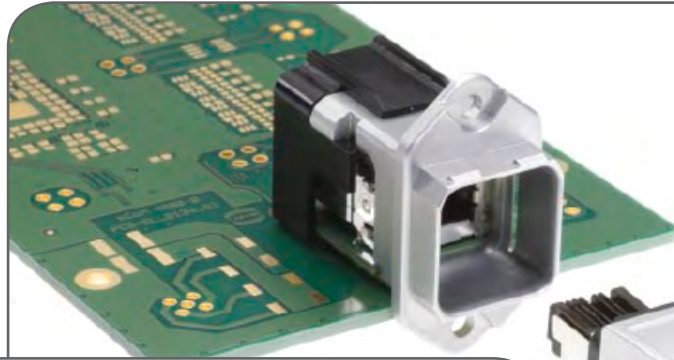




A distributed automation system does not contain any central automated control cabinets. Controls, sensors and actuators are designed for a high degree of protection (IP 65 / IP 67) and are installed directly in the field. In connection with these innovative installation concepts with distributed devices, users are demanding a standard connector family that is compatible with all interfaces. In response to these needs, the HARTING PushPull series has set the respective new appliance connection standard. PushPull technology is available for data, signal and power applications. Other interfaces accommodating USB or fiber optics (LC, SCRJ) supplement the universal range of the PushPull solutions. The integration of communication and power lines in a hybrid PushPull connector is a genuine trend-setting advance. In view of these strengths, the PushPull container has become the standard for current and future appliance interfaces. The German automotive industry, for example, has opted for the implementation of the PushPull connector family.

### Application profile:

| CONNECTION TYPE                                  |                     | ENVIRONMENT |                                           | APPLICATION |        |                                                                    |                    |           |                                     |                          |
|--------------------------------------------------|---------------------|-------------|-------------------------------------------|-------------|--------|--------------------------------------------------------------------|--------------------|-----------|-------------------------------------|--------------------------|
| Board to Board                                   | Cable/Wire to Board | IP 20       | IP 65 / IP 67                             | Data        | Signal | Power                                                              | high performance   |           |                                     |                          |
|                                                  |                     |             |                                           |             |        |                                                                    | Data transfer rate | Shielding | Number of contacts, contact density | Voltage, working current |
|                                                  |                     |             |                                           |             |        |                                                                    |                    |           |                                     |                          |
| Cable termination                                |                     |             | PCB termination                           |             |        | Application standard                                               |                    |           |                                     |                          |
| <div><div>Han-Quick Lock®</div><div></div></div> |                     |             | <div><div>THT</div><div></div></div>      |             |        | <div><div></div><div></div><div></div><div></div><div></div></div> |                    |           |                                     |                          |
| <div><div>IDC HARAX®</div><div></div></div>      |                     |             | <div><div>SMC</div><div></div></div>      |             |        |                                                                    |                    |           |                                     |                          |
| <div><div>Crimp</div><div></div></div>           |                     |             | <div><div>SMT</div><div></div></div>      |             |        |                                                                    |                    |           |                                     |                          |
| <div><div>Screw</div><div></div></div>           |                     |             | <div><div>Press-in</div><div></div></div> |             |        |                                                                    |                    |           |                                     |                          |
| <div><div>Cage clamp</div><div></div></div>      |                     |             |                                           |             |        | <div><div>Separate housing</div><div></div></div>                  |                    |           |                                     |                          |
| <div><div>Axial screw</div><div></div></div>     |                     |             |                                           |             |        | <div><div>Integrated housing</div><div></div></div>                |                    |           |                                     |                          |

<sup>1)</sup> Piercing contacts

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The PushPull connector housing is a function container with degree of protection IP 65 / IP 67 and is available in two standardized housing sizes. These containers are equipped with standard RJ45, FOC or power contacts for operation at 5 x 16 A, depending on application requirements. The PushPull connector can be delivered either as plastic, or as metal variant, depending on the installation environment.

### THE PushPull PRINCIPLE

PushPull connector applications combine two basic advantages:

1. Simple operation
2. Safe and vibration resistant sealed IP 65 / IP 67 connection.

The innovative PushPull lock mechanism dispenses with the need for a latching bracket. The connector can be inserted with one hand, minimum force and an audible click for safe operation. The connection can be removed again just as easily for service work.

### COPPER, FOC AND POWER – IN THE SAME DESIGN

HARTING offers two series of the PushPull connector system, which differ in terms of their outer dimensions and module inserts.

#### Han® PushPull (IEC 61 076-3-117 VARIANT 14)

This series represents the standard PROFINET device interface for the IP 67 environment of the German automobile manufacturing industry.

The connector is available as metal and as plastic version. The RJ45 module for copper conductors and the SCRJ module for FOCs are available as data connectors. The RJ45 variant is realized by means of the RJ Industrial module equipped with HARAX® quick connection technology. The power module which is installed in the same container can be assembled on-site, either with crimp contacts or with innovative Quick Lock® technology in order to wire the distributed field devices to 230/400 V (16 A) power. This 5-pole connector enables the transfer of two



independent 24 V control circuits with functional ground, or the transfer of a three-phase voltage of 400 V (16 A).

## HARTING PushPull (IEC 61 076-3-106 VARIANT 4)

This extremely compact and space-saving series provides an Ethernet appliance connection with degree of protection IP 65 / IP 67 that requires no more installation space than a M12 connector. The RJ45 variant for copper conductors and the LC variant for FOCs are available as modules for data connectors. The RJ45 variant is realized by means of *HARAX*® quick connection technology as used with HARTING RJ Industrial®. The 4-pole module for 48 V (12 A) or the 3-pole module for 250 V (16 A) can be used to supply power to the distributed field devices.

## HARTING PushPull HYBRID

The migration from Fieldbus to Ethernet within communication technology has simplified machine installation options. This

simplification is attained by combining the data and the 24 V power lines in a single hybrid cable with hybrid connector, in connection with the spatial requirements of an M12 connector.

The HARTING PushPull Hybrid offers trend-setting connection technology for this new method of machine installation.

The PushPull Hybrid reduces everything by half: the number of connection points and cables, and spatial requirements for the connection technology.

The PushPull Hybrid makes everything easier: machine installation, the wiring of connectors and safe insertion.

## APPLIANCE INTEGRATION:

In order to support the implementation of appliances with degree of protection IP 65 / IP 67, HARTING offers panel feed-through devices with integrated couplings and female contact modules for direct mounting on PCBs.

## HARTING PushPull

### ONE CONCEPT FOR DATA, SIGNAL AND POWER

The internationally standardized PushPull connector represents the latest generation of appliance connection technology with high degree of protection IP 65 / IP 67, easy insertion and snap-action engagement with audible click.

The PushPull housing family is designed for the integration of a wide range of contact inserts for data, signal and power lines.

### INSTALLATION IN PLANTS

#### WITH Han® PushPull CONNECTORS:

- The standard for PROFINET communication
- One housing for the electrical and optical data transfer and for power supply
- Plastic or metal housing variants

### INSTALLATION IN MACHINES

#### WITH HARTING PushPull HYBRID CONNECTORS:

- Combined data lines and appliance power supply up to 5 A in the same connector
- Compact size (comparable with M12)
- Straight and angled connector design, suitable for on-site assembly and overmolded

### POWER SUPPLY TO DISTRIBUTED DEVICES

#### USING PushPull CONNECTORS:

- Variant 4: 48 V (12 A), 4-pole or 250 V (16 A), 3-pole
- Variant 14: 400 V (12 A) 5-pole, or 24 V (16 A) 5-pole
- Latest connection technology QuickLock® for on-site assembly without special auxiliary tools





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

## Advantages

- PushPull housing bulkhead mounting with HARTING PushPull technology
- Compact, space-saving design for device integration of RJ45- or Power-pcb female

Housing bulkhead mounting EasyInstall

- for simple device integration round panel cut out

Housing bulkhead mounting Compact

- high packing density  
(spacing 27 x 21 mm)

## Technical characteristics

|                               |                                                           |
|-------------------------------|-----------------------------------------------------------|
| Locking                       | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4 |
| Transmission rate             | 10/100/1000 Mbit/s                                        |
| Shielding                     | fully shielded,<br>360° shielding contact                 |
| Mating cycles                 | min. 750                                                  |
| Degree of protection          | IP 65 / IP 67                                             |
| Temperature range             | -40 °C ... +70 °C                                         |
| Housing material              | Plastic, black                                            |
| Flammability<br>acc. to UL 94 | V 0                                                       |
|                               | UL approval (E102079)                                     |

| Identification                                                                                                                                                                                                                                                                                                                                                                             | Part No.                                                                                                                                                                         | Drawing              | Dimensions in mm |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------|
| <b>Components device side</b><br><br><b>Housing bulkhead mounting – EasyInstall</b><br>with integrated seal<br>board drillings for M3<br><br>without fixing clip<br><br>with fixing clip<br><br>with fixing clip, for all HIFF compatible modules                                                                                                                                          | <br><br>09 45 545 0030 <sup>1)</sup><br>09 45 595 0030 <sup>2)3)</sup><br><br>09 45 545 0031 <sup>2)</sup><br>09 45 595 0031 <sup>2)3)</sup><br><br>09 45 545 0032               | <p>Panel cut out</p> |                  |
| <b>Housing bulkhead mounting – Compact</b><br>Board drillings for M2.5<br><br>without fixing clip (incl. flat seal)<br>without fixing clip (with integrated seal)<br><br>with fixing clip (incl. flat seal)<br>with fixing clip (with integrated seal)<br>with fixing clip (with integrated seal) for vertical RJ jack 09 45 551 1103<br>with fixing clip, for all HIFF compatible modules | <br><br>09 45 545 0023 <sup>2)</sup><br>09 45 545 0033 <sup>2)</sup><br><br>09 45 545 0021 <sup>2)</sup><br>09 45 545 0029 <sup>2)</sup><br><br>09 45 545 0027<br>09 45 545 0028 |                      |                  |

<sup>1)</sup> suitable RJ45 jacks: 09 45 551 1100 / ... 1110 / ... 1102 / ... 1103 / ... 1130 / ... 1530

<sup>2)</sup> suitable RJ45 jacks: 09 45 551 1100 / ... 1110 / ... 1102 / ... 1130 / ... 1530

<sup>3)</sup> Metal version



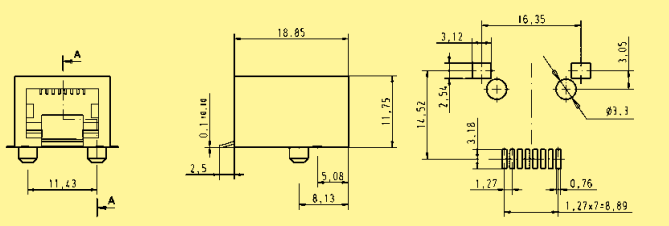
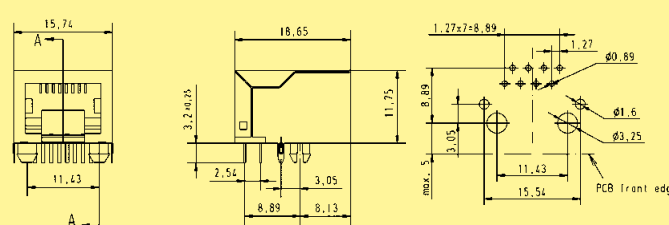
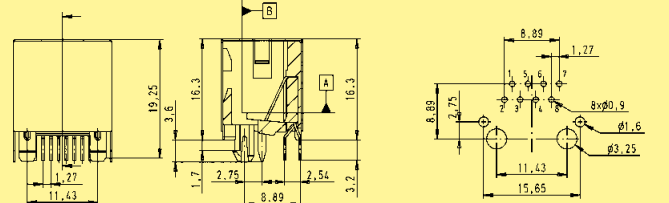
HARTING PushPull Technology acc. to IEC 61076-3-106 variant 4  
RJ45 jacks and accessories

## 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                                                                | IP 65 / IP 67                                          |
| Temperature range                                                                   | -40 °C ... +70 °C                                      |
| Housing material                                                                    | Plastic, black                                         |
| Flammability acc. to UL 94                                                          | V 0                                                    |
|  | UL approval (E102079)                                  |

| Identification                        | Part No.                                                     | Drawing                                                                              | Dimensions in mm |
|---------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------|
| Components device side                |                                                              |                                                                                      | pcb layout       |
| RJ45 jacks Cat. 5                     |                                                              |                                                                                      |                  |
| Solder variant SMD, 90° angled        | 09 45 551 1100 <sup>1)</sup><br>09 45 551 1110 <sup>2)</sup> |  |                  |
| Solder variant overmolded, 90° angled | 09 45 551 1102 <sup>1)</sup>                                 |  |                  |
| Solder variant overmolded, straight   | 09 45 551 1103 <sup>3)</sup>                                 |  |                  |

<sup>1)</sup> Packaging: Blister à 120 pieces

<sup>2)</sup> Packaging: Tape & Reel à 130 pieces

<sup>3)</sup> Packaging: Tape & Reel à 80 pieces



HARTING PushPull Technology acc. to IEC 61076-3-106 variant 4  
RJ45-panel feed-throughs and accessories

## Advantages

- Small, space-saving PushPull Interfaces in IP 65 / IP 67
- Easy handling of RJ45 patch cords in switch cabinets or sets
- Mounting to casings

## Technical characteristics

|                                      |                                                           |
|--------------------------------------|-----------------------------------------------------------|
| Locking                              | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4 |
| Transmission rate<br>cat. 5 versions | 10/100/1000 Mbit/s                                        |
| Transmission rate<br>cat. 6 versions | 10/100 Mbit/s / 1/10 Gbit/s                               |
| Shielding                            | fully shielded,<br>360° shielding contact                 |
| Mating cycles                        | min. 750                                                  |
| Degree of protection                 | IP 65 / IP 67                                             |
| Temperature range                    | -40 °C ... +70 °C                                         |
| Housing material                     | Plastic, black                                            |
| Flammability<br>acc. to UL 94        | V 0<br>UL approval (E102079)                              |

| Identification                                                                                                                                                                                                                                                                                      | Part No.                                                                  | Drawing | Dimensions in mm |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------|------------------|
| <b>Panel feed-through set<br/>category of transmission Cat. 5</b><br><br>incl. housing bulkhead mounting EasyInstall<br>with integrated seal,<br>2 x RJ45-jack<br>board drillings for M3<br><br>incl. housing bulkhead mounting Compact,<br>flat seal,<br>2 x RJ45-jack<br>board drillings for M2.5 | 09 45 245 1130<br>09 45 295 1130<br>(metal version)<br><br>09 45 245 1102 |         |                  |
| <b>Panel feed-through set<br/>category of transmission Cat. 6</b><br><br>incl. housing bulkhead mounting EasyInstall<br>with integrated seal,<br>2 x RJ45-jack<br>board drillings for M3<br><br>incl. housing bulkhead mounting Compact,<br>with integrated seal,<br>2 x RJ45-jack                  | 09 45 245 1590<br><br>09 45 245 1560                                      |         |                  |



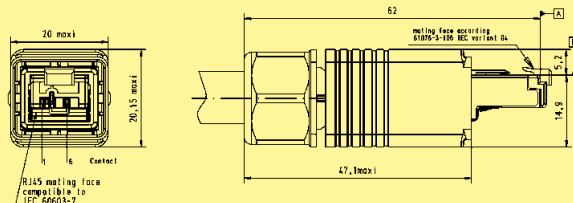
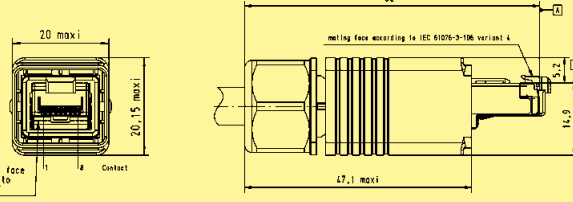
HARTING PushPull Technology acc. to IEC 61076-3-106 variant 4  
RJ45-connector

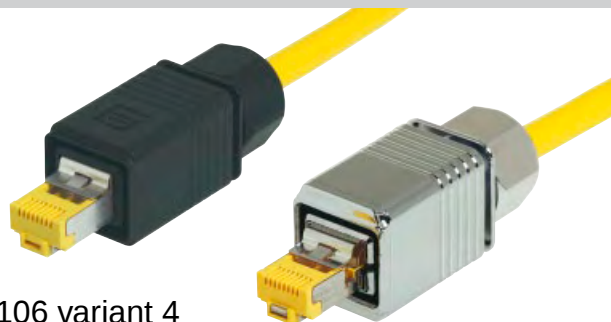
## Advantages

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

## Technical characteristics

|                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Locking                                                                             | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4         |
| Degree of protection                                                                | IP 65 / IP 67                                                     |
| Mating face                                                                         | RJ45 acc. to IEC 60 603-7                                         |
| Cable diameter                                                                      | 4.9 ... 8.6 mm                                                    |
| Termination cross section                                                           |                                                                   |
| Cat. 5                                                                              | AWG 24/7 ... AWG 22/7 (stranded)<br>AWG 23/1 ... AWG 22/1 (solid) |
| Cat. 6                                                                              | AWG 24/7 ... AWG 28/7 (stranded)                                  |
| Mating cycles                                                                       | min. 750                                                          |
| Temperature range                                                                   | -40 °C ... +70 °C                                                 |
| Housing material                                                                    | Plastic, black                                                    |
| Flammability<br>acc. to UL 94                                                       | V 0                                                               |
|  | UL approval (E102079)                                             |

| Identification                                                                                          | Part No.                                            | Drawing                                                                                                                                                                                                           | Dimensions in mm |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Connector, 4-poles<br/>Cat. 5</b><br>incl. housing with RJ45 connector,<br>shielding and cable gland | 09 45 145 1100<br>09 45 195 1100<br>(metal version) |                                                                                                                               |                  |
| <b>Connector, 8-poles<br/>Cat. 6</b><br>incl. housing with RJ45 connector,<br>shielding and cable gland |                                                     |                                                                                                                               |                  |
| Wire manager white                                                                                      | 09 45 145 1500<br>09 45 195 1500<br>(metal version) |                                                                                                                                                                                                                   |                  |
| Wire manager blue                                                                                       | 09 45 145 1510<br>09 45 195 1510<br>(metal version) |                                                                                                                                                                                                                   |                  |
| <b>New Cat. 6<sub>A</sub> version</b><br>(available Q3/2012)                                            | 09 45 145 1520<br>09 45 195 1520<br>(metal version) | Reference note:<br>For cat. 6 patch cords it is recommended to use one connector with a white wire manager and one with an blue cable manager, in order to optimise the crosstalk between different signal pairs. |                  |
| System cables in different versions                                                                     |                                                     | see catalogue "Intelligent Network Solutions"                                                                                                                                                                     |                  |



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<sub>A</sub> suitable for 1/10 Gbit Ethernet

## Technical characteristics

|                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Locking                                                                             | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4         |
| Mating face                                                                         | RJ45 acc. to IEC 60 603-7                                         |
| Cable diameter                                                                      | 4.9 ... 8.6 mm                                                    |
| Termination cross section                                                           | AWG 27/7 ... AWG 22/7 (stranded)<br>AWG 24/1 ... AWG 22/1 (solid) |
| Conductor diameter                                                                  | max. 1.6 mm (incl. insulation)                                    |
| Mating cycles                                                                       | min. 750                                                          |
| Degree of protection                                                                | IP 65 / IP 67                                                     |
| Temperature range                                                                   | -40 °C ... +70 °C                                                 |
| Housing material                                                                    | Plastic, black                                                    |
| Flammability<br>acc. to UL 94                                                       | V 0                                                               |
|  | UL approval (E102079)                                             |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Connector, 8-poles Cat. 6

incl. housing with RJ45 connector,  
shielding and cable gland

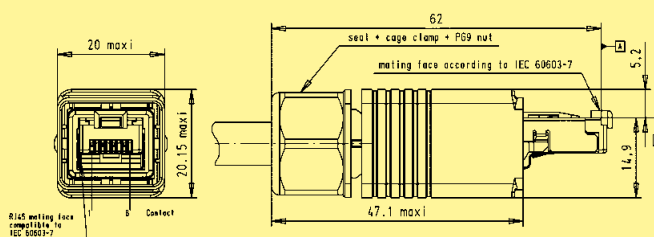
09 45 145 1560  
09 45 195 1560  
(metal version)

#### Colour clips

for colour coding the HARTING  
PushPull connectors

|        |                |
|--------|----------------|
| White  | 09 45 840 0011 |
| Yellow | 09 45 840 0013 |
| Red    | 09 45 840 0017 |
| Blue   | 09 45 840 0018 |
| Green  | 09 45 840 0019 |

System cables in different versions



see catalogue "Intelligent Network Solutions"



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 61 754-20
- One-piece LC body assures high mechanical stability
- A & B parts identification for Duplex according TIA 568 standard

## Technical characteristics

|                               |                                                           |
|-------------------------------|-----------------------------------------------------------|
| Locking                       | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4 |
| Degree of protection          | IP 65 / IP 67                                             |
| Mating face                   | LC acc. to IEC 61 754-20                                  |
| Cable diameter                | 5.8 ... 7.2 mm                                            |
| Mating cycles                 | min. 200                                                  |
| Temperature range             | -40 °C ... +70 °C                                         |
| Housing material              | Plastic, black                                            |
| Flammability<br>acc. to UL 94 | V 0                                                       |

| Identification                    | Part No.                              | Drawing | Dimensions in mm |
|-----------------------------------|---------------------------------------|---------|------------------|
| <b>HARTING PushPull LC duplex</b> |                                       |         |                  |
| Cable side                        |                                       |         |                  |
|                                   | Multimode GOF                         |         |                  |
|                                   | 09 57 402 0500 000                    |         |                  |
|                                   | 09 57 409 0500 000<br>(metal version) |         |                  |
| Singlemode GOF                    |                                       |         |                  |
|                                   | Multimode GOF                         |         |                  |
|                                   | 09 57 402 0501 000                    |         |                  |
|                                   | 09 57 409 0501 000<br>(metal version) |         |                  |
| Device side EasyInstall version   |                                       |         |                  |
|                                   | Multimode GOF                         |         |                  |
|                                   | 09 57 441 0500 000                    |         |                  |
|                                   | 09 57 468 0500 000<br>(metal version) |         |                  |
| Singlemode GOF                    |                                       |         |                  |
|                                   | Multimode GOF                         |         |                  |
|                                   | 09 57 441 0501 000                    |         |                  |
|                                   | 09 57 468 0501 000<br>(metal version) |         |                  |
| Device side Compact version       |                                       |         |                  |
|                                   | Multimode GOF                         |         |                  |
|                                   | 09 57 442 0502 001                    |         |                  |
|                                   | 09 57 442 0503 001                    |         |                  |
| Singlemode GOF                    |                                       |         |                  |
|                                   | Multimode GOF                         |         |                  |
|                                   | 09 57 442 0502 001                    |         |                  |
|                                   | 09 57 442 0503 001                    |         |                  |
| Singlemode GOF                    |                                       |         |                  |
|                                   | Multimode GOF                         |         |                  |
|                                   | 09 57 442 0502 001                    |         |                  |
|                                   | 09 57 442 0503 001                    |         |                  |



LC duplex IP 20 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 IP 67 connector on device side

## Technical characteristics

|                      |                           |
|----------------------|---------------------------|
| Degree of protection | IP 20                     |
| Mating interface     | LC duplex with two fibres |
| Temperature range    | -40 °C ... +70 °C         |

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

Device side

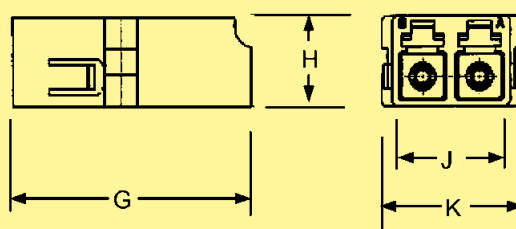
Adapter

Multimode GOF

09 57 400 0003 000

Singlemode GOF

09 57 400 0004 000



|   | min.  | max.  |
|---|-------|-------|
| G | 26.60 | 26.80 |
| H | 9.35  | 9.45  |
| J | 12.80 | 12.90 |
| K | 15.24 | 15.34 |

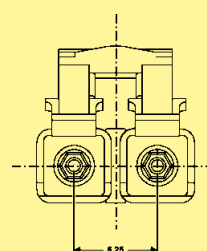
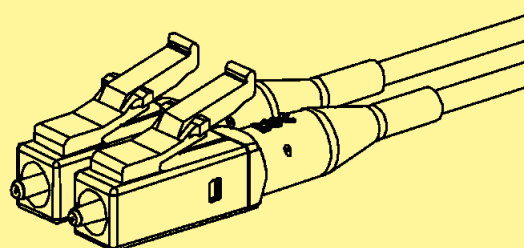
Connector  
LC duplex

Multimode GOF

09 57 400 0001 000

Singlemode GOF

09 57 400 0002 000





HARTING PushPull Hybrid  
type acc. to IEC 61076-3-106 variant 4

## Advantages

### HARTING PushPull Hybrid

In the future all new machine generations will be equipped with Fast Ethernet, no matter if PROFINET, Ethernet/IP, Powerlink, Ethercat, Varan or other Ethernet profiles.

With the change of the communication technology also the possibility is offered of simplifying the machine installation and of introducing an innovative Hybrid installation concept. This simplification will unite by data and 24 V (5 A)-supply in a Hybrid cable, at least with the space requirement of a M12-connector.

For this new installation solution HARTING with the HARTING PushPull Hybrid offers the trend-setting installation technology.

Everything is halved: the number of pluggings, the number of cables and the space requirement for the connection technology. Everything becomes simpler: the installation, attaching and safe plugging.

The Hybrid connectors were developed particular under the criteria of simple attaching in the field and the particular safe data communication with the patented omega screen concept. As contacts D-Sub and HDD Sub contacts worked world-wide are used. This socket pin contact system ensures highest reliability and optimal shock and vibration stability.

With the optional available coding pins 6 different codings can be realized.

This connector is available in the variants straight or angled as well as for field assembling or overmolded.

## Technical characteristics

### Advantages

- Compact, space-saving design
- Very compact housing with high degree of protection
- Polarisation with nose
- Sixfold codable

### 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

### Recommended pin assignment

- Power contacts

| Contact | Function       | Conductor colour |
|---------|----------------|------------------|
| 1       | V +            | Red              |
| 2       | Ground         | Brown            |
| 3       | V + (switched) | Yellow           |

- Data contacts

| Contact | Signal | Function            | Conductor colour |
|---------|--------|---------------------|------------------|
| 4       | RD –   | Receiver Data –     | Blue             |
| 5       | RD +   | Receiver Data +     | White            |
| 6       | TD –   | Transmission Data – | Orange           |
| 7       | TD +   | Transmission Data + | Yellow           |



Structure Hybrid cable

Data: 4x AWG26/7  
Power: 3x AWG20/7



HARTING PushPull Hybrid, type acc. to IEC 61076-3-106 variant 4 device side

## Advantages

- Combined data- and power-supply up to 5 A / 48 V included to one connector
- HARTING PushPull technology
- Compact design
- High packing density
- Sixfold codable
- Suitable for all Fast-Ethernet variants

## Technical characteristics

|                               |                                                                                         |
|-------------------------------|-----------------------------------------------------------------------------------------|
| Locking                       | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4                               |
| Degree of protection          | IP 65 / IP 67                                                                           |
| Termination                   | Solder pins                                                                             |
| Transmission performance      | Category 5 / Class D<br>up to 100 MHz acc. to<br>ISO/IEC 11 801:2002,<br>EN ISO 50173-1 |
| Transmission rate             | 10 / 100 Mbit/s                                                                         |
| Number of contacts            | Data: 4, shielded (Ethernet)<br>Power: 3, (5 A / 48 V)                                  |
| Housing material              | Plastic, black                                                                          |
| Flammability<br>acc. to UL 94 | V 0                                                                                     |

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

### Components device side

#### Set straight

HARTING PushPull Hybrid housing  
bulkhead mounting and pcbs female  
shielded, IP 65 / IP 67, black, 180°  
straight

09 45 245 1300

#### Set angled

HARTING PushPull Hybrid housing  
bulkhead mounting and pcbs female  
shielded, IP 65 / IP 67, black, 90°  
angled

09 45 245 1310

#### Female insert

PCB jack  
shielded 180° straight

09 45 545 1300

PCB jack  
shielded 90° angled

09 45 545 1305

#### Housing bulkhead mounting

for female insert straight  
for female insert angled

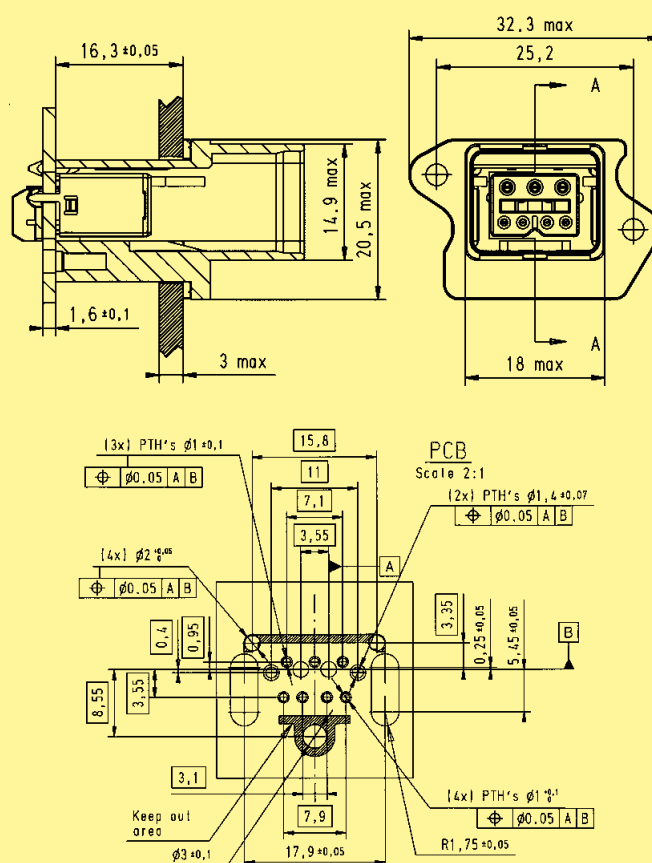
09 45 545 1320

09 45 545 1325

#### Panel feed-through

1 x Hybrid female IP 65 / IP 67 on  
1 x RJ45 female and 3 pcb clamps,  
board drillings for M2.5

09 45 245 1320





HARTING PushPull Hybrid, type acc. to IEC 61 076-3-106 variant 4  
Hybrid connector

## Advantages

- Combined data- and power-supply up to 5 A / 48 V included to one connector
- HARTING PushPull technology
- Compact design
- High packing density
- Sixfold condable
- Suitable for all Fast-Ethernet variants

## Technical characteristics

|                               |                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------|
| Locking                       | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4                                |
| Degree of protection          | IP 65 / IP 67                                                                            |
| Termination                   | Crimp                                                                                    |
| Cable diameter                | AWG 26 for Ethernet<br>AWG 20 for Power                                                  |
| Transmission performance      | Category 5 / Class D<br>up to 100 MHz acc. to<br>ISO/IEC 11 801:2002,<br>EN ISO 50 173-1 |
| Number of contacts            | Data: 4, shielded (Ethernet)<br>Power: 3, (5 A / 48 V)                                   |
| Housing material              | Plastic, black                                                                           |
| Flammability<br>acc. to UL 94 | V 0                                                                                      |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Connector

HARTING PushPull Hybrid connector,  
IP 65/ 67, black,  
with cable gland and crimp contacts

straight

09 45 145 1300

#### Accessories – Coding pin set

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

09 45 845 1300

#### Tools

Crimping tool for data contacts

09 99 000 0596

Crimping tool for power contacts

09 99 000 0175

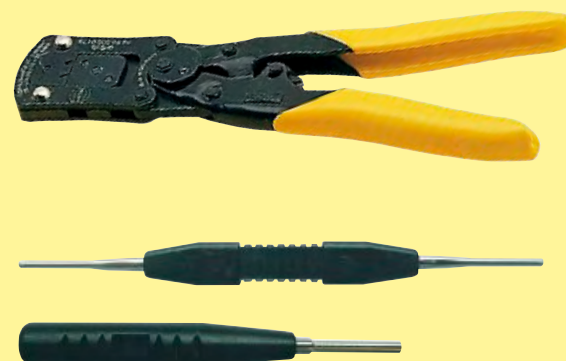
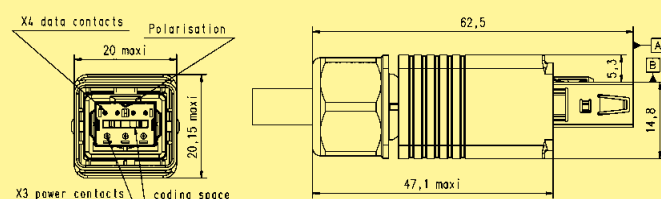
#### Insertion and removal tool

for data contacts

09 99 000 0513

for power contacts

09 99 000 0171





HARTING PushPull Hybrid, type acc. to IEC 61076-3-106 variant 4  
overmoulded Hybrid system cables

## Advantages

- Combined data- and power-supply up to 5 A / 48 V included to one connector
- HARTING PushPull technology
- Robust design, suitable for industrial applications
- High packing density
- Sixfold codable
- Suitable for all Fast-Ethernet variants

## Technical characteristics

|                          |                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------|
| Cable construction:      | Twisted Pair shielded<br>+ 3 Power cables                                              |
| Core structure           | Data: 4x AWG 26/7<br>Power: 3x AWG 20/7                                                |
| Transmission performance | Category 5 / Class D<br>up to 100 MHz acc. to<br>ISO/IEC 11801:2002,<br>EN ISO 50173-1 |
| Sheath material          | FRNC                                                                                   |
| Cable-<br>outer diameter | ø (7.0 ±0.4) mm                                                                        |
| Shielding                | Shielding foil<br>and shielding braid                                                  |
| Temperature range        | -40 °C ... +80 °C                                                                      |
| Colour                   | black                                                                                  |

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

### System cables 2x HARTING PushPull Hybrid

|        |       |                |
|--------|-------|----------------|
| Length | 0.5 m | 09 47 616 1005 |
|        | 1 m   | 09 47 616 1010 |
|        | 2 m   | 09 47 616 1020 |
|        | 3 m   | 09 47 616 1030 |
|        | 5 m   | 09 47 616 1050 |
|        | 10 m  | 09 47 616 1100 |
|        | 20 m  | 09 47 616 1200 |

### System cables 1x HARTING PushPull Hybrid, second side open

|        |       |                |
|--------|-------|----------------|
| Length | 0.5 m | 09 47 610 0005 |
|        | 1 m   | 09 47 610 0010 |
|        | 2 m   | 09 47 610 0020 |
|        | 3 m   | 09 47 610 0030 |
|        | 5 m   | 09 47 610 0050 |
|        | 10 m  | 09 47 610 0100 |
|        | 20 m  | 09 47 610 0200 |

### Hybrid cable

|      |       |                |
|------|-------|----------------|
| ring | 20 m  | 09 45 600 0331 |
| ring | 50 m  | 09 45 600 0341 |
| ring | 100 m | 09 45 600 0301 |
| reel | 500 m | 09 45 600 0321 |



Structure Hybrid cable

available  
Q3 / 2012



HARTING PushPull, type acc. to IEC 61 076-3-106 variant 4  
10-poles 100 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<br>acc. to IEC 61 076-3-106 variant 4 |
| Degree of protection                    | IP 65 / IP 67                                             |
| Mating face                             | acc. to IEC/PAS 61076-3-11x                               |
| Number of contacts                      | 10                                                        |
| Electrical data<br>acc. to DIN EN 61984 | 5 A 100 V 1.5 kV 3                                        |
| Contact resistance                      | 10 mΩ                                                     |
| Termination                             | Crimp                                                     |
| Conductor cross section                 | 0.75 mm <sup>2</sup>                                      |
| Conductor diameter                      | max. 2.1 mm                                               |
| Outer cable diameter                    | 6.5 ... 9.5 mm                                            |
| Shielding                               | Fully shielded, 360° shielding contact                    |
| Mating cycles                           | min. 500                                                  |
| Temperature range                       | -40 °C ... +70 °C                                         |
| Housing material                        | Plastic, black<br>Zinc die-cast, nickel-plated            |
| Flammability acc. to UL 94              | V 0                                                       |

### Identification

### Part No.

### Drawing

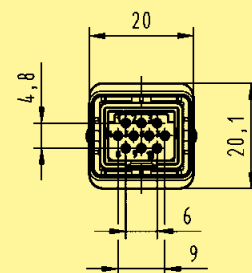
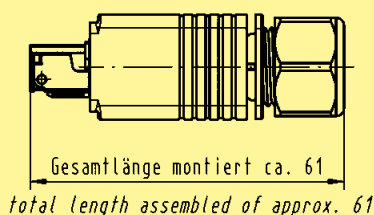
### Dimensions in mm

## HARTING PushPull Signal

Connector set 10-poles  
incl. plastic housing  
and female insert

09 45 145 9010

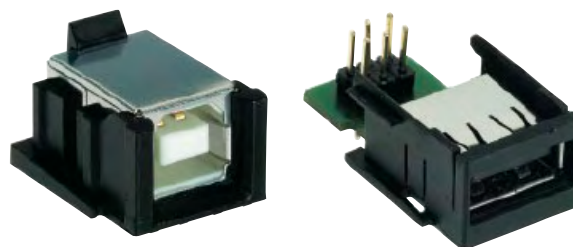
Order D-Sub crimp female  
contacts separately



| Identification                                                                                                                                                                                                                        | Part No.                                                                                                                         | Drawing | Dimensions in mm |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------|------------------|
| <b>HARTING PushPull Signal</b><br><br>Insert for panel feed-through<br>HIFF, 10-poles<br>incl. male insert<br><br>Order D-Sub crimp male<br>contacts separately                                                                       | 09 45 545 9010                                                                                                                   |         |                  |
| <b>HARTING PushPull</b><br>housing bulkhead mounting,<br>plastic<br><br>EasyInstall                                                                                                                                                   | 09 45 545 0032                                                                                                                   |         |                  |
| Compact                                                                                                                                                                                                                               | 09 45 545 0028                                                                                                                   |         |                  |
| <b>D-Sub crimp contacts</b><br>(Female)<br>for AWG 24-20; 0.25-0.56 mm <sup>2</sup><br>for AWG 22-18; 0.33-0.82 mm <sup>2</sup><br><br>(Male)<br>for AWG 24-20; 0.25-0.56 mm <sup>2</sup><br>for AWG 22-18; 0.33-0.82 mm <sup>2</sup> | 09 67 000 8278 <sup>1)</sup><br>09 67 000 3476 <sup>2)</sup><br><br>09 67 000 8178 <sup>1)</sup><br>09 67 000 3576 <sup>2)</sup> |         |                  |

<sup>1)</sup> To be used with crimp tool 09 99 000 0175

<sup>2)</sup> To be used with crimp tool 09 99 000 0501. Suitable locator: 61 03 600 0531



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 | IP 65 / IP 67                           |
| Mating cycles        | min. 750                                |
| Temperature range    | -40 °C ... +70 °C                       |

### Identification

### Part No.

### 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

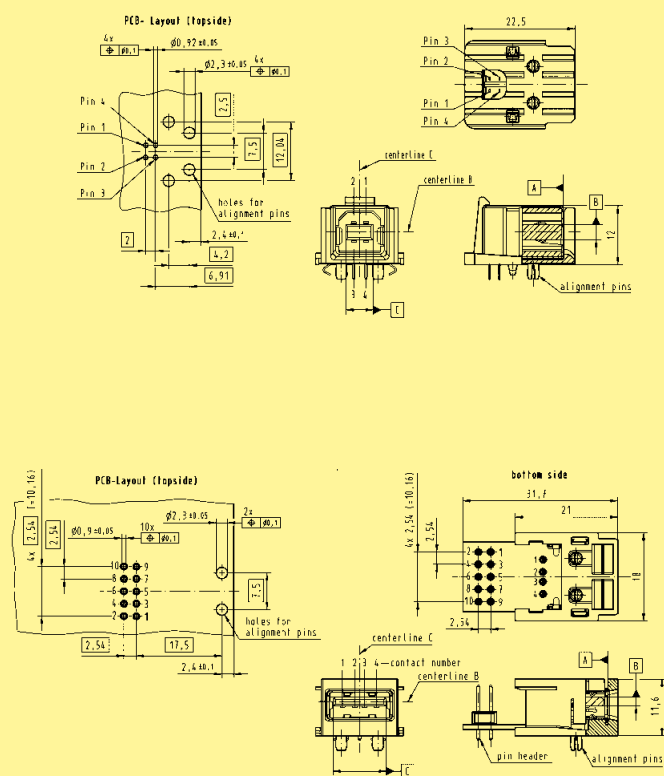
Jack to pin header

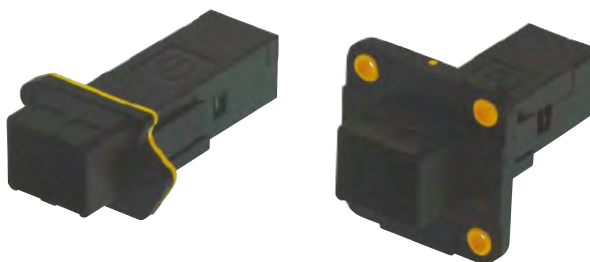
09 45 541 1902

##### Adapter PCB USB 3.0 type A

Jack to pin header

09 45 541 1905





## 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 | IP 65 / IP 67             |
| Mating cycles        | min. 750                  |
| Temperature range    | -40 °C ... +70 °C         |

#### Identification

#### Part No.

#### Drawing

#### Dimensions in mm

#### Panel feed-throughs

##### EasyInstall style

USB 2.0 type A  
2 x jack

09 45 245 1903

USB 3.0 type A  
2 x jack

09 45 245 1905

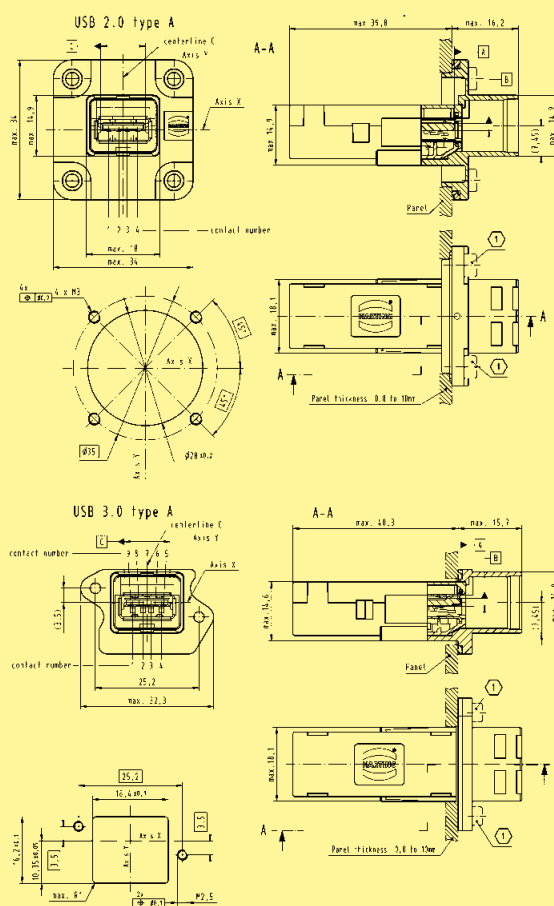
##### Compact style

USB 2.0 type A  
2 x jack

09 45 245 1902

USB 3.0 type A  
2 x jack

09 45 245 1904





HARTING PushPull USB  
System cables

## Advantages

- HARTING PushPull technology
- Compact, space-saving design for the device integration of USB jacks
- USB 2.0 and 3.0 compatible
- Fully shielded, 360° shielding contact
- Robust design, suitable for industrial applications

## Technical characteristics

|                      |                                            |
|----------------------|--------------------------------------------|
| Mating face          | USB 2.0 type B and<br>USB 2.0 / 3.0 type A |
| Number of contacts   | USB 2.0: 4 and USB 3.0: 9                  |
| Degree of protection | IP 65 / IP 67                              |
| Mating cycles        | min. 750                                   |
| Temperature range    | -40 °C ... +70 °C                          |

| Identification                                                     | Part No.       | Drawing | Dimensions in mm |
|--------------------------------------------------------------------|----------------|---------|------------------|
| System cables<br>2 x PushPull USB<br>Length 1.5 m                  |                |         |                  |
| USB 2.0 type B                                                     | 09 45 145 3902 |         |                  |
| USB 2.0 type A                                                     | 09 45 145 1902 |         |                  |
| USB 3.0 type A                                                     | 09 45 145 2902 |         |                  |
| System cables<br>1 x PushPull USB<br>1 x IP 20 USB<br>Length 1.5 m |                |         |                  |
| USB 2.0 type B                                                     | 09 45 145 3912 |         |                  |
| USB 2.0 type A                                                     | 09 45 145 1912 |         |                  |
| USB 3.0 type A                                                     | 09 45 145 2912 |         |                  |
| Other types and lengths on request                                 |                |         |                  |

HARTING offers with the HARTING PushPull Power connector an 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 IP 67 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

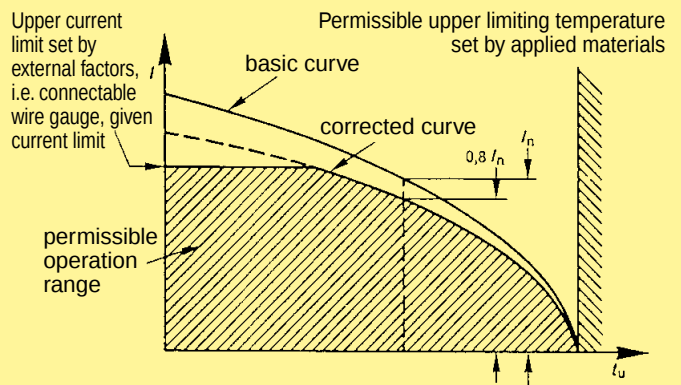
## Typical application areas

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

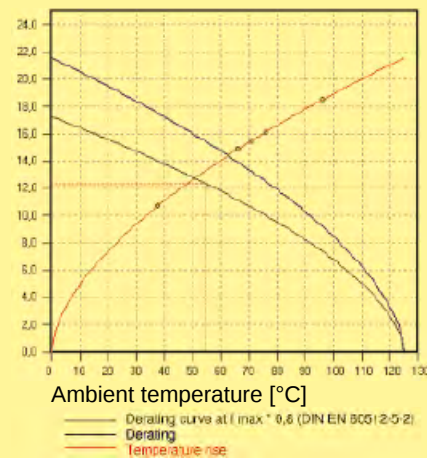
## Current carrying capacity

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.

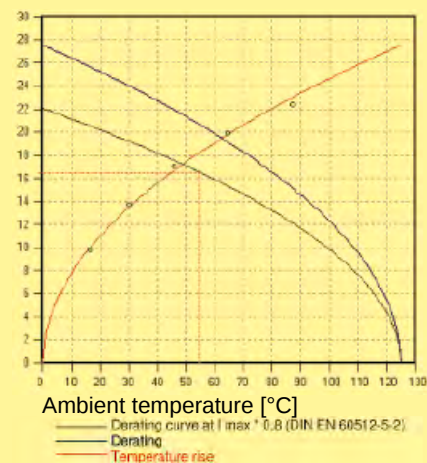
## Example of a current capacity curve



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



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





## Advantages

## Technical characteristics

- Power connectors for devices
- EasyInstall and 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 nose
- Device side: female with cable cage, crimp or solder termination
- 4 different coding variants without loss of contact

|                                      |                                                           |
|--------------------------------------|-----------------------------------------------------------|
| Locking                              | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4 |
| Degree of protection                 | IP 65 / IP 67                                             |
| Number of contacts                   | 4                                                         |
| Electrical data<br>acc. to EN 61 984 | 12 A 48 V 1.5 kV 3                                        |
| Termination                          | Crimp                                                     |
| Termination cross section            | 0.75 - 2.5 mm <sup>2</sup><br>(AWG 20 - 12) stranded      |
| Termination                          | Solder pins                                               |
| Termination diameter                 | 1.6 mm                                                    |
| Termination                          | Cable cage                                                |
| Termination cross section            | 0.75 - 2.5 mm <sup>2</sup><br>(AWG 20 - 12) stranded      |
| Mating cycles                        | min. 750                                                  |
| Temperature range                    | -40 °C ... +70 °C                                         |
| Housing material                     | Plastic, black                                            |
| Flammability acc. to UL 94           | V 0                                                       |

**02**  
**21**

1) Metal version (without contacts)



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
- EasyInstall panel feed-through for simple device integration
- Compact, space-saving design
- Touch-proof according to IEC DIN EN 60 529
- Polarisation with nose
- Cable side: Male with crimp termination
- 4 different coding variants without loss of contact

## Technical characteristics

|                                      |                                                           |
|--------------------------------------|-----------------------------------------------------------|
| Locking                              | PushPull Technology<br>acc. to IEC 61 076-3-106 variant 4 |
| Degree of protection                 | IP 65 / IP 67                                             |
| Number of contacts                   | 4                                                         |
| Electrical data<br>acc. to EN 61 984 | 12 A 48 V 1.5 kV 3                                        |
| Cable diameter                       | 4.9 ... 8.6 mm                                            |
| Termination                          | Crimp                                                     |
| Termination cross section            | 0.75 - 2.5 mm <sup>2</sup><br>(AWG 20 - 12) stranded      |
| Mating cycles                        | min. 750                                                  |
| Temperature range                    | -40 °C ... +70 °C                                         |
| Housing material                     | Plastic, black                                            |
| Flammability acc. to UL 94           | V 0                                                       |

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

### Connector set

incl. 4 turned crimp contacts (male)  
for 1.5 mm<sup>2</sup>, insulation body, housing,  
cable gland

09 46 145 4400  
09 46 195 4400<sup>1)</sup>

### Connector set

without contacts

09 46 145 4401

### Accessories – crimp contacts male

0.75 mm<sup>2</sup> (AWG 20 - 18)

09 46 500 0403

1.5 mm<sup>2</sup> (AWG 16 - 14)

09 46 500 0401

2.5 mm<sup>2</sup> (AWG 12)

09 46 500 0405

### Accessories – crimp contacts female

0.75 mm<sup>2</sup> (AWG 20 - 18)

09 46 500 0404

1.5 mm<sup>2</sup> (AWG 16 - 14)

09 46 500 0402

2.5 mm<sup>2</sup> (AWG 12)

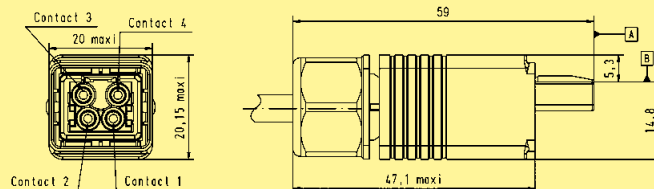
09 46 500 0406

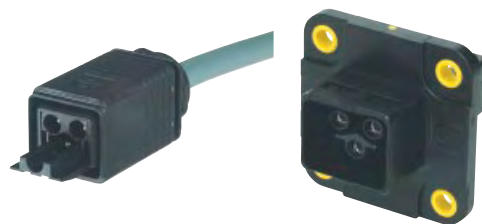
### Accessories – Coding pin set

to avoid accidental incorrect mating  
a coding system is required.

09 46 840 0000

This coding pins are inserted without  
loss of contact.





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
- EasyInstall panel feed-through for simple device integration
- Compact, space-saving design
- Touch-proof according to IEC DIN EN 60 529
- Polarisation with nose
- 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<br>acc. to IEC 61 076-3-106 variant 4 |
| Degree of protection                 | IP 65 / IP 67                                             |
| Number of contacts                   | 2 + PE                                                    |
| Electrical data<br>acc. to EN 61 984 | 16 A 250 V 4 kV 3                                         |
| Cable diameter                       | 4.9 ... 8.6 mm                                            |
| Termination                          | Crimp                                                     |
| Termination cross section            | 0.75 - 2.5 mm <sup>2</sup><br>(AWG 20 - 12) stranded      |
| Mating cycles                        | min. 750                                                  |
| Temperature range                    | -40 °C ... +70 °C                                         |
| Housing material                     | Plastic, black                                            |
| Flammability acc. to UL 94           | V 0                                                       |

| Identification                                                                                                                                                         | Part No.       | Drawing | Dimensions in mm |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------|------------------|
| <b>HARTING PushPull Power 2/0</b>                                                                                                                                      |                |         |                  |
| <b>Panel feed-through set</b><br>incl. 3 turned crimp contacts (female) for 1.5 mm <sup>2</sup> , insulation body (black), housing bulkhead mounting EasyInstall       | 09 46 245 3430 |         |                  |
| <b>Panel feed-through set</b><br>incl. 3 turned contacts (female) for 1.5 mm <sup>2</sup> , insulation body (black), housing bulkhead mounting, with crimp termination | 09 46 245 3410 |         |                  |
| <b>Power-female with crimp termination</b><br>without contacts                                                                                                         | 09 46 500 3401 |         |                  |
| <b>Connector set</b><br>incl. 3 turned crimp contacts (male) for 1.5 mm <sup>2</sup> , insulation body (black), housing, cable gland                                   | 09 46 145 3410 |         |                  |
| <b>Connector set</b><br>without contacts                                                                                                                               | 09 46 145 3411 |         |                  |
| <b>Coding pin set</b><br>to avoid accidental incorrect mating a coding system is required.<br>This coding pins are inserted without loss of contact.                   | 09 46 840 0000 |         |                  |

## Identification

## Part No.

HARTING PushPull Power  
8-indent crimping tool incl. positioner

09 46 800 0000

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

09 46 800 0010

Insertion tool

09 46 800 0099

Extraction tool

09 46 800 0098



For wire gauges  
0.08 ... 4.0 mm<sup>2</sup>  
(AWG 28 ... 12).



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.

### 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.

### Tensile strength of crimped connections

| Conductor cross-section |     | Tensile strength |
|-------------------------|-----|------------------|
| mm <sup>2</sup>         | 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



Crimp-cross section  
HARTING crimp profile

| Identification                                                                                       | Part No.           | Drawing | Dimensions in mm |
|------------------------------------------------------------------------------------------------------|--------------------|---------|------------------|
| <b>Transport protection</b><br><br>for device side<br>IP 40                                          | 09 45 845 0003     |         |                  |
| <b>Protection cover</b><br>for device side<br>IP 65 / IP 67                                          |                    |         |                  |
| Version with passive locking without cord                                                            | 09 45 845 0009 024 |         |                  |
| Version with passive locking with plastic cord for fixing screw M3                                   | 09 45 845 0009     |         |                  |
| Version with passive locking with nylon cord for fixing screw M2.5 / M3                              | 09 45 845 0011 024 |         |                  |
| Version with active locking without cord                                                             | 09 45 845 0015     |         |                  |
| Version with active locking with plastic cord for fixing screw M3                                    | 09 45 845 0014     |         |                  |
| Version with active locking with nylon cord for fixing screw M2.5 / M3                               | 09 45 845 0013     |         |                  |
| <b>Protection cover</b><br>for connectors<br>IP 65 / IP 67                                           | 09 45 845 0010     |         |                  |
| <b>Security clip</b><br>for connectors<br>can be sealed and protects against unauthorized unplugging | 09 45 845 0020     |         |                  |

available  
Q2 / 2012



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<br>acc. to IEC 61 076-3-106 variant 4 |
| Degree of protection       | IP 65 / IP 67                                             |
| 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 | V 0                                                       |

| Identification                                                                                                                                                                   | Part No.       | Drawing                                                        | Dimensions in mm |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------|------------------|
| <b>HARTING PushPull cable to cable housings, plastic</b><br>(Order housing bulkhead mounting and insert separately)<br><br>for outer cable diameter<br>6.5 ... 9.5 mm            | 09 45 345 0000 | 2X M2.5x10 self tapping screws<br>according to EN ISO 7092<br> |                  |
| <b>HARTING PushPull bulkhead housings, plastic</b><br>(Order housing bulkhead mounting and insert separately)                                                                    | 09 45 345 0001 | 2X M2.5x10 self tapping screws<br>according to EN ISO 7092<br> |                  |
| <b>Suitable HARTING PushPull Signal panel feed-through</b>                                                                                                                       | 09 45 245 9010 |                                                                |                  |
| <b>Suitable bulkhead housing, plastic</b><br>for RJ45 / Signal                                                                                                                   | 09 45 545 0028 |                                                                |                  |
| <b>Inserts for RJ45 / Signal</b><br><br>RJ 45: 8-poles, Cat. 6 / class E <sub>A</sub><br>Ha-Vis preLink® set AWG 22/23<br>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 |                                                                |                  |
| Signal: 10-poles, 60 V / 3 A*                                                                                                                                                    | 09 45 545 9010 |                                                                |                  |

\* Order D-Sub crimp male contacts separately (see page 02.16)



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       | IP 65 / IP 67                                |
| Mating face                | RJ45 acc. to IEC 60 603-7                    |
| Termination type           | Jack with solder termination                 |
| Mating cycles              | min. 750                                     |
| Temperature range          | -40 °C ... +70 °C                            |
| Housing material           | Plastic, black                               |
| Flammability acc. to UL 94 | V 0                                          |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Components device side

Housing bulkhead mounting plastic

09 35 002 0321

Dust protection cover IP 40 rubber (NBR)

09 35 002 5401

Protection cover IP 65 / IP 67

09 35 002 5402

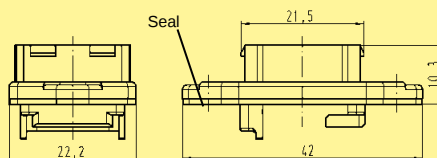
RJ45 jack

Solder variant, 90° angled

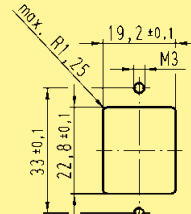
09 35 002 2101

Solder variant, 180° straight

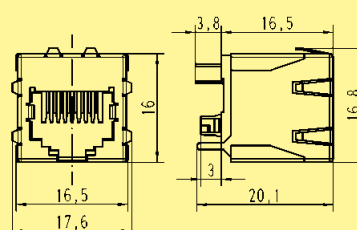
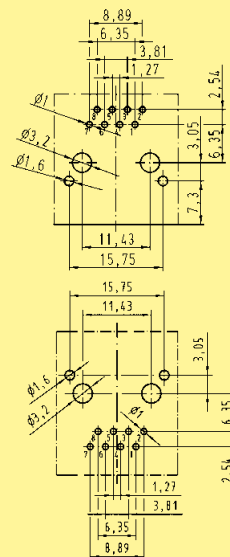
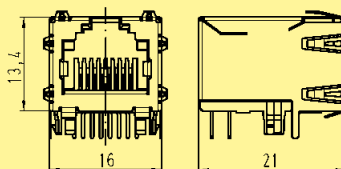
09 35 002 2102



#### Panel cut out



#### PCB layout





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       | IP 65 / IP 67                                                                                                                     |
| Mating face                | RJ45 acc. to IEC 60 603-7                                                                                                         |
| Transmission performance   | acc. to ISO/IEC 11801:2002, EN 50 173-1, category 5 / class D up to 100 MHz resp. category 6 / class E <sub>A</sub> 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 | V 0                                                                                                                               |

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

### Han® PushPull RJ45

Panel feed through Cat. 5 including housing and printed board with 2 x RJ45 jack horizontally mounted

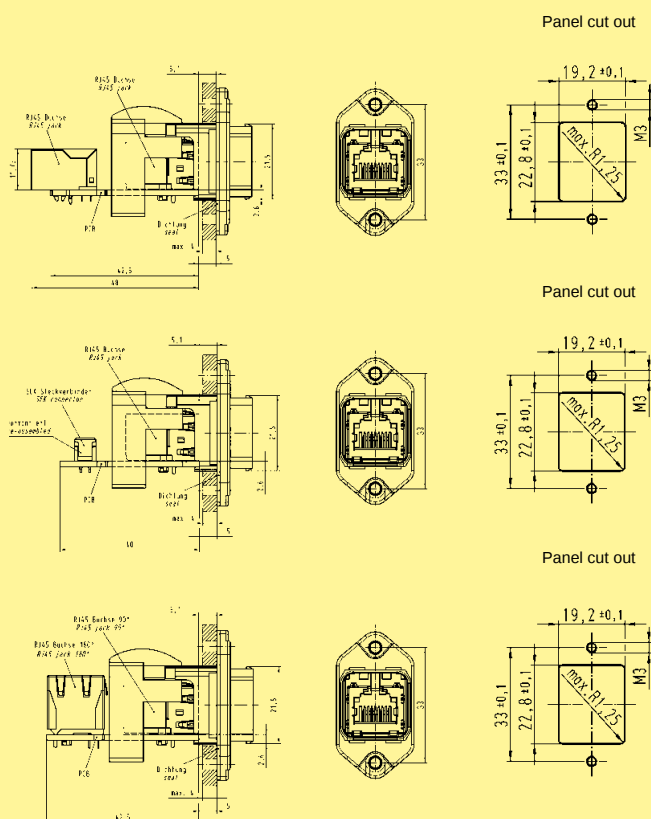
09 35 221 0331

Panel feed through Cat. 5 including housing and printed board with RJ45 jack and SEK board

09 35 222 0331

Panel feed through Cat. 5 including housing and printed board with RJ45 jack and RJ45 jack vertically mounted in the IP20 range

09 35 223 0331



| Identification                                                                                                                                                 | Part No.       | Drawing        | Dimensions in mm |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|------------------|
| Panel feed through Cat. 5 including housing and printed board with RJ45 jack and 47° jack vertically mounted in the IP 20 range                                | 09 35 224 0331 |                | Panel cut out    |
| Panel feed through Cat. 5 including housing and printed board with RJ45 jack and solder termination in the IP 20 range                                         | 09 35 226 0331 |                | Panel cut out    |
| Panel feed through Cat. 6 including housing and HARTING RJ Industrial® 10G RJ45 bulkhead                                                                       | 09 35 225 0331 |                | Panel cut out    |
| Panel feed through to mount HIFF inserts, e.g. Ha-VIS preLink® RJ45-module<br>Order inserts separately                                                         | 09 35 012 0331 |                | Panel cut out    |
| Ha-VIS preLink® set RJ45 jack AWG 22/23<br><br>consists of:<br>• 1x Ha-VIS preLink® module RJ45 jack<br>• 1x Ha-VIS preLink® terminal module<br>• 1x cable tie | 20 82 001 0001 |                |                  |
| HARTING RJ Industrial® cable jack                                                                                                                              |                | see page 01.10 |                  |
| AWG 22-24, 8-poles, Cat. 6                                                                                                                                     | 09 45 545 1562 |                |                  |
| AWG 24-28, 8-poles, Cat. 6                                                                                                                                     | 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  
RJ45 connector

PushPull

## 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     | IP 65 / IP 67                                                                                                                 |
| 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 <sub>A</sub> 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)<br>AWG 23/1 - 22/1 (solid)                                                 |
|                          | Cable diameter 1.6 mm                                                                                                         |
| for Cat. 6               | Conductor cross section AWG 22/7 - 27/7 (stranded)<br>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 V-0                                                                                                     |

### Identification

### Part No.

### 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

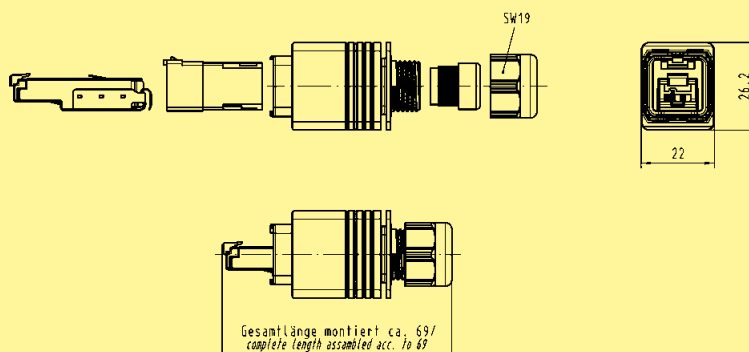
PROFINET-Identification:  
PROFINET O-Plug RJ45

09 35 226 0421

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

6.5 - 9.5 mm clamp range

09 35 225 0421





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     | IP 65 / IP 67                                                                |
| 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 / class E up to 250 MHz |
| Transmission rate        | 10/100/1000 Mbit/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 V-0                                                    |

## Identification

## Part No.

## Drawing

## Dimensions in mm

### Connector set, plastic

incl. housing  
and male insert  
5 - 8 mm clamp range

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

Wire manager, white

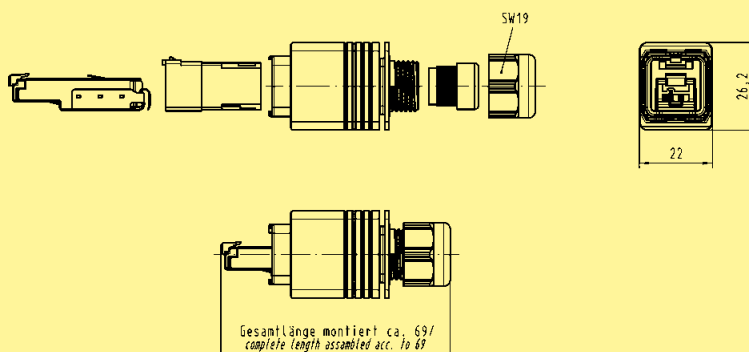
09 35 223 0421

Wire manager, blue

09 35 224 0421

New Cat. 6<sub>A</sub> version  
(available Q3/2012)

09 35 227 0421





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 | IP 65 / IP 67                                |
| Mating face          | RJ45 acc. to IEC 60 603-7                    |
| Termination type     | Jack with solder termination                 |
| Mating cycles        | min. 750                                     |
| Temperature range    | -40 °C ... +70 °C                            |
| Housing material     | Zinc die-cast, nickel plated                 |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Components device side

Housing bulkhead mounting metal

09 35 002 0301

Dust protection cover IP 40 rubber (NBR)

09 35 002 5401

Protection cover IP 65 / IP 67

09 35 002 5402

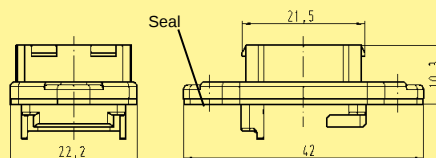
RJ45 jack

Solder variant, 90° angled

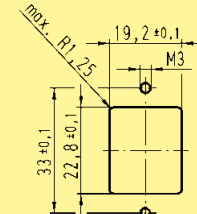
09 35 002 2101

Solder variant, 180° straight

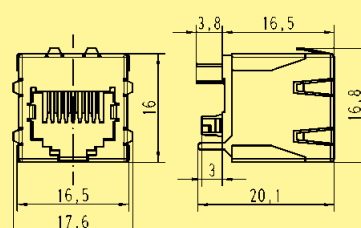
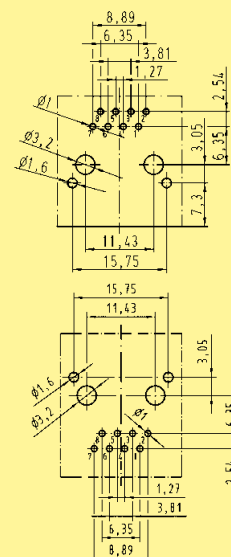
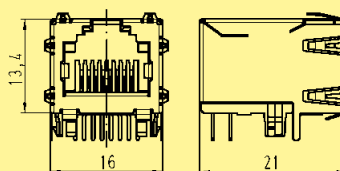
09 35 002 2102



#### Panel cut out



#### PCB layout





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     | IP 65 / IP 67                                                               |
| Mating face              | RJ45 acc. to IEC 60 603-7                                                   |
| Transmission performance | acc. to ISO/IEC 11801:2002, EN 50 173-1, category 5 / class D up to 100 MHz |
| Transmission rate        | 10 / 100 Mbit/s                                                             |
| Number of contacts       | 8                                                                           |
| Shielding                | Fully shielded, 360° shielding contact (Cat. 6)                             |
| Termination type         | Female with solder termination                                              |
| Mating cycles            | min. 750                                                                    |
| Temperature range        | -40 °C ... +70 °C                                                           |
| Housing material         | Zinc die-cast, nickel plated                                                |

### Identification

### Part No.

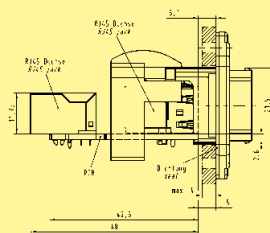
### Drawing

### Dimensions in mm

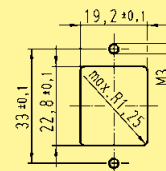
#### Han® PushPull RJ45

Panel feed through Cat. 5 including housing and printed board with 2 x RJ45 jack horizontally mounted

09 35 221 0311

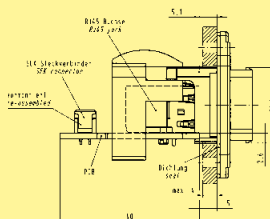


Panel cut out

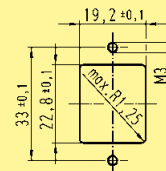


Panel feed through Cat. 5 including housing and printed board with RJ45 jack and SEK board

09 35 222 0311

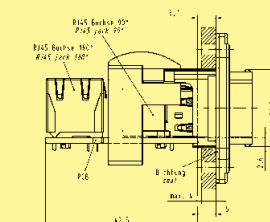


Panel cut out

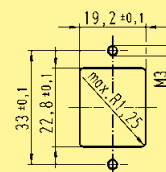


Panel feed through Cat. 5 including housing and printed board with RJ45 jack and RJ45 jack vertically mounted in the IP20 range

09 35 223 0311



Panel cut out







Han® PushPull, type acc. to IEC 61076-3-117 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<sub>A</sub>, 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 <sub>A</sub> 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     | IP 65 / IP 67                                                              |
| Mating cycles            | min. 750                                                                   |
| Temperature range        | -40 °C ... +70 °C                                                          |
| Housing material         | Zinc die-cast, nickel-plated                                               |

### Identification

### Part No.

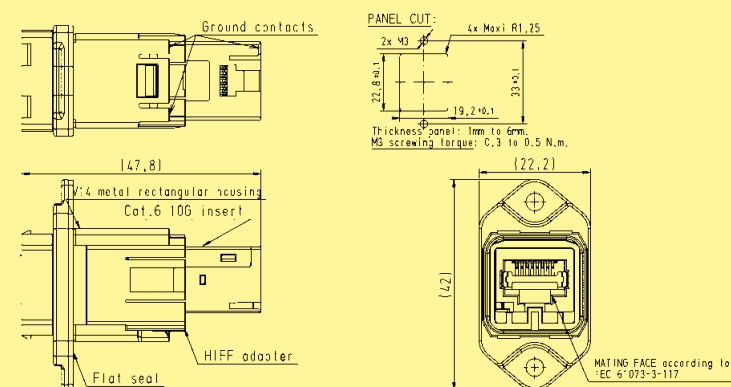
### Drawing

### Dimensions in mm

#### Han® PushPull RJ45 10G

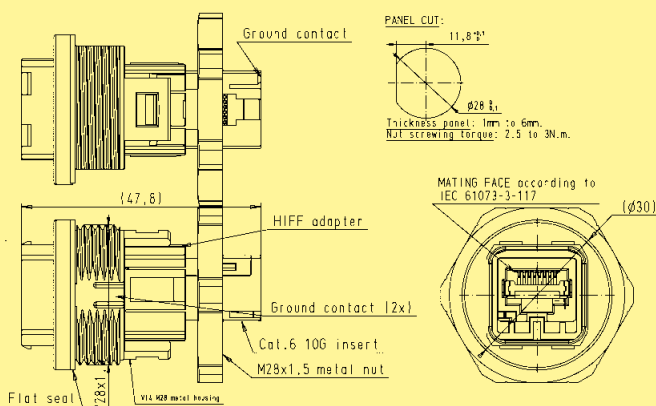
Panel feed through, Cat. 6 including bulkhead housing for rectangular panel cut out, flat seal and HARTING RJ Industrial® 10G RJ45 bulkhead, isolated bulkhead fixture

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 No.

## Drawing

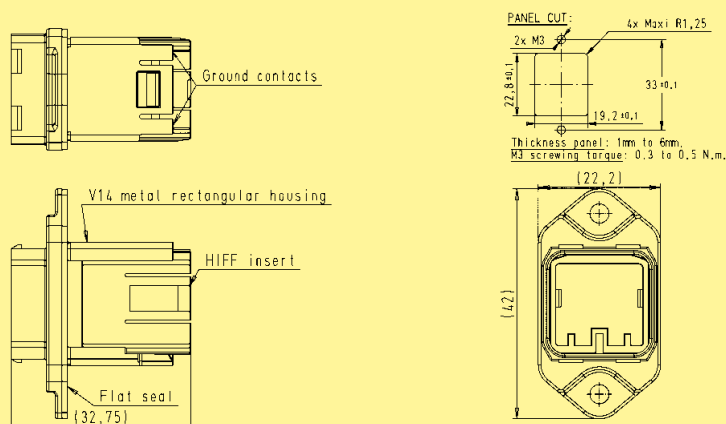
## Dimensions in mm

### 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

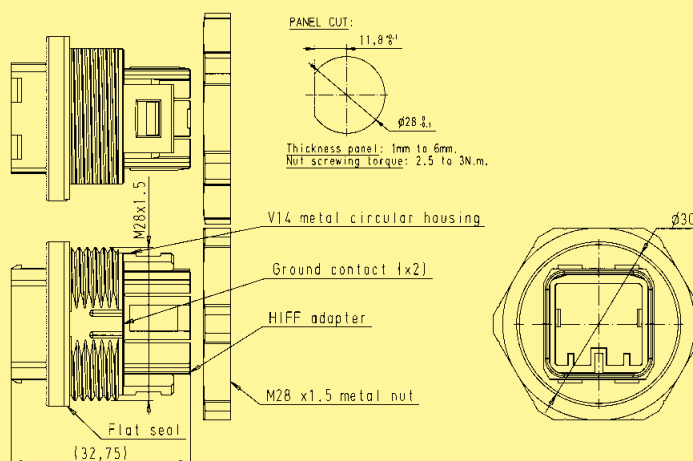
Bulkhead housing for rectangular  
panel cut out, incl. plastic adapter

09 35 012 0311



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

09 35 012 0312

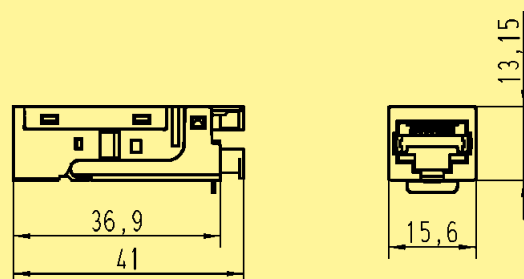


### Ha-VIS preLink® set RJ45 jack AWG 22/23

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

- 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



### Features

- High degree of protection IP 65 / IP 67
- 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 11801 Chapter 10.2.4

### Technical characteristics

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| Transmission performance               | Cat. 6 / Class E up to 250 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                             | 83.2 x 62 x 25.2 mm (unmated)                          |
| Degree of protection acc. to DIN 60529 | IP 65 / IP 67 (mated)                                  |
| Mounting                               | Wall mountable with 4 screws (type M5)                 |
| Temperature range                      | -20 °C ... +70 °C                                      |
| Maximum permissible humidity           | 30 % ... 95 % (no condensation)                        |

#### Identification

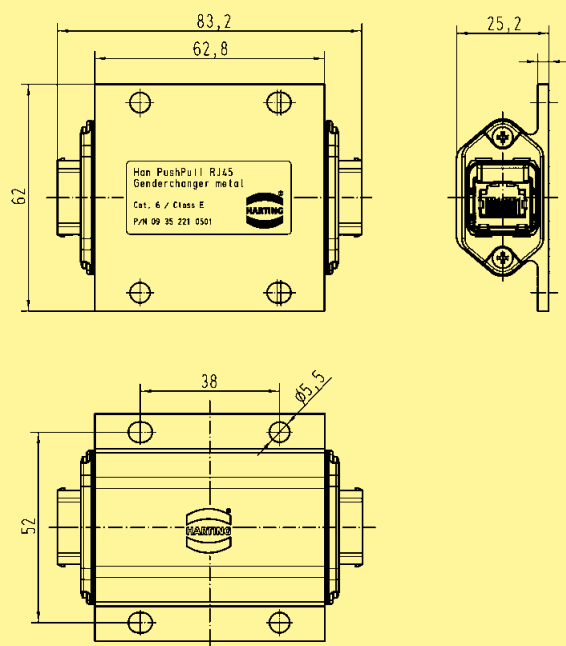
Han® PushPull RJ45  
Genderchanger metal  
including housing and printed board  
with 2 x RJ45 jack

#### Part No.

09 35 221 0501

#### Drawing

#### Dimensions in mm





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

PushPull

## 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     | IP 65 / IP 67                                                                                                                |
| 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 <sub>A</sub> 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)<br>AWG 23/1 - 22/1 (solid)                                                                        |
| Cable diameter           | 1.6 mm                                                                                                                       |
| for Cat. 6               |                                                                                                                              |
| Conductor cross section  | AWG 22/7 - 27/7 (stranded)<br>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 No.

### Drawing

### Dimensions in mm

#### Connector set, metal

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

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

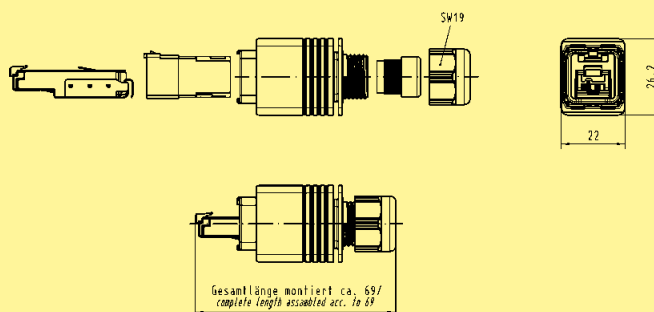
09 35 221 0401

Han® RJ Industrial PN  
Category 5, 4-poles, IDC contacts  
PROFINET-Identification:  
PROFINET O-Plug RJ45

09 35 226 0401

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

09 35 225 0401





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     | IP 65 / IP 67                                                                                                                      |
| 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,<br>category 5 / class D up to 100 MHz<br>category 6 / class E <sub>A</sub> up to 500 MHz |
| Transmission rate        | 10/100 Mbit/s and 1/10 Gbit/s                                                                                                      |
| Termination              | with IDC contacts, no tools needed /<br>field-assembly                                                                             |
| for Cat. 5               |                                                                                                                                    |
| Conductor cross section  | AWG 24/7 - 22/7 (stranded)<br>AWG 23/1 - 22/1 (solid)                                                                              |
| Cable diameter           | 1.6 mm                                                                                                                             |
| for Cat. 6               |                                                                                                                                    |
| Conductor cross section  | AWG 22/7 - 27/7 (stranded)<br>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 No.

### 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

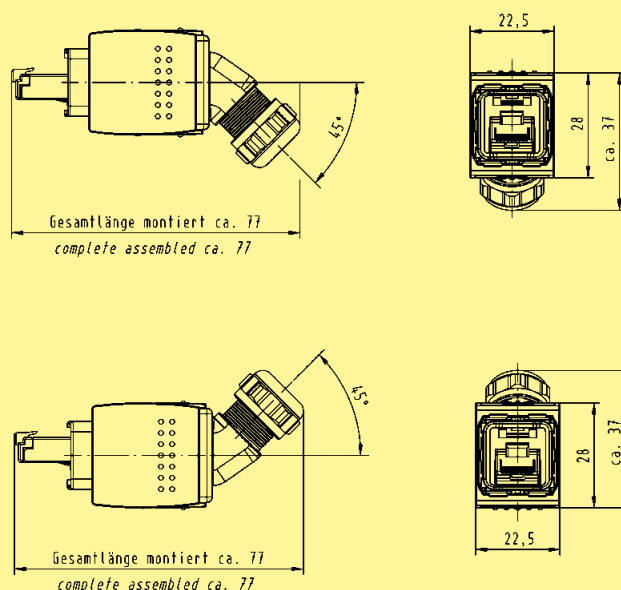
Han® RJ Industrial 10G  
Category 6, 8-poles, IDC contacts,  
6.5 - 9.5 mm clamp range

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<br>acc. to IEC 61 076-3-117                                    |
| Degree of protection     | IP 65 / IP 67                                                                      |
| 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,<br>EN 50 173-1,<br>category 6 / class E up to 250 MHz |
| Transmission rate        | 10/100/1000 Mbit/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 No.

### 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

Wire manager, white

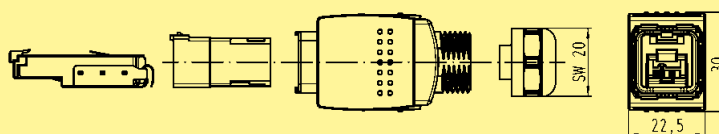
09 35 223 0401

Wire manager, blue

09 35 224 0401

New Cat. 6<sub>A</sub> version  
(available Q3/2012)

09 35 227 0401



available  
Q2 / 2012



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<br>acc. to IEC 61 076-3-117 variant 14 |
| Degree of protection       | IP 65 / IP 67                                              |
| 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 | V 0                                                        |

| Identification                                                                                                                                                             | Part No.       | Drawing                                                                                                                    | Dimensions in mm |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Han® PushPull</b><br><b>cable to cable housings,</b><br><b>plastic</b><br>(Order housing bulkhead mounting<br>and insert separately)                                    |                | 2X REMFORM $\phi 3 \times 8$ TORX screws<br>                                                                               |                  |
| for outer cable diameter<br>6.5 ... 9.5 mm                                                                                                                                 | 09 35 002 0431 |                                                                                                                            |                  |
| for outer cable diameter<br>9 ... 13 mm                                                                                                                                    | 09 35 002 0433 | 2X REMFORM $\phi 3 \times 8$ TORX screws<br>                                                                               |                  |
| <b>Suitable bulkhead</b><br><b>housing, plastic</b><br><br>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<br/>M3 screwing torque: 0,3 to 0,5 N.m.</p> |                  |
| <b>Inserts for RJ45</b><br><br>RJ 45: 8-poles, Cat. 6 / class E <sub>A</sub><br>Ha-Vis preLink® set AWG 22/23<br>HARTING RJ Industrial®<br>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

PushPull

| Identification                                                                                                   | Part No.                            | Drawing                                                                             | Dimensions in mm |
|------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------|------------------|
| <b>Han® PushPull dust protection cover IP 40 rubber (NBR)</b><br>for device side                                 | 09 35 002 5401                      |    |                  |
| <b>Han® PushPull protection cover IP 65 / IP 67</b><br>for device side with fixing cord<br>1 piece<br>100 pieces | 09 35 002 5402<br>09 35 002 5402 XL |  |                  |
| without fixing cord<br>100 pieces                                                                                | 09 35 002 5403 XL                   |                                                                                     |                  |
| <b>Han® PushPull dust protection cover IP 40</b><br>for cable side                                               | 09 35 002 5412                      |  |                  |
| <b>Han® PushPull protection cover IP 65 / IP 67</b><br>for cable side                                            | 09 35 002 5411                      |  |                  |



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       | IP 65 / IP 67                                                                                                                |
| Mating face                | SCRJ acc. to IEC 61 754-24                                                                                                   |
| Fiber Typen                | POF <sup>1)</sup> 1 mm<br>HCS <sup>2)</sup> 200 µm / 230 µm<br>MM 62.5 µm / 125 µm<br>MM 50 µm / 125 µm<br>SM 10 µm / 125 µm |
| Mating cycles              | min. 750                                                                                                                     |
| Temperature range          | -40 °C ... +70 °C                                                                                                            |
| Housing material           | Plastic, black                                                                                                               |
| Flammability acc. to UL 94 | V 0                                                                                                                          |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Components device side

Housing bulkhead mounting  
Optical transceiver  
not included

plastic

09 35 002 0323

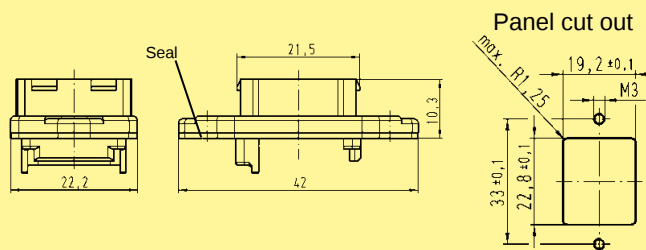
Dust protection cover IP 40  
rubber (NBR)

09 35 002 5401

Protection cover IP 65 / IP 67

09 35 002 5402

Reference for transceiver  
as well as mounting instruction  
on request



<sup>1)</sup> POF = Polymer-Optical Fibre

<sup>2)</sup> 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       | IP 65 / IP 67                                                                                                                |
| Mating face                | SCRJ acc. to IEC 61 754-24                                                                                                   |
| Fiber Typen                | POF <sup>1)</sup> 1 mm<br>HCS <sup>2)</sup> 200 µm / 230 µm<br>MM 62.5 µm / 125 µm<br>MM 50 µm / 125 µm<br>SM 10 µm / 125 µm |
| Mating cycles              | min. 750                                                                                                                     |
| Temperature range          | -40 °C ... +70 °C                                                                                                            |
| Housing material           | Plastic, black                                                                                                               |
| Flammability acc. to UL 94 | V 0                                                                                                                          |

### Identification

### Part No.

### Drawing

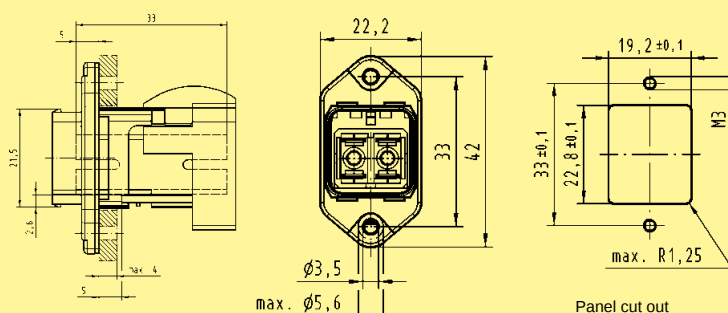
### Dimensions in mm

#### Han® PushPull SCRJ

Panel feed through

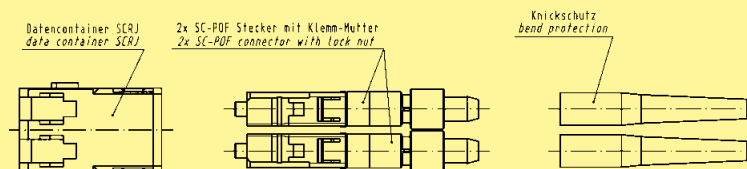
SC contacts order separately

09 35 242 0333



#### SCRJ IP 20 POF connector

09 35 002 4002



### 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



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       | IP 65 / IP 67                     |
| Mating face                | SCRJ acc. to IEC 61 754-24        |
| Fiber Typen                | POF <sup>1)</sup> 1 mm            |
|                            | HCS <sup>2)</sup> 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 | V 0                               |
| Cable diameter             | 6.5 - 9.5 mm                      |

| Identification                                                                                                                                                                                               | Part No.                                                                 | Drawing | Dimensions in mm |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------|------------------|
| <b>Connector set, plastic</b><br>incl. housing and SCRJ insert,<br>POF contacts<br><br>PROFINET-Identification:<br>PROFINET O-Plug SCRJ<br><br>incl. housing and SCRJ insert<br>SC contacts order separately | 09 35 241 0421<br><br><br><br><br><br><br><br><br><br><br>09 35 241 0422 |         |                  |
| <b>SCRJ IP 20</b><br><b>POF connector</b>                                                                                                                                                                    | 09 35 002 4002                                                           |         |                  |
| <b>Dust protection cover IP 40</b>                                                                                                                                                                           | 09 35 002 5412                                                           |         |                  |
| <b>Protection cover IP 65 / IP 67</b>                                                                                                                                                                        | 09 35 002 5411                                                           |         |                  |
| <b>Contacts</b><br><br>SC POF contact, 1 mm<br>SC 125 GI contact<br>SC 230 HCS contact                                                                                                                       | 20 10 001 5217<br>20 10 125 5211<br>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 | IP 65 / IP 67                                                                                                                |
| Mating face          | SCRJ acc. to IEC 61 754-24                                                                                                   |
| Fiber Typen          | POF <sup>1)</sup> 1 mm<br>HCS <sup>2)</sup> 200 µm / 230 µm<br>MM 62.5 µm / 125 µm<br>MM 50 µm / 125 µm<br>SM 10 µm / 125 µm |
| Mating cycles        | min. 750                                                                                                                     |
| Temperature range    | -40 °C ... +70 °C                                                                                                            |
| Housing material     | Zinc die-cast, nickel plated                                                                                                 |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Components device side

Housing bulkhead mounting  
Optical transceiver  
not included

metal

09 35 002 0303

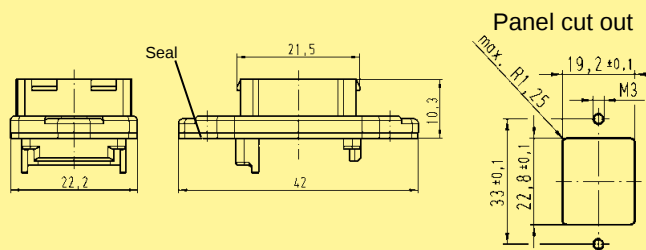
Dust protection cover IP 40  
rubber (NBR)

09 35 002 5401

Protection cover IP 65 / IP 67

09 35 002 5402

Reference for transceiver  
as well as mounting instruction  
on request



<sup>1)</sup> POF = Polymer-Optical Fibre

<sup>2)</sup> 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 | IP 65 / IP 67                     |
| Mating face          | SCRJ acc. to IEC 61 754-24        |
| Fiber Typen          | POF <sup>1)</sup> 1 mm            |
|                      | HCS <sup>2)</sup> 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 No.

### Drawing

### Dimensions in mm

#### Han® PushPull SCRJ

Panel feed through

SC contacts order separately

09 35 242 0313

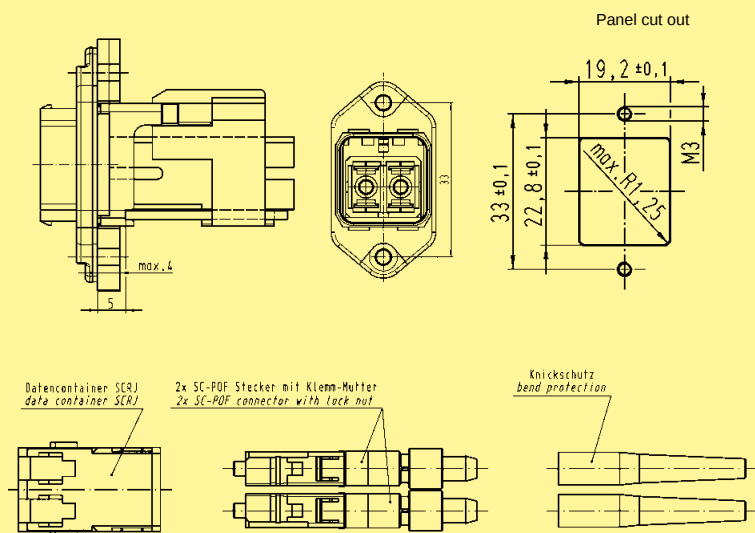
#### SCRJ IP 20 POF connector

09 35 002 4002

### 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 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       | IP 65 / IP 67                     |
| Mating face                | SCRJ acc. to IEC 61 754-24        |
| Fiber Typen                | POF <sup>1)</sup> 1 mm            |
|                            | HCS <sup>2)</sup> 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 | V 0                               |
| Cable diameter             | 6.5 - 9.5 mm                      |

| Identification | Part No. | 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 IP 20 POF connector

09 35 002 4002

### Dust protection cover IP 40

09 35 002 5412

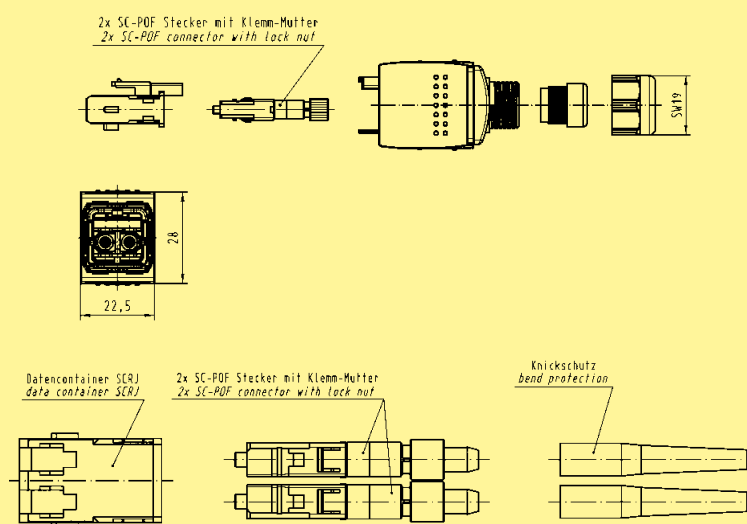
### Protection cover IP 65 / IP 67

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 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<br>acc. to IEC 61 754-24                                        |
| Locking                   | PushPull technology<br>acc. to IEC 61 076-3-117 variant 14<br>(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 1260                                                                   |

| Identification                                                                                                                                                                                                                                                                                                                        | Part No.                                                             | Drawing | Dimensions in mm |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------|------------------|
| <b>Assembly tool set for POF cutting, without final polishing</b><br><br>The set contains<br>- one stripping and cutting tool for 1260 operations<br>- one sheath stripping tool<br>- one Kevlar shear<br>- one positioner for SCRJ contacts<br>Supplied in a robust plastic case<br><br>Replacement cutting tool for 1260 operations | 09 35 000 9913<br><br><br><br><br><br><br><br><br><br>09 35 000 9914 |         |                  |
| <b>Assembly tool set for POF cutting, with final polishing</b><br><br>Without an optical meter<br>With an optical meter                                                                                                                                                                                                               | 20 99 000 3016<br>20 99 000 3013                                     |         |                  |
| <b>Polishing wheel (grinding wheel) for POF cables 2.2</b>                                                                                                                                                                                                                                                                            | 20 99 000 1099                                                       |         |                  |
| <b>Sand paper for POF, grain size 1000</b>                                                                                                                                                                                                                                                                                            | 20 80 001 9911                                                       |         |                  |

available  
Q3 / 2012



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14  
10-poles 100 V / 5 A

PushPull

## 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<br>acc. to IEC 61 076-3-117 variant 14 |
| Degree of protection                     | IP 65 / IP 67                                              |
| Mating face                              | acc. to IEC/PAS 61 076-3-11x                               |
| Number of contacts                       | 10                                                         |
| Electrical data<br>acc. to DIN EN 61 984 | 5 A 100 V 1.5 kV 3                                         |
| Contact resistance                       | 10 mΩ                                                      |
| Termination                              | Crimp                                                      |
| Conductor cross section                  | AWG 24 ... 18; 0.25 ... 0.82 mm <sup>2</sup>               |
| 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<br>Zinc die-cast, nickel-plated             |
| Flammability acc. to UL 94               | V 0                                                        |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Han® 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

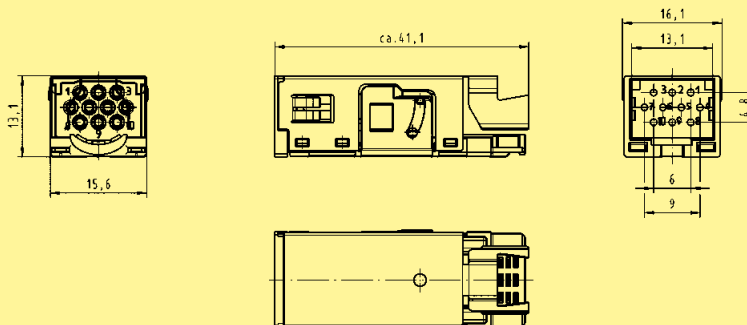
(Device side)

for AWG 24-20; 0.25-0.56 mm<sup>2</sup>

for AWG 22-18; 0.33-0.82 mm<sup>2</sup>

09 67 000 8178<sup>1)</sup>

09 67 000 3576<sup>2)</sup>



<sup>1)</sup> To be used with crimp tool 09 99 000 0175

<sup>2)</sup> To be used with crimp tool 09 99 000 0501. Suitable locator: 61 03 600 0531

| Identification                                                                                                                          | Part No.                                                     | Drawing | Dimensions in mm |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------|------------------|
| <b>Han® PushPull</b><br><b>panel feed-through HIFF</b><br>to hold the 10-poles insert                                                   |                                                              |         |                  |
| Metal rectangular                                                                                                                       | 09 35 012 0311                                               |         |                  |
| Metal circular                                                                                                                          | 09 35 012 0312                                               |         |                  |
| Plastic rectangular                                                                                                                     | 09 35 012 0331                                               |         |                  |
| <b>D-Sub crimp contacts</b><br>(Connector side)<br>for AWG 24-20; 0.25-0.56 mm <sup>2</sup><br>for AWG 22-18; 0.33-0.82 mm <sup>2</sup> | 09 67 000 8278 <sup>1)</sup><br>09 67 000 3476 <sup>2)</sup> |         |                  |
| (Device side)<br>for AWG 24-20; 0.25-0.56 mm <sup>2</sup><br>for AWG 22-18; 0.33-0.82 mm <sup>2</sup>                                   | 09 67 000 8178 <sup>1)</sup><br>09 67 000 3576 <sup>2)</sup> |         |                  |

<sup>1)</sup> To be used with crimp tool 09 99 000 0175

<sup>2)</sup> To be used with crimp tool 09 99 000 0501. Suitable locator: 61 03 600 0531

available  
Q3 / 2012



Han® PushPull, type acc. to IEC 61 076-3-117 variant 14  
10-poles 100 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<br>acc. to IEC 61 076-3-117 variant 14 |
| Degree of protection                     | IP 65 / IP 67                                              |
| Mating face                              | acc. to IEC/PAS 61 076-3-11x                               |
| Number of contacts                       | 10                                                         |
| Electrical data<br>acc. to DIN EN 61 984 | 5 A 100 V 1.5 kV 3                                         |
| Contact resistance                       | 10 mΩ                                                      |
| Termination                              | Crimp                                                      |
| Conductor cross section                  | AWG 24 ... 18; 0.25 ... 0.82 mm <sup>2</sup>               |
| 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<br>Zinc die-cast, nickel-plated             |
| Flammability acc. to UL 94               | V 0                                                        |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Han® PushPull Signal

Connector set 10-poles  
incl. metal housing  
and female insert  
4 ... 11 mm

09 35 261 0401

Connector set 10-poles  
incl. plastic housing  
and female insert  
6.5 ... 9.5 mm

09 35 261 0421

Order D-Sub crimp female  
contacts separately

#### D-Sub crimp contacts

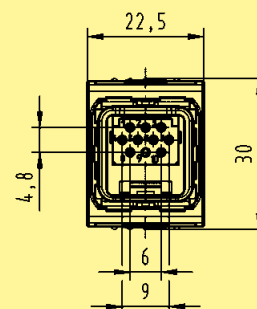
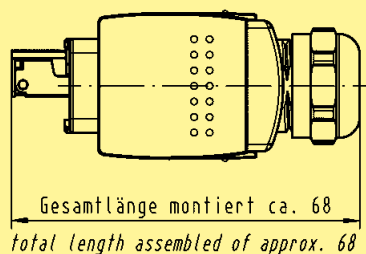
(Connector side)

for AWG 24-20; 0.25-0.56 mm<sup>2</sup>

09 67 000 8278<sup>1)</sup>

for AWG 22-18; 0.33-0.82 mm<sup>2</sup>

09 67 000 3476<sup>2)</sup>



<sup>1)</sup> To be used with crimp tool 09 99 000 0175

<sup>2)</sup> To be used with crimp tool 09 99 000 0501. Suitable locator: 61 03 600 0531



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<br>acc. to IEC 61 076-3-118 |
| Degree of protection                     | IP 65 / IP 67                                   |
| Number of contacts                       | 4 + PE                                          |
| Electrical data<br>acc. to DIN EN 61 984 | 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               | V 0                                             |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Components device side

Housing bulkhead mounting  
plastic

09 35 002 0323

Dust protection cover IP 40,  
rubber (NBR)

09 35 002 5401

Protection cover IP 65 / IP 67

09 35 002 5402

Coding pins

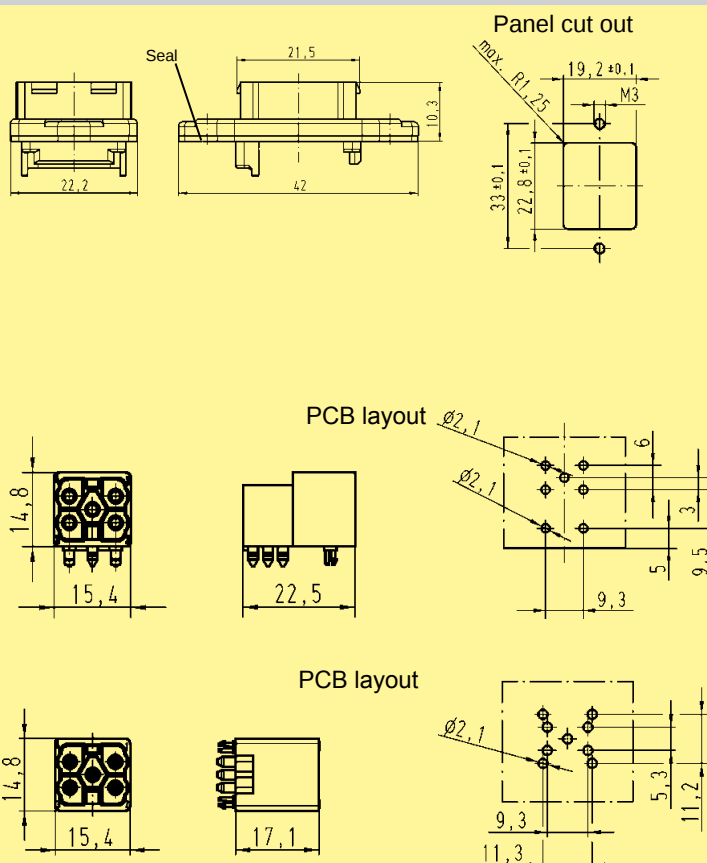
09 35 000 6190

Male insert  
with solder termination  
angled

09 35 002 3003

Male insert  
with solder termination  
straight

09 35 002 3004





available  
Q2 / 2012



Han® PushPull, type acc. to IEC 61 076-3-118  
Panel feed-through, 5-poles, 230/400 V, 16 A

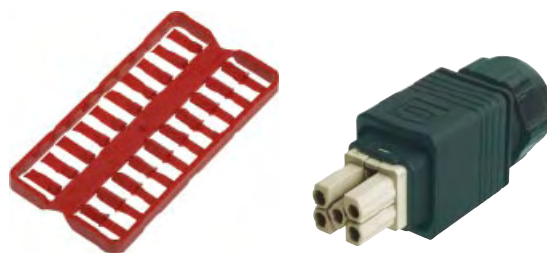
## Features

- 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 mm<sup>2</sup>

## 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       | IP 65 / IP 67                                           |
| Number of contacts         | 4 + PE                                                  |
| Electrical data            |                                                         |
| acc. to DIN EN 61 984      | 16 A 690 V 4 kV 3                                       |
| Termination cross section  | 0.25 - 2.5 mm <sup>2</sup>                              |
| Mating cycles              | min. 500                                                |
| Temperature range          | -40 °C ... +70 °C                                       |
| Housing material           | Plastic, black                                          |
| Flammability acc. to UL 94 | V 0                                                     |

| Identification                                                                                                                                                                                         | Part No.                         | Drawing | Dimensions in mm |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------|------------------|
| <b>Han® PushPull Power 4/0</b><br><b>Panel feed-through</b><br>5-poles, 690 V / 16 A<br>incl. bulkhead housing and male insert<br><br>with crimp termination<br>(Order crimp male contacts separately) | 09 35 231 0331                   |         |                  |
| with Han-Quick Lock® termination<br><br>0.5 ... 2.5 mm <sup>2</sup><br>0.25 ... 1.5 mm <sup>2</sup>                                                                                                    | 09 35 232 0331<br>09 35 234 0331 |         |                  |
| <b>Coding element</b><br>10 pieces each for device and cable side<br>enables 4 times coding without contact loss                                                                                       | 09 35 000 6190                   |         |                  |



Han® PushPull, type acc. to IEC 61 076-3-118  
Connector, 5-poles, 230/400 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 mm<sup>2</sup>

## Technical characteristics

|                            |                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------|
| Locking                    | PushPull technology<br>acc. to IEC 61 076-3-117 variant 14<br>acc. to IEC 61 076-3-118 |
| Mating face                | IP 65 / IP 67                                                                          |
| Degree of protection       | 4 + PE                                                                                 |
| Number of contacts         |                                                                                        |
| Electrical data            | 16 A 690 V 4 kV 3                                                                      |
| acc. to DIN EN 61 984      | 0.25 – 2.5 mm <sup>2</sup>                                                             |
| Termination cross section  | min. 500                                                                               |
| Mating cycles              | -40 °C ... +70 °C                                                                      |
| Temperature range          | Plastic, black                                                                         |
| Housing material           | V 0                                                                                    |
| Flammability acc. to UL 94 |                                                                                        |

| Identification                                                                                                                                                                      | Part No.                         | Drawing | Dimensions in mm |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------|------------------|
| <b>Connector set, plastic</b><br>incl. housing<br>and female insert<br><br>with crimp termination<br>9 – 13 mm clamp range<br>Han® P crimp contacts<br>order separately             | 09 35 231 0423                   |         |                  |
| with Han-Quick Lock® termination<br>9 – 13 mm clamp range<br>for termination cross section 0.5 - 2.5 mm <sup>2</sup>                                                                | 09 35 232 0423                   |         |                  |
| with Han-Quick Lock® termination<br>6.5 – 9.5 mm clamp range<br>for termination cross section 0.5 - 2.5 mm <sup>2</sup><br>for termination cross section 0.25 - 1.5 mm <sup>2</sup> | 09 35 232 0421<br>09 35 234 0421 |         |                  |
| Dust protection cover IP 40                                                                                                                                                         | 09 35 002 5412                   |         |                  |
| Protection cover IP 65 / IP 67                                                                                                                                                      | 09 35 002 5411                   |         |                  |
| Coding pins                                                                                                                                                                         | 09 35 000 6190                   |         |                  |



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<br>acc. to IEC 61 076-3-118         |
| Degree of protection                     | IP 65 / IP 67                                           |
| Number of contacts                       | 4 + PE                                                  |
| Electrical data<br>acc. to DIN EN 61 984 | 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               | V 0                                                     |
| Housing material                         | Zinc die-cast, nickel plated<br>Plastic, black (female) |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Components device side

Housing bulkhead mounting  
metal

09 35 002 0303

Dust protection cover IP 40,  
rubber (NBR)

09 35 002 5401

Protection cover IP 65 / IP 67

09 35 002 5402

Coding pins

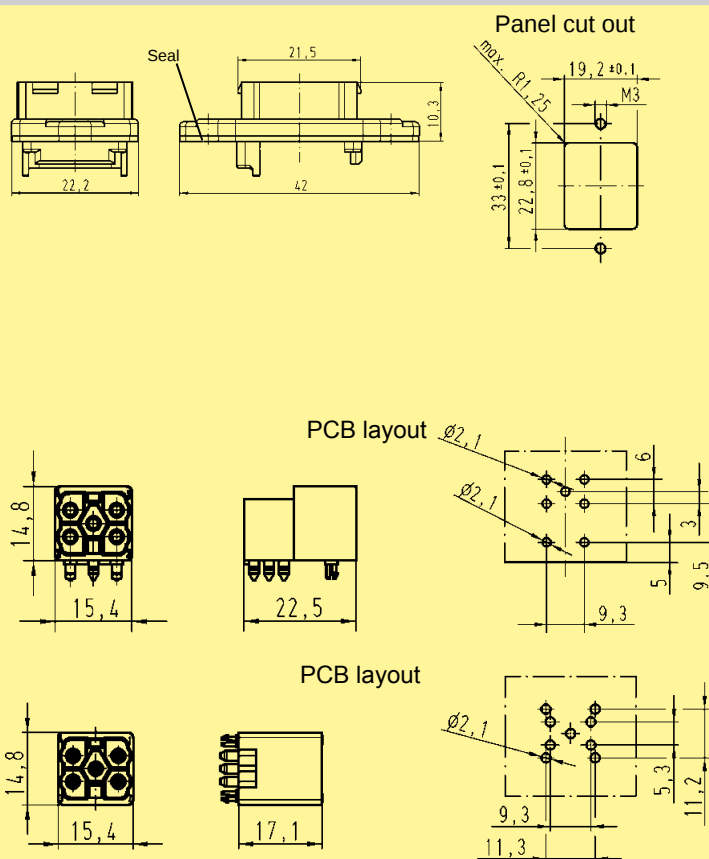
09 35 000 6190

Male insert  
with solder termination  
angled

09 35 002 3003

Male insert  
with solder termination  
straight

09 35 002 3004





available  
Q2 / 2012



Han® PushPull, type acc. to IEC 61 076-3-118  
Panel feed-through, 5-poles, 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 mm<sup>2</sup>

## 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       | IP 65 / IP 67                                           |
| Number of contacts         | 4 + PE                                                  |
| Electrical data            |                                                         |
| acc. to DIN EN 61 984      | 16 A 690 V 4 kV 3                                       |
| Termination cross section  | 0.25 – 2.5 mm <sup>2</sup>                              |
| Mating cycles              | min. 500                                                |
| Temperature range          | -40 °C ... +70 °C                                       |
| Housing material           | Zinc die-cast, nickel-plated                            |
| Flammability acc. to UL 94 | V 0                                                     |

| Identification                                                                                                                 | Part No.                         | Drawing | Dimensions in mm |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------|------------------|
| <b>Han® PushPull Power 4/0</b><br><b>Panel feed-through</b><br>5-poles, 690 V / 16 A<br>incl. bulkhead housing and male insert |                                  |         |                  |
| Rectangular panel cut out<br>with crimp termination<br>(Order crimp male contacts separately)                                  | 09 35 231 0311                   |         |                  |
| with Han-Quick Lock® termination<br>0.5 ... 2.5 mm <sup>2</sup><br>0.25 ... 1.5 mm <sup>2</sup>                                | 09 35 232 0311<br>09 35 234 0311 |         |                  |
| Circular panel cut out<br>with crimp termination<br>(Order crimp male contacts separately)                                     | 09 35 231 0312                   |         |                  |
| with Han-Quick Lock® termination<br>0.5 ... 2.5 mm <sup>2</sup><br>0.25 ... 1.5 mm <sup>2</sup>                                | 09 35 232 0312<br>09 35 234 0312 |         |                  |
| <b>Coding element</b><br>10 pieces each for device and cable side<br>enables 4 times coding without contact loss               | 09 35 000 6190                   |         |                  |



Han® PushPull, type acc. to IEC 61 076-3-118  
Connector, 5-poles, 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 mm<sup>2</sup>

## 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       | IP 65 / IP 67                                           |
| Number of contacts         | 4 + PE                                                  |
| Electrical data            |                                                         |
| acc. to DIN EN 61 984      | 16 A 690 V 4 kV 3                                       |
| Termination cross section  | 0.25 – 2.5 mm <sup>2</sup>                              |
| Mating cycles              | min. 500                                                |
| Temperature range          | -40 °C ... +70 °C                                       |
| Housing material           | Zinc die-cast, nickel-plated                            |
| Flammability acc. to UL 94 | V 0                                                     |

| Identification                                                                                                                                                                   | Part No.                         | Drawing | Dimensions in mm |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------|------------------|
| <b>Connector set, metal</b><br>incl. housing and female insert<br><br>with crimp termination<br>4 – 11 mm clamp range<br>Han® P crimp contacts<br>order separately               | 09 35 231 0401                   |         |                  |
| with Han-Quick Lock® termination<br>4 – 11 mm clamp range<br>for termination cross section 0.5 - 2.5 mm <sup>2</sup><br>for termination cross section 0.25 - 1.5 mm <sup>2</sup> | 09 35 232 0401<br>09 35 234 0401 |         |                  |
| Dust protection cover IP 40                                                                                                                                                      | 09 35 002 5412                   |         |                  |
| Protection cover IP 65 / IP 67                                                                                                                                                   | 09 35 002 5411                   |         |                  |
| Coding pins                                                                                                                                                                      | 09 35 000 6190                   |         |                  |

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

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

BUCHANAN-  
crimping tool

09 99 000 0001



Locator Han P®

for crimping tool 09 99 000 0001

09 99 000 0329

Multiple crimping tool depth  
adjustment gauge

09 99 000 0379

Wire gauge  
0.5 - 1 mm<sup>2</sup> Ø 1.55  
1.5 - 2.5 mm<sup>2</sup> Ø 1.80

Removal tool Han P®

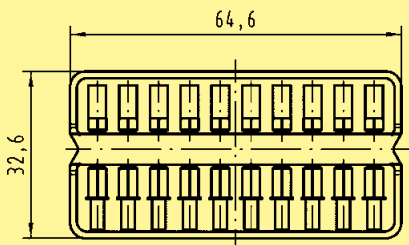
09 99 000 0319



Coding pins

for 4 times coding  
without contact loss

09 35 000 6190



| Identification | Part No.     |                | Drawing | Dimensions in mm |
|----------------|--------------|----------------|---------|------------------|
|                | Male contact | Female contact |         |                  |

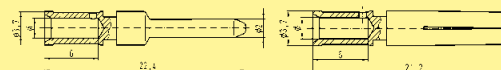
Crimp contacts Han® P

silver plated

for 0.5 mm<sup>2</sup>  
for 0.75 mm<sup>2</sup>  
for 1.0 mm<sup>2</sup>  
for 1.5 mm<sup>2</sup>  
for 2.5 mm<sup>2</sup>

09 35 000 6103  
09 35 000 6104  
09 35 000 6105  
09 35 000 6106  
09 35 000 6107

09 35 000 6203  
09 35 000 6204  
09 35 000 6205  
09 35 000 6206  
09 35 000 6207



| Wire gauge               |        | Ø       | Stripping length |
|--------------------------|--------|---------|------------------|
| for 0.5 mm <sup>2</sup>  | AWG 20 | 1.15 mm | 6 mm             |
| for 0.75 mm <sup>2</sup> | AWG 18 | 1.30 mm | 6 mm             |
| for 1.0 mm <sup>2</sup>  | AWG 18 | 1.45 mm | 6 mm             |
| for 1.5 mm <sup>2</sup>  | AWG 16 | 1.75 mm | 6 mm             |
| for 2.5 mm <sup>2</sup>  | AWG 14 | 2.25 mm | 6 mm             |

available  
Q2 / 2012



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<br>acc. to IEC 61 076-3-117 variant 14 |
| Degree of protection       | IP 65 / IP 67                                              |
| 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 | V 0                                                        |

| Identification                                                                                                              | Part No.       | Drawing                                      | Dimensions in mm |
|-----------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------|------------------|
| <b>Han® PushPull<br/>cable to cable housings,<br/>plastic</b><br>(Order housing bulkhead mounting<br>and insert separately) |                | 2X REMFORM $\phi 3 \times 8$ TORX screws<br> |                  |
| for outer cable diameter<br>6.5 ... 9.5 mm                                                                                  | 09 35 002 0431 |                                              |                  |
| for outer cable diameter<br>9 ... 13 mm                                                                                     | 09 35 002 0433 | 2X REMFORM $\phi 3 \times 8$ TORX screws<br> |                  |
| <b>Suitable bulkhead<br/>housing, plastic</b>                                                                               |                |                                              |                  |
| for power, 5-poles, 690 V / 16 A,<br>incl. housing bulkhead mounting<br>and insert                                          |                |                                              |                  |
| with crimp termination<br>(Order Han® P crimp male<br>contacts separately)                                                  | 09 35 231 0331 |                                              |                  |
| with Han-Quick Lock®<br>termination                                                                                         |                |                                              |                  |
| 0.5 ... 2.5 mm <sup>2</sup>                                                                                                 | 09 35 232 0331 |                                              |                  |
| 0.25 ... 1.5 mm <sup>2</sup>                                                                                                | 09 35 234 0331 |                                              |                  |
| <b>Coding element power</b>                                                                                                 |                |                                              |                  |
| 10 pieces each for device and<br>cable side                                                                                 | 09 35 000 6190 |                                              |                  |



Housing bulkhead mounting and power females for device integration

## Features

- HARTING PushPull technology
- Touch-proof
- Device side: male
  - Solder variant, angled and straight
- AIDA-conform  
(German Domestic Automobile Manufactures)

## Technical characteristics

|                            |                                     |
|----------------------------|-------------------------------------|
| Locking                    | PushPull technology                 |
| Degree of protection       | IP 65 / IP 67                       |
| Number of contacts         | 4 + PE                              |
| Electrical data            |                                     |
| acc. to DIN EN 61 984      | 16 A 24 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 | V 0                                 |

| Identification                                                                                                                                                                                                                                                                                                      | Part No.                                                                                               | Drawing | Dimensions in mm         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------|--------------------------|
| <b>Components device side</b><br><br>Housing bulkhead mounting plastic<br><br>Male insert with solder termination angled<br><br>Male insert with solder termination straight<br><br>Panel feed-through, plastic<br>incl. housing and male insert with spring force connection<br><br>Protection cover IP 65 / IP 67 | 09 35 004 0321<br><br>09 35 004 3003<br><br>09 35 004 3004<br><br>09 35 431 0331<br><br>09 35 004 5401 |         | <b>Panel cut out</b><br> |



Connector, 5-poles, 24 V, 16 A

PushPull

Features

- HARTING PushPull technology
- Touch-proof
- Cable side: female
  - spring force connection
- AIDA-conform  
(German Domestic Automobile Manufactures)

Technical characteristics

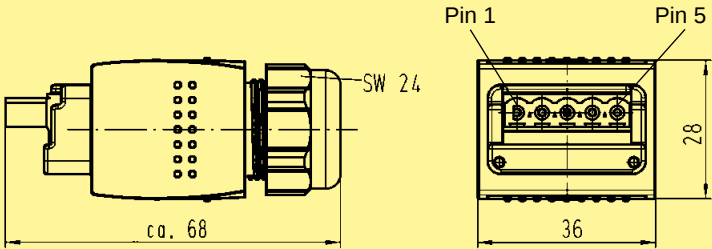
|                            |                              |
|----------------------------|------------------------------|
| Locking                    | PushPull technology          |
| Degree of protection       | IP 65 / IP 67                |
| Number of contacts         | 4 + PE                       |
| Electrical data            |                              |
| acc. to DIN EN 61 984      | 16 A 24 V 4 kV 3             |
| Termination                | Spring force connection      |
| Termination cross section  | 0.75 ... 2.5 mm <sup>2</sup> |
| Mating cycles              | min. 500                     |
| Temperature range          | -40 °C ... +70 °C            |
| Cable diameter             | 9 – 13 mm                    |
| Housing material           | Plastic, black               |
| Flammability acc. to UL 94 | V 0                          |

| Identification | Part No. | Drawing | Dimensions in mm |
|----------------|----------|---------|------------------|
|----------------|----------|---------|------------------|

Connector set, plastic

incl. housing  
and female insert  
with spring force connection

09 35 431 0421





Housing bulkhead mounting and power females for device integration

## Features

- HARTING PushPull technology
- Touch-proof
- Device side: male
  - Solder variant, angled and straight
- AIDA-conform  
(German Domestic Automobile Manufactures)

## Technical characteristics

|                       |                                     |
|-----------------------|-------------------------------------|
| Locking               | PushPull technology                 |
| Degree of protection  | IP 65 / IP 67                       |
| Number of contacts    | 4 + PE                              |
| Electrical data       | 16 A 24 V 4 kV                      |
| acc. to DIN EN 61 984 | Male insert with solder termination |
| Termination           | min. 500                            |
| Mating cycles         | -40 °C ... +70 °C                   |
| Temperature range     | Zinc die-cast, nickel plated        |
| Housing material      | Plastic, black (female)             |

### Identification

### Part No.

### Drawing

### Dimensions in mm

#### Components device side

Housing bulkhead mounting  
metal

09 35 004 0301

Male insert  
with solder termination  
angled

09 35 004 3003

Male insert  
with solder termination  
straight

09 35 004 3004

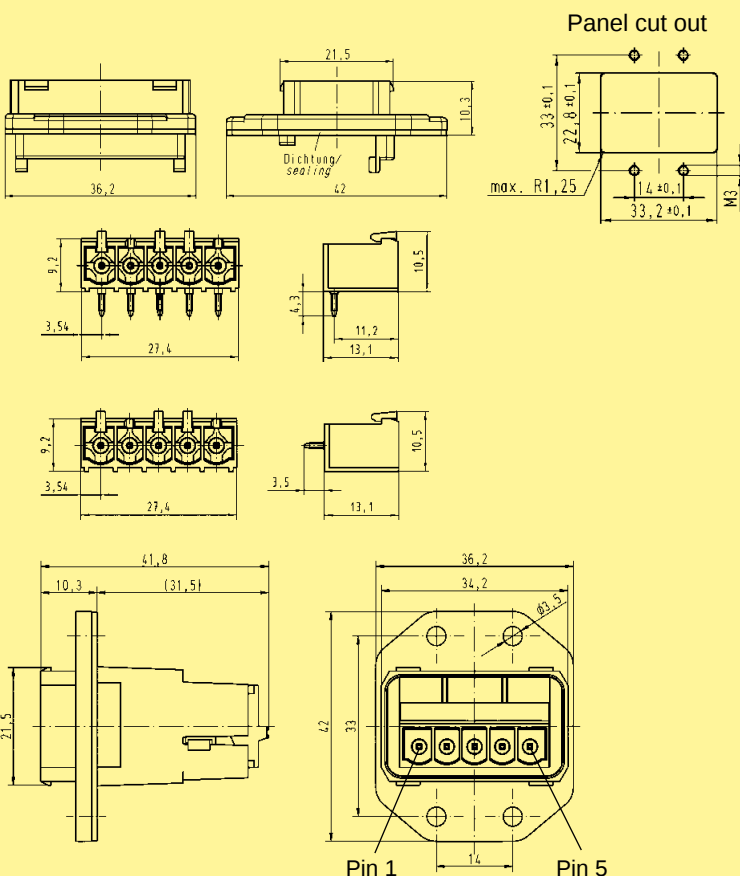
Panel feed-through,  
metal

incl. housing and male insert  
with spring force connection

09 35 431 0311

Protection cover IP 65 / IP 67

09 35 004 5401





Han® PushPull L Power 4/0 Genderchanger Metal

Features

Technical characteristics

|                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                           |         |                     |                         |             |                    |   |               |          |                  |                    |            |                               |                                        |                       |          |                                        |                   |                   |                              |                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------|---------|---------------------|-------------------------|-------------|--------------------|---|---------------|----------|------------------|--------------------|------------|-------------------------------|----------------------------------------|-----------------------|----------|----------------------------------------|-------------------|-------------------|------------------------------|---------------------------------|
| <ul style="list-style-type: none"><li>• High degree of protection IP 65 / IP 67</li><li>• Robust metal housing</li><li>• Standard PROFINET component of the German automotive production</li><li>• Allows usage of different cable types (Type B,C) e.g. in robots application</li><li>• Extension of cords according to PROFINET guideline</li></ul> | <table><tr><td>Connector</td><td>Han® PushPull L Power 4/0</td></tr><tr><td>Locking</td><td>PushPull technology</td></tr><tr><td>Electrical transmission</td><td>16 A / 24 V</td></tr><tr><td>Number of contacts</td><td>5</td></tr><tr><td>Mating cycles</td><td>min. 500</td></tr><tr><td>Housing material</td><td>Aluminium anodized</td></tr><tr><td>Dimensions</td><td>83.4 x 62 x 40.7 mm (unmated)</td></tr><tr><td>Degree of protection acc. to DIN 60529</td><td>IP 65 / IP 67 (mated)</td></tr><tr><td>Mounting</td><td>Wall mountable with 4 screws (type M5)</td></tr><tr><td>Temperature range</td><td>-20 °C ... +50 °C</td></tr><tr><td>Maximum permissible humidity</td><td>30 % ... 95 % (no condensation)</td></tr></table> | Connector | Han® PushPull L Power 4/0 | Locking | PushPull technology | 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 | IP 65 / IP 67 (mated) | Mounting | Wall mountable with 4 screws (type M5) | Temperature range | -20 °C ... +50 °C | Maximum permissible humidity | 30 % ... 95 % (no condensation) |
| Connector                                                                                                                                                                                                                                                                                                                                             | Han® PushPull L Power 4/0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |                           |         |                     |                         |             |                    |   |               |          |                  |                    |            |                               |                                        |                       |          |                                        |                   |                   |                              |                                 |
| Locking                                                                                                                                                                                                                                                                                                                                               | PushPull technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |                           |         |                     |                         |             |                    |   |               |          |                  |                    |            |                               |                                        |                       |          |                                        |                   |                   |                              |                                 |
| 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                                                                                                                                                                                                                                                                                                                | IP 65 / IP 67 (mated)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |                           |         |                     |                         |             |                    |   |               |          |                  |                    |            |                               |                                        |                       |          |                                        |                   |                   |                              |                                 |
| Mounting                                                                                                                                                                                                                                                                                                                                              | Wall mountable with 4 screws (type M5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                           |         |                     |                         |             |                    |   |               |          |                  |                    |            |                               |                                        |                       |          |                                        |                   |                   |                              |                                 |
| Temperature range                                                                                                                                                                                                                                                                                                                                     | -20 °C ... +50 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |                           |         |                     |                         |             |                    |   |               |          |                  |                    |            |                               |                                        |                       |          |                                        |                   |                   |                              |                                 |
| Maximum permissible humidity                                                                                                                                                                                                                                                                                                                          | 30 % ... 95 % (no condensation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                           |         |                     |                         |             |                    |   |               |          |                  |                    |            |                               |                                        |                       |          |                                        |                   |                   |                              |                                 |

Identification

Part No.

Drawing

Dimensions in mm

|                                                                                                                                              |                       |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--|--|
| <p>Han® PushPull L Power 4/0 Genderchanger metal</p> <p>including housing and printed board with 2 x male insert with solder termination</p> | <p>09 35 431 0501</p> |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--|--|



Connector, 5-poles, 24 V, 16 A

## Features

- HARTING PushPull technology
- Touch-proof
- Cable side: female
  - spring force connection
- AIDA-conform  
(German Domestic Automobile Manufactures)

## Technical characteristics

|                           |                              |
|---------------------------|------------------------------|
| Locking                   | PushPull technology          |
| Degree of protection      | IP 65 / IP 67                |
| Number of contacts        | 4 + PE                       |
| Electrical data           |                              |
| acc. to DIN EN 61 984     | 16 A 24 V 4 kV 3             |
| Termination               | Spring force connection      |
| Termination cross section | 0.75 ... 2.5 mm <sup>2</sup> |
| Mating cycles             | min. 500                     |
| Temperature range         | -40 °C ... +70 °C            |
| Cable diameter            | 9 – 13 mm                    |
| Housing material          | Zinc die-cast, nickel plated |

### Identification

### Part No.

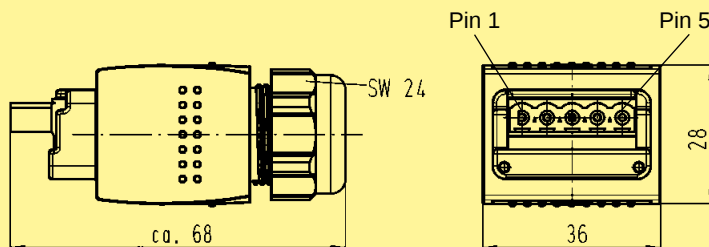
### Drawing

### Dimensions in mm

#### Connector set, metal

incl. housing  
and female insert  
with spring force connection

09 35 431 0401



## Данный компонент на территории Российской Федерации

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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9