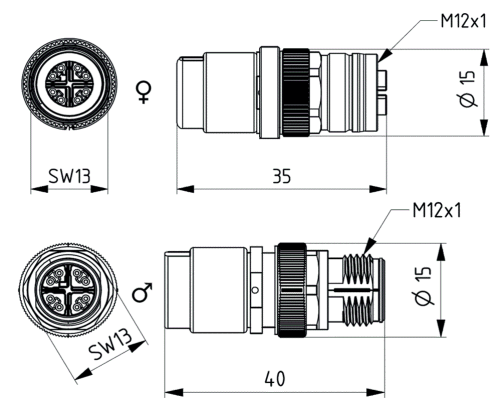


M12 Mini X 10GB Ethernet connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- 10Gbit Ethernet M12 field connection in Mini design: 35 x Ø 15
- Functionally reliable, error-free data transmission with high requirements
- Safe strain relief and shield connection with cable gland
- Large cable clamping range of 4 - 9 mm
- Full metal housing protects against interference and in harsh environments
- Simple assembly with few individual parts
- Contacts not included
- Certified plastics according to EN 45545-2 for railway applications

Dimensions

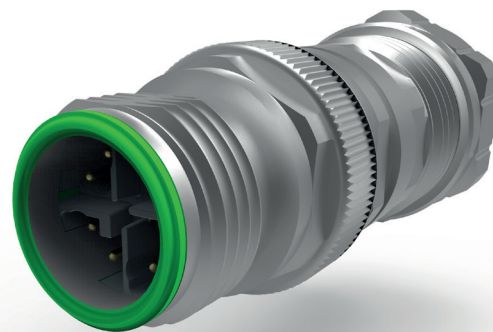


Technical data (mutual data on pages 7 & 34)

Nominal voltage/ current	48 V / 0,5 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-900125	M12 X-8 Male Crimp KV Ø 4 - 9 mm
42-900124	M12 X-8 Female Crimp KV Ø 4 - 9 mm
42-000901G2	M12 X Crimp contact Male AWG 22 - 26
42-000902G2	M12 X Crimp contact Female AWG 22 - 26

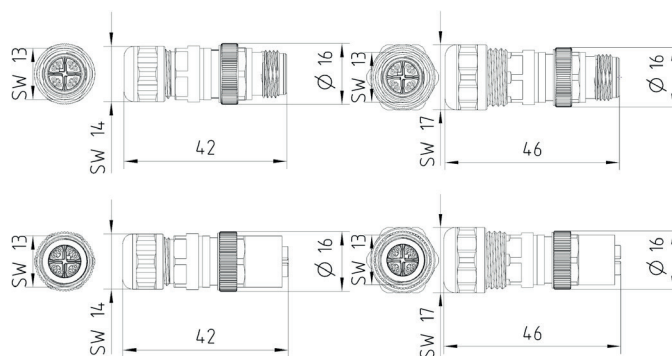


M12 X 10 Gbit Ethernet connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The reliable 10Gbit Ethernet und Profinet M12 field assembly connector
- Reliable fault-free data transmission for high demands
- High safety in the network with machined crimp contacts
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- Compact dimensions for applications with small installation space
- Full metal housing protects against malfunction in harsh environment
- Easy assembly due to a few single parts
- Contacts not included in delivery

Dimensions



Technical data (mutual data on pages 7 & 34)

Nominal voltage/ current	48 V / 0,5 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-900120	M12 X-8 Female crimp KV Ø 4-6,5 mm
42-900121	M12 X-8 Male crimp KV Ø 4-6,5 mm
42-900122	M12 X-8 Female crimp KV Ø 5,5 - 9 mm
42-900123	M12 X-8 Male crimp KV Ø 5,5 - 9 mm
42-000901G2	M12 X Crimp contact male AWG 22 - 26
42-000902G2	M12 X Crimp contact female AWG 22 - 26

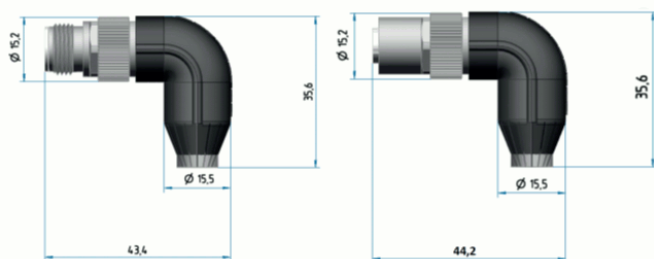


M12 X 90° 10 Gbit Ethernet Crimp CF

360° Shielding and vibration-/torsion-proof

- The vibration-proof right angle 10 Gbit Ethernet and Profinet M12 field connector
- Reliable fault-free data transmission for high demands
- Vibration-/shock-proof shield connection and strain relief with crimp flange / crimp sleeve
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Simple setting of the desired cable exit during assembly
- Full metal housing protects against malfunction in harsh environment
- Easy assembly due to only a few single parts

Dimensions



Technical data (mutual data on pages 7 & 34)

Nominal voltage/ current	48 V / 0.5 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-920001	M12 Male X8/8POL H+S 84124806 PVH
42-920002	M12 Female X8/8POL H+S 84124806 PVH
42-920003	M12 Male X8/8POL TE TECC0011C7 PVH
42-920004	M12 Female X8/8 TE TECC0011C7 PVH
42-920005	M12 Male X8/8POL Leoni 307704 PVH
42-920006	M12 Female X8/8 Leoni 307704 PVH
42-920011	M12 Female X8/8POL LAPP 2170483 PVH
42-920012	M12 Female X8/8POL LAPP 2170483 PVH
42-920013	M12 Male X8/8POL LAPP 2170931 PVH
42-920014	M12 Female X8/8POL LAPP 2170931 PVH

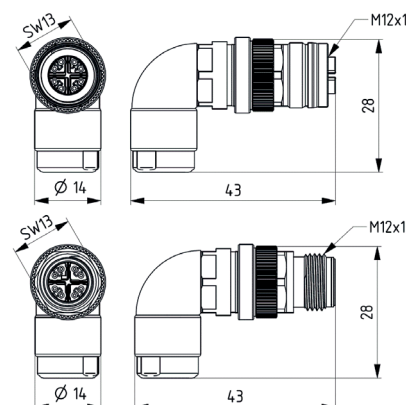


M12 Mini X 10GB Ethernet connector 90° cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The vibration-proof compact right angle 10 Gbit Ethernet and Profinet M12 field connector
- Reliable fault-free data transmission for high demands
- Safe strain relief and shield connection with cable gland
- Large cable clamping range of 4 - 9 mm
- Free choice for 90° cable exit with 8 coding positions (8x45°)
- Full metal housing protects against malfunction in harsh environment

Dimensions



Technical data (mutual data on pages 7 & 34)

Nominal voltage/ current	48 V / 0.5 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

42-920125	M12 X-8 Male Crimp KV Ø 4 - 9 mm
42-920124	M12 X-8 Female Crimp KV Ø 4 - 9 mm
42-000901G2	M12 X Crimp contact male AWG 22 - 26
42-000902G2	M12 X Crimp contact female AWG 22 - 26

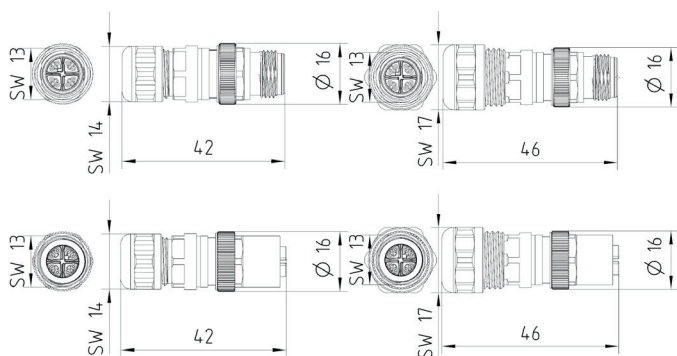


M12 X V4A 10 Gbit Ethernet connector cable gland

Fully shielded and wide cable clamp range 4 - 9 mm

- The reliable V4A10Gbit Ethernet und Profinet M12 field assembly connector
- Reliable fault-free data transmission for high demands
- V4A for maritime as well as process and food technology applications
- Secure shielding and strain relief with cable gland
- Wide cable clamp range 4 - 9 mm / 4 - 6,5 und 5,5 - 9 mm
- V4A full metal housing protects against malfunction in harsh environment
- Easy assembly due to a few single parts
- Contacts not included in delivery

Dimensions



Technical data (mutual data on pages 7 & 34)

Nominal voltage/ current	48 V / 0,5 A
Temperature range	-40 °C to +85 °C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

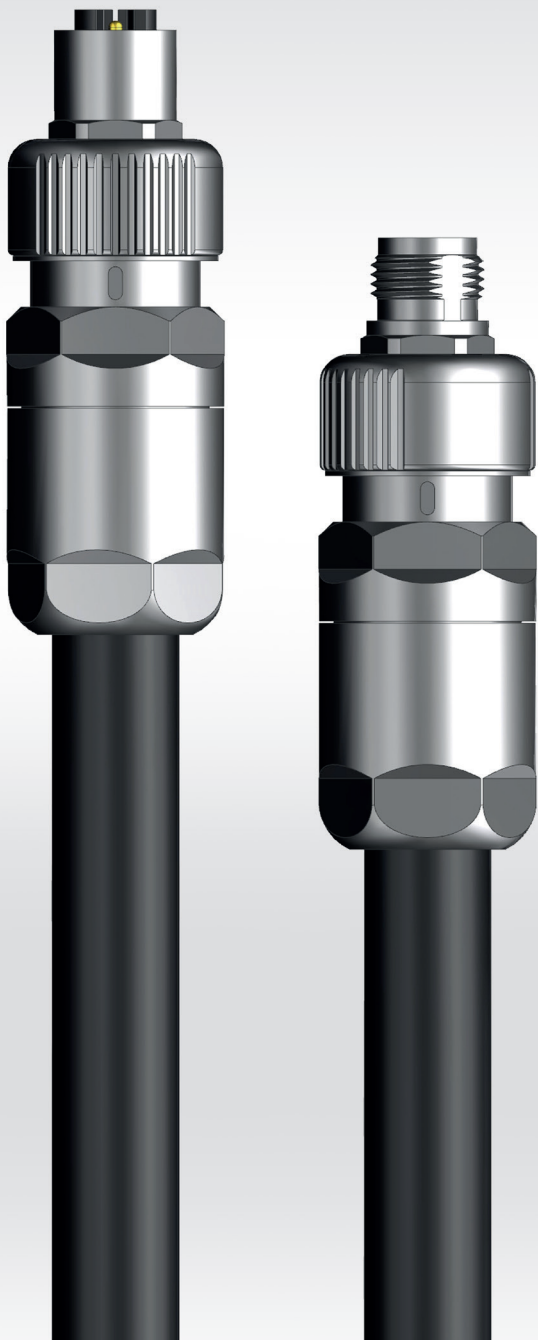
44-900120	M12 X-8 Female Crimp KV Ø 4-6,5 mm
44-900121	M12 X-8 Male Crimp KV Ø 4-6,5 mm
42-900122	M12 X-8 Female Crimp KV Ø 5,5 - 9 mm
42-900123	M12 X-8 Male KV Ø 5,5 - 9 mm
42-000901G2	M12 X Crimp contact Male AWG 22 - 26
42-000902G2	M12 X Crimp contact Female AWG 22 - 26

Your notes

M12 Power

Fully shielded connectors with reliable crimp technology for cables up to 14 mm

Circular connectors



The PROVERTHA M12 Power connectors with L-Codierung 4+ PE are standardized in the IEC 61076-4-111. The PROVERTHA M12 Power connectors characterised by a full metal housing and the vibration-proof crimp technology for the power contacts. The connectors are designed for a wide cable clamping range für cables with wire sizes up to 2,5 qmm and outer diameters up to 14 mm. The connectors are the right solution for applications with shielding requirements and especially for applications with cables with large outer diameter.

Technical data

Connector	M12 L-Code acc. to IEC 61076-4-111
Pin number	4 + PE
Nominal voltage	63 V DC
Nominal current	16 A
Protection class	IP 67 (screw-locked)
Temperature range	- 40° C to + 85° C
Mechanical lifetime	250 or 500 Mating cycles
Wire size	0,5 qmm - 2,5 qmm (AWG 20 - 14)
Cable diameter	7 - 14 mm
Housing	Cu alloy or Zn alloy Ni-plated
Insulator + contact holder	Thermoplast HL3 acc. to EN 45545-2
Contacts	Cu alloy Au-plated

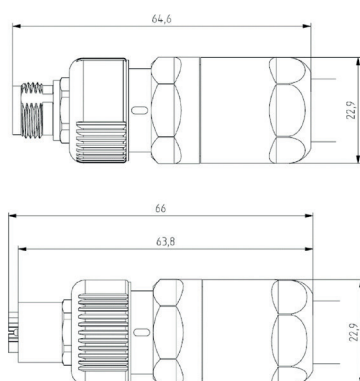


M12 Power L-code with cable gland

360° Shielding for cables 7 - 14 mm / wires 0,5 -2,5 mm²

- M12 Power L-coding 4+PE (leading)
- Pin layout and dimensions acc. to. IEC 61076-2-111
- Full metal housing with 360° shielding
- Vibration-proof crimp technology for the wire termination
- Cable strain relief for cable-diameter 7-14 mm
- Wire size: 0,5 - 2,5 qmm / AWG 20 - 14
- Certified plastics acc. to EN 45545-2 for railway applications
- Easy assembly due to only a few single parts

Dimensions



Technical data *(mutual data on pages 7 & 40)*

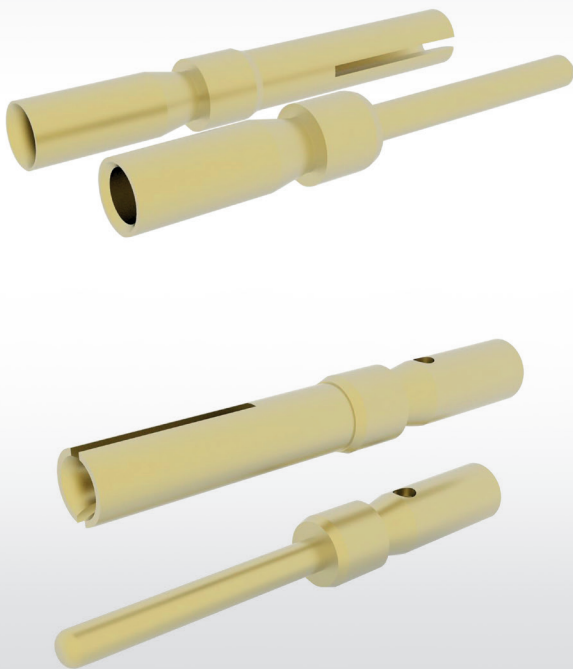
Nominal voltage/ current	63 V DC / 16 A
Temperature range	-40° C to +85° C
Degree of protection	IP 67 (screw-locked)
Plastics	Thermoplast, HL3 acc. to EN 45545-2

Order information

Soon available	M12 Power L-Code male
Soon available	M12 Power L-Code female

Accessories for circular connectors

Circular connectors



For the M12 Crimp connectors with the codings A, -5, A-8, B and D plus X machined crimp contacts are available for the cable gland versions and as replacement parts separate delivered.

For the M8 Crimp connectors machined crimp contacts are available for the cable gland versions and as replacement parts separate delivered.

Technical data

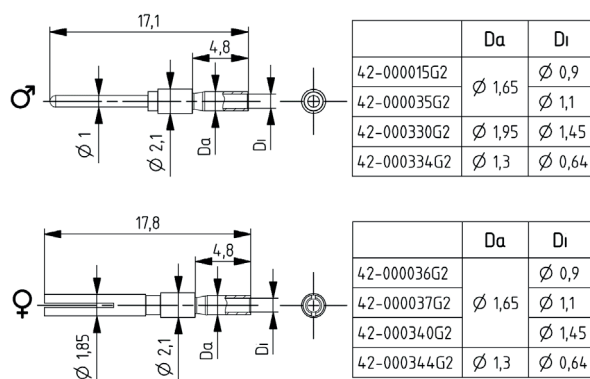


M12 Crimp contacts for M12 A-5, M12 B, M12 D

Machined versions with pin diameter 1 mm

- Machined precision contacts made from Cu alloy
- Gold-plated over Ni barrier layer
- Plating for 250 mating cycles
- Best quality and long life due to specified contact area
- Wire size: AWG 18 - AWG 28

Dimensions



Technical data (mutual data on pages 7 & 42)

Nominal current	max. 7 A
Wire size	AWG 18 - AWG 28
Resistance	≤10 mΩ
Contact	Cu alloy gold-plated

Order information

42-000015G2	M12 Crimp contact male AWG 22 - 24
42-000035G2	M12 Crimp contact male AWG 20 - 22
42-000330G2	M12 Crimp contact male AWG 18 - 20
42-000334G2	M12 Crimp contact male AWG 26 - 28
42-000036G2	M12 Crimp contact female AWG 22 - 24
42-000037G2	M12 Crimp contact female AWG 20 - 22
42-000340G2	M12 Crimp contact female AWG 18 - 20
42-000344G2	M12 Crimp contact female AWG 26 - 28

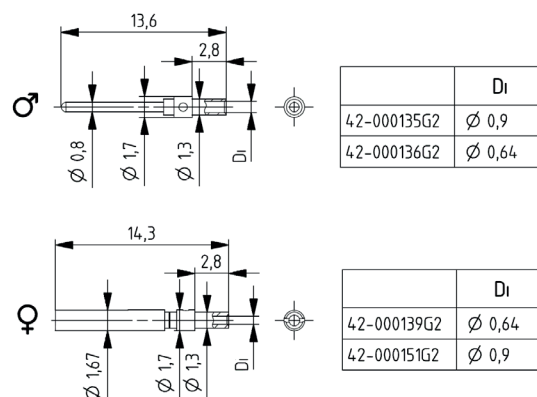


M12 Crimp contacts for M12 A-8

Machined versions with pin diameter 0.8 mm

- Machined precision contacts made from Cu alloy
- Gold-plated over Ni barrier layer
- Plating for 250 mating cycles
- Best quality and long life due to specified contact area
- Wire size: AWG 22 - AWG 28

Dimensions



Technical data (mutual data on pages 7 & 42)

Nominal current	max. 3 A
Wire size	AWG 22 - AWG 28
Resistance	≤10 mΩ
Contact	Cu alloy gold-plated

Order information

42-000135G2	M12 Crimp contact male AWG 22 - 24
42-000136G2	M12 Crimp contact male AWG 26 - 28
42-000139G2	M12 Crimp contact female AWG 26 - 28
42-000151G2	M12 Crimp contact female AWG 22 - 24

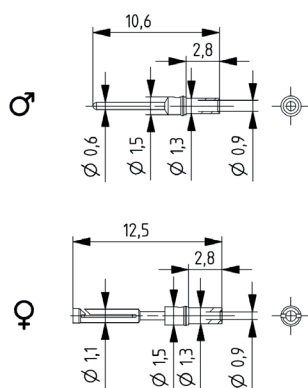


M12 Crimp contacts for M12 X

Machined versions with pin diameter 0.6 mm

- Machined precision contacts made from Cu alloy
- Gold-plated over Ni barrier layer
- Plating for 250 mating cycles
- Best quality and long life due to specified contact area
- Wire size: AWG 22 - AWG 26

Dimensions



Technical data (mutual data on pages 7 & 42)

Nominal current	max. 1 A
Wire size	AWG 22 - AWG 26
Resistance	≤10 mΩ
Contact	Cu alloy gold-plated

Order information

42-000901G2	M12 Crimp contact male AWG 22 - 26
42-000902G2	M12 Crimp contact female AWG 22 - 26

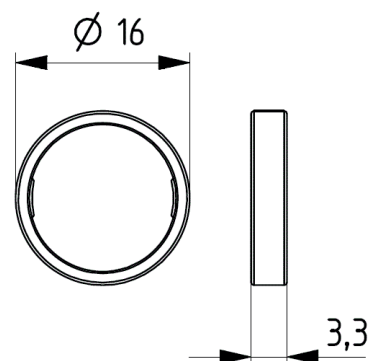


M12 color ring for unmistakable connection

Easy snap-in assembly

- Unmistakable connection achieved by different colors
- Colors: black, white, red, green, yellow, and blue
- Easy retrofitting by snap-in assembly into the housing
- Simple assembly thanks to snap-in design
- Thermoplastic UL 94-V0
- Thermoplastic certified acc. to EN 45545-2 for railway applications

Dimensions



Technical data (mutual data on pages 7 & 42)

Material	Thermoplast
UL fire behavior	UL 94-V0
Railway fire protection	EN 45545-2 R22: HL1/R23: HL 1-HL2

Order information

42-000304BL	Color ring blue
42-000304GE	Color ring yelb
42-000304GN	Color ring green
42-000304R	Color ring red
42-000304SW	Color ring black
42-000304WE	Color ring white

Your notes

M12 Cable assemblies



Assembled and overmolded versions
Special design for interference-free data transmission
360 ° EMI / RFI shielding through a full metal housing
Vibration and torsion-proof shield contact
Vibration-proof crimping technology for signal and shield contact
Vibration and torsion-proof strain relief
Safe solution for increased requirements such as in rail and transport technology as well as in factory automation for automatic punching machines and robot applications.
High-quality UL-certified drag chain cables
Special version for railway technology with railway-certified cable types
Standard types available from lengths of 0.3 m to 10 m
Customer-specific lengths and designs are available on request

Technical data

Nominal voltage/current	50 V / 4 A
Temperature range	- 20° C to +70 ° C
Protection class	IP 67 (screw-locked)
Mating cycles	250
Cable specification	
Profinet	Highly flexible Profinet C UL drag chain cable
Outer diameter and color	6,5 ± 0,2 mm green
Profibus	Highly flexible UL drag chain cable
Outer diameter and color	8 ± 0,2 mm violet
CAN-Bus	Highly flexible CAN/DeviceNet UL cable
Outer diameter and color	6,6 ± 0,5 mm Red lila (RAL 4001)
Railcat	RADOX RAILCAT CAT5e XM S H+S-Nr.12568935
Outer diameter and color	7,25 ± 0,3 mm schwarz

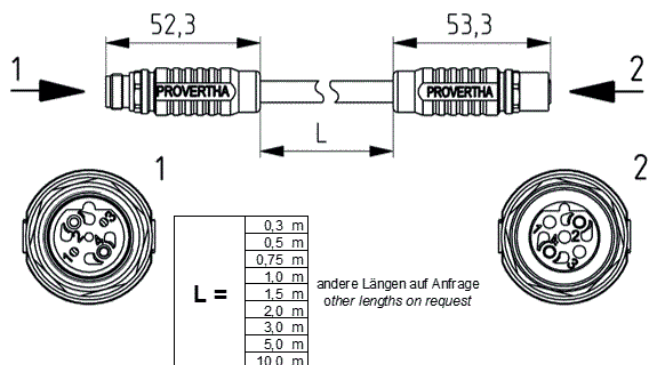


Profibus M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded Profibus M12 cable assemblies
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- Highly flexible Profibus UL drag chain cable
- M12 coupling nut with combined hex knurl for defined tightening torque
- Certified plastics acc. to EN 45545-2 and UL 94 V-0
- 100 % tested M12 Profibus cable assemblies

Dimensions



Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	Profibus highly flexible UL drag chain

Order information

420-100000	Profibus male-female 0,3m
420-100001	Profibus Vmale-female 0,5m
420-100003	Profibus male-female 1m
420-100050	Profibus female-female 0,3m
420-100051	Profibus female-female 0,5m
420-100053	Profibus female-female 1m
420-100100	Profibus male-male 0,3m
420-100101	Profibus male-male 0,5m
420-100103	Profibus male-male 1m

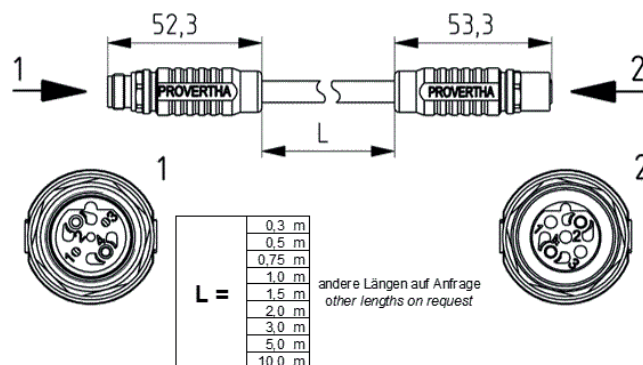


Overmolded Profibus IP67 M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded Profibus M12 cable assemblies
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- Highly flexible Profibus UL drag chain cable
- M12 coupling nut with combined hex knurl for defined tightening torque
- Certified plastics acc. to EN 45545-2 and UL 94 V-0
- 100 % tested M12 Profibus cable assemblies

Dimensions



Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	Profibus highly flexible UL drag chain

Order information

420-110000	Profibus male-female 0,3m
420-110001	Profibus Vmale-female 0,5m
420-110003	Profibus male-female 1m
420-110050	Profibus female-female 0,3m
420-110051	Profibus female-female 0,5m
420-110053	Profibus female-female 1m
420-110100	Profibus male-male 0,3m
420-110101	Profibus male-male 0,5m
420-110103	Profibus male-male 1m

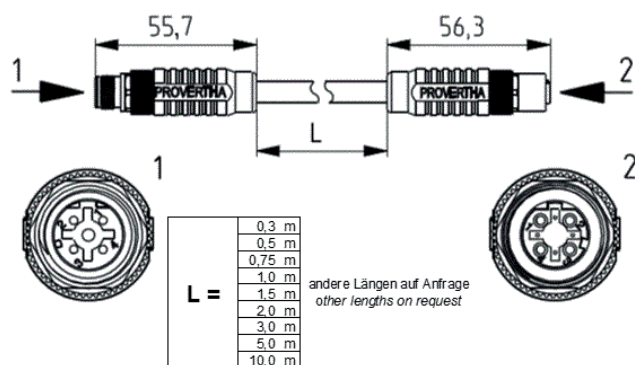


Profinet IP67 M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded Profinet M12
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- Profinet Type C UL drag chain cable for high requirements
- M12 coupling nut with combined hex knurl for defined tightening torque
- Certified plastics acc. to EN 45545-2 and UL 94 V-0
- 100 % tested M12 Profinet cable assemblies

Dimensions



Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	Profinet Type C PUR UL drag chain

Order information

420-300000	Profinet male-female 0,3M
420-300001	Profinet male-female 0,5M
420-300003	Profinet male-female 1,0M
420-300050	Profinet female-female 0,3M
420-300051	Profinet female-female 0,5M
420-300053	Profinet female-female 1,0M
420-300100	Profinet male-male 0,3M
420-300101	Profinet male-male 0,5M
420-300103	Profinet male-male 1,0M

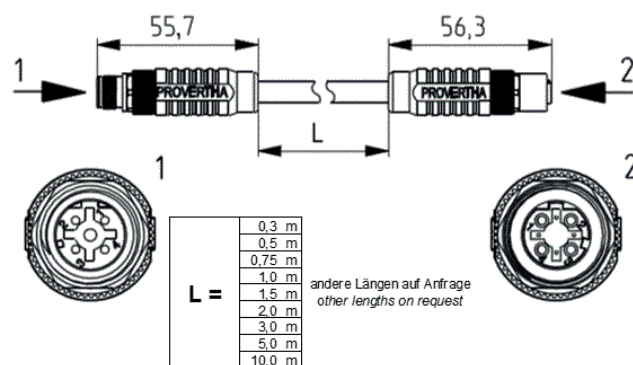


Overmolded Profinet IP67 M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded Profinet M12 cable assemblies
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- Profinet Type C UL drag chain cable for high requirements
- M12 coupling nut with combined hex knurl for defined tightening torque
- Certified plastics acc. to EN 45545-2 and UL 94 V-0
- 100 % tested M12 Profinet cable assemblies

Dimensions



Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	Profinet Type C PUR UL drag chain

Order information

420-310000	Profinet male-female 0,3M
420-310001	Profinet male-female 0,5M
420-310003	Profinet male-female 1,0M
420-310050	Profinet female-female 0,3M
420-310051	Profinet female-female 0,5M
420-310053	Profinet female-female 1,0M
420-310100	Profinet male-male 0,3M
420-310101	Profinet male-male 0,5M
420-310103	Profinet male-male 1,0M

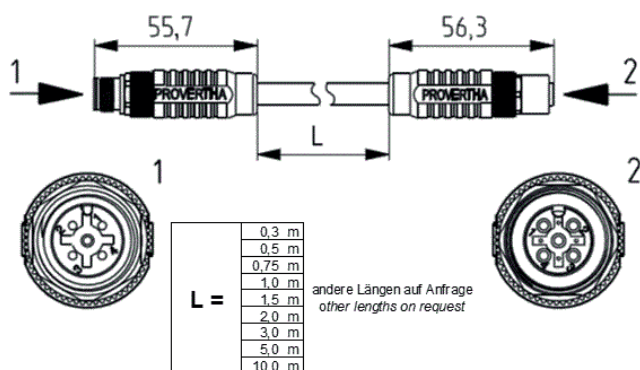


CAN/DeviceNet IP67 M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded CAN/DeviceNet M12 A-5 cable assemblies
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- Highly flexible CAN/DeviceNet UL drag chain cable
- M12 coupling nut with combined hex knurl for defined tightening torque
- Certified plastics acc. to EN 45545-2 and UL 94 V-0
- 100 % tested CAN-/DeviceNet M12 cable assemblies

Dimensions



Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	CAN/DeviceNet highly flexible UL drag chain

Order information

420-500000	CAN bus male-female 0,3m
420-500001	CAN bus Vmale-female 0,5m
420-500003	CAN bus male-female 1m
420-500050	CAN bus female-female 0,3m
420-500051	CAN bus female-female 0,5m
420-500053	CAN bus female-female 1m
420-500100	CAN bus male-male 0,3m
420-500101	CAN bus male-male 0,5m
420-500103	CAN bus male-male 1m

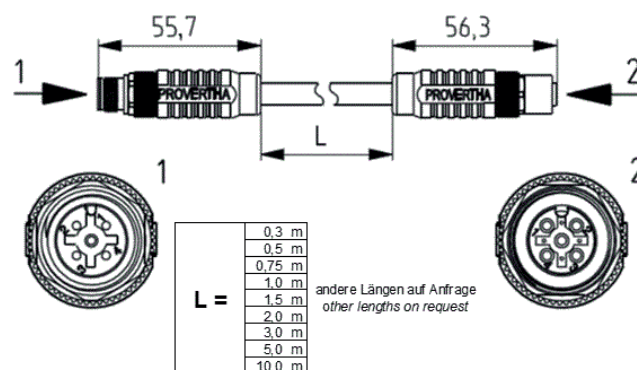


Overmolded CAN/DeviceNet IP67 M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded CAN/DeviceNet M12 A-5 cable assemblies
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- Highly flexible CAN/DeviceNet UL drag chain cable
- M12 coupling nut with combined hex knurl for defined tightening torque
- Certified plastics acc. to EN 45545-2 and UL 94 V-0

Dimensions



Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	CAN/DeviceNet highly flexible UL drag chain

Order information

420-510000	CAN bus male-female 0,3m
420-510001	CAN bus Vmale-female 0,5m
420-510003	CAN bus male-female 1m
420-510050	CAN bus female-female 0,3m
420-510051	CAN bus female-female 0,5m
420-510053	CAN bus female-female 1m
420-510100	CAN bus male-male 0,3m
420-510101	CAN bus male-male 0,5m
420-510103	CAN bus male-male 1m

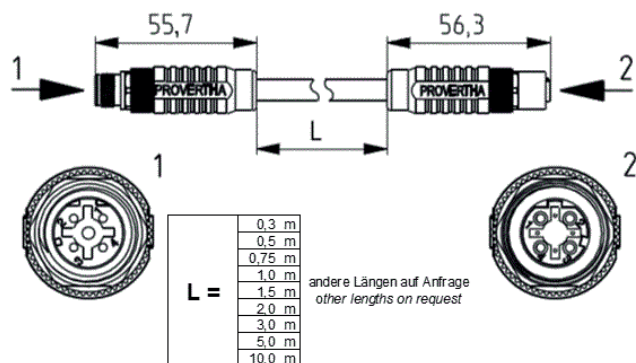


Railcat IP67 M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded Railcat M12 D-coded Cat 5e cable assemblies
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- M12 coupling nut with combined hex knurl for defined tightening torque
- Railway cable RADOX RAILCAT CAT5e XM S
- Certified plastics acc. to EN 45545-2 and NFF 16-101
- Certified qualification acc. to DIN EN 61373 for railway applications

Dimensions



Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	Radox RailCat CAT5 7,3mm H+S-Nr. 12568935

Order information

420-301000	RAILCAT male-female 0,3M
420-301001	RAILCAT male-female 0,5M
420-301003	RAILCAT male-female 1,0M
420-301050	RAILCAT female-female 0,3M
420-301051	RAILCAT female-female 0,5M
420-301053	RAILCAT female-female 1,0M
420-301100	RAILCAT male-male 0,3M
420-301101	RAILCAT male-male 0,5M
420-301103	RAILCAT male-male 1,0M

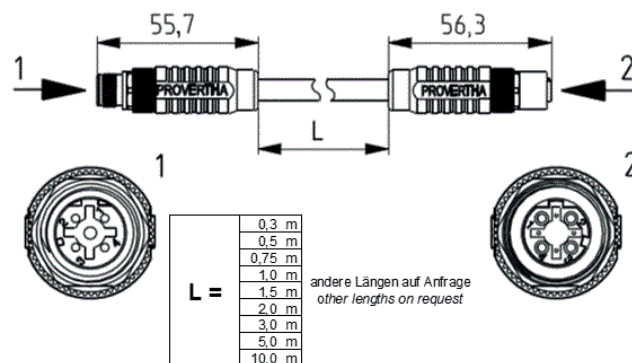


Overmolded Railcat IP67 M12 Cable assemblies

Reliable and vibration-proof with crimp technology

- Fully shielded Railcat M12 D-coded Cat 5e cable assemblies
- 360° EMI/RFI shielding due to crimp flange / crimp sleeve system
- Functionally reliable with crimp technology for signals and cable shield
- Torsion- and vibration-proof strain relief and shield connection
- M12 coupling nut with combined hex knurl for defined tightening torque
- Railway cable RADOX RAILCAT CAT5e XM S
- Certified plastics acc. to EN 45545-2 and NFF 16-101
- Certified qualification acc. to DIN EN 61373 for railway applications

Dimensions




Technical data (mutual data on pages 7 & 46)

Nominal voltage/ current	50 V / 4 A
Temperature range	- 20° C to +70 °C
Degree of protection	IP 67 (screw-locked)
Cable	Radox RailCat CAT5 7,3mm H+S-Nr. 12568935

Order information

420-311000	RAILCAT male-female 0,3M
420-311001	RAILCAT male-female 0,5M
420-311003	RAILCAT male-female 1,0M
420-311050	RAILCAT female-female 0,3M
420-311051	RAILCAT female-female 0,5M
420-311053	RAILCAT female-female 1,0M
420-311100	RAILCAT male-male 0,3M
420-311101	RAILCAT male-male 0,5M
420-311103	RAILCAT male-male 1,0M

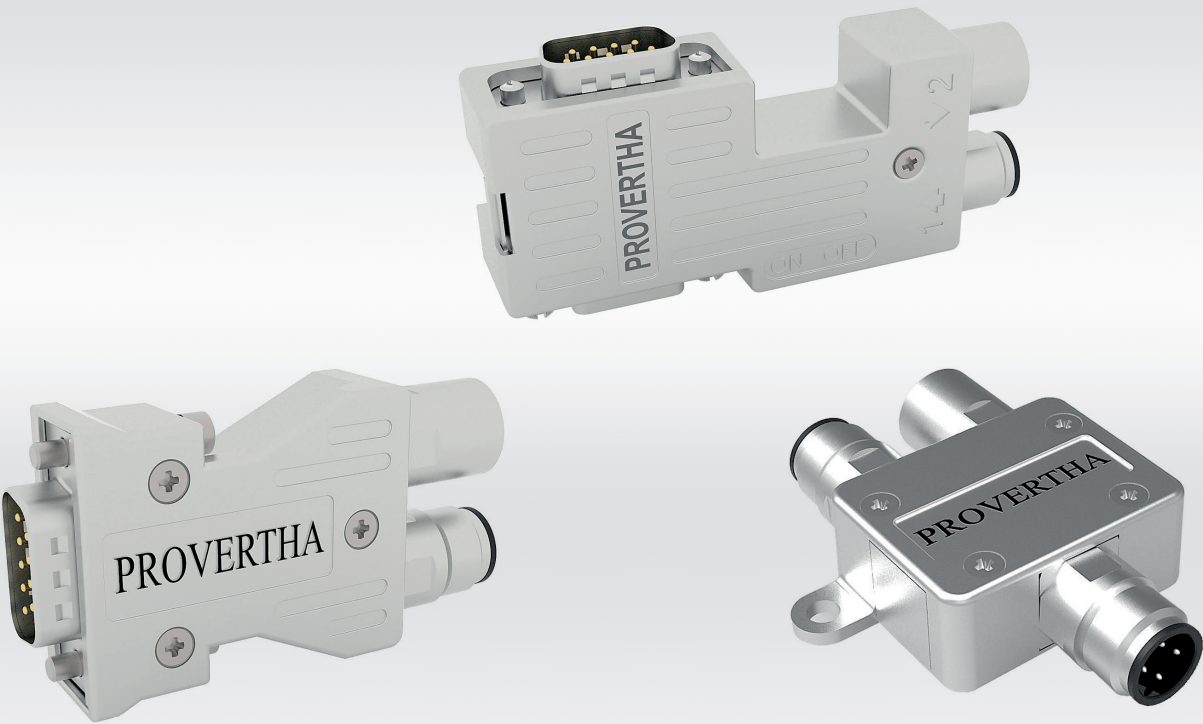
Your notes



**Bus connectors
for highest
reliability**

Fieldbus

Bus connectors for highest reliability



A wide product range in fully shielded, high-quality design for interference-free data transmission in fieldbus networks. Profibus and CAN bus bus plugs from PROVERTHA consist of completely shielded die-cast zinc housings for maximum EMI / RFI and high functional reliability. Four connection options and 5 housing versions solve every requirement and installation situation.

Profibus bus plug & play with two M12 plug-in connections

Profibus bus connector internal cable clamp, the reliable field assembly of Profibus cables.

Profibus bus connector external cable clamp, the reliable field assembly of Profibus special cables Ø 10 mm (up to 14 mm)

Profibus bus connector crimp flange / crimp sleeve, the shock- and vibration- and torsion-proof Profibus cable connection and at the same time non-detachable, so that a loosening of the cable is excluded. This is in a sense a „seal“ of the Profibus connection.

Axial and Small: Cable outlet 180 ° for directly stacked interfaces

Compact: Cable outlet 90 ° for short installation depth

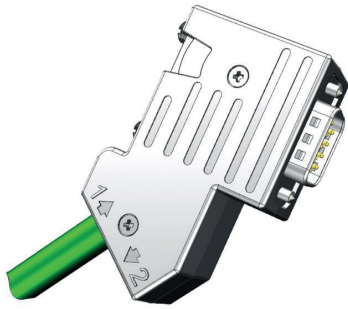
Compact II: for Siemens SINUMERIK NCU 7x0.3 PN with cable outlet 90 °

Special: Cable outlet 35 °

Smart 7: Design especially for Siemens S7-300 / S7-1200 / S7-1500

Fully shielded Profibus and CAN bus / DeviceNet M12 T and Y splitter

Technical data	
Data rate Profibus	12 MBit/s
Data rate CAN-Bus	1 MBit/s
Housing	Zn alloy
Plastics	
Bus connectors	Thermoplast UL 94 V-0
CAN-Bus M12 distributors	Thermoplast HL 3 EN 45545-2 and UL94 V-0
Profibus M12 distributors	Thermoplast UL 94 V-0
Mechanical lifetime	200 Mating cycles
Temperature range	
Bus connectors	- 20 °C to + 70 °C
M12 distributors	- 40 °C to + 85 °C
UL file bus connectors	E 363578

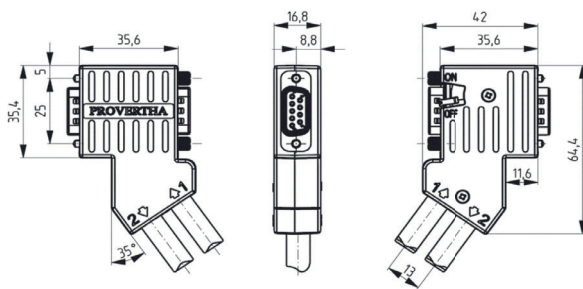


Universal Bus connector Special Internal cable clamp

Fully shielded with cable outlet 35° and 9 screw terminals

- The safe reliable field connection for Modbus/ RS 232 / RS 422 / RS 485
- Reliable fault-free data transmission
- 9 screw terminals for 1:1 connection to D-Sub pin 1-9
- Easy safe conductor connection with screw terminal
- Large conductor cross-section area: 0.14-1 qmm (AWG 26-18)
- Zinc die-cast housing for high shielding and rough environment
- Safe shield connection and strain relief with a solid cable clamp

Dimensions

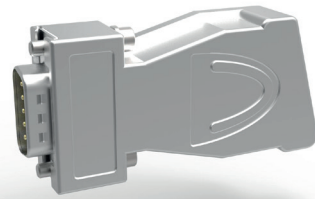


Technical data (mutual data on pages 52 & 53)

Bus-/ PG-interface	D-Sub 9-pole, pin/socket
Temperature range	-20° C to +70° C
Mechanical service life	200 mating cycles
Cable/conductor diameter	6,8 ± 0,3 + 8 ± 0,3 mm / 0,14 - 1 mm ²

Order information

40-7291132	UNIVERSAL SPECIAL IK OPG PVH
40-7292132	UNIVERSAL SPECIAL IK MPG PVH

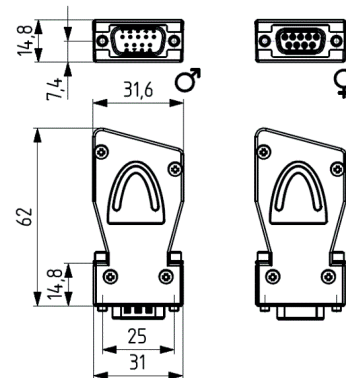


Fully shielded MVB / WTB axial bus connector

Crimp flange / crimp sleeve for extremely high requirements

- The vibration-proof reliable field connection for MVB/WTB bus
- Reliable fault-free data transmission in case of high requirements
- Vibration-proof shield connection and strain relief with crimp flange/sleeve
- Vibration-proof Profibus conductor connection with cage clamp
- 2 x cable outlet 180°
- Zinc die-cast housing with high shielding due to special design
- Zinc die-cast housing provides safe protection in rough environment
- Complete sets including crimp flange / crimp sleeve and blind plug

Dimensions

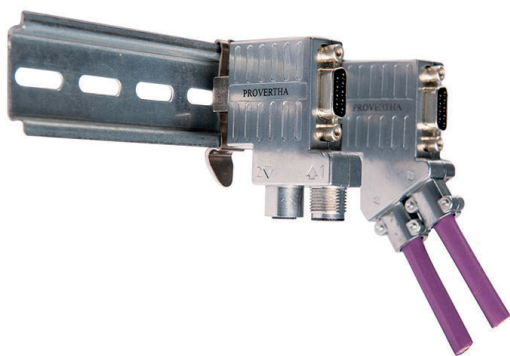


Technical data (mutual data on pages 52 & 53)

Interface	D-Sub 9-pole, male or female
Single wire stranded/ solid	0,14 - 0,75 mm ² (AWG 26 - 18)
Temperature range	-20° C up to +70° C
Mechanical lifetime	G1: 500 mating cycles or G2: 500 mating cycles

Order information

40-181142M11	Male G1 UNC Crimp-F: D 6-7 and Crimp-H:D 10-11
40-181152F12	Female G1 M3 Crimp-F: D 6-7 and Crimp-H:D 9,5-10,5
40-181152M12	Male G1 M3 Crimp-F: D 6-7 and Crimp-H:D 9,5-10,5
40-181152F21	Female G2 UNC Crimp-F: D 6-7 and Crimp-H:D 9,5-10,5
40-181152M11	Male G1 UNC Crimp-F: D 6-7 and Crimp-H:D 9,5-10,5
40-181152F22	Female G2 M3 Crimp-F: D 6-7 and Crimp-H:D 9,5-10,5
40-181162F21	Female G2 UNC Crimp-F: D 5,5-6,5 and Crimp-H:D 9,5-10,5
40-181172M11	Male G1 UNC Crimp-F: D 6,5-7,5 and Crimp-H:D 10-11

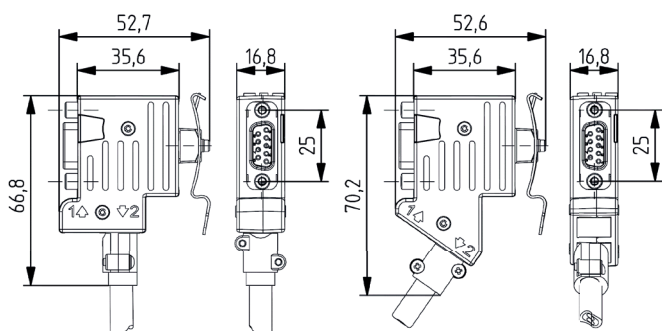


Full-metal D-Sub DIN top hat rail adapter

Safe contacting, shielding and ground connection

- Interference-free signal distributor or service interface in the control cabinet
- Reliable data transmission by means of crimp technology
- Easy snap-on assembly and safe ground connection with metal top hat rail clip
- 360° shielding with crimp flange/crimp sleeve
- Cable connection: cable clamp or crimp flange/crimp sleeve (order separately)
- Compact: cable outlet 2 x 90° / Special: cable outlet 2 x 35°
- D-Sub socket crimp (crimp contacts need to be ordered separately)
- Other versions like D-Sub pin upon request

Dimensions



Technical data (mutual data on pages 52 & 53)

Current carrying capacity	machined contact: 7 A
Test voltage	1 kV
Cable diameter	external clamp 7-10 mm (optional 4-14)
Temperature range	-55 °C to +125 °C

Order information

40-1392442	Compact socket cable clamp 7-10
40-1392472	Compact socket crimp flange (excl.)
40-1292442	Special D-Sub socket cable clamp 7-10
40-1292472	Special D-Sub socket crimp flange (excl.)

Profibus

Safe data transmission in Profibus networks

Fieldbus



A complete product range with bus connectors in fully shielded, high-quality design for secure data transmission in Profibus networks.

Four connection options for a wide variety of requirements

- Profibus bus connector Plug & Play M12

The functional and fail-safe quick connection in seconds

Two M12 plug-in connections for error-free connection of pre-assembled Profibus cables

- Profibus bus connector Internal cable clamp

The reliable field assembly of Profibus cables with vibration-proof conductor connection by cage clamp

- Profibus bus connector External cable clamp

Reliable field assembly of special cables up to Ø 10 mm (optional up to 14 mm) with vibration-proof conductor connection through cage clamp terminal.

- Profibus bus connector crimp flange / crimp sleeve

The shock-, vibration- and torsion-proof Profibus cable connection with vibration-proof conductor connection by cage clamp terminal and at the same time insoluble, so that a release of the cable is excluded. This is a kind of one „sealing“ of the Profibus connection.

5 housing versions for every installation situation

- Axial and Small: cable outlet 180 ° for stacked interfaces

- Compact: Cable outlet 90 ° for short installation depth

- Compact 2: Design for Siemens SINUMERIK NCU 7x0.3 PN with cable outlet 90 °

- Special: Cable outlet 35 ° for superimposed interfaces and limited installation depth

- Smart 7: Design for Siemens S7-300 / S7-1200 / S7-1500 with cable outlet 90 °

Shock and vibration-proof M12 Profibus connectors and cable assemblies with 360° shielding ensure secure data transmission,

Fully shielded M12 T- and Y-Splitter

- Full metal housing for robust applications with high requirements

- Crimp technology for functional safety

- Versions for wall mounting or for direct connection to device interfaces

- Customized versions on request

Technical data

Data rate	12 Mbit/s
Bus interface	D-Sub 9-pole male
PG interface optional	D-Sub 9-pole female
Mechanical lifetime	200 mating cycles
Temperature range	-20° C to + 70° C
Permissible humidity	Max 75% at + 25° C, non-condensing
Degree of protection	IP 30
Housing material	Zn alloy
D-Sub	Thermoplast UL 94-V0
D-Sub screw locking	Knurled screw UNC 4-40
UL file	E 363578

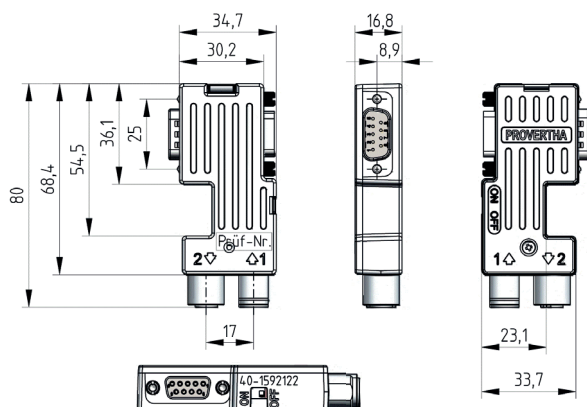


Profibus Bus connector Smart 7 Plug & Play M12

Metal case for S7-300/S7-1200/S7-1500

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Highest safety in the Profibus network
- Housing design especially for Siemens controls S7-300/S7-1200/S7-1500
- Zinc die-cast case for shielding and mechanical protection
- Externally operable switch for bus termination
- Versions with PG interface for diagnosis/programming
- Tested ready-made M12 cables for input/output

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate/interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable connection	Shielded M12 PROFIBUS cable

Order information

40-1591122	PROFIBUS SMART7 M12 OPG PVH
40-1592122	PROFIBUS SMART7 M12 MPG PVH
40-1591022	PROFIBUS SMART7 M12 KNOTEN OPG PVH

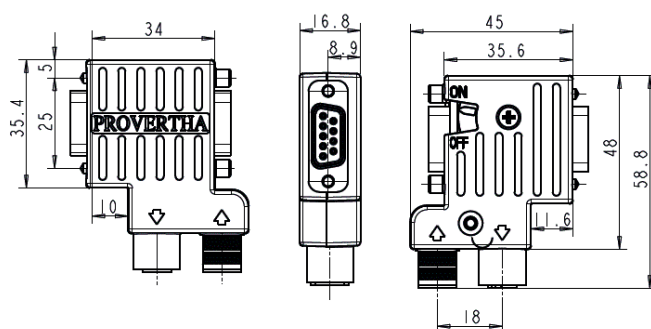


Bus connector Compact Plug & Play M12

Full-metal case with cable outlet 90°

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Highest safety in the Profibus network
- Cable outlet 90° especially for applications with low installation depth
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Tested ready-made M12 cables for input/output ex stock

Dimensions

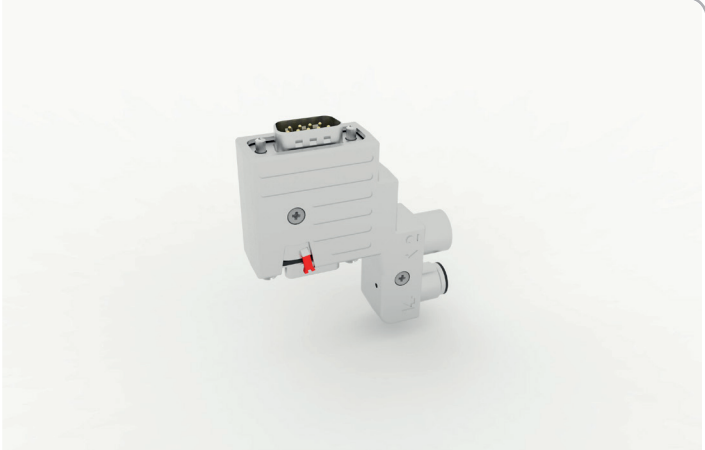


Technical data (mutual data on pages 52 & 56)

Data rate/interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable connection	Shielded M12 PROFIBUS cable

Order information

40-1391122	PROFIBUS COMPACT M12 OPG PVH
40-1392122	PROFIBUS COMPACT M12 MPG PVH

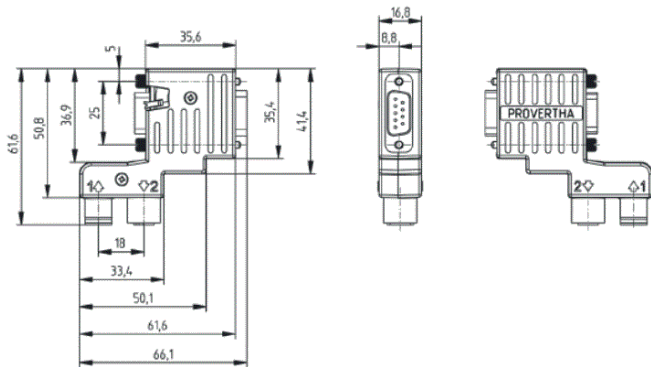


Profibus Bus connector Compact 2 Plug & Play M12

Fault-free quick connection for SINUMERIK NCU 7x0.3 PN

- Housing design and cable outlet 90° for SINUMERIK NCU 7x0.3 PN
- Reliable and fault-free due to shielded M12 Profibus cables
- Easy installation without special knowledge
- Completely shielded zinc die-cast case for EMI/RFI safety
- Massive switch lever externally operable for activating the bus termination
- Lever ON/OFF position in colour and visible front
- Programming/diagnosis option with 2nd D-Sub
- 100 % tested bus connector for high reliability

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable connection	Shielded M12 PROFIBUS cables

Order information

40-1491122	PROFIBUS COMPACT 2 M12 OPG PVH
40-1492122	PROFIBUS COMPACT 2 M12 MPG PVH

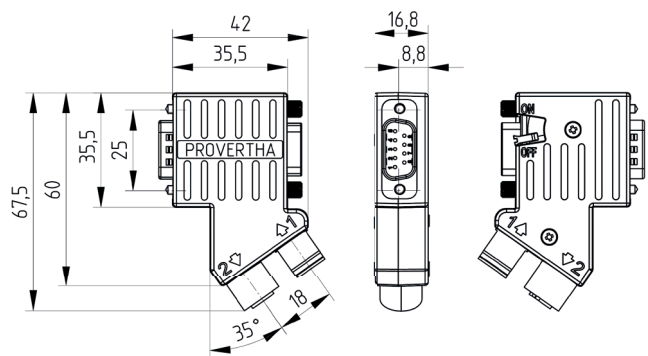


Bus connector Special Plug & Play M12

Full-metal case with cable outlet 35°

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Cable outlet 35° avoids collision with cable channel/interface
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Tested ready-made M12 cables for input/output ex stock

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable connection	Shielded M12 PROFIBUS cables

Order information

40-1291122	PROFIBUS SPECIAL M12 OPG PVH
40-1292122	PROFIBUS SPECIAL M12 MPG PVH

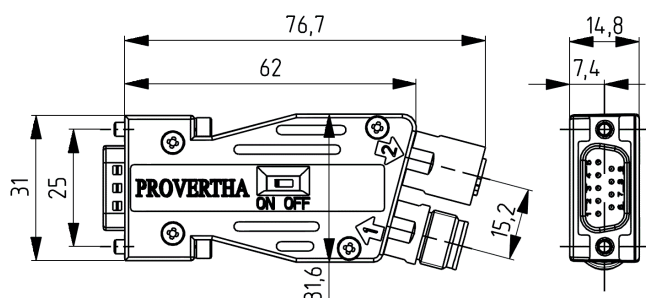


Bus connector Axial Plug & Play M12

Full-metal case with cable outlet 180°

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Highest safety in the Profibus network
- Cable outlet 180° for directly overlying interfaces
- Zinc die-cast case with special shielding design
- Vibration-proof latching with Allen screw with spring washer
- Tested ready-made M12 cables for input/output ex stock
- Bus termination via externally operable lever

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable connection	shielded M12 PROFIBUS cables

Order information

40-1191122	PROFIBUS AXIAL M12 PVH
40-1191022	PROFIBUS AXIAL M12 KNOTEN PVH

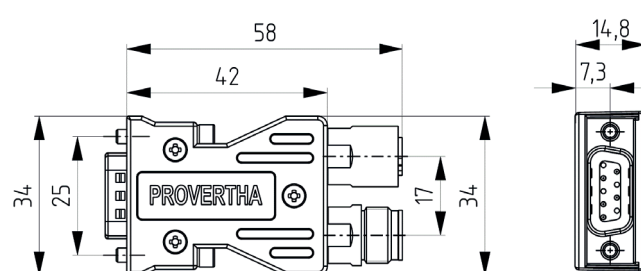


Bus connector Small Plug & Play M12

Full-metal case with cable outlet 180° in IP67 or IP30

- 360° EMI/RFI shielding due to full-metal case
- Plug & Play M12 quick connection
- Compact outer dimensions for restricted installation situations
- Massive housing for rough environmental conditions
- Vibration-proof latching with Allen screw with spring washer
- Node version
- Termination happens via M12 Profibus bus-termination
- 100 % tested bus connector for high functional reliability

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable connection	shielded M12 PROFIBUS cables

Order information

40-1193022	Profibus SMALL M12 IP30
40-1193067	Profibus SMALL M12 IP67

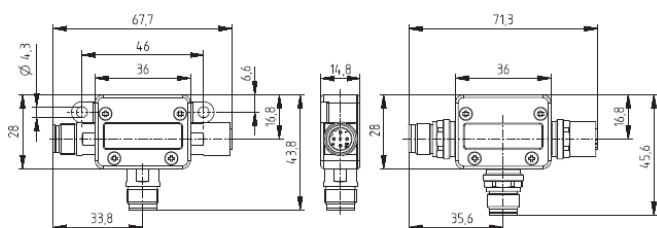


Profibus M12 T-Splitter

360° Shielding and rough applications due to full-metal case

- 360° EMI/RFI zinc die-cast full-metal case
- Protection class IP 67
- M12 B-code, 5-pole
- Pin 1-4 connected, shield on housing
- Version for direct interface connection with rotatable M12 connection
- Version with mounting brackets for wall mounting
- Articles with different pin/socket and pin assignment upon request
- For rough environmental conditions due to full-metal case

Dimensions

**Technical data** (mutual data on pages 52 & 56)

Nominal voltage/current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Protection class	IP 67
Insulator	Thermoplast UL 94-V0

Order information

42-100007	Direct connection without lugs
42-100017	Wall mounting with lugs

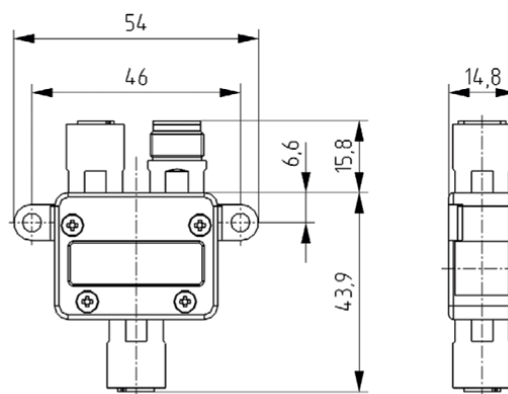


Profibus M12 Y-Splitter

360° Shielding and rough applications due to full-metal case

- 360° EMI/RFI zinc die-cast full-metal case
- Protection class IP 67
- M12 B-code, 5-pole
- Pin assignment: pin 1-4 connected, shield on case
- Version for direct interface connection with rotatable M12 connection
- Version with mounting brackets for wall mounting
- Articles with different pin/socket and pin assignment upon request
- For rough environmental conditions due to full-metal case

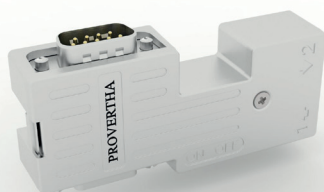
Dimensions

**Technical data** (mutual data on pages 52 & 56)

Nominal voltage/current	50 V / 4 A
Temperature range	- 40 °C to + 85 °C
Protection class	IP 67
Insulator	Thermoplast UL 94-V0

Order information

42-100008	Wall mounting with lugs
42-100018	Direct connection without lugs

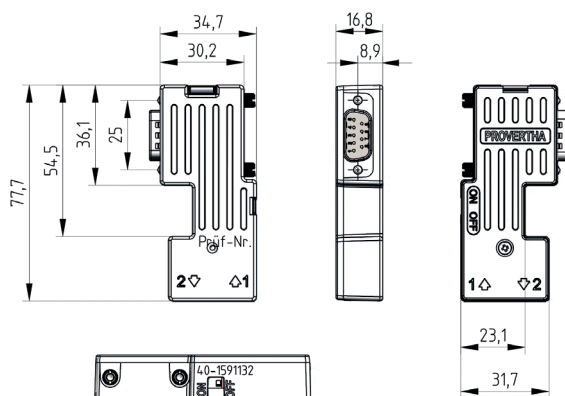


Bus connector Smart 7 Internal cable clamp

Fully shielded for S7-300/S7-1200/S7-1500

- Internal cable clamp for reliable field connection
- Reliable fault-free data transmission
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Housing design especially for Siemens controls S7-300/S7-1200/S7-1500
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Safe shield connection and strain relief by means of full-metal cable clamp

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	8 ± 0,3 mm / 0,08 - 0,5mm ²

Order information

40-1591132	PROFIBUS SMART7 IK OPG PVH
40-1592132	PROFIBUS SMART7 IK MPG PVH
40-1591022	PROFIBUS SMART7 IK OPG KNOTEN PVH

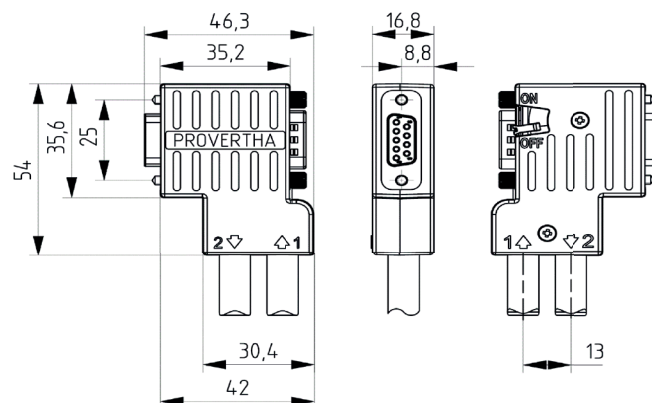


Bus connector Compact Internal cable clamp

Fully shielded with cable outlet 90°

- The safe reliable field connection for Profibus cables
- Reliable fault-free data transmission
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 90° especially for applications for low installation depth
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Safe shield connection and strain relief by means of full-metal cable clamp

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	8 ± 0,3 mm / 0,08 - 0,5mm ²

Order information

40-1391132	PROFIBUS COMPACT IK OPG PVH
40-1392132	PROFIBUS COMPACT IK MPG PVH
40-1391032	PROFIBUS COMPACT KNOTEN IK OPG PVH

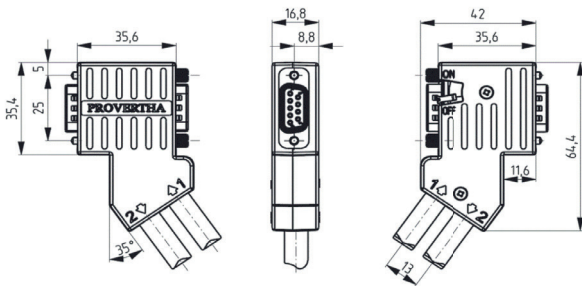


Bus connector Special Internal cable clamp

Fully shielded with cable outlet 35°

- The safe reliable field connection for Profibus cables
- Reliable fault-free data transmission
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 35° avoids collision with duct/interface
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Safe shield connection and strain relief by means of full-metal cable clamp

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	8 ± 0,3 mm / 0,08 - 0,5mm ²

Order information

40-1291132	PROFIBUS SPECIAL IK OPG PVH
40-1292132	PROFIBUS SPECIAL IK MPG PVH

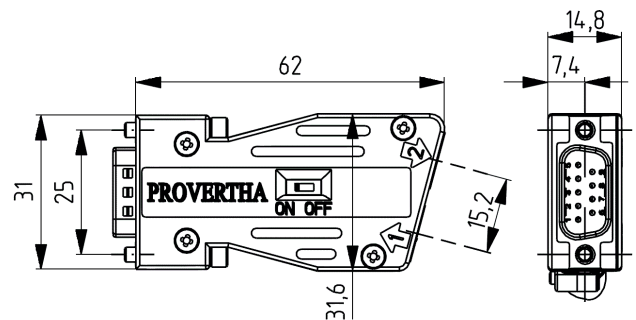


Bus connector Axial Internal cable clamp

Fully shielded with cable outlet 180°

- The safe reliable field connection for Profibus cables
- Reliable fault-free data transmission
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 180° for directly overlying interfaces
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Safe shield connection and strain relief by means of full-metal cable clamp

Dimensions

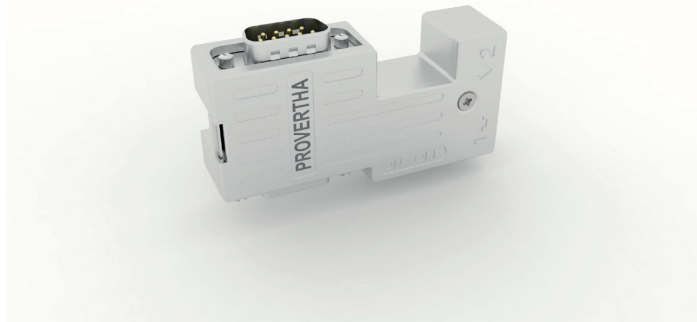


Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	8 ± 0.3 mm / 0.08-0,5 mm ²

Order information

40-1191132	PROFIBUS AXIAL IK PVH
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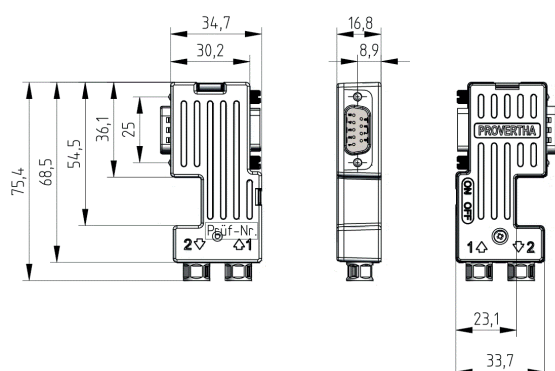


Bus connector Smart 7 crimp flange

360° shielding for S7-300/S7-1200/S7-1500

- The vibration-proof reliable field connection for Profibus cables
- Reliable fault-free data transmission in case of high requirements
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Housing design especially for Siemens controls S7-300/S7-1200/S7-1500
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Vibration-proof shield connection and strain relief with crimp flange/sleeve

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	8 ± 0,3 mm / 0,08 - 0,5mm ²

Order information

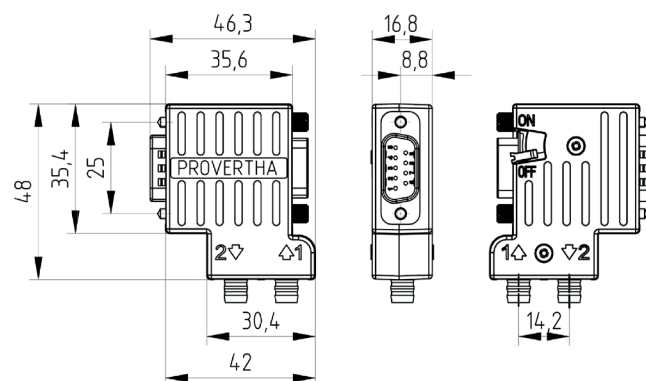
40-1591172	PROFIBUS SMART7 CR OPG PVH
40-1592172	PROFIBUS SMART7 CR MPG PVH



Bus connector Special crimp flange

- The vibration-proof reliable field connection for Profibus cables
- Reliable fault-free data transmission in case of high requirements
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 90° especially for applications for low installation depth
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Vibration-proof shield connection and strain relief with crimp flange/sleeve

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	250 mating cycles
Cable/conductor diameter	8 ± 0,3 mm / 0,08 - 0,5mm ²

Order information

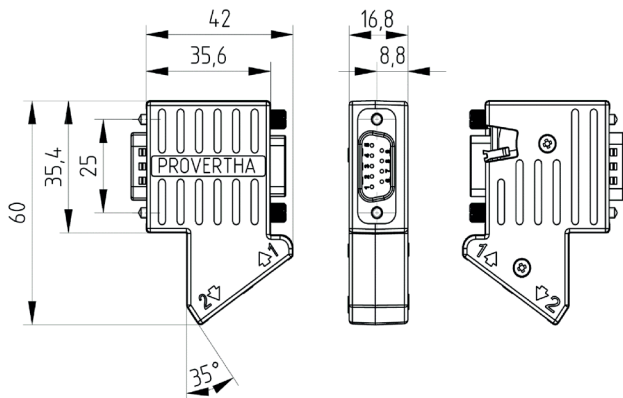
40-1391172	PROFIBUS COMPACT CR OPG PVH
40-1392172	PROFIBUS COMPACT CR MPG PVH



Bus connector Special crimp flange

- The vibration-proof reliable field connection for Profibus cables
- Reliable fault-free data transmission in case of high requirements
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 35° avoids collision with duct/interface
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Vibration-proof shield connection and strain relief with crimp flange/sleeve

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20 °C to +70 °C 200 mating cycles
Mechanical service life	200 mating cycles
Cable/conductor diameter	8 ± 0,3 mm / 0,08 - 0,5mm ²

Order information

40-1291172	PROFIBUS SPECIAL CR OPG PVH
40-1292172	PROFIBUS SPECIAL CR MPG PVH

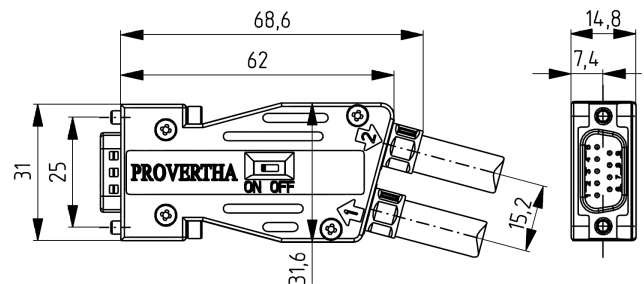


Profibus Bus connector Axial crimp flange

360° shielding and cable outlet 90°

- The vibration-proof reliable field connection for Profibus cables
- Reliable fault-free data transmission in case of high requirements
- Vibration- proof shield connection and strain relief with crimp flange/sleeve
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 180° for directly overlying interfaces
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Bus termination via externally operable switch

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	112 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	8 ± 0,3 mm / 0,08 - 0,5mm ²

Order information

40-1191172	PROFIBUS AXIAL CR PVH
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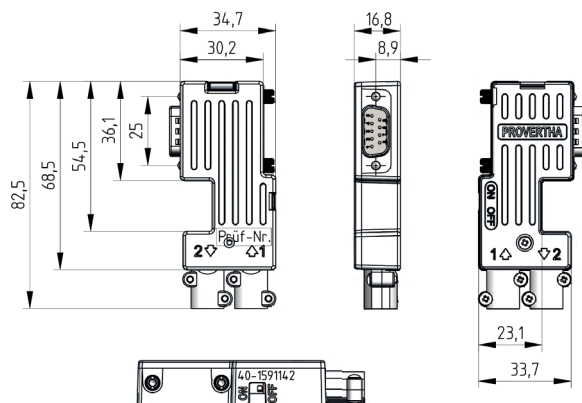


Bus connector Smart 7 External cable clamp

Fully shielded for S7-300/S7-1200/S7-1500 and cables 7-10 mm

- The safe reliable field connection for special Profibus cables up to Ø14Ø14
- Reliable fault-free data transmission
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Housing design especially for Siemens controls S7-300/S7-1200/S7-1500
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Safe shield connection and strain relief due to full metal cable clamp

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	7-10 mm / 0.08-0.5 mm²

Order information

40-1591142	PROFIBUS SMART7 EK OPG PVH
40-1592142	PROFIBUS SMART7 EK MPG PVH
40-1591042	PROFIBUS SMART7 EK OPG KNOTEN PVH

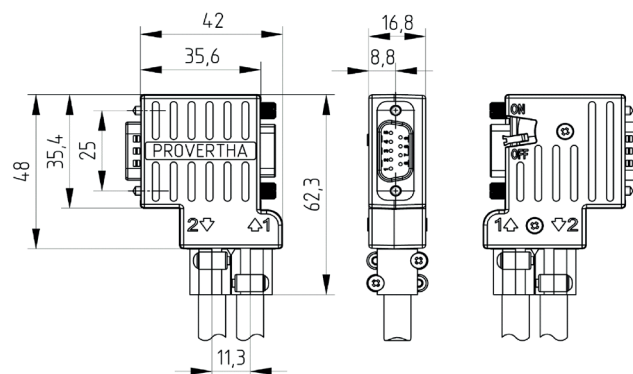


Bus connector Compact External cable clamp

Fully shielded with cable outlet 35° for cables 7-10 mm

- The safe reliable field connection for special Profibus cables up to Ø10 (Ø14)
- Reliable fault-free data transmission
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 90° especially for applications for low installation depth
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Safe shield connection and strain relief due to full metal cable clamp

Dimensions

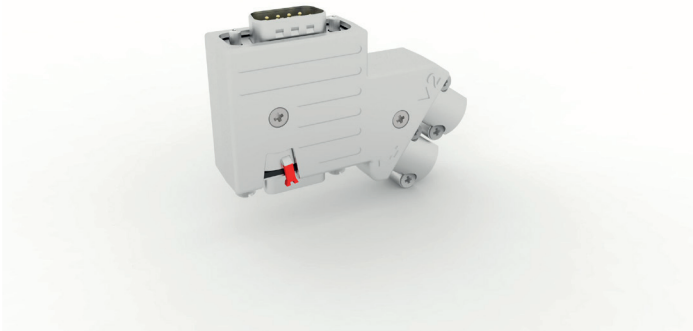


Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	7 - 10 mm / 0,08 - 0,5mm²

Order information

40-1391142	PROFIBUS COMPACT EK OPG PVH
40-1392142	PROFIBUS COMPACT EK MPG PVH

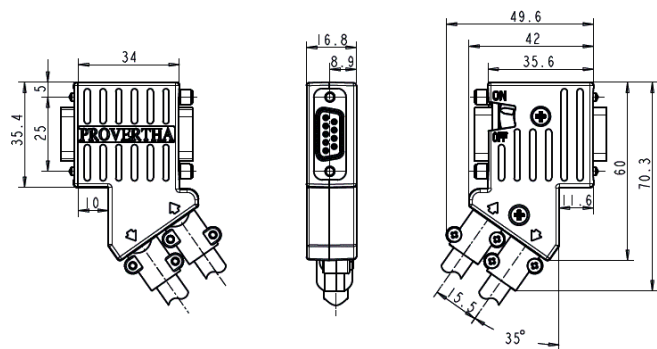


Bus connector Special External cable clamp

Fully shielded with cable outlet 35° for cables 7-10 mm

- The safe reliable field connection for special Profibus cables up to Ø 7-10
- Reliable fault-free data transmission
- High safety in the Profibus network
- Vibration-proof Profibus conductor connection with cage clamp
- Cable outlet 35° avoids collision with duct/interface
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Safe shield connection and strain relief due to full metal cable clamp

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	7 - 10 mm / 0,08 - 0,5mm ²

Order information

40-1291142	PROFIBUS SPECIAL EK OPG PVH
40-1292142	PROFIBUS SPECIAL EK MPG PVH

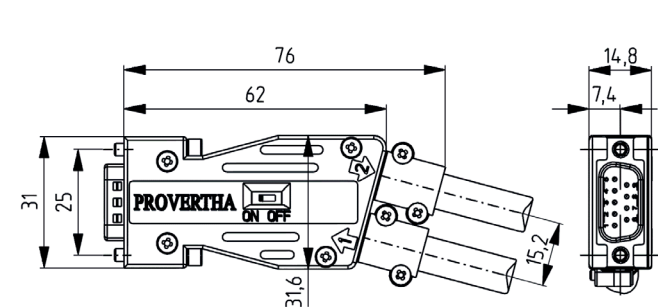


Shielded Profibus Bus connector Axial EK

Cable outlet 180° and cable diameter 7-10 mm

- Cable outlet 180° for directly overlying interfaces
- Effektive shielding with a full-metal case and massive cable clamp
- Fault-free connection by use of colour clamps for the Profibus cores
- Vibration-proof, easy and fast due to cage clamp
- Flexibility at the outer cable diameter due to cable clamp
- Lever externally operable for the bus termination
- Vibration-proof Inbus screw UNC 4-40 with pre-assembled spring washer
- 100 % tested bus connector for high functional reliability

Dimensions



Technical data (mutual data on pages 52 & 56)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, pin
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	7 - 10 mm / 0,08 - 0,5mm ²

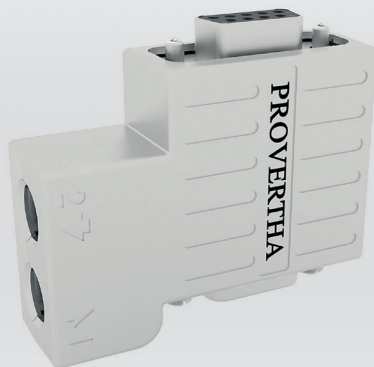
Order information

40-1191142	PROFIBUS AXIAL EK PVH
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Your notes

CAN bus

Safe data transmission in CAN bus networks



A complete product range with bus connectors in fully shielded, high-quality design for secure data transmission in CAN / DeviceNet networks.

Four connection options for a wide variety of requirements

- CAN bus bus connector Plug & Play M12

The functional and fail-safe quick connection in seconds

Two M12 plug-in connections for error-free connection of M12 CAN / DeviceNet cables

- Bus connector Internal cable clamp

The reliable field assembly with safe conductor connection via screw terminal

- Bus connector External cable clamp

The reliable field assembly of special cables up to 10 mm with safe conductor connection via screw terminal

- Bus connector crimp flange / crimp sleeve

The shock-, vibration- and torsion-proof CAN / DeviceNet cable connection with safe conductor connection via screw terminal

4 housing versions for every installation situation

- Axial and Small: cable outlet 180 ° for directly stacked interfaces

- Compact: Cable outlet 90 ° for low installation depth

- Special: Cable outlet 35 ° for stacked interfaces and limited installation depth

Shock and vibration-proof M12 A-5 cable connectors and cable assemblies with 360 ° shielding ensure secure data transmission

Fully shielded M12 T- and Y-Splitter

- Full metal housing with 360 ° shielding for robust applications with high requirements

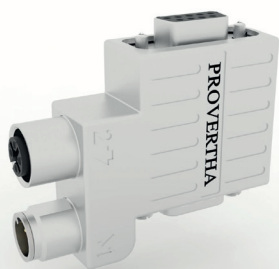
- Crimp technology for functional safety

- Versions for wall mounting or for direct connection to device interfaces

- Customized versions on request

Technical data

Data rate	1 Mbit/s
Bus interface	D-Sub 9-pole female
PG interface optional	D-Sub 9-pole male
Mechanical lifetime	200 mating cycles
Temperature range	-20° C to + 70° C
Permissible humidity	Max 75% at + 25° C, non-condensing
Degree of protection	IP 30
Housing material	Zn alloy
D-Sub	Thermoplast UL-94V0
D-Sub screw locking	Knurled screw UNC 4-40
UL file	E 363578

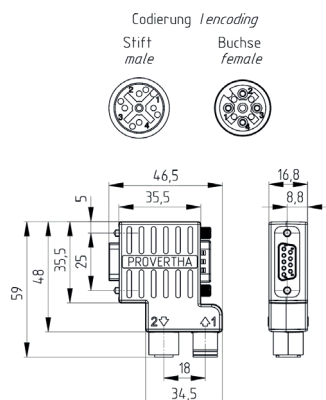


Bus connector Compact Plug & Play M12

Reliable quick connection with cable outlet 90°

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Cable outlet 90° for limited installation depth
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Massive switch lever externally operable for bus termination
- Versions MPG with 2nd D-Sub pin as PG/diagnosis-interface
- 2 versions: index 63: cable shield on pin1/ 53: cable shield on case

Dimensions

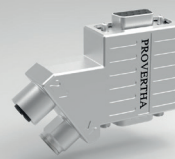


Technical data (mutual data on pages 52 & 68)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200
Cable connection	Shielded M12 CAN-bus cable

Order information

40-5391122	CANBUS COMPACT M12 OPG shield on case
40-6391122	CANBUS COMPACT M12 OPG shield on pin 1
40-5392122	CANBUS COMPACT M12 MPG shield on case
40-6392122	CANBUS COMPACT M12 MPG shield on pin 1

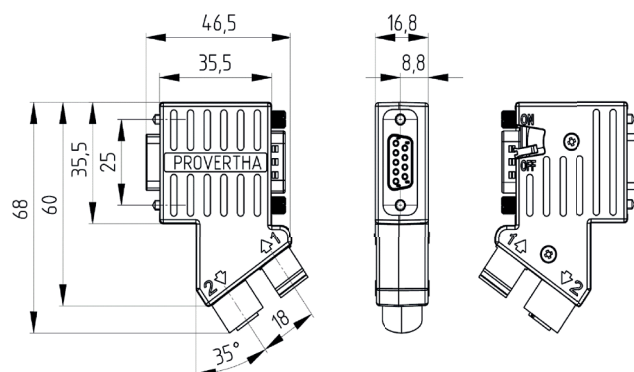


Bus connector Special Plug & Play M12

Reliable quick connection with cable outlet 35°

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Cable outlet 55 ° for overlying interfaces
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Massive switch lever externally operable for bus termination
- Versions MPG with 2nd D-Sub pin as PG/diagnosis-interface
- 2 versions: index 63: cable shield on pin1/ 53: cable shield on case

Dimensions



Technical data (mutual data on pages 52 & 68)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200
Cable connection	Shielded M12 CAN-bus cable

Order information

40-5291122	CANBUS SPECIAL M12 OPG shield on case
40-6291122	CANBUS SPECIAL M12 OPG shield on pin 1
40-5292122	CANBUS SPECIAL M12 MPG shield on case
40-6292122	CANBUS SPECIAL M12 MPG shield on pin 1

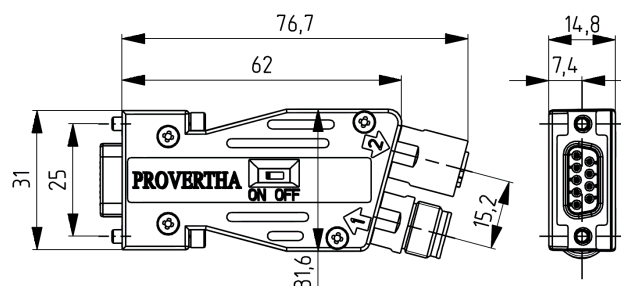


Bus connector Axial Plug & Play M12

Reliable quick connection and cable outlet 180°

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Highest safety in the CAN-network
- Cable outlet 180° for directly overlying interfaces
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Bus termination with externally operable lever
- 2 versions: Index 61: cable shield on pin 1/ 51: cable shield on case

Dimensions



Technical data (mutual data on pages 52 & 68)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200
Cable connection	Shielded M12 CAN-bus cables

Order information

40-5191122	CANBUS AXIAL M12 OPG shield on case
40-619122	CANBUS AXIAL M12 OPG shield on pin 1

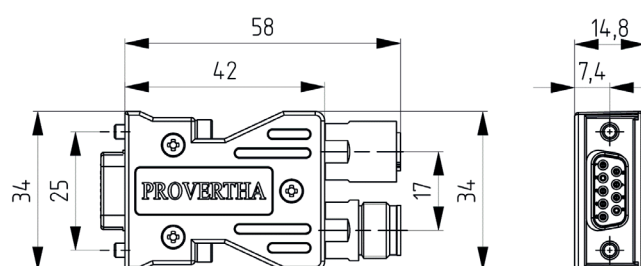


Bus connector Small Plug&Play M12 IP 67 und IP 30

Reliable quick connection with cable outlet 180°

- Plug & Play M12: the cost-saving direct quick connection
- Reliable fault-free data transmission
- Cable outlet 180° for directly overlying interfaces
- Zinc die-cast case with high shielding due to special design
- Vibration-proof screw-latching with Inbus screw with spring washer
- Node version with termination via M12 CAN bus termination
- Versions with protection class IP 67 or IP 30
- 100 % tested bus connectors for high functional reliability

Dimensions



Technical data (mutual data on pages 52 & 68)

Data rate / interface	12 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200
Cable connection	Shielded M12 CAN-bus cables

Order information

40-5193022	CANBUS SMALL M12 IP30 shield on case
40-5193067	CANBUS SMALL M12 IP67 shield on case
40-6193022	CANBUS SMALL M12 IP30 shield on pin 1
40-6193067	CANBUS SMALL M12 IP67 OPG shield on pin 1

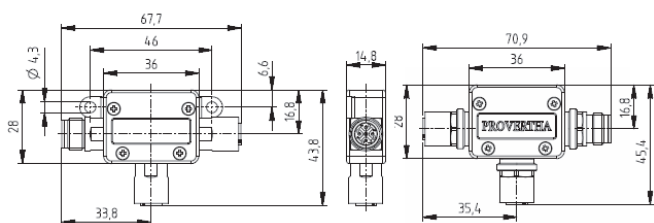


CAN M12 T-Splitter

360° Shielding and rough applications due to full-metal case

- 360° EMI/RFI-Zinc die-cast full-metal case
- Protection class IP 67
- M12 A-code, 5-pole pin 1-5 connected
- Version for direct interface connection with rotatable M12 connection
- Version with mounting brackets for wall mounting
- For rough applications due to full-metal case
- Plastic materials certified for railway applications
- Special editions upon request

Dimensions



Technical data (mutual data on pages 52 & 68)

Nominal voltage/current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Protection class	IP 67
Plastic material	Thermoplast HL3 acc. to EN 45545-2

Order information

42-500007	Wall mounting with lugs
42-500017	Direct connection without lugs

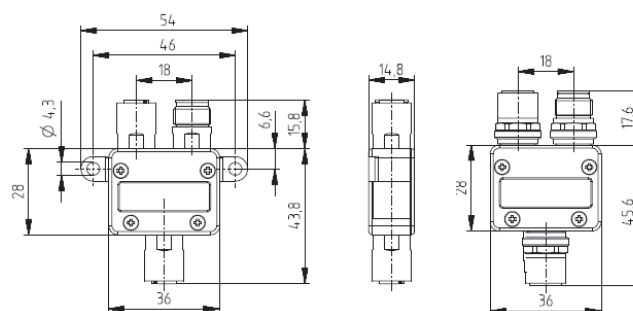


CAN M12 Y-Splitter

360° shielding and rough applications due to full-metal case

- 360° EMI/RFI-Zinc die-cast full-metal case
- Protection class IP 67
- M12 A-code, 5-pole pin 1-5 connected
- Version for direct interface connection with rotatable M12 connection
- Version with mounting brackets for wall mounting
- For rough applications due to full-metal case
- Plastic materials certified for railway applications
- Special editions upon request

Dimensions



Technical data (mutual data on pages 52 & 68)

Nominal voltage/current	50 V / 4 A
Temperature range	-40 °C to +85 °C
Protection class	IP 67
Plastic material	Thermoplast HL3 acc. to EN 45545-2

Order information

42-500008	Wall mounting with lugs
42-500018	Direct connection without lugs

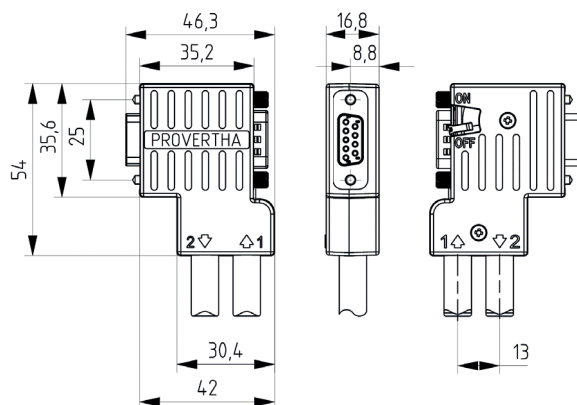


Bus connector Compact Internal cable clamp

Fully shielded with cable outlet 90°

- The safe reliable field connection for CAN bus cables
- Reliable fault-free data transmission
- Cable outlet 90° especially for applications with low installation depth
- Safe shield connection and strain relief by means of full-metal cable clamp
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Massive colour switch lever for externally operable bus termination
- Versions MPG with 2nd D-Sub pin as PG/diagnosis interface

Dimensions

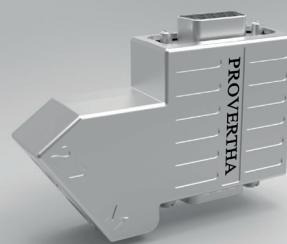


Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	6,5 - 7 mm / 0,08 - 0,5mm ²

Order information

40-5391132	CANBUS COMPACT 90 IK OPG PVH
40-5392132	CANBUS COMPACT 90 IK MPG PVH

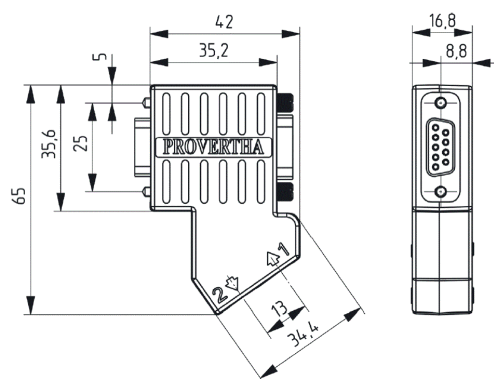


Bus connector Special Internal cable clamp

Fully shielded with cable outlet 35°

- The safe reliable field connection for CAN bus cables
- Reliable fault-free data transmission
- Cable outlet 35° especially for overlying interfaces
- Safe shield connection and strain relief by means of full-metal cable clamp
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Massive colour switch lever for externally operable bus termination
- Versions MPG with 2nd D-Sub pin as PG/diagnosis interface

Dimensions



Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	6,5 - 7 mm / 0,08 - 0,5mm ²

Order information

40-5291132	CANBUS SPEZIAL 35 IK OPG PVH
40-5292132	CANBUS SPEZIAL 35 IK MPG PVH

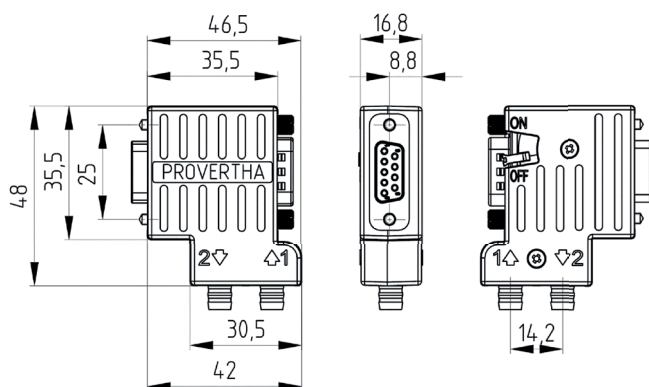


Bus connector Compact crimp flange

360° shielding and cable outlet 90°

- The vibration-proof reliable field connection for CAN bus cables
- Reliable fault-free data transmission in case of high requirements
- Cable outlet 90° especially for applications with low installation depth
- Easy safe CAN-bus conductor connection with screw terminal
- 360° EMI/RFI shielding by means of crimp flange/sleeve and full-metal case
- Vibration-proof shield connection and strain relief with crimp flange/sleeve
- Zinc die-cast case provides safe protection in rough environment
- Massive switch lever for externally operable bus termination

Dimensions

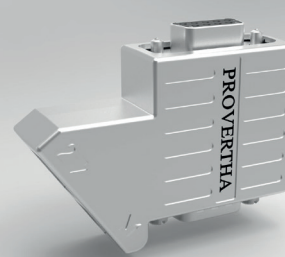


Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	6,5 - 7 mm / 0,08 - 0,5mm ²

Order information

40-5391172	CAN-BUS COMPACT 90 CR OPG PVH
40-5392172	CAN-BUS COMPACT 90 CR MPG PVH

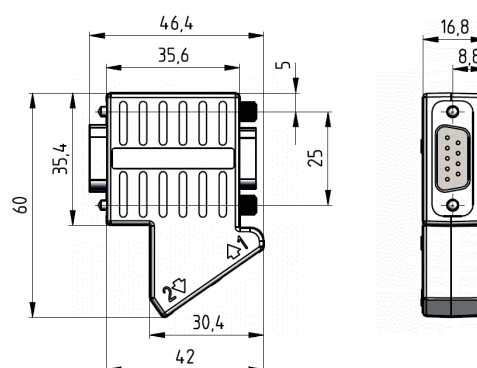


Bus connector Special crimp flange

360° shielding with cable outlet 35°

- The vibration-proof reliable field connection for CAN bus cables
- Reliable fault-free data transmission in case of high requirements
- Cable outlet 35° for overlying interfaces
- Easy safe CAN-bus conductor connection with screw terminal
- 360° EMI/RFI shielding by means of crimp flange/sleeve and full-metal case
- Vibration-proof shield connection and strain relief with crimp flange/sleeve
- Zinc die-cast case provides safe protection in rough environment
- Massive switch lever for externally operable bus termination

Dimensions



Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	6,5 - 7 mm / 0,08 - 0,5mm ²

Order information

40-5291172	CAN-BUS SPEZIAL 35 CR OPG PVH
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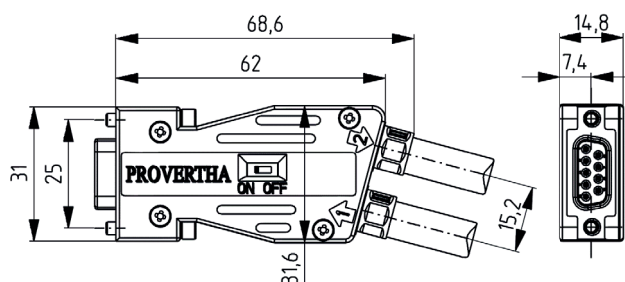


CAN bus connector Axial crimp flange

360° shielding and cable outlet 180°

- Cable outlet 180° for directly overlying interfaces
- The safe reliable field connection for CAN bus cables
- Reliable data transmission in case of high requirements
- Vibration-proof shield connection and strain relief with crimp flange/sleeve
- Easy and fast due to screw terminal
- Zinc die-cast case with high shielding due to special design
- Zinc die-cast case provides safe protection in rough environment
- Bus termination with externally operable lever

Dimensions

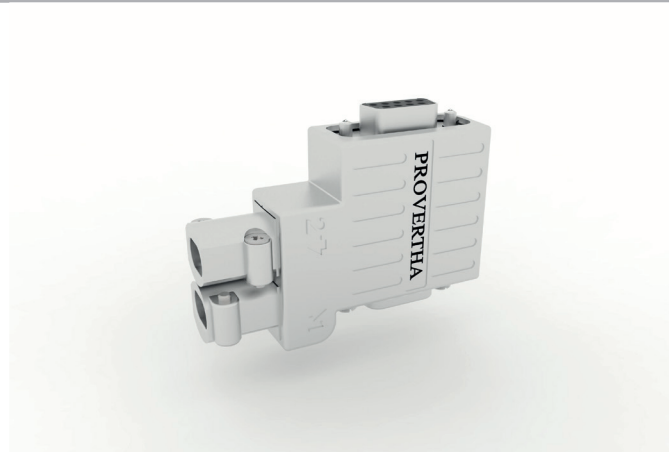


Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	6,5 - 7 mm / 0,08 - 0,5mm ²

Order information

40-5191172	CANBUS AXIAL CR PVH
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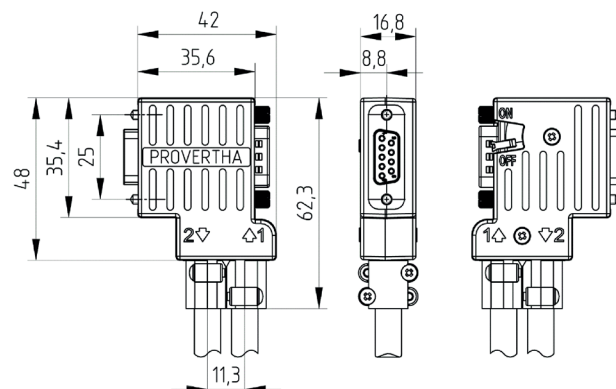


Bus connector Compact External cable clamp

Fully shielded with cable outlet 90° for cables 7-10 mm

- The safe reliable field connection for CAN bus cables up to Ø10 (Ø14)
- Reliable fault-free data transmission
- Cable outlet 90° especially for applications with low installation depth
- Easy and safe CAN-Bus conductor connection with screw terminal
- Zinc die-cast case with high shielding due to special design
- Safe shield connection and strain relief with crimp flange/sleeve
- Massive switch lever externally operable for bus termination
- Versions MPG with 2nd D-Sub pin as PG/diagnosis interface

Dimensions

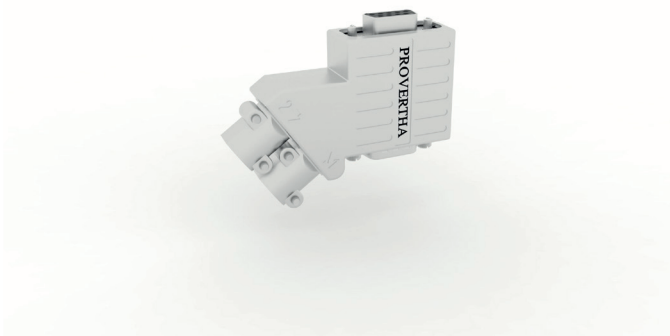


Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	7 - 10 mm / 0,08 - 0,5mm ²

Order information

40-5391142	CANBUS COMPACT EK OPG PVH
40-5392142	CANBUS COMPACT EK MPG PVH

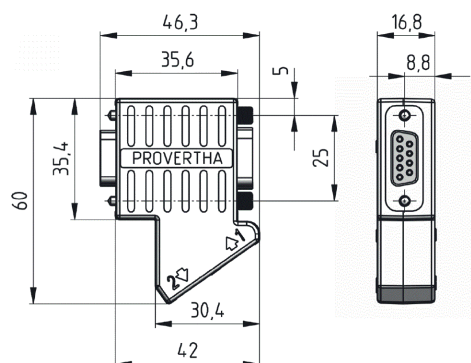


Bus connector Special External cable clamp

Fully shielded with cable outlet 35° for cables 7-10 mm

- The safe reliable field connection for CAN bus cables up to Ø10 (Ø14)
- Reliable fault-free data transmission
- Cable outlet 55° for overlying interfaces
- Easy and safe CAN bus conductor connection with screw terminal
- Zinc die-cast case with high shielding due to special design
- Safe shield connection and strain relief by means of full-metal cable clamp
- Massive switch lever externally operable for bus termination
- Versions MPG with 2nd D-Sub pin as PG/diagnosis interface

Dimensions

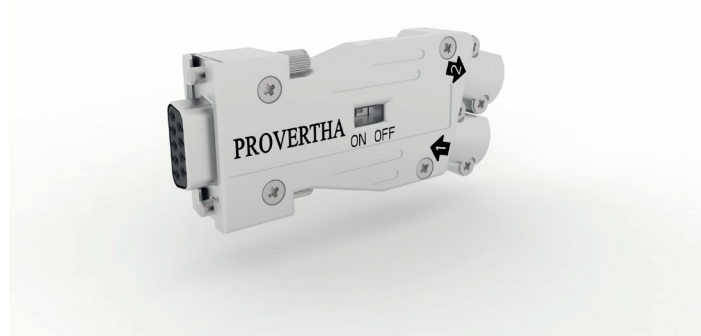


Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	7 - 10 mm / 0,08 - 0,5mm ²

Order information

40-5291142	CANBUS SPEZIAL EK OPG PVH
40-5292142	CANBUS SPEZIAL EK MPG PVH

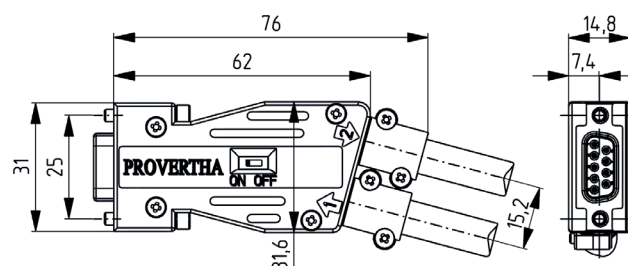


Bus connector Axial External cable clamp

Fully shielded with cable outlet 180° for cables 7-10 mm

- For directly overlying interfaces
- Cable connection: 180° towards D-Sub plug-in direction
- Effective shielding by means of full-metal case and massive cable clamp
- Easy and fast core connection with screw terminal
- Flexibility at the outer cable diameter due to cable clamp
- Lever externally operable for activating the bus termination
- Vibration-proof latching with Inbus screw with spring washer
- 100 % tested bus connectors for high functional reliability

Dimensions



Technical data (mutual data on pages 52 & 68)

Data rate / interface	1 Mbit/s / D-Sub 9-pole, socket
Temperature range	-20° C to +70° C
Lifetime	200 mating cycles
Cable/conductor diameter	7 - 10 mm / 0,08 - 0,5mm ²

Order information

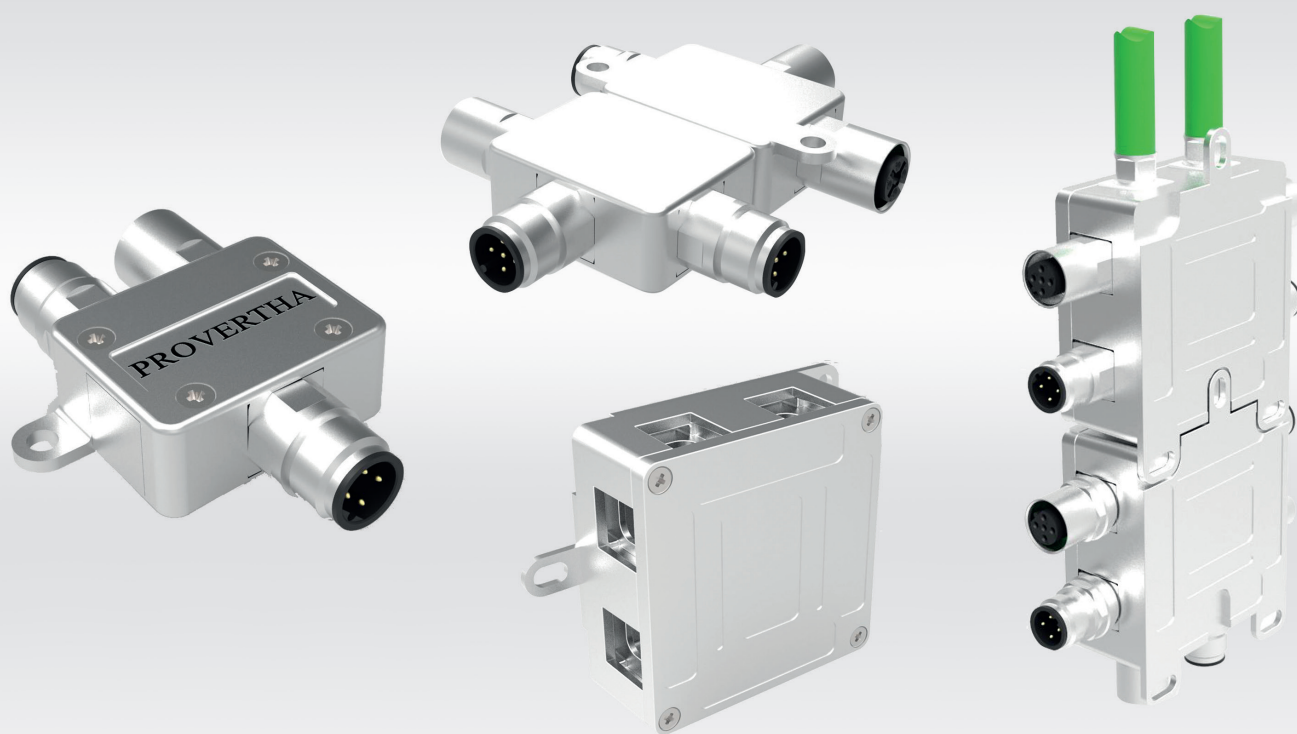
40-5191142	CANBUS AXIAL EK PVH
------------	---------------------

**Compact modular
distribution
systems reliable
in rough
environment**



Compact fully shielded distribution systems

Modular, expandable solutions with 360 ° shielding



Distribution system construction kit with basic module versions

- T / Y distributor in a very compact miniature design with up to 5 inputs / outputs
- Compact distribution box with up to 8 inputs / outputs.

Adapter for interlinking enables high flexibility for different applications

Various connection options, tailor-made, functionally reliable solutions.

- M8 connector
- M12 connector
- External cable clamp for large cable diameters
- Crimping / crimping sleeve system for torsion / vibration-proof strain relief and shield contact

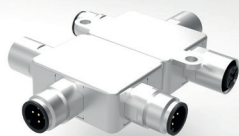
Snap-on mounting on the top-hat rail with a top-hat rail clip adapter

The distribution system is secure thanks to its special design with an all-round shielded solid full metal housing

In combination with connection options with 360 ° shielding, high functional reliability for the highest requirements.

Technical data

Temperature range	- 40 ° C to + 85 ° C
Protection class	IP 67 (encapsulated)
Housing	Zn alloy; optionally nickel-plated
Adapter and cover	Zn alloy; optionally nickel-plated
Insulator M12 and M8 connector	Thermoplastic UL 94-V0 and EN 45545
External cable clamp	Zn alloy; optionally nickel-plated
Crimp flange	Zn alloy and Cu alloy tinned
Crimp sleeve	Cu alloy tinned

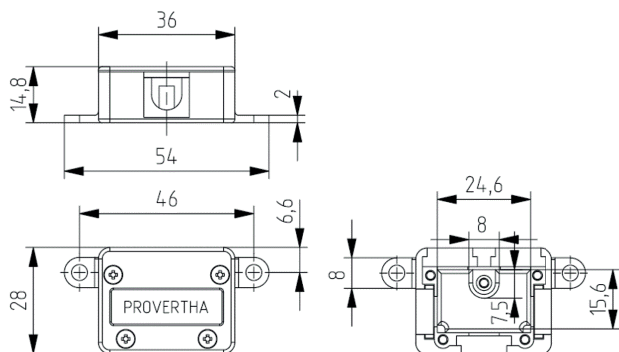


Modular, reliable distribution system

Full metal housing with 360 ° shielding

- 360 ° shielding due to special full metal housing design
- Up to 5 inputs / outputs
- Plug & play with M12/M8 connection male or female
- Crimp flange / crimp sleeve for cable shield connection and strain relief torsion- and vibration-proof
- Cable clamp for special cables with an outer diameter of up to 14mm
- Blanking plate for closing not used inputs/outputs
- 2 integrated mounting lugs for wall mounting

Dimensions

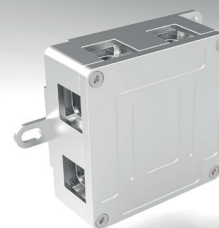


Technical data (mutual data on pages 76 & 77)

Temperature range	- 40 °C bis + 85 °C
Protection class	IP 67 (encapsulated)
Housing	Zn alloy
Insulator	Thermoplast UL 94-V0 and EN 45545

Order information

77VT1DC001	Standard version for wall mounting with lugs
77VT1DCN001	Ni plated version for wall mounting with lugs

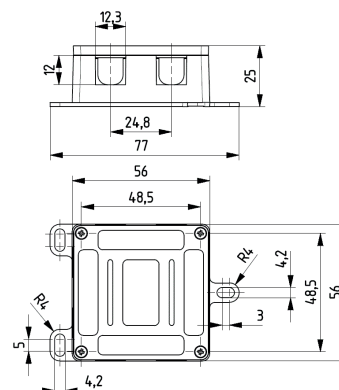


Compact reliable distribution box

360° shielding and variable connection options

- 360 ° shielding due to special full metal housing design
- Up to 8 inputs / outputs
- Plug & play with M12/M8 connection male or female
- Crimp flange / crimp sleeve for torsion- and vibration-proof cable shield connection
- Crimp flange / crimp sleeve for torsion- and vibration-proof cable strain relief
- Cable clamp for special cables with an outer diameter of up to 14mm
- Blanking plate for closing not used inputs/outputs
- 2 integrated mounting lugs for wall mounting

Dimensions

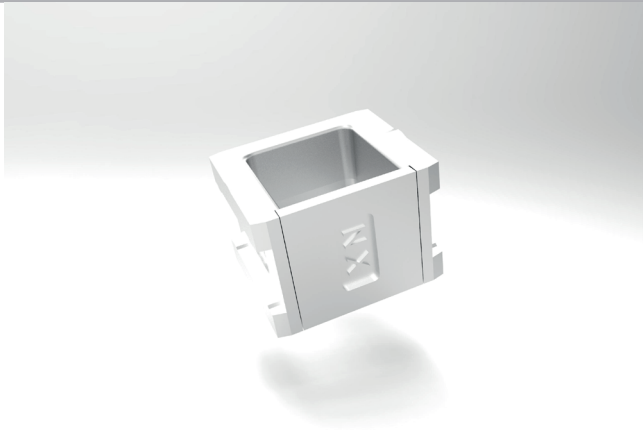


Technical data (mutual data on pages 76 & 77)

Temperature range	- 40 °C bis + 85 °C
Protection class	IP 67 (encapsulated)
Housing	Zn alloy
Insulator	Thermoplast UL 94-V0 and EN 45545

Order information

78VT1DC1001	Standard version wall mounting with mounting lugs
78VT1DCN1001	Ni-plated version version wall mounting with mounting lugs

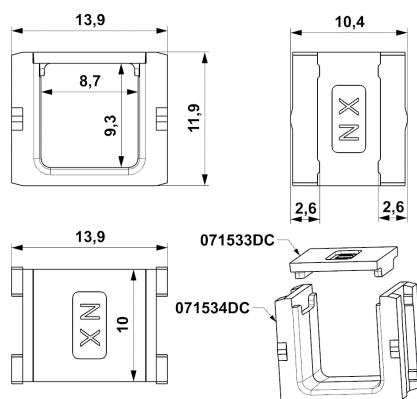


Adapter for linking distribution boxes

360 ° shielding is retained when chaining

- Solid zinc die-cast housing for rough requirements
- 360 ° shielding over the entire length with optional cover
- Potting for linked distribution boxes is secured
- Adapter design realizes safe, low-resistance grounding between the boxes
- Vibration and torsion-proof linking of distribution boxes

Dimensions

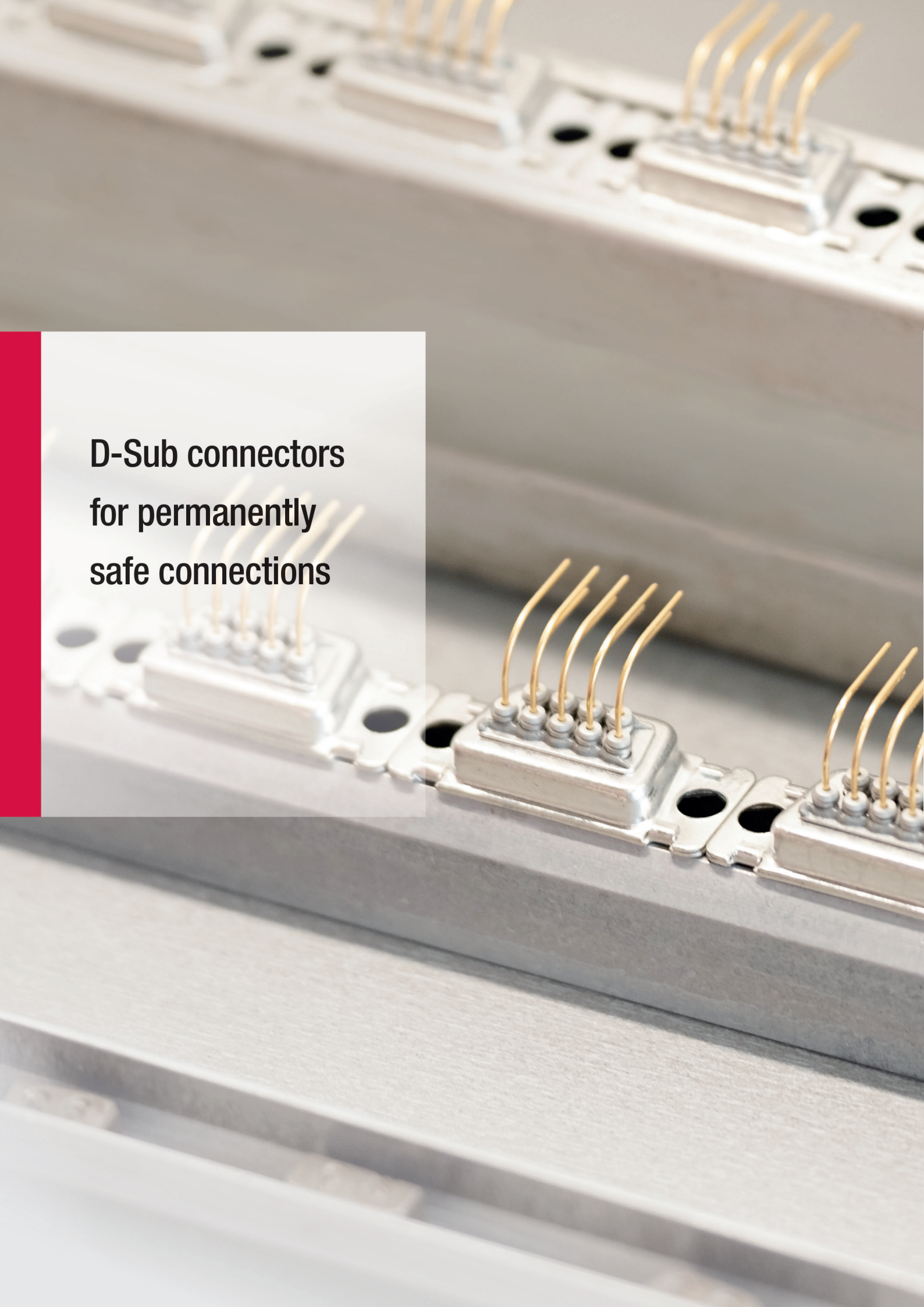


Technical data *(mutual data on pages 76 & 77)*

Temperature range	- 40 °C bis + 85 °C
Protection class	IP 67 (encapsulated)
Housing	Zn alloy

Order information

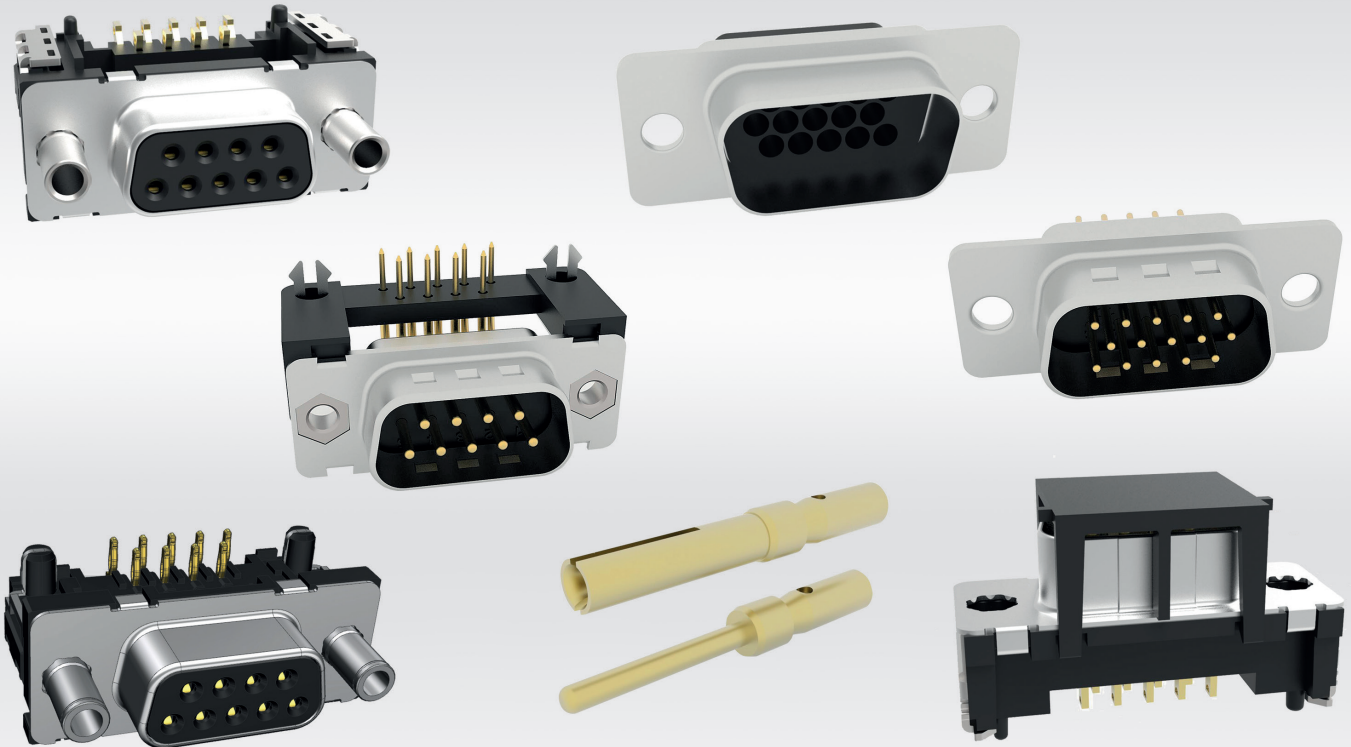
071533DC	Adapter
071533DCN	Adapter Ni-plated
071533DC	Cover
071534DCN	Cover Ni-plated

A close-up photograph of several D-Sub connectors mounted on a metal panel. The connectors are silver-colored with gold-plated pins. A red vertical bar is on the left side of the image. The text "D-Sub connectors for permanently safe connections" is overlaid on the red bar.

**D-Sub connectors
for permanently
safe connections**

D-Sub

D-Sub connectors in various designs



Innovative D-Sub connectors with special customer benefits:

- Quick Lock: innovative push-pull locking system for D-Sub hoods with a simple adaptation for retrofitting at every D-Sub device interface
- 600 V D-Sub connectors for compact and economical power applications
- 360 ° EMI / RFI D-Sub full metal hoods with shock / vibration and torsion proof
- Strain relief and shield connection using a crimp flange / crimp sleeve system
- Most extensive D-Sub program
- D-Sub connectors for PCB mounting:
 - 180 ° soldering with Boardlock or Comblock;
 - Solder 90 ° with plastic bracket or with metal bracket
- TMC series: High Performance PCB connectors with standard and with mixed layout in 3 connection types: SMT, THR, Pressfit
- D-Sub connectors for cable assembly: IDC, crimp, hand solder
- Mixed layout D-Sub: soldering 90 ° and 180 °, crimp, hand soldering and high-current contacts
- High Density D-Sub: Crimp, hand solder, 180 ° soldering and 180 ° soldering
- DualPort D-Sub connectors
- Filter D-Sub that eliminate EMC interferences
- D-Sub plastic hoods in black or metallized for shielding requirements
- 360 ° EMI / RFI-D-Sub full metal hoods for high requirements
- Accessories: EMC and dust protection caps, hexagon threaded screws, seals, cable bushings and cable grommets

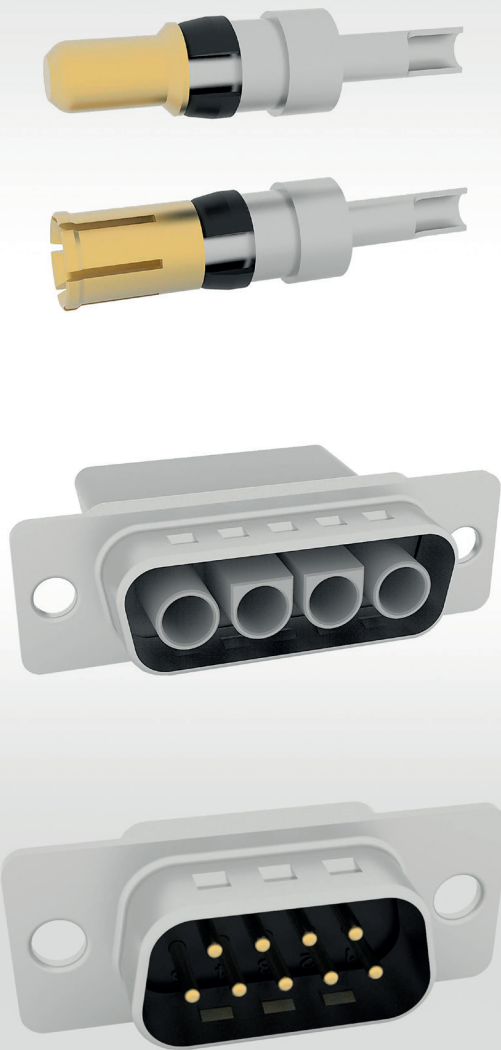
Technical data

Insulator	Thermoplast UL 94 V-0
Contacts	Cu and brass alloy
Contact surface	Hard gold plated over Ni barrier layer
Housing	Steel tin- or Zn-plated or passivated
Mating and unmating force	0,3 - 0,7 N
Clearance and creepage distance	≥ 0,9 mm acc. to VDE 0110
Test voltage	1 kV / AC
Resistance	≤ 10 mΩ
Insulation resistance	≥ 5 GΩ
Current rating D-Sub	machined: 7 A / stamped: 5 A
Current rating HD D-Sub	machined: 3 A / stamped: 1 A
Temperature range	-55 °C to +125 °C
Mechanical lifetime	G1 = 500 mating cycles
	G2 = 250 mating cycles
	G3 = 50 mating cycles

D-Sub cable connection

Reliable D-Sub connectors for cable assemblies

D-Sub



Standard D-Sub:

Crimp connectors with machined crimp contacts with 4-point crimp as functionally reliable solution for demanding applications

Crimp connectors with stamped crimp contacts on reel are the economical solution for multiple assemblies

IDC connectors Low profile for tight installation spaces

IDC connectors with insulation displacement double contact for increased requirements

Solder cup connectors with standard or extended solder connection for easier handling when soldering

Wire wrap connectors

Fastening accessories: through hole, thread UNC 4-40 or M3 on the connection or Mating side

Mixed Layout D-Sub: crimp and hand solder connectors, crimp and solder cup power contacts

600 V-D-Sub: Crimp connectors as well as turned and stamped crimp contacts

High Density D-Sub: Crimp and solder cup connectors, stamped and turned Crimp contacts

Filter-D-Sub: Cable soldering and soldering cup connectors as well as wire wrap connectors

600 V D-Sub: Crimp connectors as well as turned and punched crimp contacts

High Density D-Sub: crimp and solder cup connectors, stamped and machined crimp contacts

Filter D-Sub: Cable soldering and soldering cup and wire wrap connector

Technical data

Nominal current D-Sub	machined: 7 A / stamped: 5 A
Nominal current HD D-Sub	machined: 3 A / stamped: 1 A
Test voltage	1 KV / AC
Resistance	$\leq 10 \text{ m}\Omega$
Insulation resistance	$\geq 5 \text{ G}\Omega$
Clearance and creepage distance	$\geq 0,9 \text{ mm acc. to VDE 0110}$
Mating and unmating force	0,3 - 0,7 N
Temperature range	-55 °C bis +125 °C
Insulator	Thermoplast UL 94-V0
Contacts	Cu and brass alloy gold-plated
Housing	Steel tin- or Zn-plated or passivated
Mechanical lifetime	G1 = 500 mating cycles
	G2 = 250 mating cycles
	G3 = 50 mating cycles

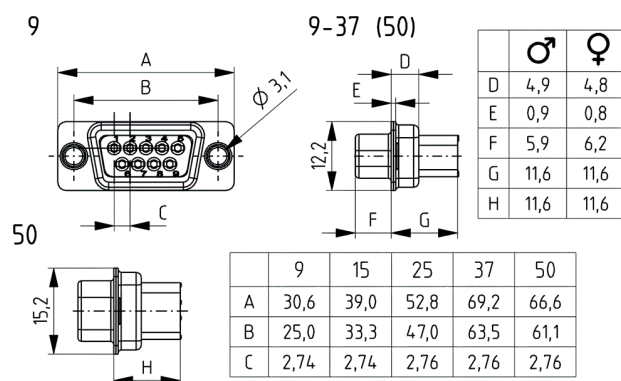


Crimp connector

Without contacts

- Stamped or machined crimp contacts insertable
- Insulator flame-retardant acc. to UL 94 V-0
- Fully compatible to market standard

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	machined: 7 A / stamped: 5 A
Contact resistance	≤10 mΩ
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C

Order information

CSDT09P	Pin 9-pole
CSDT15P	Pin 15-pole
CSDT25P	Pin 25-pole
CSDT37P	Pin 37-pole
CSDT50P	Pin 50-pole
CST09S	Socket 9-pole
CST15S	Socket 15-pole
CST25S	Socket 25-pole
CST37S	Socket 37-pole
CST50S	Socket 50-pole

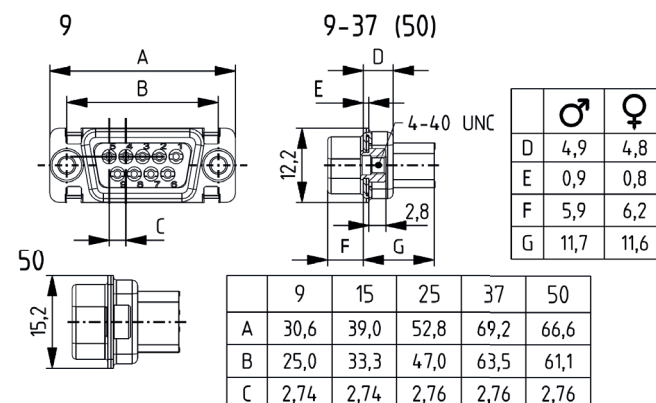


Crimp connector with threaded rivet

Threaded rivet on termination side

- Stamped or machined crimp contacts insertable
- Insulator flame-retardant acc. to UL 94 V-0
- Threaded rivet UNC 4-40 or M3 on termination side
- Fully compatible to market standard

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	machined: 7 A / stamped: 5 A
Contact resistance	≤10 mΩ
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C

Order information

CG42DT09P	Pin 9-pole UNC
CG42DT15P	Pin 15-pole UNC
CG42DT25P	Pin 25-pole UNC
CG42DT37P	Pin 37-pole UNC
CG42DT50P	Pin 50-pole UNC
CG42T09S	Socket 9-pole UNC
CG42T15S	Socket 15-pole UNC
CG42T25S	Socket 25-pole UNC
CG42T37S	Socket 37-pole UNC
CG42T50S	Socket 50-pole UNC

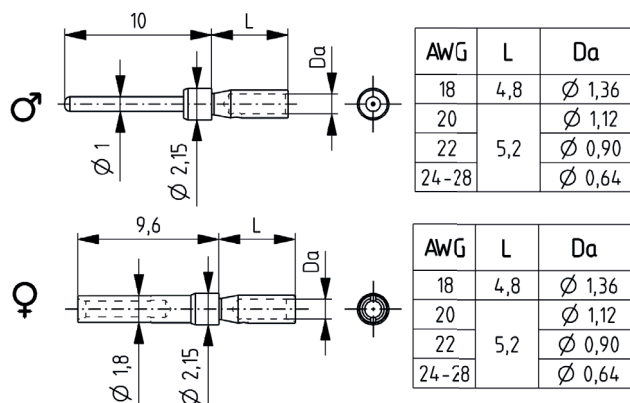


D-Sub Crimp contacts

Machined versions

- Machined precision contacts from Cu-alloy
- Fully gold-plated over a Ni-barrier layer
- Various surfaces for different lifetime requirements
- Highest quality and lifetime because of defined contact zone
- Conductor cross-sections: AWG 18-AWG 28
- Fully compatible to standard contact

Dimensions

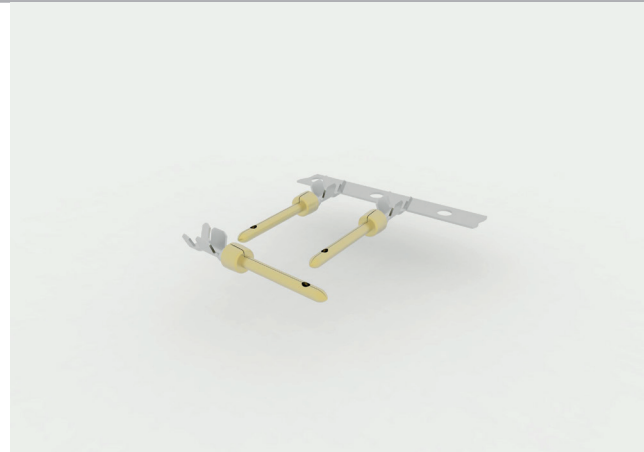


Technical data (mutual data on pages 81 & 82)

Nominal current	max. 7 A
Wire size	AWG 18 - AWG 28
Contact resistance	≤10 mΩ
Material	Cu-alloy gold-plated

Order information

C051800Gx	Crimp contact pin AWG 18 Gx: G1 / G2 / G3
C052000Gx	Crimp contact pin AWG 20 Gx: G1 / G2 / G3
C052200Gx	Crimp contact pin AWG 22 Gx: G1 / G2 / G3
C052400Gx	Crimp contact pin AWG 24 Gx: G1 / G2 / G3
C061800Gx	Crimp contact socket AWG 18 Gx: G1 / G2 / G3
C062000Gx	Crimp contact socket AWG 20 Gx: G1 / G2 / G3
C062200Gx	Crimp contact socket AWG 22 Gx: G1 / G2 / G3
C062400Gx	Crimp contact socket AWG 24 Gx: G1 / G2 / G3

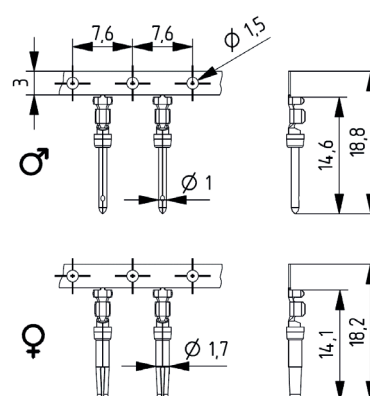


D-Sub Crimp contacts

Stamped versions

- Stamped precision contacts from Cu-alloy
- Fully gold-plated over a Ni-barrier layer
- Various surfaces for different lifetime requirements
- Highest quality and lifetime because of defined contact zone
- Conductor cross-sections: AWG 20 -AWG 32
- Approved by leading crimp machine producers
- 3 VPE: coil 10.000 / coil 500 / pack 100
- Various directions for unrolling

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	5 A
Wire size	AWG 20 -32
Contact resistance	≤10 mΩ
Material	Cu-alloy gold-plated

Order information

C1520GLGxT	Pin AWG 20 -24 coil 10000 contacts
C1524GLGxT	Pin AWG 24 -28 coil 10000 contacts
C1528GLGxT	Pin AWG 28 -32 coil 10000 contacts
C1620GLGxT	Socket AWG 20 -24 coil 10000 contacts
C1624GLGxT	Socket AWG 24 -28 coil 10000 contacts
C1628GLGxT	Socket AWG 28 -32 coil 10000 contacts
C1520SLGxT	Pin AWG 20 -24 coil 500 contacts
C152000GxT100	Pin AWG 20 -24 pack. 100 contacts
C1620SLGxT	Socket AWG 20 -24 coil 500 contacts
C162000GxT100	Socket AWG 20 -24 pack 100 contacts

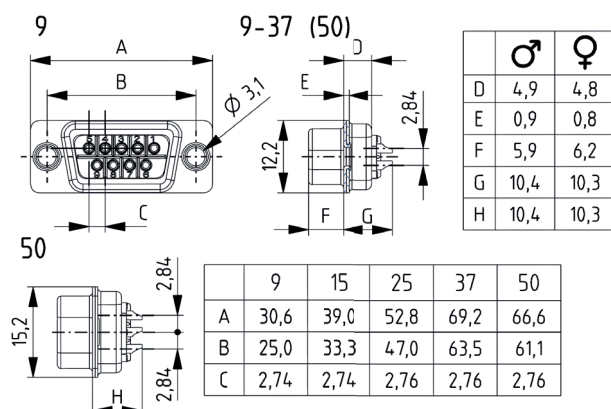


Solder cup connection

With stamped or machined contacts

- Machined precision contacts fully gold-plated
- Stamped precision contacts selectively gold-plated and connection tin-plated
- Suitable for wire sizes up to AWG 20
- Highest quality and lifetime because of defined contact area

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	machined: 7 A / stamped: 5 A
Contact resistance	≤10 mΩ
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C

Order information

SDT0951Gx	Pin 9-pole Gx:G1/G2/G3 Stamped: 151Gx
SDT1551Gx	Pin 15-pole Gx:G1/G2/G3 Stamped: 151Gx
SDT2551Gx	Pin 25-pole Gx:G1/G2/G3 Stamped: 151Gx
SDT3751Gx	Pin 37-pole Gx:G1/G2/G3 Stamped: 151Gx
SDT5051Gx	Pin 50-pole Gx:G1/G2/G3 Stamped: 151Gx
ST0961Gx	Socket 9-pole Gx:G1/G2/G3 Stamped: 161Gx
ST1561Gx	Socket 15-pole Gx:G1/G2/G3 Stamped: 161Gx
ST2561Gx	Socket 25-pole Gx:G1/G2/G3 Stamped: 161Gx
ST3761Gx	Socket 37-pole Gx:G1/G2/G3 Stamped: 161Gx
ST5061Gx	Socket 50-pole Gx:G1/G2/G3 Stamped: 161Gx

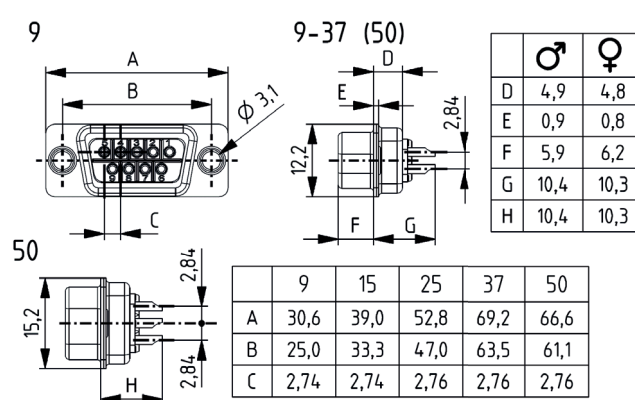


Long solder cup connection

With machined contacts

- Machined precision contacts fully gold-plated
- Suitable for conductor diameters up to AWG 20
- Highest quality and lifetime because of defined contact zone
- Fully compatible to standard contact

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	Machined contacts: 7 A
Contact resistance	≤10 mΩ
Insulation resistance	≥10 GΩ
Clearance and creepage	≥1 mm acc. to VDE 0110

Order information

SDT09512Gx	Pin 9-pole Gx:G1/G2/G3
SDT15512Gx	Pin 15-pole Gx:G1/G2/G3
SDT25512Gx	Pin 25-pole Gx:G1/G2/G3
SDT37512Gx	Pin 37-pole Gx:G1/G2/G3
SDT50512Gx	Pin 50-pole Gx:G1/G2/G3
ST09612Gx	Socket 9-pole Gx:G1/G2/G3
ST15612Gx	Socket 15-pole Gx:G1/G2/G3
ST25612Gx	Socket 25-pole Gx:G1/G2/G3
ST37612Gx	Socket 37-pole Gx:G1/G2/G3
ST50612Gx	Socket 50-pole Gx:G1/G2/G3

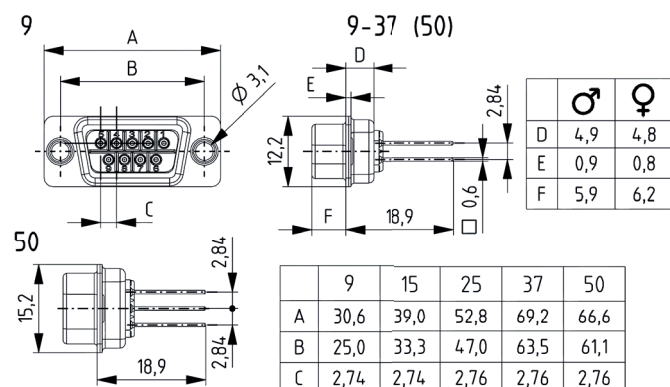


Wire Wrap connection

With machined contacts

- Machined precision contacts from copper alloy
- Fully gold-plated over a Ni-barrier layer
- Highest quality and lifetime because of defined contact zone
- Version with 3 coils: item No. example SDT0955G2
- Version with 2 coils: item No. example SDT0952G2

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	Machined contacts: 7 A
Contact resistance	≤10 mΩ
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C

Order information

SDT0955Gx	Pin 9-pole Gx:G1/G2/G3
SDT1555Gx	Pin 15-pole Gx:G1/G2/G3
SDT2555Gx	Pin 25-pole Gx:G1/G2/G3
SDT3755Gx	Pin 37-pole Gx:G1/G2/G3
SDT5055Gx	Pin 50-pole Gx:G1/G2/G3
ST0965Gx	Socket 9-pole Gx:G1/G2/G3
ST1565Gx	Socket 15-pole Gx:G1/G2/G3
ST2565Gx	Socket 25-pole Gx:G1/G2/G3
ST3765Gx	Socket 37-pole Gx:G1/G2/G3
ST5065Gx	Socket 50-pole Gx:G1/G2/G3

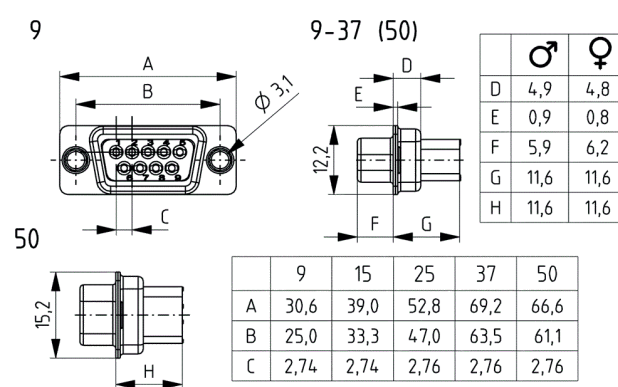


Crimp connectors for vacuum

Without contacts

- Insulator with very low outgassing
- Insulator flame-retardant acc. to UL 94 V-0
- Shell made of stainless steel
- Stamped or machined crimp contacts insertable
- Fully compatible to market standard

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	machined: 7 A / stamped: 5 A
Contact resistance	≤10 mΩ
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C

Order information

CSDT09PV	Pin 9-pole
CSDT15PV	Pin 15-pole
CSDT25PV	Pin 25-pole
CSDT37PV	Pin 37-pole
CSDT50PV	Pin 50-pole
CST09SV	Socket 9-pole
CST15SV	Socket 15-pole
CST25SV	Socket 25-pole
CST37SV	Socket 37-pole
CST50SV	Socket 50-pole

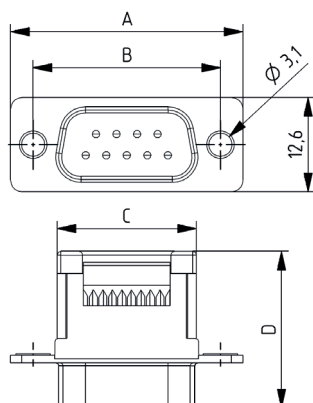


IDC connectors

With double-contacting

- Safe double-contacting
- High-quality edition with stamped contacts
- UL-approval
- Shell tin-plated
- Suitable in case of difficult contacting in insulation displacement area

Dimensions



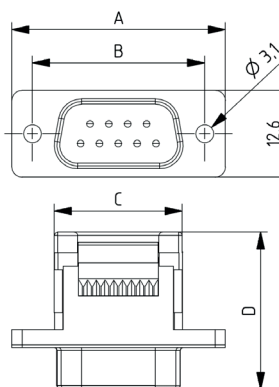
	9	15	25	37
A	30,6	39,0	52,8	54,9
B	25,0	33,3	47,0	63,5
C	16,4	24,7	38,5	2,76
♂ D	22,7	23,6		
♀ D	23,0	23,9		

IDC connectors

Suitable for many standard hoods

- Standard connector
- Shell tin-plated
- Quality class 3
- With strain relief clamp
- Available with threaded rivet upon request

Dimensions



	9	15	25	37
A	30,6	39,0	52,8	54,9
B	25,0	33,3	47,0	63,5
C	18,6	26,6	40,9	57,1
♂ D	18,4			
♀ D	18,2			

Technical data (mutual data on pages 81 & 82)

Nominal current	AWG 24: 1,5 A / AWG 26: 1 A
Test voltage	1 kV / AC
Temperature range	-20° C to +105° C
Plastic material	Thermoplast UL 94 V-0

Order information

IKDT09154G075	Pin 9-pole
IKDT15154G075	Pin 15-pole
IKDT25154G075	Pin 25-pole
IKDT37154G075	Pin 37-pole
IKDT50154G075	Pin 50-pole
IKT09164G075	Socket 9-pole
IKT15164G075	Socket 15-pole
IKT25164G075	Socket 25-pole
IKT37164G075	Socket 37-pole
IKT50164G075	Socket 50-pole

Technical data (mutual data on pages 81 & 82)

Nominal current	1 A
Test voltage	500 V / AC
Temperature range	-55° C to +105° C
Plastic material	Thermoplast UL 94 V-0

Order information

IDT09154G3	Pin 9-pole
IDT15154G3	Pin 15-pole
IDT25154G3	Pin 25-pole
IDT37154G3	Pin 37-pole
IDT50154G3	Pin 50-pole
IT09164G3	Socket 9-pole
IT15164G3	Socket 15-pole
IT25164G3	Socket 25-pole
IT37164G3	Socket 37-pole
IT50164G3	Socket 50-pole

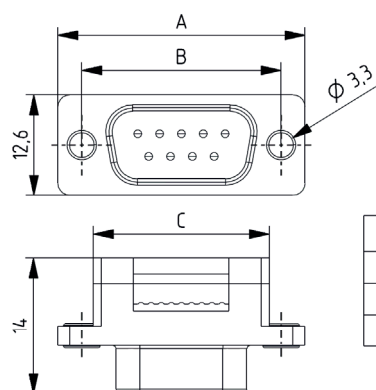


IDC connectors Low Profile

With stamped contacts

- High-quality design with stamped contacts
- UL-approval
- Shell tin-plated
- With strain relief clamp
- Available with threaded rivet upon request

Dimensions



	9	15	25	37
A	30,6	39,0	52,8	54,9
B	25,0	33,3	47,0	63,5
C	16,4	24,7	38,5	2,76

Technical data (mutual data on pages 81 & 82)

Nominal current	1 A
Test voltage	500 V / AC
Temperature range	-55° C to +105° C
Plastic material	Thermoplast UL 94 V-0

Order information

ISDT09154G3	Pin 9-pole
ISDT15154G3	Pin 15-pole
ISDT25154G3	Pin 25-pole
ISDT37154G3	Pin 37-pole
ISDT50154G3	Pin 50-pole
IST09164G3	Socket 9-pole
IST15164G3	Socket 15-pole
IST25164G3	Socket 25-pole
IST37164G3	Socket 37-pole
IST50164G3	Socket 50-pole

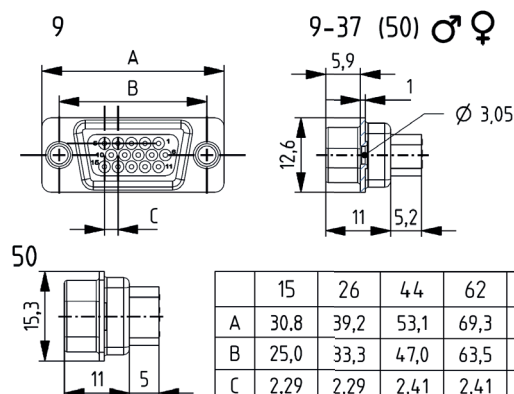


High Density crimp connectors

Without contacts

- Stamped or machined crimp contacts insertable
- Insulator flame-retardant acc. to UL 94 V-0
- Fully compatible to market standard

Dimensions



	15	26	44	62	78
A	30,8	39,2	53,1	69,3	67
B	25,0	33,3	47,0	63,5	61,1
C	2,29	2,29	2,41	2,41	2,41

Technical data (mutual data on pages 81 & 82)

Nominal current	3 A
Contact resistance	≤20 mΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

CHDT15P	Pin 15-pole
CHDT26P	Pin 26-pole
CHDT44P	Pin 44-pole
CHDT62P	Pin 62-pole
CHDT78P	Pin 78-pole
CHT15S	Socket 15-pole
CHT26S	Socket 26-pole
CHT44S	Socket 44-pole
CHT62S	Socket 62-pole
CHT78S	Socket 78-pole

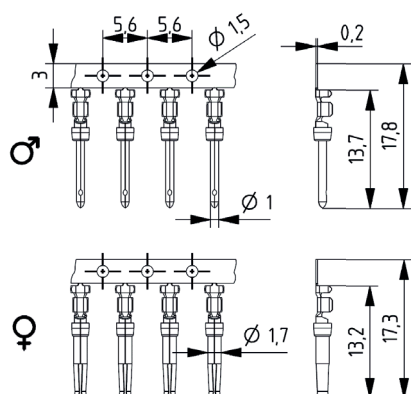


High Density crimp contacts

Stamped versions

- Precision contacts from Cu-alloy
- Safe locking in High Density Crimp connector
- Selectively gold-plated
- Surfaces for 200 mating cycles (G2) and for 50 mating cycles (G3)
- Conductor diameter: AWG 24-28

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	1 A
Wire size	AWG 24 -28
Material	Cu-alloy gold-plated

Order information

CHD1524GLG3T	Crimp contact pin coil 10000 contacts
CHD1524SLG3T	Crimp contact pin coil 500 contacts
CHD1624GLG3T	Crimp contact socket coil 500 contacts
CHD1624SLG3T	Crimp contact socket coil 500 contacts
CHD1524GLG2T	Crimp contact pin coil 10000 contacts
CHD1624GLG2T	Crimp contact socket coil 10000 contacts

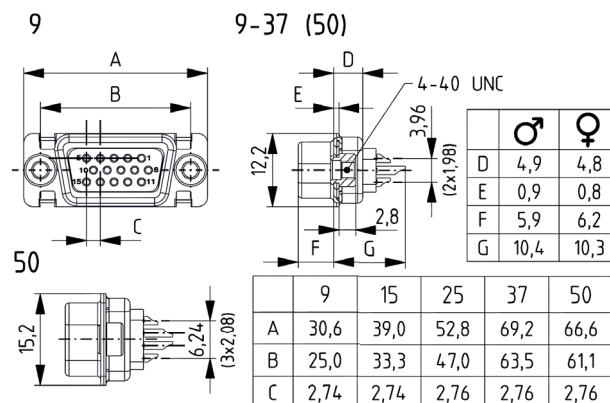


High density solder cup connection

With stamped or machined contacts

- Machined precision contacts from copper alloy fully gold-plated
- Stamped precision contacts in copper alloy gold-plated and termination tin-plated
- Suitable for conductor diameter up to AWG 22
- Highest quality and lifetime because of defined contact area

Dimensions



Technical data (mutual data on pages 81 & 82)

Nominal current	3 A
Contact resistance	≤20 mΩ
Insulation resistance	≥5 GΩ
Test voltage	1 KV / AC

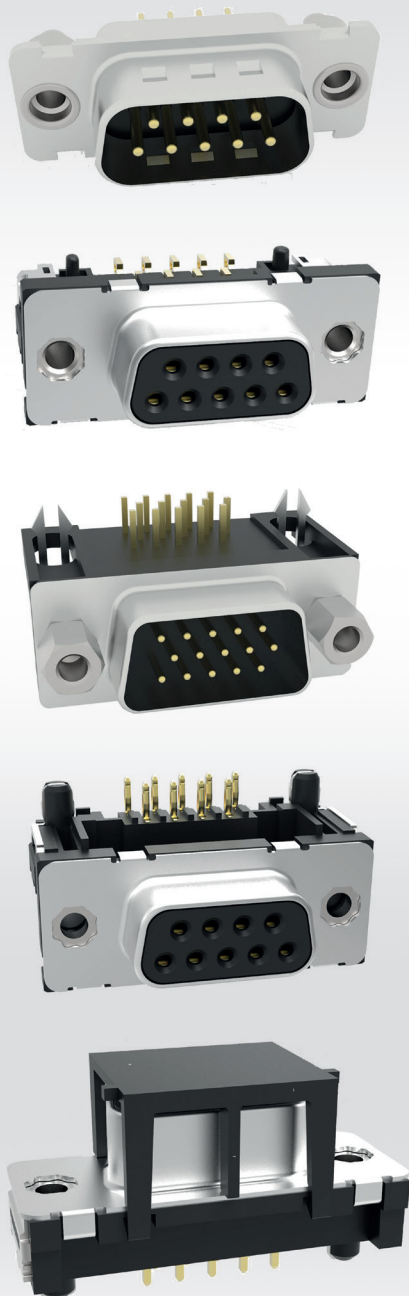
Order information

HDT1551Gx	Pin 15-pole Gx:G1/G2/G3 Stamped: 151Gx
HDT2651Gx	Pin 26-pole Gx:G1/G2/G3 Stamped: 151Gx
HDT4451Gx	Pin 44-pole Gx:G1/G2/G3 Stamped: 151Gx
HDT6251Gx	Pin 62-pole Gx:G1/G2/G3 Stamped: 151Gx
HDT7851Gx	Pin 78-pole Gx:G1/G2/G3 Stamped: 151Gx
HT1561Gx	Socket 15-pole Gx:G1/G2/G3 Stamped: 161Gx
HT2661Gx	Socket 26-pole Gx:G1/G2/G3 Stamped: 161Gx
HT4461Gx	Socket 44-pole Gx:G1/G2/G3 Stamped: 161Gx
HT6261Gx	Socket 62-pole Gx:G1/G2/G3 Stamped: 161Gx
HT7861Gx	Socket 78-pole Gx:G1/G2/G3 Stamped: 161Gx

D-Sub PCB connection

Reliable D-Sub connectors for PCB applications

D-Sub



Versions with solder connection 180°

- Machined contacts for high current carrying capacity
- Solid mounting accessories for safe and effective grounding
- Various mounting accessories

Boardlock with internal thread UNC or M3 and snap-in locking clip

Combilock with threaded bolt UNC or M3 and snap-in locking clip

Threaded rivet UNC or M3

Through hole

Versions with solder connection 90°

- Machined contacts for high current carrying capacity
- Full metal mounting accessories for safe and effective grounding
- Plastic brackets with different mounting accessories

Internal thread UNC or M3 as well as earthing clip and snap-in locking clip

Threaded bolt UNC or M3 as well as earthing clip

Through hole and earthing clip

Through hole

- Solid metal bracket with different mounting accessories

Internal thread UNC or M3 as well as earthing clip and snap-in locking clip

Threaded bolt UNC or M3 as well as earthing clip

Through hole and earthing clip

Through hole

Technical data

Nominal current D-Sub	machined: 7 A / stamped: 5 A
Nominal current HD D-Sub	machined: 3 A / stamped: 1 A
Test voltage	1 kV / AC
Resistance	≤ 10 mΩ
Insulation resistance	≥ 5 GΩ
Clearance and creepage distance	≥ 0,9 mm acc. to VDE 0110
Mating and unmating force	0,3 - 0,7 N
Temperature range	-55 °C to +125 °C
Insulator	Thermoplast UL 94-V0
Contacts	Cu and brass alloy gold-plated
Metal shell	Steel tin- or Zn-plated or passivated
Mechanical lifetime	G1 = 500 mating cycles
	G2 = 250 mating cycles
	G3 = 50 mating cycles

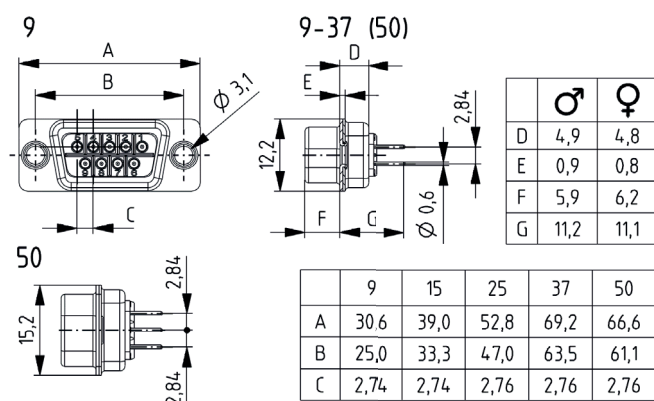


D-Sub connectors solder pin 180°

With machined contacts

- Machined precision contacts fully gold-plated over a nickel barrier layer
- High current carrying capacity due to machined contacts
- Highest quality and lifetime because of defined contact zone
- Will be delivered with shell tin-plated
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	Machined contacts: 7 A
R contact /R insulation	≤10 mΩ/ ≥10 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

SDT0952Gx	Pin 9-pole Gx: G1 / G2 / G3
SDT1552Gx	Pin 15-pole Gx: G1 / G2 / G3
SDT2552Gx	Pin 25-pole Gx: G1 / G2 / G3
SDT3752Gx	Pin 37-pole Gx: G1 / G2 / G3
SDT5052Gx	Pin 50-pole Gx: G1 / G2 / G3
ST0962Gx	Socket 9-pole Gx: G1 / G2 / G3
ST1562Gx	Socket 15-pole Gx: G1 / G2 / G3
ST2562Gx	Socket 25-pole Gx: G1 / G2 / G3
ST3762Gx	Socket 37-pole Gx: G1 / G2 / G3
ST5062Gx	Socket 50-pole Gx: G1 / G2 / G3

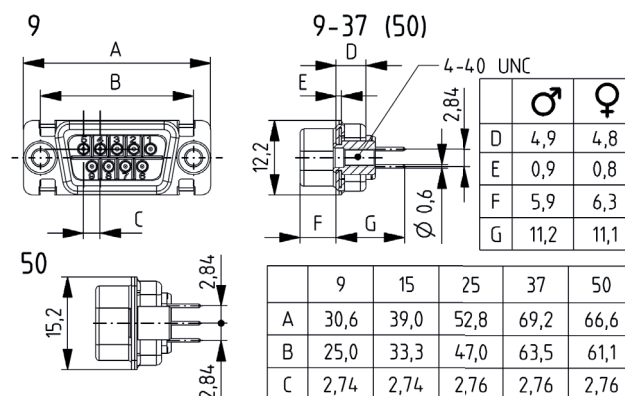


D-Sub connectors solder pin 180°

With machined contacts and threaded rivet

- Machined precision contacts fully gold-plated over a nickel barrier layer
- Threaded rivet on the connection side with thread UNC or M3
- 2 rivet heights: 5.5: Index G45 / 2.8: Index G42
- Highest quality and lifetime because of defined contact zone
- Will be delivered with shell tin-plated
- High current carrying capacity due to machined contacts
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10 mΩ/ ≥10 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

G45DT0952Gx	Pin 9-pole UNC Gx: G1 / G2 / G3
G45DT1552Gx	Pin 15-pole UNC Gx: G1 / G2 / G3
G45DT2552Gx	Pin 25-pole UNC Gx: G1 / G2 / G3
G45DT3752Gx	Pin 37-pole UNC Gx: G1 / G2 / G3
G45DT5052Gx	Pin 50-pole UNC Gx: G1 / G2 / G3
G45T0962Gx	Socket 9-pole UNC Gx: G1 / G2 / G3
G45T1562Gx	Socket 15-pole UNC Gx: G1 / G2 / G3
G45T2562Gx	Socket 25-pole UNC Gx: G1 / G2 / G3
G45T3762Gx	Socket 37-pole UNC Gx: G1 / G2 / G3
G45T5062Gx	Socket 50-pole UNC Gx: G1 / G2 / G3

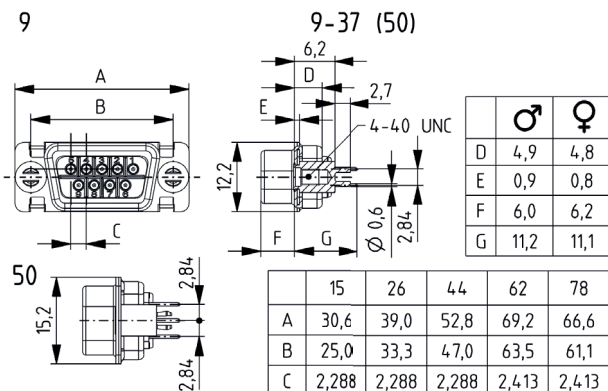


Boardlock solder pin 180°

With machined contacts

- Boardlock: fastening clip and threaded bolt in one
- Connector snapped-in on the board, fixed, 4-40 UNC (or M3) thread for mounting
- Therefore safe and efficient board assembly possible
- High quality, precisely machined clip bolts
- Effective grounding with massive mounting bolts
- Machined contacts completely gold-plated over Ni barrier layer
- High current rating due to machined contacts
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10 mΩ/ ≥10 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C

Order information

BL4DT0952Gx	Pin 9-pole UNC Gx: G1/G2/G3
BL4DT1552Gx	Pin 15-pole UNC Gx: G1/G2/G3
BL4DT2552Gx	Pin 25-pole UNC Gx: G1/G2/G3
BL4DT3752Gx	Pin 37-pole UNC Gx: G1/G2/G3
BL4DT5052Gx	Pin 50-pole UNC Gx: G1/G2/G3
BL4T0962Gx	Socket 9-pole UNC Gx: G1/G2/G3
BL4T1562Gx	Socket 15-pole UNC Gx: G1/G2/G3
BL4T2562Gx	Socket 25-pole UNC Gx: G1/G2/G3
BL4T3762Gx	Socket 37-pole UNC Gx: G1/G2/G3
BL4T5062Gx	Socket 50-pole UNC Gx: G1/G2/G3

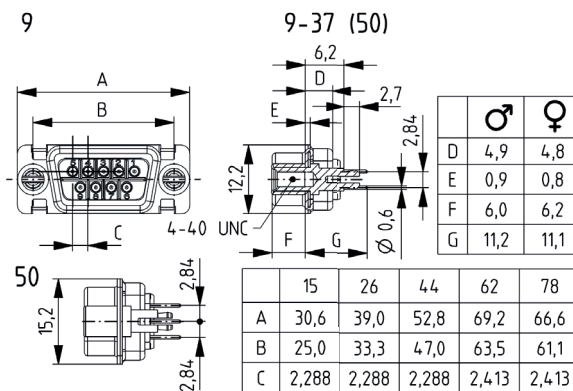


Combilock solder pin 180°

With machined contacts

- Combilock: fastening clip, spacer and threaded bolt in one
- Integrated threaded bolt UNC or M3
- Safe and efficient board assembly with snap-in clip
- High quality, precisely machined clip bolts
- Effective grounding with massive mounting bolts
- Machined contacts completely gold-plated over Ni
- High current carrying capacity due to machined contacts
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10 mΩ/ ≥10 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C

Order information

B4DT0952Gx	Pin 9-pole UNC Gx: G1/G2/G3
B4DT1552Gx	Pin 15-pole UNC Gx: G1/G2/G3
B4DT2552Gx	Pin 25-pole UNC Gx: G1/G2/G3
B4DT3752Gx	Pin 37-pole UNC Gx: G1/G2/G3
B4DT5052Gx	Pin 50-pole UNC Gx: G1/G2/G3
B4T0962Gx	Socket 9-pole UNC Gx: G1/G2/G3
B4T1562Gx	Socket 15-pole UNC Gx: G1/G2/G3
B4T2562Gx	Socket 25-pole UNC Gx: G1/G2/G3
B4T3762Gx	Socket 37-pole UNC Gx: G1/G2/G3
B4T5062Gx	Socket 50-pole UNC Gx: G1/G2/G3

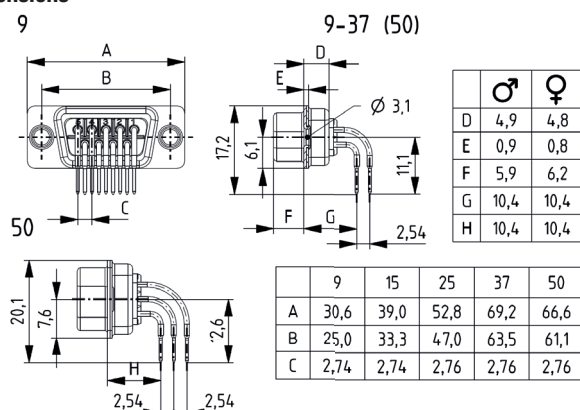


D-Sub connector solder pin 90°

With machined contacts

- European Standard grid dimension
- Machined precision contacts from copper alloy
- Fully gold-plated over nickel barrier layer
- Highest quality and lifetime because of defined contact area
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10mΩ/ ≥10GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

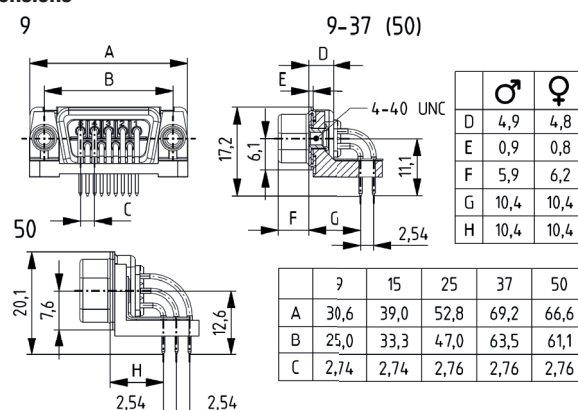
SDT0956Gx	Pin 9-pole UNC Gx:G1 / G2 / G3
SDT1556Gx	Pin 15-pole UNC Gx:G1 / G2 / G3
SDT2556Gx	Pin 25-pole UNC Gx:G1 / G2 / G3
SDT3756Gx	Pin 37-pole UNC Gx:G1 / G2 / G3
SDT5056Gx	Pin 50-pole UNC Gx:G1 / G2 / G3
ST0966Gx	Socket 9-pole UNC Gx:G1 / G2 / G3
ST1566Gx	Socket 15-pole UNC Gx:G1 / G2 / G3
ST2566Gx	Socket 25-pole UNC Gx:G1 / G2 / G3
ST3766Gx	Socket 37-pole UNC Gx:G1 / G2 / G3
ST5066Gx	Socket 50-pole UNC Gx:G1 / G2 / G3

Solder pin 90°

Machined contacts with plastic and grounding bracket

- Metal grounding bracket with though hole for ground connection
- Ground connection and mounting with screw + nut
- Integrated, non-protruding UNC 4-40 or M3 thread
- Plastic bracket with positioning plate
- For problem-free insertion on the board
- Thermoplast UL 94 V-0

Dimensions

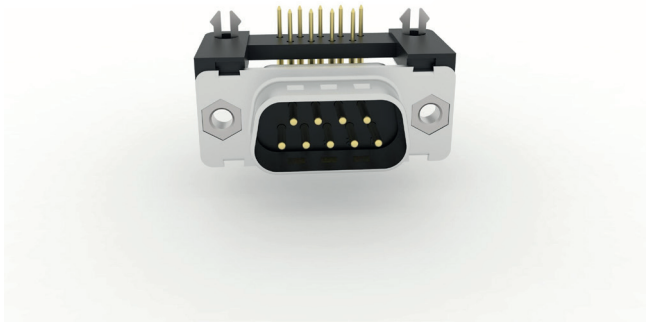


Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10mΩ/ ≥10GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

SDT0956GxE4B	Pin 9-pole UNC Gx: G1/G2/G3
SDT1556GxE4B	Pin 15-pole UNC Gx: G1 / G2 / G3
SDT2556GxE4B	Pin 25-pole UNC Gx:G1 / G2 / G3
SDT3756GxE4B	Pin 37-pole UNC Gx:G1 / G2 / G3
SDT5056GxE4B	Pin 50-pole UNC Gx:G1 / G2 / G3
ST0966GxE4B	Socket 9-pole UNC Gx:G1 / G2 / G3
ST1566GxE4B	Socket 15-pole UNC Gx:G1 / G2 / G3
ST2566GxE4B	Socket 25-pole UNC Gx:G1 / G2 / G3
ST3766GxE4B	Socket 37-pole UNC Gx:G1 / G2 / G3
ST5066GxE4B	Socket 50-pole UNC Gx:G1 / G2 / G3

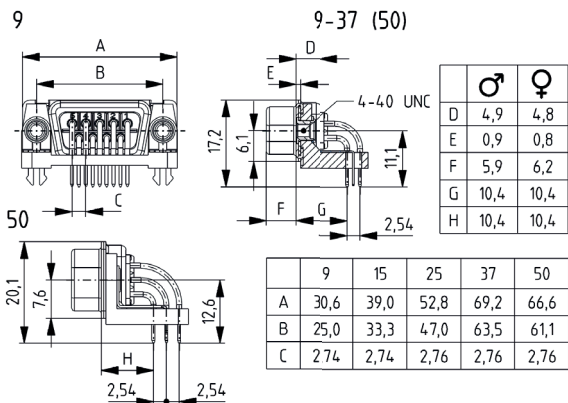


Solder pin 90°

Machined contacts with plastic bracket and grounding clip

- Plastic bracket and grounding bracket plus locking clip
- Board mounting and ground connection in one
- Integrated, non-protruding UNC 4-40 or M3 thread
- For effective mounting
- Plastic bracket with positioning plate
- For easy insertion on the board
- Machined precision contacts
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10 mΩ/ ≥10 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

SDT0956GxR4B	Pin 9-pole UNC Gx: G1/G2/G3
SDT1556GxR4B	Pin 15-pole UNC Gx: G1/G2/G3
SDT2556GxR4B	Pin 25-pole UNC Gx: G1/G2/G3
SDT3756GxR4B	Pin 37-pole UNC Gx: G1/G2/G3
SDT5056GxR4B	Pin 50-pole UNC Gx: G1/G2/G3
ST0966GxR4B	Socket 9-pole UNC Gx: G1/G2/G3
ST1566GxR4B	Socket 15-pole UNC Gx: G1/G2/G3
ST2566GxR4B	Socket 25-pole UNC Gx: G1/G2/G3
ST3766GxR4B	Socket 37-pole UNC Gx: G1/G2/G3
ST5066GxR4B	Socket 50-pole UNC Gx: G1/G2/G3

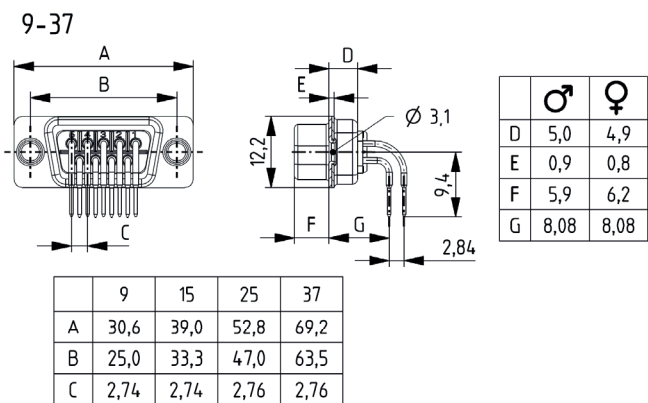


D-Sub connector solder pin 90°

With machined contacts 8.08 mm/.318 inch footprint

- Machined precision contacts
- High current carrying capacity due to machined contacts
- Shell tin-plated
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10 mΩ/ ≥10 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

SDT09568Gx	Pin 9-pole UNC Gx: G1/G2/G3
SDT15568Gx	Pin 15-pole UNC Gx: G1/G2/G3
SDT25568Gx	Pin 25-pole UNC Gx: G1/G2/G3
SDT37568Gx	Pin 37-pole UNC Gx: G1/G2/G3
SDT50568Gx	Pin 50-pole UNC Gx: G1/G2/G3
ST09668Gx	Socket 9-pole UNC Gx: G1/G2/G3
ST15668Gx	Socket 15-pole UNC Gx: G1/G2/G3
ST25668Gx	Socket 25-pole UNC Gx: G1/G2/G3
ST37668Gx	Socket 37-pole UNC Gx: G1/G2/G3
ST50668Gx	Socket 50-pole UNC Gx: G1/G2/G3

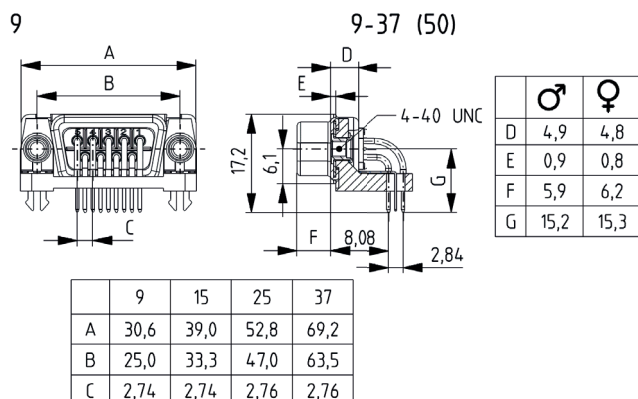


D-Sub connector solder pin 90°

With machined contacts 8.08 mm/.318 inch footprint

- Installation height 6.3 acc. to US standard
- Machined precision contacts
- High current carrying capacity due to machined contacts
- With plastic bracket and grounding bracket plus locking clip
- Easy safe mounting with snap-in board lock
- Effektive grounding with metal grounding bracket
- Optional UNC 4-40 or M3 thread
- Thermoplast UL 94 V-0

Dimensions

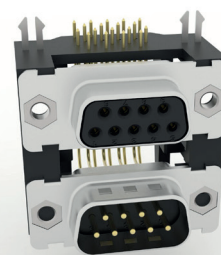


Technical data (mutual data on pages 81 & 90)

Current carrying capacity	7 A
R contact /R insulation	≤10 mΩ/ ≥10 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

SDT09568GxR4B	Pin 9-pole UNC Gx: G1 / G2 / G3
SDT15568GxR4B	Pin 15-pole UNC Gx: G1 / G2 / G3
SDT25568GxR4B	Pin 25-pole UNC Gx: G1 / G2 / G3
SDT37568GxR4B	Pin 37-pole UNC Gx: G1 / G2 / G3
SDT50568GxR4B	Pin 50-pole UNC Gx: G1 / G2 / G3
ST09668GxR4B	Socket 9-pole UNC Gx: G1/G2/G3
ST15668GxR4B	Socket 15-pole UNC Gx: G1/G2/G3
ST25668GxR4B	Socket 25-pole UNC Gx: G1/G2/G3
ST37668GxR4B	Socket 37-pole UNC Gx: G1/G2/G3
ST50668GxR4B	Socket 50-pole UNC Gx: G1/G2/G3

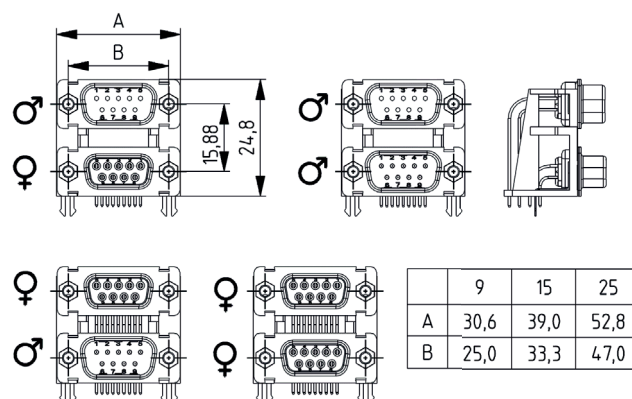


D-Sub dual port connectors

With stamped contacts

- Space advantage with two connectors on almost the same board area
- Many combination possibilities
- Height 15,88 mm. Special dimensions upon request
- Insulator tested acc. to UL 94-V0
- Quality class 3

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	1 A
R contact /R insulation	≤30 mΩ/ ≥1 GΩ
Test voltage	1 KV / AC
Temperature range	-30° C to +105° C

Order information

DP09P09PR4B	Pin - Pin 9-pole
DP15P15PR4B	Pin - Pin 15-pole
DP25P25PR4B	Pin - Pin 25-pole
DP09S09SR4B	Socket - Socket 9-pole
DP15S15SR4B	Socket - Socket 15-pole
DP25S25SR4B	Socket - Socket 25-pole
DP09P09SR4B	Pin - Socket 9-pole
DP15P15SR4B	Pin - Socket 15-pole
DP25P25SR4B	Pin - Socket 25-pole
DP09S09PR4B	Socket - Pin 9-pole

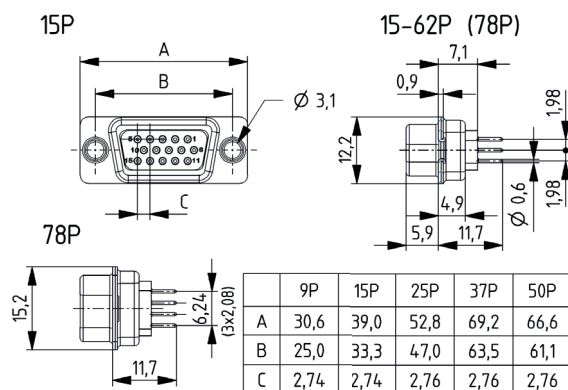


High Density solder pin 180°

With machined contacts

- Machined precision contacts
- Fully gold-plated over nickel barrier layer
- Highest quality and lifetime because of defined contact zone
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	3 A
R contact /R insulation	≤20 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

HDT1552Gx	Pin 15-pole Gx: G1/G2/G3
HDT2652Gx	Pin 26-pole Gx: G1/G2/G3
HDT4452Gx	Pin 44-pole Gx: G1/G2/G3
HDT6252Gx	Pin 62-pole Gx: G1/G2/G3
HDT7852Gx	Pin 78-pole Gx: G1/G2/G3
HT1562Gx	Socket 15-pole Gx: G1/G2/G3
HT2662Gx	Socket 26-pole Gx: G1/G2/G3
HT4462Gx	Socket 44-pole Gx: G1/G2/G3
HT6262Gx	Socket 62-pole Gx: G1/G2/G3
HT7862Gx	Socket 78-pole Gx: G1/G2/G3

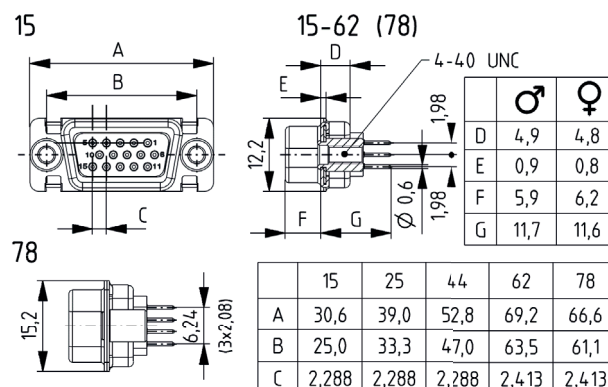


High Density Boardlock solder pin 180°

With machined contacts

- Boardlock: fastening clip and spacer with threads in one
- Boardlock: fastening clip and spacer with threads in one
- Safe and efficient board assembly with snap-in clip
- Effective grounding due to solid mounting bolts
- High-quality, precisely machined clip bolts
- Machined contacts completely gold-plated over Ni
- High current carrying capacity due to machined contacts
- Thermoplast UL 94-V0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	3A
R contact /R insulation	≤20 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

BL4HDT1552Gx	Pin 15-pole Gx: G1/G2/G3
BL4HDT2652Gx	Pin 26-pole Gx: G1/G2/G3
BL4HDT4452Gx	Pin 44-pole Gx: G1/G2/G3
BL4HDT6252Gx	Pin 62-pole Gx: G1/G2/G3
BL4HDT7852Gx	Pin 78-pole Gx: G1/G2/G3
BL4HT1562Gx	Socket 15-pole Gx: G1/G2/G3
BL4HT2662Gx	Socket 26-pole Gx: G1/G2/G3
BL4HT4462Gx	Socket 44-pole Gx: G1/G2/G3
BL4HT6262Gx	Socket 62-pole Gx: G1/G2/G3
BL4HT7862Gx	Socket 78-pole Gx: G1/G2/G3

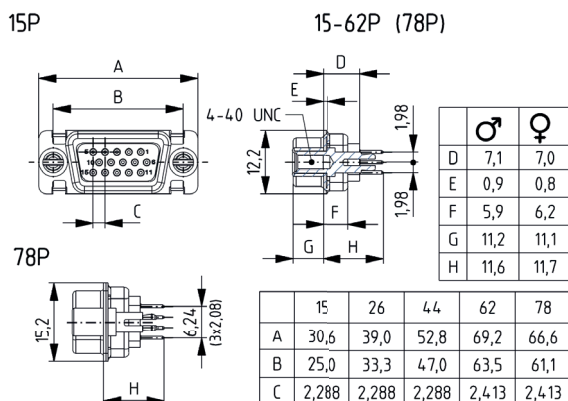


High Density Combilock solder pin 180°

With machined contacts

- Fastening clip, spacer and threaded bolt in one
- Effective grounding with massive Combilock bolt
- Safe and efficient board assembly with snap-in clip
- High quality, precisely machined clip bolts
- Machined contacts completely gold-plated over Ni
- Thread UNC or M3
- Thermoplast UL 94 V-0

Dimensions

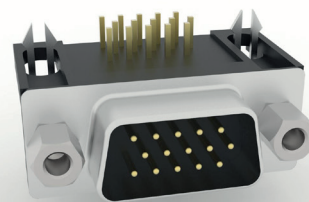


Technical data (mutual data on pages 81 & 90)

Current carrying capacity	3A
R contact /R insulation	≤20 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

B4HDT1552Gx	Pin 15-pole Gx: G1/G2/G3
B4HDT2652Gx	Pin 26-pole Gx: G1/G2/G3
B4HDT4452Gx	Pin 44-pole Gx: G1/G2/G3
B4HDT6252Gx	Pin 62-pole Gx: G1/G2/G3
B4HDT7852Gx	Pin 78-pole Gx: G1/G2/G3
B4HT1562Gx	Socket 15-pole Gx: G1/G2/G3
B4HT2662Gx	Socket 26-pole Gx: G1/G2/G3
B4HT4462Gx	Socket 44-pole Gx: G1/G2/G3
B4HT6262Gx	Socket 62-pole Gx: G1/G2/G3
B4HT7862Gx	Socket 78-pole Gx: G1/G2/G3

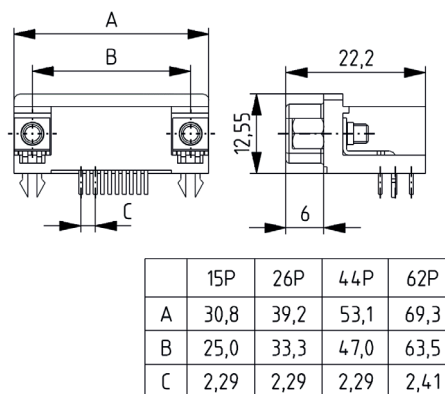


High Density solder pin 90°

With stamped contacts

- High Density connectors offer a ca. 60% higher contact density than Standard D-Sub connectors
- Stamped, selectively refined contacts in quality class 3
- Mounted with plastic bracket, grounding clip and UNC 4-40 thread
- Tin-plated metal housing
- Thermoplast UL 94 V-0

Dimensions



Technical data (mutual data on pages 81 & 90)

Current carrying capacity	1 A
R contact /R insulation	≤30 mΩ/ ≥1 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

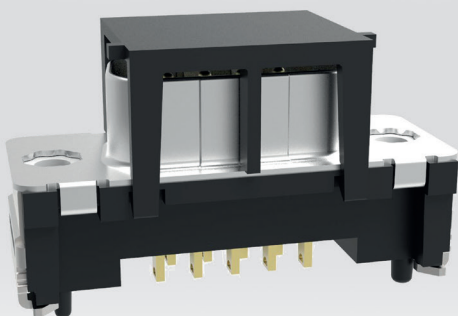
Order information

HDT1556G3	Pin 15-pole UNC
HDT2656G3	Pin 26-pole UNC
HDT4456G3	Pin 44-pole UNC
HDT6256G3	Pin 62-pole UNC
HDT7856G3	Pin 78-pole UNC
HT1566G3	Socket 15-pole UNC
HT2666G3	Socket 26-pole UNC
HT4466G3	Socket 44-pole UNC
HT6266G3	Socket 62-pole UNC
HT7866G3	Socket 78-pole UNC

TMC

High Performance PCB D-Sub

D-Sub



With 4 connection types suitable for every application

Pressfit: For use in backplanes and PCBs

with solderless termination

SMT: For applications in modern printed circuit board applications

with fully automatic SMT assembly and soldering process

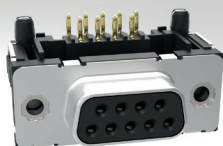
THR: Cost reduction through redesign of THT solutions

for the fully automatic SMT assembly and soldering process

THT: For standard designs in the wave soldering process with different mounting options

Technical data

Nominal signal current	9:5,7 A / 15:4,8 A / 25 :4,4 A/ 37:3,9 A
Test voltage	1 kV / AC
Contact resistance	≤ 25 mΩ
Insulation resistance	≥ 5 GΩ
Creepage and clearance	≥ 0,9 mm nach VDE 0110
Mating force max.	9:30 N / 15:50 N / 25:83 N / 37: 123 N
Unmating force min.	9:3,3 N / 15:4,5 N / 25:7,8 N / 37: 11 N
Unmating force max.	9:20 N / 15:50 N / 25:56 N / 37: 82 N
Temperature range	-55 °C bis +125 °C
Mechanical lifetime	≥ 250 mating cycles
Insulator	Thermoplast UL 94-V0
Contacts	Cu alloy mating area gold-plated / termination area tin-plated
Metal bracket	Cu alloy tin-plated
Metallgehäuse	Steel tin-plated
UL approval	E465059

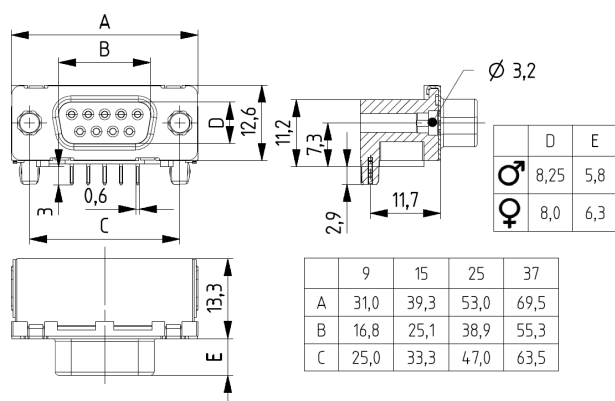


TMC D-Sub Pressfit 90 ° Standard through hole

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Angled Pressfit connection
- Certified elastic pressfit zone
- Gripper surface integrated for automatic pick & place- Through hole \varnothing 3.2
- Types of pin and socket
- Pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

174424	TMCP 9 EE 8-ST 237 E2 094
174425	TMCP 15 EE 8-ST 237 E2 094
174426	TMCP 25 EE 8-ST 237 E2 094
174427	TMCP 37 EE 8-ST 237 E2 094
174448	TMCS 9 EE 8-ST 237 E2 094
174449	TMCS 15 EE 8-ST 237 E2 094
174450	TMCS 25 EE 8-ST 237 E2 094
174451	TMCS 37 EE 8-ST 237 E2 094

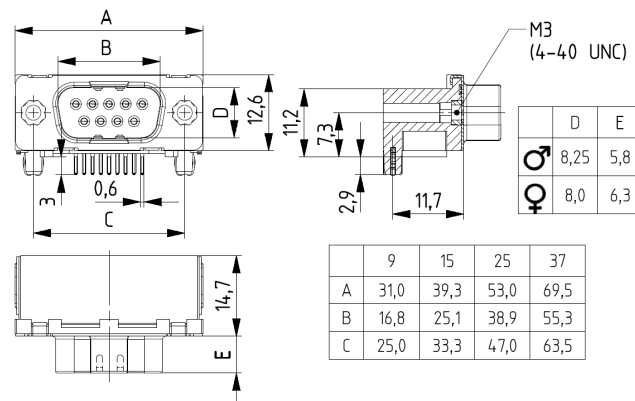


TMC D-Sub Pressfit 90° Standard thread

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Angled Pressfit connection
- Thread UNC 4-40 or M3
- Types of pin and socket
- Pole number: 9/15/25/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

154208	TMCP 9 EE 8-ST 237 E2 VM #4 094
154192	TMCP 15 EE 8-ST 237 E2 VM #4 094
154196	TMCP 25 EE 8-ST 237 E2 VM #4 094
154200	TMCP 37 EE 8-ST 237 E2 VM #4 094
154236	TMCS 9 EE 8-ST 237 E2 VM #4 094
154240	TMCS 15 EE 8-ST 8-ST 237 E2 VM #4 094
154244	TMCS 25 EE 8-ST 8-ST 237 E2 VM #4 094
154248	TMCS 37 EE 8-ST 237 E2 VM #4 094

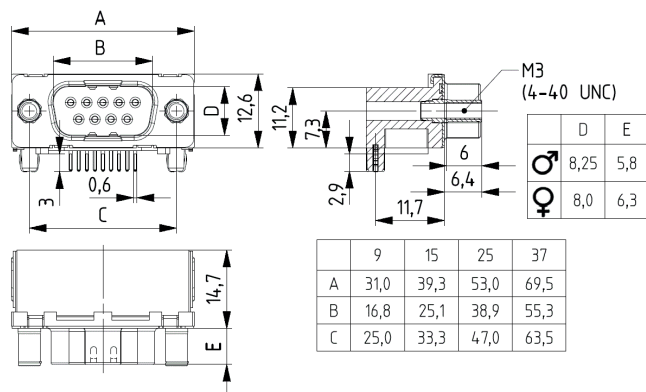


TMC D-Sub Pressfit 90 ° Standard threaded bolt

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Angled Pressfit connection
- Elastic certified Pressfit zone
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval
- Tray packaging

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

154222	TMCP 9 EE 8-ST 237 E2 VK #4
154226	TMCP 15 EE 8-ST 237 E2 VK #4
154230	TMCP 25 EE 8-ST 237 E2 VK #4
154234	TMCP 37 EE 8-ST 237 E2 VK #4
154270	TMCS 9 EE 8-ST 237 E2 VK #4
154274	TMCS 15 EE 8-ST 237 E2 VK #4
154278	TMCS 25 EE 8-ST 237 E2 VK #4
154282	TMCS 37 EE 8-ST 237 E2 VK #4

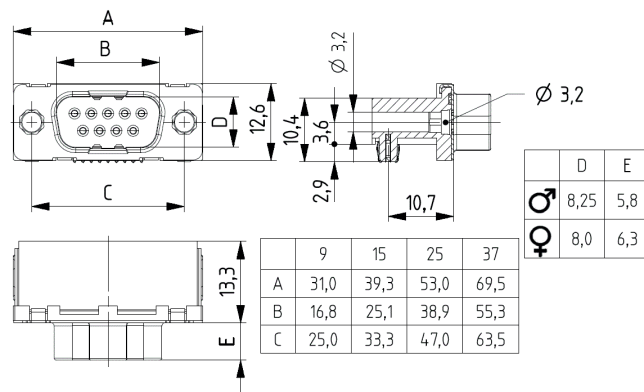


TMC D-Sub Pressfit 90° Eurostyle through hole

Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled Pressfit connection
- Certified elastic pressfit zone
- Gripper surface integrated for automatic pick & place
- Through hole Ø 3.2
- Pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

174412	TMCP 9 EE 8-EU 237 E2 094
174413	TMCP 15 EE 8-EU 237 E2 094
174414	TMCP 25 EE 8-EU 237 E2 094
174415	TMCP 37 EE 8-EU 237 E2 094
174436	TMCS 9 EE 8-EU 237 E2 094
174437	TMCS 15 EE 8-EU 237 E2 094
174438	TMCS 25 EE 8-EU 237 E2 094
174439	TMCS 37 EE 8-EU 237 E2 094

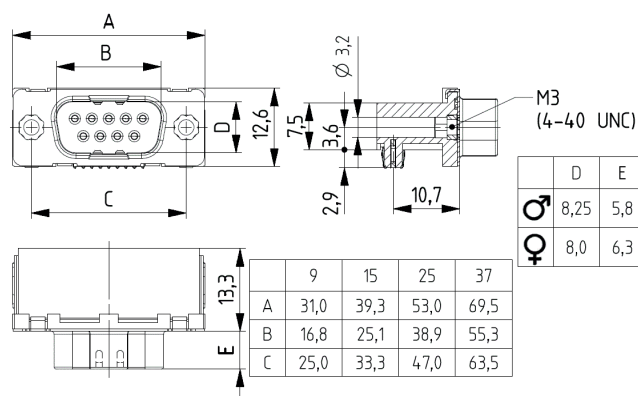


TMC D-Sub Pressfit 90° Eurostyle thread

Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled Pressfit connection
- Elastic certified insertion zone
- Gripper surface integrated for automatic pick & place
- Thread UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions

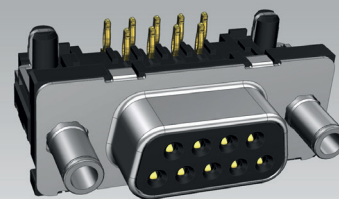


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

154124	TMCP 9 EE 8-EU 237 E2 VM #4
154128	TMCP 15 EE 8-EU 237 E2 VM #4
154132	TMCP 25 EE 8-EU 237 E2 VM #4
154136	TMCP 37 EE 8-EU 237 E2 VM #4
154172	TMCS 9 EE 8-EU 237 E2 VM #4
154176	TMCS 15 EE 8-EU 237 E2 VM #4
154180	TMCS 25 EE 8-EU 237 E2 VM #4
154184	TMCS 37 EE 8-EU 237 E2 VM #4

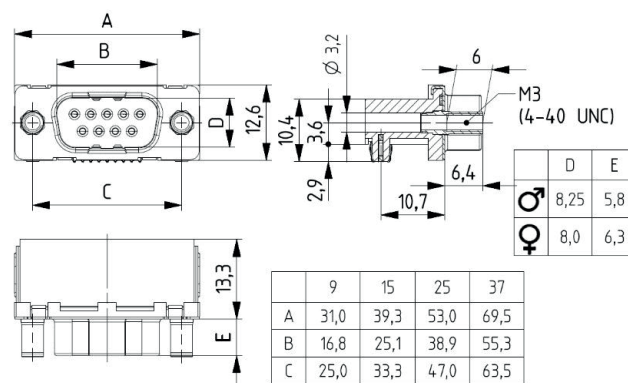


TMC D-Sub Pressfit 90° Eurostyle threaded bolt

Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Right angle Pressfit connection
- Elastic certified pressfit zone
- Pressfit clip for secure fixing
- Male and female in size 9/15/25/37
- Threaded bolt UNC 4-40 or M3
- UL approval E465059

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C to +125° C

Order information

154126	TMCP 9 EE 8-EU 237 E2 VK#4
154130	TMCP 15 EE 8-EU 237 E2 VK#4
154134	TMCP 25 EE 8-EU 237 E2 VK#4
154138	TMCP 37 EE 8-EU 237 E2 VK#4
154174	TMCS 9 EE 8-EU 237 E2 VK#4
154178	TMCS 15 EE 8-EU 237 E2 VK#4
154182	TMCS 25 EE 8-EU 237 E2 VK#4
154186	TMCS 37 EE 8-EU 237 E2 VK#4

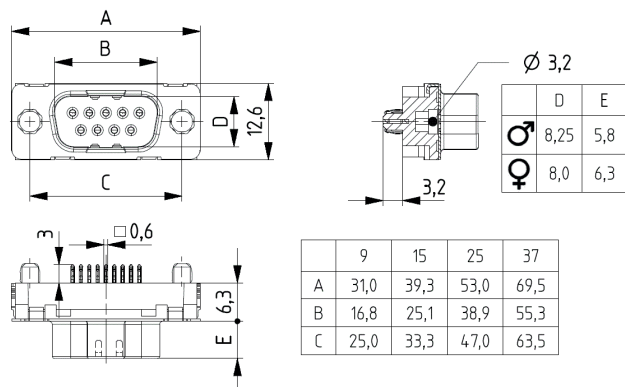


TMC D-Sub Pressfit 180 ° Standard through hole

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight Pressfit connection
- Elastic certified pressfit zone
- Strain relief and grounding clip with Pressfit connection
- Through hole \varnothing 3.2
- Pole number: 9/15/25/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

194057	TMCP 9 EE 3,0 8-63 237 E2 172
194370	TMCP 15 EE 3,0 8-63 237 E2 172
194375	TMCP 25 EE 3,0 8-63 237 E2 172
194113	TMCP 37 EE 3,0 8-63 237 E2 172
194061	TMCS 9 EE 3,0 8-63 237 E2 172
194380	TMCS 15 EE 3,0 8-63 237 E2 172
194385	TMCS 25 EE 3,0 8-63 237 E2 172
194390	TMCS 37 EE 3,0 8-63 237 E2 172

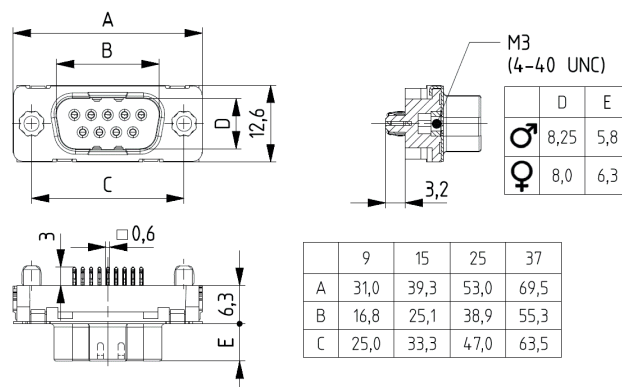


TMC D-Sub Pressfit 180 ° Standard thread

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight Pressfit connection
- Certified elastic pressfit zone
- Strain relief and grounding clip with pressfit connection
- Thread UNC 4-40 or M3
- Pole number: 9/15/25/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

194055	TMCP 9 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0
194373	TMCP 15 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0
194378	TMCP 25 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0
194115	TMCP 37 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0
194059	TMCS 9 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0
194383	TMCS 15 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0
194388	TMCS 25 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0
194395	TMCS 37 EE 3,0 8-63 * 237 E2 * VM#4 * TRAY J 0

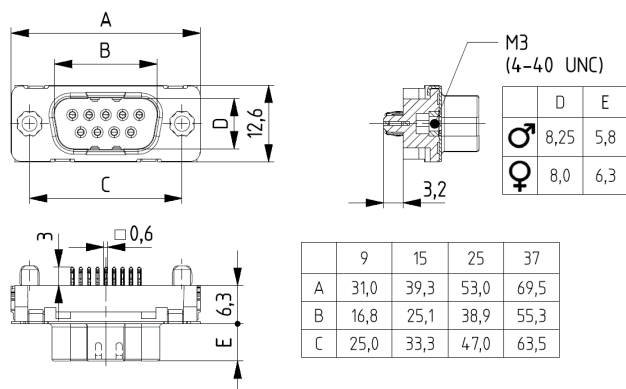


TMC D-Sub Pressfit 180 ° standard threaded bolt

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight Pressfit connection
- Elastic certified insertion zone
- Strain relief and grounding clip with Pressfit connection
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/25/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

194055	TMCP 9 EE 3,0 8-63 237 E2 VM#4
194373	TMCP 15 EE 3,0 8-63 237 E2 VM#4
194378	TMCP 25 EE 3,0 8-63 237 E2 VM#4
194115	TMCP 37 EE 3,0 8-63 237 E2 VM#4
194059	TMCS 9 EE 3,0 8-63 237 E2 VM#4
194383	TMCS 15 EE 3,0 8-63 237 E2 VM#4
194388	TMCS 25 EE 3,0 8-63 237 E2 VM#4
194395	TMCS 37 EE 3,0 8-63 237 E2 VM#4

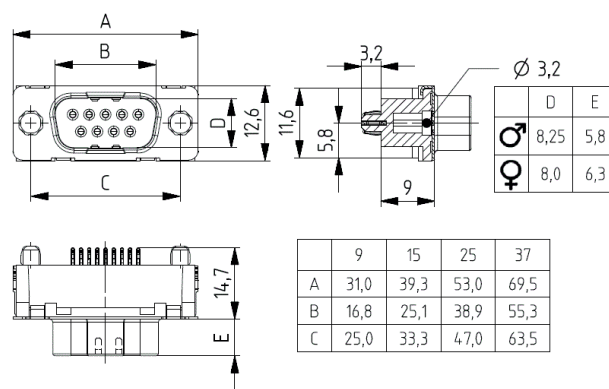


TMC D-Sub Pressfit 180 ° High through hole

Installation height 9.0 mm

- Design according to IEC 802-3 (DIN 41 652)
- High with installation height 9.0 mm
- Straight pressfit connection
- Elastic certified pressfit zone
- Strain relief and grounding clip with Pressfit connection
- Through hole Ø 3.2
- Pole number: 9/15/25/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

194897	TMCP 9 EE 3,0 8-63 237 E2 172
194902	TMCP 15 EE 3,0 8-63 237 E2 172
194907	TMCP 25 EE 3,0 8-63 237 E2 172
194912	TMCP 37 EE 3,0 8-63 237 E2 172
194917	TMCS 9 EE 3,0 8-63 237 E2 172
194922	TMCS 15 EE 3,0 8-63 237 E2 172
194927	TMCS 25 EE 3,0 8-63 237 E2 172
194932	TMCS 37 EE 3,0 8-63 237 E2 172

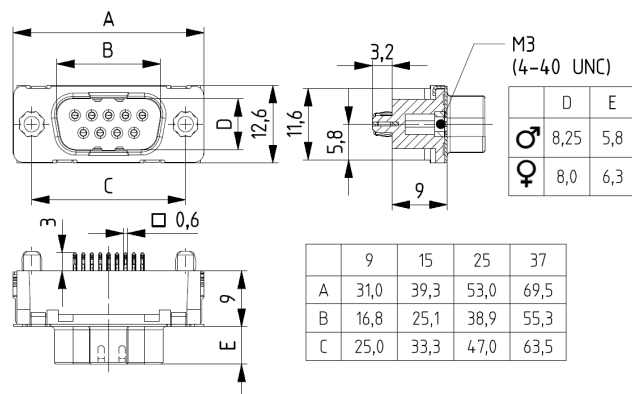


TMC D-Sub Pressfit 180 ° High Thread

Installation height 9.0 mm

- Design according to IEC 802-3 (DIN 41 652)
- High with installation height 9.0 mm
- Straight pressfit connection
- Elastic certified pressfit zone
- Strain relief and grounding clip with Pressfit connection
- Pressfit Clip absorbs forces when inserting and pulling
- Thread UNC 4-40 or M3
- Types of pin and socket

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

194899	TMCP 9 EE 3,0 8-90 237 E2 VM#4
194904	TMCP 15 EE 3,0 8-90 237 E2 VM#4
194909	TMCP 25 EE 3,0 8-90 237 E2 VM#4
194913	TMCP 37 EE 3,0 8-90 237 E2 VM#4
194919	TMCS 9 EE 3,0 8-90 237 E2 VM#4
194924	TMCS 15 EE 3,0 8-90 237 E2 VM#4
194929	TMCS 25 EE 3,0 8-90 237 E2 VM#4
194934	TMCS 37 EE 3,0 8-90 237 E2 VM#4

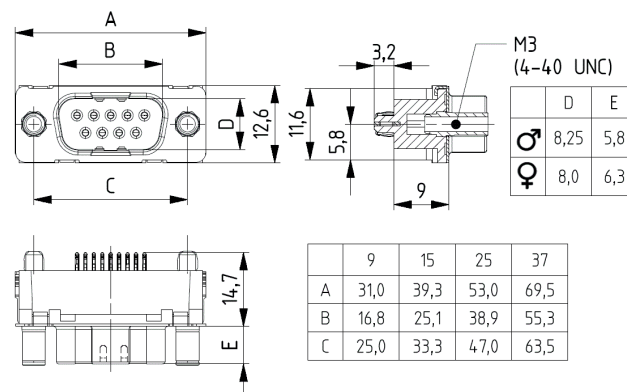


TMC D-Sub Pressfit 180 ° High threaded bolt

Installation height 9.0 mm

- Design according to IEC 802-3 (DIN 41 652)
- High with installation height 9.0 mm
- Straight pressfit connection
- Certified elastic pressfit zone
- Strain relief and grounding clip with pressfit connection
- Thread UNC 4-40 or M3
- Pole number: 9/15/25/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

194899	TMCP 9 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0
194904	TMCP 15 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0
194909	TMCP 25 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0
194913	TMCP 37 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0
194919	TMCS 9 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0
194924	TMCS 15 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0
194929	TMCS 25 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0
194934	TMCS 37 EE 3,0 8-90 * 237 E2 * VK#4 * TRAY J 0

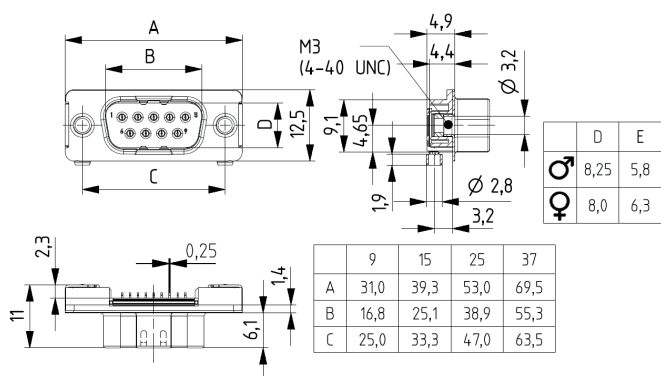


TMC D-Sub SMT Slimline 90°

Ultrathin design 9 poles

- Mating face according to IEC 802-3 (DIN 41 652)
- Installation width 4.65 mm saves 67% of PCB area
- Dual-leaf spring contact for maximum contact safety
- Right angle SMT connection
- Suitable for all common SMT soldering processes
- Additional solder anchors absorb mechanical stress
- Automatic pick & place due to integrated gripper surface
- Tape & reel packaging

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	4 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

494137	TMCP 9 SMD * 8-SL * 237 E-SL
484836	TMCP 9 SMD * 8-SL * 237 E-SL *** VM #4
484835	TMCP 9 SMD * 8-SL * 237 E-SL *** VM M3
494138	TMCS 9 SMD * 8-SL * 237 E-SL
484834	TMCS 9 SMD * 8-SL * 237 E-SL *** VM #4
484833	TMCS 9 SMD * 8-SL * 237 E-SL *** VM M3

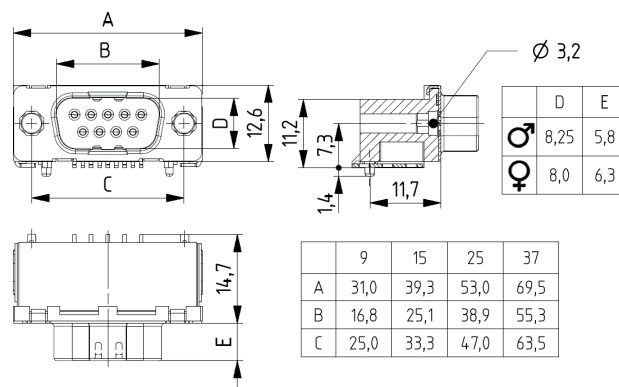


TMC D-Sub SMT 90° Standard Through Hole

Installation height 7.3 mm

- Design acc. to IEC 802-3 (DIN 41 652)
- Standard with installation height 7,3 mm
- Right angle SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick&place
- Through hole Ø 3,2
- Types of pin and socket in pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

174416	TMCP 9 SMD * 8-ST * 237 E2 * 094 * TRAY J 0
174417	TMCP 15 SMD * 8-ST * 237 E2 * 094 * TRAY J 0
174418	TMCP 25 SMD * 8-ST * 237 E2 * 094 * TRAY J 0
174419	TMCP 37 SMD * 8-ST * 237 E2 * 094 * TRAY J 0
174440	TMCS 9 SMD * 8-ST * 237 E2 * 094 * TRAY J 0
117441	TMCS 15 SMD * 8-ST * 237 E2 * 094 * TRAY J 0
174442	TMCS 25 SMD * 8-ST * 237 E2 * 094 * TRAY J 0
174443	TMCS 37 SMD * 8-ST * 237 E2 * 094 * TRAY J 0

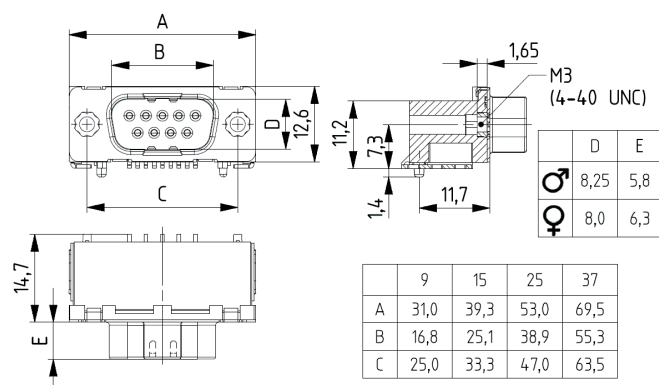


TMC D-Sub SMT 90° Standard Thread

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Right angle SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Thread UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

154188	TMCP 9 SMD 8-ST 237 E2 VM #4 094 TRAY
154192	TMCP 15 SMD 8-ST 237 E2 VM #4 094 TRAY
154196	TMCP 25 SMD 8-ST 237 E2 VM #4 094 TRAY
154200	TMCP 37 SMD 8-ST 237 E2 VM #4 094 TRAY
154236	TMCS 9 SMD 8-ST 237 E2 VM #4 094 TRAY
154240	TMCS 15 SMD 8-ST 237 E2 VM #4 094 TRAY
154244	TMCS 25 SMD 8-ST 237 E2 VM #4 094 TRAY
154248	TMCS 37 SMD 8-ST 237 E2 VM #4 094 TRAY

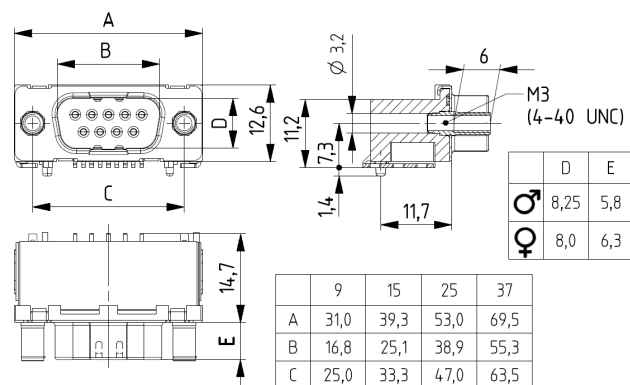


TMC D-Sub SMT 90° Standard Threaded Bolt

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Angled SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

154190	TMCP 9 SMD 8-ST 237 E2 VK #4 094 TRAY
154194	TMCP 15 SMD 8-ST 237 E2 VK #4 094 TRAY
154198	TMCP 25 SMD 8-ST 237 E2 VK #4 094 TRAY
154202	TMCP 37 SMD 8-ST 237 E2 VK #4 094 TRAY
154238	TMCS 9 SMD 8-ST 237 E2 VK #4 094 TRAY
154242	TMCS 15 SMD 8-ST 237 E2 VK #4 094 TRAY
154246	TMCS 25 SMD 8-ST 237 E2 VK #4 094 TRAY
154250	TMCS 37 SMD 8-ST 237 E2 VK #4 094 TRAY

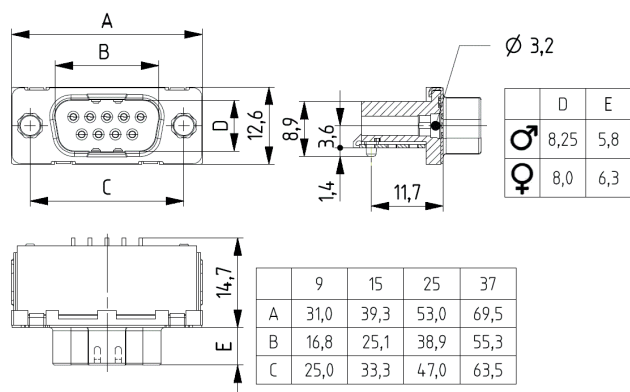


TMC D-Sub SMT 90° Eurostyle Through Hole

Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Through hole \varnothing 3,2
- Pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

174501	TMCP 9 SMD * 8-EU * 237 E2 * 094 * TRAY J 0
117405	TMCP 15 SMD * 8-EU * 237 E2 * 094 * TRAY J 0
174406	TMCP 25 SMD * 8-EU * 237 E2 * 094 * TRAY J 0
174407	TMCP 37 SMD * 8-EU * 237 E2 * 094 * TRAY J 0
174428	TMCS 9 SMD * 8-EU * 237 E2 * 094 * TRAY J 0
174429	TMCS 15 SMD * 8-EU * 237 E2 * 094 * TRAY J 0
174430	TMCS 25 SMD * 8-EU * 237 E2 * 094 * TRAY J 0
174431	TMCS 37 SMD * 8-EU * 237 E2 * 094 * TRAY J 0

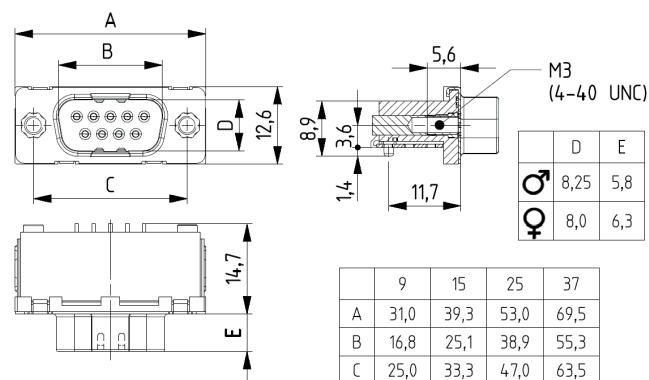


TMC D-Sub SMT 90° Eurostyle Thread

Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Thread UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions

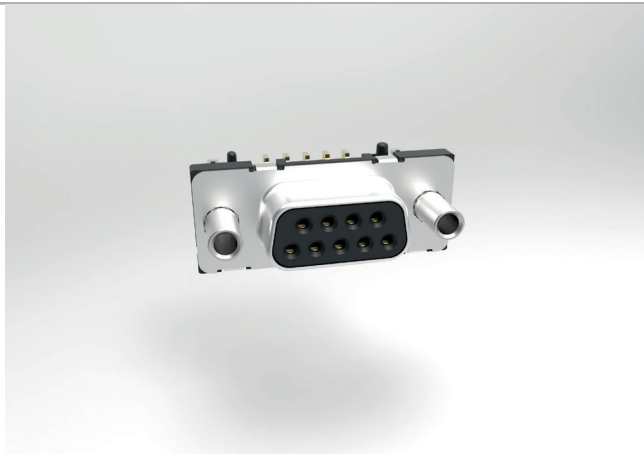


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

204769	TMCP 9 SMD 8-EU 237 E2* VM #4 094 TRAY
204770	TMCP 15 SMD 8-EU 237 E2* VM #4 094 TRAY
204771	TMCP 25 SMD 8-EU 237 E2* VM #4 094 TRAY
204772	TMCP 37 SMD 8-EU 237 E2* VM #4 094 TRAY
204773	TMCS 9 SMD 8-EU 237 E2* VM #4 094 TRAY
204774	TMCS 15 SMD 8-EU 237 E2* VM #4 094 TRAY
204775	TMCS 25 SMD 8-EU 237 E2* VM #4 094 TRAY
204776	TMCS 37 SMD 8-EU 237 E2* VM #4 094 TRAY
214776	TMCP 9 SMD 8-EU 237 E2* VM #4 094 T&R
214647	TMCS 9 SMD 8-EU 237 E2* VM #4 094 T&R

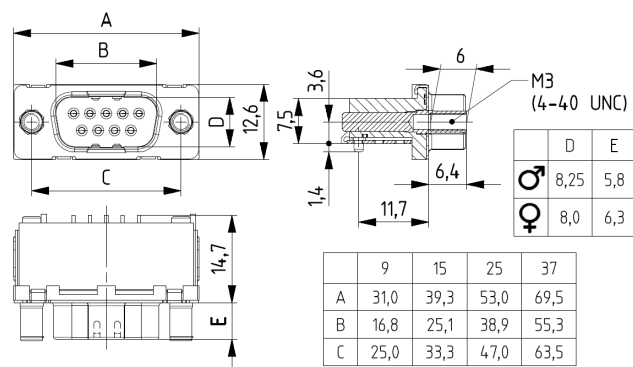


TMC D-Sub SMT 90° Eurostyle Threaded Bolt

Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions

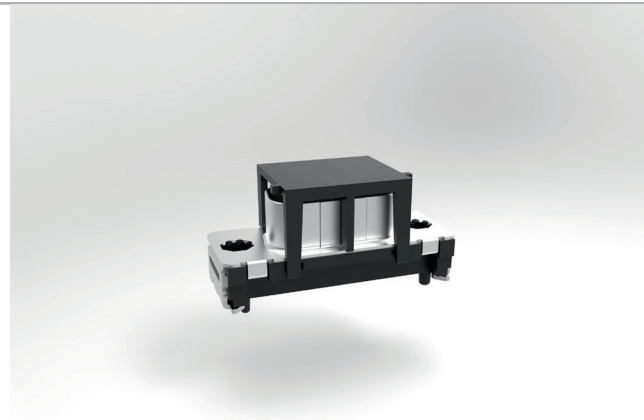


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

154094	TMCP 9 SMD 8-EU 237 E2 VKL #4 094 TRAY
154098	TMCP 15 SMD 8-EU 237 E2 VKL #4 094 TRAY
154102	TMCP 25 SMD 8-EU 237 E2 VKL #4 094 TRAY
154106	TMCP 37 SMD 8-EU 237 E2 VKL #4 094 TRAY
154142	TMCS 9 SMD 8-EU 237 E2 VKL #4 094 TRAY
154146	TMCS 15 SMD 8-EU 237 E2 VKL #4 094 TRAY
154150	TMCS 25 SMD 8-EU 237 E2 VKL #4 094 TRAY
154154	TMCS 37 SMD 8-EU 237 E2 VKL #4 094 TRAY

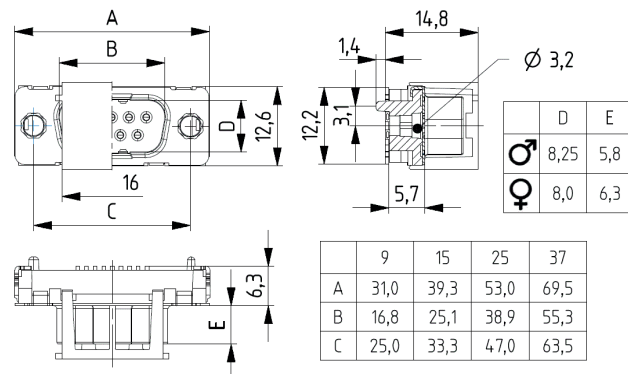


TMC D-Sub SMT 180° Standard Through Hole

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight SMT connection
- Design suitable for all common SMT soldering processes
- Vacuum pick-up cap pre-equipped for automatic pick & place
- Through hole Ø 3,2
- Pole number: 9/15/25/37
- UL approval

Dimensions

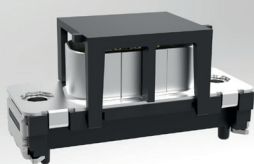


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

174385	TMCP 9 SMD * 8-63 * 237 E2 112 TRAY J 0
174386	TMCP 15 SMD * 8-63 * 237 E2 112 TRAY J 0
174387	TMCP 25 SMD * 8-63 * 237 E2 112 TRAY J 0
174388	TMCP 37 SMD * 8-63 * 237 E2 112 TRAY J 0
174389	TMCS 9 SMD * 8-63 * 237 E2 112 TRAY J 0
174390	TMCS 15 SMD * 8-63 * 237 E2 112 TRAY J 0
174391	TMCS 25 SMD * 8-63 * 237 E2 112 TRAY J 0
174392	TMCS 37 SMD * 8-63 * 237 E2 112 TRAY J 0

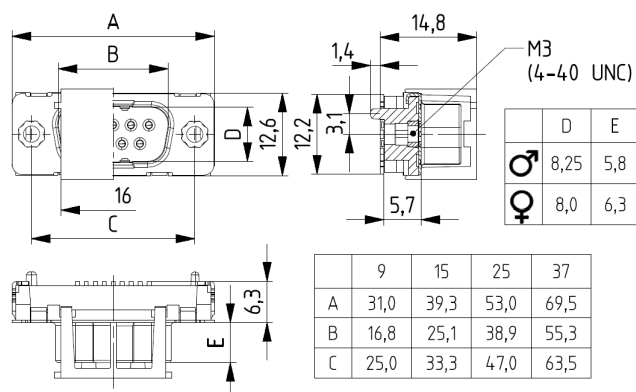


TMC D-Sub SMT 180° Standard Thread

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight SMT connection
- Design suitable for all common SMT soldering processes
- Vacuum pick-up cap pre-equipped for automatic pick & place
- Thread UNC 4-40 or M3
- Pole number: 9/15/25/37
- UL approval

Dimensions

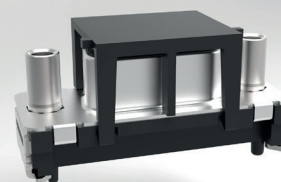


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

164005	TMCP 9 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164006	TMCP 15 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164007	TMCP 25 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164008	TMCP 37 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164021	TMCS 9 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164022	TMCS 15 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164023	TMCS 25 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164024	TMCS 37 SMD * 8-63 * 237 E2 * 112 * TRAY J 0

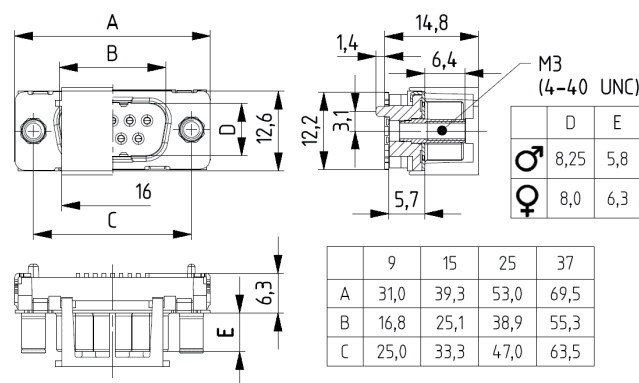


TMC D-Sub SMT 180° Standard Threaded Bolt

Installation height 6,3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Straight SMT connection
- Design suitable for all common SMT soldering processes
- Tray or tube packing with vacuum pick-up cap pre-equipped
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions

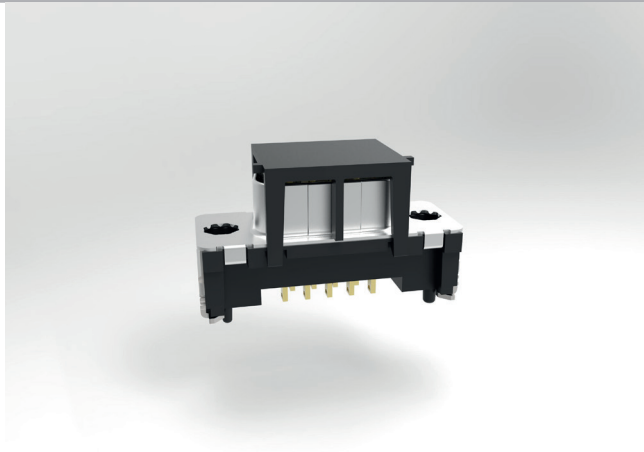


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

204263	TMCP 9 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
164014	TMCP 15 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
164015	TMCP 25 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
164016	TMCP 37 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
204264	TMCS 9 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
164030	TMCS 15 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
164031	TMCS 25 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
164032	TMCS 37 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
194251	TMCP 9 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0
194271	TMCS 9 SMD * 8-63 * 237 E2 * VK#4 * TRAY J 0

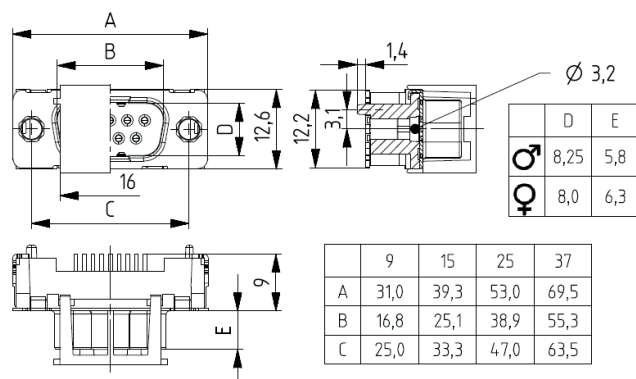


TMC D-Sub SMT 180° High Through Hole

Installation height 9 mm

- Design according to IEC 802-3 (DIN 41 652)
- High with installation height 9 mm
- Straight SMT connection
- Design suitable for all common SMT soldering processes
- Design suitable for all common SMT soldering processes
- Through hole $\varnothing 3,2$
- Pole number: 9/15/25/37
- UL approval

Dimensions

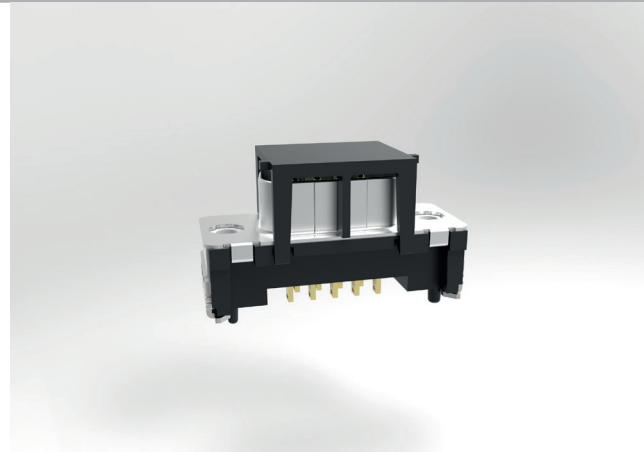


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

194290	TMCP 9 SMD * 8-90 * 237 E2 * 112 * TRAY J 0
194300	TMCP 15 SMD * 8-90 * 237 E2 * 112 * TRAY J 0
194310	TMCP 25 SMD * 8-90 * 237 E2 * 112 * TRAY J 0
194320	TMCP 37 SMD * 8-90 * 237 E2 * 112 * TRAY J 0
194330	TMCS 9 SMD * 8-90 * 237 E2 * 112 * TRAY J 0
194340	TMCS 15 SMD * 8-90 * 237 E2 * 112 * TRAY J 0
194350	TMCS 25 SMD * 8-90 * 237 E2 * 112 * TRAY J 0
194360	TMCS 37 SMD * 8-90 * 237 E2 * 112 * TRAY J 0

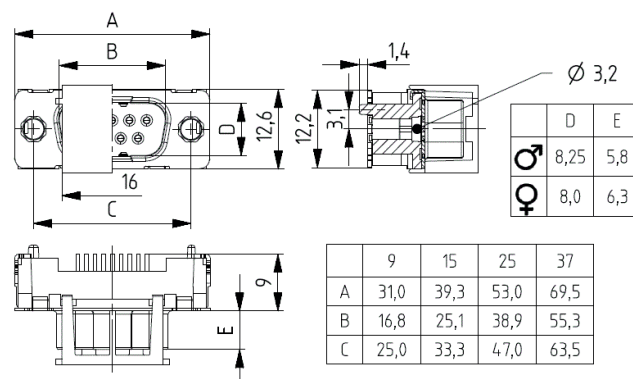


TMC D-Sub SMT 180° High Thread

Installation height 9 mm

- Design according to IEC 802-3 (DIN 41 652)
- High with installation height 9 mm
- Straight SMT connection
- Design suitable for all common SMT soldering processes
- Vacuum pick-up cap pre-equipped for automatic pick & place
- Thread UNC 4-40 or M3
- Pole number: 9/15/25/37
- UL approval

Dimensions

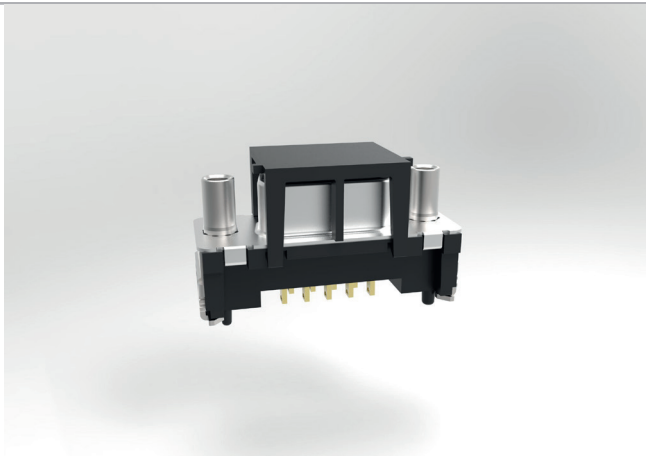


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

164005	TMCP 9 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164006	TMCP 15 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164007	TMCP 25 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164008	TMCP 37 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164021	TMCS 9 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164022	TMCS 15 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164023	TMCS 25 SMD * 8-63 * 237 E2 * 112 * TRAY J 0
164024	TMCS 37 SMD * 8-63 * 237 E2 * 112 * TRAY J 0

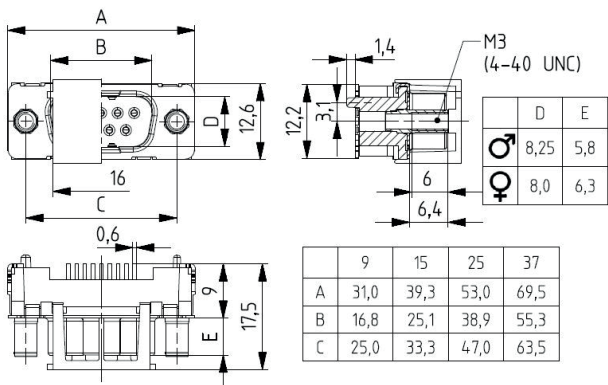


TMC D-Sub SMT 180° High Threaded Bolt

Installation height 9 mm

- Design according to IEC 802-3 (DIN 41 652)
- High with installation height 9 mm
- Straight SMT connection
- Design suitable for all common SMT soldering processes
- Vacuum pick-up cap pre-equipped for automatic pick & place
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

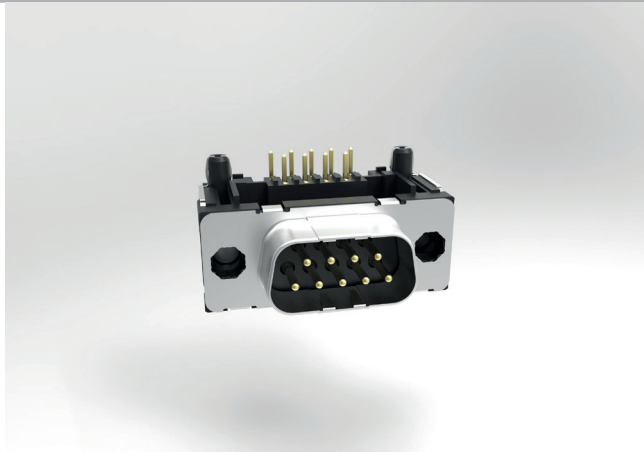
Dimensions

**Technical data** (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

164005	TMCP 9 SMD * 8-63 * 237 E2 112 TRAY J 0
164006	TMCP 15 SMD * 8-63 * 237 E2 112 TRAY J 0
164007	TMCP 25 SMD * 8-63 * 237 E2 112 TRAY J 0
164008	TMCP 37 SMD * 8-63 * 237 E2 112 TRAY J 0
164021	TMCS 9 SMD * 8-63 * 237 E2 112 TRAY J 0
164022	TMCS 15 SMD * 8-63 * 237 E2 112 TRAY J 0
164023	TMCS 25 SMD * 8-63 * 237 E2 112 TRAY J 0
164024	TMCS 37 SMD * 8-63 * 237 E2 112 TRAY J 0

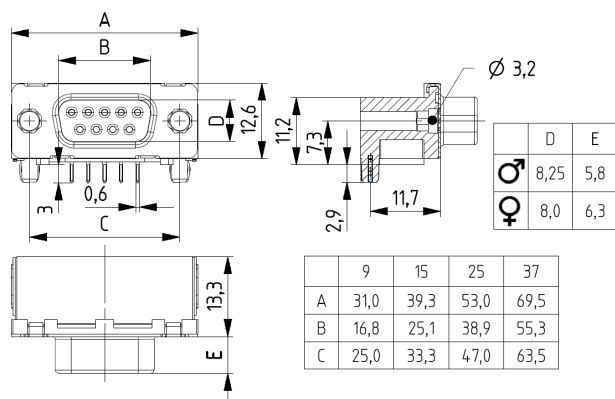


TMC D-Sub THR 90° Standard Through Hole

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Angled THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Through hole \varnothing 3.2
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

204467	TMCP 9 THR 8-ST 237 E2 112 TRAY
204473	TMCP 15 THR 8-ST 237 E2 112 TRAY
204479	TMCP 25 THR 8-ST 237 E2 112 TRAY
204485	TMCP 37 THR 8-ST 237 E2 112 TRAY
204515	TMCS 9 THR 8-ST 237 E2 112 TRAY
204521	TMCS 15 THR 8-ST 237 E2 112 TRAY
204527	TMCS 25 THR 8-ST 237 E2 112 TRAY
204533	TMCS 37 THR 8-ST 237 E2 112 TRAY

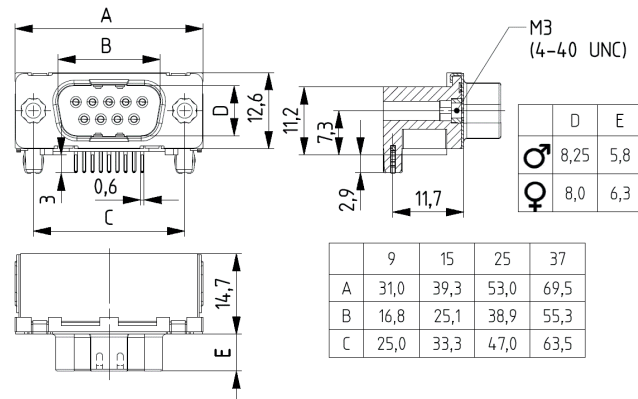


TMC D-SubTHR 90° Standard Thread

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Angled THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Thread UNC 4-40 or M3
- UL approval

Dimensions

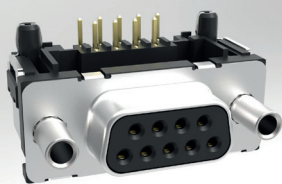


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

204464	TMCP 9 THR 8-ST 237 E2 #4 094 TRAY
204470	TMCP 15 THR 8-ST 237 E2 #4 094 TRAY
204476	TMCP 25 THR 8-ST 237 E2 #4 094 TRAY
204482	TMCP 37 THR 8-ST 237 E2 #4 094 TRAY
204512	TMCS 9 THR 8-ST 237 E2 #4 094 TRAY
204518	TMCS 15 THR 8-ST 237 E2 #4 094 TRAY
204524	TMCS 25 THR 8-ST 237 E2 #4 094 TRAY
204530	TMCS 37 THR 8-ST 237 E2 #4 094 TRAY

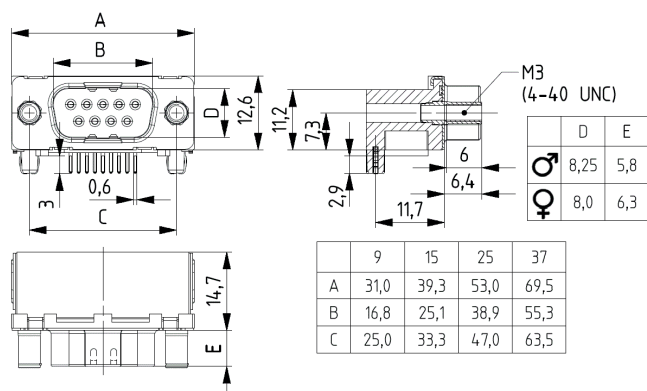


TMC D-Sub THR 90° Standard Threaded Bolt

Installation height 7.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 7.3 mm
- Angled THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

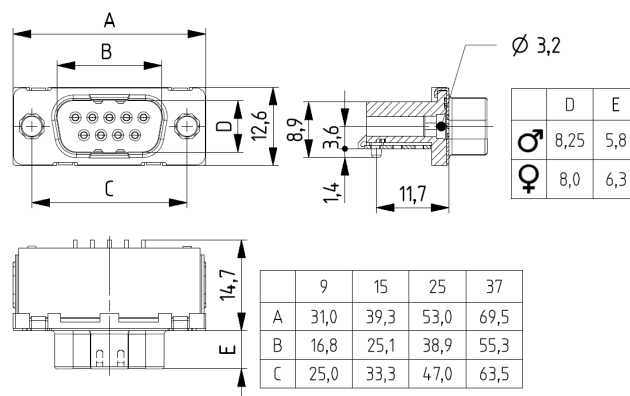
204466	TMCP 9 THR 8-ST 237 E2 VK#4 094 TRAY
204472	TMCP 15 THR 8-ST 237 E2 VK#4 094 TRAY
204478	TMCP 25 THR 8-ST 237 E2 VK#4 094 TRAY
204484	TMCP 37 THR 8-ST 237 E2 VK#4 094 TRAY
204514	TMCS 9 THR 8-ST 237 E2 VK#4 094 TRAY
204520	TMCS 15 THR 8-ST 237 E2 VK#4 094 TRAY
204526	TMCS 25 THR 8-ST 237 E2 VK#4 094 TRAY
204532	TMCS 37 THR 8-ST 237 E2 VK#4 094 TRAY



TMC D-Sub THR 90° Eurostyle Through Hole Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Through hole Ø 3.2
- Pole number: 9/15/15/37

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

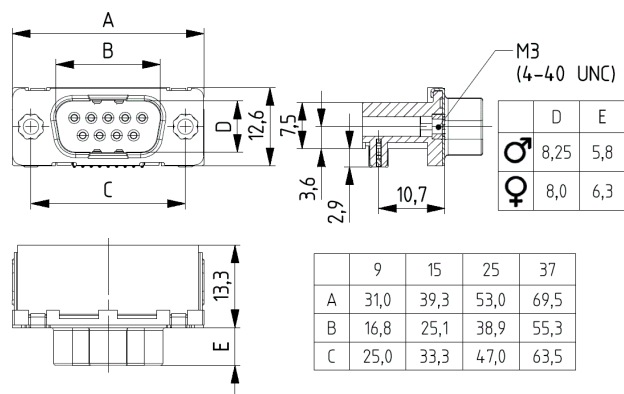
204443	TMCP 9 THR 8-EU 237 E2 112 TRAY
204473	TMCP 15 THR 8-EU 237 E2 112 TRAY
204455	TMCP 25 THR 8-EU 237 E2 112 TRAY
204423	TMCP 37 THR 8-EU 237 E2 112 TRAY
204491	TMCS 9 THR 8-EU 237 E2 112 TRAY
204497	TMCS 15 THR 8-EU 237 E2 112 TRAY
204503	TMCS 25 THR 8-EU 237 E2 112 TRAY
204509	TMCS 37 THR 8-EU 237 E2 112 TRAY



TMC D-Sub THR 90° Eurostyle Thread Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Thread UNC 4-40 or M3
- Pole number: 9/15/15/37

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

204440	TMCP 9 THR 8-EU 237 E2 #4 094 TRAY
204446	TMCP 15 THR 8-EU 237 E2 #4 094 TRAY
204452	TMCP 25 THR 8-EU 237 E2 #4 094 TRAY
204458	TMCP 37 THR 8-EU 237 E2 #4 094 TRAY
204488	TMCS 9 THR 8-EU 237 E2 #4 094TRAY
204494	TMCS 15 THR 8-EU 237 E2 #4 094 TRAY
204500	TMCS 25 THR 8-EU 237 E2 #4 094 TRAY
204506	TMCS 37 THR 8-EU 237 E2 #4 094 TRAY

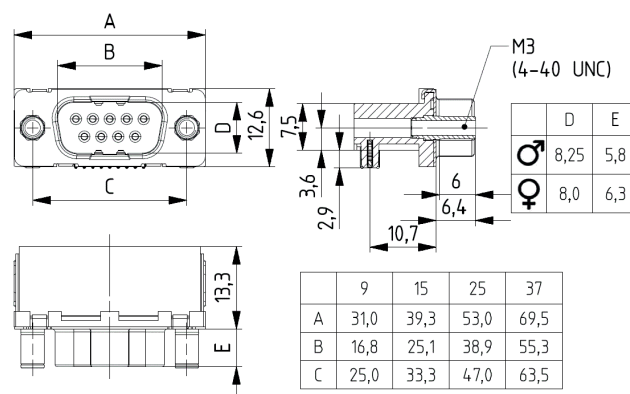


TMC D-Sub THR 90° Eurostyle Threaded Bolt

Installation height 3.6 mm

- Design according to IEC 802-3 (DIN 41 652)
- Eurostyle with installation height 3.6 mm
- Angled THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- ripper surface integrated for automatic pick & place
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions

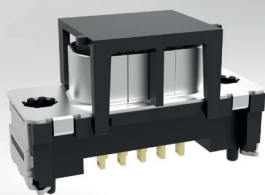


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

204440	TMCP 9 THR 8-EU 237 E2 #4 094 TRAY
204446	TMCP 15 THR 8-EU 237 E2 #4 094 TRAY
204452	TMCP 25 THR 8-EU 237 E2 #4 094 TRAY
204458	TMCP 37 THR 8-EU 237 E2 #4 094 TRAY
204488	TMCS 9 THR 8-EU 237 E2 #4 094TRAY
204494	TMCS 15 THR 8-EU 237 E2 #4 094 TRAY
204500	TMCS 25 THR 8-EU 237 E2 #4 094 TRAY
204506	TMCS 37 THR 8-EU 237 E2 #4 094 TRAY

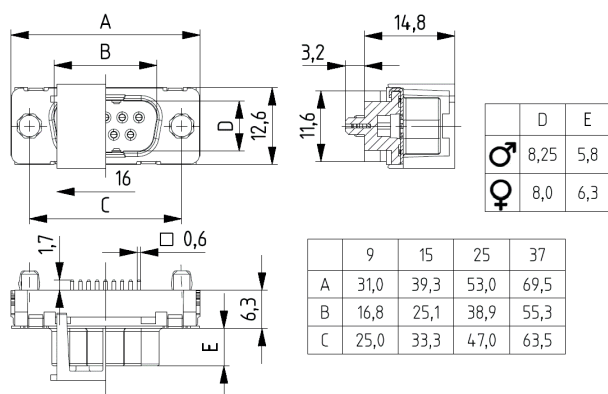


TMC D-Sub THR 180° Standard Thru Hole

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- Vacuum pick-up cap pre-equipped for automatic pick & place
- Through hole $\varnothing 3,2$
- Pole number: 9/15/15/37
- UL approval

Dimensions

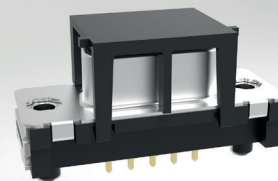


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

204903	TMCP 9 THR 8-63 237 E2 112 TRAY
204862	TMCP 15 THR 8-63 237 E2 112 TRAY
204875	TMCP 25 THR 8-63 237 E2 112 TRAY
234888	TMCP 37 THR 8-63 237 E2 112 TRAY
204918	TMCS 9 THR 8-63 237 E2 112 TRAY
234901	TMCS 15 THR 8-63 237 E2 112 TRAY
204914	TMCS 25 THR 8-63 237 E2 112 TRAY
204927	TMCS 37 THR 8-63 237 E2 112 TRAY

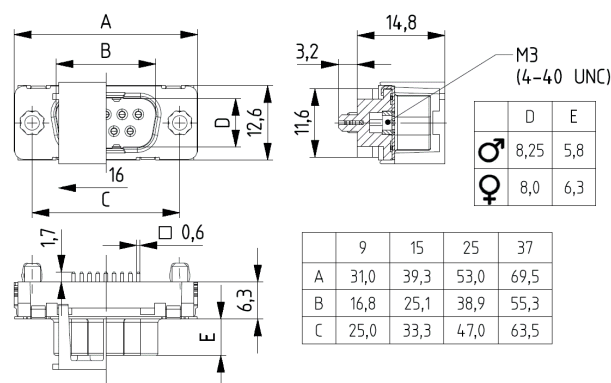


TMC D-Sub THR 180° Standard Thread

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- Vacuum pick-up cap pre-equipped for automatic pick & place
- Thread UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions

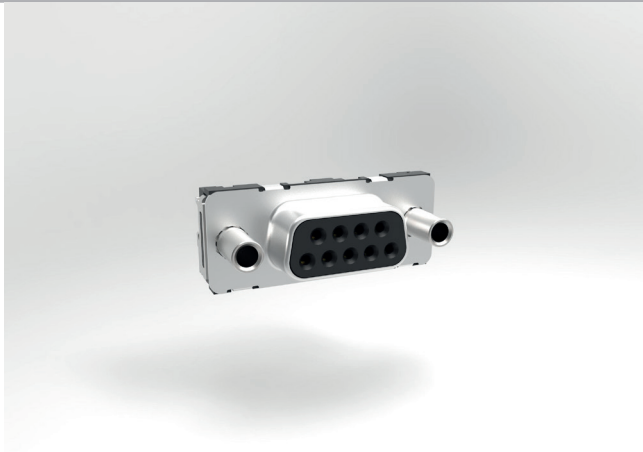


Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	$\leq 25 \text{ m}\Omega / \geq 5 \text{ G}\Omega$
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

204905	TMCP 9 THR 8-63 237 E2 #4 094TRAY
234171	TMCP 15 THR 8-63 237 E2 #4 094 TRAY
234172	TMCP 25 THR 8-63 237 E2 #4 094 TRAY
234890	TMCP 37 THR 8-63 237 E2 #4 094 TRAY
204920	TMCS 9 THR 8-63 237 E2 #4 094 TRAY
234903	TMCS 15 THR 8-63 237 E2 #4 094 TRAY
234916	TMCS 25 THR 8-63 237 E2 #4 094 TRAY
234929	TMCS 37 THR 8-63 237 E2 #4 094 TRAY

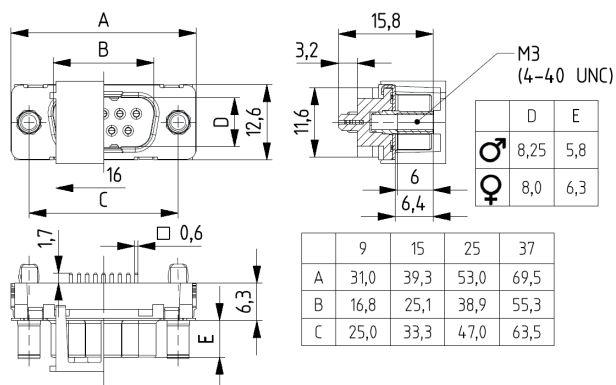


TMC D-Sub THR 180° Standard Threaded Bolt

Installation height 6.3 mm

- Design according to IEC 802-3 (DIN 41 652)
- Standard with installation height 6.3 mm
- Straight THR (Thru Hole Reflow) connection
- Design suitable for all common SMT soldering processes
- Vacuum pick-up cap pre-equipped for automatic pick & place
- Threaded bolt UNC 4-40 or M3
- Pole number: 9/15/15/37
- UL approval

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	3,5 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

204907	TMCP 9 THR 8-63 237 E2 VK #4 094 TRAY
234866	TMCP 15 THR 8-63 237 E2 VK #4 094 TRAY
234567	TMCP 25 THR 8-63 237 E2 VK #4 094 TRAY
234892	TMCP 37 THR 8-63 237 E2 VK #4 094 TRAY
204922	TMCS 9 THR 8-63 237 E2 VK #4 094 TRAY
234905	TMCS 15 THR 8-63 237 E2 VK #4 094 TRAY
234918	TMCS 25 THR 8-63 237 E2 VK #4 094 TRAY
234931	TMCS 37 THR 8-63 237 E2 VK #4 094 TRAY

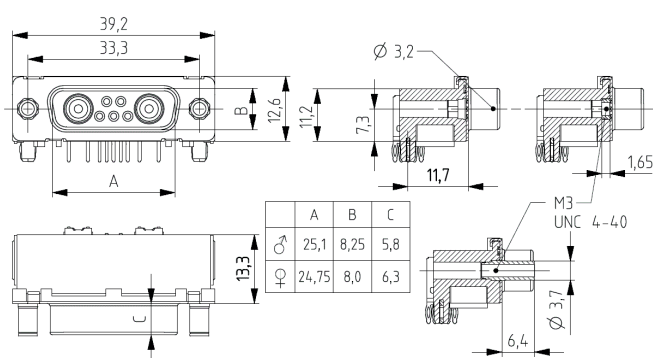


TMC High Power D-Sub Pressfit 90 °

Stamped contacts and installation height 7.3 mm

- Economical High Power application on backplanes and PCBs
- Right angle pressfit connection with an installation height of 7.3 mm
- Elastic certified pressfit zone
- No soldering errors, flux problems, no cleaning process and no thermal stress
- The pressfit zone ensures a gas-tight connection
- Allows assembly on both sides of the panel
- Pole configuration: 7W2
- Thread or threaded bolt UNC 4-40 oder M3

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	25 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

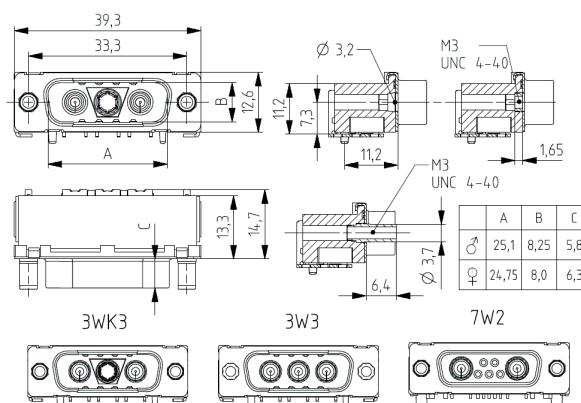
224341	7W2 Male through hole
224343	7W2 Male UNC
224342	7W2 Male threaded bolt UNC
214306	7W2 Female through hole
204782	7W2 Female UNC
214305	7W2 Female threaded bolt UNC



TMC High Power D-Sub SMT 90°

- Cost optimisation for high power D-Sub application on SMT PCB
- Standard with installation height 7.3 mm
- Right angle SMT connection
- Design suitable for all common SMT soldering processes
- Gripper surface integrated for automatic pick & place
- Through hole Ø 3.2 or thread or threaded bolt UNC 4-40 or M3
- Tray packaging
- UL approval

Dimensions

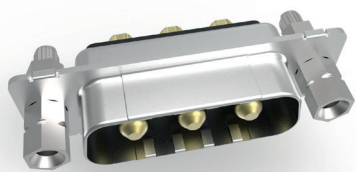


Technical data (mutual data on pages 81 & 98)

Current rating	25 A
R Contact/R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 kV / AC
Temperature range	-55° C bis +125° C

Order information

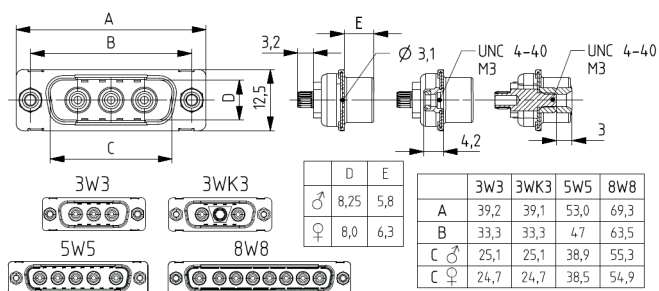
224330	7W2 Male Ø 3,2 I 224263 7W2 Female Ø 3,2
224333	7W2 Male UNC I 204794 7W2 Female UNC
224331	7W2 Male bolt UNC I 224264 7W2 Female bolt UNC
244244	3W3 Male Ø 3,2 I 244254 3W3 Female Ø 3,2
244247	3W3 Male UNC I 244257 3W3 Female UNC
244245	3W3 Male bolt UNC I 244255 3W3 Female bolt UNC
244249	3WK3 Male Ø 3,2 I 244259 3W3 Female Ø 3,2
244252	3WK3 Male UNC I 244262 3WK3 Female UNC
244250	3WK3 Male bolt UNC I 244260 3WK3 Female bolt UNC



TMC High Power D-Sub Pressfit 180°

- Economical High Power application on backplanes and PCBs
- Straight pressfit connection with an installation height of 6.3 mm
- Elastic certified pressfit zone
- No soldering errors, flux problems, no cleaning process and no thermal stress
- Machined contacts allow for high current rating
- Pressfit fastening /ground bolt with thread or threaded bolt UNC or M3
- Pole configuration: 3W3 / 3WK3 / 5W5 / 8W8
- Thread UNC 4-40 or M3

Dimensions



Technical data (mutual data on pages 81 & 98)

Current rating	30 A
R Contact /R Insulation	≤25 mΩ/ ≥5 GΩ
Test voltage	1 KV / AC
Temperature range	-55° C bis +125° C

Order information

134435	3W3 Male UNC I 134451 3W3 Female UNC
134439	3WK3 Male UNC I 134455 3WK3 FemaleUNC
134443	5W5 MaleUNC I 134459 5W5 Female UNC
134447	8W8 Male UNC I 134463 8W8 Female UNC
134499	3W3 Male bolt UNC I 134509 3W3 Female bolt UNC
134501	3WK3 Male bolt UNC I 134511 3WK3 Female bolt UNC
134505	5W5 Male bolt UNC I 134515 5W5 Female bolt UNC
134507	8W8 Male bolt UNC I 134517 8W8 Female bolt UNC

Your notes

Mxed Layout D-Sub Connectors

Reliable with machined contacts and solid mounting accessories

D-Sub



Mixed Layout Connectors for pure high power or mixed (signal / high power) solutions

Machined contacts for high current rating

Mixed layout contact configuration:

size 1: 2W2C

size 2: 3W3, 3W3C, 7W2

size 3: 5W5, 13W3, 17W2

size 4: 8W8, 21W4

For the PCB connection

- Connectors with solder pin 180 ° and 90 °
- Boardlock solder pin 180 ° connector for secure mounting and grounding
- Combilock solder pin 180 ° connector for secure mounting and grounding
- Right angle connectors with solid metal bracket and locking clip for secure grounding

For the cable connection

- Crimp connectors with signal crimp contacts in machined or stamped design
- High power crimp contacts from 10 A to 40 A;
- Hand solder connectors with signal hand solder contacts in machined version
- High power hand solder contacts from 10 A to 40 A.

Technical data

Current rating signal contacts	7 A
Current rating high power contacts	10 A / 20 A / 30 A / 40 A (depends om termination style)
Contact R / Insulation R signal contacts	$\leq 10 \text{ m}\Omega$ / $\geq 5 \text{ G}\Omega$
Contact R / Insulation R high power contacts	$\leq 1 \text{ m}\Omega$ / $\geq 5 \text{ G}\Omega$
Test voltage	1 kV / AC
Temperature range	-55° C to +125° C
Insulator	Thermoplast UL 94-V0
Contacts	Cu alloy gold-plated
Boardlock / Combilock	Cu alloy tin-plated
Metal bracket	St tin-plated
Mechanical lifetime	G1: 500 mating cycles
	G2: 250 mating cycles

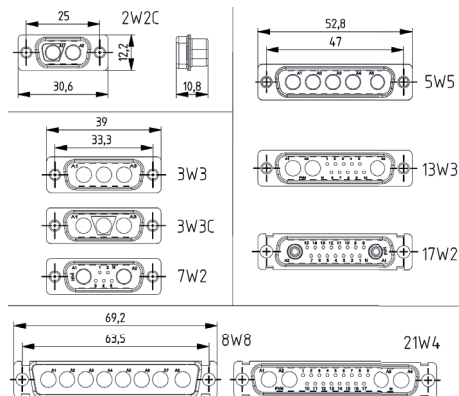


Mixed Layout crimp connectors

Without contacts

- D-Sub Mixed Layout crimp connectors
- Versions with threaded rivet upon request
- Signal crimp contacts in machined edition from AWG 18-AWG 28
- Signal crimp contacts in stamped edition from AWG 20-AWG 32
- High voltage crimp contacts in machined edition from 10 A to 40 A
- Fully compatible to market standard

Dimensions



Technical data (mutual data on pages 81 & 120)

Test voltage	1 KV / AC
Insulation resistance	≥5 GΩ
Temperature range	-55° C to +125° C
Plastic material	Thermoplast UL 94 V-0

Order information

PDT2W2CP	Pin I PT2W2CS socket
PDT3W3P	Pin I PT3W3S socket
PDT3W3CP	Pin I PT3W3CS socket
PDT7W2P	Pin I PT7W2S socket
PDT5W5P	Pin I PT5W5S socket
PDT13W3P	Pin I PT13W3S socket
PDT17W2P	Pin I PT17W2S socket
PDT8W8P	Pin I PT8W8S socket
PDT21W4P	Pin I PT21W4S socket

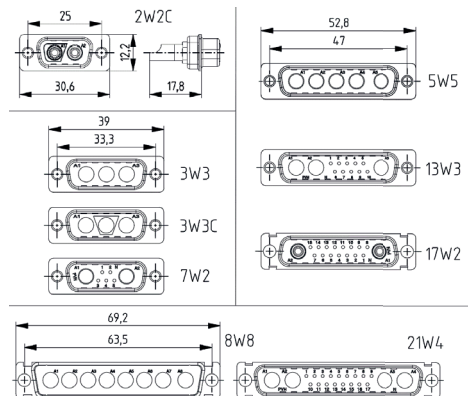


Mixed Layout solder cup connectors

With power contacts

- Machined contacts with high current carrying capacity
- Signal contacts equipped
- Signal contacts and high power contacts equipped
- Power solder cup contacts available separately
- Fully compatible to market standard

Dimensions



Technical data (mutual data on pages 81 & 120)

Nominal current signal	7 A
Nominal current power	10 A / 20 A / 40 A
Temperature range	-55° C to +125° C
Plastic material	Thermoplast UL 94 V-0

Order information

PDT2W2CP1zGx	Pin I PT2W2CS1zGx socket
PDT3W3P1zGx	Pin I PT3W3CS1zGx socket
PDT3W3CP1zGx	Pin I PT3W3CS1zGx socket
PDT7W2P1zGx	Pin I PT7W2S1zGx socket
PDT5W5P1zGx	Pin I PT5W5CS1zGx socket
PDT13W3P1zGx	Pin I PT13W3S1zGx socket
PDT17W2P1zGx	Pin I PT17W2S1zGx socket
PDT8W8P1zGx	Pin I PT6W8S1zGx socket
PDT21W4P1zGx	Pin I PT21W4S1zGx socket
1z:10/12/14 I Gx: G1/G2/G3	

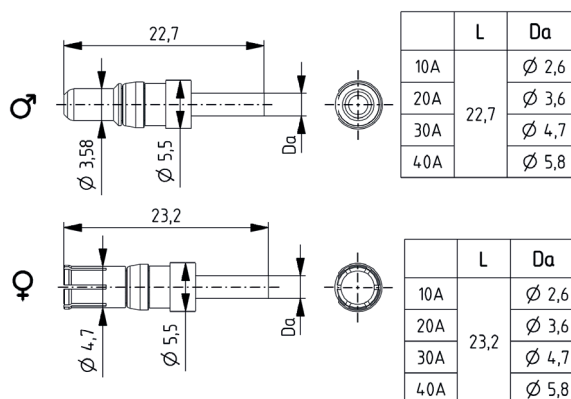


High power contacts crimp connection

For the use in D-Sub Mixed Layout connectors

- Currents: 10 A / 20 A / 30 A / 40
- Machined precision contacts from Cu-alloy
- Hard gold-plated over Ni-barrier layer
- Various surfaces for different lifetime requirements
- Highest quality and lifetime because of defined contact zone

Dimensions



Technical data (mutual data on pages 81 & 120)

Nominal current	10 A / 20 A / 40 A
AWG 10 A / 20 A / 30 A / 40 A	16 - 20 / 12 - 14 / 10 - 12 / 8 - 10
R passage/ R isolation	≤1 mΩ / 10 GΩ
Insulation resistance	10 GΩ

Order information

P5310Gx	Crimp pin 10 A Gx: G1/G2/G3
P5320Gx	Crimp pin 20 A Gx: G1/G2/G3
P5330Gx	Crimp pin 30 A Gx: G1/G2/G3
P5340Gx	Crimp pin 40 A Gx: G1/G2/G3
P6310Gx	Crimp socket 10 A Gx: G1/G2/G3
P6320Gx	Crimp socket 20 A Gx: G1/G2/G3
P6330Gx	Crimp socket 30 A Gx: G1/G2/G3
P6340Gx	Crimp socket 40 A Gx: G1/G2/G3

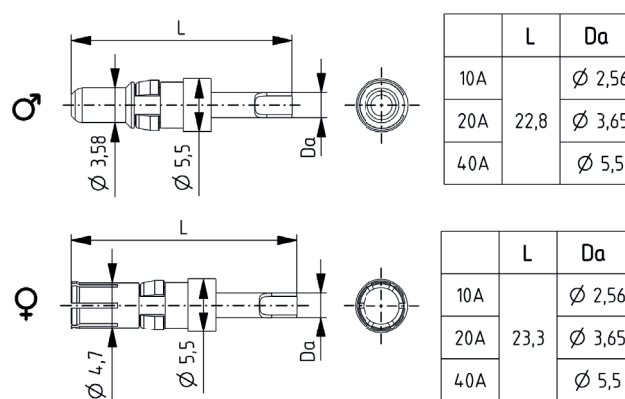


High power contacts solder cup connection

For the use in D-Sub Mixed Layout connectors

- Currents: 10 A / 20 A / 40 A
- Machined precision contacts from Cu-alloy
- Mating area gold-plated and connection area tin-plated
- Various surfaces for different lifetime requirements
- Highest quality and lifetime because of defined contact zone

Dimensions



Technical data (mutual data on pages 81 & 120)

Nominal current	10 A / 20 A / 40 A
AWG 10 A / 20 A / 40 A	16 - 20 / 12 - 14 / 8 - 10
R passage/ R isolation	≤1 mΩ / 10 GΩ
Insulation resistance	10 GΩ

Order information

P5110Gx	Hand soldering pin 10 A Gx: G1 / G2 / G3
P5120Gx	Hand soldering pin 20 A Gx: G1 / G2 / G3
P5140Gx	Hand soldering pin 40 A Gx: G1 / G2 / G3
P6110Gx	Hand soldering socket 10 A Gx: G1 / G2 / G3
P6120Gx	Hand soldering socket 20 A Gx: G1 / G2 / G3
P6140Gx	Hand soldering socket 40 A Gx: G1 / G2 / G3

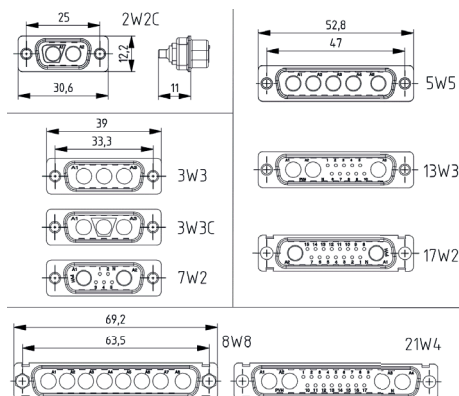


Mixed Layout solder pin 180°

With machined solder pin contacts

- D-Sub Mixed Layout with machined signal solder pins 180°
- D-Sub Mixed Layout with machined signal solder and high power pins 180°
- High power pins 180° with current rating 20 A and 40 A

Dimensions



Technical data (mutual data on pages 81 & 120)

Nominal current signal	7 A
Nominal current high power	20 A or 40 A
Test voltage	1 kV / AC
Temperature range	-55 °C to +125 °C

Order information

PDT2W2CP2zGx	Male PT2W2CS2zGx Female
PDT3W3P2xGx	Male PT3W3CS2zGx Female
PDT3W3CP2xGx	Male PT3W3CS2zGx Female
PDT7W2P2xGx	Male PT7W2S2zGx Female
PDT5W5P2xGx	Male PT5W5CS2zGx Female
PDT13W3P2xGx	Male PT13W3S2zGx Female
PDT17W2P2xGx	Male PT17W2S2zGx Female
PDT8W8P2xGx	Male PT8W8S2zGx Female
PDT21W4P2xGx	Male PT21W4S2zGx Female
2z: 20/22/24 Gx: G1 /G2/G3	

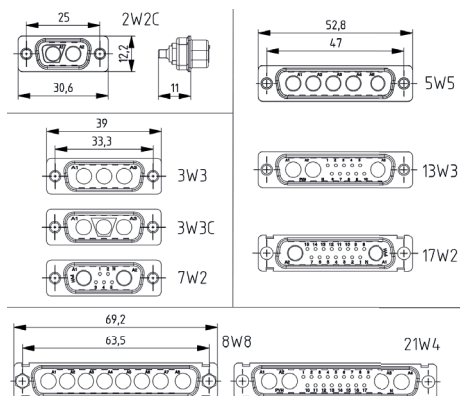


Mixed Layout Boardlock solder pin 180°

With machined solder pin contacts

- Mixed Layout with straight solder pins
- Boardlock: fastening clip and spacer with threads in one
- Connector is snapped onto PCB, fixed and has a UNC thread
- This enables safe and efficient PCB assembly
- Effective grounding due to solid Boardlock bolt
- High current rating due to machined contacts
- Versions only equipped with signal contacts
- Versions equipped with signal and high power contacts

Dimensions



Technical data (mutual data on pages 81 & 120)

Nominal current signal	7 A
Nominal current high power	20 A or 40 A
Test voltage	1 kV / AC
Temperature range	-55 °C to +125 °C

Order information

PDT2W2CP2zGxB4	Male PT2W2CS2zGx Female
PDT3W3P2xGxB4	Male PT3W3CS2zGx Female
PDT3W3CP2xGxB4	Male PT3W3CS2zGx Female
PDT7W2P2xGxB4	Male PT7W2S2zGx Female
PDT5W5P2xGxB4	Male PT5W5CS2zGx Female
PDT13W3P2xGxB4	Male PT13W3S2zGx Female
PDT17W2P2xGxB4	Male PT17W2S2zGx Female
PDT8W8P2xGxB4	Male PT8W8S2zGx Female
PDT21W4P2xGxB4	Male PT21W4S2zGx Female
2z: 20/22/24 Gx: G1 /G2/G3	

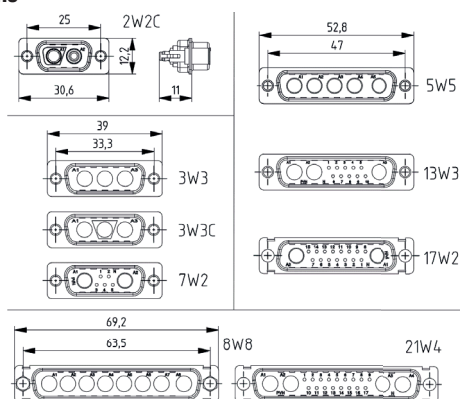


Mixed Layout Combilock solder pin 180°

With machined solder pin contacts

- Mixed Layout with straight solder pins
- Boardlock: fastening clip, spacer and threaded bolt in one
- Connector is snapped onto PCB, fixed and has a UNC thread
- This enables safe and efficient PCB assembly
- Effective grounding due to solid Boardlock bolt
- High current rating due to machined contacts
- Versions only equipped with signal contacts (index 20)
- Versions equipped with signal and high power contacts (index 22/24)

Dimensions



Technical data (mutual data on pages 81 & 120)

Nominal current signal	7 A
Nominal current high power	20 A or 40 A
Test voltage	1 kV / AC
Temperature range	-55 °C to +125 °C

Order information

PDT2W2CP2zGxC4	Male PT2W2CS2zGx Female
PDT3W3P2xGxC4	Male PT3W3CS2zGx Female
PDT3W3CP2xGxC4	Male PT3W3CS2zGx Female
PDT7W2P2xGxC4	Male PT7W2S2zGx Female
PDT5W5P2xGxC4	Male PT5W5CS2zGx Female
PDT13W3P2xGxC4	Male PT13W3S2zGx Female
PDT17W2P2xGxC4	Male PT17W2S2zGx Female
PDT8W8P2xGxC4	Male PT8W8S2zGx Female
PDT21W4P2xGxC4	Male PT21W4S2zGx Female
2z: 20/22/24 Gx: G1 /G2/G3	

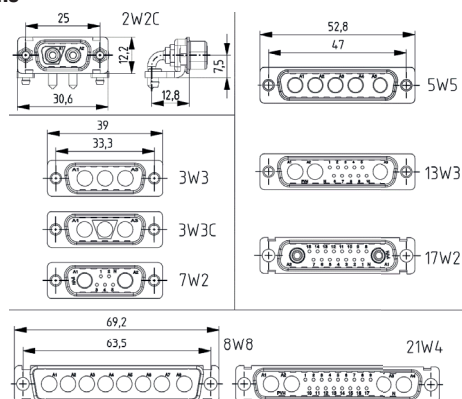


Mixed Layout solder pin 90°

Metal bracket with threaded rivet and locking clip

- Right angle signal contacts in machined version
- High current rating due to machined contacts
- Metal bracket with threaded rivet UNC 4-40 or M3 and metal locking clip
- Secure and easy assembly due to snap-in locking clip
- Metal bracket achieves safe effective grounding
- D-Sub Mixed Layout connectors with signal contacts
- D-Sub Mixed Layout connectors with signal contacts + special contacts

Dimensions



Technical data (mutual data on pages 81 & 120)

Nominal current signal	7 A
Nominal current high power	20 A or 40 A
Test voltage	1 kV / AC
Temperature range	-55 °C to +125 °C

Order information

PDT2W2CP6zGxR48	Male PT2W2CS6zGxR48 Female
PDT3W3P6zGxR48	Male PT3W3CS6zGxR48 Female
PDT3W3CP6zGxR48	Male PT3W3CS6zGxR48 Female
PDT7W2P6zGxR48	Male PT7W2S6zGxR48 Female
PDT5W5P6zGxR48	Male PT5W5CS6zGxR48 Female
PDT13W3P6zGxR48	Male PT13W3S6zGxR48 Female
PDT17W2P6zGxR48	Male PT17W2S6zGxR48 Female
PDT8W8P6zGxR48	Male PT6W8S6zGxR48 Female
PDT21W4P6zGxR48	Male PT21W4S6zGxR48 Female
6z: 60/62/64 Gx: G1 /G2/G3	

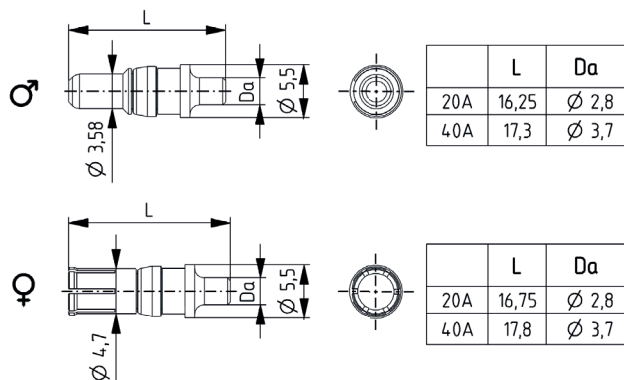


High power contacts solder pin 180°

Machined contacts

- Machined precision contacts of Cu-alloy
- Fully gold-plated with Ni barrier layer
- Various surfaces for different lifetime requirements
- Highest quality and lifetime due to defined contact zone
- Current carrying capacity: 20 A and 40 A

Dimensions



Technical data (mutual data on pages 81 & 120)

Current rating	20 A or 40 A
Resistance	≤1 mΩ
Insulation resistance	≥10 GΩ
Temperature range	-55 °C to +125 °C

Order information

P5220Gx	Male 20 A Gx:G1/G2 /G3
P5240Gx	Male 40 A Gx:G1/G2 /G3
P6220Gx	Female 20 A Gx:G1/G2 /G3
P6240Gx	Female 20 A Gx:G1/G2 /G3

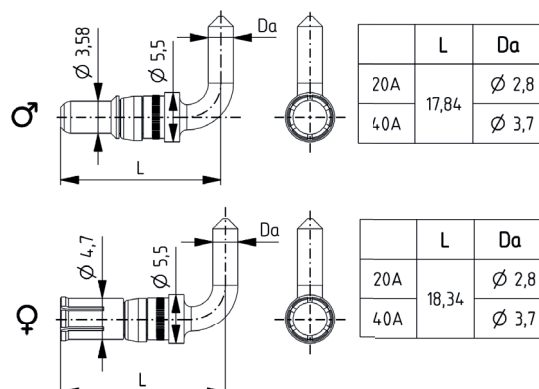


High power contacts solder pin 90°

Machined contacts

- Current rating:20 A/40 A
- Machined contacts made from Cu alloy
- Mating area gold-plated over Ni barrier layer and termination area tin-plated
- Various platings for different lifetime requirements
- Highest quality and mechanical lifetime due to defined contact area
- For the application in D-Sub Mixed Layout connectors

Dimensions



Technical data (mutual data on pages 81 & 120)

Current rating	20 A or 40 A
Resistance	≤1 mΩ
Insulation resistance	≥10 GΩ
Temperature range	-55 °C to +125 °C

Order information

P5620Gx	Male 20A Gx:G1/G2/G3
P5640Gx	Male 40A Gx: G1/G2/G3
P6620Gx	Female 20A Gx: G1/G2/G3
P6640Gx	Female 40A Gx: G1/G2/G3

D-Sub 600V Power

Compact with high current carrying capacity

D-Sub



The 600V D-Sub connector range was developed by Provertha especially for compact power applications with vibration-proof and easy fast cable assembly. This is achieved by new, especially developed snap-in crimp contacts and the matching crimp connectors for the snap-in locking plus the use of Quick-Lock D-Sub-hoods with the innovative Push-Pull quick latching and easy one-hand operation.

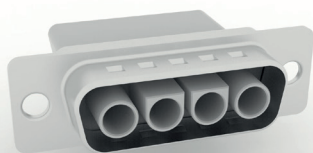
In the 4-pole connector system, the socket version is touch-proof according to VDE 0110.

The Power D-Sub connectors are designed for direct field assembly with machined crimp contacts and crimp tools.

The 600V Power D-Subs are ideal for applications in electrical drives, in car painting facilities and robots.

Technical data

Nominal voltage	630 V
Overvoltage category	I:2,5kV and II:4kV acc. to IEC 60 664
Minimum clearance distance	2.5 kV:≥1,5 mm and 4 kV:≥ 3 mm
Minimum creepage distance	≥ 1,8 mm
Degree of pollution	1
Nominal current	machined: 20 A / stamped: 16 A
Mechanical lifetime	machined: 250 / stamped: 20 mating cycles
Temperature range	-55° C to + 125° C
UL file	E465059
Insulator	Thermoplast UL 94-V0
Contacts	Cu alloy gold-plated
Housing	St tin-plated
Wire size	machined: AWG 20-12 / stamped: AWG 20-14

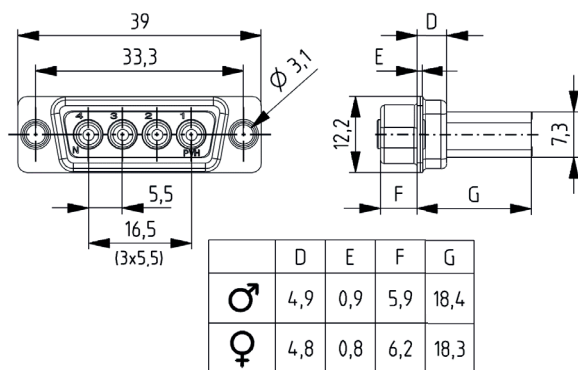


D-Sub 600V Power crimp connectors

For machined or stamped contacts

- Compact design
- Female version touch-proof acc. to VDE 0110
- Cable connector with reliable crimp technology for the wire connection
- Machined crimp contacts for high current rating up to 20A
- Stamped crimp contacts for serial manufacturing
- Hand crimp tool and positioner direct available
- Vibration-proof quick locking with the Quick Lock hoods

Dimensions

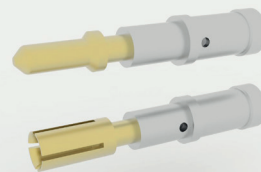


Technical data (mutual data on pages 81 & 126)

Nominal voltage	630 V
Rated surge voltage	Overvoltage category I: 2,5 kV/ II: 4 kV
Nominal current	machined: 20 A / stamped: 18 A
Temperature range	-55 °C to +125 °C

Order information

MDT4W4P30	Crimp connector male for machined contacts
MDT4W4P40	Crimp connector male for stamped contacts
MT4W4S30	Crimp connector female for machined contacts
MT4W4S40	Crimp connector female for stamped contacts

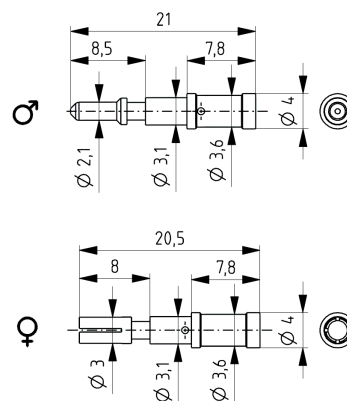


D-Sub 600V Power crimp contacts

Machined and stamped versions

- Machined crimp contacts for high current rating up to 20A
- Machined crimp contacts with 4 point crimp for high reliability
- Stamped crimp contacts for serial manufacturing
- Hand crimp tool and positioner direct available

Dimensions



Technical data (mutual data on pages 81 & 126)

Current rating	machined: 20 A / stamped: 18 A
Wire size	machined: AWG 20 - 12 / stamped: AWG 20 - 14
Mating cycles	machined: 200 / stamped: 20
Material	Cu alloy gold-plated / stamped: tin-plated

Order information

C0512G2	Crimp contact machined male AWG 8 - 12
C0612G2	Crimp contact machined female AWG 8 - 12
C0516G2	Crimp contact machined male AWG 16 - 20
C0616G2	Crimp contact machined female AWG 16 - 20
C1516T	Crimp contact stamped male AWG 14 - 20
C1616T	Crimp contact stamped female AWG 14 - 20

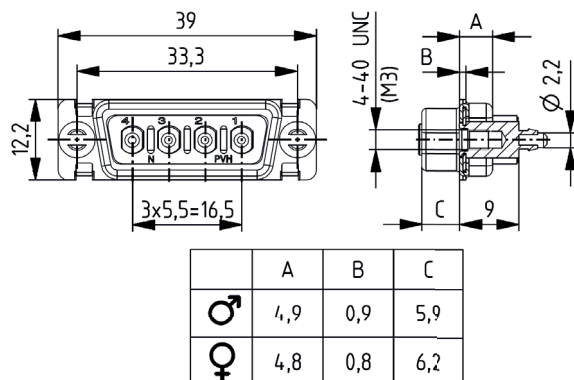


D-Sub Connectors 600V Power solder pin 180°

With machined contacts

- Male and female version
- Straight machined solder pin contacts for high current rating
- Contacts gold-plated with Ni barrier layer
- Solid mounting bolt for safe absorption of the mating and unmating forces
- Boardlock for safe positioning and fixing on the PCB
- Panel cut-out complies with the 15-pole D-Sub

Dimensions



Technical data (mutual data on pages 81 & 126)

Nominal voltage	630 V
Rated surge voltage	Overvoltage category I: 2,5 kV/ II: 4 kV
Nominal current	20 A
Temperature range	-55 °C to +125 °C

Order information

MDT4W4P22G2B4	Male UNC
MT4W4S22G2B4	Female UNC
MDT4W4P22G2B3	Male M3
MT4W4S22G2B3	Female M3

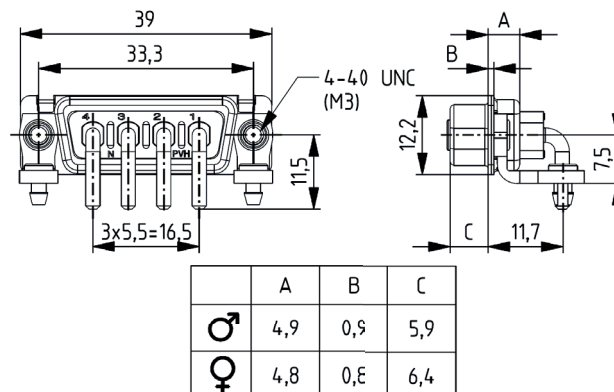


D-Sub Connectors 600V Power solder pin 90°

With machined contacts

- Male and female version
- Angled machined solder pin contacts for high current rating
- Contacts gold-plated with Ni barrier layer
- Solid metal bracket for safe absorption of the mating and unmating forces
- Boardlock for safe positioning and fixing on the PCB
- Metal bracket version with through hole Ø3,4 for M3 screw fastening
- Panel cut-out complies with the 15-pole D-Sub
- Thread UNC or M3

Dimensions



Technical data (mutual data on pages 81 & 126)

Nominal voltage	630 V
Rated surge voltage	Overvoltage category I: 2,5 kV/ II: 4 kV
Nominal current	20 A
Temperature range	-55 °C to +125 °C

Order information

MDT4W4P62G2R48	Male UNC boardlock
MT4W4S62G2R48	Female UNC boardlock
MDT4W4P62G2R38	Male M3 boardlock
MT4W4S62G2R38	Female M3 boardlock
MDT4W4P62G248	Male UNC through hole Ø3,4
MT4W4S62G248	Female UNC through hole Ø3,4
MDT4W4P62G238	Male M3 through hole Ø3,4
MT4W4S62G238	Female M3 through hole Ø3,4

Your notes

Waterproof D-Sub

Economical solutions with compact dimensions

D-Sub



The waterproof D-Sub connectors meet the highest protection class IP 67 requirements in applications where dust and splash water occur and the function of connectors that are not specially protected is impaired. The very resistant special potting compound enables the use in many application areas. These connectors are designed with machined precision contacts for high current carrying capacity. The connectors have the same mounting cut-out and identical external dimensions as the standard D-Sub connector.

Technical data

Nominal current	machined: 7 A
Test voltage	1 kV / AC
Contact resistance	≤ 10 mΩ
Insulation resistance	≥ 5 GΩ
Clearance and creepage distance	≥ 0,9 mm acc. to VDE 0110
Mating and unmating force	0,3 - 0,7 N per contact
Temperature range	-55 °C to +125 °C
Insulator	Thermoplast UL 94-V0
Contacts	Cu and brass alloy gold-plated
Metal shell	Steel tin- or Zn-plated or passivated
Mechanical lifetime	G1 = 500 mating cycles
	G2 = 250 mating cycles
	G3 = 50 mating cycles
Protection class	IP 67

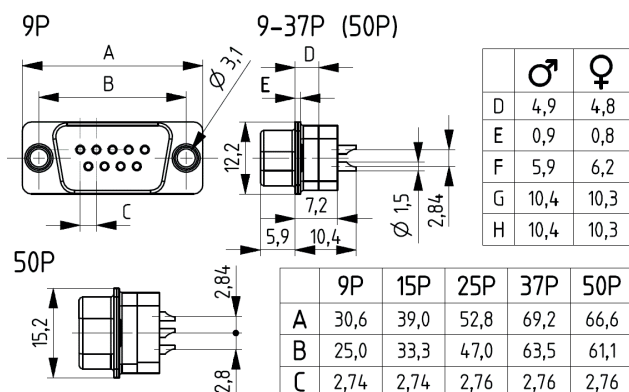


IP 67 D-Sub solder cup

with machined contacts

- High-quality casting compound resistant to many liquids
- Sealed against gases and liquids
- Machined precision contacts Cu alloy
- Integrated solder-stop
- Fully gold-plated over Nickel barrier layer
- Suitable for conductor diameter up to AWG 20
- Highest quality and lifetime because of defined contact area
- Outer dimensions according to standard version

Dimensions

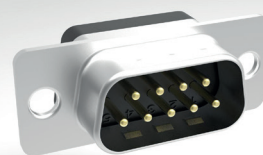


Technical data (mutual data on pages 81 & 130)

Nominal current	Machined contacts: 7 A
Contact / Insulation resistance	≤10 mΩ/ ≥10 GΩ

Order information

SDT09512GxV	Male 9-pole Gx:G1/G2/G3
SDT15512GxV	Male 15-pole Gx:G1/G2/G3
SDT25512GxV	Male 25-pole Gx:G1/G2/G3
SDT37512GxV	Male 37-pole Gx:G1/G2/G3
SDT50512GxV	Male 50-pole Gx:G1/G2/G3
ST09612GxV	Female 9-pole Gx:G1/G2/G3
ST15612GxV	Female 15-pole Gx:G1/G2/G3
ST25612GxV	Female 25-pole Gx:G1/G2/G3
ST37612GxV	Female 37-pole Gx:G1/G2/G3
ST50612GxV	Female 50-pole Gx:G1/G2/G3

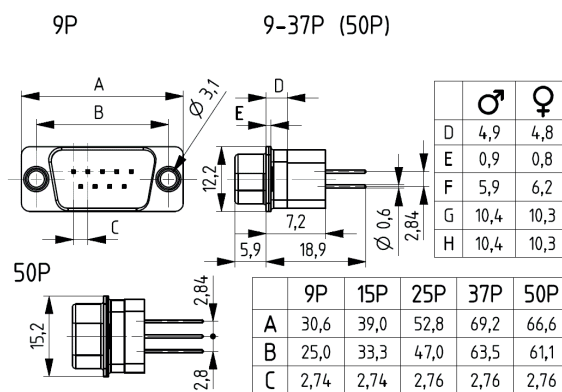


IP 67 D-Sub WireWrap

with machined contacts

- High-quality casting compound resistant to many liquids
- Sealed against gases and liquids
- Machined precision contacts Cu alloy
- Fully gold-plated over Nickel barrier layer
- Highest quality and lifetime because of defined contact area
- Standard accessories can be used
- Outer dimensions according to standard version

Dimensions



Technical data (mutual data on pages 81 & 130)

Nominal current	Machined contacts: 7 A
Contact / Insulation resistance	≤10 mΩ/ ≥10 GΩ

Order information

SDT0955GxV	Male 9-pole Gx:G1/G2/G3
SDT1555GxV	Male 15-pole Gx:G1/G2/G3
SDT2555GxV	Male 25-pole Gx:G1/G2/G3
SDT3755GxV	Male 37-pole Gx:G1/G2/G3
SDT50512GxV	Male 50-pole Gx:G1/G2/G3
ST0965GxV	Female 9-pole Gx:G1/G2/G3
ST1565GxV	Female 15-pole Gx:G1/G2/G3
ST2565GxV	Female 25-pole Gx:G1/G2/G3
ST3765GxV	Female 37-pole Gx:G1/G2/G3
ST5065GxV	Female 50-pole Gx:G1/G2/G3

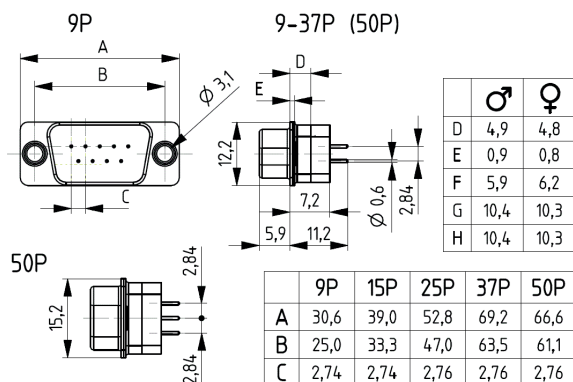


IP 67 D-Sub Solder pin 180°

with machined contacts

- High-quality casting compound resistant to many liquids
- Sealed against gases and liquids
- Machined precision contacts Cu alloy
- Fully gold-plated over Nickel barrier layer
- Highest quality and lifetime because of defined contact area
- Standard Zubehör einsetzbar
- Outer dimensions according to standard version

Dimensions



Technical data (mutual data on pages 81 & 130)

Nominal current Machined contacts: 7 A

Contact / Insulation resistance $\leq 10 \text{ m}\Omega / \geq 10 \text{ G}\Omega$

Order information

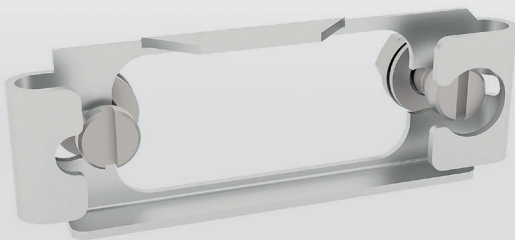
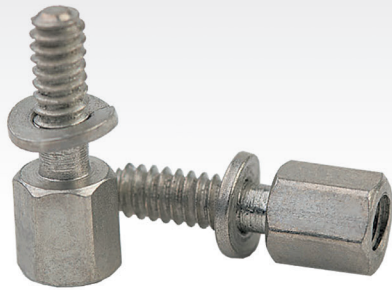
SDT0952GxV	Male 9-pole Gx:G1/G2/G3
SDT1552GxV	Male 15-pole Gx:G1/G2/G3
SDT2552GxV	Male 25-pole Gx:G1/G2/G3
SDT3752GxV	Male 37-pole Gx:G1/G2/G3
SDT5052GxV	Male 50-pole Gx:G1/G2/G3
ST0962GxV	Female 9-pole Gx:G1/G2/G3
ST1562GxV	Female 15-pole Gx:G1/G2/G3
ST2562GxV	Female 25-pole Gx:G1/G2/G3
ST3762GxV	Female 37-pole Gx:G1/G2/G3
ST5062GxV	Female 50-pole Gx:G1/G2/G3

Your notes

D-Sub accessories

EMC-protection plus mounting and locking accessories

D-Sub



For the interference-free closure of open D-Sub interfaces, full-metal EMC blind flanges and plastic caps with a special shield coating are available.

Versions with a fastening clip and transparent versions are applicable for the dust protection.

For locking the D-Sub interfaces, the following editions are applicable alternatively to the screw lock:

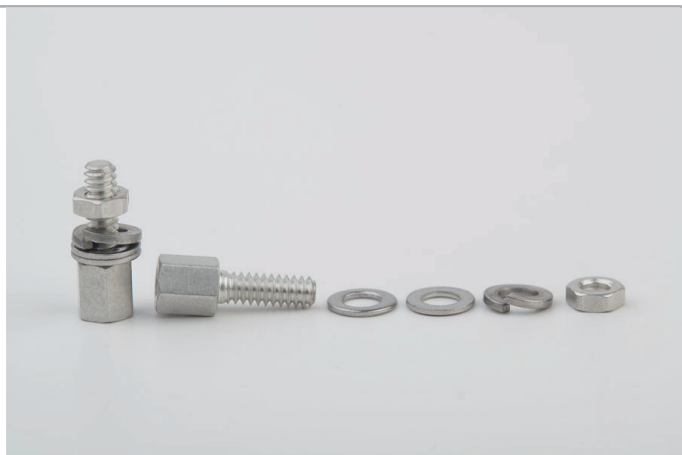
- Plunger pins for the Quick Lock Push Pull quick locking system
- Slide lock
- Clip lock
- Screw lock without hood

For the safe mounting of the D-Sub connectors at front panels and case walls, female screw locks are available as sets including spring washer, spacers and nut in various lengths and outer/inner thread combinations.

A female screw lock with captive spring washer is predestined for the vibration-proof mounting.

Technical data

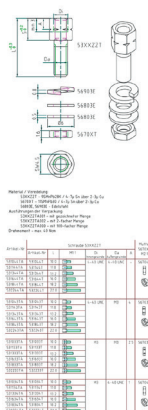
See each product



Hexagonal screws

- Various lengths
- Packaging as complete set: 2 hexagonal screws, spacer, spring washer and nuts
- Packaging as loose parts in separate plastic bags for each article

Dimensions



Technical data (mutual data on pages 81 & 134)

Hexagonal screw St tin-plated

Order information

531044TA002	L=10 / inside: UNC / outside: UNC
531144TA002	L=11 / inside: UNC / outside: UNC
531344TA002	L=13 / inside: UNC / outside: UNC
531644TA002	L=16 / inside: UNC / outside: UNC
531844TA002	L=18 / inside: UNC / outside: UNC
532244TA002	L=22 / inside: UNC / outside: UNC
531033TA002	L=10 / inside: M3 / outside: M3
531043TA002	L=10 / inside: UNC / outside: M3
531034TA002	L=10 / inside: M3 / outside: UNC

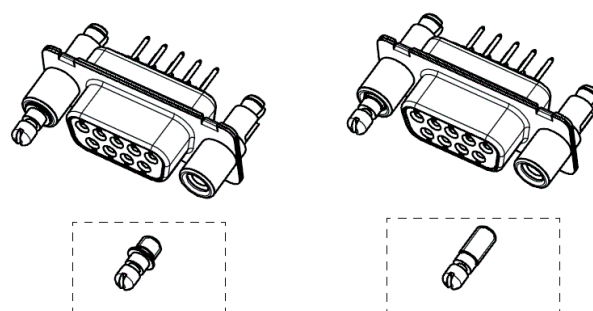


Quick Lock pins variant A

Extension set for D-Sub interface with threaded bolt

- Versions with thread UNC 4-40 or M3
- Versions with or without stop

Dimensions



Technical data (mutual data on pages 81 & 134)

Quick Lock pin Steel tin-plated

Order information

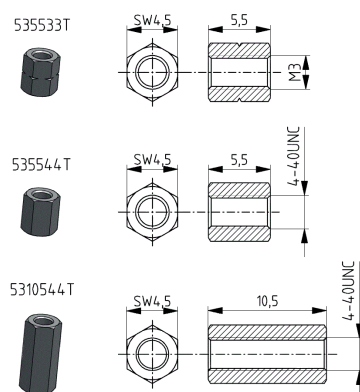
104T002	Set UNC 4-40
104M3T002	Set M3
103T002	Set UNC 4-40 with stop for mounting height 6 mm



Hexagonal threaded bolts

- Various lengths: 5.5/10.5
- Thread: UNC 4-40 or M3

Dimensions



Technical data (mutual data on pages 81 & 134)

Material	Steel tin-plated
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Order information

535544T	L = 5,5 UNC
535533T	L = 5,5 M3
5310544T	L = 10,5 UNC

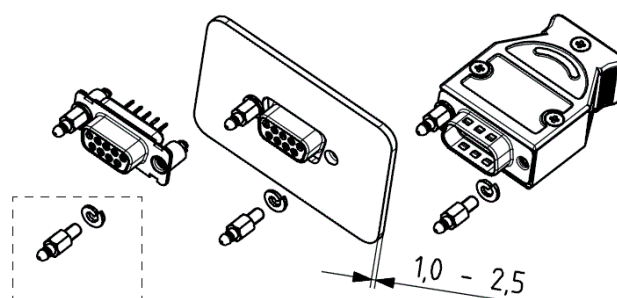


Quick Lock pins variant B

Extension set for D-Sub interface with thread on the connection side

- Versions with thread UNC 4-40 or M3
- Versions for different wall thicknesses up to 5 mm
- Versions with plunger pin short (K = 3) or long (K = 7)
- Set with 2 pins, 2 spring washers and 2 ring washers

Dimensions



Technical data (mutual data on pages 81 & 134)

Quick Lock pin	Steel tin-plated
----------------	------------------

Order information

104TA002	Set UNC 4-40
104M3TA002	Set M3
104T1002	Set UNC 4-40 wall thickness S 1-1.3
104M3T1002	Set M3 wall wall thickness S 1-1.3
104T15002	Set UNC 4-40 wall wall thickness S 1, 5 -1.8
104M3T15002	Set M3 wall wall thickness S 1.5-1.8
104T17002	Set UNC 4-40 wall wall thickness S 1.7-2
104M3T17002	Set M3 wall wall thickness S 1.7-2
104T22002	Set UNC 4-40 wall wall thickness S 2.2- 2.5
104M3T22002	Set M3 wall wall thickness S 2.2-2.5

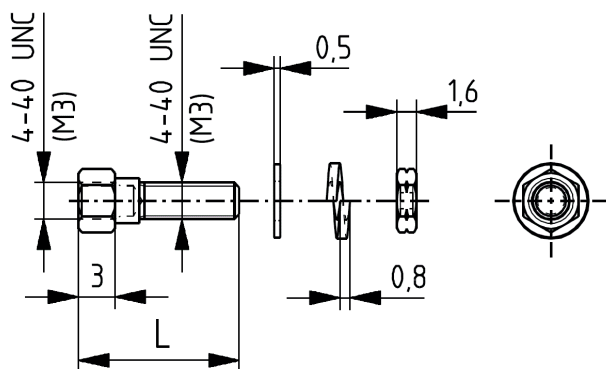


Hexagonal screws for case assembly

With screw, washer, spring washer and nut

- Outer thread/inner thread editions: UNC 4-40/ UNC 4-40 , UNC 4-40/M3, M3/UNC 4-40, M3/M3
- Width across flats: SW 4.5 or SW 5
- Head height: 5 mm
- Screw lengths from 8.5 mm to 13.2 mm
- Packed as set with 2 screw, washer, spring washer and nuts in one bag
<space>Bulk packaging with screw, washer, spring washer and nut as loose parts in bags

Dimensions



Technical data (mutual data on pages 81 & 134)

Hexagonal threaded bolt Steel tin-plated

Order information

5385S43TA002	L=8.5 int.UNC/ext.M3 Set/000:bulk
5385S33TA002	L=8.5 int.M3/ext.M3 Set/000:bulk
5395S44TA002	L=9.5 int.UNC/ext.UNC Set/000:bulk
5395S43TA002	L=9.5 int.UNC/ext.M3 Set/000:bulk
5395S34TA002	L=9.5 int.M3/ext.UNC Set/000:bulk
5395S33TA002	L=9.5 int.M3/ext.M3 Set/000:bulk
5311S44TA002	L=11 int.UNC/ext.UNC Set/000:bulk
5311S33TA002	L=11 int.M3/ext.M3 Set/000:bulk
5313S44TA002	L=13.2 int.UNC/ext.UNC Set/000:bulk
5313S33TA002	L=13.2 int.M3/ext.M3 Set/000:bulk

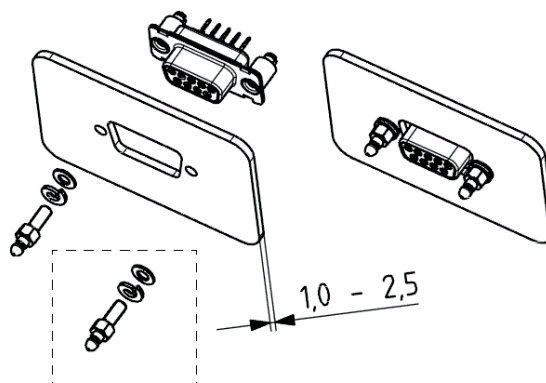


Quick Lock pins variant C

Extension set for D-Sub interface with through hole

- Versions with thread M3
- Versions for different wall thicknesses (S) up to 2,5 mm

Dimensions



Technical data (mutual data on pages 81 & 134)

Plunger pin Steel tin-plated

Order information

103M3TA002	Set M3 D-Sub front panel mounting
103M3TKA002	Set M3 D-Sub front panel mounting
113M3TA002	Set M3 D-Sub front panel mounting
103M3T1002	Set M3 D-Sub rear panel mounting
103M3TK1002	Set M3 D-Sub rear panel mounting
113M3T12002	Set M3 D-Sub rear panel mounting

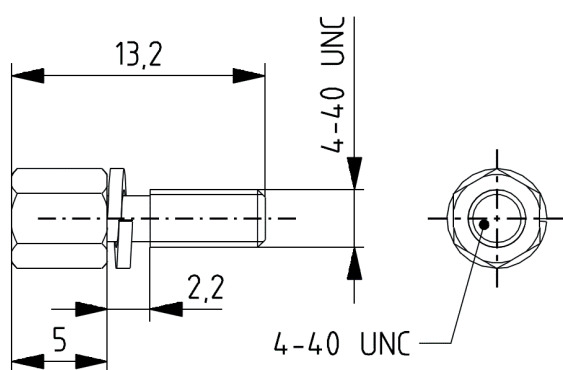


Hexagonal screw for case assembly

With captively mounted spring washer

- For applications at case wall
- Protection against self-loosening at vibration by spring washer
- Thread: UNC 4-40

Dimensions



Technical data (mutual data on pages 81 & 134)

Material	Steel tin-plated
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Order information

531344FT	UNC
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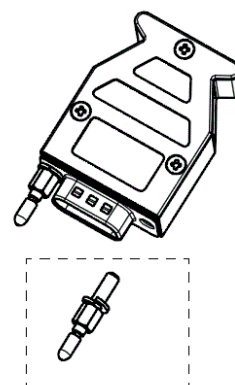


Quick Lock pins variant D

Extension set for plastic hoods Series 07

- Quick Lock pins with self-cutting thread
- Application in plastic hoods for push/clip locking Series 07
- Set with 2 plunger pins and 2 spring washers

Dimensions

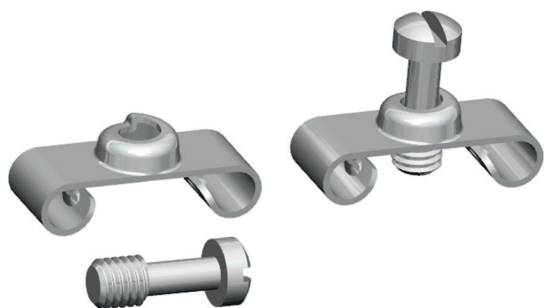


Technical data (mutual data on pages 81 & 134)

Plunger pin	Steel tin-plated
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Order information

114TK002	Set
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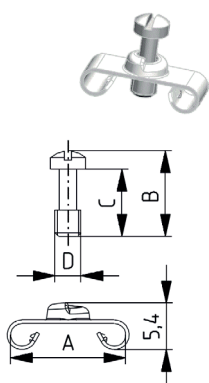


Screw latching

As a set or single parts

- Screw latching for application without hood
- Fixed captively with holding bracket
- UNC 4-40 or M3 thread
- 2 surfaces: Z-version: zinc-plated / T-version: tin-plated

Dimensions



	D	A	B	C
50	4-40 UNC	15,8	9,2	6,7
9-37	4-40 UNC	13,2	9,2	6,7
50	M3	15,8	9,8	7,7
50	4-40 UNC	15,8	9,8	7,7
9-37	M3	13,2	9,8	7,7
9-37	4-40 UNC	13,2	9,8	7,7

Technical data (mutual data on pages 81 & 134)

Locking screw/bracket	Steel zinc-plated or tin-plated
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Order information

529370T002	9-37-pole UNC tin-plated as set/000: single parts
52050T002	50-pole UNC tin-plated as set/000: single parts
529370TM3002	9-37-pole M3 tin-plated as set/000: single parts
52050TM3002	50-pole M3 tin-plated as set/000: single parts
529370Z002	9-37-pole UNC tin-plated as set/000: single parts
52050Z002	50-pole UNC tin-plated as set/000: single parts
529370ZM3002	9-37-pole M3 tin-plated as set/000: single parts
52050ZM3002	50-pole M3 tin-plated as set/000: single parts

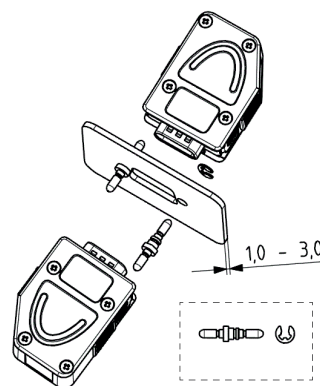


Quick Lock pins variant E

Extension set für hood-hood thru bulkhead

- Versions for different wall thicknesses up to max. 2,5 mm
- Pin with contour on both sides for mating from front and rear side
- Set with 2 pins and 2 spring washers

Dimensions

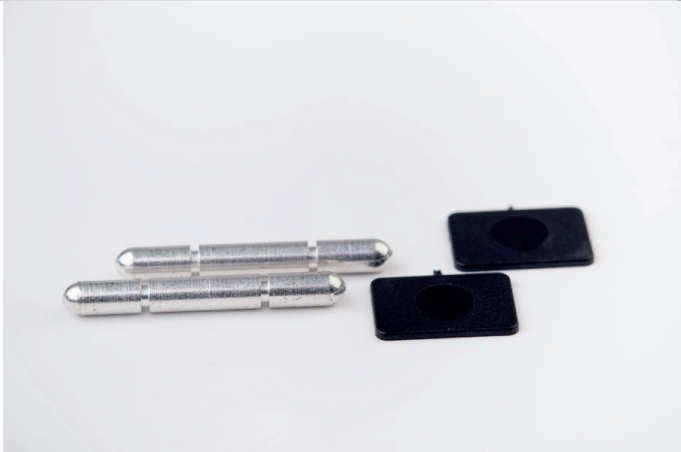


Technical data (mutual data on pages 81 & 134)

Quick Lock pin	Steel tin-plated
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Order information

114TF125002	Set wall thickness 1,25
114TF15002	Set wall thickness 1,5
114TF2002	Set wall thickness 2
114TF22002	Set wall thickness 2,2
114TF25002	Set wall thickness 2,5
114TF3002	Set wall thickness 3

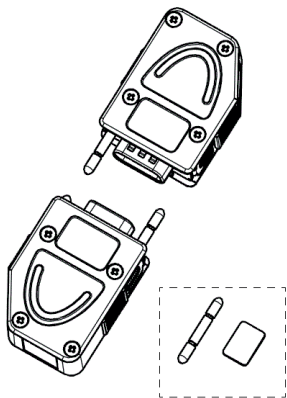


Quick Lock pins variant F

Extension set for connection hood-hood

- Version for flying connection of 2 hoods
- Coding for safe plugging

Dimensions



Technical data *(mutual data on pages 81 & 134)*

Quick Lock pin	Steel tin-plated
----------------	------------------

Order information

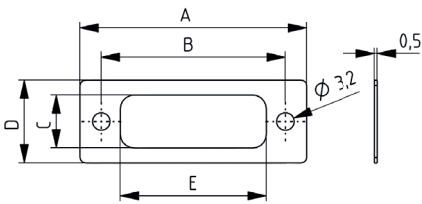
113TF002	Set
----------	-----



Sealing flanges made of silicon

- Silicon flange sealing for protection against moisture
- 09- to 50-pole
- Excellent fit for all D-Sub connectors

Dimensions



	09	15	25	37	50
A	33,0	41,0	55,0	72,0	70,0
B	25,0	33,3	47,0	63,5	61,1
C	9,6				12,4
D	15,0				18,0
E	18,2	26,4	40,2	56,6	54,2

Technical data *(mutual data on pages 81 & 134)*

Material	VMQ
Temperature range	- 60° - 230° C

Order information

SF09	9-pole
SF15	15-pole
SF25	25-pole
SF37	37-pole
SF50	50-pole

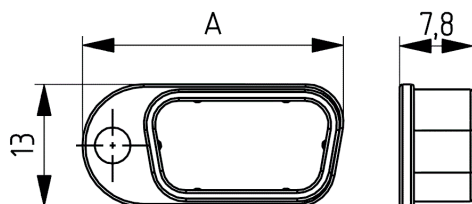


Protection Caps Plastic Black

Black version with eyelet attachment

- Protection against dust and humidity
- High-class, very sturdy plastic
- 09 bis 37 polig lieferbar
- With eyelet attachment for mounting a chain

Dimensions



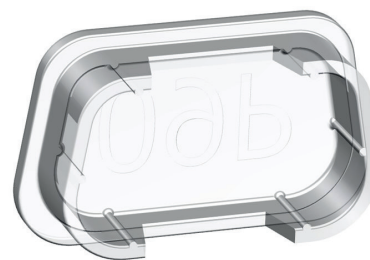
	SKB09x	SKB15x	SKB25x	SKB37x
A	27,6	36,0	49,6	65,6

Technical data (mutual data on pages 81 & 134)

Material	Thermoplast
----------	-------------

Order information

SKB09P	9-pole for D-Sub male
SKB15P	15-pole for D-Sub male
SKB25P	25-pole for D-Sub male
SKB37P	37-pole for D-Sub male
SKB09S	9-pole for D-Sub female
SKB15S	15-pole for D-Sub female
SKB25S	25-pole for D-Sub female
SKB37S	37-pole for D-Sub female

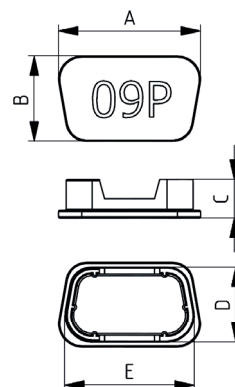


Protection Caps

Transparent version

- Protection against dust and humidity
- Transparent plastic
- Economical solution

Dimensions



	A	B	C	D	E
9P	24,0	14,7	6,7	13,1	21,4
15P	32,8	14,7	6,7	12,7	30,2
25P	45,2	14,7	6,7	12,7	43,4
37P	63,1	14,7	7,3	12,7	60,3
50P	56,6	15,0	8,0	-	-
9S	22,5	13,2	6,7	11,2	19,9
15S	31,0	13,2	6,7	11,2	28,3
25S	44,5	13,2	6,7	11,2	41,8
37S	58,0	11,2	7,9	12,7	58,0
50S	54,8	13,7	8,0	-	-

Technical data (mutual data on pages 81 & 134)

Material	Thermoplast
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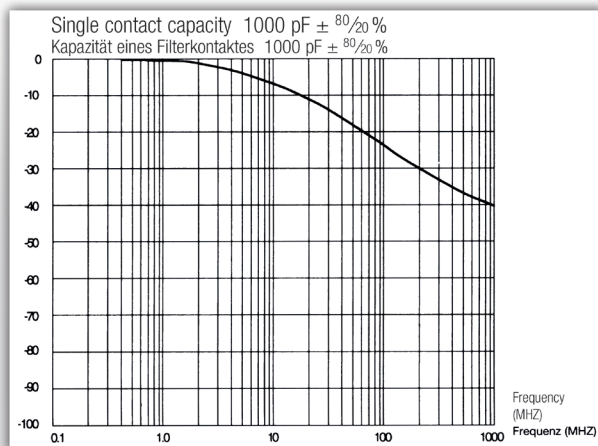
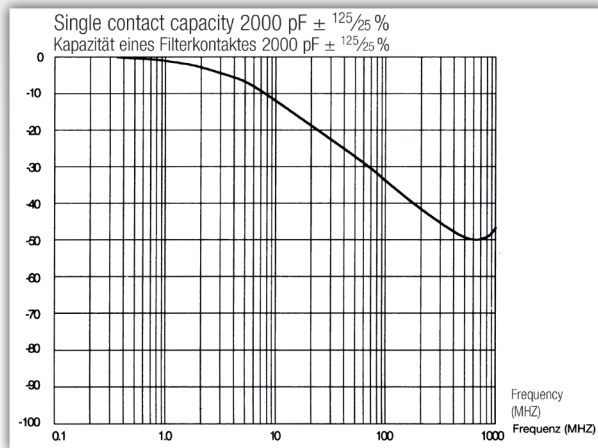
Order information

SKT09P	9-pole for D-Sub male
SKT15P	15-pole for D-Sub male
SKT25P	25-pole for D-Sub male
SKT37P	37-pole for D-Sub male
SKT50P	50-pole for D-Sub male
SKT09S	9-pole for D-Sub female
SKT15S	15-pole for D-Sub female
SKT25S	25-pole for D-Sub female
SKT37S	37-pole for D-Sub female
SKT50S	50-pole for D-Sub female

D-Sub Filter connectors

For filtering interferences for an optimal signal transmission

D-Sub



D-Sub filter connectors suppress interference of the input signals at the D-Sub device interface. PROVERTHA offers the range of filter connectors with filter capacitors for the suppression of crosstalk and harmonics, which act as low-pass filters. The cost-effective solution for the suppression of disturbances

at high frequencies with lower attenuation requirements, the series of ferrite-equipped filter connectors.

- High quality filtering with feedthrough capacitors
- 100% assured quality through individual testing of each connector
- Selective filter assembly in the connector possible.
- Dimensionally identical to standard plugs and the installation dimension remains the same
- Our standard accessories can be used without restrictions
- Capacitance values ??from 2pF to 2000 pF available
- RF density, closed metal back
- High attenuation values ??up to 50 dB
- Different types of connections: solder cup or cable solder, WireWrap plus solder pin 180 ° and solder pin 90 °

Technical data

Nominal voltage	100 V DC (Var 01: 2000pF: 50 V DC)
Test voltage	200 V DC (Var 01: 2000pF: 125 V DC)
Nominal current	≤ 5 A DC
Insulation resistance	≥ 1 G Ω at 25 °C
Temperature range	-25 °C to +85 °C
Mechanical lifetime	G1: 500 / G2: 250 / G3: 50 mating cycles
Variant 01 2000 pF Tol.	+80% / -20%
Variant 02 1000 pF Tol.	+80% / -20%
Variant 09 2 pF Tol.	+0% / -100% (without filter pins)

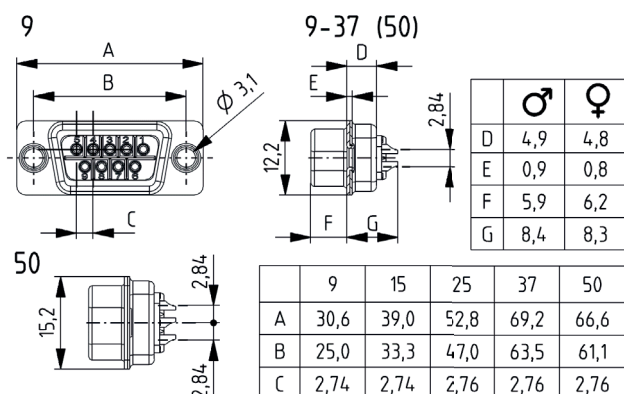


Filter connectors

With solder cup connection

- Chip capacitor filtration 1000 pF
- Standard D-SUB dimensions
- Inexpensive edition
- Quality class 3

Dimensions



Technical data (mutual data on pages 81 & 142)

Nominal temperature	-25° C to + 85° C
Nominal voltage	100VDC (Var Nr. 01 (2000pF) = 50VDC)
Test voltage	200VDC (Var Nr. 01 (2000pF) = 125VDC)
Nominal current	5 A DC Max.

Order information

F0209151G3T	Pin 9-pole
F0215151G3T	Pin 15-pole
F0225151G3T	Pin 25-pole
F0237151G3T	Pin 37-pole
F0209161G3T	Socket 9-pole
F0215161G3T	Socket 15-pole
F0225161G3T	Socket 25-pole
F0237161G3T	Socket 37-pole

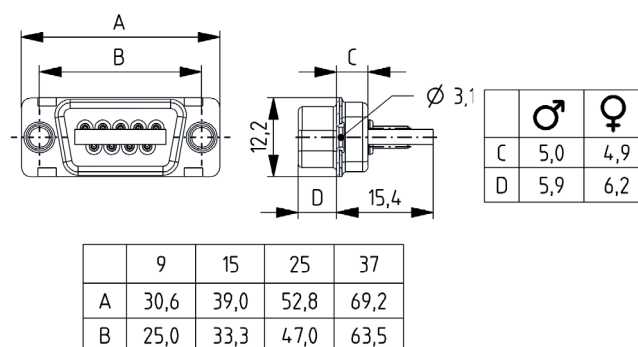


Filter connectors

For cable soldering technology (PCB)

- High-quality filtering with feedthrough capacitors
- Capacity value: 1000 pF (2 pF to 2000 pF upon request)
- RF-tight sealed metal rear side
- High attenuation values up to 50 dB
- Fully assembled soldering terminal
- Optimal soldering of small wire cross-sections too
- Compact structure; fits into D-Sub hoods

Dimensions



Technical data (mutual data on pages 81 & 142)

Nominal temperature	-25° C to +85° C
Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF = 50 VDC))
Test voltage	200 VDC (Variation Nr. 01 (2000 pF = 125 VDC))
Nominal current	5 A DC max.

Order information

F020951Gx	Pin 9-pole Gx: G1/G2/G3
F021551Gx	Pin 15-pole Gx: G1/G2/G3
F022551Gx	Pin 25-pole Gx: G1/G2/G3
F023751Gx	Pin 37-pole Gx: G1/G2/G3
F020961Gx	Socket 9-pole Gx: G1/G2/G3
F021561Gx	Socket 15-pole Gx: G1/G2/G3
F022561Gx	Socket 25-pole Gx: G1/G2/G3
F023761Gx	Socket 37-pole Gx: G1/G2/G3

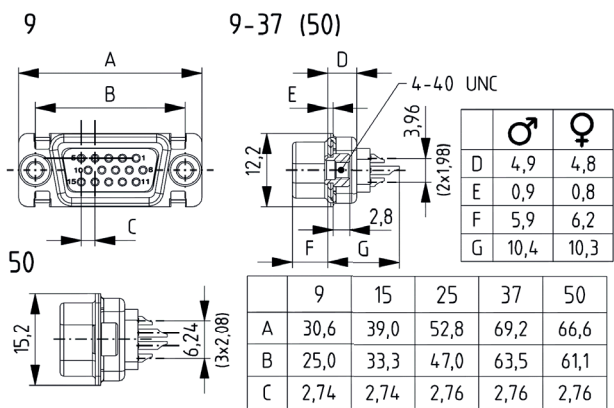


Filter connectors

Wire Wrap connection

- High quality filtering with feedthrough capacitors
- Capacity value: 1000 pF (2 pF to 2000 pF upon request)
- RF-tight sealed metal rear side
- High attenuation values up to 50 dB
- High-precision machined Wire Wrap contacts
- 3-winded Wire Wrap

Dimensions



Technical data (mutual data on pages 81 & 142)

Nominal temperature	-25° C to + 85° C
Nominal voltage	100VDC (Var. Nr. 01 (2000pF) = 50VDC)
Test voltage	200VDC (Var. Nr. 01 (2000pF) = 125VDC)
Nominal current	5 A DC max.

Order information

F020955Gx	Pin 9-pole Gx: G1/G2/G3
F021555Gx	Pin 15-pole Gx: G1/G2/G3
F022555Gx	Pin 25-pole Gx: G1/G2/G3
F023755Gx	Pin 37-pole Gx: G1/G2/G3
F020965Gx	Socket 9-pole Gx: G1/G2/G3
F021565Gx	Socket 15-pole Gx: G1/G2/G3
F022565Gx	Socket 25-pole Gx: G1/G2/G3
F023765Gx	Socket 37-pole Gx: G1/G2/G3

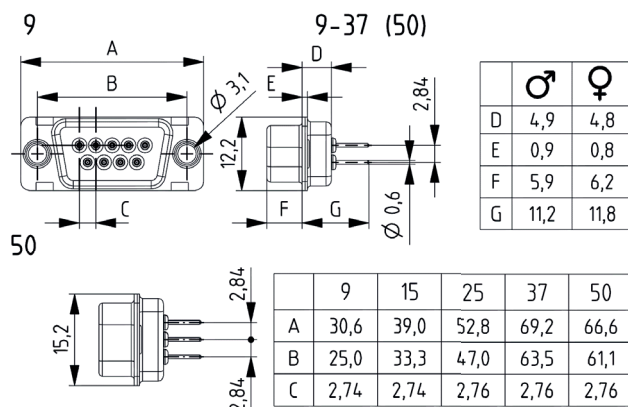


Filter connectors solder pin 180°

Machined contacts and 1000 pF

- High quality filtering with feedthrough capacitors
- Capacity value: 1000 pF (2 pF to 2000 pF upon request)
- Machined precision contacts
- Selective filtering of the contacts in the connector possible upon request
- RF-tight sealed metal rear side
- High attenuation up to 50 dB
- 100 % guaranteed quality due to single examination of each connector
- Installation dimensions of standard connectors

Dimensions



Technical data (mutual data on pages 81 & 142)

Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF) = 50 VDC)
Test voltage	200 VDC (Variation Nr. 01 (2000 pF) = 125 VDC)
Nominal current	5 A DC max.
Insulation resistance	1 GΩmin. @ 25° C

Order information

F020952Gx	Pin 9-pole Gx:G1 / G2 / G3
F021552Gx	Pin 15-pole Gx:G1 / G2 / G3
F022552Gx	Pin 25-pole Gx:G1 / G2 / G3
F023752Gx	Pin 37-pole Gx:G1 / G2 / G3
F025052Gx	Pin 50-pole Gx:G1 / G2 / G3
F020962Gx	Socket 9-pole Gx:G1 / G2 / G3
F021562Gx	Socket 15-pole Gx:G1 / G2 / G3
F022562Gx	Socket 25-pole Gx:G1 / G2 / G3
F023762Gx	Socket 37-pole Gx:G1 / G2 / G3
F025062Gx	Socket 50-pole Gx:G1 / G2 / G3

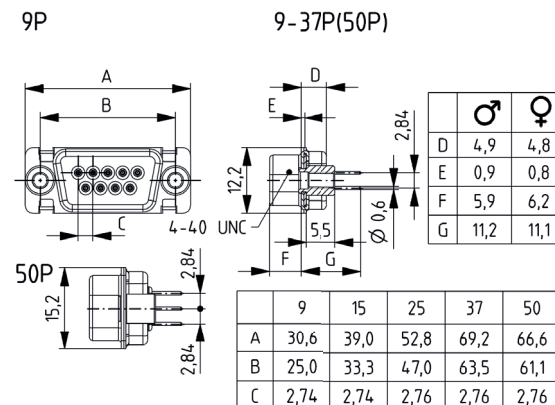


Filter connectors solder pin 180°

Threaded rivet UNC 4-40 or M3

- High quality filtering with feedthrough capacitors
- Capacity value: 1000 pF (2 pF to 2000 pF upon request)
- Selective filtering of the contacts in the connector possible upon request
- Machined precision contacts
- RF-tight sealed metal rear side
- High attenuation up to 50 dB
- 100 % guaranteed quality due to single examination of each connector
- Installation dimensions of standard connectors

Dimensions



Technical data (mutual data on pages 81 & 142)

Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF) = 50 VDC)
Test voltage	200 VDC (Variation Nr. 01 (2000 pF) = 125 VDC)
Nominal current	5 A DC max.
Insulation resistance	1 GΩmin. @ 25° C

Order information

F020952Gx4	Pin 9-pole UNC Gx:G1 / G2 / G3
F021552Gx4	Pin 15-pole UNC Gx:G1 / G2 / G3
F022552Gx4	Pin 25-pole UNC Gx:G1 / G2 / G3
F023752Gx4	Pin 37-pole UNC Gx:G1 / G2 / G3
F025052Gx4	Pin 50-pole UNC Gx:G1 / G2 / G3
F020962Gx4	Socket 9-pole UNC Gx:G1 / G2 / G3
F021562Gx4	Socket 15-pole UNC Gx:G1 / G2 / G3
F022562Gx4	Socket 25-pole UNC Gx:G1 / G2 / G3
F023762Gx4	Socket 37-pole UNC Gx:G1 / G2 / G3
F025062Gx4	Socket 50-pole UNC Gx:G1 / G2 / G3

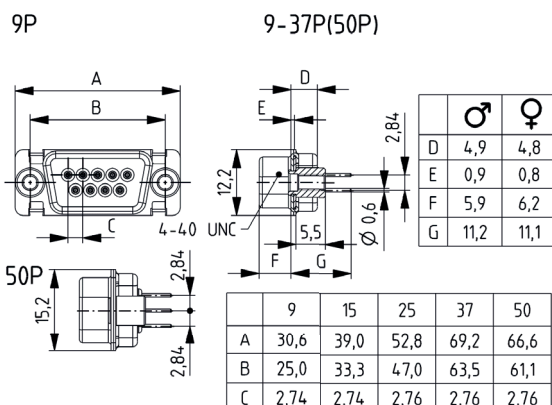


Filter connectors Boardlock

Snap-in mounting/grounding clip with inner thread

- High quality filtering with feedthrough capacitors
- Capacity value: 1000 pF (2 pF to 2000 pF upon request)
- Selective filtering of the contacts in the connector possible upon request
- Boardlock with snap-in fastening clip and thread UNC 4-40 or M3
- Boardlock for PCB thickness 1.6 mm with safe grounding
- RF-tight sealed metal rear side
- High attenuation up to 50 dB
- 100 % guaranteed quality due to single examination of each connector

Dimensions



Technical data (mutual data on pages 81 & 142)

Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF) = 50 VDC)
Test voltage	200 VDC (Variation Nr. 01 (2000 pF) = 125 VDC)
Nominal current	5 A DC max.
Insulation resistance	1 GΩmin. @ 25° C

Order information

BL4F020952Gx	Pin 9-pole UNC Gx:G1 / G2 / G3
BL4F021552Gx	Pin 15-pole UNC Gx:G1 / G2 / G3
BL4F022552Gx	Pin 25-pole UNC Gx:G1 / G2 / G3
BL4F023752Gx	Pin 37-pole UNC Gx:G1 / G2 / G3
BL4F025052Gx	Pin 50-pole UNC Gx:G1 / G2 / G3
BL4F020962Gx	Socket 9-pole UNC Gx:G1 / G2 / G3
BL4F021562Gx	Socket 15-pole UNC Gx:G1 / G2 / G3
BL4F022562Gx	Socket 25-pole UNC Gx:G1 / G2 / G3
BL4F023762Gx	Socket 37-pole UNC Gx:G1 / G2 / G3
BL4F025062Gx	Socket 50-pole UNC Gx:G1 / G2 / G3

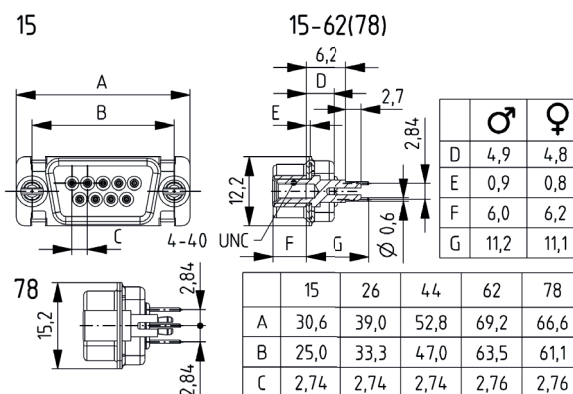


Filter connectors Combilock

Snap-in mounting/grounding clip and threaded bolt

- High quality filtering with feedthrough capacitors
- Capacity value: 1000 pF (2 pF to 2000 pF upon request)
- Selective filtering of the contacts in the connector possible upon request
- High attenuation up to 50 dB
- Combilock with snap-in fastening clip and threaded sleeve UNC 4-40 or M3
- Combilock for PCB thickness 1.6 mm with safe grounding
- 100 % guaranteed quality due to single examination of each connector
- Installation dimensions of standard connectors

Dimensions



Technical data (mutual data on pages 81 & 142)

Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF) = 50 VDC)
Test voltage	200 VDC (Variation Nr. 01 (2000 pF) = 125 VDC)
Nominal current	5 A DC max.
Insulation resistance	1 GΩmin. @ 25° C

Order information

B4F020952Gx	Pin 9-pole UNC Gx:G1 / G2 / G3
B4F021552Gx	Pin 15-pole UNC Gx:G1 / G2 / G3
B4F022552Gx	Pin 25-pole UNC Gx:G1 / G2 / G3
B4F023752Gx	Pin 37-pole UNC Gx:G1 / G2 / G3
B4F025052Gx	Pin 50-pole UNC Gx:G1 / G2 / G3
B4F020962Gx	Socket 9-pole UNC Gx:G1 / G2 / G3
B4F021562Gx	Socket 15-pole UNC Gx:G1 / G2 / G3
B4F022562Gx	Socket 25-pole UNC Gx:G1 / G2 / G3
B4F023762Gx	Socket 37-pole UNC Gx:G1 / G2 / G3
B4F025062Gx	Socket 50-pole UNC Gx:G1 / G2 / G3

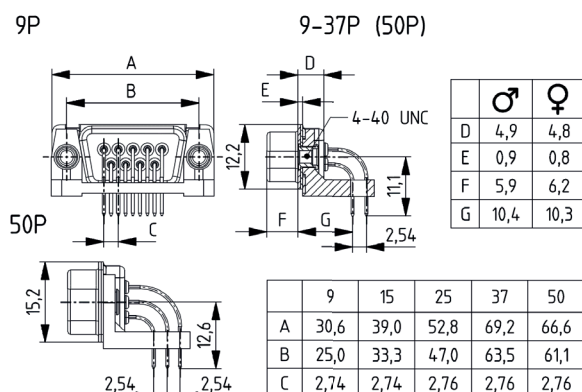


Filter connectors with solder pins 90°

With plastic bracket

- D-Sub filter connectors with filtrated signal contacts with angled solder pins
- Capacity value: 1000 pF (2 pF to 2000 pF upon request)
- Machined precision contacts
- Selective filtering of the contacts in the connector possible upon request
- RF-tight sealed metal rear side
- High attenuation up to 50 dB
- 100 % guaranteed quality due to single examination of each connector
- Installation dimensions of standard connectors

Dimensions

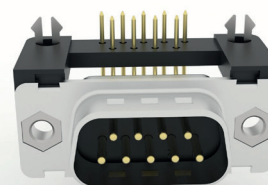


Technical data (mutual data on pages 81 & 142)

Pole numbers	9, 15, 25, 37, 50
Nominal temperature	-25° C to + 85° C
Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF) = 50 VDC)
Test voltage	200 VDC (Variation Nr. 01 (2000 pF) = 125 VDC)

Order information

F020956GxE4B	Pin 9-pole UNC Gx:G1 / G2 / G3
F021556GxE4B	Pin 15-pole UNC Gx:G1 / G2 / G3
F022556GxE4B	Pin 25-pole UNC Gx:G1 / G2 / G3
F023756GxE4B	Pin 37-pole UNC Gx:G1 / G2 / G3
F025056GxE4B	Pin 50-pole UNC Gx:G1 / G2 / G3
F020966GxE4B	Socket 9-pole UNC Gx:G1 / G2 / G3
F021566GxE4B	Socket 15-pole UNC Gx:G1 / G2 / G3
F022566GxE4B	Socket 25-pole UNC Gx:G1 / G2 / G3
F023766GxE4B	Socket 37-pole UNC Gx:G1 / G2 / G3
F025066GxE4B	Socket 50-pole UNC Gx:G1 / G2 / G3

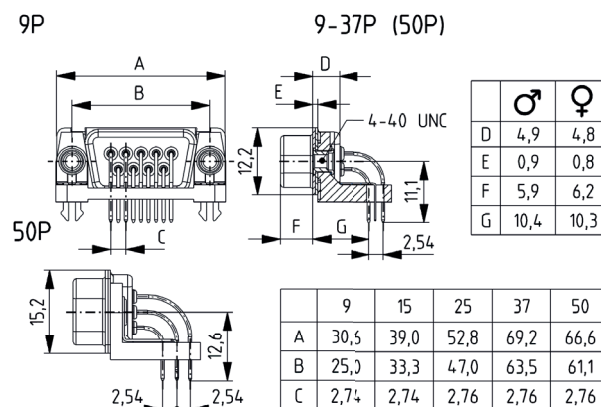


Filter connectors solder pin 90°

With plastic bracket, grounding clip and inside thread

- D-Sub filter connectors with filtered signal contacts
- Angled solder pins in high-quality machined edition
- Snap-in clip for safe effective ground connection
- 100 % guaranteed quality due to single examination of each connector
- High attenuation up to 50 dB
- RF-tight sealed metal rear side

Dimensions



Technical data (mutual data on pages 81 & 142)

Pole numbers	9, 15, 25, 37, 50
Nominal temperature	-25° C to + 85° C
Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF) = 50 VDC)
Test voltage	200 VDC (Variation Nr. 01 (2000 pF) = 125 VDC)

Order information

F020956GxR4B	Pin 9-pole UNC Gx:G1 / G2 / G3
F021556GxR4B	Pin 15-pole UNC Gx:G1 / G2 / G3
F022556GxR4B	Pin 25-pole UNC Gx:G1 / G2 / G3
F023756GxR4B	Pin 37-pole UNC Gx:G1 / G2 / G3
F025056GxR4B	Pin 50-pole UNC Gx:G1 / G2 / G3
F020966GxR4B	Socket 9-pole UNC Gx:G1 / G2 / G3
F021566GxR4B	Socket 15-pole UNC Gx:G1 / G2 / G3
F022566GxR4B	Socket 25-pole UNC Gx:G1 / G2 / G3
F023766GxR4B	Socket 37-pole UNC Gx:G1 / G2 / G3
F025066GxR4B	Socket 50-pole UNC Gx:G1 / G2 / G3

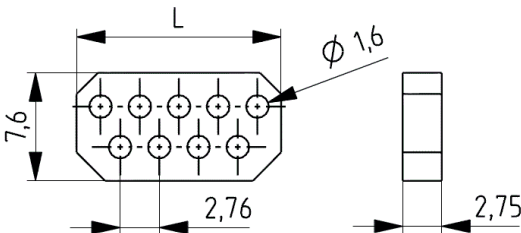


Ferrite plates

For D-Sub connectors

- Subsequent shielding against electromagnetic interferences
- For subsequent assembly at D-Sub connector
- Pole numbers: 9 / 15 / 25 / 37

Dimensions



	FP09	FP15	FP25	FP37
L	14,4	22,8	36,5	53,0

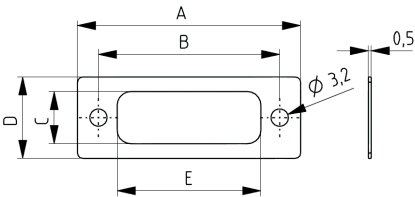


RF flange seal

For D-Sub connectors

- Good RF-shielding of the D-Sub panel cut-outs at cases
- For optimal sealing between connector and frame
- Extremely low contact resistance

Dimensions



	DF09	DF15	DF25	DF37	DF50
A	33,0	41,0	55,0	72,0	70,0
B	25,0	33,3	47,0	63,5	61,1
C	9,6				12,4
D	15,0				18,0
E	18,2	26,4	40,2	56,6	54,2

Technical data *(mutual data on pages 81 & 142)*

Dampening values

1 MHz	0,5 dB
10 MHz	1 dB
100 MHz	3 dB

Order information

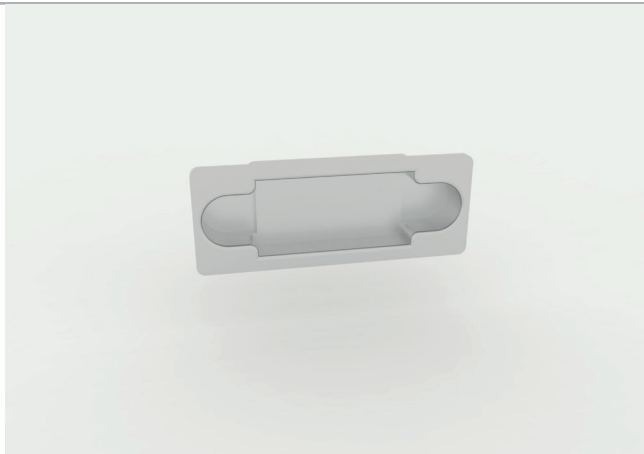
FP09	9-pole
FP15	15-pole
FP25	25-pole
FP37	37-pole

Technical data *(mutual data on pages 81 & 142)*

Material	Silicon (nickel-graphite filled)
Temperature range	-55 ° C to +200 ° C

Order information

DF09	9-pole
DF15	15-pole
DF25	25-pole
DF37	37-pole
DF50	50-pole

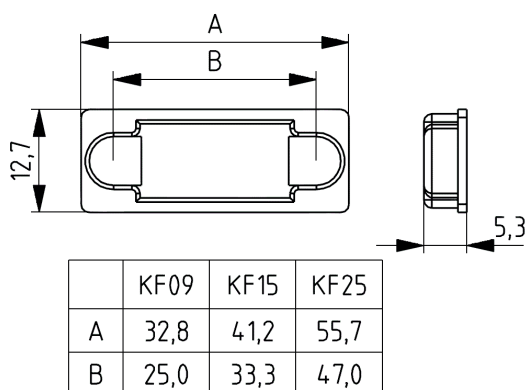


RF shielding cap

For D-Sub interfaces

- Protection from RF radiation at open interfaces
- 50 µm electromagnetical shielding coating
- UL-listed plastic
- Pole number: 9 / 15 / 25

Dimensions



Technical data (mutual data on pages 81 & 142)

Temperature range	- 35° C to + 85°C
Attenuation 100 MHz	87 dB
Attenuation 1000 MHz	52 dB
Material	UL Thermoplast

Order information

KF09P	Cap pin 9-pole
KF15P	Cap pin 15-pole
KF25P	Cap pin 25-pole
KF09S	Cap socket 9-pole
KF15S	Cap socket 15-pole
KF25S	Cap socket 25-pole

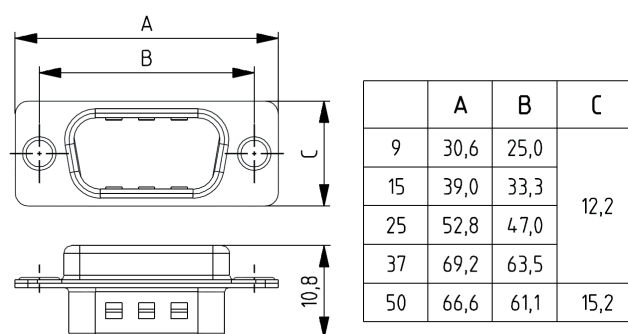


EMC blind flange

Protection of the D-Sub interface

- Exact closing of open D-Sub interface
- Protection of the D-Sub interface against EMI/RFI interferences
- Versions available from 9- to 50-pole
- Versions for D-Sub connector pin and socket

Dimensions



Technical data (mutual data on pages 81 & 142)

Blind flange	Steel tin-plated
--------------	------------------

Order information

AK09P	for D-Sub pin 9-pole
AK15P	for D-Sub pin 15-pole
AK25P	for D-Sub pin 25-pole
AK37P	for D-Sub pin 37-pole
AK50P	for D-Sub pin 50-pole
AK09S	for D-Sub socket 9-pole
AK15S	for D-Sub socket 15-pole
AK25S	for D-Sub socket 25-pole
AK37S	for D-Sub socket 37-pole
AK50S	for D-Sub socket 50-pole

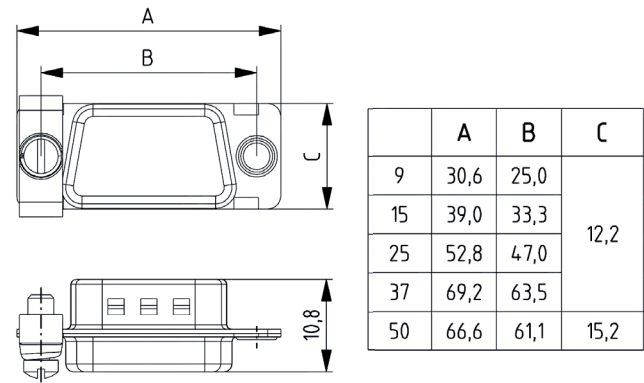


EMC protection cap

With screw-locking

- EMC protection of the D-Sub interface
- Exact closing of the D-Sub interface
- Captive by means of screw locking UNC 4-30 (4) or M3 (3)

Dimensions



Technical data *(mutual data on pages 81 & 142)*

Blind flange	Steel tin-plated/nickel-plated
Bracket	Steel tin-plated
Locking screw	Steel tin-plated

















Order information

AK09P4	for D-Sub socket 9-pole UNC
AK15P4	for D-Sub socket 15-pole UNC
AK25P4	for D-Sub socket 25-pole UNC
AK37P4	for D-Sub socket 37-pole UNC
AK50P4	for D-Sub socket 50-pole UNC
AK09S4	for D-Sub pin 9-pole UNC
AK15S4	for D-Sub pin 15-pole UNC
AK25S4	for D-Sub pin 25-pole UNC
AK37S4	for D-Sub pin 37-pole UNC
AK50S4	for D-Sub pin 50-pole UNC

Your notes

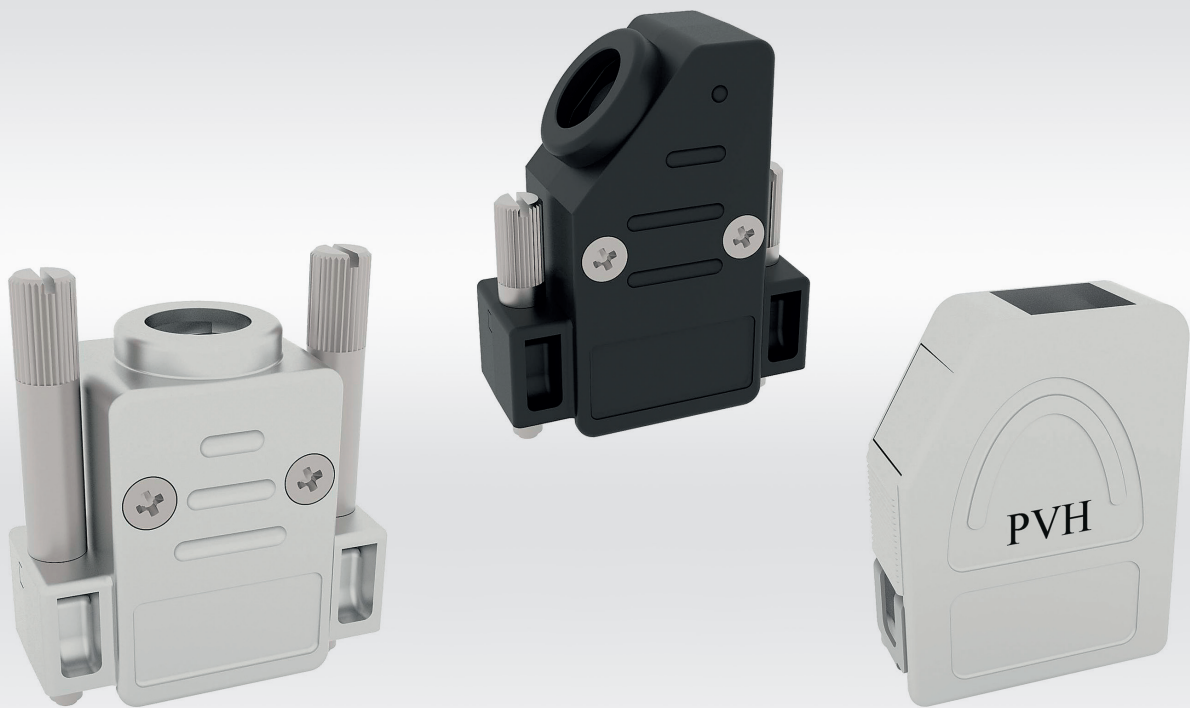
Suitable hoods for your application

FITTING **YOUR** APPLICATION

	Hoods series	Hood size	Cable exit		Cable fixing		
		Pin number	straight	angled	clamp intern	clamp extern	Crimp flange
Quick Lock hoods							
	103	9-50	x	9p: 1x 15°/15p: 1x30°/25p-50p 2x30°	x	x	x
	104	9-50	x	9p: 1x 15°/15p: 1x30°/25p-50p 2x30°	x	x	x
	104DC	9, 15, 25, 37, 50	x	9p: 1x 15°/15p: 1x30°/25p-50p2x30°	x	x	x
Plastic and metallized plastic D-Sub hoods with screw lock							
	17	9-50	x	25-50p: 2x30°	x		
	47	9-50		1x40°	x		
	47155	15		1x20°	x		
	57	9-25	x		x		
	77	9-37	x	9p-37p:2 x 90°	x		
Plastic and metallized plastic D-Sub hoods for clip or push lock							
	07	9-50	x	2x30°	x	x	x
Screw-locked die-cast hoods							
	17DC	9, 15, 25, 37, 50	x	25-50p: 2x30°		x	x
	47DC	9, 15, 25		1x40°		x	x
	101DC	9		2x75° (parallel)		x	x
	117DC 147DC	9, 15, 25, 37, 50	x	9-15: 1 x 180° oder 1 x 45° 25-50: 1 x 180° oder 2 x 45°	x	x	x
	118DC	15	x	1x90°	x	x	x
Die-cast hoods for clip or push lock							
	07DC	9, 15, 25, 37, 50	x	2x30°			x
	77DC	9, 15				x	x

D-Sub Hoods

Plastic black, metallized and full-metal in zinc die-cast



A comprehensive product range with more than 20 hood systems

Features

- Quick and easy assembly
- Practical design with a minimized number of individual parts
- Hoods in plastic, metallized plastic and full metal

Various locking options

- Screw locking with knurled screws in various lengths
- Push-pull locking with the innovative Quick Lock system
- Slide locking in universal design

Cable connection versions for highest requirements

- 360° EMI/RFI crimp flange system vibration- and torsion-proof
- External cable clamp for diameters 4-14 mm (50-pole: -16 mm)
- Internal cable clamp is the compact solution for standard applications

The right hood for every application

- Plastic hoods
- Metallized plastic hoods for applications with shielding requirements
- Full-metal hoods with 360° EMI/RFI shielding for high EMC requirements
- Quick Lock system with innovative push-pull locking
- Bus hoods with 2 cable outlets

Technical data

IP protection class	IP 20
---------------------	-------

Plastic hoods

Black or metallized plastic for shielding

D-Sub Hoods



A wide range of black or metallized plastic hoods for applications with shielding requirements. Quick and easy assembly through a practical design with a minimized number of single parts is an essential feature of the D-Sub plastic hoods. The tailor-made solution can be implemented with a wide range of options with regard to locking, cable outlet and a comprehensive range of accessories.

Various locking options

- Screw locking with knurled screws in different lengths
- Push-pull locking with the innovative „Quick Lock“ system
- Sliding lock in universal design

Cable connection versions for the highest requirements

All hood series

- Cable clamp internally as a compact solution

Quick Lock and 07er Hoods (Sliding / Clip Locking):

- 360 ° EMI / RFI crimp flange system vibration- and torsion-proof
- External cable clamp for diameter 4-14 mm (50-pole: up to 16 mm)

The right hood for every application

- Plastic hoods
- Metallized plastic hoods for applications with shielding requirements
- Adapter hoods in black or metallized

Technical data

IP protection class	IP 20
Temperature range black	-20° C to + 90° C
Temperature range metallized	-40° C to + 90° C
Tightening torque	
Cable clamp screw	max. 30 Ncm
Cover screw	max. 20 Ncm
Housing (metallized)	ABS UL 94-V0 (Ni-plated)
Locking screws	St Ni-plated
Cable diameter	
Series 07/ 17/ 47/ 57	9+15:max. 8,5 / 25 + 37:max. 11 / 50:max. 12
Series 77	max. 10
Series 103/104 QuickLock	9:9/ 15:10/ 25+37:11/ 50:12

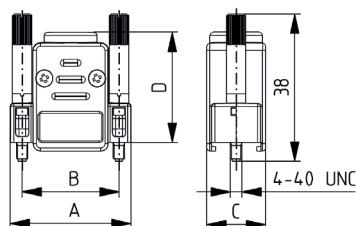


Plastic hood (series 17)

Very compact design and screw-locking

- Two-part plastic case with straight cable outlet
- Made from high-quality black ABS plastic, flame-retarding acc. to UL 94 V-0
- Hood pluggable in 3 TE-grid
- Integrated dust protection shoulder
- UNC 4-40 knurled screws (M3 also available)
- Multiple opening possible
- Also available in green, red and blue

Dimensions



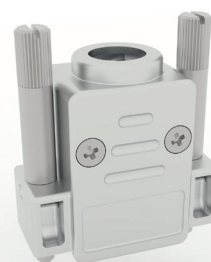
	9	15	25	37	50
A	31,5	39,5	53,2	69,7	67,1
B	25,0	33,3	47,0	63,5	61,1
C	15,2	15,2	15,2	15,2	18,2
D	28,5	32,5	35,5	37,5	37,5

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15:8,5 / 25+37:11 / 50:12
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0 black

Order information

17090B38T001	9-pole set
17150B38T001	15-pole set
17250B38T001	25-pole set
17370B38T001	37-pole set
17500B38T001	50-pole set
17090B38T000	9-pole single parts
17150B38T000	15-pole single parts
17250B38T000	25-pole single parts
17370B38T000	37-pole single parts
17500B38T000	50-pole single parts

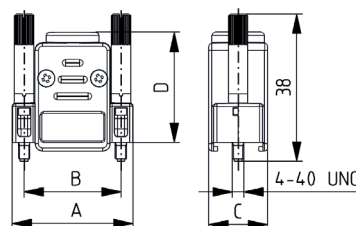


Plastic hood metallized (series 17)

Very compact design and screw locking

- Two-part plastic case with straight cable outlet
- Made from high-quality metallized ABS UL 94 V-0
- High shielding attenuation for EMC applications
- Hood pluggable in 3 TE-grid
- Integrated dust protection shoulder
- UNC 4-40 knurled screws (M3 also available)
- Multiple opening possible

Dimensions



	9	15	25	37	50
A	31,5	39,5	53,2	69,7	67,1
B	25,0	33,3	47,0	63,5	61,1
C	15,2	15,2	15,2	15,2	18,2
D	28,5	32,5	35,5	37,5	37,5

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15:8,5 / 25+37:11 / 50:12
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

17090M38T001	9-pole set
17150M38T001	15-pole set
17250M38T001	25-pole set
17370M38T001	37-pole set
17500M38T001	50-pole set
17090M38T000	9-pole single parts
17150M38T000	15-pole single parts
17250M38T000	25-pole single parts
17370M38T000	37-pole single parts
17500M38T000	50-pole single parts

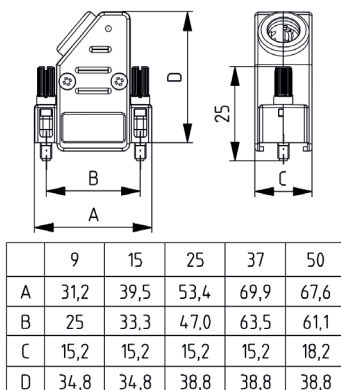


Plastic hood (series 47)

With screw-locking and side cable outlet

- Dual-part plastic case with lateral cable outlet
- Made from high-quality black ABS plastic, flame-retarding acc. to UL 94 V-0
- Hood pluggable in 3 TE-grid
- Integrated dust protection shoulder
- UNC 4-40 knurled screws (M3 also available)
- Multiple opening possible

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15:8,5 / 25+37:11 / 50:12
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0 black

Order information

47090B25T001	9-pole set
47150B25T001	15-pole set
47250B25T001	25-pole set
47370B25T001	37-pole set
47500B25T001	50-pole set
47090B25T000	9-pole single parts
47150B25T000	15-pole single parts
47250B25T000	25-pole single parts
47370B25T000	37-pole single parts
47500B25T000	50-pole single parts

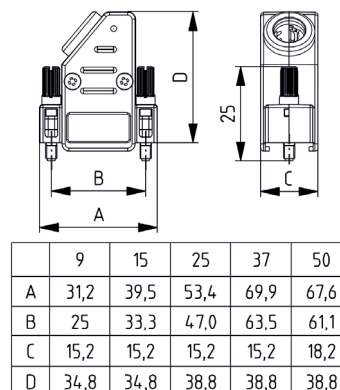


Plastic hood metallized (series 47)

With screw-locking and side cable outlet

- Good shielding with metallization and case geometry
- High shielding attenuation for EMC applications
- Fast assembly with pre-assembled locking screws
- Made from high-quality black ABS plastic, flame-retarding acc. to UL 94 V-0
- Hood pluggable in 3 TE-grid
- Integrated dust protection shoulder
- UNC 4-40 locking screw, alternatively M3
- Set-packaging or loose parts in bags

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15:8,5 / 25+37:11 / 50:12
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

47090M25T001	9-pole set
47150M25T001	15-pole set
47250M25T001	25-pole set
47370M25T001	37-pole set
47500M25T001	50-pole set
47090M25T000	9-pole single parts
47150M25T000	15-pole single parts
47250M25T000	25-pole single parts
47370M25T000	37-pole single parts
47500M25T000	50-pole single parts

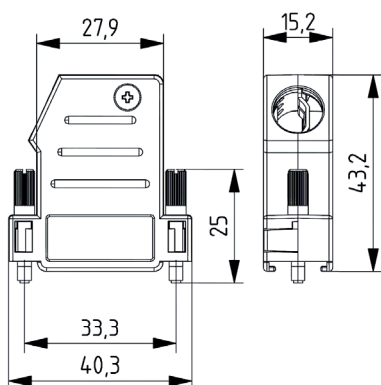


Compact hood series 47155

With side cable outlet and large mounting space

- Cable outlet 25°
- Housing size 2 for Hermaphroditic 3W3 (C) / 7W2 and D-Sub 15P/HD D-Sub 26P
- Easy assembly with snap-in design and pre-assembled knurled screws
- Locking with knurled screw M3 or UNC 4-40
- Integrated cable clamp for strain relief of the cable
- Integrated dust protection shoulder
- Assembly grid in assemblies 3 TE (15.24 mm)
- Multiple opening possible

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	5 - 11 mm
Temperature range:	-40°C to +90°C
Housing:	ABS UL 94-V0 black

Order information

47155B25T001	Hood black UNC set
47155B25M3T001	Hood black M3 set
47155B25T000	Hood black UNC single parts
47155B25M3T000	Hood black M3 single parts

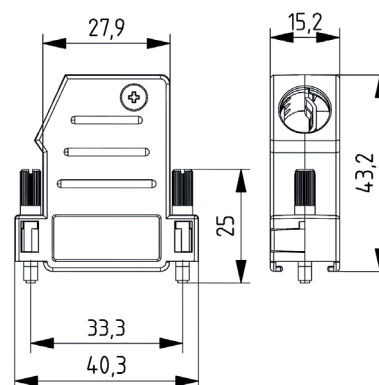


Compact hood metallized (series 47155)

With side cable outlet and large mounting space

- Cable outlet 25°
- Easy assembly due to design with snap-in half shells and pre-assembled knurled screws for locking
- Locking with knurled screw M3 or UNC 4-40
- Integrated cable clamp for strain relief of the cable
- Integrated dust protection shoulder
- High shielding attenuation for EMC applications
- Assembly grid in assemblies 3 TE (15.24 mm)

Dimensions



Technical data (mutual data on pages 153 & 154)

IP pction classrote:	IP 20
Cable diameter:	5 - 11 mm
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

47155M25T001	Hood metallized UNC set
47155M25M3T001	Hood metallized M3 set
47155M25T000	Hood metallized UNC single parts
47155M25M3T000	Hood metallized M3 single parts

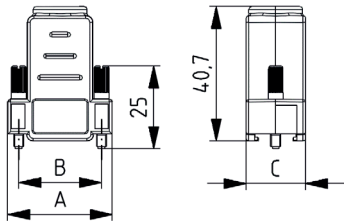


Stud hood (series 57)

With lateral screw-locking

- Minimized assembly time due to stud locking of the hood halves
- Suitable for flat cable connectors
- Made from high-quality black ABS plastic, flame-retarding acc. to UL 94 V-0
- Available with metallized or black surface
- UNC 4-40 knurled screw (M3 also available)

Dimensions



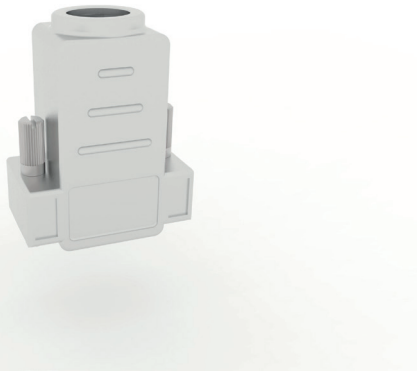
	9	15	25
A	31,7	39,5	53,6
B	25,0	33,3	47,0
C	18,0	18,0	16,6

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15:10 / 25:11
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0 black

Order information

57090B25T001	9-pole set
57150B25T001	15-pole set
57250B25T001	25-pole set
57090B25T000	9-pole single parts
57150B25T000	15-pole single parts
57250B25T000	25-pole single parts

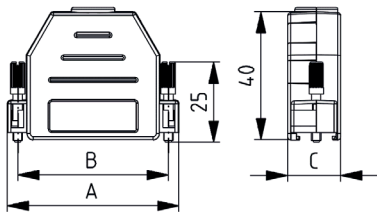


Stud hood metallized (series 57)

With lateral screw-locking

- Minimized assembly time due to stud locking between the hood halves
- Suitable for flat cable connectors
- Made from high-quality metallized ABS UL 94 V-0
- High shielding attenuation for EMC applications
- Pre-assembled UNC 4-40 knurled screw (alternatively M3)

Dimensions



	9	15	25
A	31,7	40,0	53,5
B	25,0	33,3	47,0
C	18,0	18,0	16,6

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15:10 / 25:11
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

57090M25T001	9-pole set
57150M25T001	15-pole set
57250M25T001	25-pole set
57090M25T000	9-pole single parts
57150M25T000	15-pole single parts
57250M25T000	25-pole single parts

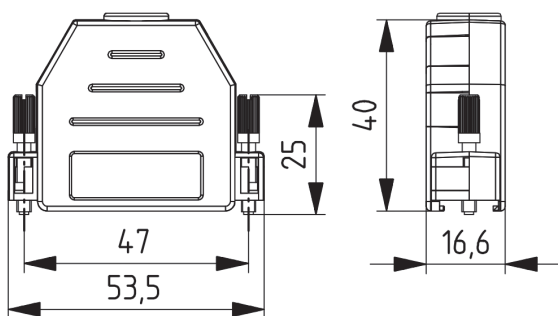


Clip hood (series 57)

With lateral screw-locking

- Minimized assembly time due to clip-/pin-connection of the half shells
- Suitable for flat band connectors
- Made from high-quality ABS plastic, flame-retarding acc. to UL 94 V-0
- Available with metallized or black surface
- UNC 4-40 knurled screw (M3 also available)

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	5 - 11 mm
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0 black

Order information

57255B25T001	25-pole set
57255B25T000	25-pole single parts

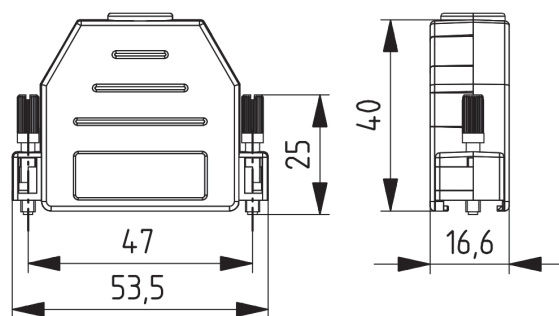


Clip hood metallized (series 57)

Easy boltless hood assembly

- Minimized assembly time due to clip locking of hood halves
- Suitable for flat band connectors
- Made from high-quality ABS plastic UL 94 V-0
- High shielding attenuation for EMV-applications
- Pre-assembled UNC 4-40 knurled screw (alternatively M3)

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	max. 11 mm
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

57255M25T001	25-pole set
57255M25T000	25-pole single parts

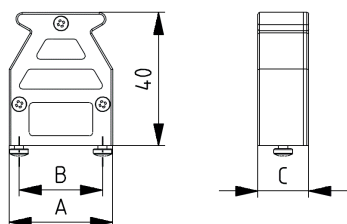


Plastic hood (series 07)

For clip- and slide-locking

- Dual-part hood with 3 cable outlets (9-pole 2 cable outlets)
- Made from high-quality ABS plastic, flame-retarding acc. to UL 94 V-0
- Large cable interior space
- Multiple opening possible
- Set-packaging or loose parts in bags

Dimensions



	9	15	25	37	50
A	31,0	39,3	53,0	69,5	67,0
B	25,0	33,3	47,0	63,5	61,1
C	15,3	15,3	15,3	15,3	17,8

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15;8,5 / 25+37;11 / 50;12
Temperature range:	-40°C to +90°C
Housing:	ABS UL 94-V0 black

Order information

07090BT001	9-pole set
07150BT001	15-pole set
07250BT001	25-pole set
07370BT001	37-pole set
07500BT001	50-pole set
07090BT000	9-pole single parts
07150BT000	15-pole single parts
07250BT000	25-pole single parts
07370BT000	37-pole single parts
07500BT000	50-pole single parts

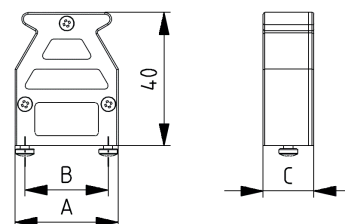


Plastic hood metallized (series 07)

for clip- and slide-locking

- Dual-part hood with 3 cable outlets (9-pole 2 cable outlets)
- Made from high-quality ABS ABS UL 94-V0
- High shielding attenuation for EMC applications
- Large cable interior space
- Multiple opening possible
- Pre-assembled UNC 4-40 knurled screw (alternatively M3)
- Set-packaging or loose parts in bags

Dimensions



	9	15	25	37	50
A	31,0	39,3	53,0	69,5	67,0
B	25,0	33,3	47,0	63,5	61,1
C	15,3	15,3	15,3	15,3	17,8

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9+15;8,5 / 25+37;11 / 50;12
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

07090M001	9-pole set
07150M001	15-pole set
07250M001	25-pole set
07370M001	37-pole set
07500M001	50-pole set
07090M000	9-pole single parts
07150M000	15-pole single parts
07250M000	25-pole single parts
07370M000	37-pole single parts
07500M000	50-pole single parts

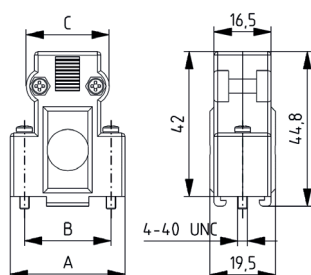


Flat cable hood (series 37)

For insulation displacement and solder cup connectors

- Two-piece plastic hood
- Integrated strain relief
- UNC 4-40 locking screws
- Grey ABS plastic
- For insulation displacement and solder cup connectors

Dimensions



	9	15	25	37
A	33,5	41,2	54,8	71,5
B	25,0	33,3	47,0	63,5
C	16,5	15,2	15,2	15,2

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Temperature range:	-20° C to +90° C
Housing:	ABS grey

Order information

37090G001	9-pole set
37150G001	15-pole set
37250G001	25-pole set
37370G001	37-pole set

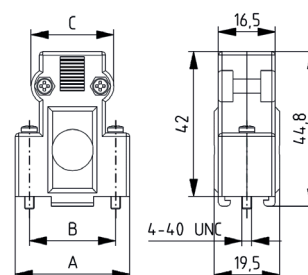


Flat cable hood metallized (series 37)

For insulation displacement and solder cup connectors

- Two-piece plastic hood
- Integrated strain relief
- UNC 4-40 locking screws
- Grey ABS plastic
- For insulation displacement and solder cup connectors

Dimensions



	9	15	25	37
A	33,5	41,2	54,8	71,5
B	25,0	33,3	47,0	63,5
C	16,5	15,2	15,2	15,2

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Temperature range:	-20° C to +90° C
Housing:	ABS nickel-plated

Order information

37090M001	9-pole Set
37150M001	15-pole Set
37250M001	25-pole Set
37370M001	37-pole Set

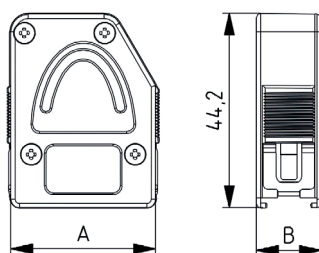


Quick Lock plastic hood (series 104)

Push-Pull locking

- New, innovative locking system
- Fast one-hand operation, safe locking, highest holding force
- Fast assembly as screw- and push-locking
- Automotive approval
- 2 - 3 cable inlets
- Crimp flange system optionally applicable
- ABS, flamed retarding acc. to UL 94 V-0, available metallized too
- For special cables external cable clamp up to Ø14mm (50-pole: Ø16mm)

Dimensions



	9	15	25	37	50
A	33,0	41,3	56,2	71,5	70,3
B	15,5				18,5

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9: 9/15: 10/ 25+37: 11/ 50: 12
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0 black

Order information

104090BT001	9-pole short version set
104150BT001	15-pole short version set
104250BT001	25-pole short version set
104370BT001	37-pole short version set
104500BT001	50-pole short version set

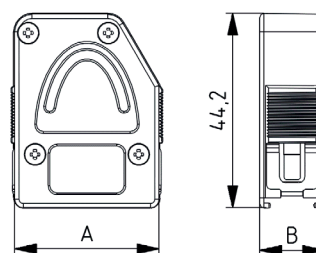


Quick Lock plastic hood metallized (series 104)

Push-Pull locking

- New, innovative locking system
- Fast one-hand operation, safe locking, highest holding force
- Fast assembly as screw- and push-locking
- Automotive approval
- 2 - 3 cable inlets
- Crimp flange system optionally applicable
- ABS, flamed retarding acc. to UL 94 V-0, available metallized too
- For special cables external cable clamp up to Ø14mm (50-pole: Ø16mm)

Dimensions



	9	15	25	37	50
A	33,0	41,3	56,2	71,5	70,3
B	15,5				18,5

Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9: 9/15: 10/ 25+37: 11/ 50: 12
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

104090M001	9-pole short version set
104150M001	15-pole short version set
104250M001	25-pole short version set
104370M001	37-pole short version set
104500M001	50-pole short version set

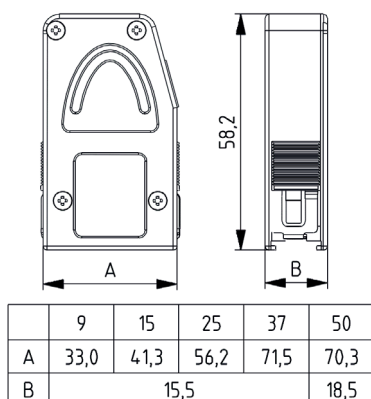


Quick Lock plastic hood (series 103)

Push-Pull locking long version

- New, innovative locking system
- Fast one-hand operation, safe locking, highest holding force
- Fast assembly as screw- and push-locking
- Automotive approval
- 2-3 cable inlets
- Crimp flange system optionally applicable
- ABS, flamed retarding acc. to UL 94 V-0, available metallized too
- For special cables external cable clamp up to Ø14mm (50-pole: Ø16mm)

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9: 9/15: 10/ 25+37: 11/ 50: 12
Temperature range:	-20 °C to +90 °C
Housing:	ABS UL 94-V0 black

Order information

103090BT001	9-pole long version set
103150BT001	15-pole long version set
103250BT001	25-pole long version set
103370BT001	37-pole long version set
103500BT001	50-pole long version set

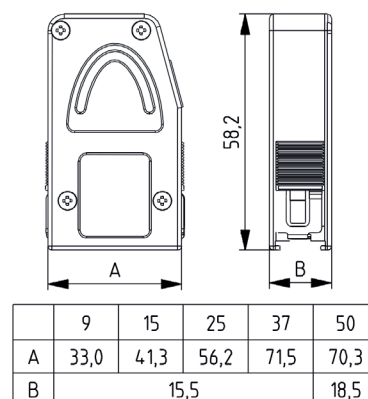


Quick Lock plastic hood metallized (series 103)

Push-Pull locking long version

- New, innovative locking system
- Fast one-hand operation, safe locking, highest holding force
- Faster assembly as screw- and push-locking
- Automotive approval
- 2-3 Kabeleingänge
- High shield attenuation for EMC applications
- 360° shielding with crimp flange system
- For special cables external cable clamp up to Ø14mm (50-pole: Ø16mm)

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	9: 9/15: 10/ 25+37: 11/ 50: 12
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

103090M001	9-pole long version set
103150M001	15-pole long version set
103250M001	25-pole long version set
103370M001	37-pole long version set
103500M001	50-pole long version set
103090M000	9-pole long version single parts
103150M000	15-pole long version single parts
103250M000	25-pole long version single parts
103370M000	37-pole long version single parts
103500M000	50-pole long version single parts



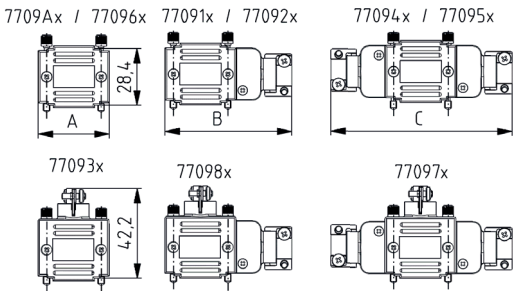
Modular hood system (series 77)

Versatile

- Low installation height (16 mm)
- Large cable clamp area (max. 10 mm)
- Modular system for diverse applications
- Applications:hood with 3 outlets / Dongle / distributor up to 4 cables
- Made from high-quality ABS plastic, flame-retarding acc. to UL 94 V-0
- Metallized version for EMV-applications
- UNC 4-40 knurled screw with inside thread and slit (M3 upon request)
- Packed as a set

Dimensions

	9	15	25	37
A	32,3	40,6	54,3	70,8
B	58,0	66,5	80,5	122,6
C	83,5	92,0	105,5	122,6



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	5 - 11 mm
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0 black

Order information

7709xB	09-pol. Set x:Var A I1 I2 I3 I4 I5 I6 I7 I8
7715xB	15-pol. Set x:Var A I1 I2 I3 I4 I5 I6 I7 I8
7725xB	25-pol. Set x:Var A I1 I2 I3 I4 I5 I6 I7 I8



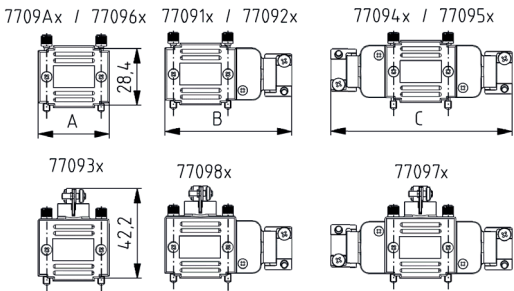
Modular hood system metallized (series 77)

Versatile

- Low installation height (16 mm)
- Large cable clamp area (max. 10 mm)
- Made from high-quality metallized ABS UL 94 V-0
- High shielding attenuation for EMC applications
- Modular system for diverse applications
- Applications:hood with 3 outlets / Dongle / distributor up to 4 cables
- UNC 4-40 knurled screw with inside thread and slit (M3 upon request)
- Packed as a set

Dimensions

	9	15	25	37
A	32,3	40,6	54,3	70,8
B	58,0	66,5	80,5	122,6
C	83,5	92,0	105,5	122,6



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Cable diameter:	max. 10 mm
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

7709xM	09-pol. Set x:Var A I1 I2 I3 I4 I5 I6 I7 I8
7715xM	15-pol. Set x:Var A I1 I2 I3 I4 I5 I6 I7 I8
7725xM	25-pol. Set x:Var A I1 I2 I3 I4 I5 I6 I7 I8

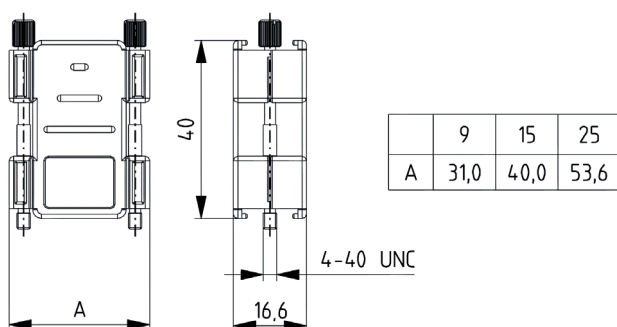


Adapter case (Serie 87)

Knurled screws with inside thread

- Fast assembly with snap lock of the case half shells
- RF-tight case construction
- Made from high-quality ABS UL94-V0
- Large cable interior space
- UNC 4-40 knurled screw with inside thread and slot (M3 upon request)
- Complete with UNC 4-40 screws with knurls with UNC 4-40 inside thread
- Set-packaging or loose parts in bags

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0

Order information

87094BT001	9-pole set
87154BT001	15-pole set
87254BT001	25-pole set
87094BT000	9-pole single parts
87154BT000	15-pole single parts
87254BT000	25-pole single parts

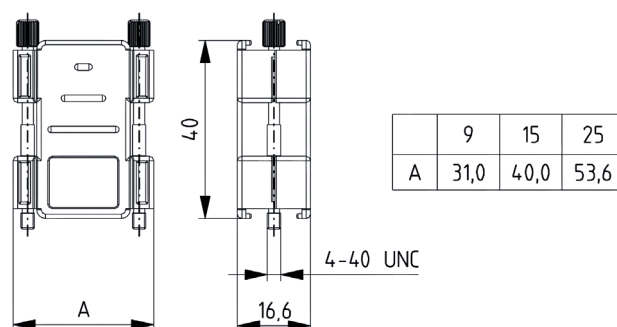


Adapter case metallized (series 87)

Knurled screws with inside thread

- Fastest assembly by grouting both adapter halves
- RF-tight case construction
- High shielding attenuation for EMC-applications
- Made from high-quality metallized ABS UL94-V0
- Large cable interior space
- UNC 4-40 knurled screw with inside thread and slot (M3 upon request)
- Set-packaging or loose parts in bags

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Temperature range:	-40° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

87094M001	9-pole set
87154M001	15-pole set
87254M001	25-pole set
87094M000	9-pole single parts
87154M000	15-pole single parts
87254M000	25-pole single parts

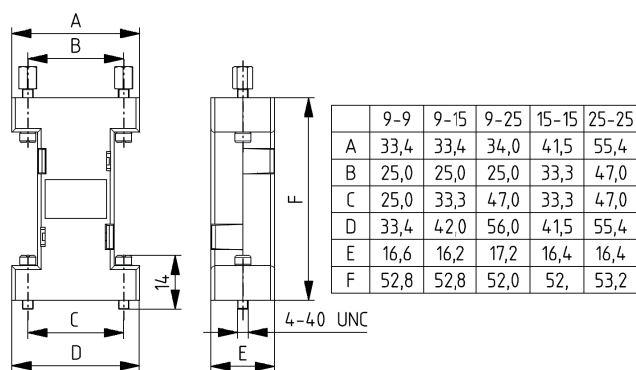


Adapter case (series 67)

Available black, grey or metallized

- Empty case for own assembling of adapters
- Two-part plastic case
- Large wiring space
- Complete with UNC 4-40 screws

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0

Order information

670909B	9 pole - 9pole set
670915B	9 pole -15-pole set
670925B	9 pole -25-pole set
671515B	15 pole -15-pole set
672525B	25 pole -25-pole set

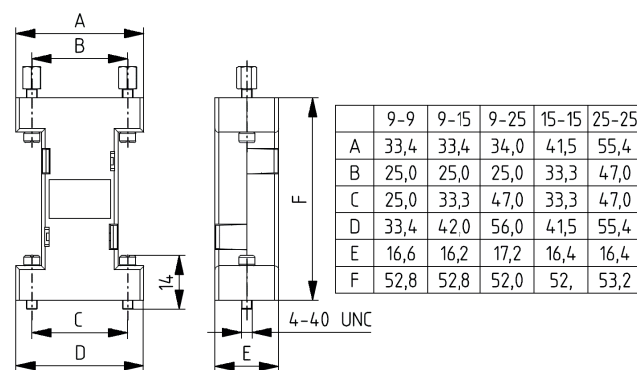


Adapter case metallized (series 67)

Versions for pole number alteration

- Empty case for own cabling of adapters
- Dual-part plastic case
- Large wiring space
- Good shielding attenuation for EMC applications by metallizing
- Versions for pole number alteration from 9 to 15 and 9 to 25
- Complete with UNC 4-40 screws

Dimensions



Technical data (mutual data on pages 153 & 154)

IP protection class:	IP 20
Temperature range:	-20° C to +90° C
Housing:	ABS UL 94-V0 nickel-plated

Order information

670909M	9 pole - 9-pole set
670915M	9 pole -15-pole set
670925M	9 pole -25-pole set
671515M	15 pole -15-pole set
672525M	25 pole -25-pole set

Your notes

Full-metal hoods

Rough applications with 360° shielding

D-Sub Hoods



Broad range of full-metal hoods

Features

- Special housing designs for 360° shielding
- Fast and easy assembly due to minimized number of single parts
- Solid die-cast housing for

Various locking options

- Screw locking with knurled screws in various lengths
- Push-Pull locking with the innovative Quick Lock-system
- Slide lock in universal design

Cable connection versions for highest requirements

All hood series

- 360° EMI/RFI crimp flange-system vibration- and torsion-proof
- External cable clamp for diameters 4-14 mm (50-pole: -16 mm)

QuickLock- and 117/147 hood series:

- Internal cable clamp as an compact solution

The right hood for every application

- Hoods with straight or angled cable outlet
- Hoods with multiple cable outlets
- Adapter hoods

Technical data

IP protection class	IP 20
Temperature range	- 45°C to + 90°C
Tightening torque	
Cable clamp screw	max. 30 Ncm
Cover screw	max. 20 Ncm
Housing	Zn alloy
Locking screws	St Ni-plated
Cable diameter in mm	
Series 07DC/17DC/47DC/77DC/101DC	9-37:4 - 14 / 50: 4 - 16
Series 104DC/117DC/147DC Internal	9:4 -10 / 15:4-12 / 25:4-14 / 37-50:4-15
Series 104DC/117DC/147DC External	9-37:4 - 14 / 50: 4 - 16
Series 109/110DC	max. 10

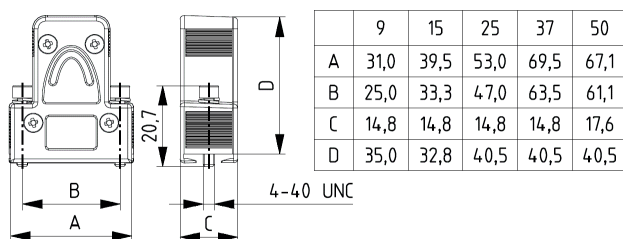


Full-metal hood (series 17DC)

Cable outlet 180° with screw locking

- New, grip-compatible design
- Assembly-friendly due to pre-cut thread
- Short delivery time thanks to warehousing
- Mechanically extremely durable
- Lateral knurled screws with UNC 4-40 thread, M3 optional
- Optimal RF-tight in connection with crimp flanges
- Vibration- and torsion-proof with crimp flange/crimp sleeve

Dimensions



Technical data (mutual data on pages 153 & 168)

Cable diameter	9 -25:max Ø 14 / 37-50:max. Ø 16
Temperature range	-55° C to +90° C
Case	Zn-alloy
Knurled/cover screw	St nickel-plated / St galvanised

Order information

1709DC25001	9-pole Set
1715DC25001	15-pole Set
1725DC25001	25-pole Set
1737DC25001	37-pole Set
1750DC25001	50-pole Set

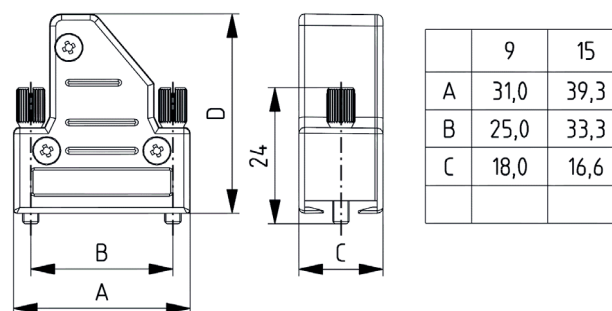


Full-metal hood (series 47DC)

Vibration- and torsion-proof with crimp flange/crimp sleeve

- 40° cable outlet
- New, grip-compatible design
- Assembly-friendly due to pre-cut thread
- Short delivery time thanks to warehousing
- Mechanically extremely durable
- Pre-assembled knurled screws UNC 4-40 (alternatively M3 available)
- Optimal RF-tight in combination with crimp flanges

Dimensions



Technical data (mutual data on pages 153 & 168)

Cable diameter	9 -25:max Ø 14 / 37-50:max. Ø 16
Temperature range	-55° C bis +90° C
Hood/knurled/cover screw	Zn-alloy / St nickel-plated / St galvanised

Order information

4709DC25001	9-pole Set
4715DC25001	15-pole Set
4725DC25001	25-pole Set

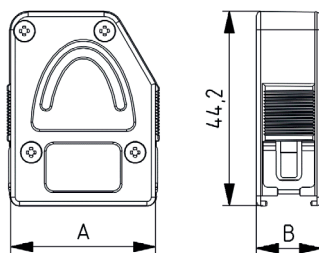


Quick Lock full-metal hood (series 104DC)

Push-Pull locking

- New, innovative locking system
- Fast one-hand operation, safe locking, highest holding force
- Faster assembly than screw and push locking
- Automotive approval
- 2-3 cable outlets
- External cable clamp for cables up to Ø 14 mm (50-pole: Ø 16 mm)
- Optimal RF tight with crimp flanges up to Ø 14 mm (50-pole: Ø 16 mm)
- Certified for shock/vibration acc. to EN 61373

Dimensions



	9	15	25	37	50
A	33,0	41,3	56,2	71,5	70,3
B	15,5				18,5

Technical data (mutual data on pages 153 & 168)

Protection class	IP 20
Cable diameter	9 - 37pole: max Ø 14 / 50pole: max. Ø 16 mm
Temperature range	-55° C to +90° C
Housing /screws	Zn-alloy / Steel galvanised

Order information

10409DC001	9-pole Set
10415DC001	15-pole Set
10425DC001	25-pole Set
10437DC001	37-pole Set
10450DC001	50-pole Set

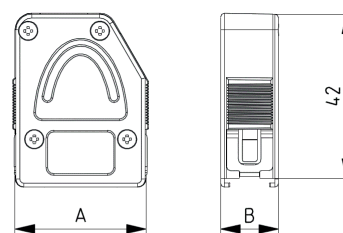


Quick Lock full-metal hood (series 104DC)

Push Pull locking and internal cable clamp

- New, innovative locking system
- Fast one-hand operation, safe locking, highest holding force
- Vibration-proof locking with certified test acc. to EN 61373
- Faster assembly than screw and push locking
- Automotive approval
- 2-3 cable outlets
- Internal cable clamp for compact economic solutions
- Set with 1 cable clamp (1DC) or with 2 cable clamps (2DC)

Dimensions



	9	15	25	37	50
A	33,0	41,3	55,0	71,5	70,3
B	14,8	14,8	14,8	14,8	17,8

Technical data (mutual data on pages 153 & 168)

Protection class	IP 20
Cable diameter	9 - 37pole: Ø 4-11 mm / 50-pole: Ø 4-13 mm
Temperature range	-55° C to +90° C
Case/screws	Zn-alloy / Steel galvanised

Order information

104091DC001	9-pole 1 cable clamp set/000: single parts
104151DC001	15-pole 1 cable clamp set/000: single parts
104251DC001	25-pole 1 cable clamp set/000: single parts
104371DC001	37-pole 1 cable clamp set/000: single parts
104501DC001	50-pole 1 cable clamp set/000: single parts

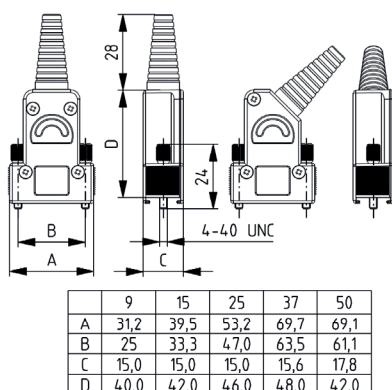


Full-metal hoods (series 117DC/147DC)

3 cable strain relief versions and screw lock

- Hood with special shielding design for high-quality EMC applications
- 2 cable outlets 180° and 135° from 15-pole version in one hood
- 9/15-pole Index 117: cable outlet 180° / Index 147: cable outlet 135°
- Always fitting with 3 options for cable strain relief and shield connection
- Compact economic solutions with internal cable clamp
- Large cable diameters and more mounting space with external cable clamp
- 360° shielding with crimp flange/crimp sleeve system
- Screw locking: knurl or vibration-proof Inbus with spring washer

Dimensions



Technical data (mutual data on pages 153 & 168)

Cable diameter internal	9: 4-10 / 15-25: 4-12 / 37-50: 4-15
Cable diameter external	9 -25: 4 - 14 / 37-50: 4 - 16
Temperature range:	-55 °C to + 90 °C
Housing/screws	Zn-alloy/Steel galvanised

Order information

117092DC25001	9-pole 180° UNC Set / 135°:147092DC25001
117152DC25001	15-pole 180° UNC Set / 135°:147152DC25001
117252DC25001	25-pole 180° + 135° UNC set
117372DC25001	37-pole 180° + 135° UNC set
117502DC25001	50-pole 180° + 135° UNC set

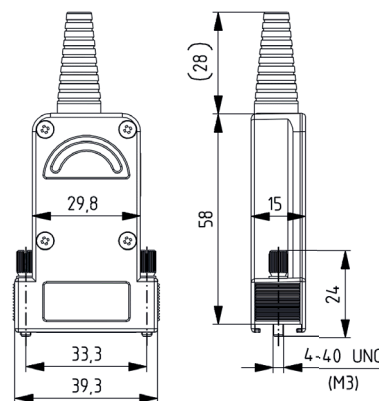


360° EMI/RFI full-metal hood (series 118DC)

Large mounting space and 3 cable strain relief options

- D-Sub hood with 180° and 90° cable outlet
- Large mounting space for special solutions with PCBs etc.
- 3 strain relief and shield connection versions
- Internal cable clamp for compact mounting depth
- External cable clamp for special cables up to Ø 14 mm
- Pre-assembled UNC 4-40 knurled screw (alternatively M3)
- Vibration-proof locking option with allen screw with spring washer

Dimensions



Technical data (mutual data on pages 153 & 168)

Cable diameter	4-12mm (External clamp: 14 mm)
Temperature range	-55° C to +90° C
Housing	Zn-alloy
Knurled/cover screw	St nickel-plated / St galvanised

Order information

118152DC25001	15-pole UNC Set
118153DC25001	15-pole M3 Set

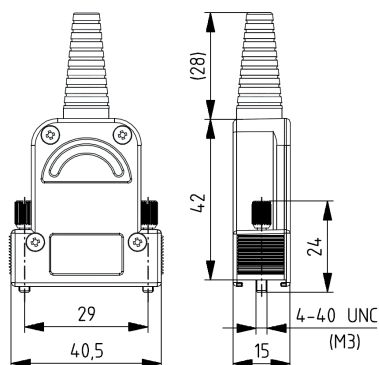


DVI full-metal hood (series 119DC)

Vibration- and torsion-proof cable connection

- Especially for high-quality fully shielded DVI connecting lines
- Flexibility at the cable connection with 3 strain relief options
- Internal cable clamp for compact mounting depth
- Crimp flange system for 360°-shielding
- Pre-assembled UNC 4-40 knurled screw (alternatively M3)
- External cable clamp for special cables up to Ø 14 mm
- Vibration-proof locking with optional Inbus screw with spring washer

Dimensions



Technical data (mutual data on pages 153 & 168)

Cable diameter	4-12mm (External clamp: 14 mm)
4-12mm (External clamp: 14 mm)	
Temperature range	-55° C to +90° C

Order information

119152DC25001	DVI JAE connector UNC Set
119153DC25001	DVI JAE connector M3 Set
119152DC25000	DVI JAE connector UNC single parts
119153DC25000	DVI JAE connector M3 single parts
119158DC25001	DVI Molex connector UNC Set
119159DC25001	DVI Molex connector M3 Set
119158DC25000	DVI Molex connector UNC single parts
119159DC25000	DVI Molex connector M3 single parts

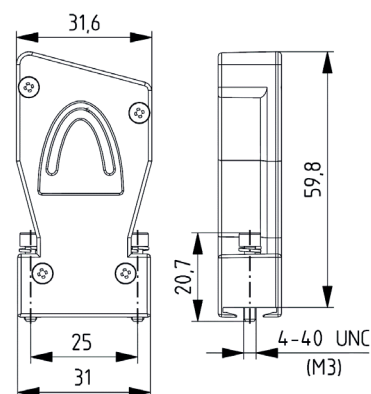


Full-metal bus hoods (series 101DC)

With 2 cable outlets and vibration-/torsion-proof

- Compact construction with 2 cable outlets
- Vibration- and torsion-proof with crimp flange/crimp sleeve
- 360° EMI/RFI shielding with crimp flange/crimp sleeve Vibration-proof screw-locking with spring washer
- Vibration-proof screw-locking with spring washer
- Long construction with mounting space for special solutions
- Extremely space-saving stackable (height 1 TE)
- Pre-assembled Inbus screw UNC 4-40 or M3

Dimensions

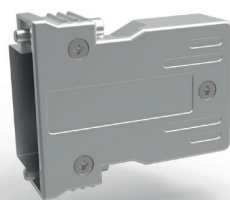


Technical data (mutual data on pages 153 & 168)

Cable diameter	9 -25: max Ø 14
Temperature range	-55° C to +90° C
Case	Zn-alloy
Knurled/cover screw	St nickel-plated / St galvanised

Order information

10109DC001	9-pole Inbus screw UNC Set
10109M3DC001	9-pole Inbus screw M3 Set

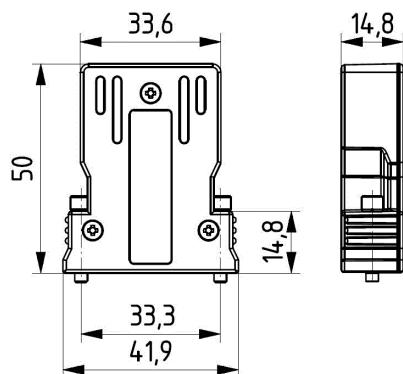


Vollmetall Bushaube 15-polig (Serie 101DC)

mit 2 Kabelausgängen und vibrations-/torsionssicher

- Kompakte 15-polige Konstruktion mit 2 Kabelausgängen 180°
- Vibrations- und torsionssichere Zugentlastung mit Crimpflansch/Crimphülse
- Vibrations- und torsionssicherer Schirmanschluss mit Crimpflansch/Crimphülse
- Externe Kabelklemme für Kabeldurchmesser 4 - 14 mm
- Vibrationssichere Schraubverriegelung mit Federring
- Lange Bauform mit Einbauraum für PCB und Sonderlösungen
- Extrem platzsparend anreihbar (Bauhöhe 1 TE)
- Vormontierte Inbusschraube UNC 4-40 oder M3

Dimensions



Technical data (mutual data on pages 153 & 168)

Kabeldurchmesser	max Ø 14
Temperaturbereich:	-55° C bis +90° C
Gehäuse	Zn-Legierung
Rändel-/ Deckelschraube	St vernickelt / St verzinkt

Order information

10115DC001	15-pole allen screw UNC Set
10115M3DC001	15-pole allen screw M3 Set

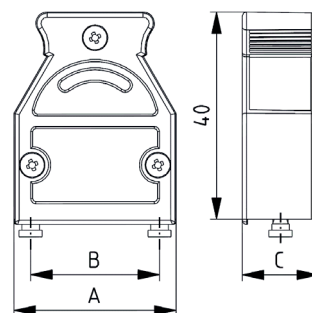


Full-metal hood (series 07DC)

For push and clip locking

- 2 cable outlets for 9-pole and 3 cable outlets from 15-pole
- New, grip-compatible design
- Assembly-friendly due to pre-cut thread
- Short delivery time thanks to warehousing
- Mechanically extremely durable
- Optimally HF-dense in connection with crimp flanges
- Multiple opening possible

Dimensions



	9	15	25	37	50
A	31,0	39,0	53,0	69,5	67,0
B	25,0	33,3	47,0	63,5	61,1
C	14,8	14,8	14,8	14,8	17,4

Technical data (mutual data on pages 153 & 168)

Protection class	IP 20
Cable diameter	max. Ø 14 mm / 50-polig: max. Ø 16 mm
Temperature range	-55° C to +90° C
Housing	Zn-alloy

Order information

0709DC001	9-pole Set
0715DC001	15-pole Set
0725DC001	25-pole Set
0737DC001	37-pole Set
0750DC000	50-pole Set

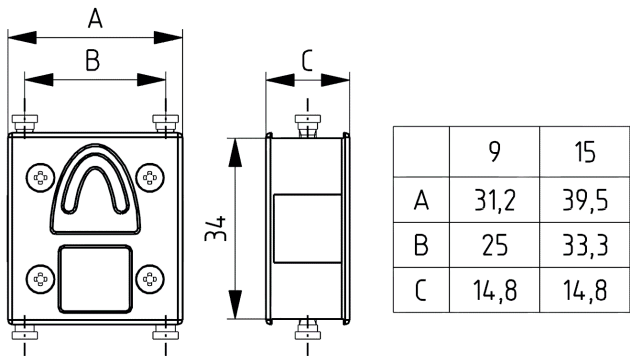


Full-metal adapter hood (series 77DC)

Wide range of applications

- 2 D-Sub outlets
- 2 cable outlets for external cable clamp/crimp flange
- Universally applicable as bus-hood or as Dongle
- Easy assembly
- For push and clip locking systems

Dimensions



Technical data (mutual data on pages 153 & 168)

Protection class	IP 20
Cable diameter	4 - 14 mm
Temperature range	-55° C to +90° C
Housing	Zn-alloy

Order information

7709DC001	9-pole Set
7715DC001	15-pole Set

Your notes

Full-metal hoods Nickel-plated

Applications with 360° shielding and high requirements

D-Sub Hoods



For applications with high quality shielding and optical requirements, Provertha offers a program of nickel-plated full metal hoods with special housing design for 360 ° shielding.

Quick and easy assembly through a practical design with a minimized number of isingle parts are an essential feature of D-Sub full metal hoods.

The tailor-made solution can be implemented with a wide range of options with regard to locking, cable outlet and a comprehensive range of accessories.

Various locking options

- Screw locking with knurled screws in different lengths
- Push-pull locking with the innovative „Quick Lock“ system

Cable connection versions for the highest requirements

- 360 ° EMI / RFI crimp flange system vibration and torsion-proof
- external cable clamp for diameters 4 - 14 mm (50-pole: up to 16 mm)
- Cable clamp internally as a compact solution

The right hood for every application

- Hoods with straight or sloping cable outlet
- Hoods with several cable outlets

Technical data

IP protection class	IP 20
Temperature range	- 45°C to + 90°C
Tightening torque	
Cable clamp screw	max. 30 Ncm
Cover screw	max. 20 Ncm
Housing	Zn alloy Ni-plated
Cable diameter in mm	
Series 104DC/117DC/147DC Internal	9:4 - 10 / 15:4-12 / 25:4-14 / 37-50:4-15
Series 104DC/117DC/147DC External	9-37:4 - 14 / 50: 4 - 16
Series 109/110DC	max. 10

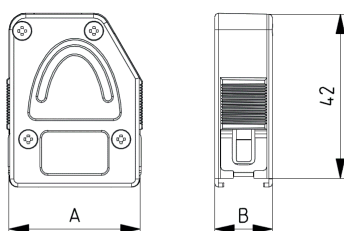


Ni-plated Quick Lock full-metal hoods (series 104DCN)

Push-Pull locking and internal cable clamp

- New, innovative locking system
- Fast one-hand operation, safe locking, highest holding force
- Vibration-proof locking with certified test acc. to EN 61373
- Faster assembly than screw and push locking
- Automotive approval
- 2-3 cable outlets
- Internal cable clamp for compact economical solutions

Dimensions



	9	15	25	37	50
A	33,0	41,3	55,0	71,5	70,3
B	14,8	14,8	14,8	14,8	17,8

Technical data (mutual data on pages 153 & 176)

Protection class	IP 20
Cable diameter	09:max Ø 10/15-25:max. Ø 12/37-50 :max. Ø 15
Temperature range	-55° C to +90° C
Housing /screws	Zn-alloy / Steel galvanised

Order information

104091DCN001	9-pole 1 cable clamp Set
104151DCN001	15-pole 1 cable clamp Set
104251DCN001	25-pole 1 cable clamp Set
104371DCN001	37-pole 1 cable clamp Set
104501DCN001	50-pole 1 cable clamp Set

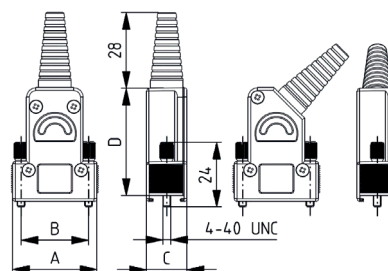


Ni-plated full-metal hoods (series 117DCN/147DCN)

3 cable strain relief versions and screw lock

- Hood with special shielding design for high-quality EMC applications
- 2 cable outlets 180° and 135° from 15-pole version in one hood
- 9/15-pole Index 117: cable outlet 180° / Index 147: cable outlet 135°
- Always fitting with 3 options for cable strain relief and shield connection
- Compact economic solutions with internal cable clamp
- Large cable diameters and more mounting space with external cable clamp
- Shielding and strain relief vibration-proof with crimp flange/crimp sleeve

Dimensions



	9	15	25	37	50
A	31,2	39,5	53,2	69,7	69,1
B	25	33,3	47,0	63,5	61,1
C	15,0	15,0	15,0	15,6	17,8
D	40,0	42,0	46,0	48,0	42,0

Technical data (mutual data on pages 153 & 176)

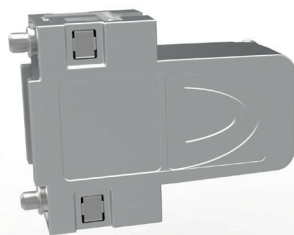
Cable diameter internal	9: 4-10 / 15-25: 4-12 / 37-50: 4-15
Cable diameter external	9 -25: 4 - 14 / 37-50: 4 - 16
Temperature range:	-55 °C to + 90 °C

Order information

117092DCN25001	9-pole 180° UNC Set / 135°:147092DCN25001
117152DCN25001	15-pole 180° UNC Set / 135°:147152DCN25001
117252DCN25001	25-pole180° + 135° UNC Set
117372DCN25001	37-pole 180° + 135° UNC Set
117502DCN25001	50-pole180° + 135° UNC Set

FLEXLOCK

Coming soon

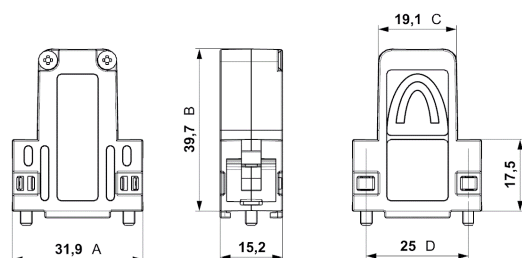


Full-metal hood Nickel-plated (series 217DCN)

Screw locking or Quick Lock Push Pull

- Patented double locking system in one D-Sub hood
- Screw locking or Quick Lock Push Pull
- Hood with special shielding design for high-quality EMC applications
- Simple assembly thanks to pre-assembled screws and snap-together design
- Option for version with locking nut for cable-cable connections
- Compact economic solutions with internal cable clamp
- Size 1: 9-pole / size 2: 15-pole / size 3: 25-pole
- Nickel-plated hood protected as a complete set in a bag

Dimensions



	09	15	25
A	31,9	40,3	54
B	39,8	41,3	45,3
C	19,1	24,1	32,9
D	25	33,3	47

Technical data (mutual data on pages 153 & 176)

Degree of protection	IP 20
Cable diameter internal cable clamp	9-pole: Ø 3 - 9,5 / 15 and 25-pole: Ø 3 - 8,5
Temperature range	-55° - 90° C

Order information

2170901DCN18001	9-pole screw locking UNC IK set
2171501DCN18001	15-pole screw locking UNC IK set
2172501DCN18001	25-pole screw locking UNC IK set
2170901DCN001	9-pole Quick Lock locking IK set
2171501DCN001	15-pole Quick Lock locking IK set
2172501DCN001	25-pole Quick Lock locking IK set

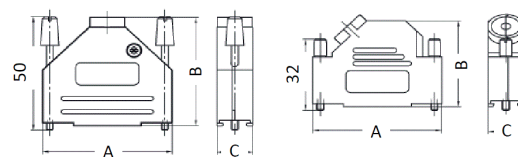


Ni-plated full-metal hood (series 109DC-110DC)

With screw locking

- 2-piece die cast hood
- Shield connection with attached clamping system
- For cable diameter up to max. 10 mm
- Cable exit 180°: series 109 and cable exit 135°: series 110
- Knurled screw UNC 4-40
- Good performance with low price

Dimensions



	10909DC	10915DC	10925DC	10937DC	11909DC	11915DC	11925DC	11937DC
Pol	9	15	25	37	9	15	27	37
A	31,2	39,5	53,4	69,7	31	39,5	53,2	69,7
B	39,9	41,5	48,6	53,6	36,3	40,3	40,3	40,3
C	15	15	15,5	15,5	14,5	14,5	14,5	14,5

Technical data (mutual data on pages 153 & 176)

Cable diameter	max. Ø 10
Temperature range	-55° C bis +90° C
Housing	Zn alloy Ni-plated
Knurled screw	St Ni-plated with plastic knurled cap

Order information

10909DC001	9-pole 180° Set
10915DC001	15-pole 180° Set
10925DC001	25-pole 180° Set
10937DC001	37-pole 180° Set
11009DC001	9-pole 135° Set
11015DC001	15-pole 135° Set
11025DC001	25-pole 135° Set
11037DC001	37-pole 135° Set

Your notes

Hood accessories

D-Sub Hoods



Technical data

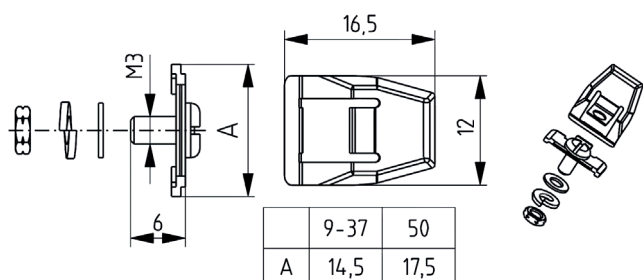
See each product



Clip locking

- Fits at every D-Sub connector
- Easy handling, one grip opening and locking
- Safe locking

Dimensions

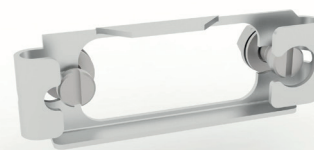


Technical data (mutual data on pages 153 & 180)

Clip/washer/spring washer	Stainless steel
Retainer/screw/ nut	Steel tin-plated or galvanised

Order information

51937ETA002	9-37-pole tin-plated set
51050ETA002	50-pole tin-plated set
51937EZA002	9-37-pole galvanised set
51050EZA002	50-pole galvanised set
51937ETA000	9-37-pole tin-plated single parts
51050ETA000	50-pole tin-plated single parts
51937EZA000	9-37-pole galvanised single parts
51050EZA000	50- pole galvanised single parts

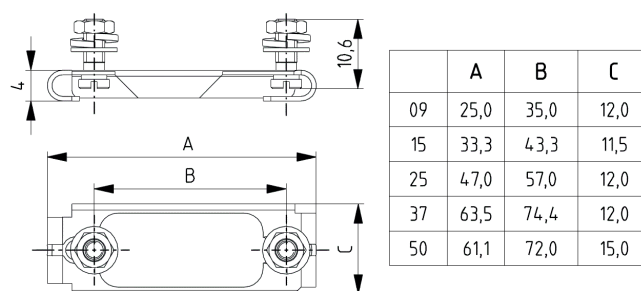


Slide locking

Stainless steel edition

- Stainless steel edition
- Universally fitting
- 3 screw variants to choose from
- E4Z:UNC 4-40/E3Z:M3/ESZ:self tapping screw
- Pole numbers: 9 / 15 / 25 / 37

Dimensions



Technical data (mutual data on pages 153 & 180)

Pole numbers	9 / 15 / 25 / 37 / 50
Slide mating engagement	stainless steel

Order information

5109E4Z001	9-pole UNC set I 000: single parts I E3Z:M3
5115E4Z001	15-pole UNC set I 000: single parts I E3Z:M3
5125E4Z001	25-pole UNC set I 000: single parts I E3Z:M3
5137E4Z001	37-pole UNC set I 000: single parts I E3Z:M3
5150E4Z001	50-pole UNC set I 000: single parts I E3Z:M3
5109ESZ001	9-pole self tapping set I 000: single parts
5115ESZ001	15-pole self tapping set I 000: single parts
5125ESZ001	25-pole self tapping set I 000: single parts
5137ESZ001	37-pole self tapping set I 000: single parts
5150E3Z001	50-pole M3 set I 000: single parts

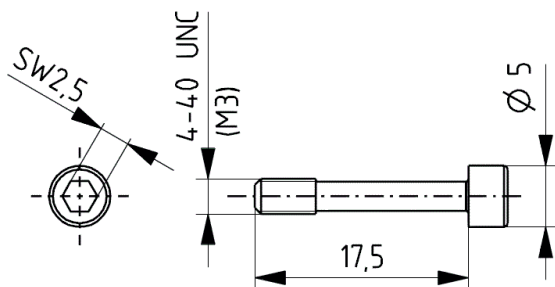


Cylinder screw with internal hex ISO 4762

For full-metal hoods with screw-locking

- Cylinder head with internal hex SW 5
- Handling of confined mounting place with hex ballpoint screwdriver
- Full-metal version for safe tightening and loosening
- Corrosion protection through nickel-plated surface
- Total length 20.7 mm
- Thread UNC 4-40 or M3
- Other thread sizes upon request

Dimensions



Technical data (mutual data on pages 153 & 180)

Material	Steel nickel-plated
----------	---------------------

Order information

5520Z4N	Inbus screw UNC 4-40
5520Z3N	Inbus screw M 3

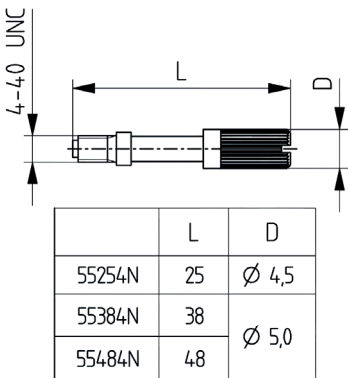


Knurled screw with slot

For plastic hoods of the series 17, 47, 57

- Combi-head with knurl and slot 0,8
- Full-metal version for safe tightening and loosening
- Corrosion protection through nickel-plated surface
- Short version with total length 25 mm
- Thread UNC 4-40 or M3
- Other thread sizes upon request

Dimensions



Technical data (mutual data on pages 153 & 180)

Material	Steel nickel-plated
----------	---------------------

Order information

55254N	Knurled screw nickel-plated UNC 4-40
55384N	Knurled screw nickel-plated UNC 4-40
55484N	Knurled screw nickel-plated UNC 4-40

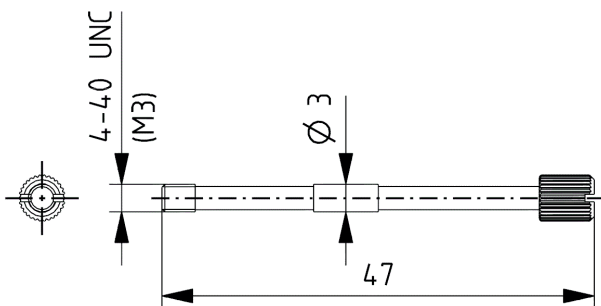


Knurled screw with slot and internal thread

For plastic adapter hoods series 87

- Combi-head Ø 5 with knurl and slit 8 and internal thread
- Full-metal version for safe tightening and loosening
- Corrosion protection through nickel-plated surface
- Total length 47 mm

Dimensions



Technical data (mutual data on pages 153 & 180)

Material	Steel nickel-plated
----------	---------------------

Order information

554744N	Knurled screw 47 4-40 UNC
554733N	Knurled screw 47 M3

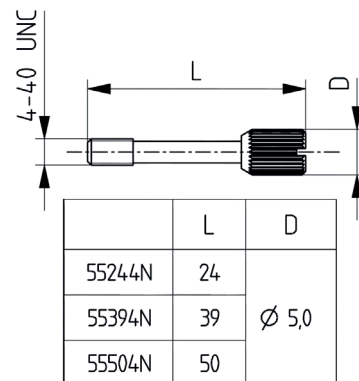


Knurled screw with slot

For full-metal hoods of the series 17 and 47

- Combi-head with knurl and slot 0,8
- Full-metal version for safe tightening and loosening
- Corrosion protection through nickel-plated surface
- Short version with total length 25 mm
- Thread UNC 4-40 or M3

Dimensions



Technical data (mutual data on pages 153 & 180)

Material	Steel nickel-plated
----------	---------------------

Order information

55244N	Knurled screw nickel-plated UNC
55394N	Knurled screw nickel-plated UNC
55504N	Knurled screw nickel-plated UNC

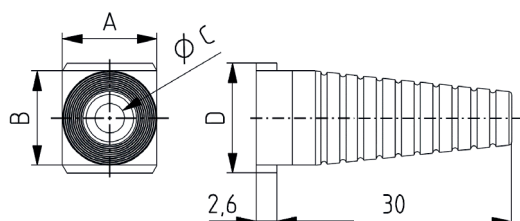


Cable bushings with rectangle flange contour

For full-metal-, QuickLock-, push lock hoods

- Easy fast mounting due to flange contour in hood flange contour
- Diameter grading 0.5 mm
- 5 versions for cable diameter 2-11.5 mm
- Grooved marking for every diameter grading
- Marking secures easy exact cut for the diameter
- 2 versions: 9-37-pole hoods and 50-pole hoods

Dimensions



	KT07KB	KT07GB
A	12,0	14,5
B	12,0	14,5
Ø C	Ø 3,8	Ø 6,3
D	14,0	19,3

Technical data (mutual data on pages 153 & 180)

Material	TPE
----------	-----

Order information

KT07KB	For 9-37pole hoods / Ø 3 - 9
KT07GB	For 50pole hoods / Ø 6 - 11,5

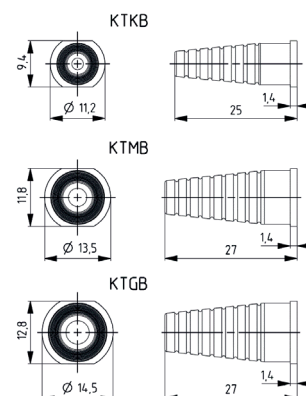


Cable bushings with round flange contour

For plastic hoods 07/17/47/57

- Easy fast assembly due to flange contour
- Diameter in steps of 0,5 mm
- Grooved marking for every diameter grading
- Marking secures easy exact cut for the diameter
- 3 versions: 9-15-pole for Ø 2-6/ 25-37-pole for Ø 3-8/ 50-pole for Ø 4-9

Dimensions

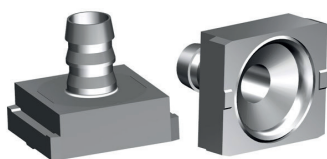


Technical data (mutual data on pages 153 & 180)

Material	TPE
----------	-----

Order information

KTKB	9-15pole / Ø 2 - 6 mm
KTMB	25-37pole / Ø 4 - 8 mm
KTGB	50pole / Ø 4 - 9 mm

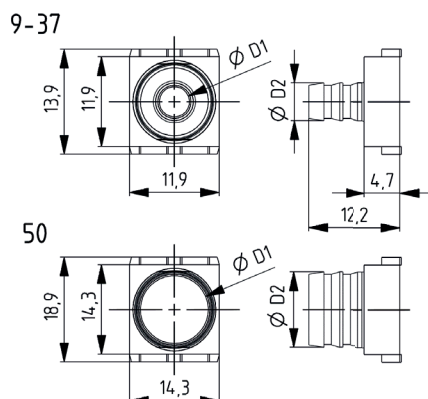


Crimp flange for D-Sub hoods

Extremely safe 360° shielding and strain relief

- 360° EMI/RFI shielding
- Vibration- und torsion-proof cable shield connection
- Vibration- and torsion-proof strain relief
- Reliability over the lifetime due to hexagonal crimp
- Gas-proof connection with hexagonal crimp
- Crimping tools for the respective sleeve size
- Validation service for the respective cable type

Dimensions



Technical data (mutual data on pages 153 & 180)

Material	Zinc and Cu-alloy
Surface	Cu-alloy tin-plated

Order information

D040F050T	D1:4/D2:5 9-37pol. I D040F050T50:50pol.
D045F055T	D1:4,5/D2:5,5 9-37pol. I D045F055T50:50pol.
D050F060T	D1:5/D2:6 9-37pol. I D050F060T50:50pol.
D055F065T	D1:5,5/D2:6,5 9-37pol. I D055F065T50:50pol.
D060F070T	D1:6/D2:7 9-37pol. I D060F070T50:50pol.
D065F075T	D1:6,5/D2:7,5 9-37pol. I D065F075T50:50pol.
D070F080T	D1:7/D2:8 9-37pol. I D070F080T50:50pol.
D076F085T	D1:7,6/D2:8,5 9-37pol. I D076F085T50:50pol.
D080F090T	D1:8/D2:9 9-37pol. I D080F090T50:50pol.
D085F095T	D1:8,5/D2:9,5 9-37pol. I D085F095T50:50pol.

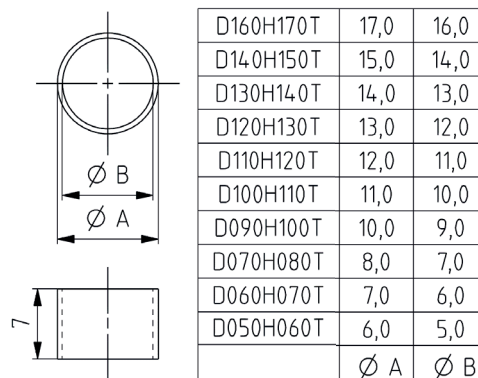


Crimp sleeves

For cable diameters from 5.0 to 17.0 mm

- Vibration-proof strain relief with hexagonal crimp
- Torsion-proof strain relief with hexagonal crimp
- Grading 5 mm
- Crimping tools for every sleeve size
- Validation service for cables

Dimensions

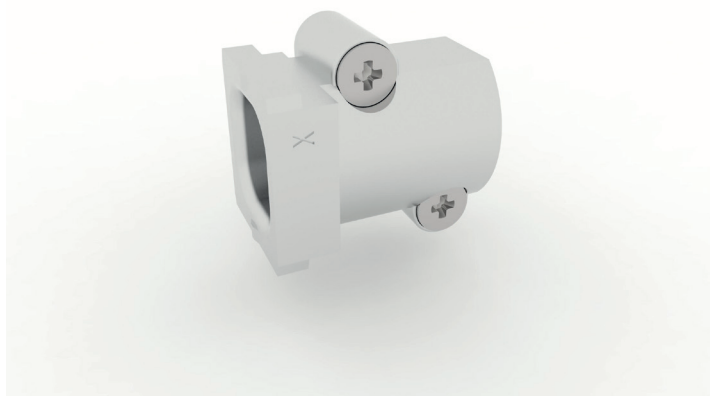


Technical data (mutual data on pages 153 & 180)

Material	Cu-alloy
Surface	tin-plated

Order information

D050H060T	Crimpsleeve Di=5 / Da=6
D055H065T	Crimpsleeve Di=5,5 / Da=6,5
D060H070T	Crimpsleeve Di=6 / Da=7
D065H075T	Crimpsleeve Di=6,5 / Da=7,5
D070H080T	Crimpsleeve Di=7 / Da=8
D075H085T	Crimpsleeve Di=7,5 / Da=8,5
D080H090T	Crimpsleeve Di=8 / Da=9
D085H095T	Crimpsleeve Di=8,5 / Da=9,5
D090H100T	Crimpsleeve Di=9 / Da=10
D095H105T	Crimpsleeve Di=9,5 / Da=10,5

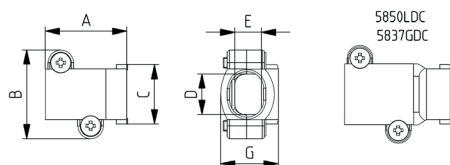


Cable clamps (58DC Series)

For full metal hoods, QL-hoods and plastic hood series 07

- Secure constant shield connection due to solid version and design
- Secure shield transfer to hood due to special design
- Easy cable harnessing due to pre-assembly outside the hood
- Optionally, a few cables can run through one cable clamp
- Cable-diameter for hoods 9-37pole in mm: 4 - 7 / 7 - 10 / 9 - 12 / 11 - 14
- Cable-diameter for hoods 50-pole in mm: 8 - 10 / 11 - 14 / 14 - 16

Dimensions



	A	B	C	D	E	G	für Kabel- Ø mm for cable Ø mm			
							○	○	⊗	⊗
5815GDC	19,1	18,0	13,9	10	6	14,7	4-7	4-5	7,5-8,5	6,5-8
5815KDC				3,5			7-10	5-6	6-7	5-6,5
5825GDC	24,8	20,8	13,9	10,7	8		9-12	6-7	4-5	-
5837GDC	24,8	23,0		12,9	9,5		11-14	7-8	6-7	5-6
5850GDC	21,1	23,0	19,0	9,0	15,3		8-10	5-7	5-6	4-5
5850KDC				5,0			11-14	7-8	4-4,5	-
5850LDC	24,8	26,0		11,0	17,1		14-16	9-10	3,5-4	-


Technical data (mutual data on pages 153 & 180)

IP protection class	IP20
Temperature range:	- 20° C to + 90° C
Tightening torque	max. 35 Ncm
Cable clamp / screw	Zinc alloy / Steel Zinc-plated

Order information

5815KDC001	Set for sz 1-4/1 cable: Ø 4-7/2 cables: Ø 4-5
5815GDC001	Set für sz 1-4/1 cable: Ø 7-10/2 cables: Ø 5-6
5825GDC001	Set für sz 1-4/1 cable: Ø 9-12/2 cables: Ø 6-7
5837GDC001	Set für sz 1-4/1 cable: Ø 11-14/2 cables: Ø 7-8
5850KDC001	Set für sz 5/1 cable: Ø 8-10/2 cables: Ø 5-7
5850GDC001	Set für sz 5/1 cable: Ø 11-14/2 cables: Ø 7-8
5850LDC001	Set für sz 5/1 cable: Ø 14-16/2 cables: Ø 9-10
58xxDC000	Packaging as single parts

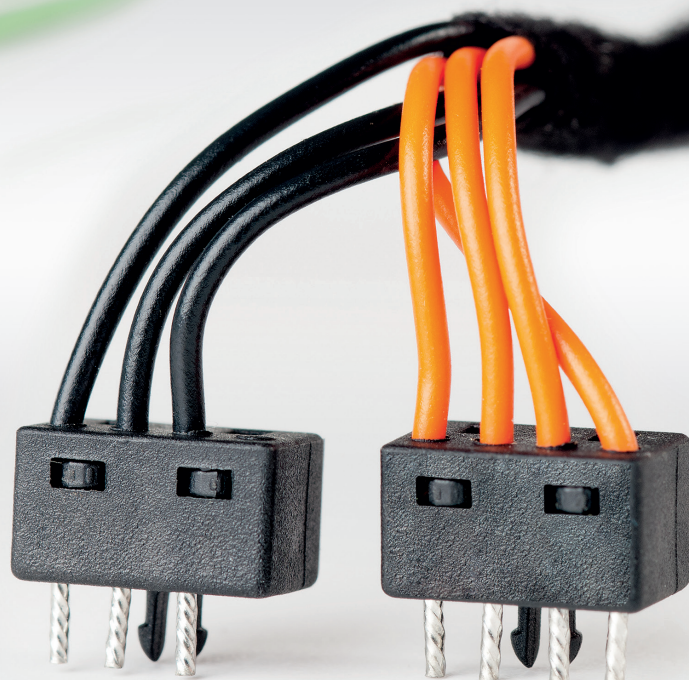
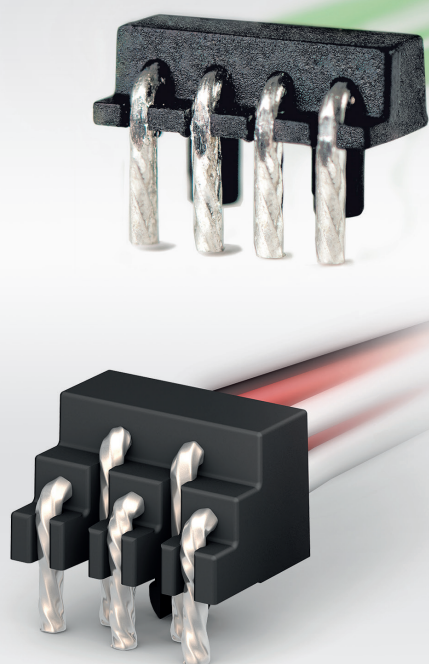
Your notes

An aerial photograph of a dark asphalt road that winds through a dense forest. The road has white painted lines along its edges. A small white car is visible on the road, moving away from the viewer. The surrounding trees are mostly green, with some showing early autumn colors of yellow and orange. A semi-transparent white rectangular box is overlaid on the left side of the image, containing text. To the left of this box is a solid red vertical bar.

**Fastest, most cost
effective and most
reliable Wire to
Board connections**

Wire to Board

Space-saving and reliable



Wherever low installation heights and absolute fail-safe cable connection are important, we recommend the wire-to-board solutions from PROVERTHA. We offer process and functionally reliable connections of single stranded wires and single cores of round and sheathed cables in completely different, customer-specific configurations. Wire-to-board solutions are space-saving, economical and safe. Wire-to-board solutions save space thanks to their low overall height.

The contacting takes place directly, without an intermediate connector. The integrated locking clip ensures secure locking on the printed circuit board and enables a 100% fail-safe connection. No tooling required.

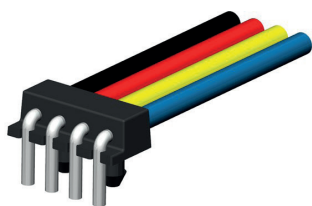
The PROVERTHA Wireclip principle consisting of a specially designed plastic part with integrated snap-in locking clip, previously twisted and tin-plated single wires are inserted into the patented Wireclip, bend 90° and shortened to the desired dimension. This solution has already proven itself millions of times in the automotive industry. The Wireclip is available as a standard version with solder pins 90 ° or as a vertical version with solder pins 180 ° and a low profile version with solder pins 90 ° and installation height 2.5 mm. The broad portfolio is completed by 2-row versions with 90 ° solder pins and mixed versions for the space-saving combined power (AWG 18) and signal (AWG 22) wire-to-board solution.

Technical features

- Minimum installation height
- Minimal manual assembly and process costs
- Easy and fast mounting on the circuit board by integrated locking clip

Technical data

Housing	High temperature Thermoplast UL 94-V0
Contact	Wires twisted and tin-plated
PCB thickness	1,6 mm
Mating and unmating force (not soldered)	10 N
Pitch / number of poles / wire sizes	
Standard version HCxxx	2,5, 2,54, 3, 4/ 2 , 3, 4, 5, 6/ AWG 18, 20, 22, 24, 26
Vertical version HCSxxx	2,54 / 4 / AWG 20, 22, 23, 26
Low Profile Version HCLxxx	1,8 / 4, 6 / AWG 22, 26
Mixed Version HC	2,54 / 2,54 + 3 / 4 / AWG 16, AWG 18 , 22
Dual row Version HCVxxx	1,8 / 3, 5, 7, 9 / AWG 20, 22

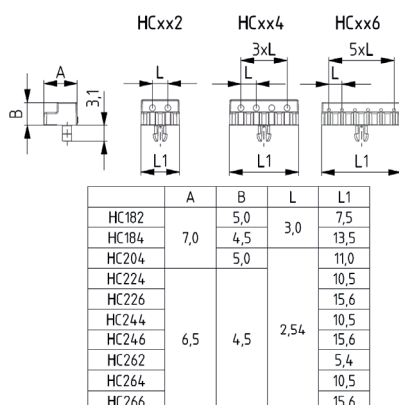


Standard Wireclip assemblies HC

Conductor exit 90° to the PCB

- Easy safe application of single strands on circuit board
- Minimum installation height
- Minimum manual equipping and process effort
- Easy fast circuit board installation with integrated snap-in clip
- Vibration-proof Wire-to-board solution with integrated snap-in clip
- Reliable 100% tested cable assemblies
- High temperature-proof Thermoplast for SMT-Reflow soldering process
- Approval in automotive industry

Dimensions



Technical data (mutual data on pages 188 & 189)

Grid in mm	2,5, 2,54, 3, 4
Pole number	2, 3, 4, 5, 6,
AWG	18, 20, 22, 24, 26
Material	Thermoplast UL 94 V-0 for SMT Reflow

Order information

HC182	2-pole R4 AWG 18
HC262	2-pole R2.54 AWG 26
HC184	4-pole R3 AWG 18
HC204	4-pole R2.54 AWG 20
HC224	4-pole R2.54 AWG 22
HC244	4-pole R2.54 AWG 24
HC264	4-pole R2.54 AWG 26
HC226	6-pole R2.54 AWG 26
HC246	6-pole R2.54 AWG 24
HC266	6-pole R2.54 AWG 26

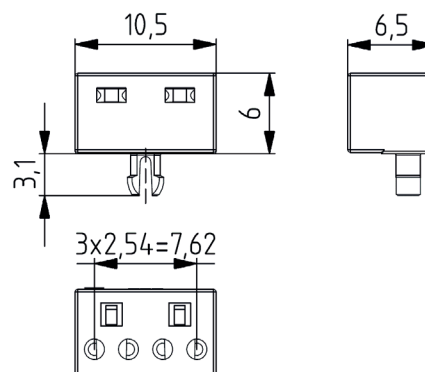


Vertical Wireclip assemblies HCS

Conductor exit 180° to the PCB

- Easy safe application of single strands on circuit board
- Minimum manual equipping and process effort
- Easy fast circuit board installation with integrated snap-in clip
- Vibration-proof Wire-to-board solution with integrated snap-in clip
- Reliable 100% tested cable assemblies
- Flexibility through different pole numbers and wire cross-sections
- High temperature-proof Thermoplast for SMT-Reflow soldering process
- Approval in automotive industry

Dimensions

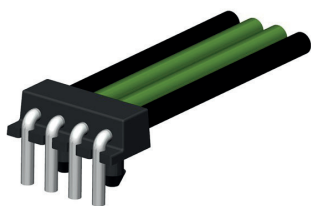


Technical data (mutual data on pages 188 & 189)

Grid	2.54
Pole number	4
AWG	20/22/23/26
Material	Thermoplast UL 94 V-0 for SMT Reflow

Order information

HCS204	4-pole R 2,54 AWG 20
HCS224	4-pole R 2,54 AWG 22
HCS234	4-pole R 2,54 AWG 23
HCS264	4-pole R 2,54 AWG 26

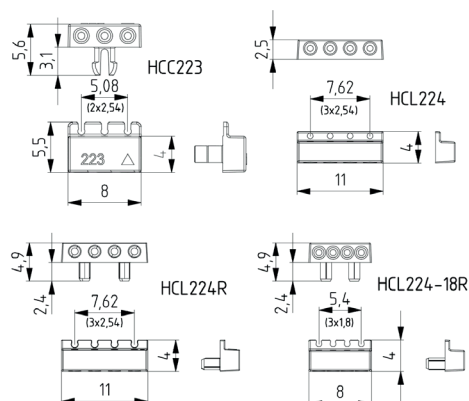


Low Profile Wireclip assemblies HCL

Cable outlet 90° to the PCB and installation height 2.5 mm

- Easy safe application of single strands on circuit board
- Minimum installation height of only 2.5 mm
- Minimum manual equipping and process effort
- Easy fast circuit board installation with integrated snap-in clip
- Vibration-proof Wire-to-board solution with integrated snap-in clip
- Reliable 100 % tested cable assemblies
- High temperature-proof Thermoplast for SMT-Reflow soldering process
- Approval in automotive industry

Dimensions

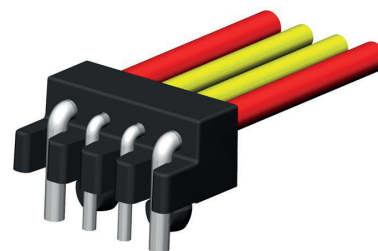


Technical data (mutual data on pages 188 & 189)

Grid	1.8, 2.54
Pole number	3 (R 2.54) , 4 (R 1.8)
AWG	22
Material	Thermoplast UL 94 V-0 for SMT Reflow

Order information

HCC223	With clip
HCL224	Without latching lug
HCL224-R	With latching lug
HCL224-18R	With latching lug, 1.8 mm grid spacing

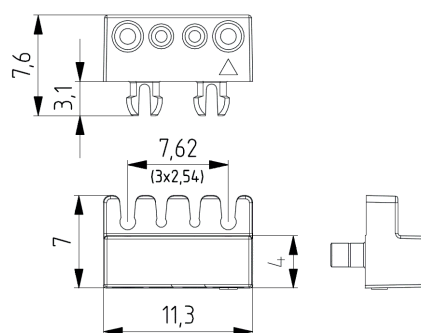


Wireclip with various conductor cross-sections

Cable outlet 90° to the PCB

- Easy safe application of single strands on circuit board
- Minimum installation height
- Minimum manual equipping and process effort
- Easy fast circuit board installation with integrated snap-in clip
- Vibration-proof Wire-to-board solution with integrated snap-in clip
- Reliable 100 % tested cable assemblies
- High temperature-proof Thermoplast for SMT-Reflow soldering process
- Approval in automotive industry

Dimensions

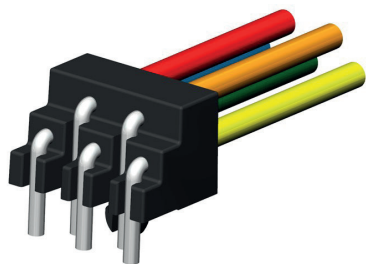


Technical data (mutual data on pages 188 & 189)

Grid	2.54 / 2.54 + 3
Pole number	2 + 2
AWG	18 + 22
Material	Thermoplast UL 94 V-0 for SMT Reflow

Order information

Upon request

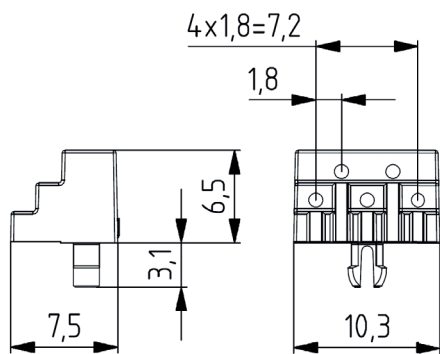


Horizontal Wireclip assemblies 2-row HCV

Cable outlet 90° to the PCB

- Easy safe application of single strands on circuit board
- Minimum installation height
- Minimum manual equipping and process effort
- Easy and fast circuit board installation with integrated snap-in clip
- Vibration-proof Wire-to-board solution with integrated snap-in clip
- Reliable 100 % tested cable assemblies
- High temperature-proof Thermoplast for SMT-Reflow soldering process
- Approval in automotive industry

Dimensions



Technical data (mutual data on pages 188 & 189)

Grid	1.8
Pole number	3/5/7/9
AWG	20/22
Material	Thermoplast UL 94-V0 for SMT reflow

Order information

HCV205	5-pole R1.8 AWG 20
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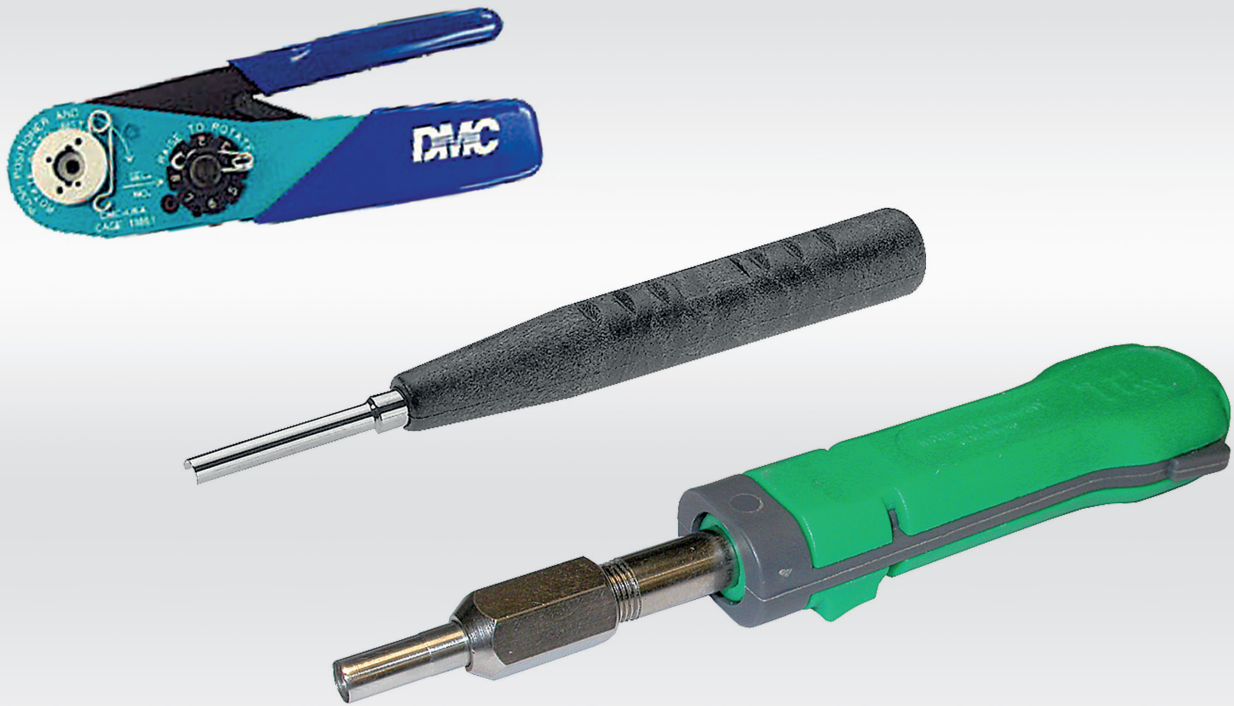
Your notes



Tools for your
PROVERTHA
products

Tools for D-Sub and M12

For easy assembly and safe crimp technology



An essential and important factor for the fault-free reliable data transmission with connectors are, beside their design and quality, the correct and reliable manufacture of the connectors with the suitable processing tools.

Therefore PROVERTHA offers processing tools coordinated with the different connector types.

The tool range includes crimp tools for D-Sub connectors and M12 connectors as well as insertion and extraction tools for D-Sub crimp contacts. The range is completed by assembly tools for D-Sub and M12 and a torque wrench for the M12 connectors.

For the machined D-Sub crimp contacts and M12 crimp contacts, high-quality hand crimping tools of a leading producer are available in various versions for different AWG sizes with the corresponding positioners for the according contact type.

For stamped D-Sub and HD-Sub crimp contacts, a crimp tool with reel hanger for the processing of reel contacts on coils for 500 pcs with the index C1x2xSLGxT and CH1x2xSLGxT as well as a pincer are also available.

For the crimp sleeves of the crimp flange/crimp sleeve system at D-Sub and M12 hand crimp tools and crimp inserts can be ordered for the according crimp sleeve diameter.

Technical data

not available

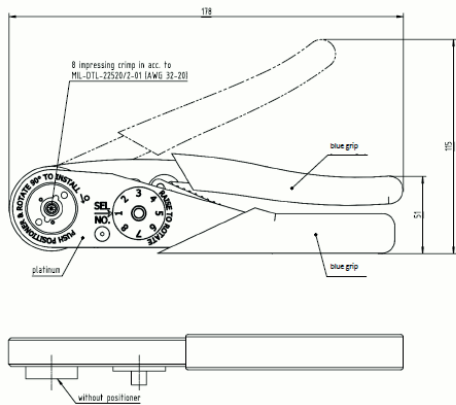


Hand crimp tool for machined crimp contacts

AWG 20 - 32

- Safe four indent MIL-crimp
- Wire size AWG 20 - AWG 32
- Positioner for machined D-Sub socket contacts
- Positioner for machined D-Sub pin contacts
- Positioner for machined HD D-Sub contacts
- Positioner for M12 contacts Ø1
- Positioner for M12 pin and socket contacts Ø 0.8
- Positioner for M12 pin and socket contacts Ø 0.6

Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC-SC	Hand crimp tool AWG 20-32
TMC-PS	Positioner for D-Sub socket machined Ø1
TMC-PP	Positioner for D-Sub pinmachined Ø1
TMC-PH	Positioner for HD D-Sub machined Ø 0.8
TMC-PD	Positioner for machined M12 contacts Ø1
TMC-P8	Positioner for M12 pin Ø 0.8
TMC-P9	Positioner for M12 socket Ø 0.8
TMC-PX1	Positioner for M12 X-code pin Ø 0.6
TMC-PX2	Positioner for M12 X-code socket Ø 0.6

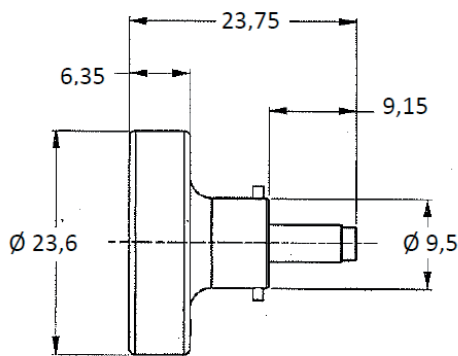


Positioner for hand crimp tool TMC-SC

For machined M12 contacts AWG 20-28

- Easy handling
- Safe fourfold MIL-crimp
- Positioner for M12 contacts Ø1
- Positioner for M12 pin contacts Ø 0.8
- Positioner for M12 socket contacts Ø 0.8
- Positioner for M12 pin contacts Ø 0.6
- Positioner for M12 B socket contacts Ø 0.6

Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC-PD	Positioner for machined M12 contacts Ø1
TMC-P8	Positioner for M12 pin Ø 0.8
TMC-P9	Positioner for M12 socket Ø 0.8
TMC-PX1	Positioner for M12 X-code pin Ø 0.6
TMC-PX2	Positioner for M12 X-code socket Ø 0.6

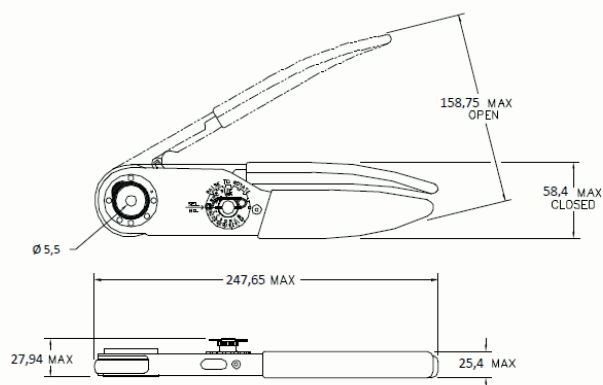


Hand crimp tool for machined crimp contacts

AWG 12 - 26

- Safe four indent MIL-crimp
- Wire size AWG 12- 26
- Positioner for machined D-Sub signal contacts
- Positioner for machined D-Sub high power contacts
- Positioner for machined 600V D-Sub contacts
- Positioner for machined M12 contacts Ø1
- Positioner for M12 contacts Ø 0.8

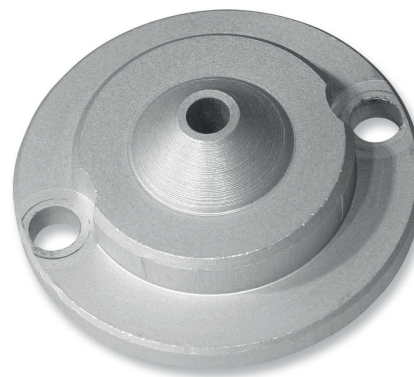
Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC-GK	Hand crimp tool AWG 12-26
TMC-P1	Positioner for D-Sub signal contacts
TMC-P2	Positioner for 600V D-Sub contacts
TMC-P3	Positioner for D-Sub high power contacts
TMC-P4	Positioner for M12 contacts Ø1
TMC-P6	Positioner for M12 contacts Ø 0.8

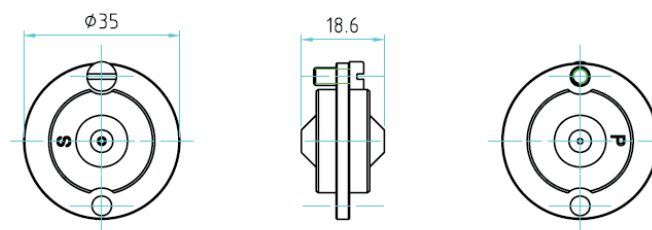


Positioner for M12 for TMC-GK

for M12 Contacts Ø 1 and M12 Contacts Ø 0.8

- Easy handling
- Positioner for M12 contacts Ø 1 (TMC-P4)
- Positioner for M12 contacts Ø 0.8 (TMC-P6)

Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC-P4	Positioner for M12 contacts Ø1
TMC-P6	Positioner for M12 contacts Ø0,8

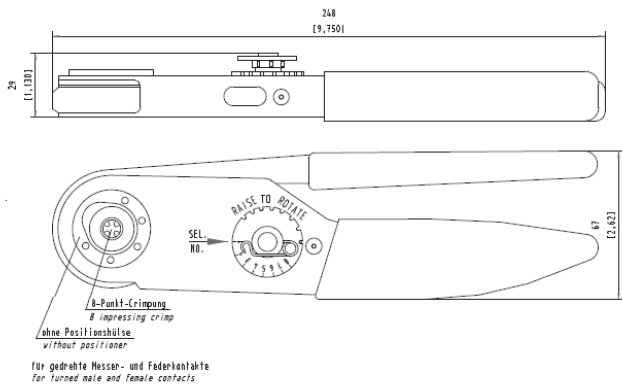


Hand crimp tool for machined power crimp contacts

AWG 8 - 16

- Safe four indent MIL-Crimp
- Wire size AWG 8-16
- Positioner for high power and for 600V D-Sub contacts

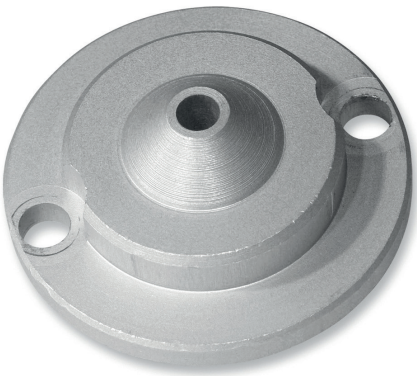
Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC PK	Hand crimp tool AWG 8-16
TMC-P3	Positioner for high power contacts
TMC-P2	Positioner for 600V D-Sub contacts

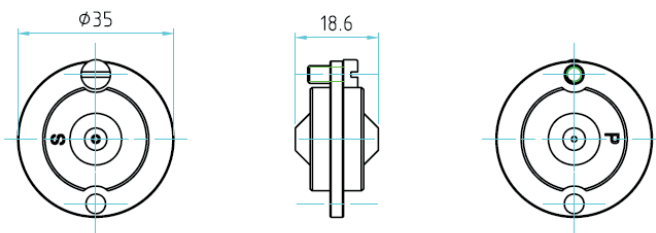


Positioner for hand crimp tool TMC PK

For machined 600V and high current D-Sub contacts

- Easy handling
- TMC-P2: Positioner for 600 V D-Sub contacts
- TMC-P3: Positioner for high power D-Sub contacts

Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC-P2	For 600 V D-Sub crimp machined
TMC-P3	For high power D-Sub crimp machined

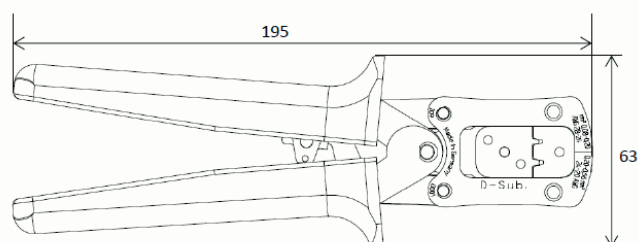


Hand crimp tool for stamped single contacts

For D-Sub crimp-signal contacts

- Easy handling
- For stamped single crimp contacts AWG 20-AWG 28

Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC2028LK For stamped D-Sub Crimp single contact

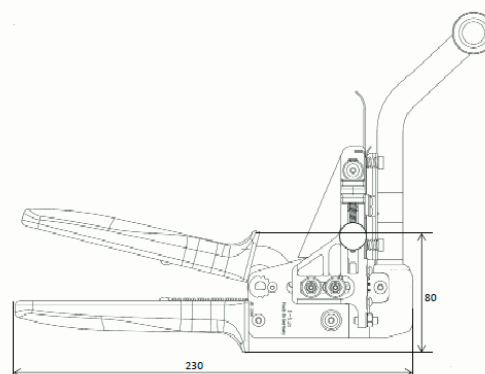


Hand crimptool with coil holder

For D-Sub crimp contacts as reel packaging

- Integrated feed and disconnect device for the reel contacts
- Conductor and isolation crimp in one operation
- Installed isolation stop for the conductor positioning
- Easy contact positioning
- Integrated restraint lock secures the complete crimping
- Easy handling due to very good power transmission
- Adjustable feeding for AWG 20-26
- For coils with 500 contacts: C152xSLGxT and C162xSLGxT

Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMC2026SP For C152xSLGxT and C162xSLGxT

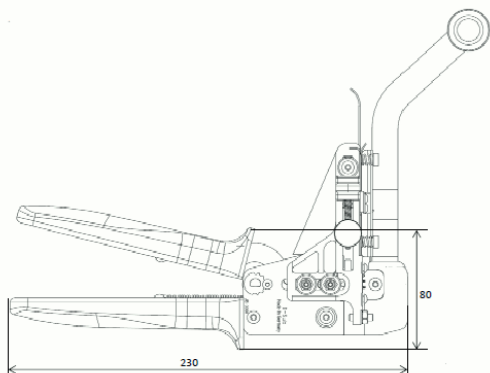


Hand crimp tool with coil holder

For HD D-Sub crimp contacts as reel packaging

- Integrated feed and disconnect device for the reel contacts
- Conductor and Isolation crimp in one operation
- Installed isolation stop for the conductor positioning
- Easy contact positioning
- Integrated restraint lock secures the complete crimping
- Easy handling due to very good power transmission
- Adjustable feeding for AWG 24-28
- For coils with 500 contacts: CH1524SLGxT and CH1624SLGxT

Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

TMCHD2426SP	For CH1524SLGxT and CH1624SLGxT
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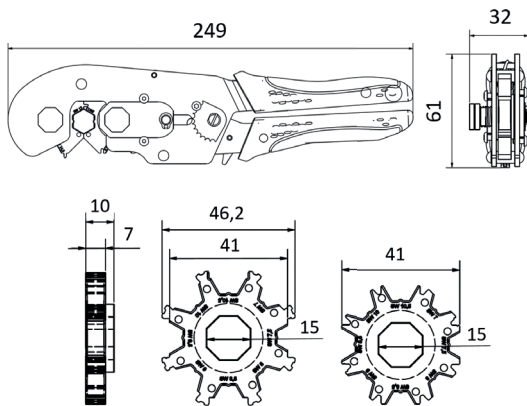


Hand crimp tool for crimp sleeves

Universal due to Multicrimp die for 8 AF sizes

- Time and cost savings due to the elimination of tool changes
- Crimping of all M12 versions with just one tool with 8 AF sizes
- Easy to use as there is no need to assemble the crimp tool
- Complete Hand crimp tool mit vormontiertem Crimp die
- Reliable crimp due to parallel crimping process
- Precision-made hardened steel crimping tool
- Ratchet with safety release
- 4 Versions: AF 4 - 7,5 / AF 7 - 10,5 / AF 11 - 12,5 / AF 13 - 14,5

Dimensions



Technical data (mutual data on pages 194 & 195)

Crimp force max.	5 kN
Crimp cycles max.	50000
Crimp tool	Precision steel
Handle	Plastics

Order information

Part.-No.	Connector
TMCCH1	M12/D-Sub
TMCCH2	M8/D-Sub
TMCCH3	D-Sub
TMCCH4	D-Sub

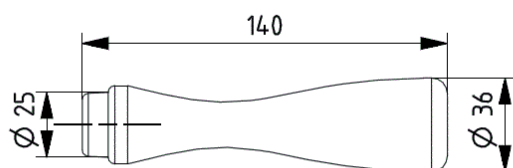


Assembly tool crimp flange M12 connector

Time-saving crimp flange assembly on cable

- 80 % time saving
- Easy to handle
- Fitting for all M12 crimp flanges

Dimensions



Technical data *(mutual data on pages 194 & 195)*

Order information

MDC12AL1	For crimp flange M12 connector
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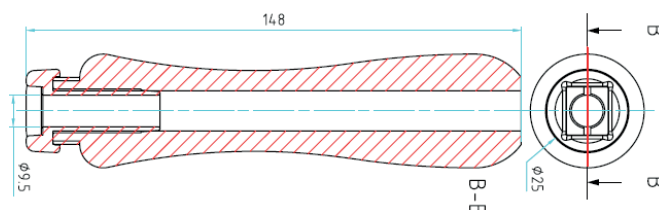


Assembly tool crimp flange D-Sub-hoods

Time-saving crimp flange assembly on cable

- 80 % time-saving
- Easy to handle
- Fitting for all crimp flanges
- 1 version for crimp flange 9-37-pole
- 1 version for crimp flange 50-pole

Dimensions



Technical data *(mutual data on pages 194 & 195)*

Order information

MDC937	For crimp flange 9-37-pole
MDC50	For crimp flange 50-pole

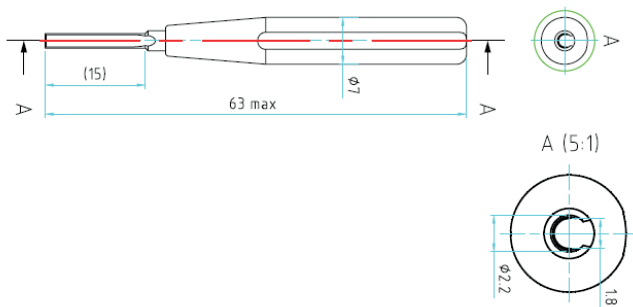


Insertion/extraction tool for D-Sub contacts

For D-Sub and HD D-Sub crimp contacts for all AWG sizes

- Easy to handle
- Push-in of the contacts and locking in the crimp connector
- Extraction of the contacts

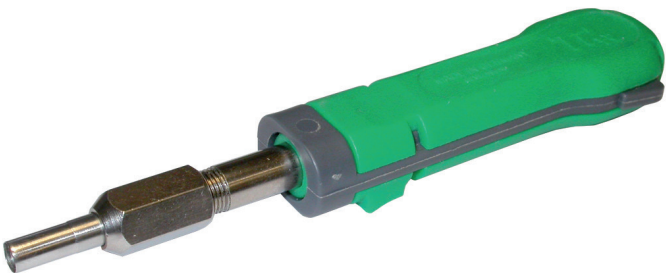
Dimensions



Technical data (mutual data on pages 194 & 195)

Order information

CMTS	Insertion/extraction tool for D-Sub
CMTHD	Insertion/extraction tool for HD D-Sub



Extraction tool for 600V D-Sub contacts

For machined and stamped crimp contacts for all AWG sizes

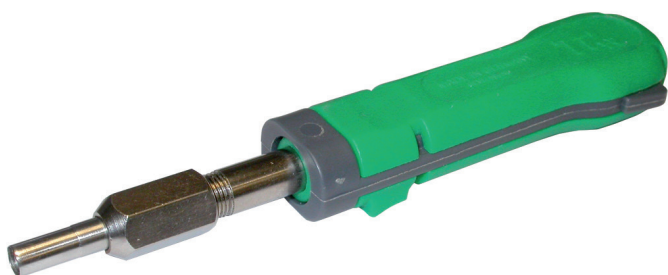
- Easy handling
- Ergonomical grip

Dimensions

Technical data (mutual data on pages 194 & 195)

Order information

CMTW31	Extraction tool for machined 600V D-Sub contacts
CMTW28	Extraction tool for stamped 600V D-Sub contacts



Extraction tool for high power contacts

For machined crimp contacts for all sizes

- Easy handling
- Ergonomical grip

Dimensions

Technical data (mutual data on pages 194 & 195)

Order information

CMTW	Extraction tool for high power contacts
------	---



Torque wrench M12 SW 13 0.8 Nm

Safe defined M12 screw locking

- Safe defined M12 screw locking for IP 67
- Special design for closely positioned M12 interfaces
- Clearly audible "click" as signal for the reliable locking
- Ergonomic design with good feel
- Corrosion- and oil-resistant materials
- Low weight

Dimensions

Technical data (mutual data on pages 194 & 195)

Order information

TTM1	Torque wrench SW13 0.8 Nm
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D-Sub miniature connector DIN41652 – IEC48B

Technical data

Insulator:

Thermoplastic resin,
glass fiber reinforced (PBTP), flame-retarding,
acc. to UL 94 V-0

Contacts:

Ms- and Cu-Alloy

Contact surface:

Hard gold plated over Ni barrier
layer or selectively gold-plated
(depending on version)

Case:

Steel sheet, galvanised and
yellow chromated or tin-plate

Insertion and withdrawal force per socket:

0.3–0.7 N

Creepage and clearance distance:

0.9 mm acc. to VDE 0110

Test voltage:

1 kV / AC

Contact resistance:

$\leq 10 \text{ m}\Omega$

Insulation resistance:

1010 Ω

Operating current:

5 A (see derating diagram)

Temperature range:

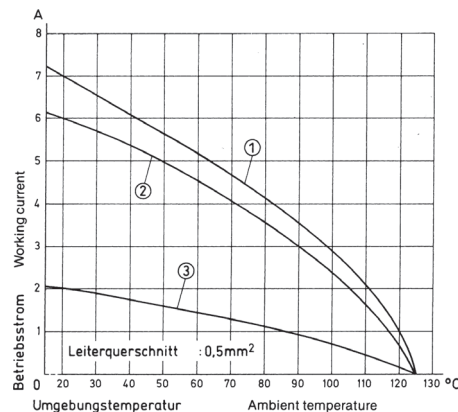
-55° C to +125° C

Connection types:

Solder cup
Straight dip solder contacts
Angled dip solder contacts
Wire Wrap 0.6 x 0.6 mm
Crimp 0.032–0.56 mm²
Insulation displacements
Press-in contacts

Quality classes:

1 = 500 mating cycles
2 = 200 mating cycles
3 = 50 mating cycles



Derating diagram

The current carrying capacity of connectors is limited by the thermal capacity of the materials of the contact elements including connections and the insulating fittings. The derating curve is therefore valid for currents which can flow through every contact element of the connection at the same time permanently, not intermittently, without exceeding the allowed maximum temperature.

Measurement and testing methods acc. to
DIN IEC 60512, part 3.

Example: 25-pole connector

- ① machined contacts
- ② stamped contacts
- ③ insulation displacement contacts

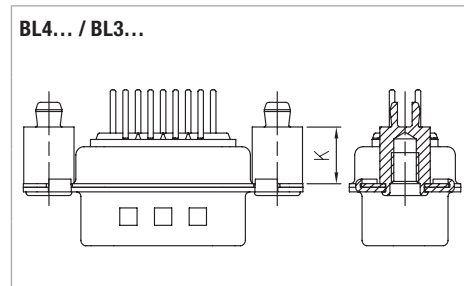
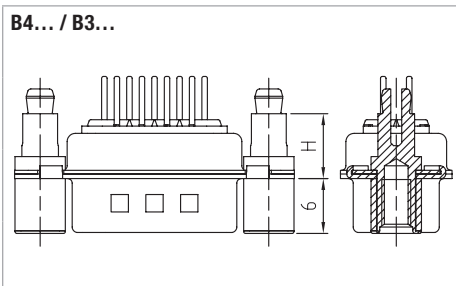
Available threaded rivet versions

FITTING YOUR APPLICATION

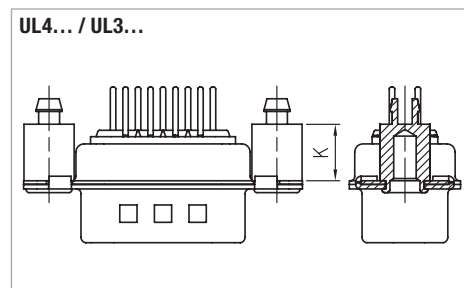
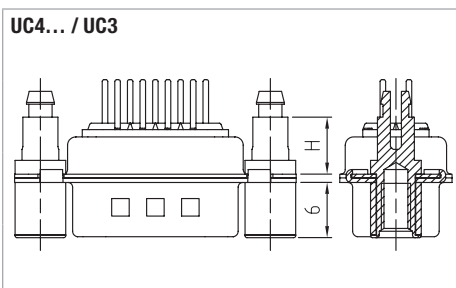
Threaded rivet	Thread
	For drill
	H
	K
	PCB thickness

Editions

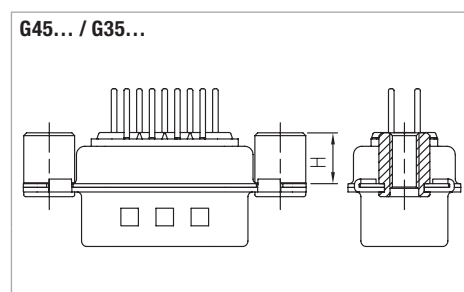
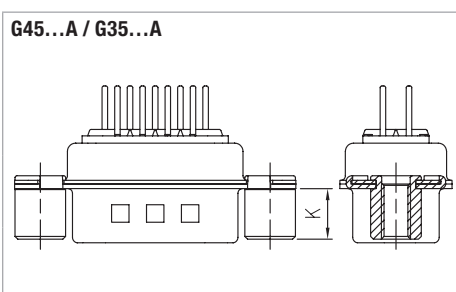
Combi- / Boardlock rivet	UNC4-40 / M3
	3,1 + 0,1
	6,2 / 6,6
	6,2 / 6,6 / 7,4 / 9 / 11 / 14 / 16
	1,6



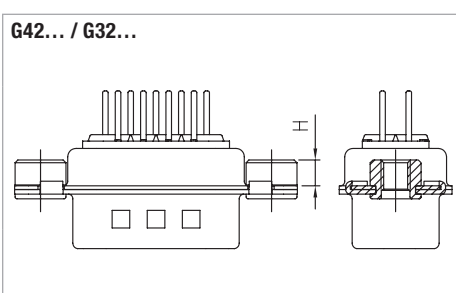
Combi- / Boardlock rivet	UNC4-40 / M3
	3,1 + 0,1
	6,2 / 6,6
	6,2 / 6,6 / 8
	1,5 – 3,5



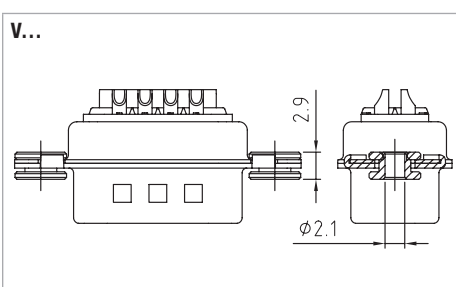
Threaded rivet	UNC4-40 / M3
	3,1 + 0,1
	5,5 / 6,2
	5,5 / 6,2



Threaded rivet	UNC4-40 / M3
	3,1 + 1,0
	2,8



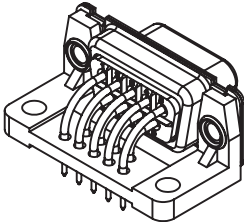
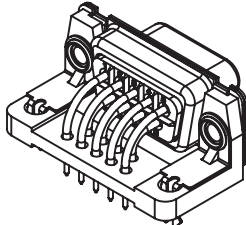
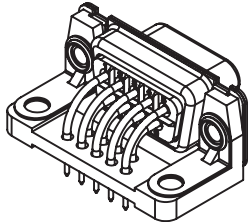
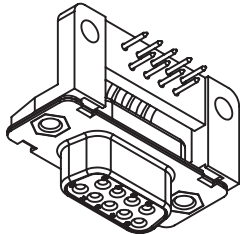
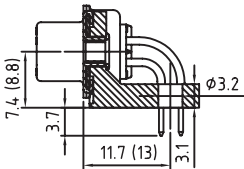
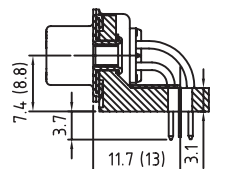
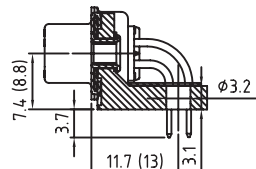
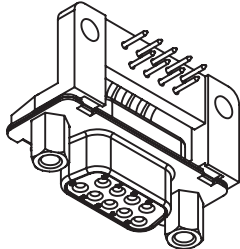
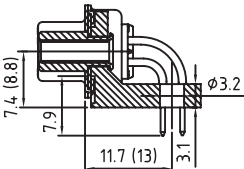
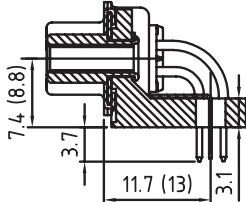
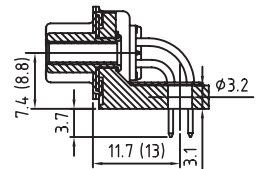
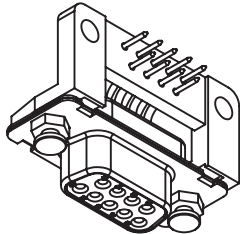
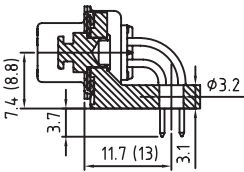
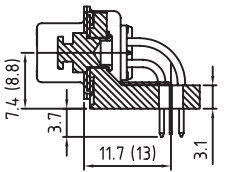
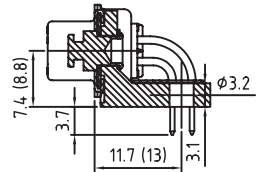
Float mounting	
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Remarks

- Standard:
G45... / G35... – H = 5.5 mm
G46... / G36... – H = 6.2 mm
- Crimp:
CG45... / CG35...
- HD D-Sub
H45... / H35... – H = 6.2 mm
- Front plan
G45DNT... / G35DNT...
G45NT... / G35NT...

Available bracket versions

		Mounting Brackets		
		Plastic Brackets		
Mounting version		with through hole 3.2 mm	Grounding bracket with locking clip and through hole 3.1+0.1 mm	Grounding bracket with through hole 3.2 mm
				
		4B 	R4B 	E4B 
		4BA 	R4BA 	E4BA 
		56B 	R56B 	E56B 

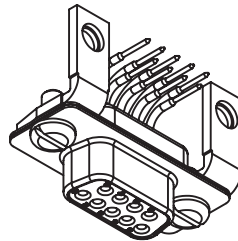
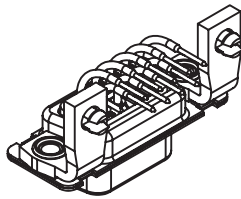
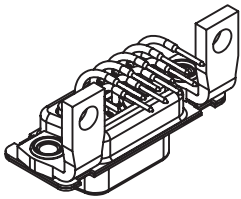
Plastic Brackets

Metal Brackets

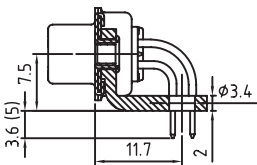
with through hole
3.4 mm

with locking clip for through hole
3.1+0.1 mm

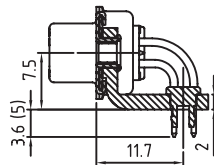
screw connection



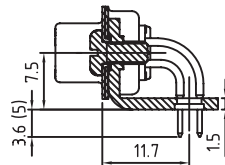
48



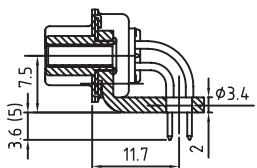
R48



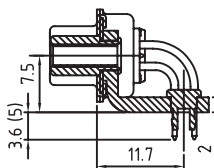
S8



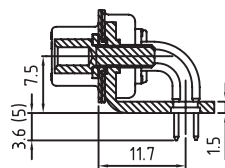
48A



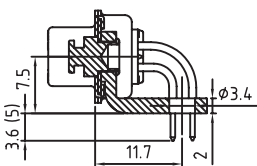
R48A



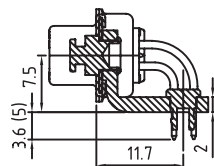
S448



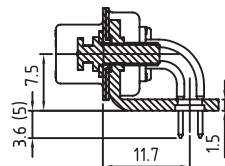
568



R568



S568



! Dimensions for 50-pole plastic bracket 8.8 mm instead of 7.4 mm and 13 mm instead of 11.7 mm.

At M3-thread please change the 4 in the item number for a 3.

Please attach the order number of the requested edition to the item number of the standard connector, i.e. ST 25 66 G 3 R 4 B.

Grid clip for drill Ø 3.1 mm + 0.1 in 1.6 mm thick PCB.

D-Sub Connectors

Electrical and Mechanical Characteristics

	Standard	SMT, THR Male- and Female		Pressfit Male- and Female	
Number of pins		9, 15, 25 und 37		9, 15, 25 und 37	
Technical Data					
Climate category	DIN EN 60068-1 test b	-55/125/56		-55/125/56	
Temperature range		-55/125 °C		-55/125 °C	
Current rating per contact	IEC 60512 test 5b	20 °C		70 °C	100 °C
		9pin	5,7 A	3,7 A	2,6 A
		15pin	4,8 A	3,5 A	2,3 A
		25pin	4,4 A	3,3 A	2,1 A
		37pin	3,9 A	2,8 A	1,8 A
Air- and creepage distance		1,2 mm		1,2 mm	
Operating voltage	IEC 60664	The permissible operating voltages depend on the customer application and on the applicable or specified safety requirements. Insulation coordination according to IEC 60664-1 has to be regarded for the complete electrical device. Therefore, the maximum creepage and clearance distances of the mated connectors are specified for consideration as a part of the whole current path. In practice, reductions in creepage or clearance distances may occur due to the conductive pattern of the printed board or the wiring used, and have to be taken into account separately. As a result the creepage and clearance distances for the application may be reduced compared to those of the connector.			
Dielectric strength	IEC 60512 test 4a	contact - contact 1000 V _{rms} contact - ground 1200 V _{rms}		contact - contact 1000 V _{rms} contact - ground 1200 V _{rms}	
Contact resistance	IEC 60512 test 2a	< 25 mΩ		< 25 mΩ	
Insulation resistance	IEC 60512 test 3a	> 5x10 ⁹ Ω		> 5x10 ⁹ Ω	
Vibration, sine	IEC 60512 test 6d	10 – 2000 Hz 20 g		10 – 2000 Hz 20 g	
Contact disturbance (while vibration test)	IEC 60512 test 2e	< 1 μs		< 1 μs	
Shock, halfsine	IEC 60512 test 6c	50 g 11 ms		50 g 11 ms	
Contact disturbance (while shock test)	IEC 60512 test 2e	< 1 μs		< 1 μs	
Mechanical operation (mating cycles)	IEC 60512 test 9a	> 250 mating cycles		> 250 mating cycles	
Insertion and withdrawal force	IEC 60512 test 13b	Insertion force max.:		Withdrawal force min.:	max.:
		9pin	30 N	3,3 N	20 N
		15pin	50 N	4,5 N	50 N
		25pin	83 N	7,8 N	56 N
		37pin	123 N	11,0 N	82 N
Gauge retention force	IEC 60512 test 16e	> 0,2 N		> 0,2 N	

D-Sub Connectors

Electrical and Mechanical Characteristics

	Standard	SMT, THR Male- and Female	Pressfit Male- and Female
Number of pins		9, 15, 25 and 37	9, 15, 25 and 37
Process-conditions			
Soldering temperature max.	IEC 68-2-20		
Hand soldering temperature max.		3,5 s at 350 °C	-
Dip soldering temperature max.		10 s at 260 °C	-
Reflow soldering temperature max.	JEDEC J-STD-020C	20 - 40 s at 260 °C	-
Coplanarity		< 0,1 mm (SMT)	-
Warning		-	Soldering of pressfit connectors not to be recommended.
Housing Material			
Housing: Plastic material		LCP	PBT
CTI value	IEC 112	CTI 175	CTI 200
UL flame rating		UL 94 V-0	UL 94 V-0
UL file (material)		E83005	E47960
Contact Material			
Base material		Cu alloy	Cu alloy
Mating area		gold plated	gold plated
Termination area		Sn	Sn
Metal Shell Material			
Base material		St	St
Plating		Sn	Sn
Metal Bracket Material			
Base material		Cu alloy	Cu alloy
Plating		Sn	Sn
Environment Compatibility			
Recycling		no flame-retardent additives, no toxic additives allow easy recycling	
Product-approval			
UL		E465059	E465059

D-Sub Connectors

Electrical and Mechanical Characteristics

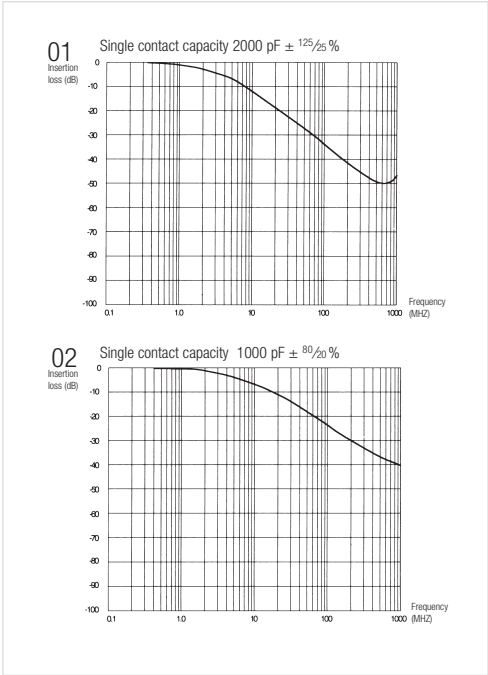
	Standard	High Current Male- and Female Connectors SMT / THR / Solder stamped / machined contacts	High Current Male- and Female Connectors Pressfit stamped / machined contacts
Pin configurations		3W3, 3WK3, 5W5, 8W8, 7W2	3W3, 3WK3, 5W5, 8W8, 7W2
Technical Data			
Climate Category	DIN EN 60068-1 test b	-55/125/56	-55/125/56
Temperature range		-55/125 °C	-55/125 °C
Current rating per contact	IEC 60512 test 5b	See derating curves.	
Air- and creepage distance		1,0 mm	1,0 mm
Operating voltage	IEC 60664	The permissible operating voltages depend on the customer application and on the applicable or specified safety requirements. Insulation coordination according to IEC 60664-1 has to be regarded for the complete electrical device. Therefore, the maximum creepage and clearance distances of the mated connectors are specified for consideration as a part of the whole current path. In practice, reductions in creepage or clearance distances may occur due to the conductive pattern of the printed board or the wiring used, and have to be taken into account separately. As a result the creepage and clearance distances for the application may be reduced compared to those of the connector.	
Dielectric strength	IEC 60512 test 4a	contact - contact 1000 V contact - ground 1000 V	contact - contact 1000 V contact - ground 1000 V
Contact resistance	IEC 60512 test 2a	Signal contacts < 25 mΩ Power contacts < 1 mΩ	Signal contacts < 25 mΩ Power contacts < 1 mΩ
Insulation resistance	IEC 60512 test 3a	> 5x10 ⁹ Ω	> 5x10 ⁹ Ω
Vibration, sine	IEC 60512 test 6d	10 – 2000 Hz 20 g	10 – 2000 Hz 20 g
Contact disturbance (while vibration test)	IEC 60512 test 2e	< 1 μs	< 1 μs
Shock, halfsine	IEC 60512 test 6c	50 g 11 ms	50 g 11 ms
Contact disturbance (while shock test)	IEC 60512 test 2e	< 1 μs	< 1 μs
Mechanical operation (mating cycles)	IEC 60512 test 9a	> 250 / 400 mating cycles	> 250 / 400 mating cycles
Insertion and withdrawal force	IEC 60512 test 13b	< 30 N / 10 N max. per contact	< 30 N / 10 N max. per contact
Gauge retention force	IEC 60512 test 16e	Signal contacts > 0,2 N min. Power contacts > 1,6 N min.	Signal contacts > 0,2 N min. Power contacts > 1,6 N min.

D-Sub Connectors

Electrical and Mechanical Characteristics

	Standard	High Current Male- and Female Connectors SMT / THR / Solder stamped / machined contacts	High Current Male- and Female Connectors Pressfit stamped / machined contacts
Pin configurations		3W3, 3WK3, 5W5, 8W8, 7W2	3W3, 3WK3, 5W5, 8W8, 7W2
Process-conditions			
Solder temperature max.	IEC 68-2-20		
Hand soldering temperature max.		3,5 s at 350 °C	-
Dip soldering temperature max.		10 s at 260 °C	-
Reflow soldering temperature max.	JEDEC J-STD-020C	20 - 40 s bei 260 °C / wave soldering machined contacts	-
Warning		-	Soldering of pressfit connectors not to be recommended.
Housing Material			
Plastic material		PA 46 / PBT	PA 46 / PBT
CTI value	IEC 112	CTI 250 / CTI 200	CTI 250 / CTI 200
UL flame rating		UL 94 V-0	UL 94 V-0
UL file		E47960 / -	E47960/ -
Contact Material			
Base material		Cu alloy	Cu alloy
Mating area		Signal contact: gold plated Stamped contact: silver plated Machined contact: gold plated	Signal contact: gold plated Stamped contact: silver plated Machined contact: gold plated
Termination area		Signal contact: Sn Stamped contact: silver plated Machined contact: gold plated	Signal contact: Sn Stamped contact: silver plated Machined contact: gold plated
Metall Shell Material			
Base material		St	St
Plating		Sn	Sn
Metal Bracket Material			
Base material		Cu alloy	Cu alloy
Plating		Sn	Sn
Environment Compatibility			
Recycling		no flame-retardent additives, no toxic additives allow easy recycling	
Product-approval			
UL		E465059 (stamped contacts)	E465059 (stamped contacts)

Filter technology



D-Sub filter connectors suppress interferences of the input signals at the D-Sub device interface via filter capacitors or as ferrite-equipped connectors

- High-quality filtering with feedthrough capacitors
- 100 % secured quality by individual examination of every connector
- Selective filter equipment possible in the connector
- Structurally identical with standard connectors and the installation dimensions remain the same
- Our standard accessories are usable without restrictions
- Capacity values from 2pF to 2000 pF available
- HF-dense, closed metal back
- Dampening values up to 50 dB

Available capacity values		
Variation No.	Capacity (all contacts and cap. tolerance)	
01	2000 pF	($\pm 80/20\%$)
02	1000 pF	($\pm 80/20\%$)
09	2 pF ($\pm 0/100\%$) available for non-filter pins	

The diagram below shows the typical course of the attenuation of D-Sub connectors with 6 selected filter capacitors depending on the frequency (50 Ω -system). From it you can determine the optimal capacity for your application. PROVERTHA filter connectors work with a low pass characteristic.

Technical data	
Pole numbers	9, 15, 25, 37, 50
Nominal temperature	-25° C --- + 85° C
Nominal voltage	100 VDC (Variation Nr. 01 (2000 pF) = 50 VDC)
Test voltage	200 VDC (Variation Nr. 01 (2000 pF) = 125 VDC)
Nominal current	5 A DC max.
Insulation resistance	1 G Ω Min. 25° C

D-Sub hoods

Provertha GmbH offers a comprehensive product range for user-oriented and reliable solutions with more than 20 hood systems.

Fast and easy assembly by means of a practical construction with a minimized number of single parts is a key characteristic of our D-Sub hoods. With multiple options regarding locking, cable outlet and an apprehensive range of accessories, the tailor-made solution can be realized.

Various locking options

- Screw-locking with knurled screws in various lengths
- Push-Pull-locking with the innovative Quick Lock system
- Push locking in universal design

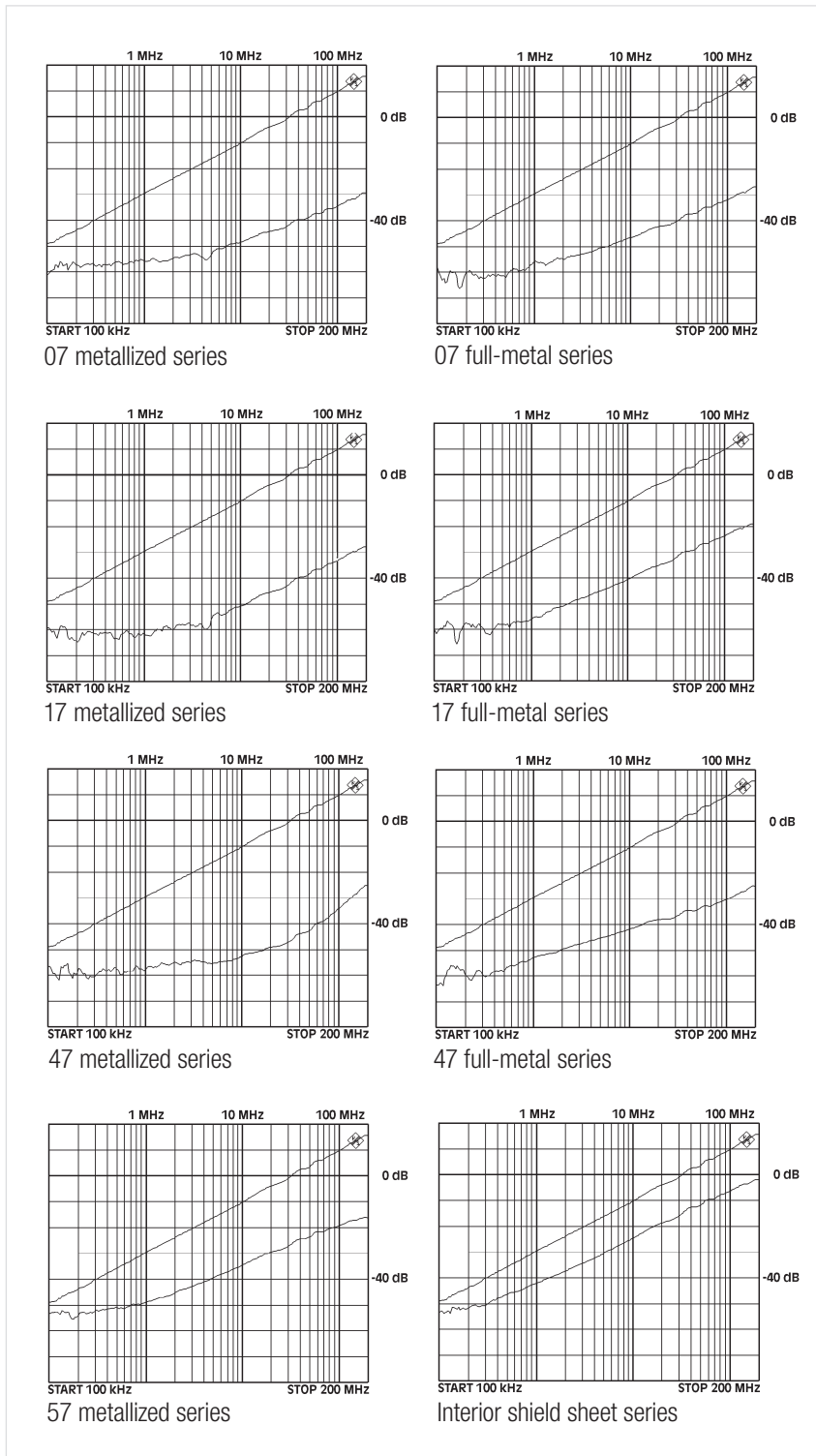
Cable connection versions for highest requirements

- 360° EMI/RFI crimp flange system vibration- and torsion-proof
- External cable clamp for diameters 4-14 mm (50-pole: -16 mm)
- Internal cable clamp is the compact solution for standard applications

The matching hood for every application

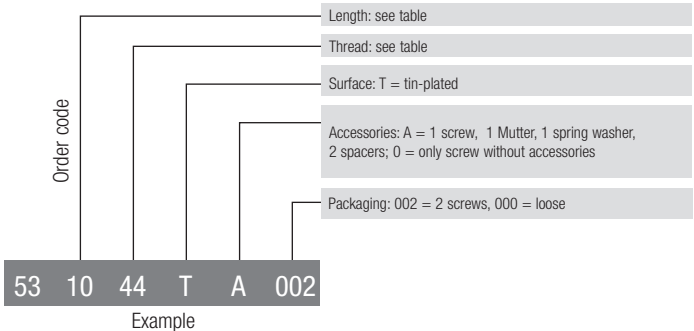
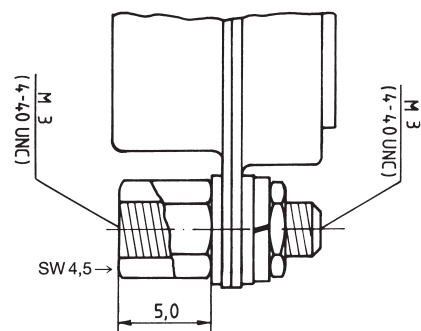
- Plastic hoods
- Metallized plastic hoods for applications with shielding requirements
- Full-metal hoods 360° hf-dense shielding for high EMV- requirements
- „Quick Lock“ system with innovative Push-Pull locking
- Bus hoods with 2 cable outlets in versions Axial (180°), Compact (90°) and Special (55°)
- Adapter hoods in plastic, metallized version or as pressure die-casting edition
- Waterproof hoods in IP 67 for rough environmental conditions

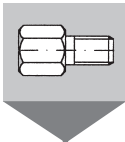
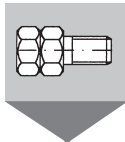
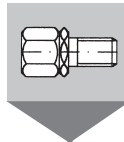
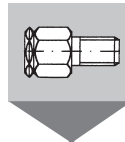
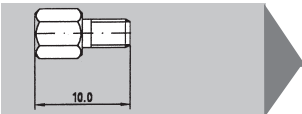
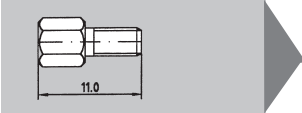
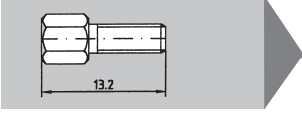
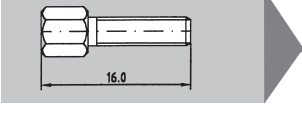
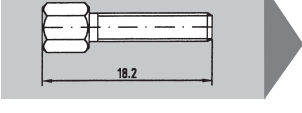
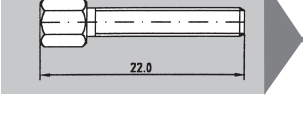
The D-Sub hood range is completed by an extensive accessories range with crimp flanges, crimp sleeves, crimp tools, cable clamps, cable sleeves and bend reliefs.

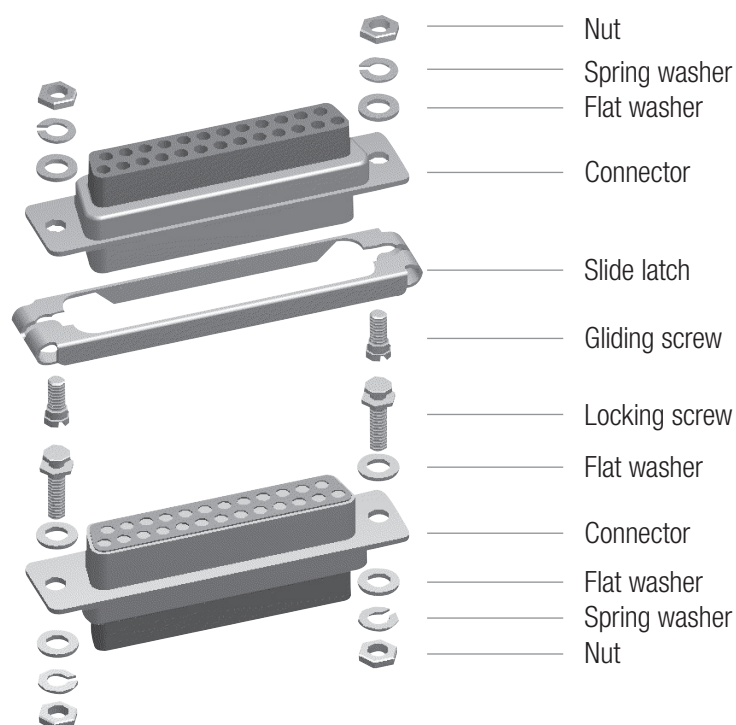


Hexagon screws

FITTING **YOUR**
APPLICATION

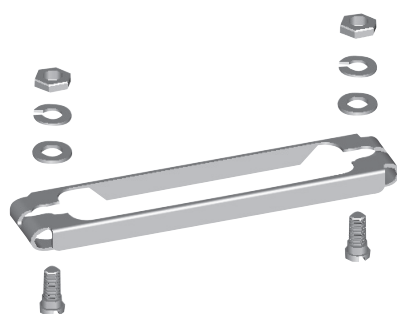


				
	UNC	M 3	Inside UNC Outside M 3	Inside M 3 Outside UNC
	531044	531033	531043	531034
	531144	531133	531143	531134
	531344	531333	531343	531334
	531644	531633	531643	531634
	531844	531833	531843	531834
	532244	532233	532243	532234



Slide latch

- Stainless V2A-version
- Universally fitting
- 3 screw versions to choose from

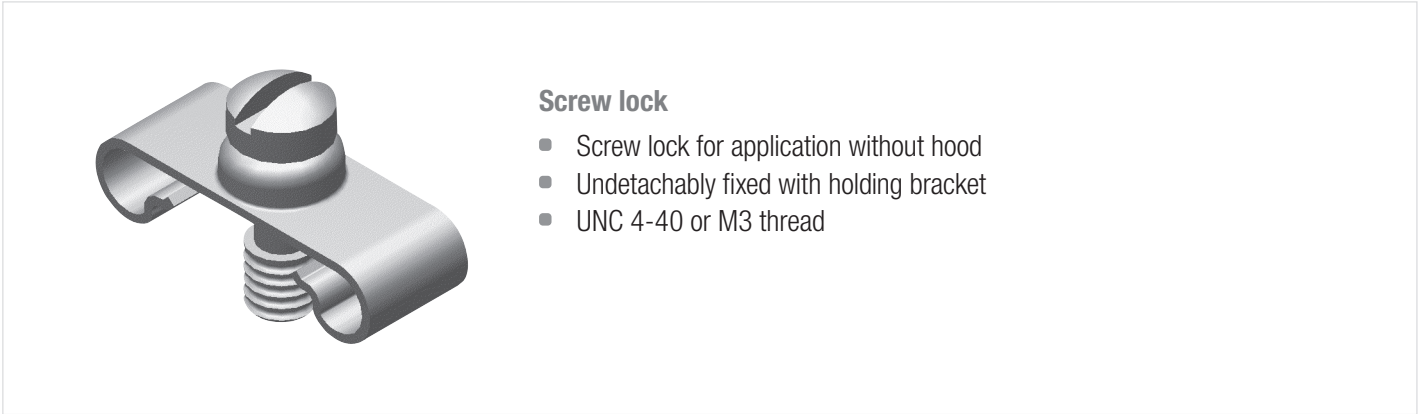
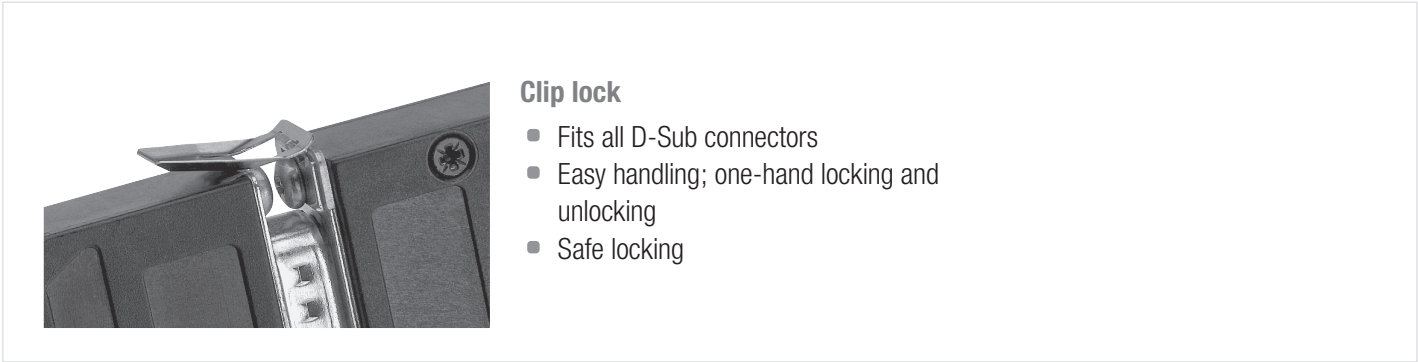
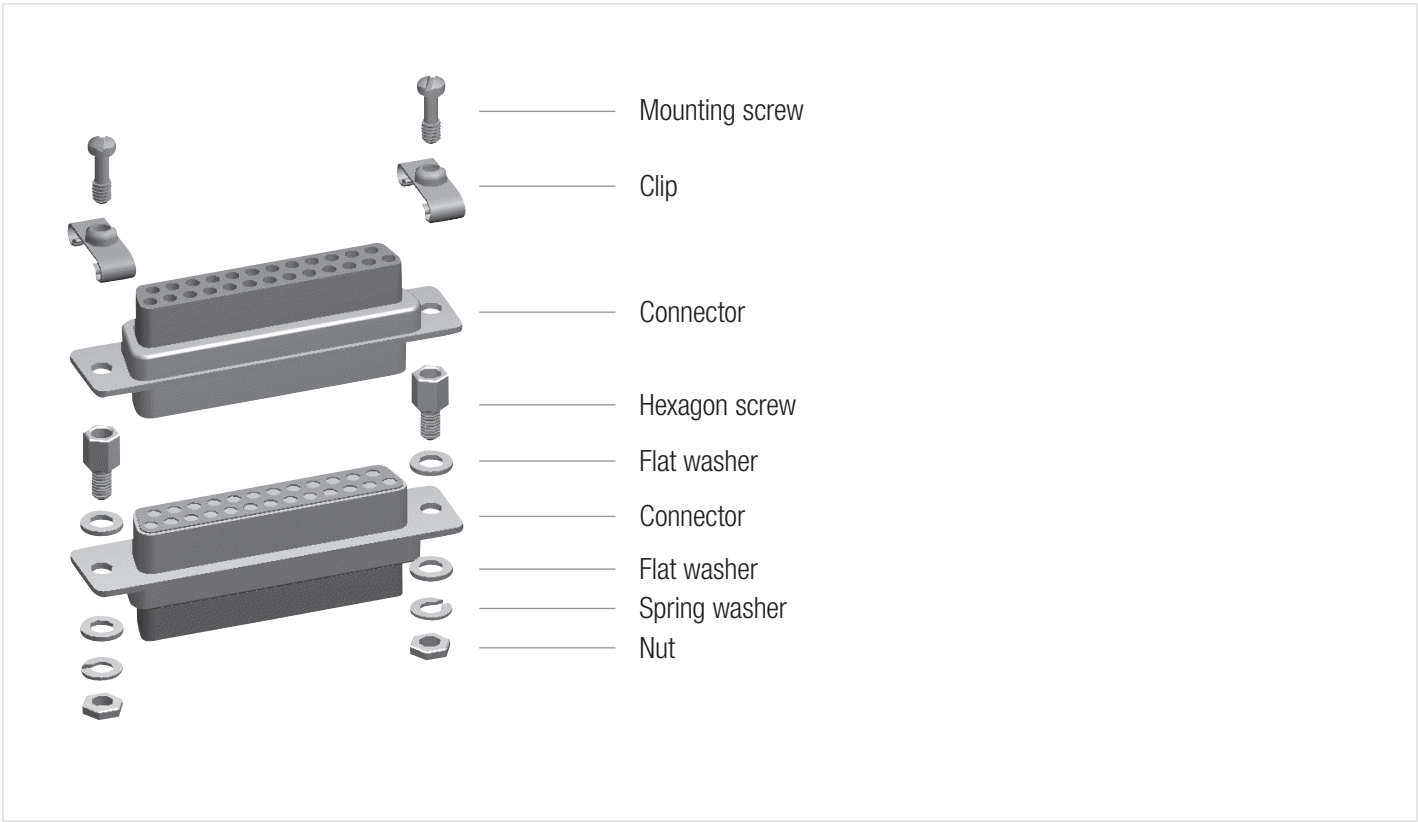


Order code		
51	09	ESZ 001
		Example
		Slide latch
		Pole numbers 09, 15, 25, 37, 50
		ESZ = Self-tapping bolt E4A = UNC 4-40 screw E3A = M3 screw
		000 = Single parts loose 001 = One set bagged



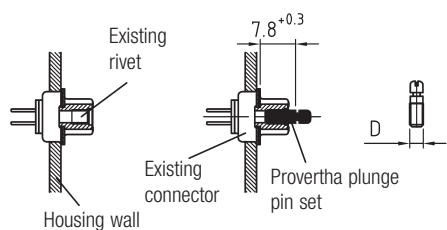
Locking screw for slide latch

- Loosely packed with accessories item no. 56 08 4 Z A 000
- 2 screws with accessories compl. bagged Item no. 56 08 4 Z A 002

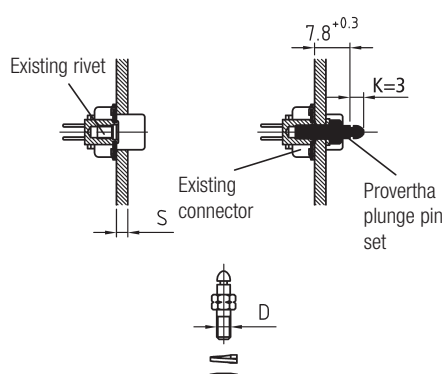


Accessories for attaching Quick Lock Hoods

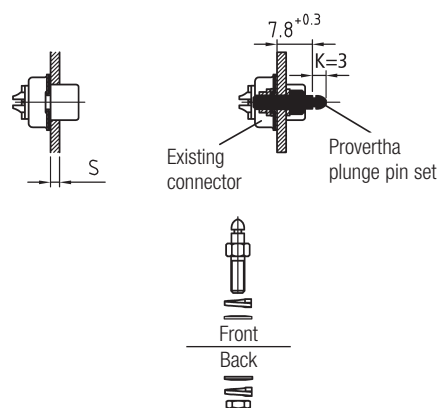
Variant A: Attachment set for existing connector with thread on mating side



Variant B: Attachment set for existing connector with thread on solder side

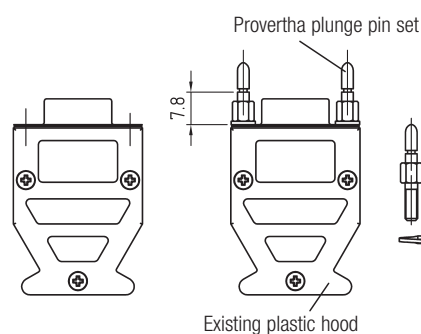


Variant C: Attachment set for existing connector with through hole

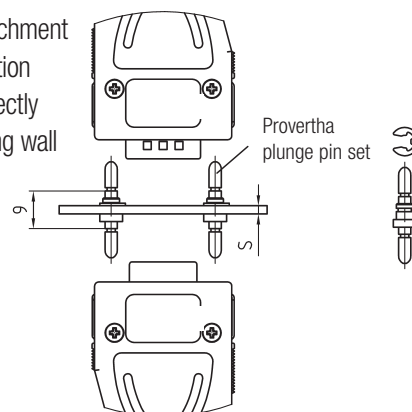


Accessories for attaching Quick Lock Hoods

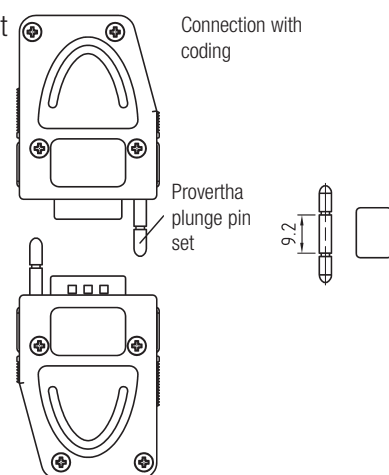
Variant D: Attachment set for existing connector with self-tapping thread for existing plastic hood.



Variant E: Attachment set for connection hood-hood directly through housing wall

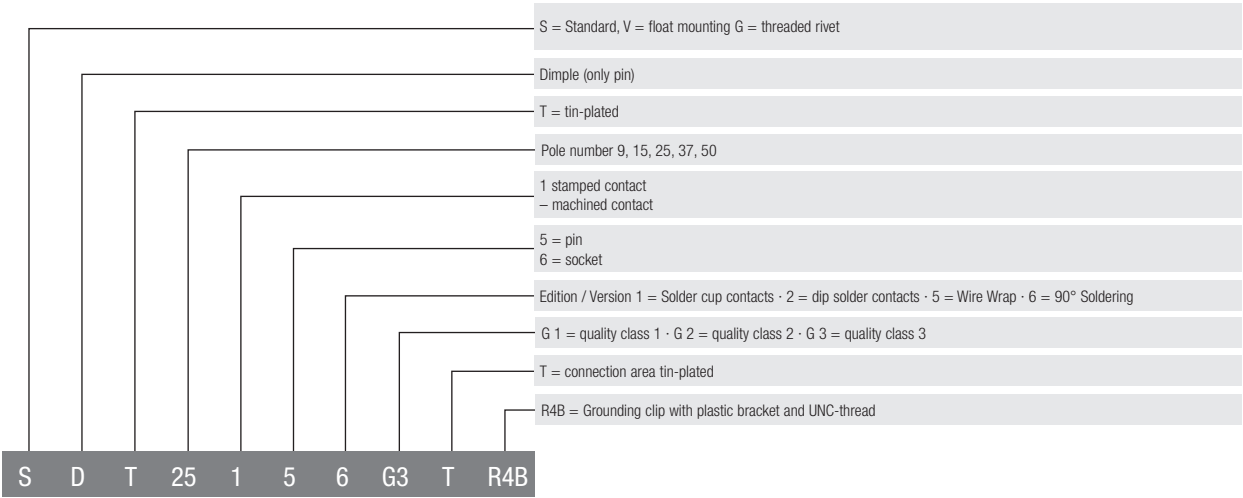


Variant F: Attachment set for connection hood-hood

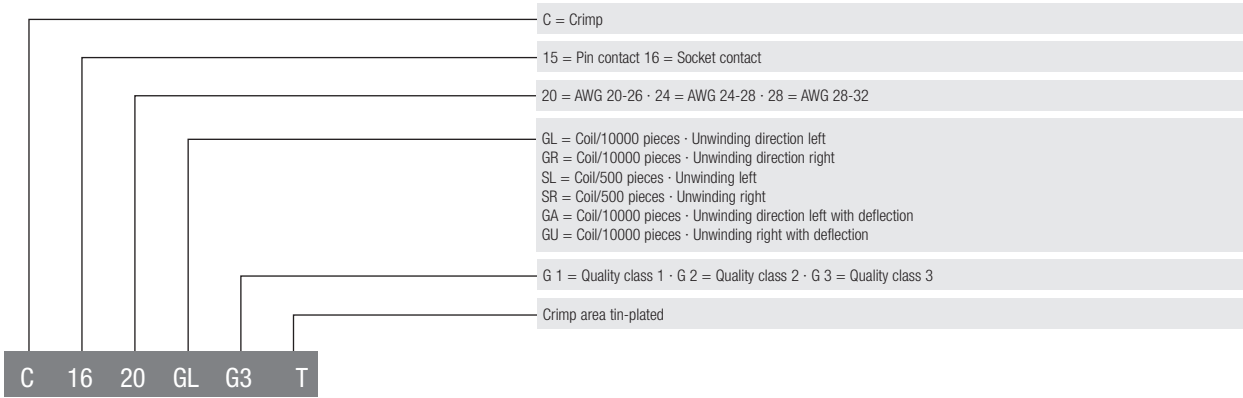


Order number code

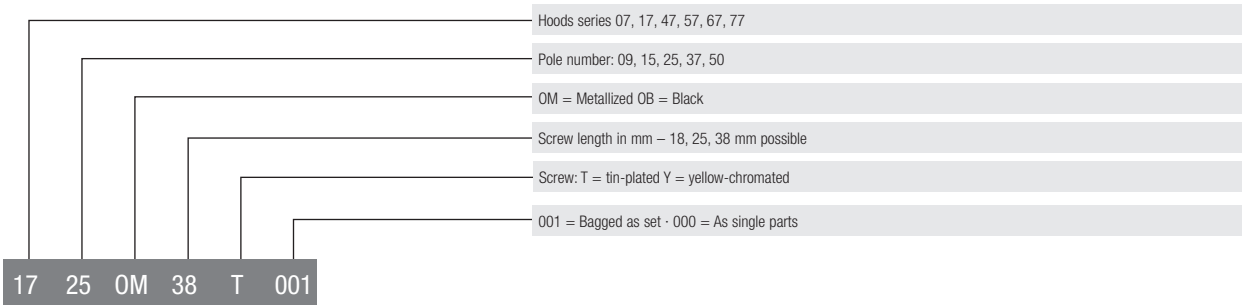
D-SUB connector



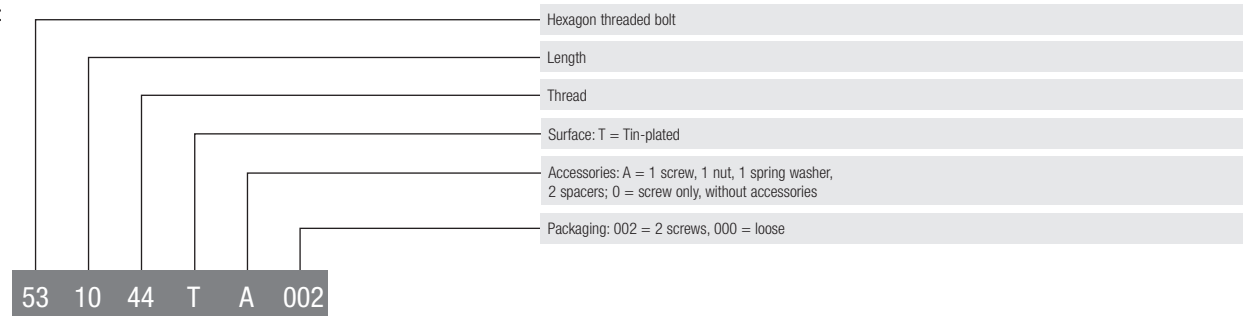
Crimp technology



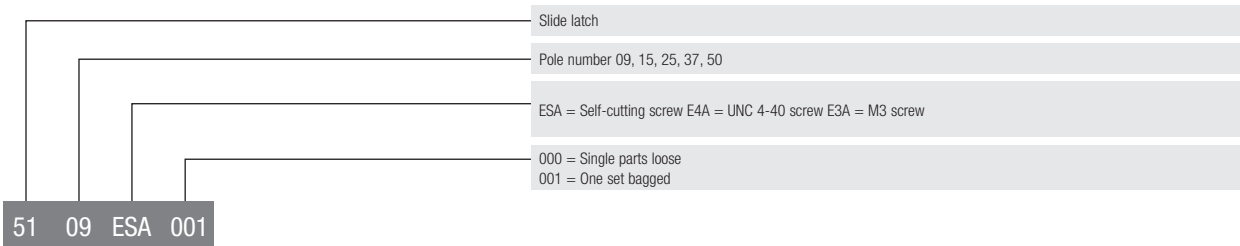
D-Sub hoods



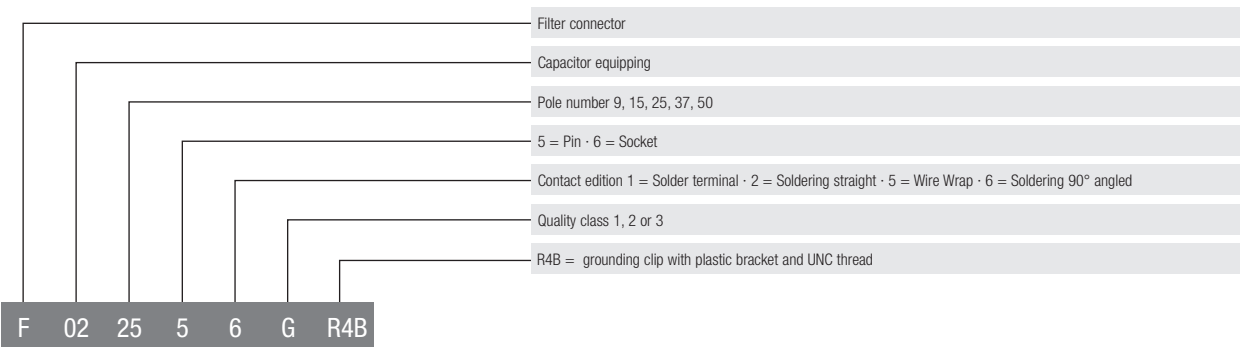
Hexagon threaded bolt



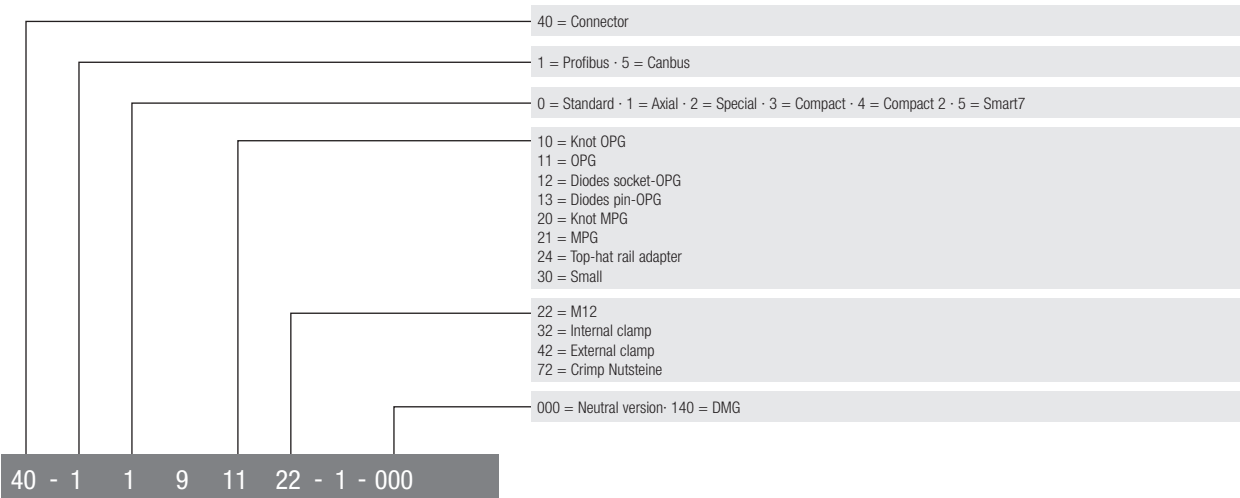
Locks



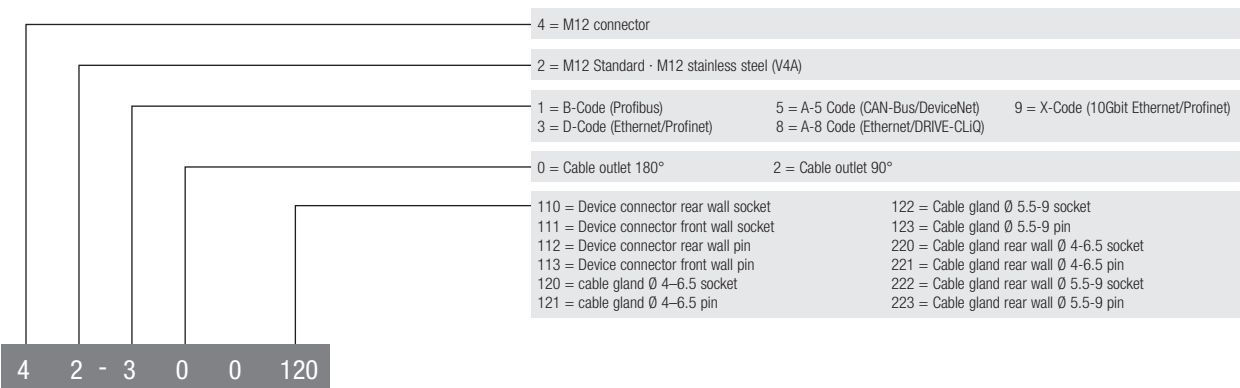
Filter technology



Fieldbus
Profibus



M12



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Your notes

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