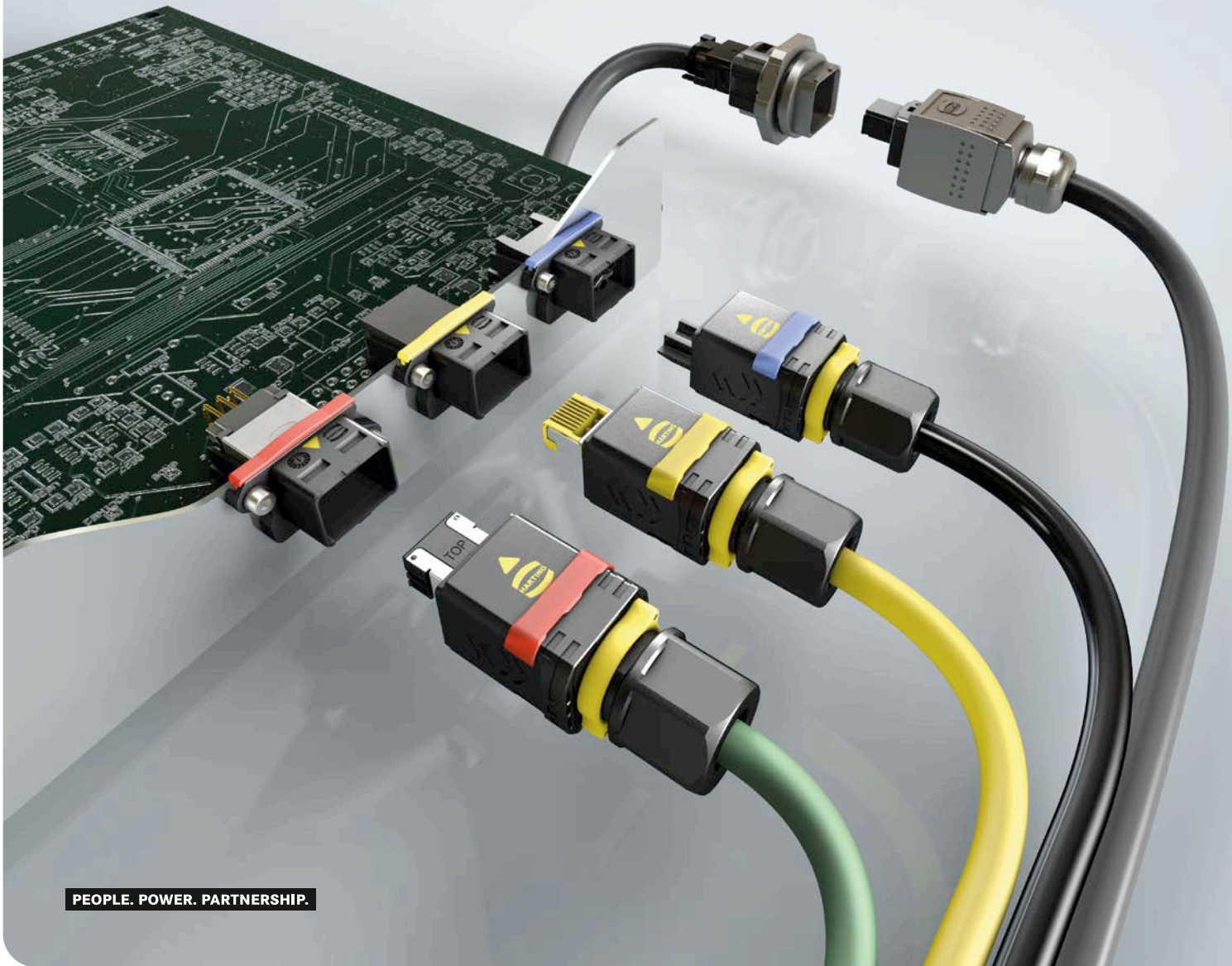




Pushing Performance
Since 1945



PEOPLE. POWER. PARTNERSHIP.

HARTING PushPull Device Connectivity

Transforming customer wishes into concrete solutions



The HARTING Technology Group is skilled in the fields of electrical, electronic and optical connection, transmission and networking technology, as well as in manufacturing, mechatronics and software creation. The Group uses these skills to develop customized solutions and products such as connectors for energy and data-transmission/data-networking applications, including, for example, mechanical engineering, rail technology, wind energy plants, factory automation and the telecommunications sector. In addition, HARTING also produces electro-magnetic components for the automobile industry and offers solutions in the field of housing technology and shop systems.

The HARTING Group currently comprises 14 production sites and branches in 44 countries worldwide employing a total of about 6,000 staff.

We aspire to top performance.

Connectors ensure functionality. As core elements of electrical and optical termination, connection and infrastructure technologies, they are essential in enabling the modular construction of devices, machines and systems across an extremely wide range of industrial applications. Their reliability is a crucial factor guaranteeing smooth functioning in the manufacturing area, telecommunications, applications in medical technology – in short, connectors are at work in virtually every conceivable application area. Thanks to the ongoing development of our technologies, our customers enjoy investment security and benefit from durable, long-term functionality.

Wherever our customers are, we're there.

Increasing industrialization is creating growing markets that are characterized by widely diverging demands and requirements. What these markets all share in common is the quest for perfection, increasingly efficient processes and reliable technologies. HARTING is providing these technologies – in Europe, the Americas and Asia. In order to implement customer requirements in the best possible manner, the HARTING professionals at our international subsidiaries engage in up-close, partnership-based interaction with our customers, right from the very early product development phase.

Our on-site staff form the interface to the centrally coordinated development and production departments. In this way, our customers can rely on consistently high, superior product quality – worldwide.

Our claim: Pushing Performance.

HARTING provides more than optimally attuned components. In order to offer our customers the best possible solutions, on request HARTING contributes a great deal more and is tightly integrated into the value-creation process.

From ready-assembled cables through to control racks or ready-to-go control desks. Our aim is to generate maximum benefit for our customers – with no compromises!

Quality creates reliability – and warrants trust.

The HARTING brand stands for superior quality and reliability – worldwide. The standards we set are the result of consistent, stringent quality management that is subject to regular certifications and audits.

EN ISO 9001, the EU Eco-Audit and ISO 14001 are key elements here. We take a proactive stance towards new requirements, which is why HARTING is the first company worldwide to have obtained the IRIS quality certificate for rail vehicles.



HARTING technology creates added value for customers.

Technologies by HARTING are at work worldwide. HARTING's presence stands for smoothly functioning systems powered by intelligent connectors, smart infrastructure solutions and sophisticated network systems. Over the course of many years of close, trust-based cooperation with its customers, the HARTING Technology Group has become one of the leading specialists globally for connector technology. We offer individual customers specific and innovative solutions that go beyond the basic standard functionalities. These tailored solutions deliver sustained results, ensure investment security and enable customers to achieve significant added value.

Opting for HARTING opens up an innovative, complex world of concepts and ideas.

In order to develop and produce connectivity and network solutions serving an exceptionally wide range of connector applications in a professional and cost-effective manner, HARTING not only commands the full array of conventional tools and basic technologies. Above and beyond these capabilities, HARTING is constantly harnessing and refining its broad base of knowledge and experience to create new solutions that also ensure continuity. To secure its lead in know-how, HARTING draws on a wealth of sources from its in-house research and applications.

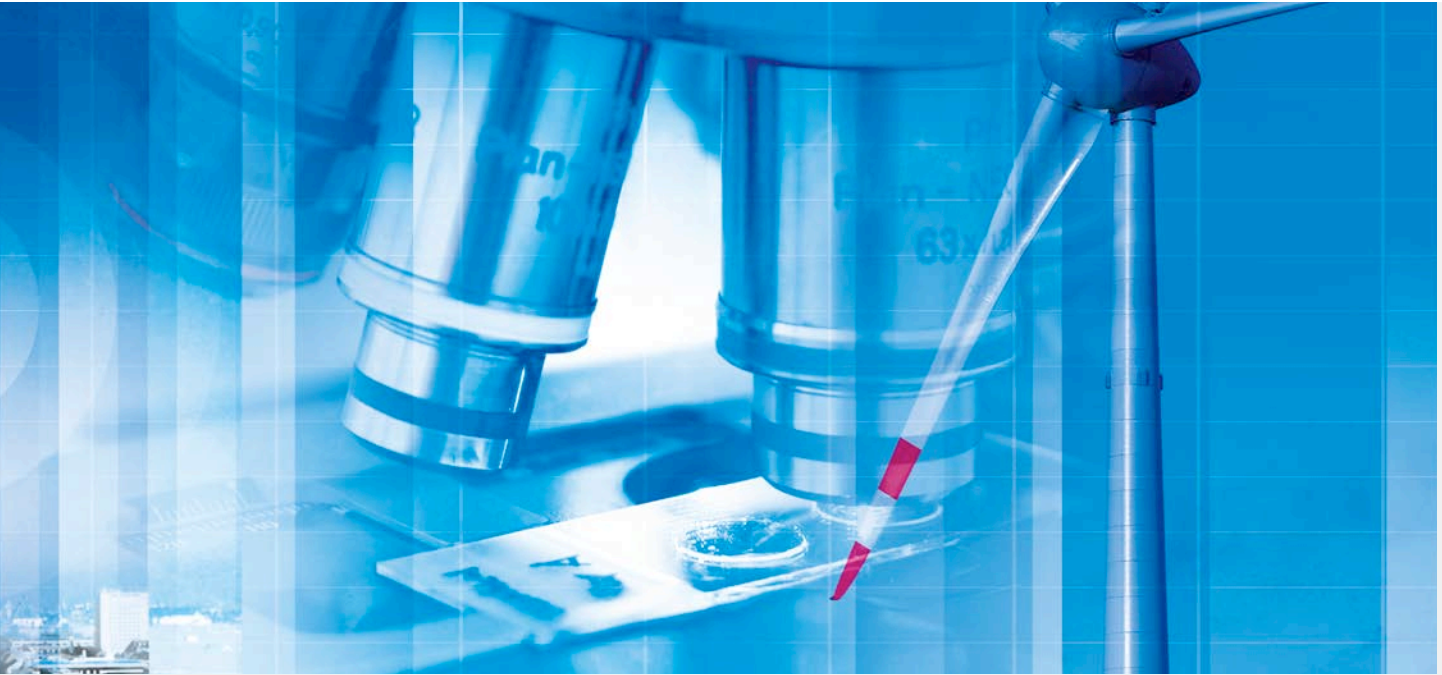
Salient examples of these sources of innovative knowledge include microstructure technologies, 3D design and connection technology,

high-temperature and ultrahigh-frequency applications that are finding use in telecommunications and automation networks, in the automotive industry, or in industrial sensor and actuator applications, RFID and wireless technologies, in addition to packaging and housing made of plastics, aluminium and stainless steel.

HARTING overcomes technological limitations.

Drawing on the comprehensive resources of the group's technology pool, HARTING devises practical solutions for its customers. Whether this involves industrial networks for manufacturing automation, or hybrid interface solutions for wireless telecommunication infrastructures, 3D circuit carriers with microstructures, or cable assemblies for high-temperature applications in the automotive industry - HARTING technologies offer not only components, but comprehensive solutions attuned to individual customer requirements and preferences. The range of cost-effective solutions covers ready-to-use cable configurations, completely assembled backplanes and board system carriers, as well as fully wired and tested control panels.

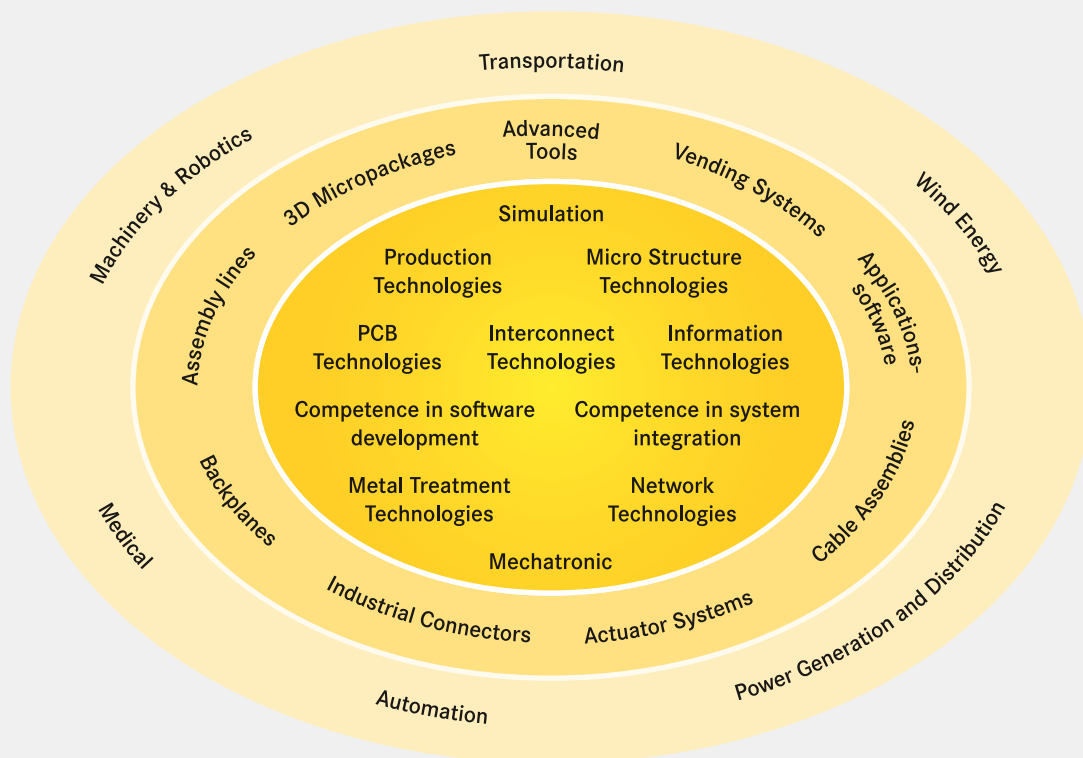
In order to ensure the future-proof design of RF and EMC-compatible interface solutions, the central HARTING laboratory (accredited according to DIN EN ISO/IEC 17025) employs simulation tools, as well as experimental, testing and diagnostics facilities all the way to Industrial computed tomography. In addition to product and process suitability considerations, lifecycle and environmental aspects play a key role in the selection of materials and processes.



HARTING's knowledge is practical know-how that generates synergy effects.

HARTING commands decades of experience with regard to the applications conditions involved in connections in telecommunications, computer, network and medical technologies, as well as industrial automation technologies, e.g. in the mechanical engineering and plant engineering areas, in addition to the power generation industry and the transportation sector. HARTING is highly

conversant with the specific application areas in all of these technology fields. In every solution approach, the key focus is on the application. In this context, uncompromising, superior quality is our hallmark. Every new solution found invariably flows back into the HARTING technology pool, thereby enriching our resources. And every new solution we go on to create will draw on this wealth of resources in order to optimize each and every individual solution. HARTING is synergy in action.



Contents

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HARTING PushPull type acc

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| HARTING PushPull type acc. to IEC 61 076-3-106 Variante 4 | 08 |
| Han® PushPull type acc. to IEC 61 076-3-117 Variante 14 | 65 |
| Han® PushPull type acc. to Power L to IEC PAS 61076-3-126 | 107 |
| PushPull XS SFP to IEC 61 754-20 | 111 |



HARTING PushPull technology acc. to IEC 61076-3-106 variant 4
bulkhead mounted housing for device integration of RJ45-, USB- and Power-jacks

Advantages

- PushPull bulkhead mounted housing with HARTING PushPull technology
- Compact, space-saving design for device integration of RJ45-, USB-, Signal- or Power-pcb female
- High packing density (spacing 27 x 21 mm)

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull technology acc. to IEC 61076-3-106 variant 4 |
| Mating cycles | min. 750 |
| Degree of protection | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|--|------------------------------|---------|------------------|
| Components device side | | | |
| Bulkhead mounted housing – Compact Board drillings for M2.5 | | | |
| without fixing clip (with integrated seal) | 09 45 545 0043 ¹⁾ | | |
| with fixing clip (with integrated seal) | 09 45 545 0042 ²⁾ | | |
| with fixing clip (with integrated seal) for vertical RJ jack 09 45 551 1103 | 09 45 545 0040 ³⁾ | | |
| with fixing clip, for all HIFF compatible modules | 09 45 545 0041 | | |

¹⁾ suitable RJ45 jacks: 09 45 551 1100 / ... 1110 / ... 1102 / ... 115x / ... 154x

²⁾ suitable RJ45 jacks: 09 45 551 1100 / ... 1110 / ... 1102

³⁾ suitable RJ45 jacks: 09 45 551 1103




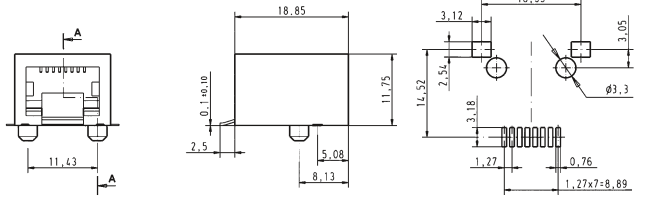
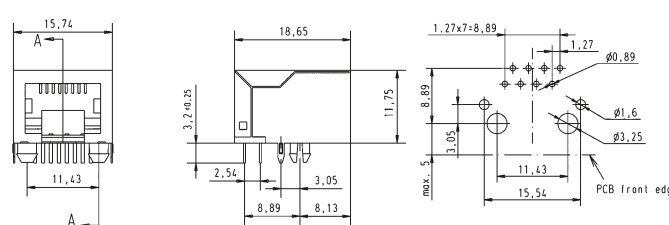
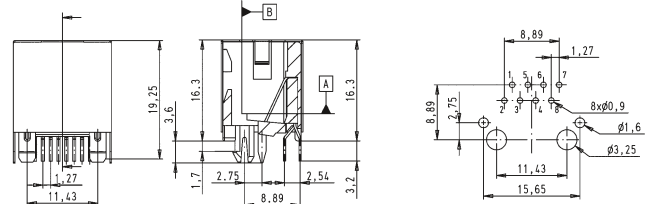
HARTING PushPull Technology acc. to IEC 61 076-3-106 variant 4
RJ45 jacks and accessories

Advantages

- HARTING PushPull technology
- Low-profile jacks for space-saving PCB integration
- Category of transmission Cat. 5
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

Technical characteristics

| | |
|---|--|
| Locking | PushPull Technology acc. to IEC 61 076-3-106 variant 4 |
| Transmission rate | 10/100/1000 Mbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mating cycles | min. 750 |
| Degree of protection | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |
|  | UL approval (E102079) |

| Identification | Part number | Drawing | Dimensions in mm pcb layout |
|--|--|--|--------------------------------|
| Components device side | | | |
| RJ45 jacks Cat. 5 | | | |
| Solder variant SMD, 90° angled | 09 45 551 1100 ¹⁾ 09 45 551 1110 ²⁾ 09 45 551 1110 333 ⁴⁾ |  | |
| Solder variant overmoulded, 90° angled | 09 45 551 1102 ¹⁾ |  | |
| Solder variant overmoulded, straight | 09 45 551 1103 ³⁾ |  | |

1) Packaging: Blister à 120 pieces
2) Packaging: Tape & Reel à 130 pieces
3) Packaging: Tape & Reel à 80 pieces
4) Sample, Packaging: 1 piece



HARTING RJ Industrial® RJ45 jacks with transformer

Advantages

- Compact design
- Integrated optical fibres
- Excellent EMC behaviour due to integrated transformers and filters for 10/100 Mbit or 1 Gbit Ethernet
- THR compatible
- Versions from 10/100 Mbit up to 10 Gbit Ethernet and PoE
- Usable for IP65 / IP67 device integration with HARTING PushPull and Han® 3 A RJ45

Technical characteristics

| | |
|----------------------|--------------------------|
| Mating face | RJ45 acc. to IEC 60603-7 |
| Number of contacts | 8 |
| Degree of protection | IP20 |
| Rated voltage | 30 V DC |
| Rated current | 8 mA DC |
| Mating cycles | min. 750 |
| Temperature range | -25 °C ... +70 °C |

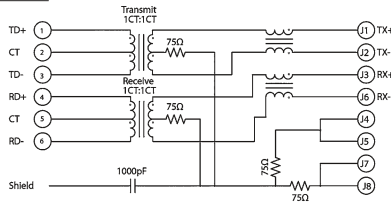
| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Components device side

RJ45 jack with transformer (low profile)

90° angled, THT
10/100 Mbit Ethernet

Schematic:



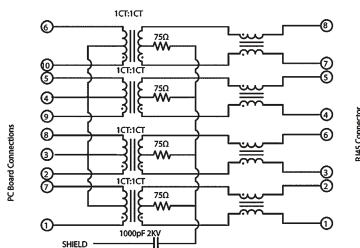
10/100 Mbit Ethernet and PoE

09 45 551 1150¹⁾

09 45 551 1151¹⁾

90° angled, THT
1 Gbit Ethernet

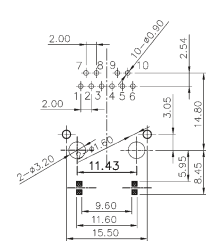
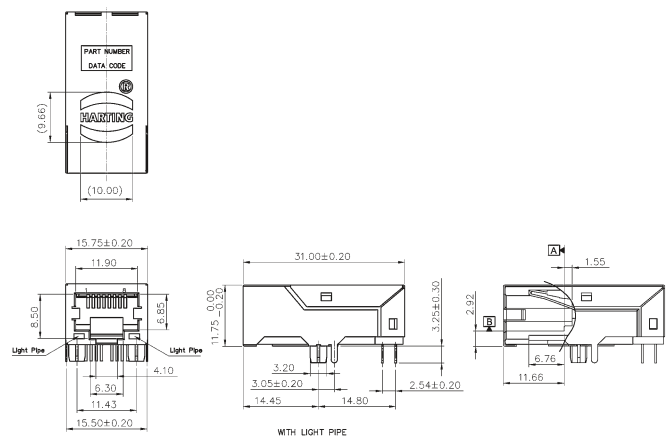
Schematic:



1 Gbit Ethernet and PoE

09 45 551 1540¹⁾

09 45 551 1541¹⁾



Customer specific versions on request



HARTING PushPull technology acc. to IEC 61 076-3-106 variant 4
RJ45 panel feed-throughs and accessories

Advantages

- Small, space-saving PushPull Interfaces in IP65 / IP67
- Easy handling of RJ45 patch cords in switch cabinets or sets
- Mounting to casings

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull Technology acc. to IEC 61 076-3-106 variant 4 |
| Transmission rate | 10/100 Mbit/s / 1/10 Gbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mating cycles | min. 750 |
| Degree of protection | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

Identification

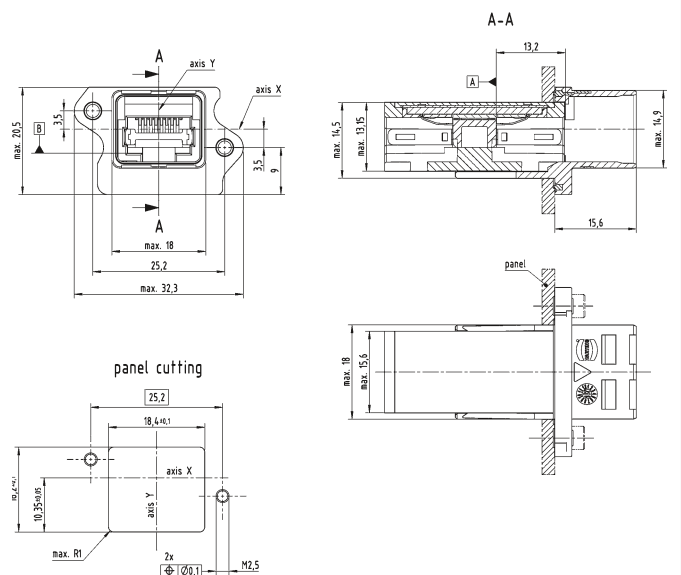
Panel feed-through set
category of transmission Cat. 6

incl. bulkhead mounted housing –
Compact, with integrated seal,
2 x RJ45-jack

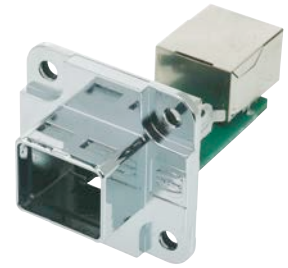
Part number

09 45 245 1561

Drawing



Dimensions in mm




HARTING PushPull Technology acc. to IEC 61 076-3-106 variant 4
RJ45-panel feed-throughs and accessories

Advantages

- Small, space-saving PushPull Interfaces in IP65 / IP67
- Easy handling of RJ45 patch cords in switch cabinets or sets

Technical characteristics

| | |
|---|--|
| Locking | PushPull Technology acc. to IEC 61 076-3-106 variant 4 |
| Transmission rate cat. 5 versions | 10/100/1000 Mbit/s |
| Transmission rate cat. 6 versions | 10/100 Mbit/s / 1/10 Gbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mating cycles | min. 750 |
| Degree of protection | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, shining |
| Flammability acc. to UL 94 | V0 |
|  | UL approval (E102079) |

Identification

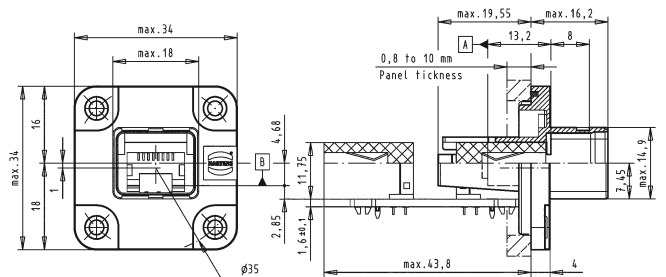
Panel feed-through set
category of transmission Cat. 5

incl. housing bulkhead mounting EasyInstall with integrated seal,
2 x RJ45-jack
board drillings for M3

Part number

09 45 295 1130
(metal version)

Drawing



Dimensions in mm



HARTING PushPull technology acc. to IEC 61076-3-106 variant 4 RJ45 connector

Advantages

- Ethernet connector based on RJ45
- Fully shielded, 360° shielding contact
- Field-assembly connector with IDC contacts (Cat. 5 versions) or piercing contacts (Cat. 6_A versions)

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Cable diameter | 4.5 ... 10 mm |
| Termination cross section | |
| Cat. 5 | AWG 24/7 ... AWG 22/7 (stranded) AWG 23/1 ... AWG 22/1 (solid) |
| Cat. 6 _A | AWG 24/7 ... AWG 28/7 (stranded) |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

Identification

Part number

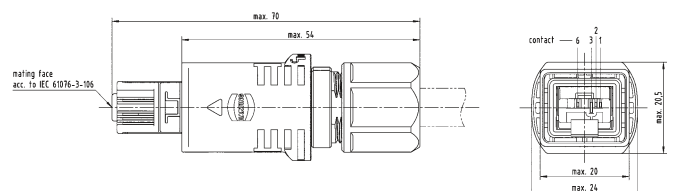
Drawing

Dimensions in mm

Connector, 4 poles
Cat. 5

incl. housing with RJ45 connector, shielding and cable gland

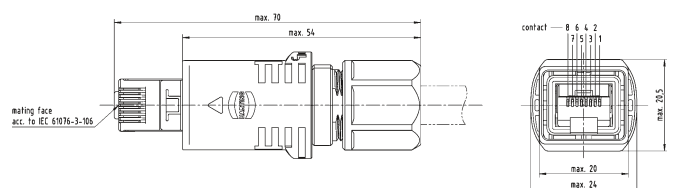
09 45 145 1106



Connector, 8 poles
Cat. 6_A

incl. housing with RJ45 connector, shielding and cable gland

09 45 145 1521
09 45 145 1521 XL¹⁾



suitable assembly tool

09 45 800 0520

¹⁾ Packaging with 100 sets



HARTING PushPull Technology acc. to IEC 61 076-3-106 variant 4
RJ45-connector

Advantages

- Ethernet connector based on RJ45
- Fully shielded, 360° shielding contact
- Field-assembly connector with IDC contacts (Cat. 5 versions) or piercing contacts (Cat. 6_A versions)

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Cable diameter | 4.9 ... 8.6 mm |
| Termination cross section | |
| Cat. 5 | AWG 24/7 ... AWG 22/7 (stranded) AWG 23/1 ... AWG 22/1 (solid) |
| Cat. 6 _A | AWG 24/7 ... AWG 28/7 (stranded) |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, shining |
| Flammability acc. to UL 94 | V0 |
| | UL approval (E102079) |

Identification

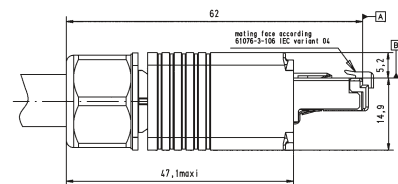
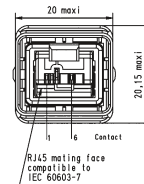
Part number

Drawing

Dimensions in mm

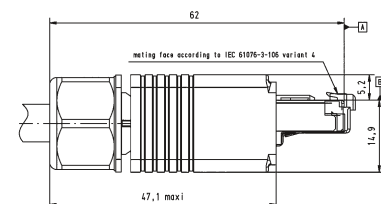
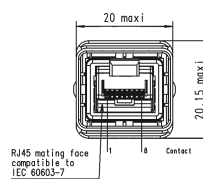
Connector, 4 poles
Cat. 5
incl. housing with RJ45 connector,
shielding and cable gland

09 45 195 1100
(metal version)



Connector, 8 poles
Cat. 6_A
incl. housing with RJ45 connector,
shielding and cable gland

09 45 195 1520
(metal version)



suitable assembly tool

09 45 800 0520




HARTING PushPull RJ45 – bulkhead

Advantages

- Small, space-saving PushPull Interfaces in IP65 / IP67
- Easy connection of PushPull RJ45 system cords
- Screwable with 2 x M3 screws

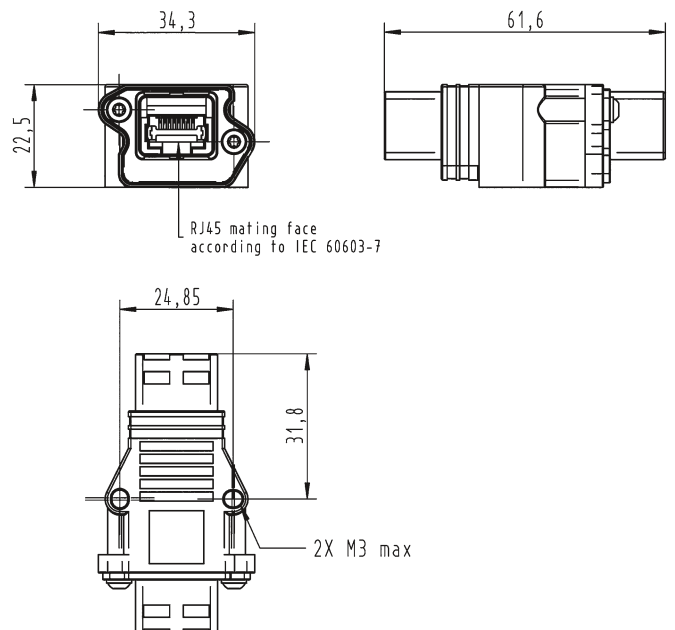
Technical characteristics

| | |
|---|---|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Number of contacts | 8 |
| Transmission category | Cat. 6, performance class EA, suitable for 1/10 Gigabit Ethernet |
| Transmission rate | 10/100 Mbit/s / 1/10 Gbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mating cycles | min. 750 |
| Degree of protection | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |
|  | UL approval (E102079) |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

HARTING PushPull RJ45 –
bulkhead

09 45 345 1560





HARTING PushPull technology acc. to IEC 61076-3-106 variant 4 RJ45 connector

Advantages

- Ethernet connector based on RJ45
- Fully shielded, 360° shielding contact
- Field-assembly connector with IDC contacts
- Category of transmission: Cat. 6 / class E_A suitable for 1/10 Gbit Ethernet

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Cable diameter | 4.5 ... 10 mm |
| Termination cross section | AWG 27/7 ... AWG 22/7 (stranded) AWG 24/1 ... AWG 22/1 (solid) |
| Conductor diameter | max. 1.6 mm (incl. insulation) |
| Mating cycles | min. 750 |
| Degree of protection | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

Identification

Part number

Drawing

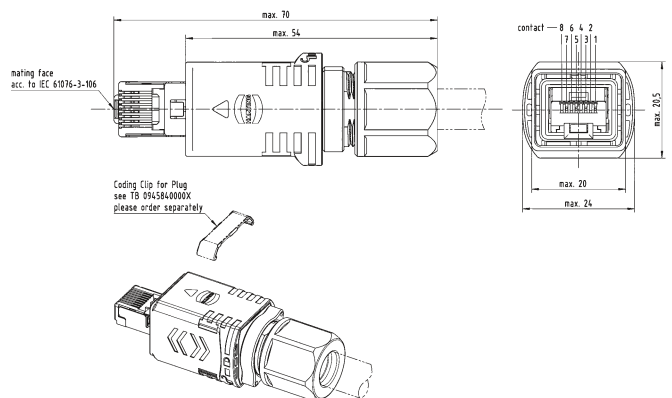
Dimensions in mm

Connector, 8 poles
Cat. 6
incl. housing
with RJ45 connector,
shielding and cable gland

09 45 145 1561

Colour clips
for colour coding the HARTING
PushPull connectors

| | |
|--------|----------------|
| Blue | 09 45 840 0008 |
| Violet | 09 45 840 0007 |
| Green | 09 45 840 0006 |
| Red | 09 45 840 0005 |
| Yellow | 09 45 840 0004 |






HARTING PushPull Technology acc. to IEC 61076-3-106 variant 4 RJ45-connector

Advantages

- Ethernet connector based on RJ45
- Fully shielded, 360° shielding contact
- Field-assembly connector with IDC contacts
- Category of transmission: Cat. 6 / class E_A suitable for 1/10 Gbit Ethernet

Technical characteristics

| | |
|---|---|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Cable diameter | 4.9 ... 8.6 mm |
| Termination cross section | AWG 27/7 ... AWG 22/7 (stranded) AWG 24/1 ... AWG 22/1 (solid) |
| Conductor diameter | max. 1.6 mm (incl. insulation) |
| Mating cycles | min. 750 |
| Degree of protection | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, shining |
| Flammability acc. to UL 94 | V0 |
|  | UL approval (E102079) |

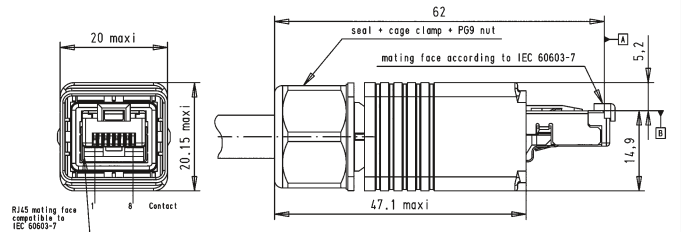
Identification

Connector, 8 poles
Cat. 6
incl. housing with RJ45 connector,
shielding and cable gland

Part number

09 45 195 1560
(metal version)

Drawing



Dimensions in mm



4x 2x AWG 26/7
 HARTING PushPull RJ45
 HARTING PushPull RJ45

Features


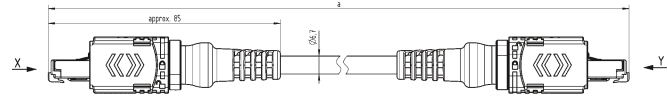

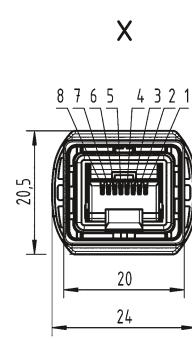
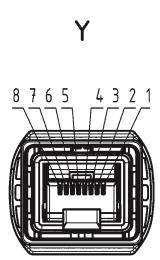
- Transmission of up to 10 Gbit/s
- Double-sided IP65/IP67 protection
- Simple handling by HARTING PushPull
- Cables suitable for industry
- Suitable for outdoor applications (PVC (outdoor))

Technical characteristics

| | |
|------------------------------|---|
| Number of cores | 8 |
| Core structure | 4x 2x AWG 26/7 |
| Connector 1 | HARTING PushPull RJ45 |
| Connector 2 | HARTING PushPull RJ45 |
| Limiting temperature | -40 ... +80 °C, -20 ... +80 °C |
| Transmission characteristics | Cat. 6A, Class E _A up to 500 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Material (cable) | PUR (polyurethane), PVC |
| Colour (cable) | Yellow, Black |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm | | | | | | | | | | | | | | | | | | |
|--|--|--|---|------------------|--|----------------|---|----------|---|---------------|---|--------|---|--------------|---|---------|---|---------------|---|---------|---|--|
| HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides Fully shielded, 360° shielding contact, PUR (polyurethane), Yellow, -40 °C ... +80 °C  | 0.5 m 1 m 5 m 7.5 m 10 m 15 m 20 m | 09 48 282 8756 005 09 48 282 8756 010 09 48 282 8756 050 09 48 282 8756 075 09 48 282 8756 100 09 48 282 8756 150 09 48 282 8756 200 |  | | | | | | | | | | | | | | | | | | | |
| HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides, Fully shielded, 360° shielding contact, PVC, Yellow, -20 °C ... +80 °C  | 0.5 m 1 m 5 m 7.5 m 10 m 15 m 20 m | 09 48 282 8757 005 09 48 282 8757 010 09 48 282 8757 050 09 48 282 8757 075 09 48 282 8757 100 09 48 282 8757 150 09 48 282 8757 200 |   <p style="text-align: center;">Loading-Plan acc. to TIA/EIA 568B</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>Shield</td><td></td></tr> <tr><td>1 white/orange</td><td>1</td></tr> <tr><td>2 orange</td><td>2</td></tr> <tr><td>3 white/green</td><td>3</td></tr> <tr><td>4 blue</td><td>4</td></tr> <tr><td>5 white/blue</td><td>5</td></tr> <tr><td>6 green</td><td>6</td></tr> <tr><td>7 white/brown</td><td>7</td></tr> <tr><td>8 brown</td><td>8</td></tr> </table> | Shield | | 1 white/orange | 1 | 2 orange | 2 | 3 white/green | 3 | 4 blue | 4 | 5 white/blue | 5 | 6 green | 6 | 7 white/brown | 7 | 8 brown | 8 | |
| Shield | | | | | | | | | | | | | | | | | | | | | | |
| 1 white/orange | 1 | | | | | | | | | | | | | | | | | | | | | |
| 2 orange | 2 | | | | | | | | | | | | | | | | | | | | | |
| 3 white/green | 3 | | | | | | | | | | | | | | | | | | | | | |
| 4 blue | 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 white/blue | 5 | | | | | | | | | | | | | | | | | | | | | |
| 6 green | 6 | | | | | | | | | | | | | | | | | | | | | |
| 7 white/brown | 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 brown | 8 | | | | | | | | | | | | | | | | | | | | | |

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

HARTING PushPull,
 Copper cable (round),
 Wiring 1:1,
 Pre-assembled on both
 sides
 Fully shielded,
 360° shielding contact,
 PVC (outdoor),
 Black,
 -20 °C ... +80 °C



| | |
|-------|--------------------|
| 0.5 m | 09 48 282 8758 005 |
| 1 m | 09 48 282 8758 010 |
| 5 m | 09 48 282 8758 050 |
| 7.5 m | 09 48 282 8758 075 |
| 10 m | 09 48 282 8758 100 |
| 15 m | 09 48 282 8758 150 |
| 20 m | 09 48 282 8758 200 |



4x 2x AWG 26/7
 HARTING PushPull RJ45
 HARTING PushPull RJ45

Features

- Transmission of up to 10 Gbit/s
- Double-sided IP65/IP67 protection
- Simple handling by HARTING PushPull
- Cables suitable for industry
- Suitable for outdoor applications (PVC (outdoor))

Technical characteristics

| | |
|------------------------------|---|
| Number of cores | 8 |
| Core structure | 4x 2x AWG 26/7 |
| Connector 1 | HARTING PushPull RJ45, RJ45 |
| Connector 2 | RJ45 |
| Limiting temperature | -20 ... +75 °C |
| Transmission characteristics | Cat. 6A, Class E _A up to 500 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Material (cable) | PUR (polyurethane), PVC |
| Colour (cable) | Yellow, Black |

Details

Other cable lengths on request!

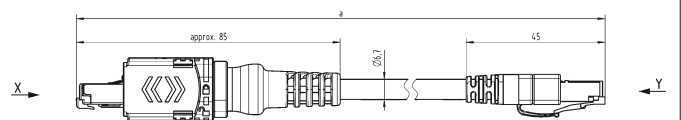
| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

HARTING PushPull,

Copper cable (round),
 Wiring 1:1,
 Pre-assembled on both
 sides
 Fully shielded,
 360° shielding contact,
 PUR (polyurethane),
 Yellow,
 -20 °C ... +75 °C



| | |
|------|--------------------|
| 1 m | 09 48 284 7756 010 |
| 2 m | 09 48 284 7756 020 |
| 3 m | 09 48 284 7756 030 |
| 5 m | 09 48 284 7756 050 |
| 7 m | 09 48 284 7756 070 |
| 10 m | 09 48 284 7756 100 |
| 15 m | 09 48 284 7756 150 |
| 20 m | 09 48 284 7756 200 |

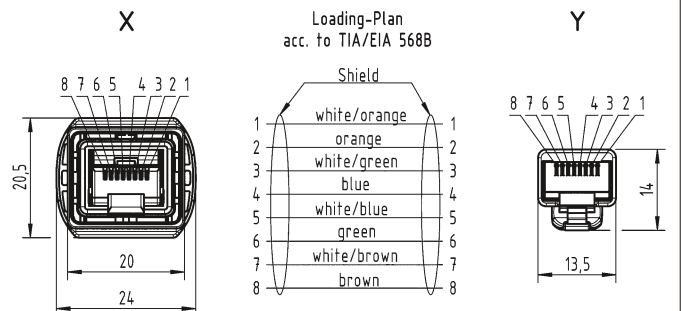



HARTING PushPull,

Copper cable (round),
 Wiring 1:1,
 Pre-assembled on both
 sides,
 Fully shielded,
 360° shielding contact,
 PVC,
 Yellow,
 -20 °C ... +75 °C



| | |
|------|--------------------|
| 1 m | 09 48 284 7757 010 |
| 2 m | 09 48 284 7757 020 |
| 3 m | 09 48 284 7757 030 |
| 5 m | 09 48 284 7757 050 |
| 7 m | 09 48 284 7757 070 |
| 10 m | 09 48 284 7757 100 |
| 15 m | 09 48 284 7757 150 |
| 20 m | 09 48 284 7757 200 |



| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|---|--|---------|------------------|
| <p>HARTING PushPull, Copper cable (round), Wiring 1:1, Pre-assembled on both sides Fully shielded, 360° shielding contact, PVC (outdoor), Black, -20 °C ... +75 °C</p>  | <p>1 m 2 m 3 m 5 m 7 m 10 m 15 m 20 m</p> | <p>09 48 284 7758 010 09 48 284 7758 020 09 48 284 7758 030 09 48 284 7758 050 09 48 284 7758 070 09 48 284 7758 100 09 48 284 7758 150 09 48 284 7758 200</p> | | |



HARTING PushPull type acc. to IEC 61076-3-106 variant 4
LC duplex panel feed-through and connector

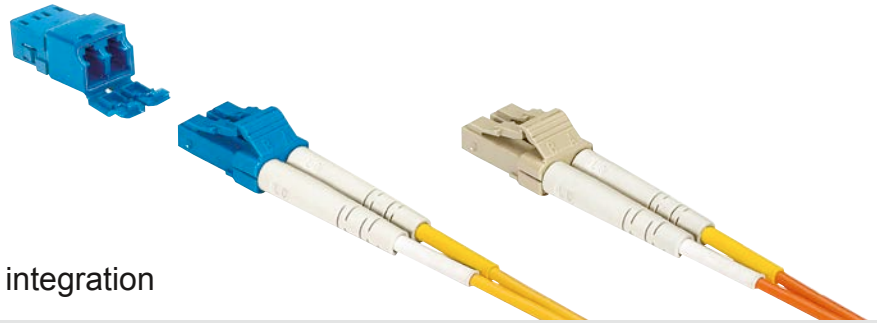
Advantages

- Optical PushPull connector based on LC with small form factor (requires 50 % compared to SC and ST)
- EasyInstall and Compact panel feed-through for simple device integration
- Optical module with inserts acc. to IEC 61754-20
- One-piece LC body assures high mechanical stability
- A & B parts identification for Duplex according TIA 568 standard

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Mating face | LC acc. to IEC 61754-20 |
| Cable diameter | 5.8 ... 7.2 mm |
| Mating cycles | min. 200 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black Zinc die-cast, shining |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|-----------------------------------|------------------------------------|---------|------------------|
| HARTING PushPull LC duplex | | | |
| Cable side | | | |
| Multimode GOF | 09 57 402 0500 000 | | |
| | 09 57 409 0500 000 (metal version) | | |
| Singlemode GOF | 09 57 402 0501 000 | | |
| | 09 57 409 0501 000 (metal version) | | |
| Device side EasyInstall version | | | |
| Multimode GOF | 09 57 441 0500 000 | | |
| | 09 57 468 0500 000 (metal version) | | |
| Singlemode GOF | 09 57 441 0501 000 | | |
| | 09 57 468 0501 000 (metal version) | | |
| Device side Compact version | | | |
| Multimode GOF | 09 57 442 0502 001 | | |
| Singlemode GOF | 09 57 442 0503 001 | | |



LC duplex IP20 adapter for device integration

Advantages

- Small form factor requires 50 % (compared to SC and ST)
- Compact, space-saving design
- High packing density
- A & B parts identification according TIA 568 standard
- Complement adapter for IP67 connector on device side

Technical characteristics

| | |
|----------------------|---------------------------|
| Degree of protection | IP20 |
| Mating interface | LC duplex with two fibres |
| Temperature range | -40 °C ... +70 °C |

| Identification | Part number | Drawing | Dimensions in mm | | | | | | | | | | | | | | | |
|------------------------|--------------------|---------|--|------|------|------|---|-------|-------|---|------|------|---|-------|-------|---|-------|-------|
| Device side | | | | | | | | | | | | | | | | | | |
| Adapter | | | | | | | | | | | | | | | | | | |
| Multimode GOF | 09 57 400 0003 000 | | | | | | | | | | | | | | | | | |
| Singlemode GOF | 09 57 400 0004 000 | | | | | | | | | | | | | | | | | |
| Connector LC duplex | | | | | | | | | | | | | | | | | | |
| Multimode GOF | 09 57 400 0001 000 | | <table border="1"> <thead> <tr> <th></th> <th>min.</th> <th>max.</th> </tr> </thead> <tbody> <tr> <td>G</td> <td>26.60</td> <td>26.80</td> </tr> <tr> <td>H</td> <td>9.35</td> <td>9.45</td> </tr> <tr> <td>J</td> <td>12.80</td> <td>12.90</td> </tr> <tr> <td>K</td> <td>15.24</td> <td>15.34</td> </tr> </tbody> </table> | | min. | max. | G | 26.60 | 26.80 | H | 9.35 | 9.45 | J | 12.80 | 12.90 | K | 15.24 | 15.34 |
| | min. | | | max. | | | | | | | | | | | | | | |
| G | 26.60 | 26.80 | | | | | | | | | | | | | | | | |
| H | 9.35 | 9.45 | | | | | | | | | | | | | | | | |
| J | 12.80 | 12.90 | | | | | | | | | | | | | | | | |
| K | 15.24 | 15.34 | | | | | | | | | | | | | | | | |
| Singlemode GOF | 09 57 400 0002 000 | | | | | | | | | | | | | | | | | |



9 / 125 µm
HARTING PushPull
HARTING PushPull

Features


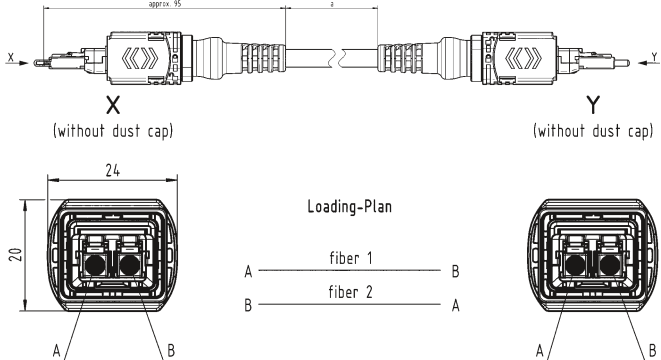

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|--------------------|
| Number of cores | 9 / 125 µm |
| Connector 1 | HARTING PushPull |
| Connector 2 | HARTING PushPull |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--------------------|--------------------|--|------------------|
| HARTING PushPull, FO cable, Singlemode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 221 0010 001 |  | |
| | 2 m | 33 61 221 0020 001 | | |
| | 3 m | 33 61 221 0030 001 | | |
| | 4 m | 33 61 221 0040 001 | | |
| | 5 m | 33 61 221 0050 001 | | |
| | 6 m | 33 61 221 0060 001 | | |
| | 7 m | 33 61 221 0070 001 | | |
| | 8 m | 33 61 221 0080 001 | | |
| | 9 m | 33 61 221 0090 001 | | |
| | 10 m | 33 61 221 0100 001 | | |
| | 11 m | 33 61 221 0110 001 | | |
| | 12 m | 33 61 221 0120 001 | | |
| | 13 m | 33 61 221 0130 001 | | |
| | 14 m | 33 61 221 0140 001 | | |
| | 15 m | 33 61 221 0150 001 | | |
| | 20 m | 33 61 221 0200 001 | | |
| | 25 m | 33 61 221 0250 001 | | |
| | 30 m | 33 61 221 0300 001 | | |
| | 35 m | 33 61 221 0350 001 | | |
| | 40 m | 33 61 221 0400 001 | | |
| 45 m | 33 61 221 0450 001 | | | |
| 50 m | 33 61 221 0500 001 | | | |
| 60 m | 33 61 221 0600 001 | | | |
| 70 m | 33 61 221 0700 001 | | | |
| 80 m | 33 61 221 0800 001 | | | |
| 90 m | 33 61 221 0900 001 | | | |
| 100 m | 33 61 221 1000 001 | | | |
| FO cable, Singlemode, Not assembled  | 10 m | 33 58 751 0100 002 | | |
| | 20 m | 33 58 751 0200 002 | | |
| | 100 m | 33 58 751 1000 002 | | |



50 / 125 µm
HARTING PushPull
HARTING PushPull

Features


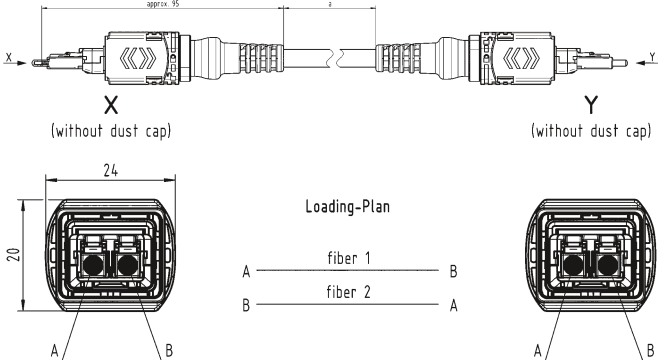

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|--------------------|
| Number of cores | 50 / 125 µm |
| Connector 1 | HARTING PushPull |
| Connector 2 | HARTING PushPull |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--------------------|--------------------|--|------------------|
| HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 221 0010 002 |  | |
| | 2 m | 33 61 221 0020 002 | | |
| | 3 m | 33 61 221 0030 002 | | |
| | 4 m | 33 61 221 0040 002 | | |
| | 5 m | 33 61 221 0050 002 | | |
| | 6 m | 33 61 221 0060 002 | | |
| | 7 m | 33 61 221 0070 002 | | |
| | 8 m | 33 61 221 0080 002 | | |
| | 9 m | 33 61 221 0090 002 | | |
| | 10 m | 33 61 221 0100 002 | | |
| | 11 m | 33 61 221 0110 002 | | |
| | 12 m | 33 61 221 0120 002 | | |
| | 13 m | 33 61 221 0130 002 | | |
| | 14 m | 33 61 221 0140 002 | | |
| | 15 m | 33 61 221 0150 002 | | |
| | 20 m | 33 61 221 0200 002 | | |
| | 25 m | 33 61 221 0250 002 | | |
| | 30 m | 33 61 221 0300 002 | | |
| | 35 m | 33 61 221 0350 002 | | |
| | 40 m | 33 61 221 0400 002 | | |
| 45 m | 33 61 221 0450 002 | | | |
| 50 m | 33 61 221 0500 002 | | | |
| 60 m | 33 61 221 0600 002 | | | |
| 70 m | 33 61 221 0700 002 | | | |
| 80 m | 33 61 221 0800 002 | | | |
| 90 m | 33 61 221 0900 002 | | | |
| 100 m | 33 61 221 1000 002 | | | |
| FO cable, Multimode, Not assembled  | 10 m | 33 58 751 0100 003 | | |
| | 20 m | 33 58 751 0200 003 | | |
| | 100 m | 33 58 751 1000 003 | | |



62,5 / 125 µm
HARTING PushPull
HARTING PushPull

Features


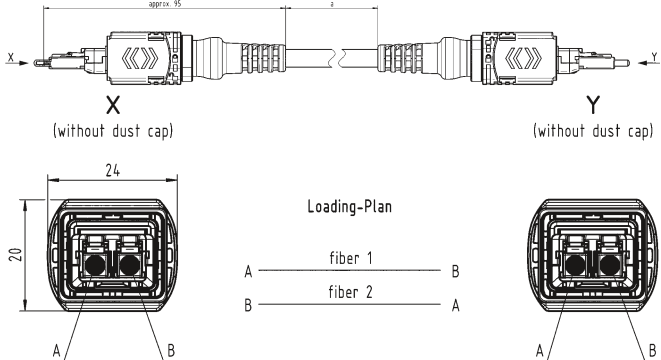

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|--------------------|
| Number of cores | 62,5 / 125 µm |
| Connector 1 | HARTING PushPull |
| Connector 2 | HARTING PushPull |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm, 7 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|---|--------------------|--------------------|--|------------------|
| HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 221 0010 003 |  | |
| | 2 m | 33 61 221 0020 003 | | |
| | 3 m | 33 61 221 0030 003 | | |
| | 4 m | 33 61 221 0040 003 | | |
| | 5 m | 33 61 221 0050 003 | | |
| | 6 m | 33 61 221 0060 003 | | |
| | 7 m | 33 61 221 0070 003 | | |
| | 8 m | 33 61 221 0080 003 | | |
| | 9 m | 33 61 221 0090 003 | | |
| | 10 m | 33 61 221 0100 003 | | |
| | 11 m | 33 61 221 0110 003 | | |
| | 12 m | 33 61 221 0120 003 | | |
| | 13 m | 33 61 221 0130 003 | | |
| | 14 m | 33 61 221 0140 003 | | |
| | 15 m | 33 61 221 0150 003 | | |
| | 20 m | 33 61 221 0200 003 | | |
| | 25 m | 33 61 221 0250 003 | | |
| | 30 m | 33 61 221 0300 003 | | |
| | 35 m | 33 61 221 0350 003 | | |
| | 40 m | 33 61 221 0400 003 | | |
| 45 m | 33 61 221 0450 003 | | | |
| 50 m | 33 61 221 0500 003 | | | |
| 60 m | 33 61 221 0600 003 | | | |
| 70 m | 33 61 221 0700 003 | | | |
| 80 m | 33 61 221 0800 003 | | | |
| 90 m | 33 61 221 0900 003 | | | |
| 100 m | 33 61 221 1000 003 | | | |
| FO cable, Multimode, Not assembled  | 10 m | 33 58 751 0100 001 | | |
| | 20 m | 33 58 751 0200 001 | | |
| | 100 m | 33 58 751 1000 001 | | |



9 / 125 µm
HARTING PushPull
LC duplex

Features


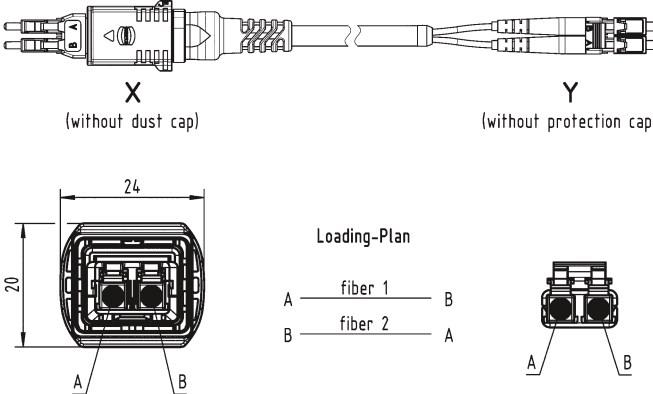

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|--------------------|
| Number of cores | 9 / 125 µm |
| Connector 1 | HARTING PushPull |
| Connector 2 | LC duplex |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|---|--------------------|--------------------|--|------------------|
| HARTING PushPull, FO cable, Singlemode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 431 0010 001 |  | |
| | 2 m | 33 61 431 0020 001 | | |
| | 3 m | 33 61 431 0030 001 | | |
| | 4 m | 33 61 431 0040 001 | | |
| | 5 m | 33 61 431 0050 001 | | |
| | 6 m | 33 61 431 0060 001 | | |
| | 7 m | 33 61 431 0070 001 | | |
| | 8 m | 33 61 431 0080 001 | | |
| | 9 m | 33 61 431 0090 001 | | |
| | 10 m | 33 61 431 0100 001 | | |
| | 11 m | 33 61 431 0110 001 | | |
| | 12 m | 33 61 431 0120 001 | | |
| | 13 m | 33 61 431 0130 001 | | |
| | 14 m | 33 61 431 0140 001 | | |
| | 15 m | 33 61 431 0150 001 | | |
| | 20 m | 33 61 431 0200 001 | | |
| | 25 m | 33 61 431 0250 001 | | |
| | 30 m | 33 61 431 0300 001 | | |
| | 35 m | 33 61 431 0350 001 | | |
| | 40 m | 33 61 431 0400 001 | | |
| 45 m | 33 61 431 0450 001 | | | |
| 50 m | 33 61 431 0500 001 | | | |
| 60 m | 33 61 431 0600 001 | | | |
| 70 m | 33 61 431 0700 001 | | | |
| 80 m | 33 61 431 0800 001 | | | |
| 90 m | 33 61 431 0900 001 | | | |
| 100 m | 33 61 431 1000 001 | | | |
| FO cable, Singlemode, Not assembled  | 10 m | 33 58 751 0100 002 | | |
| | 20 m | 33 58 751 0200 002 | | |
| | 100 m | 33 58 751 1000 002 | | |



50 / 125 μm
HARTING PushPull
LC duplex

Features


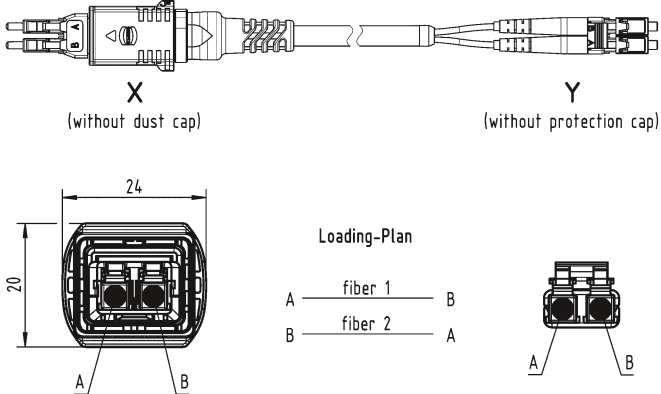

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|------------------------|
| Number of cores | 50 / 125 μm |
| Connector 1 | HARTING PushPull |
| Connector 2 | LC duplex |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--------------------|--------------------|--|------------------|
| HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 431 0010 002 |  | |
| | 2 m | 33 61 431 0020 002 | | |
| | 3 m | 33 61 431 0030 002 | | |
| | 4 m | 33 61 431 0040 002 | | |
| | 5 m | 33 61 431 0050 002 | | |
| | 6 m | 33 61 431 0060 002 | | |
| | 7 m | 33 61 431 0070 002 | | |
| | 8 m | 33 61 431 0080 002 | | |
| | 9 m | 33 61 431 0090 002 | | |
| | 10 m | 33 61 431 0100 002 | | |
| | 11 m | 33 61 431 0110 002 | | |
| | 12 m | 33 61 431 0120 002 | | |
| | 13 m | 33 61 431 0130 002 | | |
| | 14 m | 33 61 431 0140 002 | | |
| | 15 m | 33 61 431 0150 002 | | |
| | 20 m | 33 61 431 0200 002 | | |
| | 25 m | 33 61 431 0250 002 | | |
| | 30 m | 33 61 431 0300 002 | | |
| | 35 m | 33 61 431 0350 002 | | |
| | 40 m | 33 61 431 0400 002 | | |
| 45 m | 33 61 431 0450 002 | | | |
| 50 m | 33 61 431 0500 002 | | | |
| 60 m | 33 61 431 0600 002 | | | |
| 70 m | 33 61 431 0700 002 | | | |
| 80 m | 33 61 431 0800 002 | | | |
| 90 m | 33 61 431 0900 002 | | | |
| 100 m | 33 61 431 1000 002 | | | |
| FO cable, Multimode, Not assembled  | 10 m | 33 58 751 0100 003 | | |
| | 20 m | 33 58 751 0200 003 | | |
| | 100 m | 33 58 751 1000 003 | | |



62,5 / 125 µm
HARTING PushPull
LC duplex

Features


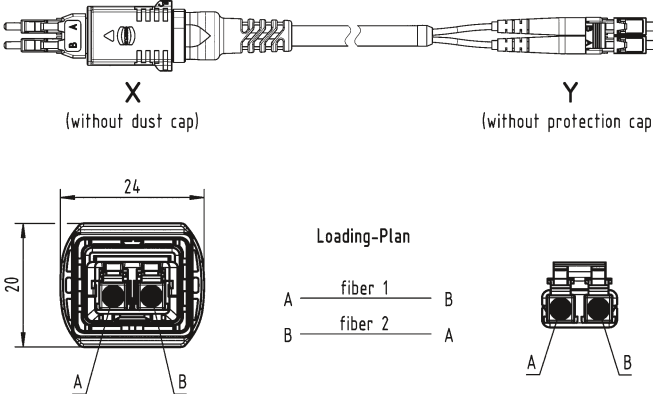

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

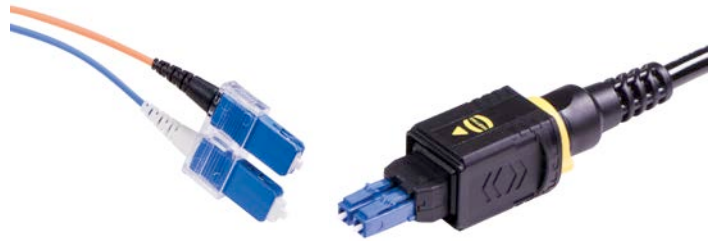
Technical characteristics

| | |
|-------------------------|--------------------|
| Number of cores | 62,5 / 125 µm |
| Connector 1 | HARTING PushPull |
| Connector 2 | LC duplex |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm, 7 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--------------------|--------------------|--|------------------|
| HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 431 0010 003 |  | |
| | 2 m | 33 61 431 0020 003 | | |
| | 3 m | 33 61 431 0030 003 | | |
| | 4 m | 33 61 431 0040 003 | | |
| | 5 m | 33 61 431 0050 003 | | |
| | 6 m | 33 61 431 0060 003 | | |
| | 7 m | 33 61 431 0070 003 | | |
| | 8 m | 33 61 431 0080 003 | | |
| | 9 m | 33 61 431 0090 003 | | |
| | 10 m | 33 61 431 0100 003 | | |
| | 11 m | 33 61 431 0110 003 | | |
| | 12 m | 33 61 431 0120 003 | | |
| | 13 m | 33 61 431 0130 003 | | |
| | 14 m | 33 61 431 0140 003 | | |
| | 15 m | 33 61 431 0150 003 | | |
| | 20 m | 33 61 431 0200 003 | | |
| | 25 m | 33 61 431 0250 003 | | |
| | 30 m | 33 61 431 0300 003 | | |
| | 35 m | 33 61 431 0350 003 | | |
| | 40 m | 33 61 431 0400 003 | | |
| 45 m | 33 61 431 0450 003 | | | |
| 50 m | 33 61 431 0500 003 | | | |
| 60 m | 33 61 431 0600 003 | | | |
| 70 m | 33 61 431 0700 003 | | | |
| 80 m | 33 61 431 0800 003 | | | |
| 90 m | 33 61 431 0900 003 | | | |
| 100 m | 33 61 431 1000 003 | | | |
| FO cable, Multimode, Not assembled  | 10 m | 33 58 751 0100 001 | | |
| | 20 m | 33 58 751 0200 001 | | |
| | 100 m | 33 58 751 1000 001 | | |



9 / 125 µm
HARTING PushPull
SC duplex

Features


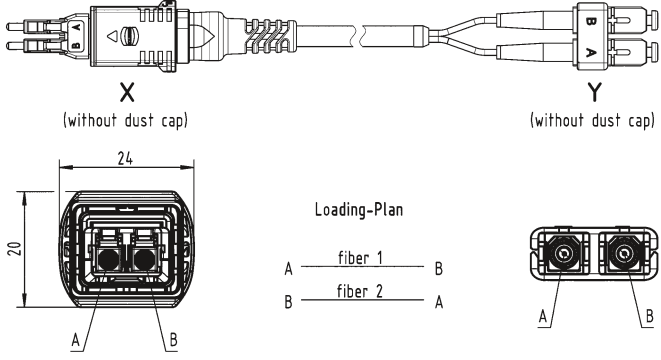

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|--------------------|
| Number of cores | 9 / 125 µm |
| Connector 1 | HARTING PushPull |
| Connector 2 | SC duplex |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--------------------|--------------------|--|---|
| HARTING PushPull, FO cable, Singlemode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 431 0010 004 |  |  |
| | 2 m | 33 61 431 0020 004 | | |
| | 3 m | 33 61 431 0030 004 | | |
| | 4 m | 33 61 431 0040 004 | | |
| | 5 m | 33 61 431 0050 004 | | |
| | 6 m | 33 61 431 0060 004 | | |
| | 7 m | 33 61 431 0070 004 | | |
| | 8 m | 33 61 431 0080 004 | | |
| | 9 m | 33 61 431 0090 004 | | |
| | 10 m | 33 61 431 0100 004 | | |
| | 11 m | 33 61 431 0110 004 | | |
| | 12 m | 33 61 431 0120 004 | | |
| | 13 m | 33 61 431 0130 004 | | |
| | 14 m | 33 61 431 0140 004 | | |
| | 15 m | 33 61 431 0150 004 | | |
| | 20 m | 33 61 431 0200 004 | | |
| | 25 m | 33 61 431 0250 004 | | |
| | 30 m | 33 61 431 0300 004 | | |
| | 35 m | 33 61 431 0350 004 | | |
| | 40 m | 33 61 431 0400 004 | | |
| | 45 m | 33 61 431 0450 004 | | |
| 50 m | 33 61 431 0500 004 | | | |
| 60 m | 33 61 431 0600 004 | | | |
| 70 m | 33 61 431 0700 004 | | | |
| 80 m | 33 61 431 0800 004 | | | |
| 90 m | 33 61 431 0900 004 | | | |
| 100 m | 33 61 431 1000 004 | | | |
| FO cable, Singlemode, Not assembled | 10 m | 33 58 751 0100 002 | | |
| | 20 m | 33 58 751 0200 002 | | |
| | 100 m | 33 58 751 1000 002 | | |



50 / 125 μ m
HARTING PushPull
SC duplex

Features


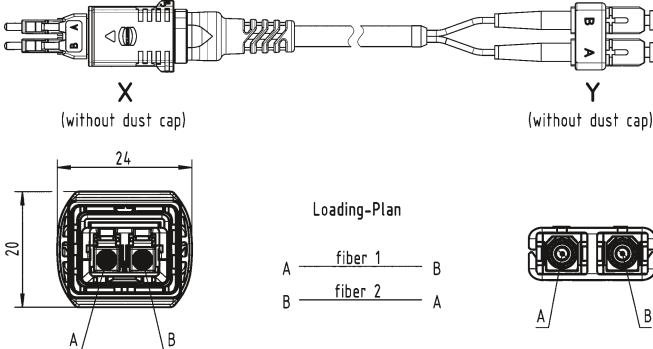

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|--------------------|
| Number of cores | 50 / 125 μ m |
| Connector 1 | HARTING PushPull |
| Connector 2 | SC duplex |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--------------------|--------------------|--|------------------|
| HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 431 0010 005 |  | |
| | 2 m | 33 61 431 0020 005 | | |
| | 3 m | 33 61 431 0030 005 | | |
| | 4 m | 33 61 431 0040 005 | | |
| | 5 m | 33 61 431 0050 005 | | |
| | 6 m | 33 61 431 0060 005 | | |
| | 7 m | 33 61 431 0070 005 | | |
| | 8 m | 33 61 431 0080 005 | | |
| | 9 m | 33 61 431 0090 005 | | |
| | 10 m | 33 61 431 0100 005 | | |
| | 11 m | 33 61 431 0110 005 | | |
| | 12 m | 33 61 431 0120 005 | | |
| | 13 m | 33 61 431 0130 005 | | |
| | 14 m | 33 61 431 0140 005 | | |
| | 15 m | 33 61 431 0150 005 | | |
| | 20 m | 33 61 431 0200 005 | | |
| | 25 m | 33 61 431 0250 005 | | |
| | 30 m | 33 61 431 0300 005 | | |
| | 35 m | 33 61 431 0350 005 | | |
| | 40 m | 33 61 431 0400 005 | | |
| 45 m | 33 61 431 0450 005 | | | |
| 50 m | 33 61 431 0500 005 | | | |
| 60 m | 33 61 431 0600 005 | | | |
| 70 m | 33 61 431 0700 005 | | | |
| 80 m | 33 61 431 0800 005 | | | |
| 90 m | 33 61 431 0900 005 | | | |
| 100 m | 33 61 431 1000 005 | | | |
| FO cable, Multimode, Not assembled  | 10 m | 33 58 751 0100 003 | | |
| | 20 m | 33 58 751 0200 003 | | |
| | 100 m | 33 58 751 1000 003 | | |



62,5 / 125 μm
HARTING PushPull
SC duplex

Features


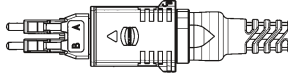
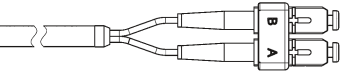
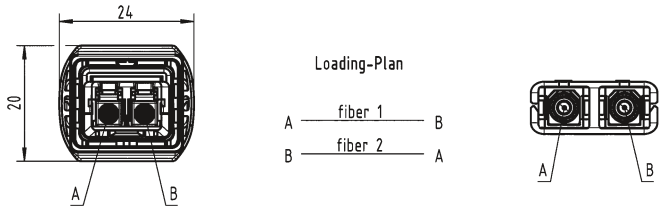
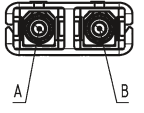

- Transmission of up to 10 Gbit/s
- Flexible, space saving
- Simple handling by HARTING PushPull
- Suitable for outdoor applications

Technical characteristics

| | |
|-------------------------|--------------------------|
| Number of cores | 62,5 / 125 μm |
| Connector 1 | HARTING PushPull |
| Connector 2 | SC duplex |
| Limiting temperature | -40 ... +85 °C |
| Schutz nach IEC 60529 | IP65 / IP67 |
| Cable diameter | 6,5 mm, 7 mm |
| Material (hood/housing) | Thermoplastic |
| Material (cable) | PUR (polyurethane) |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|---|--------------------|--------------------|---|------------------|
| HARTING PushPull, FO cable, Multimode, Overmoulded, Pre-assembled on both sides  | 1 m | 33 61 431 0010 006 |  <p>X (without dust cap)</p>  <p>Y (without dust cap)</p>  <p>24 20</p> <p>Loading-Plan A — fiber 1 — B B — fiber 2 — A</p>  <p>A — B</p> | |
| | 2 m | 33 61 431 0020 006 | | |
| | 3 m | 33 61 431 0030 006 | | |
| | 4 m | 33 61 431 0040 006 | | |
| | 5 m | 33 61 431 0050 006 | | |
| | 6 m | 33 61 431 0060 006 | | |
| | 7 m | 33 61 431 0070 006 | | |
| | 8 m | 33 61 431 0080 006 | | |
| | 9 m | 33 61 431 0090 006 | | |
| | 10 m | 33 61 431 0100 006 | | |
| | 11 m | 33 61 431 0110 006 | | |
| | 12 m | 33 61 431 0120 006 | | |
| | 13 m | 33 61 431 0130 006 | | |
| | 14 m | 33 61 431 0140 006 | | |
| | 15 m | 33 61 431 0150 006 | | |
| | 20 m | 33 61 431 0200 006 | | |
| | 25 m | 33 61 431 0250 006 | | |
| | 30 m | 33 61 431 0300 006 | | |
| | 35 m | 33 61 431 0350 006 | | |
| | 40 m | 33 61 431 0400 006 | | |
| 45 m | 33 61 431 0450 006 | | | |
| 50 m | 33 61 431 0500 006 | | | |
| 60 m | 33 61 431 0600 006 | | | |
| 70 m | 33 61 431 0700 006 | | | |
| 80 m | 33 61 431 0800 006 | | | |
| 90 m | 33 61 431 0900 006 | | | |
| 100 m | 33 61 431 1000 006 | | | |
|  FO cable, Multimode, Not assembled | 10 m | 33 58 751 0100 001 | | |
| | 20 m | 33 58 751 0200 001 | | |
| | 100 m | 33 58 751 1000 001 | | |

Number of contacts

20

0.5 A / 30 V

PVB jack

Adapter



Technical characteristics

| | |
|-------------------------------------|-------------------|
| Number of contacts | 20 |
| Electrical data acc. to EN 61984 | 0.5 A 30 V |
| Rated current | 0.5 A |
| Rated voltage | 30 V |
| Limiting temperature | -40 °C ... +80 °C |

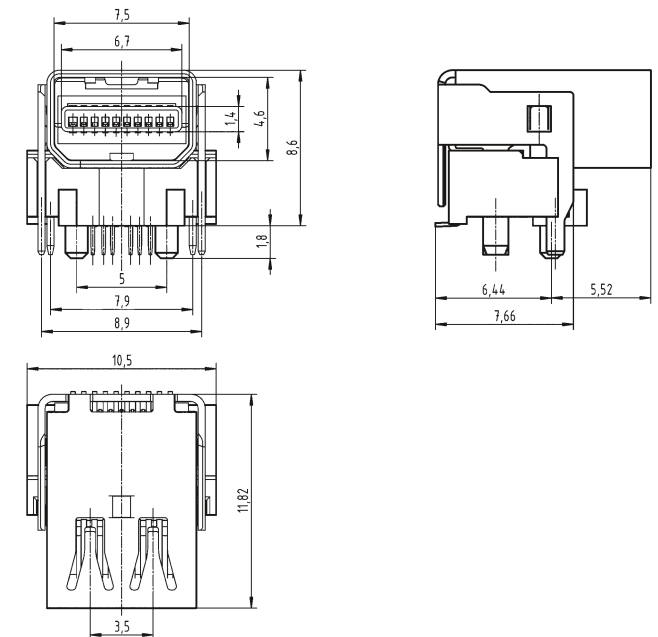
Technical characteristics

| | |
|---|---|
| Mating cycles | ≥ 100 |
| Degree of protection acc. to IEC 60529 | IP20, IP65 / IP67, when mated |
| Material (hood/housing) | Polyamide Polybutylene terephthalate (PBT) |
| Colour (hood/housing) | Black |
| RoHS | compliant |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

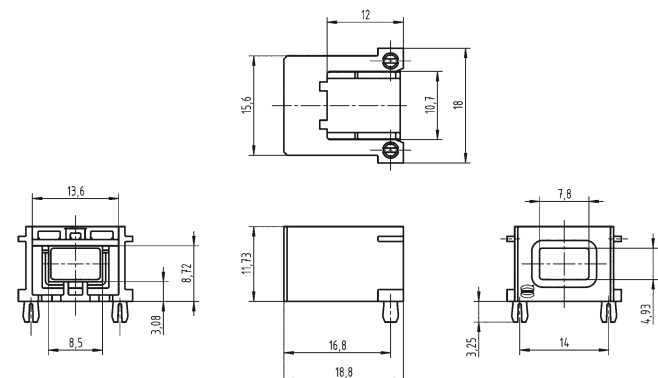
HARTING PushPull,
PCB jack,
Solder termination,
Polyamide

09 45 551 1000¹⁾
09 45 551 1000 333²⁾



HARTING PushPull,
Adapter,
Polybutylenterephthalat (PBT)

09 45 545 1002



All solder jacks and adapter PCB's are suitable for the HARTING PushPull bulkhead mounting housings 09 45 545 0042 / ... 0043

¹⁾ Packaging: Tape & Reel à 400 pieces

²⁾ Sample, Packaging: 1 piece



20x AWG 32
Mini DisplayPort
Mini DisplayPort

Technical characteristics

| | |
|------------------------------|----------------------------------|
| Number of cores | 20 |
| Core structure | 20x AWG 32 |
| Connector 1 | Mini DisplayPort |
| Connector 2 | Mini DisplayPort |
| Limiting temperature | -40 ... +80 °C |
| Transmission characteristics | DisplayPort 1.2, DisplayPort 1.1 |
| Material (cable) | TPE |

Technical characteristics

| | |
|----------------|-----------|
| Colour (cable) | Black |
| RoHS | compliant |

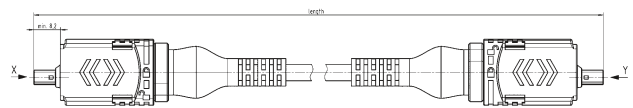
Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

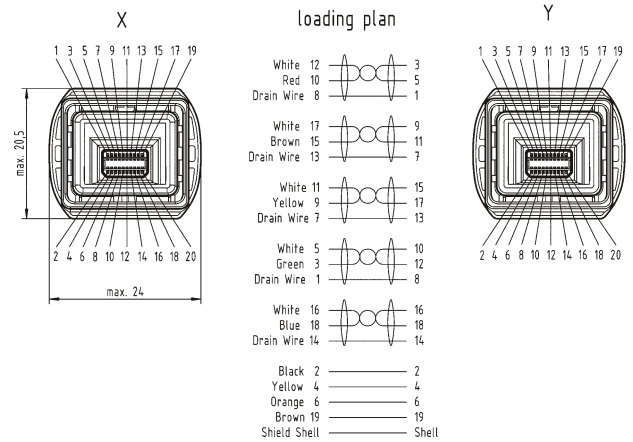
HARTING PushPull,
Copper cable (round),
Pre-assembled on both
sides,
DisplayPort 1.2

| | |
|-------|----------------|
| 0.5 m | 09 45 145 1000 |
| 1 m | 09 45 145 1001 |
| 1.5 m | 09 45 145 1002 |
| 2 m | 09 45 145 1003 |



HARTING PushPull,
Copper cable (round),
Pre-assembled on both
sides,
DisplayPort 1.1

| | |
|-----|----------------|
| 3 m | 09 45 145 1004 |
|-----|----------------|





20x AWG 32
Mini DisplayPort
IP20

Technical characteristics

| | |
|------------------------------|----------------------------------|
| Number of cores | 20 |
| Core structure | 20x AWG 32 |
| Connector 1 | Mini DisplayPort |
| Connector 2 | Mini DisplayPort |
| Limiting temperature | -40 ... +80 °C |
| Transmission characteristics | DisplayPort 1.2, DisplayPort 1.1 |
| Material (cable) | TPE |

Technical characteristics

| | |
|----------------|-----------|
| Colour (cable) | Black |
| RoHS | compliant |

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

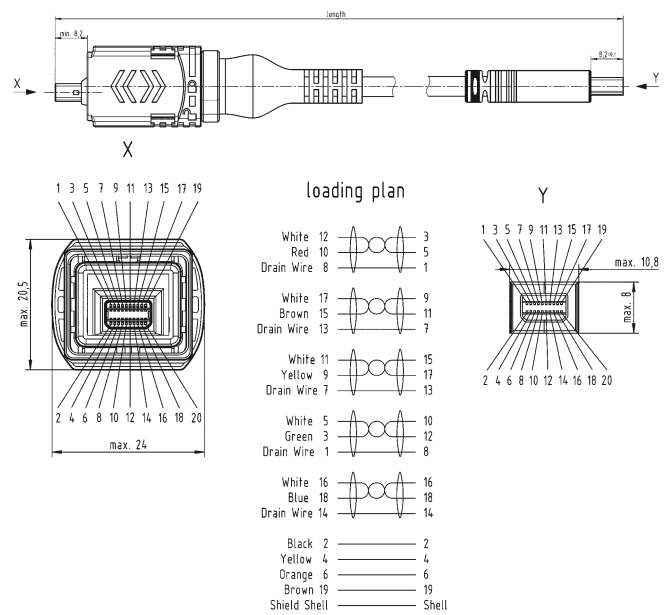
HARTING PushPull,
Copper cable (round),
Pre-assembled on both
sides,
DisplayPort 1.2

| | |
|-------|----------------|
| 0.5 m | 09 45 145 1010 |
| 1 m | 09 45 145 1011 |
| 1.5 m | 09 45 145 1012 |
| 2 m | 09 45 145 1013 |



HARTING PushPull,
Copper cable (round),
Pre-assembled on both
sides,
DisplayPort 1.1

| | |
|-----|----------------|
| 3 m | 09 45 145 1014 |
|-----|----------------|





HARTING PushPull, type acc. to IEC 61 076-3-106 variant 4
10 poles 50 V / 5 A

Features

- HARTING PushPull technology
- For the transmission of analog, low voltage and bus signals
- Fully shielded
- 10 contacts
- Touch-proof
- Easy and fast cable installation

Technical characteristics

| | |
|--------------------------------------|---|
| Locking | PushPull technology acc. to IEC 61076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Mating face | acc. to IEC/PAS 61076-3-113 |
| Number of contacts | 10 |
| Electrical data acc. to DIN EN 61984 | 5 A 50 V 1.5 kV 3 |
| Contact resistance | 10 mΩ |
| Termination | Crimp or solder |
| Conductor cross section | AWG 24 ... 18; 0.25 ... 0.82 mm ² |
| Conductor diameter | max. 2.1 mm |
| Outer cable diameter | 4.5 ... 10 mm |
| Shielding | Fully shielded, 360° shielding contact |
| Mating cycles | min. 500 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

Identification

Part number

Drawing

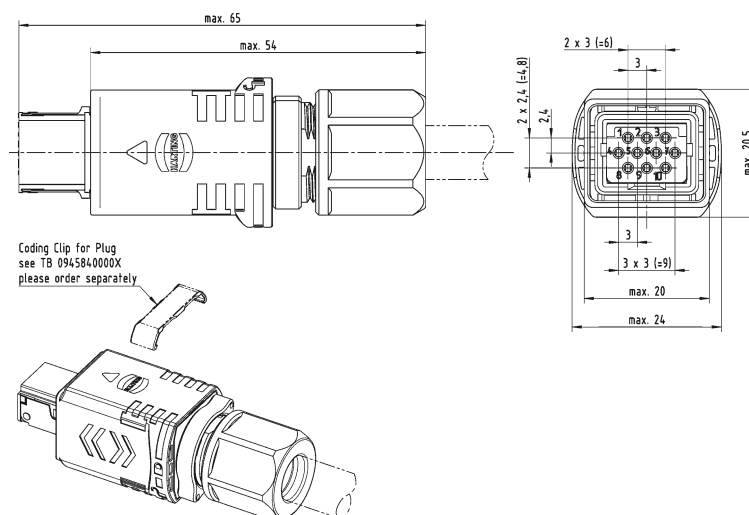
Dimensions in mm

HARTING PushPull Signal

Connector set 10 poles
incl. plastic housing
and female insert

09 45 145 9011

Order D-Sub crimp female con-
tacts separately



D-Sub crimp contacts for cable side

female, turned
AWG 24-20; 0.25 - 0.52 mm²

09 67 000 8476¹⁾

female, turned
AWG 22-18; 0.33 - 0.82 mm²

09 67 000 3476¹⁾

female, stamped
AWG 24-20; 0.25 - 0.56 mm²

09 67 000 8278²⁾

¹⁾ To be used with crimp tool 09 99 000 0501. Suitable locator: 09 99 000 0531

²⁾ To be used with crimp tool 09 99 000 0175.

| Identification | Part number | Drawing | Dimensions in mm |
|---|--|-------------------|------------------|
| HARTING PushPull Signal Insert for panel feed-through HIFF, 10 poles incl. male insert Order D-Sub crimp male contacts separately | 09 45 545 9010 | | |
| D-Sub crimp contacts for device side male, turned AWG 24-20; 0.25-0.52 mm ² male, turned AWG 22-18; 0.33-0.82 mm ² male, stamped AWG 24-20; 0.25-0.56 mm ² | 09 67 000 8576 ¹⁾ 09 67 000 3576 ¹⁾ 09 67 000 8178 ²⁾ | | |
| HARTING PushPull suitable bulkhead mounted housing, plastic Compact | 09 45 545 0041 | | |
| HARTING PushPull Signal solder jack angled suitable bulkhead mounted housings with fixing clip without fixing clip | 09 45 545 9011 09 45 545 0042 09 45 545 0043 | panel cutting | |
| HARTING PushPull Signal solder jack straight suitable bulkhead mounted housing | 09 45 545 9012 09 45 545 0040 | | |

1) To be used with crimp tool 09 99 000 0501. Suitable locator: 09 99 000 0531
 2) To be used with crimp tool 09 99 000 0175.



10x AWG 20
 HARTING PushPull Signal 10-pin
 HARTING PushPull Signal 10-pin

Features

- Double-sided IP65/IP67 protection
- Simple handling by HARTING PushPull
- 10-pin

Technical characteristics

| | |
|----------------------|----------------------------------|
| Number of cores | 10 |
| Core structure | 10x AWG 20 |
| Connector 1 | HARTING PushPull, Signal, 10-pin |
| Connector 2 | HARTING PushPull, Signal, 10-pin |
| Rated current | 5 A |
| Rated voltage | 50 V |
| Limiting temperature | -40 ... +80 °C |
| Material (cable) | PVC |
| Colour (cable) | Grey |

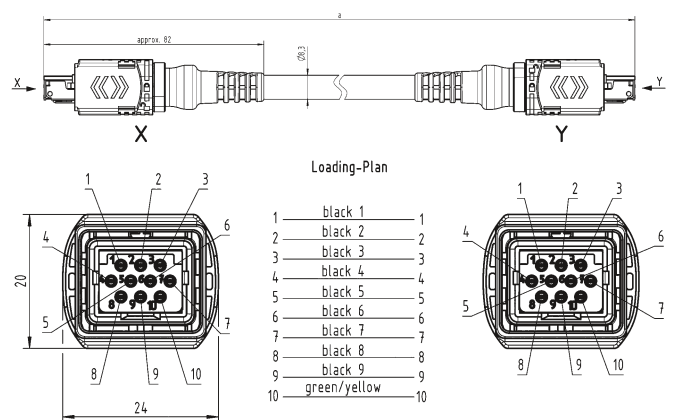
Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

HARTING PushPull,
 Copper cable (round),
 Wiring 1:1,
 Pre-assembled on both
 sides

| | |
|-------|--------------------|
| 0.5 m | 09 48 313 18A6 005 |
| 1 m | 09 48 313 18A6 010 |
| 1.5 m | 09 48 313 18A6 015 |
| 2 m | 09 48 313 18A6 020 |
| 3 m | 09 48 313 18A6 030 |
| 4 m | 09 48 313 18A6 040 |
| 5 m | 09 48 313 18A6 050 |
| 7.5 m | 09 48 313 18A6 075 |
| 10 m | 09 48 313 18A6 100 |
| 15 m | 09 48 313 18A6 150 |
| 20 m | 09 48 313 18A6 200 |





HARTING PushPull USB
Components device side and panel feed-throughs

Advantages

- HARTING PushPull technology
- Compact, space-saving design for the device integration of USB jacks
- USB 2.0 and 3.0 compatible

Technical characteristics

| | |
|----------------------|---|
| Mating face | USB 2.0 type B and USB 2.0 / 3.0 type A |
| Number of contacts | USB 2.0: 4 and USB 3.0: 9 |
| Degree of protection | IP65 / IP67 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |

| Identification | Part number | Drawing | Dimensions in mm |
|--|--|---------|------------------|
| Components device side USB 2.0 type B Solder jack, angled 90°, THT | 09 45 541 1900 | | |
| Adapter PCB USB 2.0 type A Jack to pin header | 09 45 541 1902 | | |
| Adapter PCB USB 2.0 type B Jack to jack Type B-B Type B-B, 90° Type A-B | 09 45 541 1906 09 45 541 1907 09 45 541 1910 | | |



HARTING PushPull USB
Panel feed-throughs

Advantages

- HARTING PushPull technology
- Compact, space-saving design for the device integration of USB jacks
- USB 2.0 and 3.0 compatible

Technical characteristics

| | |
|----------------------|---------------------------|
| Mating face | USB 2.0 / 3.0 type A |
| Number of contacts | USB 2.0: 4 and USB 3.0: 9 |
| Degree of protection | IP65 / IP67 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------|---------|------------------|
| Panel feed-throughs | | | |
| Panel feed-through set incl. bulkhead mounted housing – Compact, with integrated seal | | | |
| USB 2.0 type A 2 x jack | 09 45 245 1920 | | |
| USB 3.0 type A 2 x jack | 09 45 245 1930 | | |
| Coupler (IP20) | | | |
| USB 2.0 type A 2 x jack | 09 45 545 1901 | | |
| USB 3.0 type A 2 x jack | 09 45 545 1902 | | |



4 wires
 HARTING PushPull USB 2.0 Type A
 HARTING PushPull USB 2.0 Type A

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics

| | |
|------------------|-----------------------------------|
| Number of cores | 4 |
| Core structure | 4 wires |
| Connector 1 | HARTING PushPull, USB 2.0, Type A |
| Connector 2 | HARTING PushPull, USB 2.0, Type A |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

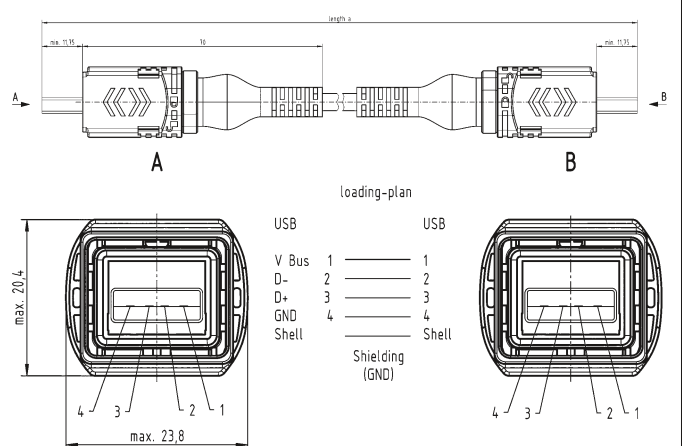
Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

USB,
 Copper cable (round),
 Pre-assembled on both
 sides



| | |
|-------|----------------|
| 0.5 m | 09 45 445 1900 |
| 1 m | 09 45 445 1901 |
| 1.5 m | 09 45 445 1902 |
| 2 m | 09 45 445 1903 |
| 3 m | 09 45 445 1904 |
| 5 m | 09 45 445 1905 |





4 wires
 HARTING PushPull USB 2.0 Type A
 IP20 USB 2.0 Type A

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics

| | |
|------------------|-----------------------------------|
| Number of cores | 4 |
| Core structure | 4 wires |
| Connector 1 | HARTING PushPull, USB 2.0, Type A |
| Connector 2 | IP20, USB 2.0, Type A |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

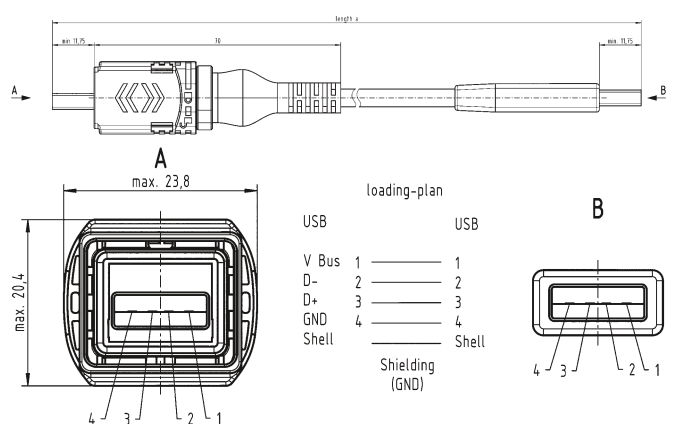
Other cable lengths on request!

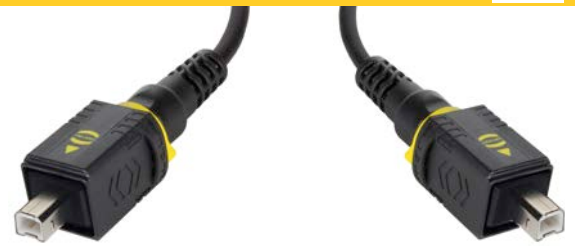
| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

USB,
 Copper cable (round),
 Pre-assembled on both
 sides



| | |
|-------|----------------|
| 0.5 m | 09 45 445 1910 |
| 1 m | 09 45 445 1911 |
| 1.5 m | 09 45 445 1912 |
| 2 m | 09 45 445 1913 |
| 3 m | 09 45 445 1914 |
| 5 m | 09 45 445 1915 |





4 wires
 HARTING PushPull USB 2.0 Type B
 HARTING PushPull USB 2.0 Type B

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics


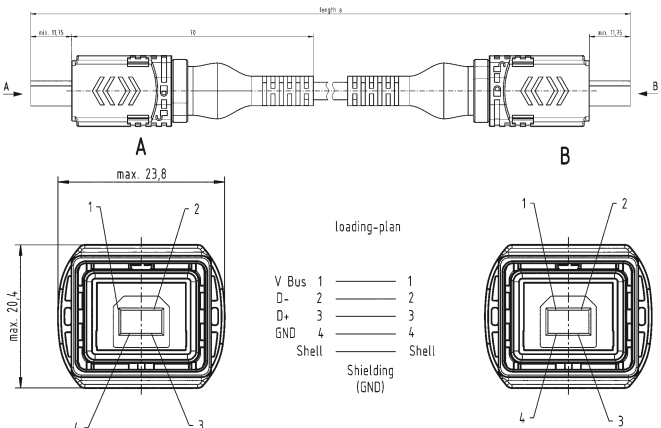
| | |
|------------------|-----------------------------------|
| Number of cores | 4 |
| Core structure | 4 wires |
| Connector 1 | HARTING PushPull, USB 2.0, Type B |
| Connector 2 | HARTING PushPull, USB 2.0, Type B |
| Material (cable) | PVC |
| Colour (cable) | Black |

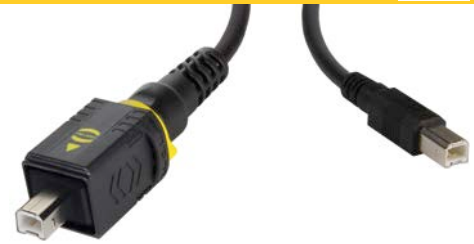
Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|---|--|--|--|------------------|
| USB, Copper cable (round), Pre-assembled on both sides  | 0.5 m 1 m 1.5 m 2 m 3 m 5 m | 09 45 445 3900 09 45 445 3901 09 45 445 3902 09 45 445 3903 09 45 445 3904 09 45 445 3905 |  | |



4 wires
 HARTING PushPull USB 2.0 Type B
 IP20 USB 2.0 Type B

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics

| | |
|------------------|-----------------------------------|
| Number of cores | 4 |
| Core structure | 4 wires |
| Connector 1 | HARTING PushPull, USB 2.0, Type B |
| Connector 2 | IP20, USB 2.0, Type B |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

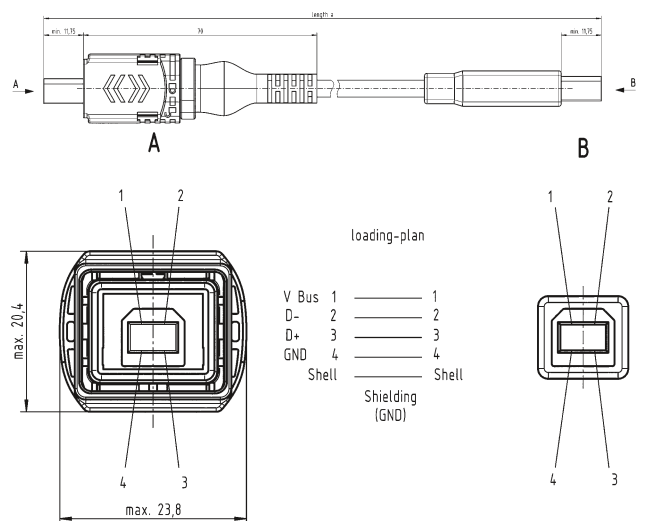
Other cable lengths on request!

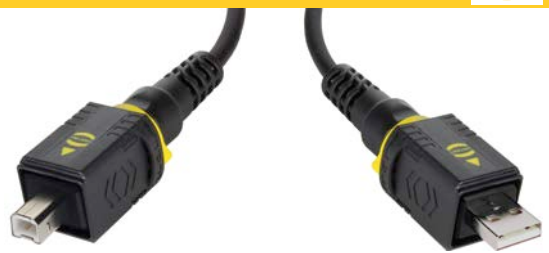
| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

USB,
 Copper cable (round),
 Pre-assembled on both
 sides



| | |
|-------|----------------|
| 0.5 m | 09 45 445 3910 |
| 1 m | 09 45 445 3911 |
| 1.5 m | 09 45 445 3912 |
| 2 m | 09 45 445 3913 |
| 3 m | 09 45 445 3914 |
| 5 m | 09 45 445 3915 |





4 wires
 HARTING PushPull USB 2.0 Type A
 HARTING PushPull USB 2.0 Type B

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics


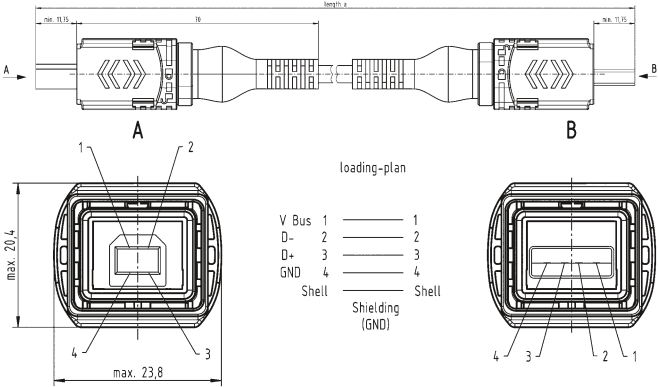
| | |
|------------------|-----------------------------------|
| Number of cores | 4 |
| Core structure | 4 wires |
| Connector 1 | HARTING PushPull, USB 2.0, Type A |
| Connector 2 | HARTING PushPull, USB 2.0, Type B |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--|--|--|------------------|
| USB, Copper cable (round), Pre-assembled on both sides  | 0.5 m 1 m 1.5 m 2 m 3 m 5 m | 09 45 445 4900 09 45 445 4901 09 45 445 4902 09 45 445 4903 09 45 445 4904 09 45 445 4905 |  | |



4 wires
 HARTING PushPull USB 2.0 Type B
 IP20 USB 2.0 Type A

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics

| | |
|------------------|-----------------------------------|
| Number of cores | 4 |
| Core structure | 4 wires |
| Connector 1 | HARTING PushPull, USB 2.0, Type B |
| Connector 2 | IP20, USB 2.0, Type A |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

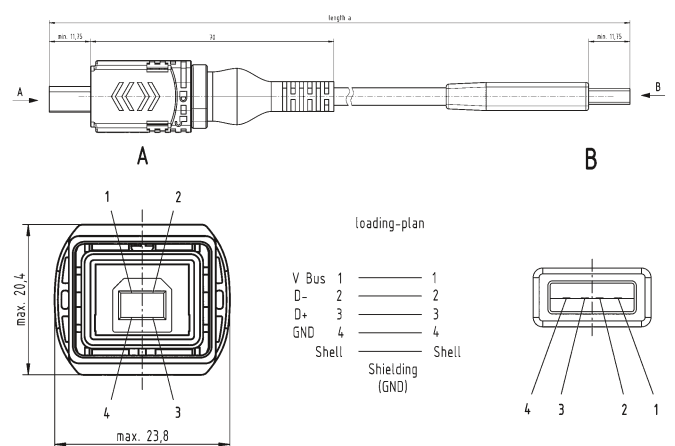
Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

USB,
 Copper cable (round),
 Pre-assembled on both
 sides



| | |
|-------|----------------|
| 0,5 m | 09 45 445 4910 |
| 1 m | 09 45 445 4911 |
| 1,5 m | 09 45 445 4912 |
| 2 m | 09 45 445 4913 |
| 3 m | 09 45 445 4914 |
| 5 m | 09 45 445 4915 |





4 wires
 HARTING PushPull USB 2.0 Type A
 IP20 USB 2.0 Type B

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics


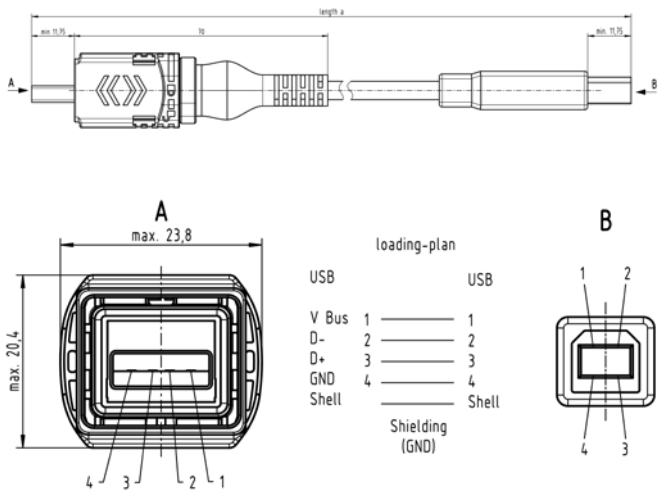
| | |
|------------------|-----------------------------------|
| Number of cores | 4 |
| Core structure | 4 wires |
| Connector 1 | HARTING PushPull, USB 2.0, Type A |
| Connector 2 | IP20, USB 2.0, Type B |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--|--|--|------------------|
| USB, Copper cable (round), Pre-assembled on both sides  | 0.5 m 1 m 1.5 m 2 m 3 m 5 m | 09 45 445 2930 09 45 445 2931 09 45 445 2932 09 45 445 2933 09 45 445 2934 09 45 445 2935 |  | |



9 wires
 HARTING PushPull USB 3.0 Type A
 HARTING PushPull USB 3.0 Type A

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 2.0 compatible

Technical characteristics

| | |
|------------------|-----------------------------------|
| Number of cores | 9 |
| Core structure | 9 wires |
| Connector 1 | HARTING PushPull, USB 3.0, Type A |
| Connector 2 | HARTING PushPull, USB 3.0, Type A |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

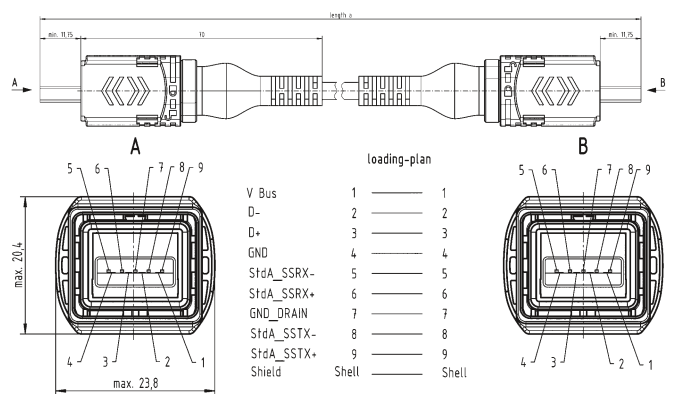
Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|----------------|--------------|-------------|---------|------------------|
|----------------|--------------|-------------|---------|------------------|

USB,
 Copper cable (round),
 Pre-assembled on both
 sides



| | |
|-------|----------------|
| 0.5 m | 09 45 445 2900 |
| 1 m | 09 45 445 2901 |
| 1.5 m | 09 45 445 2902 |
| 2 m | 09 45 445 2903 |
| 3 m | 09 45 445 2904 |
| 5 m | 09 45 445 2905 |





9 wires
 HARTING PushPull USB 3.0 Type A
 IP20 USB 3.0 Type A

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 3.0 compatible

Technical characteristics


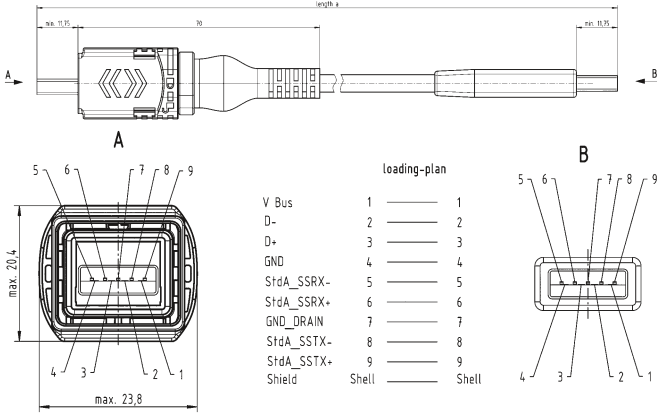
| | |
|------------------|-----------------------------------|
| Number of cores | 9 |
| Core structure | 9 wires |
| Connector 1 | HARTING PushPull, USB 3.0, Type A |
| Connector 2 | IP20, USB 3.0, Type A |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing | Dimensions in mm |
|--|--------------|----------------|--|------------------|
| USB, Copper cable (round), Pre-assembled on both sides  | 0.5 m | 09 45 445 2910 |  | |
| | 1 m | 09 45 445 2911 | | |
| | 1.5 m | 09 45 445 2912 | | |
| | 2 m | 09 45 445 2913 | | |
| | 3 m | 09 45 445 2914 | | |
| | 5 m | 09 45 445 2915 | | |



9 wires
 HARTING PushPull USB 3.0 Type A
 IP20 USB 3.0 Type B

Features

- HARTING PushPull technology
- 360° shielding
- Flexible, space saving
- Robust industrial design
- USB 3.0 compatible

Technical characteristics

| | |
|------------------|-----------------------------------|
| Number of cores | 9 |
| Core structure | 9 wires |
| Connector 1 | HARTING PushPull, USB 3.0, Type A |
| Connector 2 | IP20, USB 3.0, Type B |
| Material (cable) | PVC |
| Colour (cable) | Black |

Specifications and approvals

IEC 61076-3-106 variant 4 (V4), PushPull technology

Details

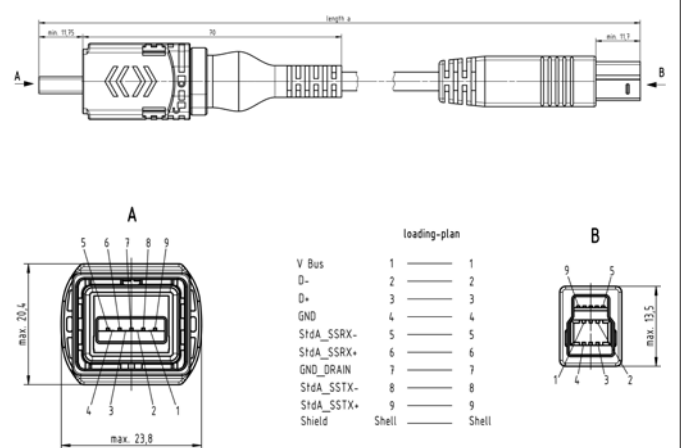
Other cable lengths on request!

Identification Cable length Part number Drawing Dimensions in mm

USB,
 Copper cable (round),
 Pre-assembled on both
 sides



| | |
|-------|----------------|
| 0.5 m | 09 45 445 2940 |
| 1 m | 09 45 445 2941 |
| 1.5 m | 09 45 445 2942 |
| 2 m | 09 45 445 2943 |
| 3 m | 09 45 445 2944 |
| 5 m | 09 45 445 2945 |



HARTING offers with the HARTING PushPull Power connector a universal solution for the power supply in compact and robust applications. It is in its element wherever small dimensions are combined with a high protection class.

The connector is available in a 4 pole 48 V and a 2 pole 250 V version. The power contacts can carry up to 12 resp. 16 A each (see deratings). In spite of this high current carrying capacity the connector gets by with minimal dimensions and fulfils the industrial requirements for clearances and creepage distances at the same time (pollution degree 3 and overvoltage category III).

Additionally the HARTING PushPull Power connector offers the protection class of IP67 and 65. Beside numerous industrial use cases it is thereby suited for diverse applications in the fields of transportation and telecommunication.

The cable side of the HARTING PushPull Power is terminated with crimping technology. For the receptacle several solutions with different termination technologies are offered.

- Regulations**
- VDE 0110
 - DIN EN 61984

Advantages

- Minimum space requirements in spite of high current carrying capacity
- Very compact housing in a high protection class
- Protection against contact on plug AND receptacle side enables an easy and safe installation
- For low voltage (48 V) and for power supply (250 V) available
- Codeable without losing contacts
- Different termination technologies for individual device integration

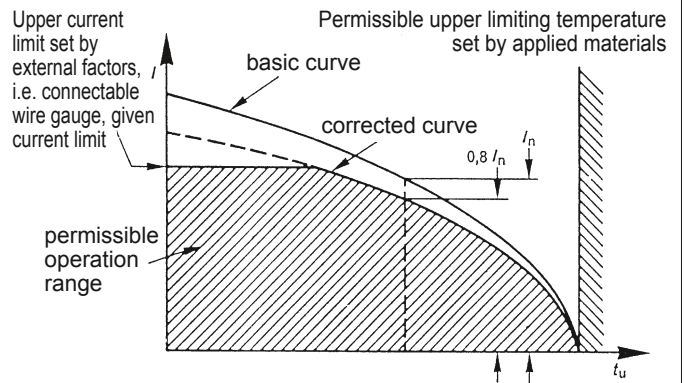
Typical application areas

- Factory and building automation
- Industrial electronics
- Telecommunication and wireless networks
- Transportation
- Industrial monitoring and camera systems
- Lighting and display technology
- Access control systems

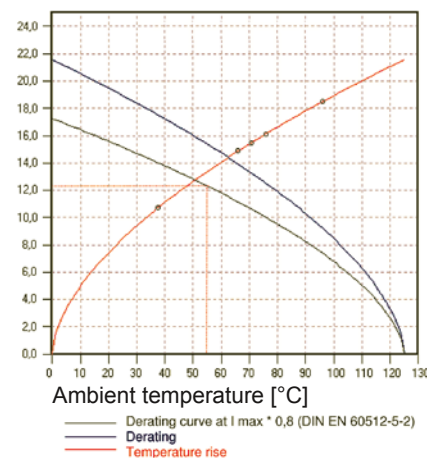
Current carrying capacity

The current carrying capacity is determined in tests which are conducted on the basis of the DIN IEC 60512-5-2. The current carrying capacity is limited by the thermal properties of materials which are used for inserts as well as by the insulating materials. These components have a limiting temperature which should not be exceeded.

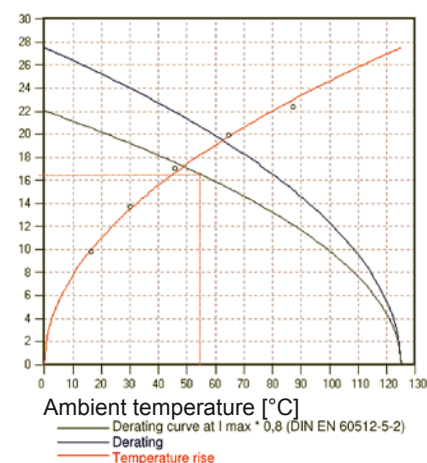
Example of a current capacity curve



Derating-Diagram for low voltage, 48 V; 4x 12 A



Derating-Diagram for power supply, 250 V; 2x 16 A





HARTING PushPull Power 4/0,
type acc. to IEC 61 076-3-106 variant 4
panel feed-throughs 4 poles 48 V / 12 A

Advantages

- Power connectors for devices
- Compact panel feed-through and females for simple device integration
- Compact, space-saving design
- Touch-proof according to IEC DIN EN 60 529
- Polarisation with the aid of coding pins
- Device side: female with cable cage, crimp or solder termination
- 4 different coding variants without loss of contact

Technical characteristics

| | |
|-------------------------------------|---|
| Locking | PushPull Technology acc. to IEC 61 076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 |
| Electrical data acc. to EN 61984 | 12 A 48 V 1.5 kV 3 |
| Termination | Crimp |
| Termination cross section | 0.75 - 2.5 mm ² (AWG 20 - 12) stranded |
| Termination | Solder pins |
| Termination diameter | 1.6 mm |
| Termination | Cable cage |
| Termination cross section | 0.75 - 2.5 mm ² (AWG 20 - 12) stranded |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|------------------------------|---------|------------------|
| Panel feed-through set | | | |
| Bulkhead mounted housing – Compact | | | |
| with 4 turned female contacts and insulation body | | | |
| with crimp termination | 09 46 245 4420 | | |
| with solder termination, 90° angled | 09 46 245 4020 | | |
| with cage clamp terminal on pcb | 09 46 245 4021 | | |
| Power-female with solder termination | | | |
| 4 poles, 48 V / 12 A, 90° angled | 09 46 500 4400 ¹⁾ | | |
| 4 poles, 48 V / 12 A, straight | 09 46 500 4402 ²⁾ | | |
| Power-female with crimp termination | 09 46 500 4401 | | |

1) Suitable housings: 09 45 545 0042 / ... 0043

2) Suitable housing: 09 45 545 0040



HARTING PushPull Power 4/0,
type acc. to IEC 61076-3-106 variant 4
connector 4 poles 48 V / 12 A

Advantages

- Power connectors for devices
- Compact, space-saving design
- Touch-proof according to IEC DIN EN 60529
- Polarisation with the aid of coding pins
- Cable side: Male with crimp termination
- 4 different coding variants without loss of contact

Technical characteristics

| | |
|-------------------------------------|--|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 |
| Electrical data acc. to EN 61984 | 12 A 48 V 1.5 kV 3 |
| Cable diameter | 4.5 ... 10 mm |
| Termination | Crimp |
| Termination cross section | 0.75 - 2.5 mm ² (AWG 20 - 12) stranded |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

Identification

Part number

Drawing

Dimensions in mm

Connector set

incl. 4 turned crimp contacts (male)
for 1.5 mm², insulation body, housing,
cable gland

09 46 145 4420

Connector set

without contacts

09 46 145 4421

Accessories – crimp contacts male

0.75 mm² (AWG 20 - 18)

09 46 500 0403

1.0 mm² (AWG 18)

09 46 500 0407

1.5 mm² (AWG 16 - 14)

09 46 500 0401

2.5 mm² (AWG 12)

09 46 500 0405

Accessories – crimp contacts female

0.75 mm² (AWG 20 - 18)

09 46 500 0404

1.0 mm² (AWG 18)

09 46 500 0408

1.5 mm² (AWG 16 - 14)

09 46 500 0402

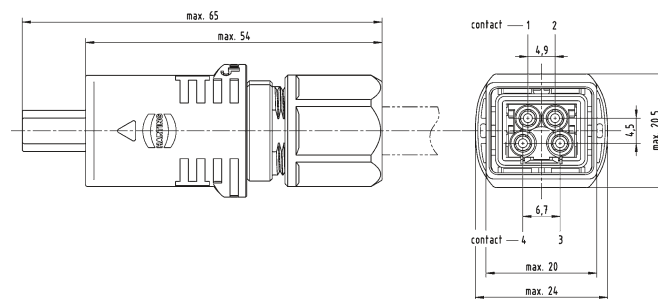
2.5 mm² (AWG 12)

09 46 500 0406

Accessories – Coding pin set

to avoid accidental incorrect mating
a coding system is required.
This coding pins are inserted without
loss of contact.

09 46 840 0000



Number of contacts

4

4G 1,5 mm²

HARTING PushPull (V4) Power 4-polig

HARTING PushPull (V4) Power 4-polig



Technical characteristics

| | |
|---|--|
| Number of cores | 4 |
| Core structure | 4G 1.5 mm ² |
| Connector | 1 HARTING PushPull (V4) Power 4-pin |
| Connector 2 | HARTING PushPull (V4) Power 4-pin |
| Rated current | 12 A |
| Rated voltage | 48 V |
| Limiting temperature - | 40 ... +80 °C |
| Degree of protection acc. to IEC 60529 | IP65 / IP67 |
| Material (cable) | PUR (polyurethane) |
| Colour (cable) | Grey |

Specifications and approvals

IEC 61076-3-106 Variante 4 (V4)

Details

Other cable lengths on request!

| Identification | Conductor cross-section (mm ²) | Cable length | Part number | Drawing | Dimensions in mm |
|--|--|--------------|--------------------|---------|------------------|
| HARTING PushPull (V4), Copper cable (round), Wiring 1:1, Cable assemblies, Pre-assembled on both sides, Crimp termination, Unshielded | 1.5 | 0.5 m | 33 59 222 0050 002 | | |
| | 1.5 | 1 m | 33 59 222 0100 002 | | |
| | 1.5 | 2 m | 33 59 222 0200 002 | | |
| | 1.5 | 3 m | 33 59 222 0300 002 | | |
| | 1.5 | 4 m | 33 59 222 0400 002 | | |
| | 1.5 | 5 m | 33 59 222 0500 002 | | |
| | 1.5 | 7.5 m | 33 59 222 0750 002 | | |
| | 1.5 | 10 m | 33 59 222 1000 002 | | |
| | 1.5 | 15 m | 33 59 222 1500 002 | | |
| | 1.5 | 20 m | 33 59 222 2000 002 | | |
| | 1.5 | 30 m | 33 59 222 3000 002 | | |





HARTING PushPull Power 2/0,
type acc. to IEC 61076-3-106 variant 4
panel feed-through and connector, 3 poles, 250 V / 16 A

Advantages

- Power connectors for devices
- Compact, space-saving design
- Touch-proof according to IEC DIN EN 60 529
- Polarisation with the aid of coding pins
- Cable side: Male with crimp termination
- Device side: female with crimp termination
- 4 different coding variants without loss of contact

Technical characteristics

| | |
|-------------------------------------|--|
| Locking | PushPull Technology acc. to IEC 61076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 2 + PE |
| Electrical data acc. to EN 61984 | 16 A 250 V 4 kV 3 |
| Cable diameter | 4.5 ... 10 mm |
| Termination | Crimp |
| Termination cross section | 0.75 - 2.5 mm ² (AWG 20 - 12) stranded |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------|---------|------------------|
| Components device side | | | |
| Panel feed-through set insulation body (black) | 09 46 245 3420 | | |
| Power-female with solder termination angled | 09 46 500 3400 | | |
| Power-female with crimp termination without contacts | 09 46 500 3401 | | |
| Connector set incl. 3 turned crimp contacts (male) for 1.5 mm ² , insulation body (black), housing, cable gland | 09 46 145 3420 | | |
| Connector set without contacts | 09 46 145 3421 | | |
| Coding pin set to avoid accidental incorrect mating a coding system is required. This coding pins are inserted without loss of contact. | 09 46 840 0000 | | |

Number of contacts

2+

3G 1,5 mm²

HARTING PushPull (V4) Power 3-polig

HARTING PushPull (V4) Power 3-polig



Technische Kennwerte

| | |
|---|--|
| Number of cores | 3 |
| Core structure | 3G 1.5 mm ² |
| Connector | 1 HARTING PushPull (V4) Power 3-pin |
| Connector 2 | HARTING PushPull (V4) Power 3-pin |
| Rated current | 16 A |
| Rated voltage | 250 V |
| Limiting temperature - | 40 ... +80 °C |
| Degree of protection acc. to IEC 60529 | IP65 / IP67 |
| Material (cable) | PUR (polyurethane) |
| Colour (cable) | Grey |

Normen und Zulassungen

IEC 61076-3-106 Variante 4 (V4)

Hinweise

Weitere Kabellängen auf Anfrage!

| Identification | Conductor cross-section (mm ²) | Cable length | Part number | Drawing | Dimensions in mm |
|---|--|--------------|--------------------|---------|------------------|
| HARTING PushPull (V4), Copper cable (round), Wiring 1:1, Cable assemblies, Pre-assembled on both sides, Crimp termination, Unshielded, PushPull | 1,5 | 0,5 m | 33 59 222 0050 001 | | |
| | 1,5 | 1 m | 33 59 222 0100 001 | | |
| | 1,5 | 2 m | 33 59 222 0200 001 | | |
| | 1,5 | 3 m | 33 59 222 0300 001 | | |
| | 1,5 | 4 m | 33 59 222 0400 001 | | |
| | 1,5 | 5 m | 33 59 222 0500 001 | | |
| | 1,5 | 7,5 m | 33 59 222 0750 001 | | |
| | 1,5 | 10 m | 33 59 222 1000 001 | | |
| | 1,5 | 15 m | 33 59 222 1500 001 | | |
| | 1,5 | 20 m | 33 59 222 2000 001 | | |
| | 1,5 | 30 m | 33 59 222 3000 001 | | |

Identification

Part number

HARTING PushPull Power
8-indent crimping tool incl. positioner

Locator HARTING PushPull Power
contacts for Buchanan crimping tool
(09 99 000 0001)

09 46 800 0000

09 46 800 0010



For wire gauges
0.08 ... 4.0 mm²
(AWG 28 ... 12).

Insertion tool

09 46 800 0099

Extraction tool

09 46 800 0098



For an easy insertion and
extraction of the male and
female crimp contacts into /
out of the insulator body.

Crimp connection

A perfect crimp connection is gastight, therefore corrosion free and amounts to a cold weld of the parts being connected. For this reason, major features in achieving high quality crimp connections are the design of the contact crimping parts and of course the crimping tool itself. Wires to be connected must be carefully matched with the correct size of crimp contacts. If these basic requirements are met, users will be assured of highly reliable connections with low contact resistance and high resistance to corrosive attack.

The economic and technical advantages are:

- Constant contact resistance as a result of precisely repeated crimp connection quality
- Corrosion free connections as a result of cold weld action
- Pre-preparation of cable forms with crimp contacts fitted
- Optimum cost cable connection

Requirements for crimp connectors are laid down in DIN IEC 60352-2, Amend. 2, as illustrated in the table.

Pull out force of stranded wire

The main criterion to judge the quality of a crimp connection is the retention force achieved by the wire conductor in the terminal section of the contact. DIN IEC 60352, part 2, defines the extraction force in relation to the cross-section of the conductor. When fitted using HARTING crimping tools and subject to their utilization in an approved manner, our crimp connectors comply with the required extraction forces.

Tensile strength of crimped connections

| Conductor cross-section | | Tensile strength |
|-------------------------|-----|------------------|
| mm ² | AWG | N |
| 0.08 | 28 | 11 |
| 0.12 | 26 | 15 |
| 0.14 | | 18 |
| 0.22 | 24 | 28 |
| 0.25 | | 32 |
| 0.32 | 22 | 40 |
| 0.5 | 20 | 60 |
| 0.75 | | 85 |
| 0.82 | 18 | 90 |
| 1.0 | | 108 |
| 1.3 | 16 | 135 |
| 1.5 | | 150 |
| 2.1 | 14 | 200 |
| 2.5 | | 230 |
| 3.3 | 12 | 275 |
| 4.0 | | 310 |

Extract from DIN IEC 60352-2, Amend. 2, Table IV

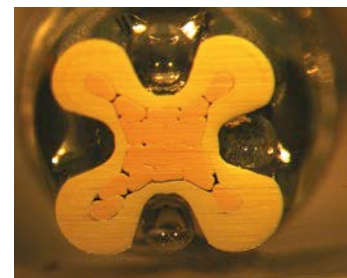
Crimping tools

Crimping tools (hand operated or automatic) are carefully designed to produce with high pressure forming parts a symmetrical connection of the crimping part of the contact and the wire being connected with the minimum increase in size at the connection point. The positioner automatically locates the crimp and wire at the correct point in the tool.

A ratchet in the tool performs 2 functions:

- ① It prevents insertion of the crimp into the tool for crimping before the jaws are fully open
- ② It prevents the tool being opened before the crimping action is completed

Identical, perfectly formed, connections can be produced using this crimping system.



Crimp-cross section
HARTING crimp profile

| Identification | Part number | Drawing | Dimensions in mm |
|--|--------------------|---------|------------------|
| <p>Transport protection</p> <p>for device side IP40</p> | 09 45 845 0003 | | |
| <p>Protection cover</p> <p>for device side IP65 / IP67</p> | | | |
| <p>Version with passive locking without cord</p> | 09 45 845 0009 024 | | |
| <p>Version with passive locking with plastic cord for fixing screw M3</p> | 09 45 845 0009 | | |
| <p>Version with passive locking with nylon cord for fixing screw M2.5 / M3</p> | 09 45 845 0011 024 | | |
| <p>Version with active locking without cord</p> | 09 45 845 0015 | | |
| <p>Version with active locking with plastic cord for fixing screw M3</p> | 09 45 845 0014 | | |
| <p>Version with active locking with nylon cord for fixing screw M2.5 / M3</p> | 09 45 845 0013 | | |
| <p>Protection cover</p> <p>for connectors IP65 / IP67</p> | 09 45 845 0010 | | |
| <p>Blinding plate</p> <p>to close PushPull Compact panel cuttings</p> | 09 45 845 0019 | | |



HARTING PushPull, type acc. to IEC 61 076-3-106 variant 4
cable to cable housing

Features

- HARTING PushPull technology
- Ideal for prototyping
- Can be combined with panel feed-throughs for power, data and signal

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull technology acc. to IEC 61076-3-106 variant 4 |
| Degree of protection | IP65 / IP67 |
| Outer cable diameter | 6.5 ... 9.5 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|--|---|------------------|
| HARTING PushPull cable to cable housings, plastic (Order housing bulkhead mounting and insert separately) for outer cable diameter 6.5 ... 9.5 mm | 09 45 345 0000 | 2X M2.5x10 self tapping screws according to EN ISO 7092 | |
| HARTING PushPull bulkhead housings, plastic (Order housing bulkhead mounting and insert separately) | 09 45 345 0001 | 2X M2.5x10 self tapping screws according to EN ISO 7092 | |
| Suitable bulkhead housing, plastic for RJ45 / Signal | 09 45 545 0028 | | |
| Inserts for RJ45 / Signal RJ 45: 8 poles, Cat. 6 / class E _A Ha-Vis preLink® set AWG 22/23 HARTING RJ Industrial® cable jack with IDC termination AWG 22-24, 8 poles AWG 24-28, 8 poles AWG 22-24, 4 poles, Cat. 5 Signal: 10 poles, 50 V / 5 A* | 20 82 001 0001 09 45 545 1562 09 45 545 1561 09 45 545 1120 09 45 545 9010 | | |

* Order D-Sub crimp male contacts separately (see pages 02.19 and 02.20)



Ethernet ports copper 2x HARTING PushPull (V4) RJ45 (IP65 / IP67)

Features

- Simple mounting
- Cable entering optionally from bottom or from topside
- Self-closing protection caps in IP65 / IP67
- IP65 / IP67 Label
- Compatible with RJ45 female inserts (HIFF-version)

Technical characteristics

| | |
|---|---|
| Transmission characteristics | Cat. 6 _A , Class E _A up to 500 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Limiting temperature | -20 ... +70 °C |
| Conductor cross-section | 0.22 ... 0.32 mm ² Solid 0.22 ... 0.32 mm ² Stranded |
| Conductor cross-section | AWG 24 ... AWG 22 |
| Wire outer diameter | 1.7 mm |
| Degree of protection acc. to IEC 60529 | IP65 / IP67 |
| Cable diameter | 6 ... 9 mm |
| Fixing | Wall mounting |
| Material (hood/housing) | Polycarbonate (PC) Fibre-glass reinforced |
| Colour (hood/housing) | Black, White |
| Material flammability class acc. to UL 94 | V-0 |

Identification

Part number

Drawing

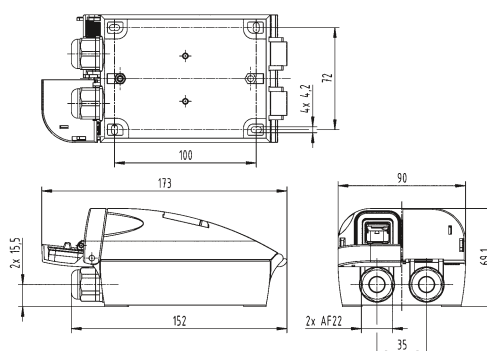
Dimensions in mm

HARTING PushPull (V4),

IDC termination,
Fully shielded, 360° shielding contact,
Outlet,
Black,
Pack contents:
2-port outlet housing with protection caps,
Cable management,
Cable gland,
Label,
2x RJ45 jack,
Dummy plugs,
Assembly instructions



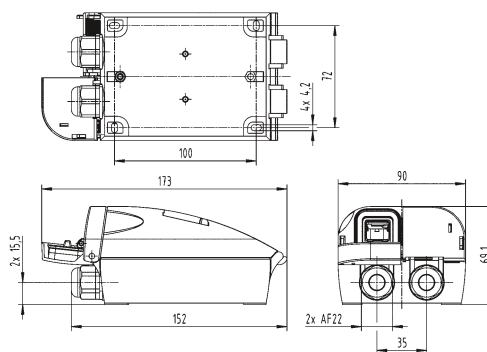
09 45 845 1562

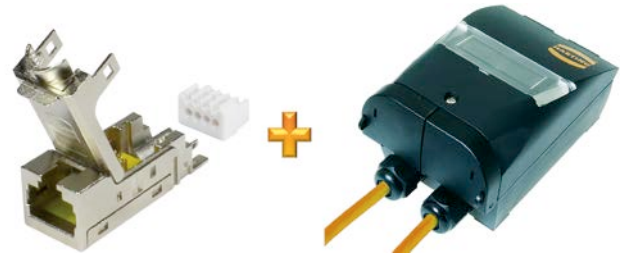


HARTING PushPull (V4),

IDC termination,
Fully shielded, 360° shielding contact,
Outlet,
White,
Pack contents:
2-port outlet housing with protection caps,
Cable management,
Cable gland,
Label,
2x RJ45 jack,
Dummy plugs,
Assembly instructions

09 45 845 1563





Technical characteristics

| | |
|---------------------------------------|----------------|
| Limiting temperature | -20 ... +70 °C |
| Degree of protection acc. to IEC60529 | IP65 / IP67 |
| Cable diameter | 6 ... 9 mm |
| Fixing | Wall mounting |

Technical characteristics

| | |
|--|--|
| Material (hood/housing) | Polycarbonate (PC) Fibre-glass reinforced |
| Colour (hood/housing) | Black |
| Material flammability class acc.to UL 94 | V-0 |

Identification

Part number

Drawing

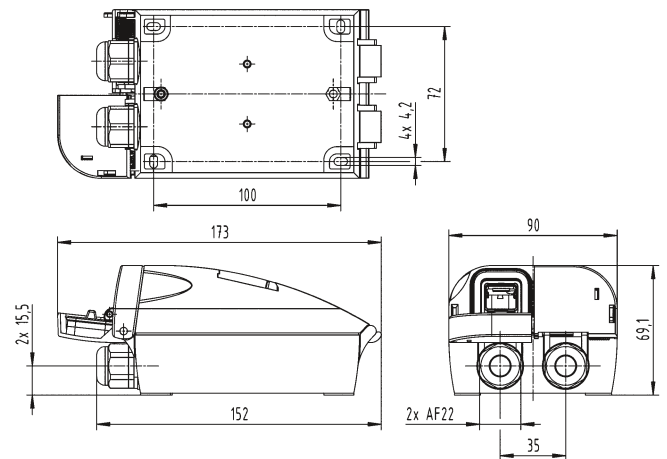
Dimensions in mm

HHARTING PushPull (V4),
Outlet,
Empty,
for fixture of 2x RJ45 female inserts,
Black

09 45 845 1560



Please order insert separately.





Number of contacts

4



Technical characteristics

| | |
|--|--|
| Number of contacts | 4 |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |
| Limiting temperature | -40 ... +70 °C |
| Mating cycles | ≥ 750 |
| Conductor cross-section | 0.22 ... 0.32 mm ² solid and stranded |
| Conductor cross-section | AWG 24 ... AWG 22 |
| Wire outer diameter | 1.7 mm |
| Degree of protection acc. to IEC 60529 | IP20 |
| Cable diameter | 5 ... 9 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | White, Yellow |

Technical characteristics

| | |
|---|---------------|
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Nickel plated |
| Material flammability class acc. to UL 94 | V-2 |
| RoHS | compliant |

Specifications and approvals

DNV GL



Identification

Part number

Drawing

Dimensions in mm

HARTING RJ Industrial®,
Female,
RJ45,
HIFF version,
IDC termination,
Fully shielded, 360° shielding contact

09 45 545 1120





Technical characteristics

| | |
|--|--|
| Number of contacts | 8 |
| Transmission characteristics | Cat. 6 ^A , Class E ^A up to 500 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Limiting temperature | -40 ... +85 °C, -40 ... +70 °C |
| Mating cycles | ≥ 750 |
| Conductor cross-section | 0.22 ... 0.32 mm ² , 0.1 ... 0.12 mm ² 0.08 ... 0.22 mm ² solid and stranded 0.22 ... 0.32 mm ² solid and stranded |
| Conductor cross-section | AWG 24 ... AWG 22 AWG 27 ... AWG 26 AWG 28 ... AWG 24 |
| Wire outer diameter | 1.2 mm, 1.7 mm |
| Degree of protection acc. to IEC 60529 | IP20 |

Technical characteristics

| | |
|---|--------------------|
| Cable diameter | 5 ... 9 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | White, Yellow |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Nickel plated |
| Material flammability class acc. to UL 94 | V-2 |
| RoHS | compliant |

Specifications and approvals

EN 45545-2 R26: HL1, HL2, HL3
 UL 1863 DUXR2.E470046
 CSA-C22.2 No. 182.4, No. 233-09 DUXR8.E470046
 DNV GL



| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

preLink®,
 Female module,
 With terminal block,
 preLink® IDC insulation displacement
 termination,
 AWG 23/22






20 82 001 0001

preLink®,
 Female module,
 With terminal block,
 preLink® IDC insulation displacement
 termination,
 AWG 27/26

20 82 001 0002



| Identification | Part number | Drawing | Dimensions in mm |
|---|-----------------------|---------|------------------|
| <p>preLink®, Female module, without terminal block, preLink® IDC insulation displacement termination, AWG 23/22, AWG 27/26</p>  | <p>20 82 000 0002</p> | | |
| <p>HARTING RJ Industrial®, Female, RJ45, HIFF version, IDC termination, Fully shielded, 360° shielding contact, AWG 28 ... AWG 24</p>  | <p>09 45 545 1561</p> | | |
| <p>HARTING RJ Industrial®, Female, RJ45, HIFF version, IDC termination, Fully shielded, 360° shielding contact, AWG 24 ... AWG 22</p>  | <p>09 45 545 1562</p> | | |



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
Housing bulkhead mounting for device integration and RJ45 jacks

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Device integration via RJ45 PCB connectors

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Termination type | Jack with solder termination |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +85 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|--|---------|--------------------------|
| Components device side | | | |
| Housing bulkhead mounting plastic | 09 35 002 0321 | | Panel cut out |
| replacement flat seal | 09 35 002 9901 | | |
| Protection cover IP65 / IP67 | 09 35 002 5402 | | PCB layout |
| RJ45 jack Solder variant, 90° angled | 09 35 002 2101 ¹⁾ 09 35 002 2101 333 ³⁾ | | |
| Solder variant, 180° straight | 09 35 002 2102 ²⁾ 09 35 002 2102 333 ³⁾ | | |
| Solder variant, 180° straight, Reflow | 09 35 002 2106 ⁴⁾ | | |

1) Packaging: Blister à 360 pieces
2) Packaging: Blister à 400 pieces
3) Sample Packaging: 1 piece
4) Packaging: Tape & Reel à 120 pieces



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 panel feed through

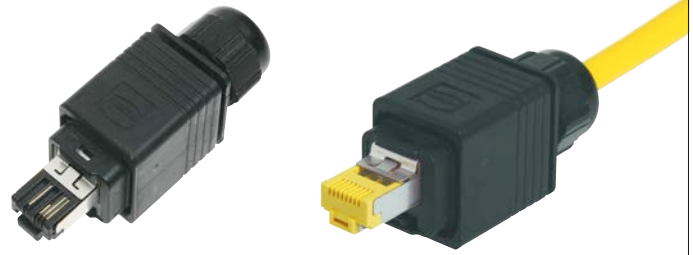
Features

- HARTING PushPull technology
- Compact design
- High packing density
- Device integration via RJ45 PCB connectors

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Transmission performance | acc. to ISO/IEC 11 801:2002, EN 50 173-1, category 5 / class D up to 100 MHz resp. category 6 / class E _A up to 500 MHz |
| Transmission rate | 10 / 100 Mbit/s and 1 / 10 Gbit/s |
| Number of contacts | 8 |
| Shielding | Fully shielded, 360° shielding contact (Cat. 6) |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|--|---------|--|
| Han® PushPull RJ45 Panel feed through Cat. 6 including housing and HARTING RJ Industrial® 10G RJ45 bulkhead | 09 35 225 0331 | | Panel cut out Thickness panel: 1mm to 6mm. M3 screwing torque: 0.3 to 0.5 N.m. |
| Panel feed through to mount HIFF inserts, e.g. Ha-VIS preLink® RJ45-module Order inserts separately | 09 35 012 0331 | | Panel cut out Thickness panel: 1mm to 6mm. M3 screwing torque: 0.3 to 0.5 N.m. |
| Ha-VIS preLink® set RJ45 jack AWG 22/23 consists of: <ul style="list-style-type: none"> • 1x Ha-VIS preLink® module RJ45 jack • 1x Ha-VIS preLink® terminal module • 1x cable tie | 20 82 001 0001 | | |
| HARTING RJ Industrial® cable jack IDC AWG 22-24, 8 poles, Cat. 6 AWG 24-28, 8 poles, Cat. 6 AWG 22-24, 4 poles, Cat. 5 | 09 45 545 1562 09 45 545 1561 09 45 545 1120 | | |



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 connector

Features

- HARTING PushPull technology
- Field-assembly connector with IDC contacts
- Fully shielded

Technical characteristics

| | |
|--------------------------|---|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Shielding | Fully shielded, 360° shielding contact |
| Number of contacts | 4 respectively 8 |
| Transmission performance | acc. to ISO/IEC 11 801:2002, EN 50 173-1, category 5 / class D up to 100 MHz, category 6 / class E _A up to 500 MHz |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Termination for Cat. 5 | with IDC contacts, no tools needed / field-assembly |
| | Conductor cross section AWG 24/7 - 22/7 (stranded) AWG 23/1 - 22/1 (solid) |
| | Cable diameter 1.6 mm |
| for Cat. 6 | Conductor cross section AWG 22/7 - 27/7 (stranded) AWG 22/1 - 27/1 (solid) |
| | Cable diameter 1.6 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black, UL 94 V0 |

Identification

Part number

Drawing

Dimensions in mm

Connector set, plastic

incl. housing and male insert

Han® RJ Industrial
Category 5, 4 poles, IDC contacts

6.5 - 9.5 mm clamp range
5 - 8 mm clamp range

09 35 221 0421
09 35 222 0421

Han® RJ Industrial PN
Category 5, 4 poles, IDC contacts

6.5 - 9.5 mm clamp range

PROFINET-Identification:
PROFINET O-Plug RJ45

09 35 226 0421

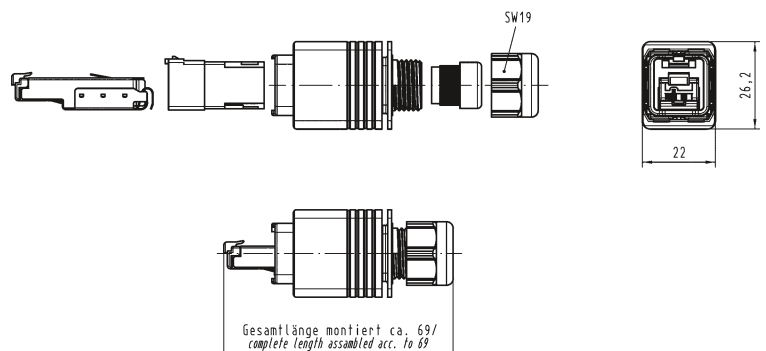
Han® RJ Industrial 10G
Category 6, 8 poles, IDC contacts

6.5 - 9.5 mm clamp range
5 - 8 mm clamp range

09 35 225 0421
09 35 228 0421

Security Clip

09 35 002 9910





Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 connector

Features

- HARTING PushPull technology
- Field-assembly connector with piercing contacts
- Fully shielded

Technical characteristics

| | |
|--------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Shielding | Fully shielded, 360° shielding contact |
| Number of contacts | 8 |
| Transmission performance | acc. to ISO/IEC 11 801:2002, EN 50 173-1, category 6 _A / class E _A up to 500 MHz |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Termination | with piercing contacts |
| Conductor cross section | AWG 24/7 - 27/7 (stranded) |
| Cable diameter | 1.05 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black, UL 94 V0 |

Identification

Part number

Drawing

Dimensions in mm

Connector set, plastic
incl. housing and male insert
5 - 8 mm clamp range

Han® RJ Industrial
Category 6_A, 8 poles, piercing contacts

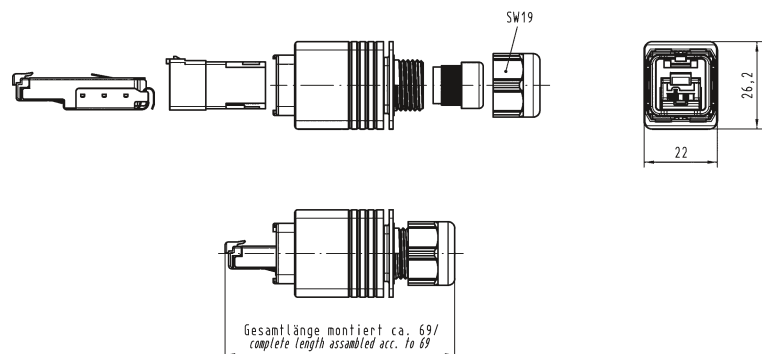
Security Clip

suitable assembly tool

09 35 227 0421

09 35 002 9910

09 45 800 0520





Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
Housing bulkhead mounting for device integration and RJ45 jacks

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Device integration via RJ45 PCB connectors

Technical characteristics

| | |
|----------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Termination type | Jack with solder termination |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +85 °C |
| Housing material | Zinc die-cast, nickel plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---------------------------------------|--|---------|------------------|
| Components device side | | | |
| Housing bulkhead mounting metal | 09 35 002 0301 | | |
| Replacement flat seal | 09 35 002 9901 | | |
| Protection cover IP65 / IP67 | 09 35 002 5402 | | |
| RJ45 jack | | | |
| Solder variant, 90° angled | 09 35 002 2101 ¹⁾ 09 35 002 2101 333 ³⁾ | | |
| Solder variant, 180° straight | 09 35 002 2102 ²⁾ 09 35 002 2102 333 ³⁾ | | |
| Solder variant, 180° straight, Reflow | 09 35 002 2106 ⁴⁾ | | |

1) Packaging: Blister à 360 pieces
2) Packaging: Blister à 400 pieces
3) Sample Packaging: 1 piece
4) Packaging: Tape & Reel à 120 pieces



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 10G panel feed through

Features

- HARTING PushPull technology
- Compact and robust design
- 360° shielding
- RJ45 mating compatible
- Transmission category 6, performance class E_A, suitable for 1/10 Gigabit Ethernet
- PROFINET conform

Technical characteristics

| | |
|--------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 variant 14 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Transmission performance | Category 6 / class E _A acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Shielding | Fully shielded, 360° shielding contact |
| Mounting | Screwable to cover plates |
| Degree of protection | IP65 / IP67 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

Identification

Part number

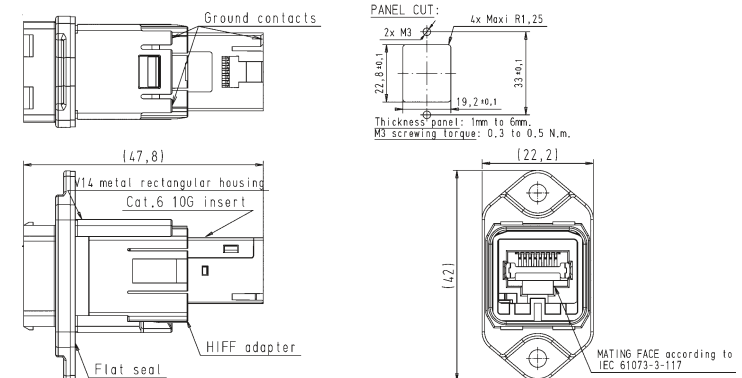
Drawing

Dimensions in mm

Han® PushPull RJ45 10G

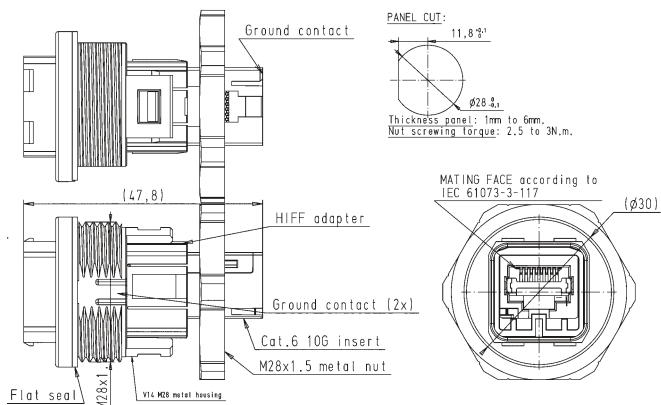
Panel feed through, Cat. 6 including bulkhead housing for rectangular panel cut out, flat seal and HARTING RJ Industrial® 10G RJ45 bulkhead, isolated bulkhead fixture

09 35 225 0311



Panel feed through, Cat. 6 including bulkhead housing for circular panel cut out, flat seal and HARTING RJ Industrial® 10G RJ45 bulkhead, isolated bulkhead fixture

09 35 225 0312



Identification

Part number

Drawing

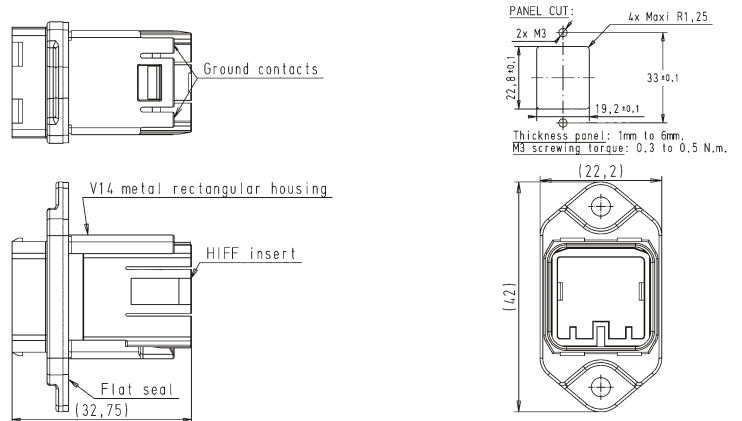
Dimensions in mm

Han® PushPull RJ45 10G

Panel feed-through to mount HIFF inserts, e.g. Ha-VIS preLink® RJ45-module, RJ Industrial cable jack
Order inserts separately

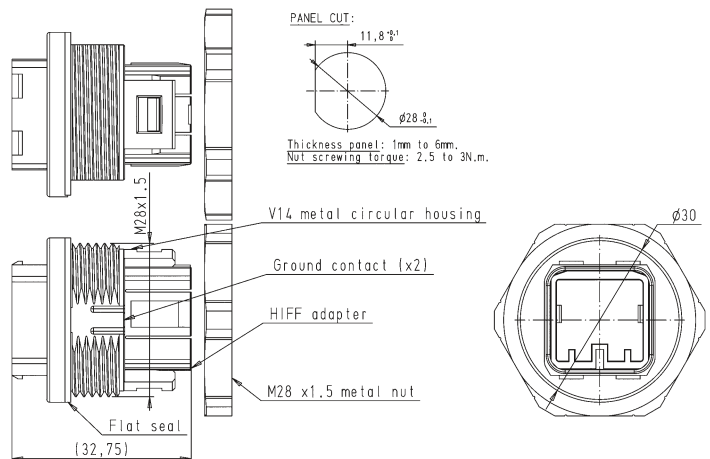
Bulkhead housing for rectangular panel cut out, incl. plastic adapter

09 35 012 0311



Bulkhead housing for circular panel cut out, incl. plastic adapter and fixing nut

09 35 012 0312

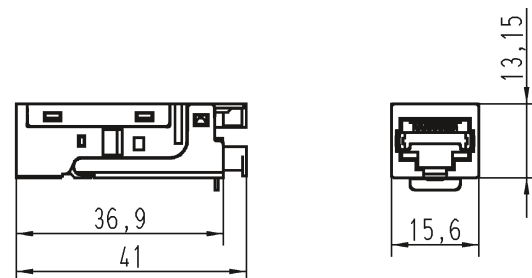


Ha-VIS preLink® set RJ45 jack AWG 22/23

consists of:

- 1x Ha-VIS preLink® module RJ45 jack
- 1x Ha-VIS preLink® terminal module
- 1x cable tie

20 82 001 0001



HARTING RJ Industrial® cable jack IDC

- AWG 22-24, 8 poles, Cat. 6
- AWG 24-28, 8 poles, Cat. 6
- AWG 22-24, 4 poles, Cat. 5

09 45 545 1562
09 45 545 1561
09 45 545 1120



Han® PushPull RJ45 Genderchanger Metal
Cat. 6 / class E_A

Features

- High degree of protection IP65 / IP67
- Robust metal housing
- Standard PROFINET component of the German automotive production
- Allows usage of different cable types (Type B, C) e.g. in robots application
- Extension of cords according to PROFINET guideline
- Can be count as one connection acc. to IEC 11 801 Chapter 10.2.4

Technical characteristics

| | |
|---|--|
| Transmission performance | Cat. 6 / class E _A up to 500 MHz |
| Connector | Han® PushPull RJ45 (PROFINET conform) |
| Locking | PushPull technology acc. to IEC 61076-3-117 variant 14 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Mating cycles | min. 750 |
| Housing material | Aluminium anodized |
| Dimensions | 61.2 x 62 x 25.2 mm (unmated) |
| Degree of protection acc. to DIN 60529 | IP65 / IP67 (mated) |
| Mounting | Wall mountable with 4 screws (type M5) |
| Temperature range | -40 °C ... +70 °C |
| Maximum permissible humidity | 30 % ... 95 % (no condensation) |

Identification

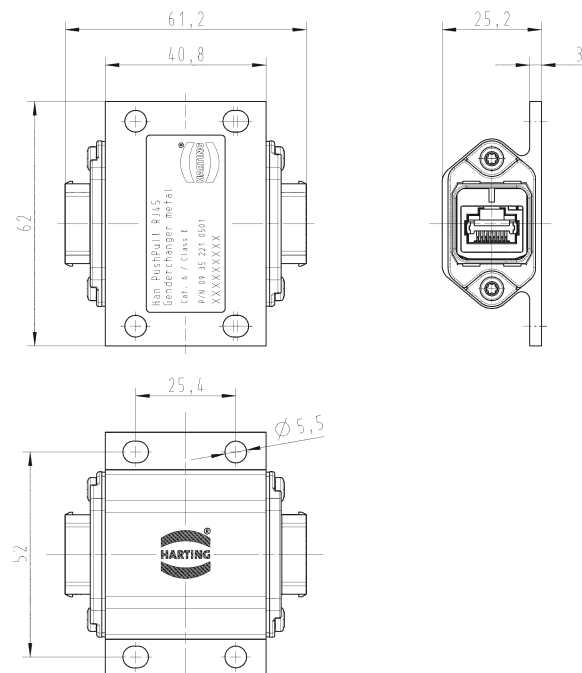
Part number

Drawing

Dimensions in mm

Han® PushPull RJ45
Genderchanger metal

09 35 221 0501





Han® PushPull RJ45 Coupling Metal Category 6 / class E_A

Features

- High degree of protection IP65 / IP67
- Robust metal housing
- Standard PROFINET component of the German automotive production
- Extension of cords according to PROFINET guideline
- Can be count as one connection acc. to IEC 11801 Chapter 10.2.4
- For an easy robot termination and a fast exchange of tube packages

Technical characteristics

| | |
|---|--|
| Transmission performance | Category 6 / class E _A up to 500 MHz |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Locking | PushPull technology acc. to IEC 61076-3-117 variant 14 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Number of contacts | 8 |
| Usable cables | |
| Termination cross section | AWG 22-24 stranded/solid |
| Cable diameter | 5 ... 9 mm |
| Conductor diameter | 1.3 ... 1.6 mm |
| Mating cycles | min. 750 |
| Housing material | Aluminium die-cast |
| Degree of protection acc. to DIN 60529 | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |

Identification

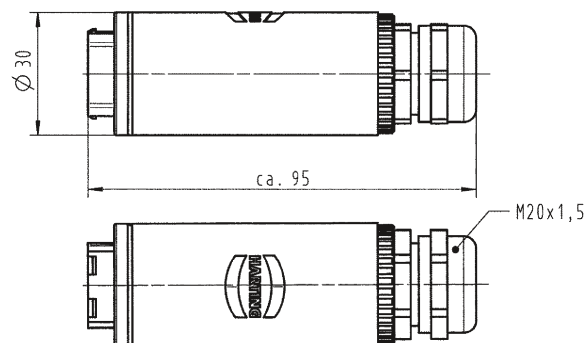
Part number

Drawing

Dimensions in mm

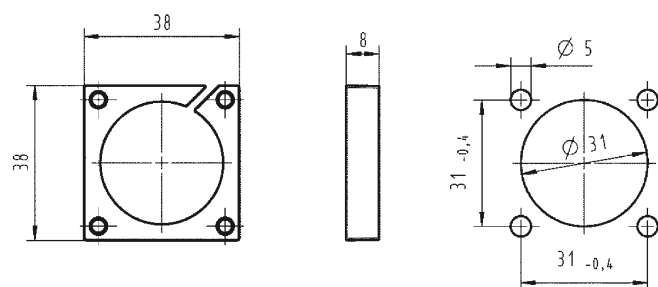
Han® PushPull RJ45
Coupling metal
including housing,
Ha-VIS preLink® RJ45 jack,
bulkhead housing
and cable gland

61 04 201 1084 01



Fixing flange

61 04 600 0182 02





Han® PushPull, type acc. to IEC 61 076-3-117 variant 14 RJ45 connector

Features

- HARTING PushPull technology
- Field-assembly connector with IDC contacts
- Fully shielded

Technical characteristics

| | |
|--------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Shielding | Fully shielded, 360° shielding contact |
| Number of contacts | 4 respectively 8 |
| Transmission performance | acc. to ISO/IEC 11 801:2002, EN 50 173-1, category 5 / class D up to 100 MHz category 6 / class E _A up to 500 MHz |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Termination | with IDC contacts, no tools needed / field-assembly |
| for Cat. 5 | |
| Conductor cross section | AWG 24/7 - 22/7 (stranded) AWG 23/1 - 22/1 (solid) |
| Cable diameter | 1.6 mm |
| for Cat. 6 | |
| Conductor cross section | AWG 22/7 - 27/7 (stranded) AWG 22/1 - 27/1 (solid) |
| Cable diameter | 1.6 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Connector set, metal

incl. housing and male insert

Han® RJ Industrial
Category 5, 4 poles, IDC contacts
6.5 - 9.5 mm clamp range

09 35 221 0401

Han® RJ Industrial PN
Category 5, 4 poles, IDC contacts
6.5 - 9.5 mm clamp range

09 35 226 0401

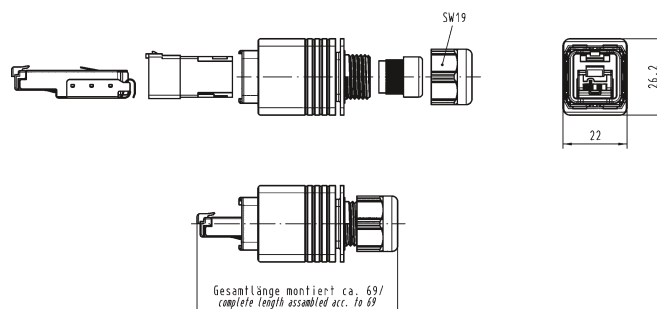
PROFINET-Identification:
PROFINET O-Plug RJ45

Han® RJ Industrial PN
Category 5, 4 poles, IDC contacts
5 - 8 mm clamp range

09 35 222 0401

Han® RJ Industrial 10G
Category 6, 8 poles, IDC contacts
4 - 11 mm clamp range

09 35 225 0401



Number of contacts

4



Features

- HARTING PushPull (V14) technology
- 360° shielding
- Field assembly
- No side cutter needed anymore – integrated cutting blades behind the IDC contacts cut the wires to the correct length • Weitbereichsschneidklemme für starre und flexible
- Wide range IDC for solid and stranded wires from AWG 26 to AWG 22
- Suitable for all PoE versions

Technical characteristics

| | |
|------------------------------|---|
| Number of contacts | 4 |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥ 750 |
| Conductor cross-section | 0.12 ... 0.32 mm ² Stranded 0.12 ... 0.32 mm ² Solid |
| Conductor cross-section | AWG 26/7 ... AWG 22/7 Stranded AWG 24/1 ... AWG 22/1 Solid |
| Wire outer diameter | 0.8 mm ... 1.6 mm |
| Degree of protection acc. | IP65 / IP67 |
| Cable diameter | 6.5 ... 9.5 mm |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Nickel plated |

Specifications and approvals

IEC 60603-7 Mating face
IEC 11801
EN 50173-1
IEC 61076-3-117 Variant 14
DNV GL



Identification

Part number

Drawing

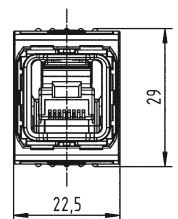
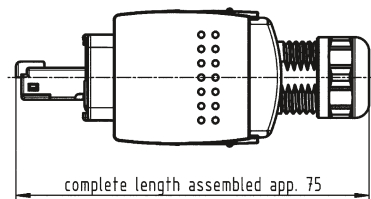
Dimensions in mm

Han® PushPull (V14),

Connector,
AIDA compliant,
PROFINET,
Straight,
IDC termination,
Fully shielded, 360° shielding contact



09 35 229 0401



When installing a PROFINET system, observe the PROFINET installation guideline.

Number of contacts

8



Features

- HARTING PushPull (V14) technology
- 360° shielding
- Category of transmission Cat. 6A
- Field assembly
- No side cutter needed anymore – integrated cutting blades behind the IDC contacts cut the wires to the correct length
- Wide range IDC for solid and stranded wires from AWG 26 to AWG 22
- Suitable for all PoE versions

Technical characteristics

| | |
|--|---|
| Number of contacts | 8 |
| Transmission characteristics | Cat. 6A, Class EA up to 500 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2,5 Gbit/s, 5 Gbit/s, 10 Gbit/s |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥ 750 |
| Conductor cross-section | 0.12 ... 0.32 mm ² Stranded 0.12 ... 0.32 mm ² Solid |
| Conductor cross-section | AWG 26/7 ... AWG 22/7 Stranded AWG 24/1 ... AWG 22/1 Solid |
| Wire outer diameter | 0.8 mm ... 1.6 mm |
| Degree of protection acc. to IEC 60529 | IP65 / IP67 |
| Cable diameter | 6.5 ... 9.5 mm |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Nickel plated |

Specifications and approvals

IEC 60603-7 Mating face
IEC 11801
EN 50173-1
IEC 61076-3-117 Variant 14
DNV GL



Identification

Part number

Drawing

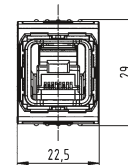
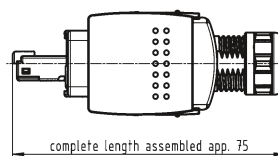
Dimensions in mm

Han® PushPull (V14),

Connector,
AIDA compliant,
PROFINET,
Straight,
IDC termination,
Fully shielded, 360° shielding contact



09 35 220 0401

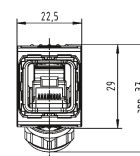
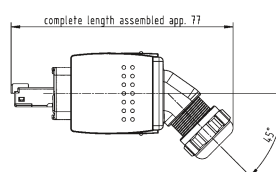


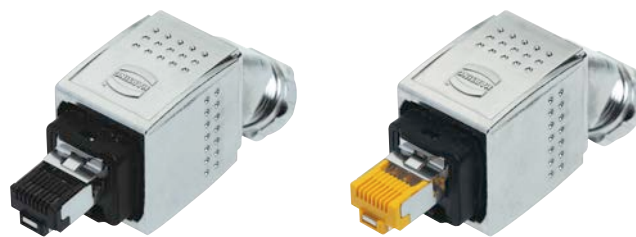
Han® PushPull (V14),

Connector,
AIDA compliant,
PROFINET,
Angled bottom,
IDC termination,
Fully shielded, 360° shielding contact



09 35 220 0402





Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 connector angled

Features

- HARTING PushPull technology
- Angled cable exit 45° to the top / bottom for a space saving cabling
- Field-assembly connector with IDC contacts
- Fully shielded

Technical characteristics

| | |
|--------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Shielding | Fully shielded, 360° shielding contact |
| Number of contacts | 4 respectively 8 |
| Transmission performance | acc. to ISO/IEC 11 801:2002, EN 50 173-1, category 5 / class D up to 100 MHz category 6 / class E _A up to 500 MHz |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Termination | with IDC contacts, no tools needed / field-assembly |
| for Cat. 5 | |
| Conductor cross section | AWG 24/7 - 22/7 (stranded) AWG 23/1 - 22/1 (solid) |
| Cable diameter | 1.6 mm |
| for Cat. 6 | |
| Conductor cross section | AWG 22/7 - 27/7 (stranded) AWG 22/1 - 27/1 (solid) |
| Cable diameter | 1.6 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Connector set,
metal

incl. housing
and male insert

Han® RJ Industrial PN

Category 5, 4 poles, IDC contacts,
6.5 - 9.5 mm clamp range

Cable exit bottom side

09 35 226 0402

Cable exit top side

09 35 226 0403

Han® RJ Industrial 10G

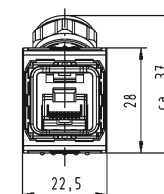
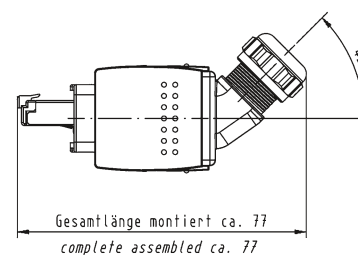
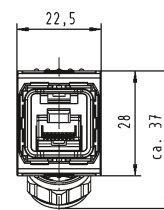
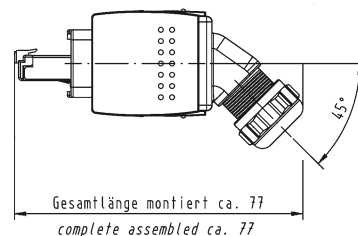
Category 6, 8 poles, IDC contacts,
6.5 - 9.5 mm clamp range

Cable exit bottom side

09 35 225 0402

Cable exit top side

09 35 225 0403





Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 connector

Features

- HARTING PushPull technology
- Compact design
- For space saving fitting conditions
- Connector with piercing contacts
- 360° shielding

Technical characteristics

| | |
|--------------------------|---|
| Locking | PushPull technology acc. to IEC 61 076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Shielding | Fully shielded, 360° shielding contact |
| Number of contacts | 8 |
| Transmission performance | acc. to ISO/IEC 11 801:2002, EN 50 173-1, category 6 _A / class E _A up to 500 MHz |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Termination | with piercing contacts |
| Conductor cross section | AWG 24/7 - 27/7 (stranded) |
| Cable diameter | 1.05 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

Identification

Part number

Drawing

Dimensions in mm

Connector set, metal

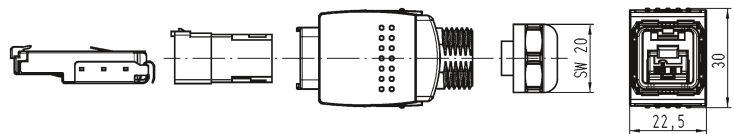
incl. housing
and male insert
4 - 11 mm clamp range

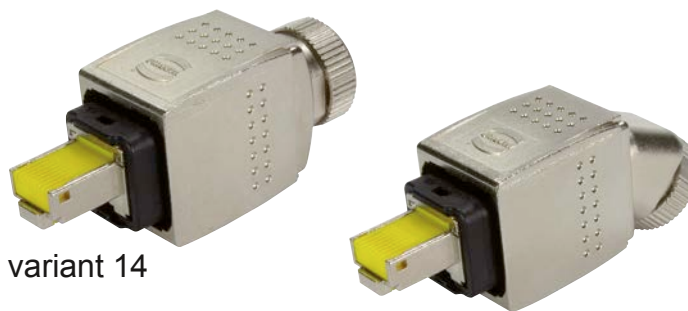
Han® RJ Industrial
Category 6, 8 poles,
piercing contacts

09 35 227 0401

suitable assembly tool

09 45 800 0520





Han® PushPull, type acc. to IEC 61076-3-117 variant 14 preLink® RJ45-connector, straight and angled

Advantages

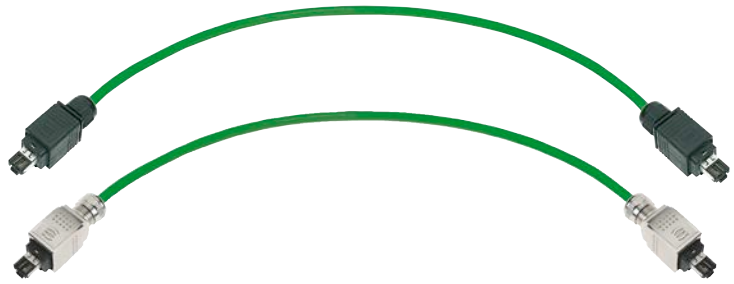
- HARTING PushPull technology
- 45° angled cable entry, bottom side, for space saving cabling
- 360° shielding
- Category of transmission Cat. 6A
- Suitable for solid and stranded wires
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

Technical characteristics

| | |
|---|---|
| Locking | PushPull technology acc. to IEC 61076-3-117 |
| Degree of protection | IP65 / IP67 |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Number of contacts | 8 |
| Transmission category | Category 6A, class E _A , suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category 6A / class E _A up to 500 MHz acc. to ISO/IEC 11801:2002, EN 50173-1 |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mounting | preLink® IDC termination |
| Cable termination for preLink® Connectable cables | terminal module, yellow, 20 82 000 0001 |
| – Conductor cross section | AWG 23 ... AWG 22 (solid and stranded) |
| – Conductor diameter | 1.3 ... 1.6 mm |
| Cable termination for preLink® Connectable cables | terminal module, white, 20 82 000 0003 |
| – Conductor cross section | AWG 27 ... AWG 26 (solid and stranded) |
| – Conductor diameter | 0.8 ... 1.1 mm |
| Cable diameter | 6.3 ... 8.8 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------------------------|---------|------------------|
| Han® PushPull preLink® RJ45 connector, straight | 20 82 104 0001 | | |
| Han® PushPull preLink® RJ45 connector, angled | 20 82 104 0045 | | |
| Ha-VIS preLink® RJ45 terminal module AWG 22/23, yellow ¹⁾ AWG 26/27, white ¹⁾ | 20 82 000 0001 20 82 000 0003 | | |
| Ha-VIS preLink® assembly tool | 20 82 000 9901 | | |

¹⁾ Packaging with 10 pieces



Han® PushPull RJ45 system cable, 4-wire, Cat. 5

Features

- Connector types Han® PushPull RJ45 (V14)
- Category Cat. 5
- Number of wires 4
- Wiring 1:1
- Sheath material PVC/PUR

Application

- Industrial Cabling
- Within switch cabinets
- On machines and control units

Benefits

- Standardised PushPull interface for IP65/IP67
- Very space-saving
- AIDA compliant
- PROFINET compliant
- Useable as trailing cable (type C)
- Easy and intuitive handling with HARTING PushPull technology

Technical characteristics

- Connector types Han® PushPull RJ45
- Cable type 4 x AWG 22/7, Cat. 5, Star quad, double shielding
- Sheath material
 - Type B PVC
 - Type C PUR
- Wiring 4 pole, contacts 1/2 and 3/6
- Transmission performance Category 5 class D up to 100 MHz acc. to ISO/IEC 11801, EN 50 173-1
- Data rate 10/100 Mbit/s
- Shielding Fully shielded, 360° shielding contact
- Operating temperature range
 - Type B -40 °C ... +70 °C
 - Type B outdoor -45 °C ... +60 °C
 - Type C -40 °C ... +70 °C
- Colour
 - Type B Green
 - Type B outdoor Black
 - Type C Green



| Identification | Plastic version | Part number Metal version | Metal, overmoulded |
|---|-----------------|------------------------------|--------------------|
| Han® PushPull RJ45 system cable, 4-wire Type B | | | |
| Length 1.5 m | 09 47 555 5033 | 09 47 565 6033 | 09 47 565 7033 |
| 3.0 m | 09 47 555 5035 | 09 47 565 6035 | 09 47 565 7035 |
| 5.0 m | 09 47 555 5037 | 09 47 565 6037 | 09 47 565 7037 |
| 10.0 m | 09 47 555 5042 | 09 47 565 6042 | 09 47 565 7042 |
| 20.0 m | 09 47 555 5044 | 09 47 565 6044 | 09 47 565 7044 |
| Han® PushPull RJ45 system cable, 4-wire Type C | | | |
| Length 1.5 m | 09 47 555 5063 | 09 47 565 6063 | 09 47 565 7063 |
| 3.0 m | 09 47 555 5065 | 09 47 565 6065 | 09 47 565 7065 |
| 5.0 m | 09 47 555 5067 | 09 47 565 6067 | 09 47 565 7067 |
| 10.0 m | 09 47 555 5072 | 09 47 565 6072 | 09 47 565 7072 |
| 20.0 m | 09 47 555 5074 | 09 47 565 6074 | 09 47 565 7074 |
| Han® PushPull RJ45 system cable, 4-wire Type B, outdoor | | | |
| Length 1.5 m | 09 47 555 5093 | 09 47 565 6093 | 09 47 565 7093 |
| 3.0 m | 09 47 555 5095 | 09 47 565 6095 | 09 47 565 7095 |
| 5.0 m | 09 47 555 5097 | 09 47 565 6097 | 09 47 565 7097 |
| 10.0 m | 09 47 555 5102 | 09 47 565 6102 | 09 47 565 7102 |
| 20.0 m | 09 47 555 5104 | 09 47 565 6104 | 09 47 565 7104 |



Han® PushPull RJ45 system cable, 8-wire, Cat. 6_A

Features

- Connector types Han® PushPull RJ45 (V14)
- Category Cat. 6_A
- Number of wires 8
- Wiring 1:1
- Sheath material PUR

Application

- Industrial Cabling
- Within switch cabinets
- On machines and control units

Benefits

- Standardised PushPull interface for IP65/IP67
- Especially space-saving
- AIDA compliant
- Easy and intuitive handling with HARTING PushPull technology

Technical characteristics

- Connector types Han® PushPull RJ45
- Cable type 4 x 2, Twisted Pair, shielded
- Sheath material PUR
- Wiring 8 pole, 1:1
- Transmission performance Category 6_A, Class E_A up to 500 MHz acc. to ISO/IEC 11801, EN 50 173-1
- Data rate 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2,5 Gbit/s, 5 Gbit/s, 10 Gbit/s
- Shielding Fully shielded, 360° shielding contact
- Operating temperature range -10 °C ... +70 °C
- Colour Green/Yellow

| Identification | Part number | | |
|---|----------------|----------------|--------------------|
| | Plastic | Metal | Metal |
| Han® PushPull RJ45 system cable, 8-wire | Yellow | Yellow | PROFINET Green |
| Length 1.5 m | 09 47 575 7001 | 09 47 585 8001 | 09 48 171 7165 015 |
| 3.0 m | 09 47 575 7002 | 09 47 585 8002 | 09 48 171 7165 030 |
| 5.0 m | 09 47 575 7003 | 09 47 585 8003 | 09 48 171 7165 050 |
| 10.0 m | 09 47 575 7004 | 09 47 585 8004 | 09 48 171 7165 100 |
| 20.0 m | 09 47 575 7005 | 09 47 585 8005 | 09 48 171 7165 200 |



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14 cable to cable housing

Features




- HARTING PushPull technology
- Ideal for prototyping
- Can be combined with panel feed-throughs for power, data and signal

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology acc. to IEC 61076-3-117 variant 14 |
| Degree of protection | IP65 / IP67 |
| Outer cable diameter | 6.5 ... 9.5 mm / 9 ... 13 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------|--|--|
| Han® PushPull cable to cable housings, plastic (Order housing bulkhead mounting and insert separately) | | 2X REMFORM $\phi 3 \times 8$ TORX screws | |
| for outer cable diameter 6.5 ... 9.5 mm | 09 35 002 0431 | | |
| for outer cable diameter 9 ... 13 mm | 09 35 002 0433 | 2X REMFORM $\phi 3 \times 8$ TORX screws | |
| Suitable bulkhead housing, plastic for RJ45 | 09 35 012 0331 | | <p>Panel cut out</p> <p>2x M3 4x Maxi R1,25</p> <p>Thickness panel: 1mm to 6mm M3 screwing torque: 0.3 to 0.5 N.m.</p> |
| Inserts for RJ45 RJ 45: 8 poles, Cat. 6 / class E _A Ha-Vis preLink® set AWG 22/23 HARTING RJ Industrial® cable jack with IDC termination | 20 82 001 0001 | | |
| AWG 22-24, 8 poles | 09 45 545 1562 | | |
| AWG 24-28, 8 poles | 09 45 545 1561 | | |
| AWG 22-24, 4 poles, Cat. 5 | 09 45 545 1120 | | |

Han® PushPull, type acc. to IEC 61 076-3-117 variant 14 Accessories

| Identification | Part number | Drawing | Dimensions in mm |
|---|--|--|------------------|
| Han® PushPull protection cover IP65 / IP67 for device side without fixing cord with fixing cord with nylon fixing cord IP40 | 09 35 002 5403 XL ¹⁾ 09 35 002 5402 09 35 002 5402 XL ¹⁾ 09 35 002 5404 09 35 002 5404 XL ²⁾ 61 04 600 0194 00 |  | |
| Han® PushPull protection cover IP65 / IP67 for cable side without fixing cord with nylon fixing cord | 09 35 002 5411 09 35 002 5413 |  | |
| Han® PushPull protection cover IP40 for cable side | 09 35 002 5412 |  | |



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
 Housing bulkhead mounting for device integration
 Optical connector based on SCRJ

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Device integration via transceiver
- Han® PushPull SCRJ for POF is according the requirements of AIDA (German Domestic Automobile Manufacturers)

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fiber Typen | POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm MM 62.5 µm / 125 µm MM 50 µm / 125 µm SM 10 µm / 125 µm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

Identification

Part number

Drawing

Dimensions in mm

Components device side

Housing bulkhead mounting
 Optical transceiver
 not included

plastic

09 35 002 0323

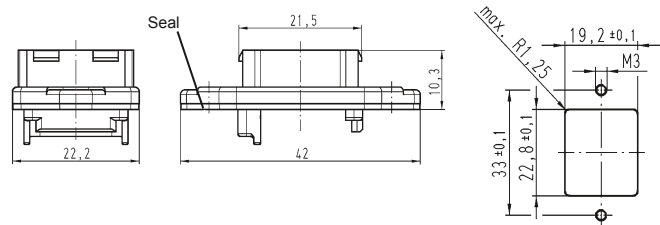
Replacement flat seal

09 35 002 9901

Protection cover IP65 / IP67

09 35 002 5402

Reference for transceiver
 as well as mounting instruction
 on request



1) POF = Polymer-Optical Fibre
 2) HCS® = Hard Clad Silica (registered trademark of SpecTran Corporation)



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 panel feed through
for optical connector based on SCRJ

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Han® PushPull SCRJ for POF is according the requirements of AIDA (German Domestic Automobile Manufacturers)

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fiber Typen | POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm MM 62.5 µm / 125 µm MM 50 µm / 125 µm SM 10 µm / 125 µm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

Identification

Part number

Drawing

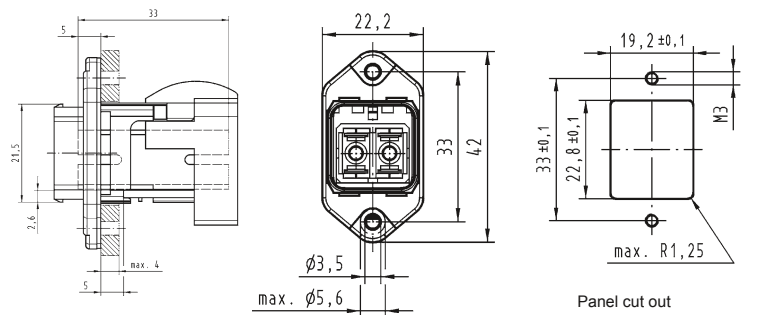
Dimensions in mm

Han® PushPull SCRJ

Panel feed through

09 35 242 0333

SC contacts order separately



SCRJ IP20

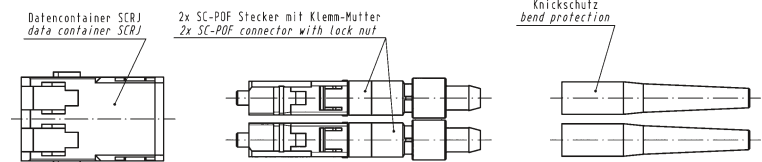
POF connector

with fast termination

09 35 002 4002

with crimp termination

09 35 002 4003



Contacts

SC POF contact, 1 mm

20 10 001 5217

SC 125 GI contact

20 10 125 5211

SC 230 HCS contact

20 10 230 5211

¹⁾ POF = Polymer-Optical Fibre

²⁾ HCS® = Hard Clad Silica (registered trademark of SpecTran Corporation)



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
SCRJ connector

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Han® PushPull SCRJ for POF is according the requirements of AIDA (German Domestic Automobile Manufacturers)
- Field installable

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fiber Typen | POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm MM 62.5 µm / 125 µm MM 50 µm / 125 µm SM 10 µm / 125 µm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |
| Cable diameter | 6.5 - 9.5 mm |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Connector set, plastic
incl. housing and SCRJ insert,
POF contacts

09 35 241 0421

PROFINET-Identification:
PROFINET O-Plug SCRJ

incl. housing and SCRJ insert
SC contacts order separately

09 35 241 0422

**SCRJ IP20
POF connector**

09 35 002 4002

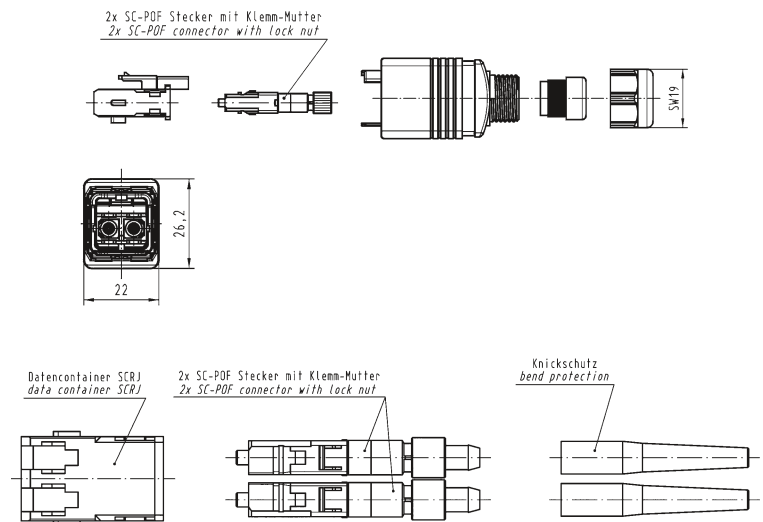
Protection cover IP65 / IP67

09 35 002 5411

Contacts

- SC POF contact, 1 mm
- SC 125 GI contact
- SC 230 HCS contact

20 10 001 5217
20 10 125 5211
20 10 230 5211





Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
 Housing bulkhead mounting for device integration
 Optical connector based on SCRJ

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Device integration via transceiver
- Han® PushPull SCRJ for POF is according the requirements of AIDA (German Domestic Automobile Manufacturers)

Technical characteristics

| | |
|----------------------|--|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fiber Typen | POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm MM 62.5 µm / 125 µm MM 50 µm / 125 µm SM 10 µm / 125 µm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel plated |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Components device side

Housing bulkhead mounting
 Optical transceiver
 not included

metal

09 35 002 0303

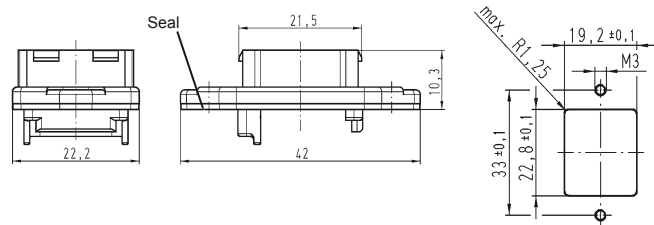
Replacement flat seal

09 35 002 9901

Protection cover IP65 / IP67

09 35 002 5402

Reference for transceiver
 as well as mounting instruction
 on request



1) POF = Polymer-Optical Fibre

2) HCS® = Hard Clad Silica (registered trademark of SpecTran Corporation)



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
RJ45 panel feed through
for optical connector based on SCRJ

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Han® PushPull SCRJ for POF is according the requirements of AIDA (German Domestic Automobile Manufacturers)

Technical characteristics

| | |
|----------------------|--|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fiber Typen | POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm MM 62.5 µm / 125 µm MM 50 µm / 125 µm SM 10 µm / 125 µm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel plated |

| Identification | Part number | Drawing | Dimensions in mm |
|--|--|--|--|
| Han® PushPull SCRJ Panel feed through SC contacts order separately | 09 35 242 0313 | | Panel cut out |
| SCRJ IP20 POF connector with fast termination with crimp termination | 09 35 002 4002 09 35 002 4003 | <p>Datencontainer SCRJ data container SCRJ</p> <p>2x SC-POF Stecker mit Klemm-Mutter 2x SC-POF connector with lock nut</p> | <p>Knickschutz bend protection</p> |
| Contacts SC POF contact, 1 mm SC 125 GI contact SC 230 HCS contact | 20 10 001 5217 20 10 125 5211 20 10 230 5211 | | |

1) POF = Polymer-Optical Fibre

2) HCS® = Hard Clad Silica (registered trademark of SpecTran Corporation)



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
SCRJ connector with fast termination

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Han® PushPull SCRJ for POF is according the requirements of AIDA (German Domestic Automobile Manufacturers)
- Field installable

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fiber Typen | POF ¹⁾ 1 mm HCS ^{®2)} 200 µm / 230 µm MM 62.5 µm / 125 µm MM 50 µm / 125 µm SM 10 µm / 125 µm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel plated |
| Flammability acc. to UL 94 | V0 |
| Cable diameter | 6.5 - 9.5 mm |

| Identification | Part number | Drawing | Dimensions in mm |
|--|--|---------|------------------|
| Connector set, metal incl. housing and SCRJ insert, POF contacts PROFINET-Identification: PROFINET O-Plug SCRJ incl. housing and SCRJ insert SC contacts order separately | 09 35 241 0401 09 35 241 0402 | | |
| SCRJ IP20 POF connector | 09 35 002 4002 | | |
| Protection cover IP65 / IP67 | 09 35 002 5411 | | |
| Contacts SC POF contact, 1 mm SC 125 GI contact SC 230 HCS contact | 20 10 001 5217 20 10 125 5211 20 10 230 5211 | | |



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
SCRJ crimp connector

Features

- HARTING PushPull technology
- Compact design
- High packing density
- Han® PushPull SCRJ for POF is according the requirements of AIDA (German Domestic Automobile Manufacturers)

Technical characteristics

| | |
|----------------------------|------------------------------------|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fiber Typen | POF ¹⁾ 980 µm / 1000 µm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel plated |
| Flammability acc. to UL 94 | V0 |
| Cable diameter | 6.5 - 9.5 mm |

Identification

Part number

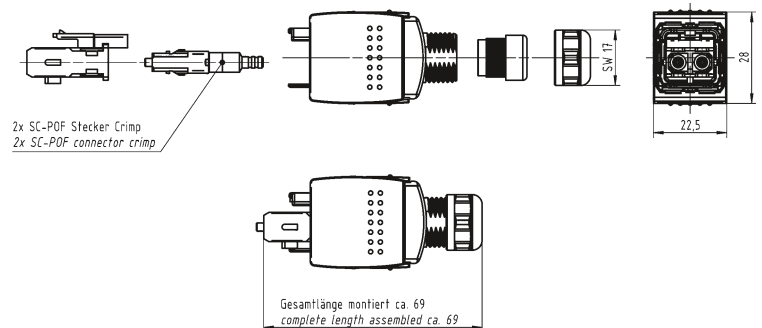
Drawing

Dimensions in mm

Connector set, metal

incl. housing and SCRJ insert,
POF crimp contacts

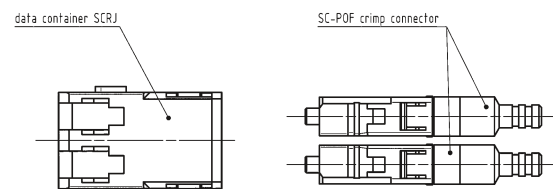
09 35 242 0401



SCRJ IP20

POF crimp connector

09 35 002 4003



Protection cover

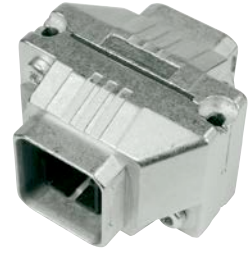
IP65 / IP67

09 35 002 5411

Contacts

SC POF crimp contact

20 10 001 5211



Han® PushPull SCRJ Genderchanger Metal

Features

- High degree of protection IP65 / IP67
- Robust metal housing
- Standard PROFINET component of the German automotive production
- Allows usage of different cable types (Type B, C) e.g. in robots application
- Extension of cords according to PROFINET guideline

Technical characteristics

| | |
|----------------------|--|
| Locking | PushPull technology |
| Degree of protection | IP65 / IP67 (mated) |
| Mating face | SCRJ acc. to IEC 61 754-24 |
| Fibre types | POF, GOF, HCS |
| Number of contacts | 2 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |
| Dimensions | 43.3 x 42 x 29 mm (unmated) |
| Mounting | Wall mountable with 2 screws (type M3) |

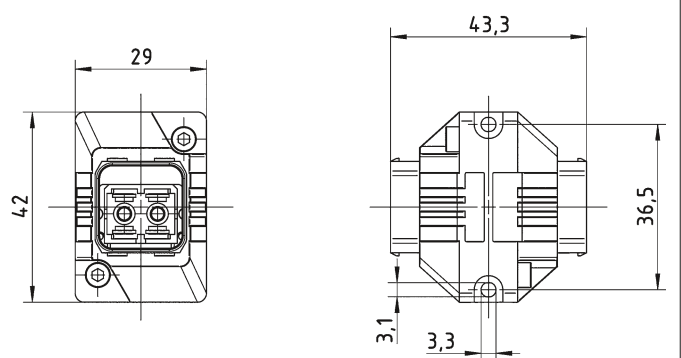
Identification

Han® PushPull SCRJ Genderchanger metal

Part number

09 35 241 0501

Drawing





Han® PushPull SCRJ POF crimp
Assembly tools for polymer-optical fibres

Features

- Cable insulation (PUR / PVC) is stripped without damage
- The 'crimping' and 'precision cutting' operations are completed within the one tool
- Specialized cutting method with an automatically advancing round blade for an accurate cutting result requiring no final polishing
- Optical display indicating remaining operations
- Simultaneous crimping of two contacts (duplex handling)

Technical characteristics

| | |
|---------------------------|--|
| Connector type | SCRJ crimp connector acc. to IEC 61 754-24 |
| Locking | PushPull technology acc. to IEC 61 076-3-117 variant 14 (AIDA compliant) |
| Insertion loss | typically 1.5 to 2.0 dB |
| Termination SC contacts | Crimp termination technique |
| Fibre dimensions | POF 980 / 1000 µm |
| Fibre outer diameter | 2.2 mm |
| Cable outer diameter | 7 to 8.5 mm |
| No. of cutting operations | Maximum 2500 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------|---------|------------------|
| <p>Assembly tool set for POF crimp cutting, without final polishing</p> <p>The set contains</p> <ul style="list-style-type: none"> - one crimping and cutting tool for 2500 operations - one sheath stripping tool - one Kevlar shear - one loading device for SC contacts <p>Supplied in a robust plastic case</p> | 09 35 000 9915 | | |
| Replacement cutting tool | 09 35 000 9914 | | |
| Replacement crimp and cutting tool | 09 35 000 9917 | | |



Han® PushPull SCRJ POF Assembly tools for polymer-optical fibres

Features

- Cable insulation (PUR / PVC) is stripped without damage
- The 'stripping' and 'precision cutting' operations are completed within the one tool
- Specialized cutting method with an automatically advancing round blade for an accurate cutting result requiring no final polishing
- Optical display indicating remaining operations
- Simultaneous handling of twin fibers (duplex mode)

Technical characteristics

| | |
|---------------------------|---|
| Connector type | SCRJ connector acc. to IEC 61754-24 |
| Locking | PushPull technology acc. to IEC 61076-3-117 variant 14 (AIDA compliant) |
| Insertion loss | typically 1.5 to 2.0 dB |
| Termination SC contacts | Fast termination technique, reusable |
| Fibre dimensions | POF 980 / 1000 µm |
| Fibre outer diameter | 2.2 mm |
| Cable outer diameter | 7 to 8.5 mm |
| No. of cutting operations | Maximum 2500 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------------------------|---------|------------------|
| Assembly tool set for POF cutting, without final polishing The set contains - one stripping and cutting tool for 2500 operations - one sheath stripping tool - one Kevlar shear - one positioner for SCRJ contacts Supplied in a robust plastic case | 09 35 000 9913 | | |
| Replacement cutting tool for 2500 operations | 09 35 000 9914 | | |
| Replacement stripping and cutting tool | 09 35 000 9916 | | |
| Assembly tool set for POF cutting, with final polishing Without an optical meter With an optical meter | 20 99 000 3016 20 99 000 3013 | | |
| Polishing wheel (grinding wheel) for POF cables 2.2 | 20 99 000 1099 | | |
| Sand paper for POF, grain size 1000 | 20 80 001 9911 | | |



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
10 poles 50 V / 5 A

Features

- HARTING PushPull technology
- For the transmission of analog, low voltage and bus signals
- Fully shielded
- 10 contacts
- Touch-proof
- Easy and fast cable installation

Technical characteristics

| | |
|---|---|
| Locking | PushPull technology acc. to IEC 61076-3-117 variant 14 |
| Degree of protection | IP65 / IP67 |
| Mating face | acc. to IEC/PAS 61076-3-119 |
| Number of contacts | 10 |
| Electrical data acc. to DIN EN 61984 | 5 A 50 V 1.5 kV 3 |
| Contact resistance | 10 mΩ |
| Termination | Crimp |
| Conductor cross section | AWG 24 ... 18; 0.25 ... 0.82 mm ² |
| Conductor diameter | max. 2.1 mm |
| Outer cable diameter | 6.5 ... 9.5 mm / 4 ... 11 mm |
| Shielding | Fully shielded, 360° shielding contact |
| Mating cycles | min. 500 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black Zinc die-cast, nickel-plated |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Han® PushPull Signal Insert

for panel feed-through HIFF,
10 poles
incl. male insert

Order D-Sub crimp male con-
tacts separately

D-Sub crimp contacts for device side³⁾

male, turned
AWG 24-20; 0.25-0.56 mm²

09 45 545 9010

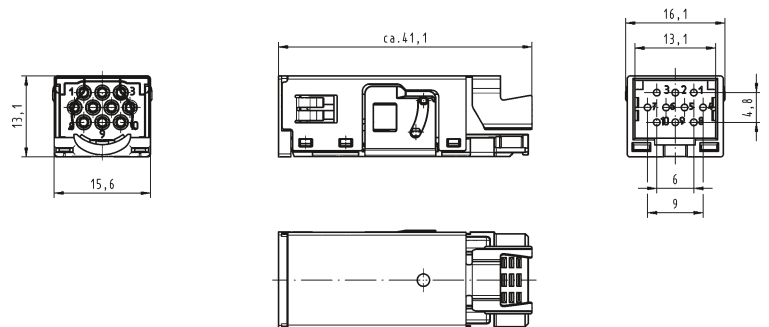
09 67 000 8576¹⁾

male, turned
AWG 22-18; 0.33-0.82 mm²

09 67 000 3576¹⁾

male, stamped
AWG 24-20; 0.25-0.56 mm²

09 67 000 8178²⁾



¹⁾ To be used with crimp tool 09 99 000 0501. Suitable locator: 09 99 000 0531

²⁾ To be used with crimp tool 09 99 000 0175.

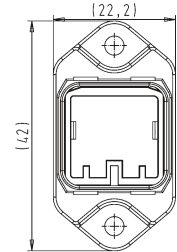
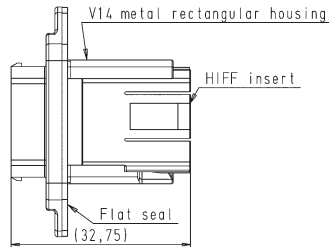
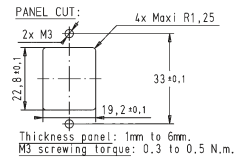
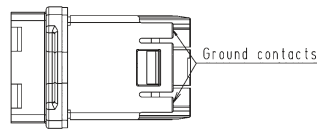
³⁾ For all useable D-Sub contacts please see chapter 05.

Identification Part number Drawing Dimensions in mm

Han® PushPull panel feed-through HIFF
to hold the 10 poles insert

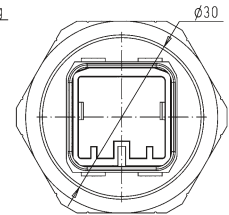
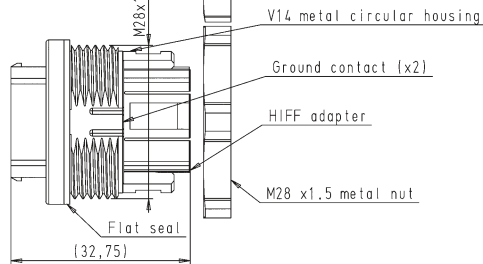
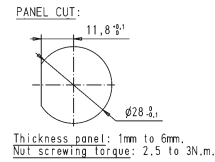
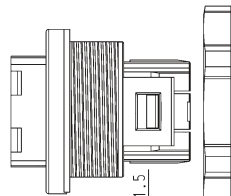
Metal rectangular

09 35 012 0311



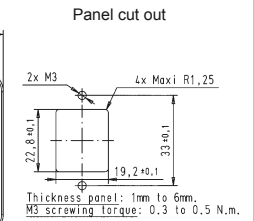
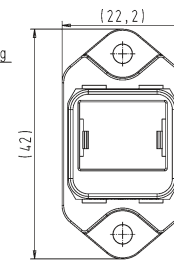
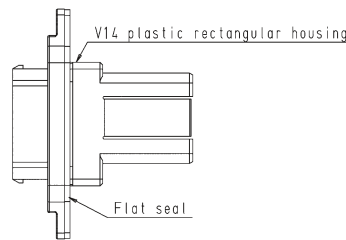
Metal circular

09 35 012 0312



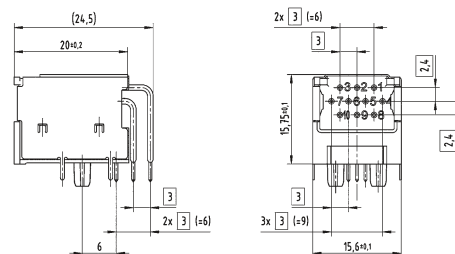
Plastic rectangular

09 35 012 0331



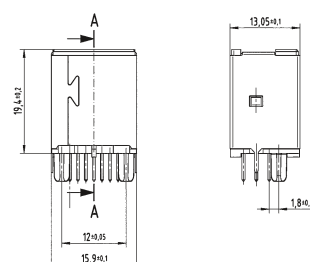
Han® PushPull Signal solder jack angled

09 35 002 6001



Han® PushPull Signal solder jack straight

09 35 002 6002



suitable housings,
bulkhead mounting

Metal

09 35 002 0303

Plastic

09 35 002 0323



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
10 poles 50 V / 5 A

Features

- HARTING PushPull technology
- For the transmission of analog, low voltage and bus signals
- Fully shielded
- 10 contacts
- Touch-proof
- Easy and fast cable installation

Technical characteristics

| | |
|---|---|
| Locking | PushPull technology acc. to IEC 61076-3-117 variant 14 |
| Degree of protection | IP65 / IP67 |
| Mating face | acc. to IEC/PAS 61 076-3-119 |
| Number of contacts | 10 |
| Electrical data acc. to DIN EN 61984 | 5 A 50 V 1.5 kV 3 |
| Contact resistance | 10 mΩ |
| Termination | Crimp |
| Conductor cross section | AWG 24 ... 18; 0.25 ... 0.82 mm ² |
| Conductor diameter | max. 2.1 mm |
| Outer cable diameter | 6.5 ... 9.5 mm / 4 ... 11 mm |
| Shielding | Fully shielded, 360° shielding contact |
| Mating cycles | min. 500 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black Zinc die-cast, nickel-plated |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Han® PushPull Signal

Connector set 10 poles
incl. metal housing
and female insert

4 ... 7 / 7 ... 11 mm clamp range
7 ... 11 mm clamp range

09 35 261 0401
09 35 262 0401

Connector set 10 poles
incl. plastic housing
and female insert

4 ... 6.5 mm clamp range
6.5 ... 9.5 mm clamp range
9 ... 13 mm clamp range

09 35 262 0423
09 35 261 0421
09 35 261 0423

Order D-Sub crimp female
contacts separately

D-Sub crimp contacts for cable side³⁾

female, turned
AWG 24-20; 0.25 - 0.52 mm²

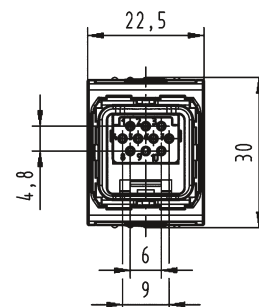
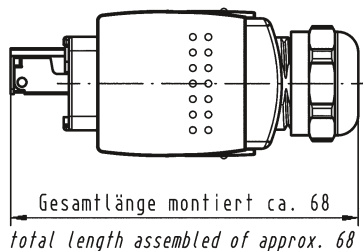
09 67 000 8476¹⁾

female, turned
AWG 22-18; 0.33 - 0.82 mm²

09 67 000 3476¹⁾

female, stamped
AWG 24-20; 0.25 - 0.56 mm²

09 67 000 8278²⁾



¹⁾ To be used with crimp tool 09 99 000 0501. Suitable locator: 09 99 000 0531

²⁾ To be used with crimp tool 09 99 000 0175.

³⁾ For all useable D-Sub contacts please see chapter 05.



Han® PushPull, type acc. to IEC 61 076-3-118
Housing bulkhead mounting and power females for device integration

Features

- HARTING PushPull technology
- Compact, space-saving design
- Touch-proof
- Device side: male
 - Solder variant, angled and straight
- 4 times coding without contact loss

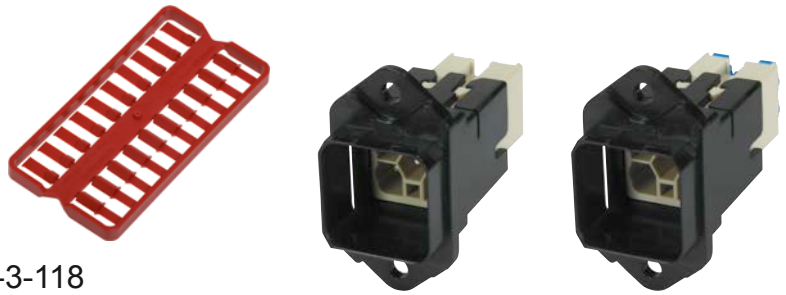
Technical characteristics

| | |
|--------------------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-118 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data acc. to DIN EN 61984 | 16 A 230/400 V 4 kV 3 |
| Termination | Male insert with solder termination |
| Mating cycles | min. 500 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Components device side

| | | | |
|--|----------------|--|--|
| Housing bulkhead mounting plastic | 09 35 002 0323 | | |
| Replacement flat seal | 09 35 002 9901 | | |
| Protection cover IP65 / IP67 | 09 35 002 5402 | | |
| Protection cover IP40 | 09 35 002 5401 | | |
| Coding pins | 09 35 000 6190 | | |
| Male insert with solder termination angled | 09 35 002 3003 | | |
| Male insert with solder termination straight | 09 35 002 3004 | | |
| | | | |



Han® PushPull, type acc. to IEC 61 076-3-118
 Panel feed-through, 5 poles, 690 V, 16 A

Features

- HARTING PushPull technology
- Compact, space-saving design
- Touch-proof
- Panel feed-through: male
 - crimp termination
 - Han-Quick Lock® termination technology
- 4 times coding without contact loss
- NEW: Larger termination cross section for conductors 0.25 - 1.5 mm²

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull technology acc. to IEC 61 076-3-117 variant 14 |
| Mating face | acc. to IEC 61 076-3-118 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data | 16 A 690 V 8 kV 3 |
| acc. to DIN EN 61 984 | 0.25 – 2.5 mm ² |
| Termination cross section | min. 500 |
| Mating cycles | -40 °C ... +70 °C |
| Temperature range | Plastic, black |
| Housing material | V0 |
| Flammability acc. to UL 94 | |

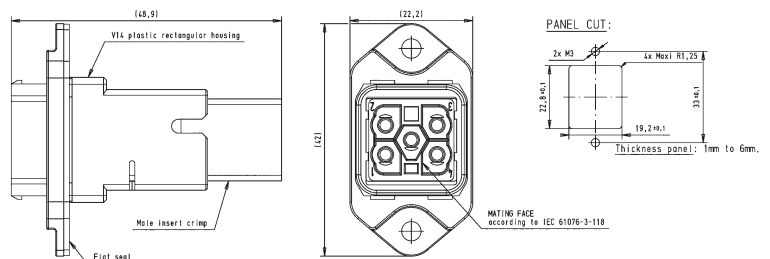
| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

**Han® PushPull Power 4/0
 Panel feed-through**

5 poles, 690 V / 16 A
 incl. bulkhead housing and male insert

with crimp termination
 (Order crimp male contacts separately)

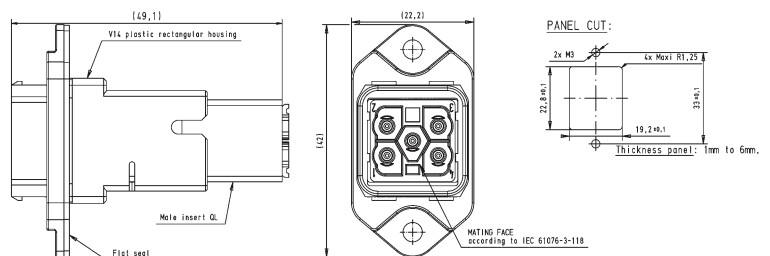
09 35 231 0331



with Han-Quick Lock® termination

0.5 ... 2.5 mm²
 0.25 ... 1.5 mm²

09 35 232 0331
 09 35 234 0331



Coding element

10 pieces each for device and cable side
 enables 4 times coding without contact loss

09 35 000 6190



Han® PushPull, type acc. to IEC 61 076-3-118
 Panel feed-through, 5 poles, 690 V, 16 A

Features

- HARTING PushPull technology
- Compact, space-saving design
- Touch-proof
- Panel feed-through: male
 - crimp termination
 - Han-Quick Lock® termination technology
- 4 times coding without contact loss
- NEW: Larger termination cross section for conductors 0.25 - 1.5 mm²

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology acc. to IEC 61 076-3-117 variant 14 acc. to IEC 61 076-3-118 |
| Mating face | acc. to IEC 61 076-3-118 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data | |
| acc. to DIN EN 61 984 | 16 A 690 V 8 kV 3 |
| Termination cross section | 0.25 – 2.5 mm ² |
| Mating cycles | min. 500 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

**Han® PushPull Power 4/0
 Panel feed-through M25**

5 poles, 690 V / 16 A
 incl. bulkhead housing and male insert, circular panel cut out

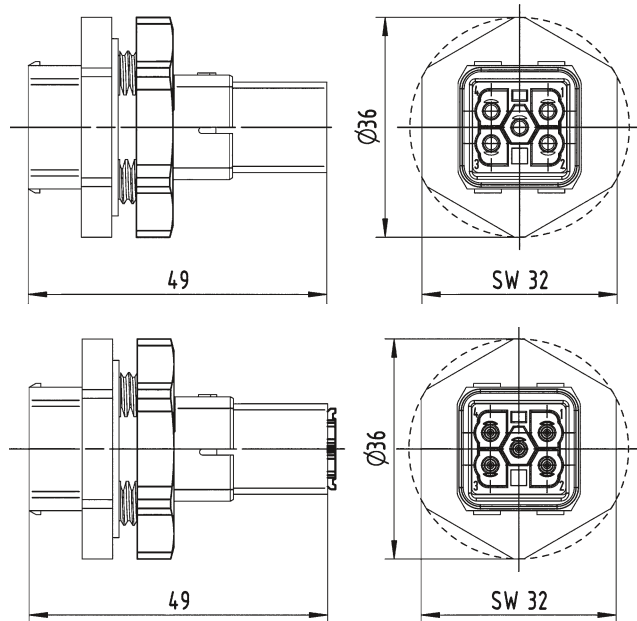
with crimp termination
 (Order crimp male contacts separately)

with Han-Quick Lock® termination

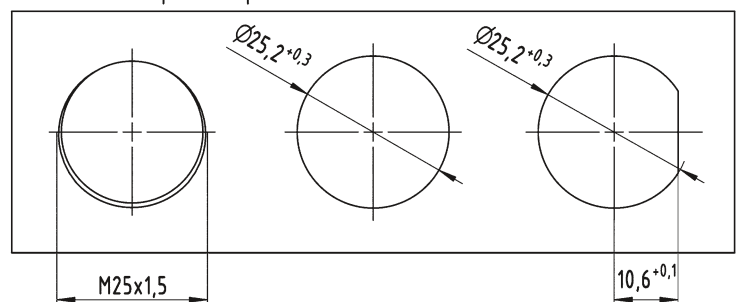
0.5 ... 2.5 mm²
 0.25 ... 1.5 mm²

09 35 231 0332

09 35 232 0332
 09 35 234 0332



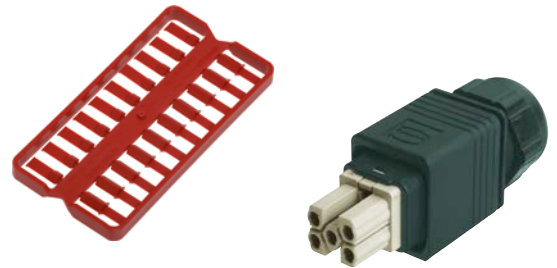
possible panel cut outs - thickness max. 3 mm



Coding element

10 pieces each for device and cable side
 enables 4 times coding without contact loss

09 35 000 6190



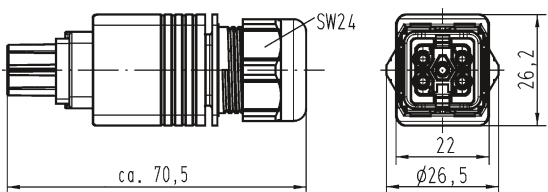
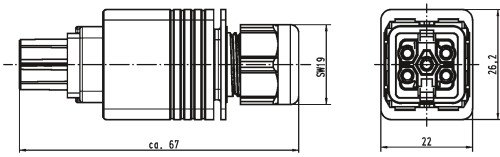
Han® PushPull, type acc. to IEC 61 076-3-118
Connector, 5 poles, 690 V, 16 A

Features

- HARTING PushPull technology
- Compact, space-saving design
- Touch-proof
- Cable side: female
 - crimp termination
 - Han-Quick Lock® termination technology
 Field-assembly without special tools
- 4 times coding without contact loss
- NEW: Larger termination cross section for conductors 0.25 - 1.5 mm²

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull technology acc. to IEC 61 076-3-117 variant 14 |
| Mating face | acc. to IEC 61 076-3-118 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data | 16 A 690 V 8 kV 3 |
| acc. to DIN EN 61 984 | 0.25 – 2.5 mm ² |
| Termination cross section | min. 500 |
| Mating cycles | -40 °C ... +70 °C |
| Temperature range | Plastic, black |
| Housing material | V0 |
| Flammability acc. to UL 94 | |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------------------------|--|------------------|
| Connector set, plastic incl. housing and female insert with crimp termination 9 – 13 mm clamp range Han® P crimp contacts order separately | 09 35 231 0423 |  | |
| with crimp termination 6.5 – 9.5 mm clamp range Han® P crimp contacts order separately | 09 35 231 0421 | | |
| with Han-Quick Lock® termination 9 – 13 mm clamp range for termination cross section 0.5 - 2.5 mm ² | 09 35 232 0423 |  | |
| with Han-Quick Lock® termination 6.5 – 9.5 mm clamp range for termination cross section 0.5 - 2.5 mm ² for termination cross section 0.25 - 1.5 mm ² | 09 35 232 0421 09 35 234 0421 | | |
| Protection cover IP65 / IP67 | 09 35 002 5411 | | |
| Protection cover IP40 | 09 35 002 5412 | | |
| Coding pins | 09 35 000 6190 | | |
| Security Clip | 09 35 002 9910 | | |



Han® PushPull, type acc. to IEC 61 076-3-118
Housing bulkhead mounting and power females for device integration

Features

- HARTING PushPull technology
- Compact, space-saving design
- Touch-proof
- Device side: male
 - Solder variant, angled and straight
- 4 times coding without contact loss

Technical characteristics

| | |
|---|---|
| Locking | PushPull technology acc. to IEC 61 076-3-118 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data acc. to DIN EN 61984 | 16 A 230/400 V 4 kV 3 |
| Termination | Male insert with solder termination |
| Mating cycles | min. 500 |
| Temperature range | -40 °C ... +70 °C |
| Flammability acc. to UL 94 | V0 |
| Housing material | Zinc die-cast, nickel plated Plastic, black (female) |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Components device side

| | | | |
|--|----------------|--|--|
| Housing bulkhead mounting metal | 09 35 002 0303 | | |
| Replacement flat seal | 09 35 002 9901 | | |
| Protection cover IP65 / IP67 | 09 35 002 5402 | | |
| Protection cover IP40 | 09 35 002 5401 | | |
| Coding pins | 09 35 000 6190 | | |
| Male insert with solder termination angled | 09 35 002 3003 | | |
| Male insert with solder termination straight | 09 35 002 3004 | | |



Han® PushPull, type acc. to IEC 61 076-3-118
Panel feed-through, 5 poles, 690 V, 16 A

Features

- HARTING PushPull technology
- Compact, space-saving design
- Touch-proof
- Panel feed-through: male
 - crimp termination
 - Han-Quick Lock® termination technology
- 4 times coding without contact loss
- NEW: Larger termination cross section for conductors 0.25 - 1.5 mm²

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull technology acc. to IEC 61 076-3-117 variant 14 |
| Mating face | acc. to IEC 61 076-3-118 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data | 16 A 690 V 8 kV 3 |
| acc. to DIN EN 61 984 | 0.25 – 2.5 mm ² |
| Termination cross section | min. 500 |
| Mating cycles | -40 °C ... +70 °C |
| Temperature range | Zinc die-cast, nickel-plated |
| Housing material | V0 |
| Flammability acc. to UL 94 | |

| | | | |
|----------------|-------------|---------|------------------|
| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|

Han® PushPull Power 4/0 Panel feed-through

5 poles, 690 V / 16 A
incl. bulkhead housing
and male insert

Rectangular panel cut out
with crimp termination
(Order crimp male contacts
separately)

09 35 231 0311

with Han-Quick Lock®
termination

0.5 ... 2.5 mm²

09 35 232 0311

0.25 ... 1.5 mm²

09 35 234 0311

Circular panel cut out
with crimp termination
(Order crimp male contacts
separately)

09 35 231 0312

with Han-Quick Lock®
termination

0.5 ... 2.5 mm²

09 35 232 0312

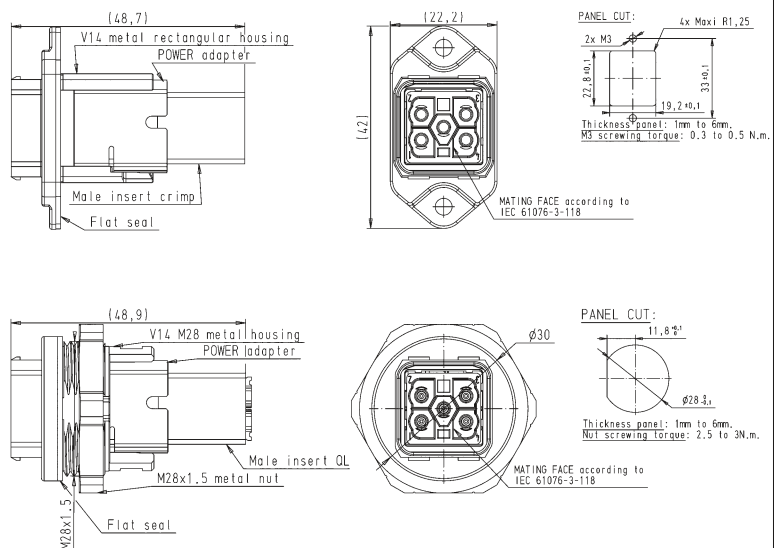
0.25 ... 1.5 mm²

09 35 234 0312

Coding element

10 pieces each for device and
cable side
enables 4 times coding without
contact loss

09 35 000 6190





Han® PushPull, type acc. to IEC 61 076-3-118
Connector, 5 poles, 690 V, 16 A

Features

- HARTING PushPull technology
- Compact, space-saving design
- Touch-proof
- Cable side: female
 - crimp termination
 - Han-Quick Lock® termination technology
 Field-assembly without special tools
- 4 times coding without contact loss
- NEW: Larger termination cross section for conductors 0.25 - 1.5 mm²

Technical characteristics

| | |
|----------------------------|---|
| Locking | PushPull technology acc. to IEC 61 076-3-117 variant 14 |
| Mating face | acc. to IEC 61 076-3-118 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data | 16 A 690 V 8 kV 3 |
| acc. to DIN EN 61 984 | 0.25 – 2.5 mm ² |
| Termination cross section | min. 500 |
| Mating cycles | -40 °C ... +70 °C |
| Temperature range | Zinc die-cast, nickel-plated |
| Housing material | V0 |
| Flammability acc. to UL 94 | |

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Connector set, metal

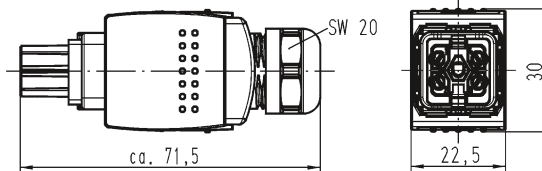
incl. housing and female insert

with crimp termination
4 – 11 mm clamp range
Han® P crimp contacts
order separately

09 35 231 0401

with Han-Quick Lock® termination
4 – 11 mm clamp range
for termination cross section 0.5 - 2.5 mm²
for termination cross section 0.25 - 1.5 mm²

09 35 232 0401
09 35 234 0401



Protection cover IP65 / IP67

09 35 002 5411

Protection cover IP40

09 35 002 5412

Coding pins

09 35 000 6190

Han® PushPull, type acc. to IEC 61 076-3-118 variant 14 Accessories

| Identification | Part number | Drawing | Dimensions in mm | | | | | | | | |
|---|----------------|---------|--|------------|--------------|---------------------------|-----------|---------------------|-----------|---------------------|-----------|
| Crimping tool | 09 99 000 0888 | | <table border="1"> <thead> <tr> <th>Wire gauge</th> <th>Tool setting</th> </tr> </thead> <tbody> <tr> <td>0.5 - 1.0 mm²</td> <td>Ø 1.15 mm</td> </tr> <tr> <td>1.5 mm²</td> <td>Ø 1.25 mm</td> </tr> <tr> <td>2.5 mm²</td> <td>Ø 1.35 mm</td> </tr> </tbody> </table> | Wire gauge | Tool setting | 0.5 - 1.0 mm ² | Ø 1.15 mm | 1.5 mm ² | Ø 1.25 mm | 2.5 mm ² | Ø 1.35 mm |
| Wire gauge | Tool setting | | | | | | | | | | |
| 0.5 - 1.0 mm ² | Ø 1.15 mm | | | | | | | | | | |
| 1.5 mm ² | Ø 1.25 mm | | | | | | | | | | |
| 2.5 mm ² | Ø 1.35 mm | | | | | | | | | | |
| Locator Han P® for crimping tool 09 99 000 0888 | 09 99 000 0886 | | | | | | | | | | |
| Removal tool Han P® | 09 99 000 0319 | | | | | | | | | | |
| Coding pins for 4 times coding without contact loss | 09 35 000 6190 | | | | | | | | | | |

| Identification | Part number | | Drawing | Dimensions in mm | | | | | | | | | | | | | | | | | | |
|---|---------------------------------|----------------|------------------|---|------------|---|------------------|--------------------------------|---------|------|---------------------------------|---------|------|--------------------------------|---------|------|--------------------------------|---------|------|--------------------------------|---------|------|
| | Male contact | Female contact | | | | | | | | | | | | | | | | | | | | |
| Crimp contacts Han® P silver plated | for 0.5 mm ² | 09 35 000 6103 | 09 35 000 6203 | <table border="1"> <thead> <tr> <th>Wire gauge</th> <th>Ø</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>for 0.5 mm² AWG 20</td> <td>1.15 mm</td> <td>6 mm</td> </tr> <tr> <td>for 0.75 mm² AWG 18</td> <td>1.30 mm</td> <td>6 mm</td> </tr> <tr> <td>for 1.0 mm² AWG 18</td> <td>1.45 mm</td> <td>6 mm</td> </tr> <tr> <td>for 1.5 mm² AWG 16</td> <td>1.75 mm</td> <td>6 mm</td> </tr> <tr> <td>for 2.5 mm² AWG 14</td> <td>2.25 mm</td> <td>6 mm</td> </tr> </tbody> </table> | Wire gauge | Ø | Stripping length | for 0.5 mm ² AWG 20 | 1.15 mm | 6 mm | for 0.75 mm ² AWG 18 | 1.30 mm | 6 mm | for 1.0 mm ² AWG 18 | 1.45 mm | 6 mm | for 1.5 mm ² AWG 16 | 1.75 mm | 6 mm | for 2.5 mm ² AWG 14 | 2.25 mm | 6 mm |
| | Wire gauge | Ø | Stripping length | | | | | | | | | | | | | | | | | | | |
| | for 0.5 mm ² AWG 20 | 1.15 mm | 6 mm | | | | | | | | | | | | | | | | | | | |
| | for 0.75 mm ² AWG 18 | 1.30 mm | 6 mm | | | | | | | | | | | | | | | | | | | |
| | for 1.0 mm ² AWG 18 | 1.45 mm | 6 mm | | | | | | | | | | | | | | | | | | | |
| | for 1.5 mm ² AWG 16 | 1.75 mm | 6 mm | | | | | | | | | | | | | | | | | | | |
| for 2.5 mm ² AWG 14 | 2.25 mm | 6 mm | | | | | | | | | | | | | | | | | | | | |
| for 0.75 mm ² | 09 35 000 6104 | 09 35 000 6204 | | | | | | | | | | | | | | | | | | | | |
| for 1.0 mm ² | 09 35 000 6105 | 09 35 000 6205 | | | | | | | | | | | | | | | | | | | | |
| for 1.5 mm ² | 09 35 000 6106 | 09 35 000 6206 | | | | | | | | | | | | | | | | | | | | |
| for 2.5 mm ² | 09 35 000 6107 | 09 35 000 6207 | | | | | | | | | | | | | | | | | | | | |



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14
cable to cable housing

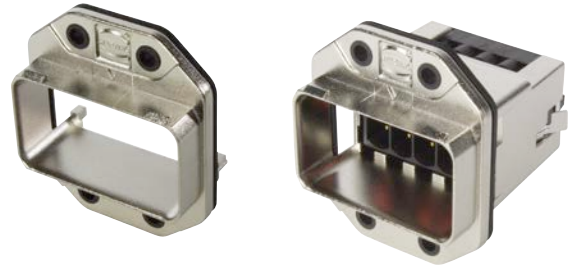
Features

- HARTING PushPull technology
- Ideal for prototyping
- Can be combined with panel feed-throughs for power, data and signal

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull technology acc. to IEC 61076-3-117 variant 14 |
| Degree of protection | IP65 / IP67 |
| Outer cable diameter | 6.5 ... 9.5 mm / 9 ... 13 mm |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|----------------|--|------------------|
| Han® PushPull cable to cable housings, plastic (Order housing bulkhead mounting and insert separately) | | 2X REMFORM $\phi 3 \times 8$ TORX screws | |
| for outer cable diameter 6.5 ... 9.5 mm | 09 35 002 0431 | | |
| for outer cable diameter 9 ... 13 mm | 09 35 002 0433 | 2X REMFORM $\phi 3 \times 8$ TORX screws | |
| Suitable bulkhead housing, plastic for power, 5 poles, 690 V / 16 A, incl. housing bulkhead mounting and insert with crimp termination (Order Han® P crimp male contacts separately) | 09 35 231 0331 | | |
| with Han-Quick Lock® termination 0.5 ... 2.5 mm ² | 09 35 232 0331 | | |
| 0.25 ... 1.5 mm ² | 09 35 234 0331 | | |
| Coding element power 10 pieces each for device and cable side | 09 35 000 6190 | | |



Housing bulkhead mounting for device integration

Features

- HARTING PushPull technology
- Robust design
- Device side: male
 - Spring cage connection
- AIDA-conform (German Domestic Automobile Manufactures)

Technical characteristics

| | |
|--------------------------------------|---|
| Locking | PushPull technology according to IEC PAS 61076-3-126 |
| Degree of protection | IP65 / IP67 |
| Number of contacts | 4 + PE |
| Electrical data acc. to DIN EN 61984 | 16 A 24 V 4 kV |
| Termination | Spring cage connection |
| Mating cycles | min. 100 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel plated Plastic, black (female) |

| Identification | Part number | Drawing | Dimensions in mm |
|--|-------------------------------------|--------------|------------------|
| Components device side Housing bulkhead mounting metal | 09 35 014 0301 | | |
| Panel feed-through, metal incl. housing and male insert with spring cage connection and with fixed coding with variable coding | 09 35 433 0311 09 35 434 0311 | | |
| Replacement coding (packing unit = 120 pieces) | 14 95 000 0051 00 | | |
| Protection cover IP65 / IP67 | 09 35 004 5402 09 35 004 5402 XL | (100 pieces) | |
| Protection cover IP40 | 61 04 600 0195 00 | | |



Han® PushPull L Power 4/0 Genderchanger Metal

Features

- High degree of protection IP65 / IP67
- Robust metal housing
- Standard PROFINET component of the German automotive production
- Allows usage of different cable types (Type B,C) e.g. in robots application
- Extension of cords according to PROFINET guideline

Technical characteristics

| | |
|--|--|
| Connector | Han® PushPull L Power 4/0 |
| Locking | PushPull technology according to IEC PAS 61076-3-126 |
| Electrical transmission | 16 A / 24 V |
| Number of contacts | 5 |
| Mating cycles | min. 500 |
| Housing material | Aluminium anodized |
| Dimensions | 83.4 x 62 x 40.7 mm (unmated) |
| Degree of protection acc. to DIN 60529 | IP65 / IP67 (mated) |
| Mounting | Wall mountable with 4 screws (type M5) |
| Temperature range | -20 °C ... +50 °C |
| Maximum permissible humidity | 30 % ... 95 % (no condensation) |

Identification

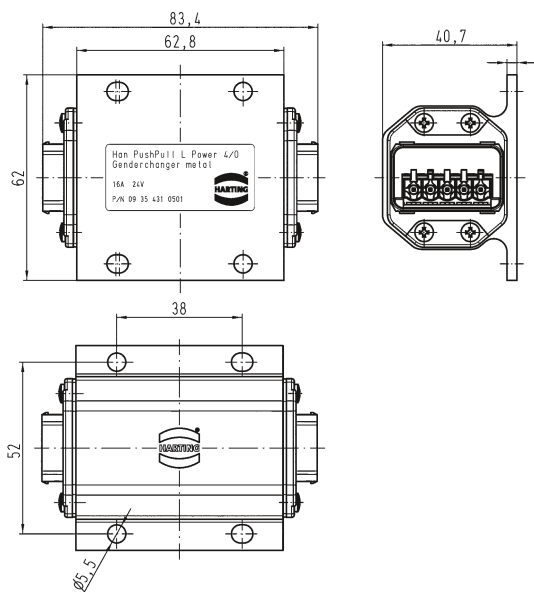
Part number

Drawing

Dimensions in mm

Han® PushPull L Power 4/0 Genderchanger metal including housing and printed board with 2 x male insert with solder termination

09 35 431 0501





Han® PushPull L Power 4/0 Coupling Metal

Features

- High degree of protection IP65 / IP67
- Robust metal housing
- Standard PROFINET component of the German automotive production
- Extension of cords according to PROFINET guideline
- For an easy robot termination and a fast exchange of tube packages

Technical characteristics

| | |
|--|--|
| Locking | PushPull technology according to IEC PAS 61076-3-126 |
| Electrical transmission | 16 A / 24 V |
| Number of contacts | 5 |
| Mating cycles | min. 500 |
| Housing material | Aluminium die-cast |
| Degree of protection acc. to DIN 60529 | IP65 / IP67 |
| Temperature range | -40 °C ... +70 °C |

Identification

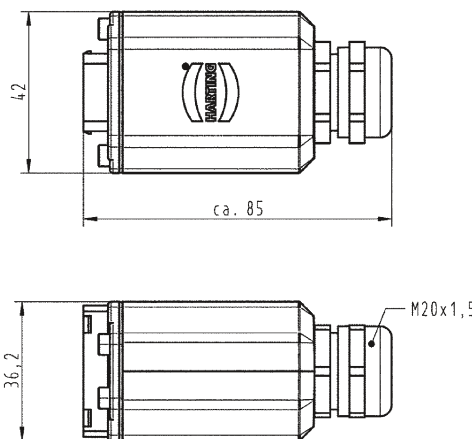
Part number

Drawing

Dimensions in mm

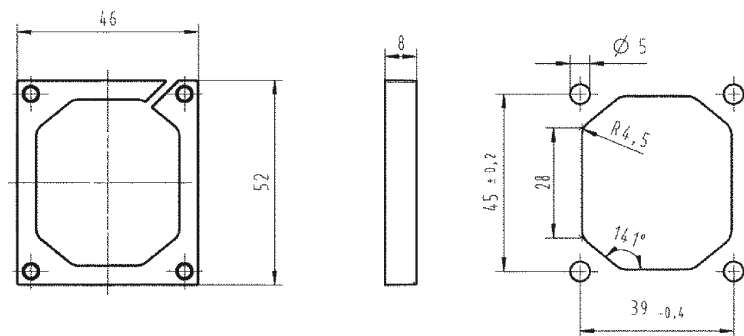
Han® PushPull L
Power 4/0
Coupling metal
including housing,
contact insert Power L,
bulkhead housing
and cable gland

61 04 201 1085 01



Fixing flange

61 04 600 0183 02



Number of contacts

5

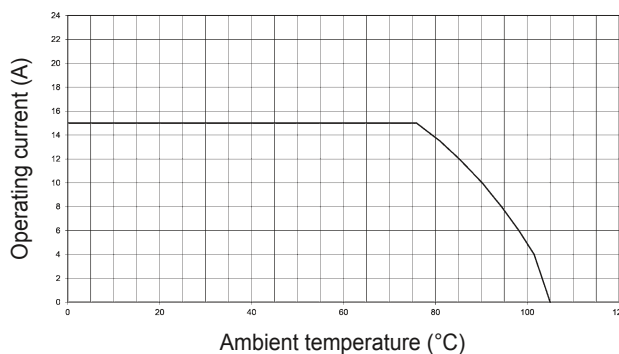
15 A 24 V 4 kV 3



Technical characteristics

| | |
|--|---|
| Number of contacts | 5 |
| Rated current | 15 A |
| Rated voltage | 24 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Limiting temperature | 0 ... +55 °C |
| Storage temperature | -40 ... +70 °C |
| Mating cycles | ≥ 500 |
| Conductor cross-section | 0.75 ... 2.5 mm ² |
| Conductor cross-section | AWG 18 ... AWG 13 |
| Locking type | PushPull |
| Degree of protection acc. to IEC 60529 | IP65 / IP67 |
| Tightening torque | 3 Nm |
| Material (insert) | Polyamide (PA) |
| Material (hood/housing) | Zinc die-cast |
| Material (contacts) | Copper alloy |
| Surface (contacts) | Sn over Ni, Termination side Au over Ni, Mating side |

Derating



Specifications and approvals

DNV GL

Identification

Part number

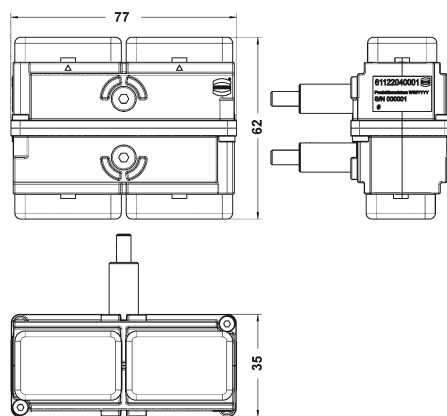
Drawing

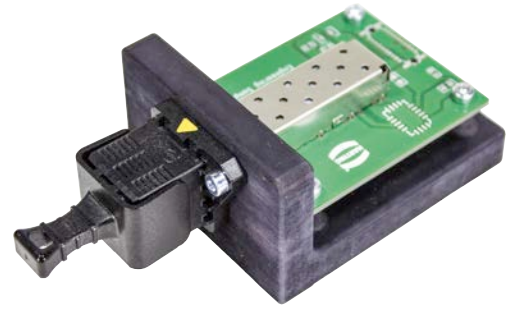
Dimensions in mm

Han® PushPull (V14),
AIDA H-distributor,
Connector,
Distributor,
AIDA compliant,
Han® PushPull (V14),
Pack contents:
Distributor,
2 fixing screws,
4 Transport protection covers,
2 distance sleeves



61 12 204 0001 02





PushPull XS SFP
Device integration and system cable

Advantages

- Optical PushPull connector based on LC with small form factor (requires 50 % compared to SC and ST)
- Shortest, most compact cable solution equipped with SFP transceiver directly pluggable into the device (length of mated pair appr. 60 mm)
- Small installation pitch: 30 mm
- Multiple transceivers for LC and RJ45 can be used in the same port
- Blind mating capability

Technical characteristics

| | |
|----------------------------|--|
| Locking | PushPull Technology |
| Degree of protection | IP65/IP67 |
| Mating face | LC acc. to IEC 61754-20 |
| Mating cycles | Min. 50 |
| Temperature range | -40 °C ... +85 °C |
| Housing material | Plastic, black |
| Flammability acc. to UL 94 | V0 |
| XXX = length | 001 = 1 m, 002 = 2 m ... 010 = 10 m, 100 = 100 m |
| Available length | 1 up to 15 m: in 1 m steps |
| | 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100 m |

Identification

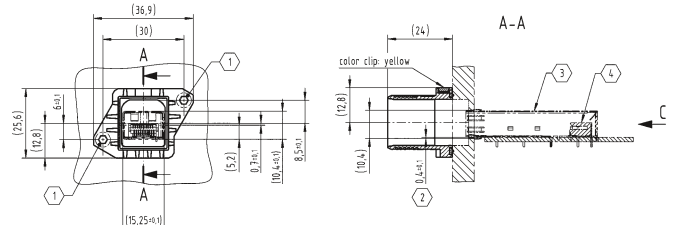
Part number

Drawing

Dimensions in mm

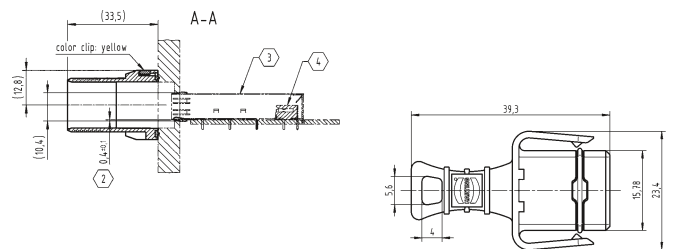
Housing bulkhead mounting, short

09 57 411 0501 200¹⁾



Housing bulkhead mounting, long

09 57 411 0501 201²⁾



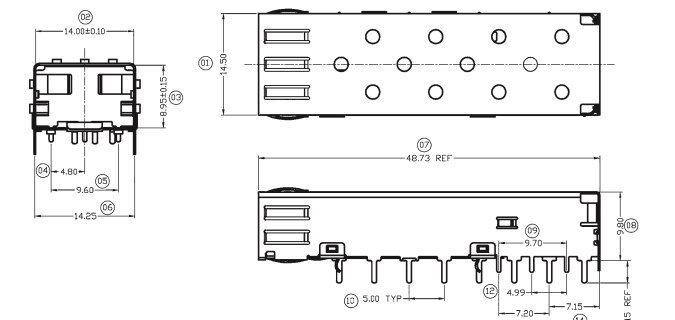
Protection cover device side

09 57 411 0501 202

SFP cage

solder termination
press in termination

33 11 000 0180 000
33 11 000 0179 000



1) Only for LC transceiver
2) For LC and RJ45 transceiver

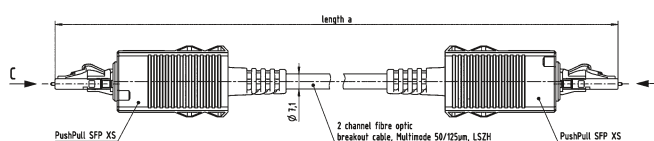
PushPull XS SFP Device integration and system cable



| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

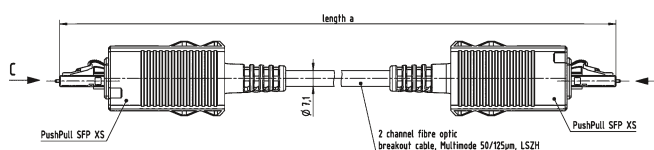
Fibre optic cable
PUR jacket,
multi mode 50/125 OM3
overmoulded bend relief suitable
for housings, long
and also usable in the same
port as PushPull XS SFP RJ45
double side assembly with
PushPull XS SFP

33 26 231 xxx0 012¹⁾



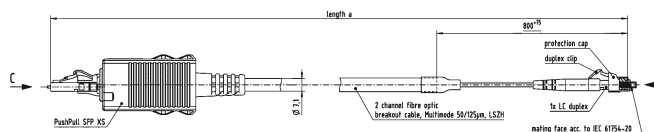
Fibre optic cable
PUR jacket,
multi mode 50/125 OM3
overmoulded bend relief suitable
for housings, short
double side assembly with
PushPull XS SFP

33 26 231 xxx0 014²⁾



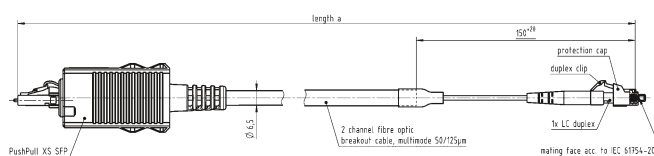
Fibre optic cable
PUR jacket,
multi mode 50/125 OM3
overmoulded bend relief suitable
for housings, long
and also usable in the same
port as PushPull XS SFP RJ45
Page 1: PushPull XS SFP
Page 2: LC duplex

33 26 231 xxx0 013¹⁾



Fibre optic cable
PUR jacket,
multi mode 50/125 OM3
overmoulded bend relief suitable
for housings, short
Page 1: PushPull XS SFP
Page 2: LC duplex

33 26 231 xxx0 018²⁾



1) For housing 09 57 411 0501 201
2) For housing 09 57 411 0501 200

3) xxx refer Technical characteristics

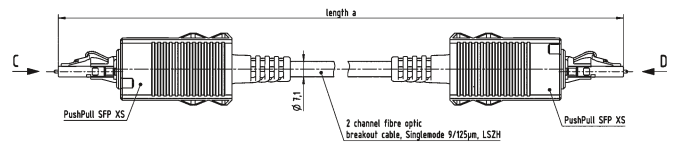


PushPull XS SFP
Device integration
and system cable

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

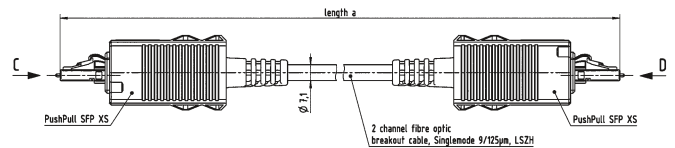
Fibre optic cable
PUR jacket,
single mode 9/125 G657.A1
overmoulded bend relief suitable
for housings, long
and also usable in the same
port as PushPull XS SFP RJ45
double side assembly with
PushPull XS SFP

33 26 231 xxx0 011¹⁾



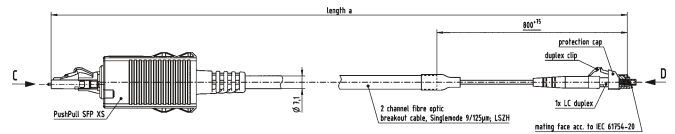
Fibre optic cable
PUR jacket,
single mode 9/125 G657.A1
overmoulded bend relief suitable
for housings, short
double side assembly with
PushPull XS SFP

33 26 231 xxx0 015²⁾



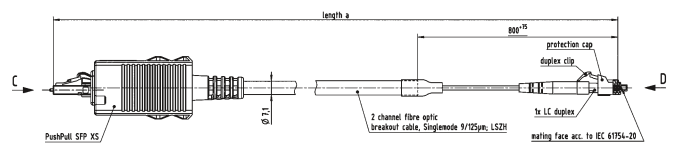
Fibre optic cable
PUR jacket,
single mode 9/125 G657.A1
overmoulded bend relief suitable
for housings, long
and also usable in the same
port as PushPull XS SFP RJ45
Page 1: PushPull XS SFP
Page 2: LC duplex

33 26 231 xxx0 016¹⁾



Fibre optic cable
PUR jacket,
single mode 9/125 G657.A1
overmoulded bend relief suitable
for housings, short
Page 1: PushPull XS SFP
Page 2: LC duplex

33 26 231 xxx0 017²⁾



1) For housing 09 57 411 0501 201
2) For housing 09 57 411 0501 200

3) xxx refer Technical characteristics

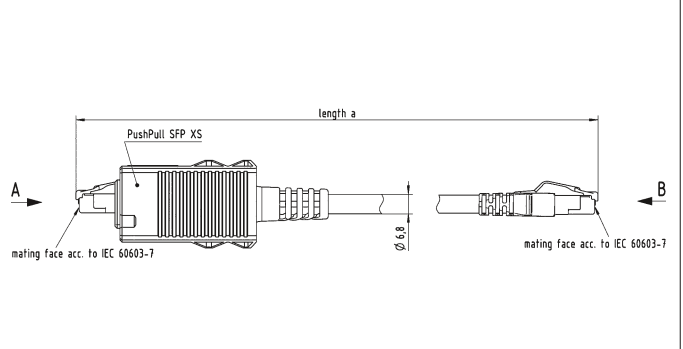


PushPull XS SFP Device integration and system cables

| Identification | Part number | Drawing | Dimensions in mm |
|----------------|-------------|---------|------------------|
|----------------|-------------|---------|------------------|

Cat. 6_A cable
 PVC jacket,
 4x2xAWG26/7
 single mode 9/125 G657.A1
 overmoulded bend relief
 (PushPull XS SFP) suitable for
 housings, long
 and also usable in the same port as
 PushPull XS SFP LC duplex
 - 3326231xxx0011
 - 3326231xxx0012
 - 3326231xxx0013
 - 3326231xxx0016

33 25 231 xxx0 001



1) xxx refer Technical characteristics

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| 09 35 000 6107 | 105 | 09 35 002 5401 | 98 | 09 35 225 0312 | 70 | 09 35 262 0401 | 97 |
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| 33 61 221 0350 003 | 26 | 33 61 431 0060 002 | 28 | 33 61 431 0200 002 | 28 | 33 61 431 0800 002 | 28 |
| | | 33 61 431 0060 003 | 29 | 33 61 431 0200 003 | 29 | 33 61 431 0800 003 | 29 |
| 33 61 221 0400 001 | 24 | 33 61 431 0060 004 | 30 | 33 61 431 0200 004 | 30 | 33 61 431 0800 004 | 30 |
| 33 61 221 0400 002 | 25 | 33 61 431 0060 005 | 31 | 33 61 431 0200 005 | 31 | 33 61 431 0800 005 | 31 |
| 33 61 221 0400 003 | 26 | 33 61 431 0060 006 | 32 | 33 61 431 0200 006 | 32 | 33 61 431 0800 006 | 32 |
| 33 61 221 0450 001 | 24 | 33 61 431 0070 001 | 27 | 33 61 431 0250 001 | 27 | | |
| 33 61 221 0450 002 | 25 | 33 61 431 0070 002 | 28 | 33 61 431 0250 002 | 28 | | |
| 33 61 221 0450 003 | 26 | 33 61 431 0070 003 | 29 | 33 61 431 0250 003 | 29 | 33 61 431 0900 001 | 27 |
| | | 33 61 431 0070 004 | 30 | 33 61 431 0250 004 | 30 | 33 61 431 0900 002 | 28 |
| 33 61 221 0500 001 | 24 | 33 61 431 0070 005 | 31 | 33 61 431 0250 005 | 31 | 33 61 431 0900 003 | 29 |
| 33 61 221 0500 002 | 25 | 33 61 431 0070 006 | 32 | 33 61 431 0250 006 | 32 | 33 61 431 0900 004 | 30 |
| 33 61 221 0500 003 | 26 | 33 61 431 0080 001 | 27 | | | 33 61 431 0900 005 | 31 |
| | | 33 61 431 0080 002 | 28 | 33 61 431 0300 001 | 27 | 33 61 431 0900 006 | 32 |
| 33 61 221 0600 001 | 24 | 33 61 431 0080 003 | 29 | 33 61 431 0300 002 | 28 | | |
| 33 61 221 0600 002 | 25 | 33 61 431 0080 004 | 30 | 33 61 431 0300 003 | 29 | | |
| 33 61 221 0600 003 | 26 | 33 61 431 0080 005 | 31 | 33 61 431 0300 004 | 30 | 33 61 431 1000 001 | 27 |
| | | 33 61 431 0080 006 | 32 | 33 61 431 0300 005 | 31 | 33 61 431 1000 002 | 28 |
| 33 61 221 0700 001 | 24 | 33 61 431 0090 001 | 27 | 33 61 431 0300 006 | 32 | 33 61 431 1000 003 | 29 |
| 33 61 221 0700 002 | 25 | 33 61 431 0090 002 | 28 | 33 61 431 0350 001 | 27 | 33 61 431 1000 004 | 30 |
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| 33 61 221 0800 001 | 24 | 33 61 431 0090 005 | 31 | 33 61 431 0350 004 | 30 | | |
| 33 61 221 0800 002 | 25 | 33 61 431 0090 006 | 32 | 33 61 431 0350 005 | 31 | | |
| 33 61 221 0800 003 | 26 | | | 33 61 431 0350 006 | 32 | 61 04 201 1084 01 | 73 |
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| 33 61 221 0900 001 | 24 | 33 61 431 0100 001 | 27 | 33 61 431 0400 001 | 27 | | |
| 33 61 221 0900 002 | 25 | 33 61 431 0100 002 | 28 | 33 61 431 0400 002 | 28 | | |
| 33 61 221 0900 003 | 26 | 33 61 431 0100 003 | 29 | 33 61 431 0400 003 | 29 | 61 12 204 0001 02 | 110 |
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| 33 61 221 1000 001 | 24 | 33 61 431 0100 005 | 31 | 33 61 431 0400 005 | 31 | | |
| 33 61 221 1000 002 | 25 | 33 61 431 0100 006 | 32 | 33 61 431 0400 006 | 32 | 61 04 600 0182 02 | 73 |
| 33 61 221 1000 003 | 26 | 33 61 431 0110 001 | 27 | 33 61 431 0450 001 | 27 | 61 04 600 0183 02 | 109 |
| | | 33 61 431 0110 002 | 28 | 33 61 431 0450 002 | 28 | | |
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| 33 61 431 0010 002 | 28 | 33 61 431 0110 004 | 30 | 33 61 431 0450 004 | 30 | 61 04 600 0195 00 | 107 |
| 33 61 431 0010 003 | 29 | | | | | | |



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