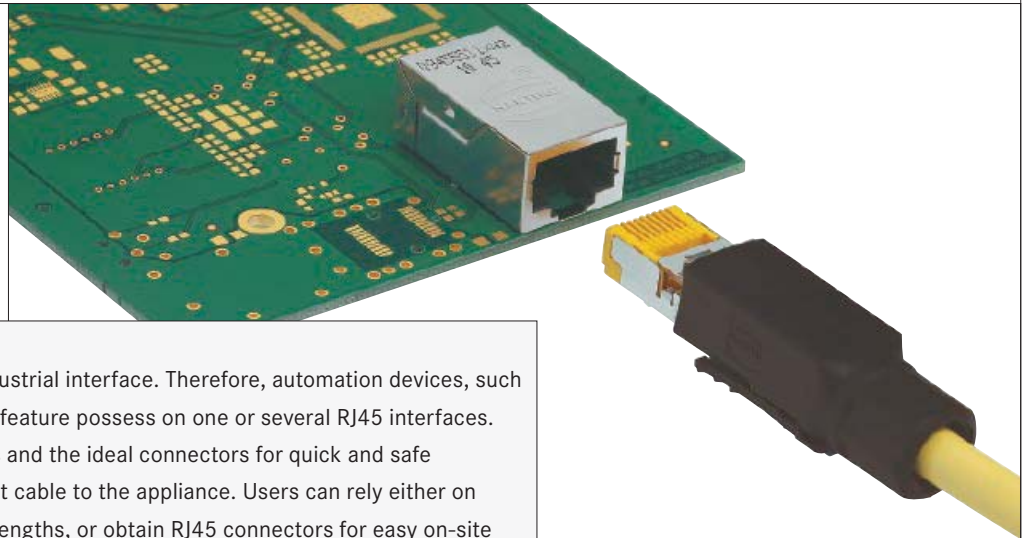# 01. HARTING RJ Industrial® – RJ45 Ethernet Connectors

Ethernet is coming up to standard industrial interface. Therefore, automation devices, such as controllers, sensors and actuators feature possess on one or several RJ45 interfaces. HARTING offers the matching sockets and the ideal connectors for quick and safe connection of the 2- or 4-pair Ethernet cable to the appliance. Users can rely either on ready-to-use patch cables in various lengths, or obtain RJ45 connectors for easy on-site dressing of the cables without using special tools.

HARTING relies on the *HARAX®* quick connection technology for on-site preparation of cables, meeting all industrial requirements made on safe and durable contacting.

The HARTING RJ Industrial® connector family also supports Ethernet automation profiles such as PROFINET, Ethernet/IP, POWERLINK and EtherCAT for the integration of RJ45 connection technology at field levels.

## *Application profile:*

| CONNECTION TYPE | | ENVIRONMENT | | APPLICATION | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Board to Board | Cable/ Wire to Board | IP20 | IP65 / IP67 | Data | Signal | Power | high performance | | | |
| | | | | | | | Data transfer rate | Shielding | Number of contacts, contact density | Voltage, working current |
| | ● | ● | | ● | | | ● | ● | | |

### Cable termination

| Han-Quick Lock® | IDC HARAX® | Crimp |
|---|---|---|
| | ● | ●[1] |

| Screw | Cage clamp | Axial screw |
|---|---|---|

### PCB termination

| THT | SMC | SMT |
|---|---|---|
| ● | ● | ● |

Press-in

### Application standard

PROFINET · EtherNet/IP · IEEE 802.3 · ISO IEC 24702 · ETHERNET POWERLINK · EtherCAT Technology Group

### Housing integration

Separate housing      integrated housing

[1] Piercing contacts

## Contents

The modular HARTING RJ Industrial® connector family is based on the standard RJ45 pin profile and was developed especially for use in rugged industrial environments.

This technology charts a new course in the wiring of appliances with Ethernet interfaces, enabling the on-site configuration of connectors for many industrial applications, no matter if the product is a power connector or a communications connector.

For the fast wiring of all Ethernet networks, HARTING relies consistently on the *HARAX®* IDC connection technology which has proved its worth in many industrial applications.

Solid or flexible conductors up to a cross-section of AWG 22 are terminated by IDC technology, without stripping or using any special tool.

For all Gigabit Ethernet networks HARTING offers the 8-pole data module with piercing connection technology and the new 8-pole data module with *HARAX®* quick termination technology. All data modules have the same dimensions.

The replacement of the data module enables the conversion of any 100 MBit Fast Ethernet network into a Gigabit Ethernet network using HARTING RJ Industrial® connectors. This innovative platform strategy also permits the use of the RJ45 data module in combination with the PushPull, Han-Max® and Han® 3 A connector families.

Based on this data module, HARTING has developed a comprehensive connector family which covers all applications for Fast Ethernet, 1/10 Gigabit Ethernet, PROFINET, Ethernet/IP and other Ethernet profiles in the industrial environment.

Degree of protection IP20 is available for the standard RJ45 connectors, either for configuration in the field, or as molded system patch cable.

### APPLIANCE INTEGRATION:

HARTING offers various RJ45 jacks for direct mounting on the PCBs of appliances.

# Special series features
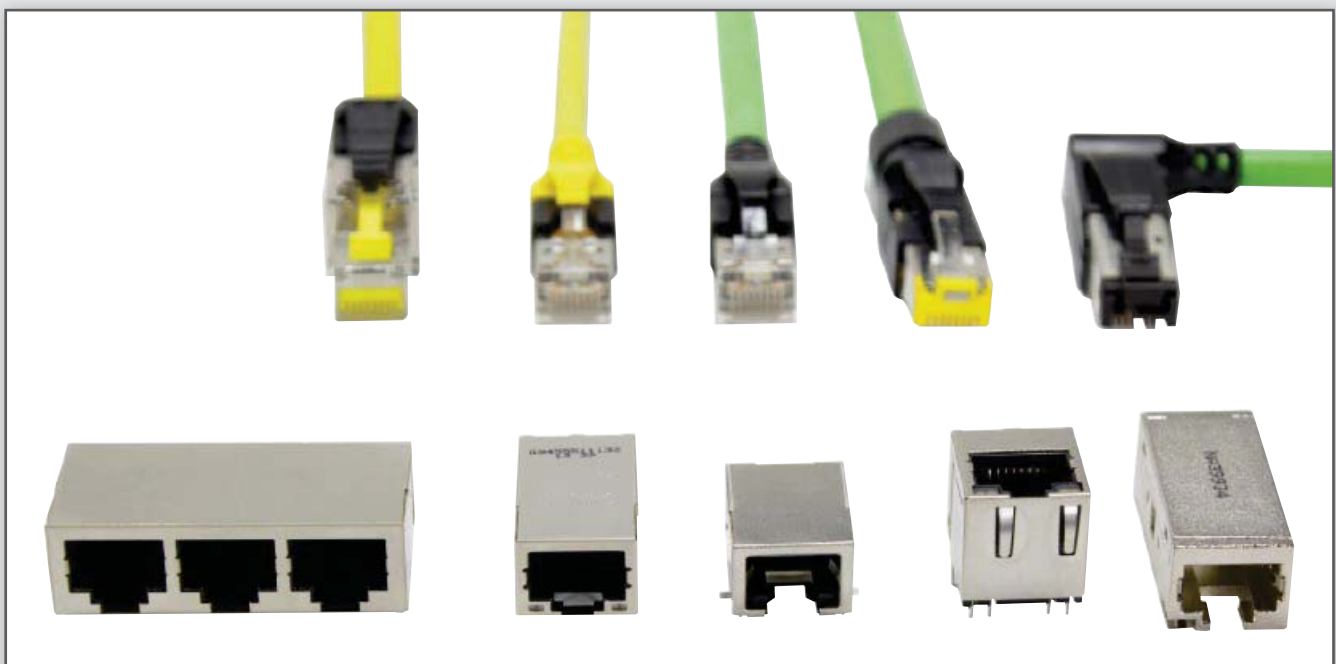
**RJ45 QUICK CONNECTION WITH *HARAX*®:**

The HARTING *HARAX*® quick connection technology is the ideal solution for dressing RJ45 connectors on-site. In order to produce a gas-proof and vibration resistant Ethernet connection, users only have to strip the cable insulation, insert the conductors, terminate the shielding plates and close the connector.

*HARAX*® is the most convenient handling standard connection for Ethernet where the emphasis is set on the assembly of connectors in the field.

*HARAX*® is an ideal IDC connection technology which is deployed universally in a very wide range of data, signal and power series.
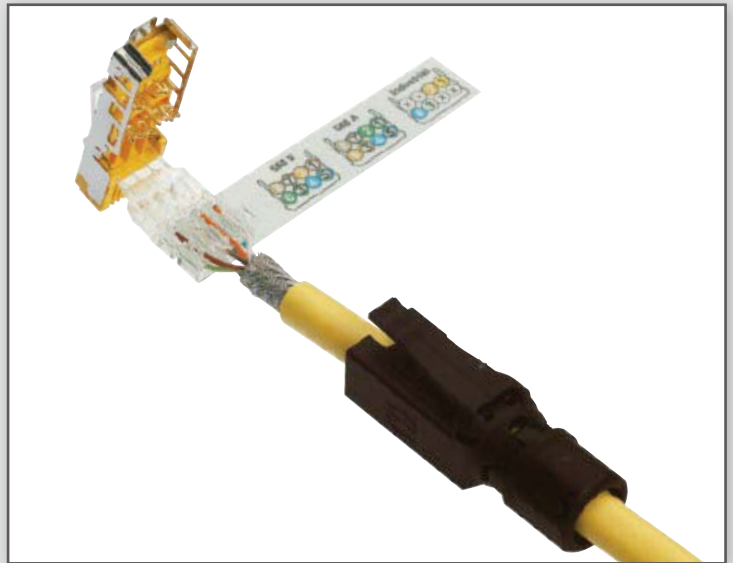
**ASSEMBLED SYSTEM CABLES:**

HARTING offers a comprehensive range of ready-to-use RJ45 system cables for the simple and easy connection of Ethernet devices. HARTING also provides assembled and tested system cables for special Ethernet profiles such as PROFINET and Ethernet/IP.

The range of solution comprises star quad, double-pair and four-pair cables of diverse structure, as required in drag chain applications, for example.

Consequently, HARTING system cables can be deployed in all Ethernet applications and all ambient conditions.
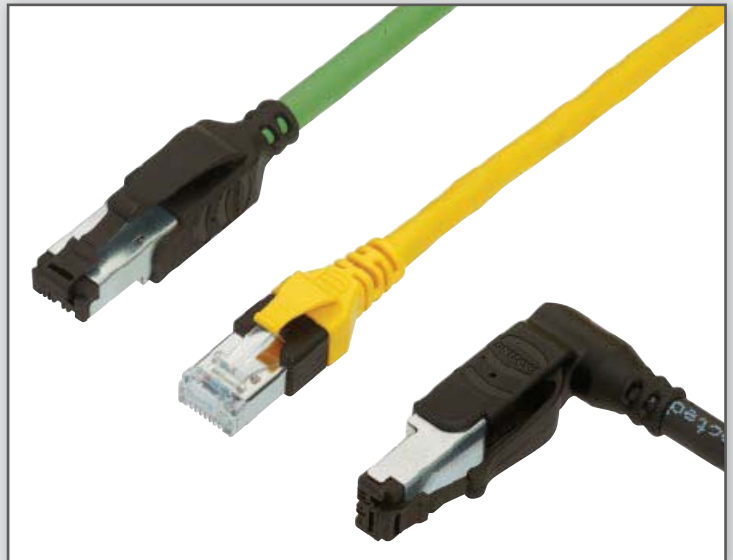
**PERFORMANCE FOR THE FUTURE:**

The HARTING RJ Industrial® portfolio offers a wide range of solutions for Industrial Ethernet, independent of wiring strategies to ISO/IEC 11801 currently deployed to wire appliances. HARTING RJ Industrial® provides field connection technology based on 2-pair category 5 variant and on 4-pair category 6 variant. HARTING RJ Industrial® is ideal for the future-proof planning of appliance interfaces, regardless of whether your future applications will involve Fast or Gigabit Ethernet, or 10 Gigabit Ethernet.

# HARTING RJ Industrial®



HARTING RJ Industrial® RJ45 jacks for direct device integration

## Advantages

- Compact design
- Category of transmission Cat. 5
- Suitable for PoE (IEEE 802.3af)
  and PoE+ (IEEE 802.3at)
- Temperature range -40 °C … +70 °C

## Technical characteristics

| | |
|---|---|
| Locking | RJ45 acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Degree of protection | IP20 |
| Rated voltage | 125 V AC |
| Rated current | 1.5 A |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Mating cycles | min. 750 |
| UL | UL approval |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Components device side | | | PCB layout, component side |
| **RJ45 jack (low profile)** | | | |
| Solder variant SMD, 90° angled | 09 45 551 1100[1] 09 45 551 1110[2] | | |
| Solder variant THT, 90° angled with EMC contacts | 09 45 551 1101[1] | | |
| Solder variant THT, 90° angled | 09 45 551 1102[1] | | |
| Solder variant THT, vertical | 09 45 551 1103[3] | | |

[1] Packaging: Blister à 120 pieces
[2] Packaging: Tape & Reel à 130 pieces
[2] Packaging: Blister à 80 pieces

# HARTING RJ Industrial®

HARTING RJ Industrial® RJ45 jacks for direct device integration

## Advantages
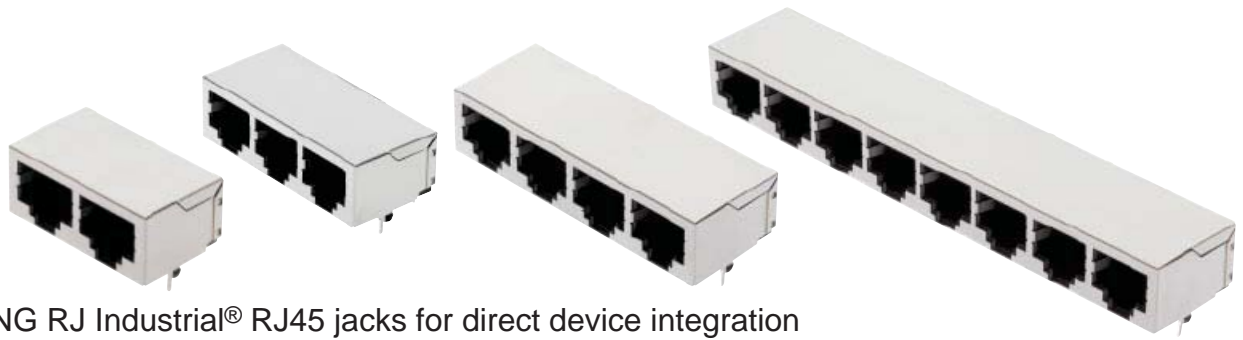
- Compact design
- Category of transmission Cat. 5
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)
- Temperature range -40 °C … +70 °C
- SMC compatible

## Technical characteristics

| | |
|---|---|
| Locking | RJ45 acc. to IEC 60603-7 |
| Number of contacts | 8 |
| Degree of protection | IP20 |
| Rated voltage | 125 V AC |
| Rated current | 1.5 A |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Mating cycles | min. 750 |
| | UL approval |

| Identification | Part number |
|---|---|
| Components device side | |
| RJ45 jack | |
| 2 ports, 90° angled, THT | 09 45 551 1122 |
| 3 ports, 90° angled, THT | 09 45 551 1123 |
| 4 ports, 90° angled, THT | 09 45 551 1124 |
| 6 ports, 90° angled, THT | 09 45 551 1126 |
| 8 ports, 90° angled, THT | 09 45 551 1128 |

**Drawing** — Dimensions in mm

| | a | b | c | d |
|---|---|---|---|---|
| 2 ports | 31.12 | 25.40 | 30.87 | 1 |
| 3 ports | 45.09 | 39.37 | 44.84 | 2 |
| 4 ports | 59.06 | 53.34 | 58.81 | 3 |
| 6 ports | 87.00 | 81.28 | 86.75 | 5 |
| 8 ports | 114.94 | 109.22 | 114.69 | 7 |

# HARTING RJ Industrial®



HARTING RJ Industrial® RJ45 jacks for direct device integration

## Advantages

- Compact design
- Category of transmission Cat. 6
- Suitable for PoE (IEEE 802.3af)
  and PoE+ (IEEE 802.3at)
- Temperature range -40 °C … +70 °C

## Technical characteristics

| | |
|---|---|
| Locking | RJ45 acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Degree of protection | IP20 |
| Rated voltage | 125 V AC |
| Rated current | 1.5 A |
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Mating cycles | min. 750 |
| 🆄🅻 | UL approval |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Components device side | | | PCB layout, component side |
| RJ45 jack (Standard) | | | |
| Solder variant overmolded (THT), 90° angled | 09 35 002 2101[1] | | |
| Solder variant overmolded (THT), 180° straight | 09 35 002 2102[2] | | |
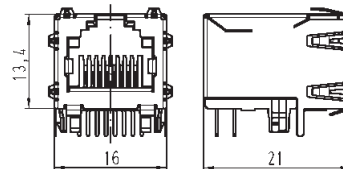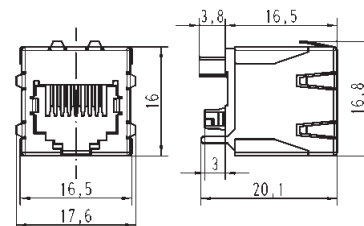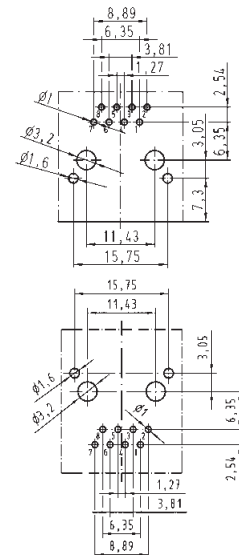
[1] Packaging: Blister à 90 pieces
[2] Packaging: Blister à 100 pieces

# HARTING RJ Industrial®

HARTING RJ Industrial® RJ45 jacks for direct device integration

## Advantages

- Compact design
- Excellent EMC behaviour due to integrated transformers and filters for 10/100 Mbit or 1 Gbit Ethernet
- Versions from 10/100 Mbit up to 10 Gbit Ethernet resp. Cat. 5

## Technical characteristics

| | |
|---|---|
| Mating face | RJ45 acc. to IEC 60603-7 |
| Number of contacts | 8 |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C … +85 °C |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| **Components device side** | | | |
| | | | |
| **RJ45 jack Cat. 5** | |  | |
| with bicolour LED | 09 45 551 1119 | | |
| without LED | 09 45 551 1120 | | |
| | | | |
| **RJ45 jack with transformer** | |  | |
| 10/100 Mbit with bicolour LED | 09 45 551 1140 | | |
| 10/100 Mbit with LED green/yellow | 09 45 551 1142 | | |
| | | | |
| 1 Gbit with bicolour LED | 09 45 551 1141 |  | |
| 1 Gbit with LED green/yellow | 09 45 551 1143 | | |

## HARTING RJ Industrial® RJ45 jacks with transformer

## Advantages

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

## Technical characteristics

| | |
|---|---|
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Degree of protection | IP20 |
| Rated voltage | 30 V DC |
| Rated current | 8 mA DC |
| Mating cycles | min. 750 |
| Temperature range | -25 °C … +70 °C |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| **Components device side** | | | |
| **RJ45 jack with transformer (low profile)** | | | |
| 90° angled, THT 10/100 Mbit Ethernet | 09 45 551 1130[1] |  | |
| 10/100 Mbit Ethernet and PoE | 09 45 551 1131[1] | | |
| 90° angled, THT 1 Gbit Ethernet | 09 45 551 1530[1] | | |
| 1 Gbit Ethernet and PoE | 09 45 551 1531[1] | | |
| 90° angled, THT 10 Gbit Ethernet | 09 45 551 1560[1] | Customer specific versions on request | |
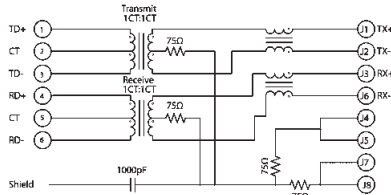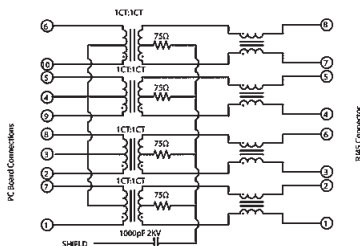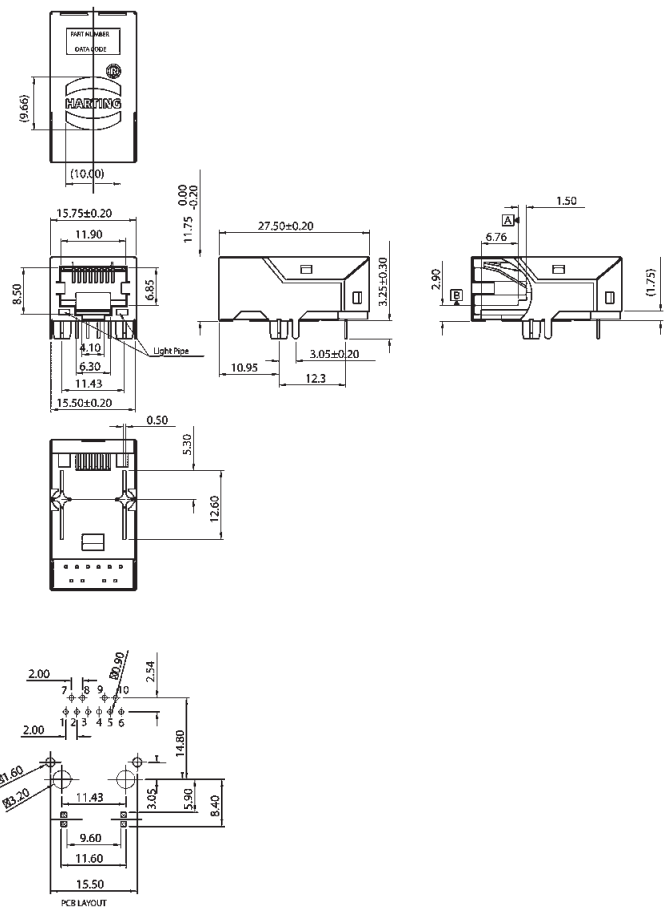
[1] Packaging: Blister à 56 pieces

# HARTING RJ Industrial®



HARTING RJ Industrial® RJ45 – coupler and adapter PCB's

## Advantages

- Compatible with Han® 3 A[1]
  and HARTING PushPull

- Suitable for PoE (IEEE 802.3af)
  and PoE+ (IEEE 802.3at)

- Temperature range -40 °C … +70 °C

## Technical characteristics

| | |
|---|---|
| Rated voltage | 125 V AC |
| Rated current | 1.5 A |
| Mating face | RJ45 acc. to IEC 60603-7 |
| Mating cycles | min. 750 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| **Coupler PCB**<br>**2x RJ45 8-poles**<br><br>2 x RJ45 jack<br>(09 45 551 1102) | 09 45 545 1130 | | |
| 1 x RJ45 jack horizontal<br>(09 45 551 1102) and<br>1 x RJ45 jack vertical<br>(09 45 551 1103) | 09 45 545 1138 | | |
| **Adapter PCB**<br>**1x RJ45 8-poles**<br><br>to solder points | 09 45 545 1134 | | |
| **Adapter PCB**<br>**1x RJ45 8-poles**<br><br>cage clamp, 5-pole, 1.5 mm² | 09 45 545 1135 | | |
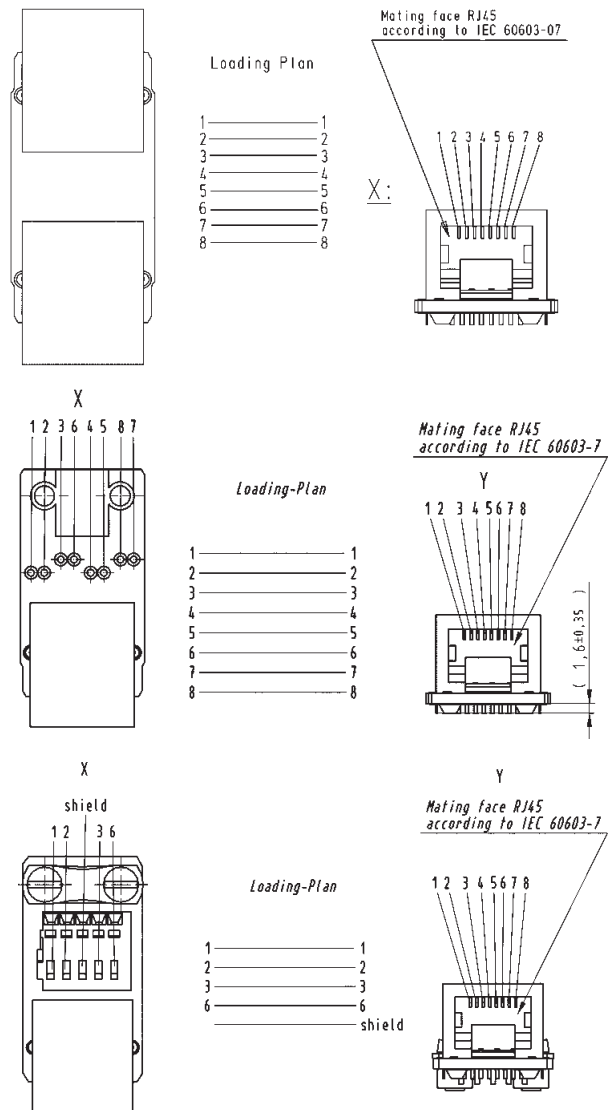
[1] with suitable adapter, see page 04.04

# HARTING RJ Industrial® 10G



PROFI NET
INDUSTRIAL ETHERNET ®

## HARTING RJ Industrial® 10G RJ45 bulkhead

## Advantages

- Compact and robust design
- 360° shielding
- Compatible with HIFF dimensions for use in:
  – Han® 3 A series
  – HARTING PushPull (V4)
  – Han® PushPull (V14)
  – *har*-port
  Details see page 01.11
- Suitable for PoE (IEEE 802.3af)
  and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Mating face | RJ45 acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Cat. 6, performance class $E_A$, suitable for 1/10 Gigabit Ethernet |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| Temperature range | –40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |
| Flammability acc. to UL 94 | V0 |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® 10G RJ45 bulkhead (HIFF version) | 09 45 545 1560 | | |
| HARTING RJ Industrial® 10G RJ45 bulkhead (keystone version) | 09 45 545 1568 | | |
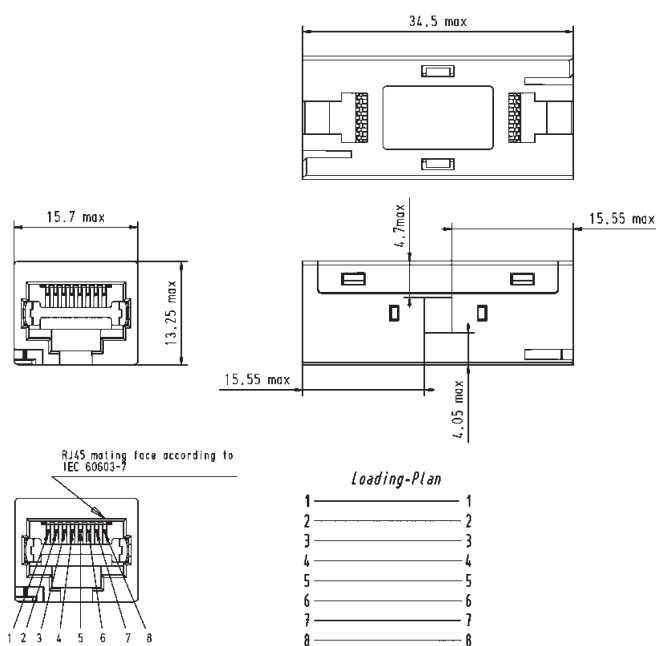
# HARTING RJ Industrial® 10G
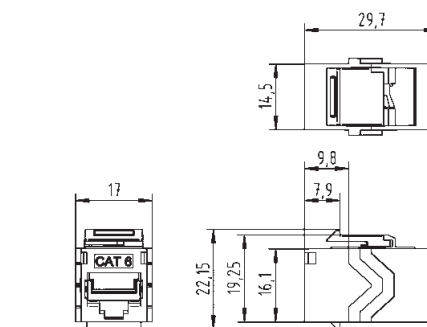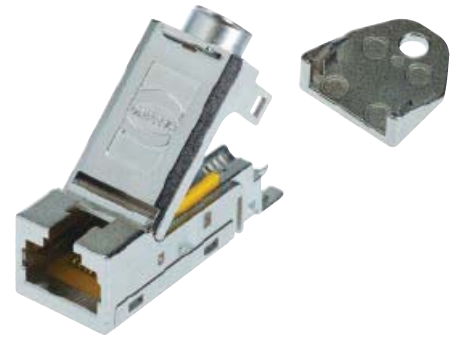
HARTING RJ Industrial® cable jack
(HIFF version)

## Advantages

- Compact and robust design

- 360° shielding

- Category of transmission Cat. 6

- Suitable for solid and stranded wires

- Field-assembly with *HARAX®* quick termination in IDC technology

- Compatible with HIFF dimensions for use in:
  – Han® 3 A series with HIFF adapter   09 45 515 0024
  – HARTING PushPull (V4)
     Compact bulkhead mounting housing   09 45 545 0028
     EasyInstall bulkhead mounting housing   09 45 545 0032
  – Han® PushPull (V14)
     Panel feed-through plastic   09 35 012 0331
     Panel feed-through metal rectangular   09 35 012 0311
     Panel feed-through metal circular   09 35 012 0312
  – *har*-port   09 45 452 0000
- Suitable for PoE (IEEE 802.3af)
  and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Category 6, class $E_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category 6 / Class $E_A$ up to 500 MHz 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 | Field-assembly |
| Cable termination | with IDC-contacts, without tools |
| Connectable cables | |
| - Conductor cross section | AWG 27 … AWG 24 (solid/stranded)[1] AWG 24 … AWG 22 (solid/stranded)[2] |
| - Conductor diameter | max. 1.6 mm (incl. insulation) |
| - Cable diameter | 5 ... 9 mm |
| Mating cycles | min. 750 |
| Degree of protection | IP20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® 10G cable jack, 8-poles | | | |
| AWG 28 … 24 | 09 45 545 1561 | | |
| AWG 24 … 22 | 09 45 545 1562 | | |
| HARTING RJ Industrial® PN cable jack, 4-poles, Cat. 5 | | | |
| AWG 24 … 22 | 09 45 545 1120 | | |
| Unlocking tool for opening of the HARTING RJ Industrial® cable jacks | 20 82 000 9916 | | |

[1] For part number 09 45 545 1561
[2] For part number 09 45 545 1562 and 09 45 545 1120

# HARTING RJ Industrial® 10G

HARTING RJ Industrial® cable jack
(keystone version)

## Advantages

- Compact and robust design

- 360° shielding

- Category of transmission Cat. 6$_A$

- Suitable for solid and stranded wires

- Field-assembly with *HARAX*® quick termination in IDC technology

- Keystone form factor – usable for DIN-rail outlet 09 45 851 0000 and a wide range of typical patch panels and wall outlets

- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Category 6$_A$, class E$_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category 6$_A$ / Class E$_A$ up to 500 MHz 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 | Field-assembly |
| Cable termination | with IDC-contacts, without tools |
| Connectable cables | |
| - Conductor cross section | AWG 27 … AWG 24 (solid/stranded)[1] AWG 24 … AWG 22 (solid/stranded)[2] |
| - Conductor diameter | max. 1.6 mm (incl. insulation)[1] max. 1.2 mm (incl. insulation)[2] |
| - Cable diameter | 5 ... 9 mm |
| Mating cycles | min. 750 |
| Degree of protection | IP 20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® 10G cable jack, 8-poles | | | |
| AWG 28 … 24 | 09 45 545 1563 | | |
| AWG 24 … 22 | 09 45 545 1564 | | |
| HARTING RJ Industrial® PN cable jack, 4-poles, Cat. 5 | | | |
| AWG 24 … 22 | 09 45 545 1122 | | |
| Unlocking tool for opening of the HARTING RJ Industrial® cable jacks | 20 82 000 9916 | | |

[1] For part number 09 45 545 1564
[2] For part number 09 45 545 1563 and 09 45 545 1122

# HARTING RJ Industrial® 10G Extender
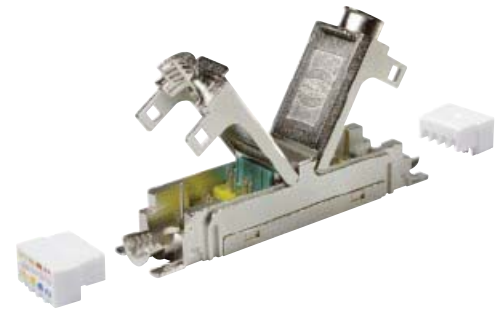
HARTING RJ Industrial® 10G Extender

## Advantages

- Simple, fast and reliable connection of data cables
- Compact and robust design
- 360° shielding
- Category of transmission Cat. $6_A$
- Suitable for solid and stranded wires
- Field assembly without special tools

## Application

- Extension of cables for data communication
- Connection of cables with different cross-sections
- Linking of fire compartments

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Category $6_A$, Class $E_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category $6_A$ / Class $E_A$ up to 500 MHz 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 | IDC termination |
| Connectable cables – Conductor cross section – Conductor diameter | AWG 23 … AWG 22 (solid and stranded) 1.3 … 1.6 mm |
| Cable diameter | 5 … 9 mm |
| Degree of protection | IP20 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® 10G Extender | 09 45 545 1569 | 57,4  65,7 | 13,15  15,6 |
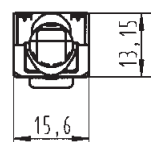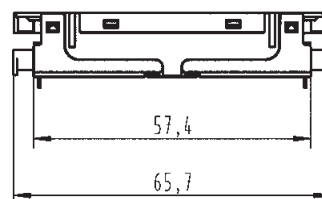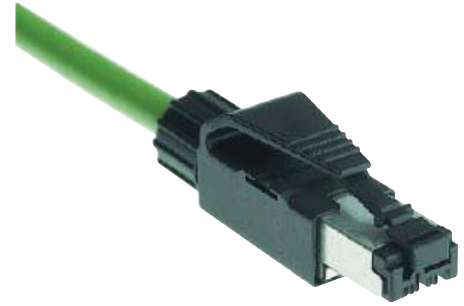
# HARTING RJ Industrial®

HARTING RJ Industrial® connector set RJ45, 4-poles

## Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Tool-less field-assembly with *HARAX®* rapid termination in IDC technology
- Compact design
- Ergonomical unlocking clip
- Less weight assures shock- and vibration-resisting connection
- Category of transmission Cat. 5
- Suitable for termination of solid and stranded cables
- Up to 10 x reconductable
- PROFINET compatible
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 4 |
| Transmission performance | Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s |
| Mounting | field-assembly |
| Cable termination | with IDC-contacts, without tools |
| Connectable cables | |
|   - Conductor cross section | AWG 24/7 … AWG 22/7 (stranded) AWG 23/1 … AWG 22/1 (solid) AWG 26/7 (09 45 151 1109) |
|   - Conductor diameter | max. 1.6 mm (09 45 151 1100 / 09 45 151 1108) max. 1.2 mm (09 45 151 1109) |
|   - Cable diameter | 6.1 … 6.9 mm |
| Mating cycles | min. 750 |
| Degree of protection | IP20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | Polyamide, UL 94-V0 |
| Colour | black |
| ᴿᵁ | UL approval (E102079) |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® connector set RJ45, 4-poles | | Mating face acc. to IEC 60 603-7 | |
| incl.: housing with shielding, splicing element, cable gland and instruction manual | 09 45 151 1100 09 45 151 1108[1] | | |
| like 09 45 151 1100 but for AWG 26 | 09 45 151 1109 | | |

[1] Packaging with 100 sets

# HARTING RJ Industrial®

HARTING RJ Industrial® PN connector set RJ45, 4-poles

## Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Field-assembly with *HARAX®* quick termination in IDC technology
- Compact design
- Ergonomically unlocking clip
- Less weight assures shock- and vibration resisting connection
- Category of transmission Cat. 5
- Suitable for solid and stranded wires
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 4 |
| Transmission category | Category 5, class D |
| Transmission performance | Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mounting | Field-assembly |
| Cable termination | with IDC-contacts, without tools |
| Connectable cables | |
| - Conductor cross section | AWG 27 … AWG 22 (solid / stranded) |
| - Conductor diameter | max. 1.6 mm (incl. insulation) |
| - Cable diameter | 4.5 ... 9 mm (straight version) 4.5 up to 8 mm (45° angled version) |
| Mating cycles | min. 750 |
| Degree of protection | IP20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | Polyamide, UL 94-V0 |
| Colour | black |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® PN connector set RJ45, 4-poles | | | |
| straight version | 09 45 151 1120 | | |
| 45° angled version (four different cable outlets possible) | 09 45 151 1121 | | |



position — 1   8
mating face acc. to IEC 60603-7
nut M12x1 with cable clamping
cable Ø4.5 up to Ø8mm

| Identification | Colour | Part number |
|---|---|---|
| Colour clips for colour coding the HARTING RJ Industrial® PN connector | White | 09 45 850 0001 |
| | Grey | 09 45 850 0002 |
| If required the colour clips can be equipped with an RFID-chip for automatic patch cable-ID recognition and storage. | Yellow | 09 45 850 0003 |
| | Magenta | 09 45 850 0005 |
| | Red | 09 45 850 0007 |
| | Blue | 09 45 850 0008 |
| | Green | 09 45 850 0009 |
| | Brown | 09 45 850 0010 |

# HARTING RJ Industrial®

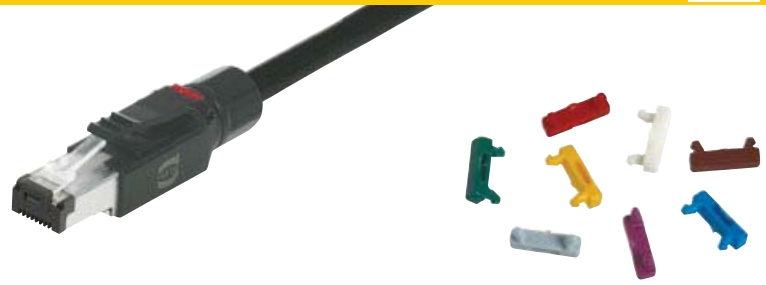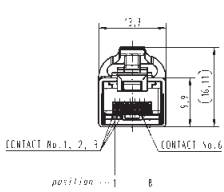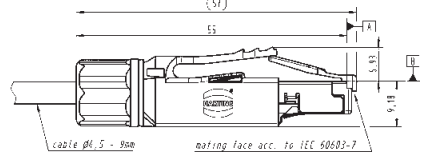HARTING RJ Industrial® EtherRail® RJ45 connector set, 4-poles

## Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Field-assembly with *HARAX®* quick termination in IDC technology
- Compact design
- Ergonomically unlocking clip
- Less weight assures shock- and vibration resisting connection
- Category of transmission Cat. 5
- Suitable for solid and stranded wires
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)
- Optimized version for Ha-VIS EtherRail® Ethernet cable, Shielded Star Quad Cable, AWG 22/19 ultra-flexible, according Cat. 5 cabling standard (ISO/IEC 11 801), part numbers 09 45 600 0188, 09 45 600 0138, 09 45 600 0148 and 09 45 600 0158

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 4 |
| Transmission category | Category 5, class D |
| Transmission performance | Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mounting | Field-assembly |
| Cable termination | with IDC-contacts, without tools |
| Connectable cables | |
| - Conductor cross section | AWG 27 … AWG 22 (solid / stranded) |
| - Conductor diameter | max. 2 mm (incl. insulation) |
| - Cable diameter | 4.5 ... 9 mm |
| Mating cycles | min. 750 |
| Degree of protection | IP20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | Polyamide, UL 94-V0 |
| Colour | black |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® EtherRail® RJ45 connector set, 4-poles<br><br>straight version | 09 45 151 1122 |  | |

| Identification | Colour | Part number |
|---|---|---|
| Colour clips for colour coding the HARTING RJ Industrial® EtherRail® RJ45 connector<br><br>If required the colour clips can be equipped with an RFID-chip for automatic patch cable-ID recognition and storage. | White | 09 45 850 0001 |
| | Grey | 09 45 850 0002 |
| | Yellow | 09 45 850 0003 |
| | Magenta | 09 45 850 0005 |
| | Red | 09 45 850 0007 |
| | Blue | 09 45 850 0008 |
| | Green | 09 45 850 0009 |
| | Brown | 09 45 850 0010 |

# HARTING RJ Industrial® PN Compact

HARTING RJ Industrial® PN Compact connector set, 4-poles

## Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Field-assembly with piercing contacts
- Compact design
- Less weight assures shock- and vibration resisting connection
- Category of transmission Cat. 5
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 4 |
| Transmission performance | Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mounting | Field-assembly |
| Cable termination | with piercing contacts |
| Connectable cables | |
| - Conductor cross section | AWG 24/7 … AWG 22/7 (stranded) |
| - Conductor diameter | max. 1.6 mm (incl. insulation) |
| - Cable diameter | 4.5 ... 7.5 mm |
| Mating cycles | min. 750 |
| Degree of protection | IP20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | PA, UL 94-V0 |
| Colour | green |
| 🆄🅻 | UL approval (E102079) |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® PN Compact connector set, 4-poles | | | |
| Compact version | 09 45 151 1130[1] | | |
| Assembly tool | 09 45 800 0530 | | |

[1] Packaging with 100 sets

# HARTING RJ Industrial® Gigalink, 8-poles

HARTING RJ Industrial® connector set RJ45, 8-poles

## Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Field-assembly with piercing contacts
- Compact design
- Ergonomically unlocking clip
- Less weight assures shock- and vibration resisting connection
- Category of transmission Cat. $6_A$
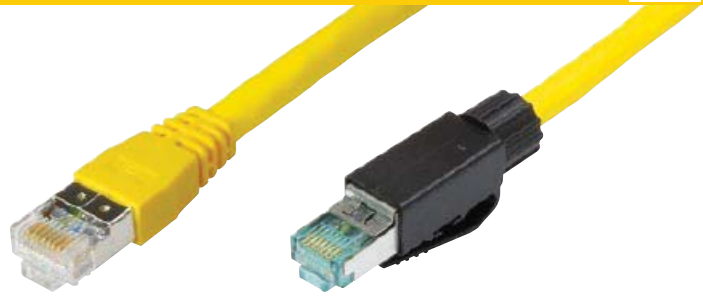- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60603-7 |
| Number of contacts | 8 |
| Transmission performance | Category $6_A$ / Class $E_A$ up to 500 MHz acc. to ISO/IEC 11801:2002, EN 50173-1 |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mounting | Field-assembly |
| Cable termination | with piercing contacts |
| Connectable cables | |
|   - Conductor cross section | AWG 28/7 … AWG 24/7 (stranded) |
|   - Conductor diameter | max. 1.05 mm (incl. insulation) |
|   - Cable diameter | 6.1 ... 6.9 mm |
| Mating cycles | min. 750 |
| Degree of protection | IP20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | Polycarbonate, UL 94-V0 |
| Colour | black |
| ®🆄🅻 | UL approval (E102079) |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® connector set RJ45, 8-poles | | Mating face acc. to IEC 60603-7 | |
| incl.: housing with shielding, cable gland and instruction manual | 09 45 151 1520<br>09 45 151 1520 XL[1] | Contact No. 8    Contact No. 1 | |
| Assembly tool for 09 45 151 1520 | 09 45 800 0520 | | |
| Compact version | 09 45 151 1525[1] | Mating face acc. to IEC 60603-7<br>Contact No. 8    Contact No. 1 | |
| Assembly tool for 09 45 151 1525 | 09 45 800 0025 | | |

[1] Packaging with 100 sets

# HARTING RJ Industrial® 10G

HARTING RJ Industrial® 10G connector set RJ45, 8-poles

## Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Field-assembly with *HARAX®* quick termination in IDC technology
- Compact design
- Ergonomically unlocking clip
- Less weight assures shock- and vibration resisting connection
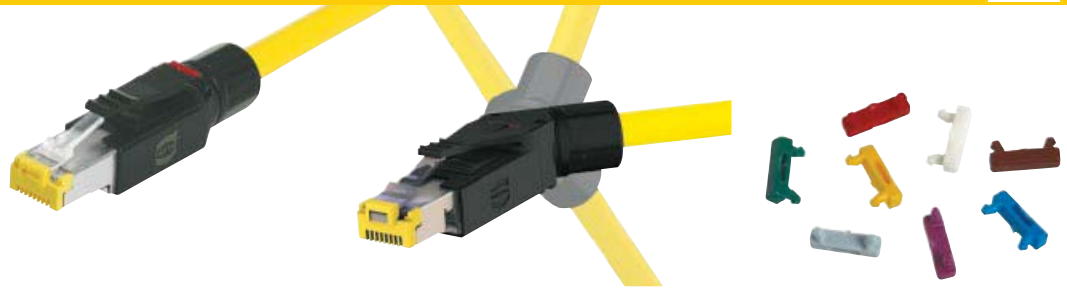- Category of transmission Cat. 6
- Suitable for solid and stranded wires
- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60603-7 |
| Number of contacts | 8 |
| Transmission category | Category 6, class $E_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category 6 / Class $E_A$ up to 500 MHz acc. to ISO/IEC 11801:2002, EN 50173-1 |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mounting | Field-assembly |
| Cable termination | with IDC-contacts, without tools |
| Connectable cables | |
| - Conductor cross section | AWG 27 … AWG 22 (solid / stranded) |
| - Conductor diameter | max. 1.6 mm (incl. insulation) |
| - Cable diameter | 4.5 ... 9 mm (straight version) 4.5 up to 8 mm (45° angled version) |
| Mating cycles | min. 750 |
| Degree of protection | IP20 |
| Temperature range | -40 °C … +70 °C |
| Housing material | Polyamide, UL 94-V0 |
| Colour | black |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® 10G connector set RJ45, 8-poles | | | |
| straight version | 09 45 151 1560 09 45 151 1560 XL[1] | | |
| 45° angled version (four different cable outlets possible) | 09 45 151 1561 | | |

| Identification | Colour | Part number |
|---|---|---|
| Colour clips for colour coding the HARTING RJ Industrial® 10G connector | White | 09 45 850 0001 |
| | Grey | 09 45 850 0002 |
| If required the colour clips can be equipped with an RFID-chip for automatic patch cable-ID recognition and storage. | Yellow | 09 45 850 0003 |
| | Magenta | 09 45 850 0005 |
| | Red | 09 45 850 0007 |
| | Blue | 09 45 850 0008 |
| | Green | 09 45 850 0009 |
| | Brown | 09 45 850 0010 |

[1] Packaging with 100 sets

# HARTING RJ Industrial® – Tools

| Identification | Part number | |
|---|---|---|
| **HARTING RJ Industrial®**<br>**Stripping Tool**<br>Stripping tool<br>for Ethernet cables<br>including blade cassette | 09 45 800 0000 |  |
| Spare blade cassette | 09 45 800 0001 | The RJ Industrial Stripping Tool is ready to remove insulation from cables for fast mounting with diameters from 2.5 to 8 mm quick and easy. It allows to remove cable sheath and shielding braid in one. |
| Stripping tool | 09 45 800 0002 |  |
| **HARTING RJ Industrial®**<br>**Gigalink Mounting tools**<br>for HARTING RJ Industrial®<br>Gigalink connectors | 09 45 800 0520 |  |
| for HARTING RJ Industrial®<br>Gigalink Cat. $6_A$ compact connectors | 09 45 800 0025 | With the RJ Industrial Gigalink Assembly Tool Ethernet connectors can be quickly, easily and reliably connected to flexible cables. |
| Wire cutter | 09 45 800 0005 |  |
| Cable shear | 09 45 800 0004 |  |
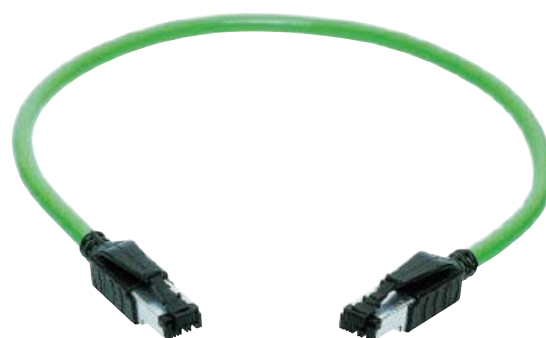
## HARTING RJ Industrial® system cable
## RJ45, 4-wire, IP20

RJ45 patch cords for switch cabinet or PLC

| Description | Part number Standard | Multiport | Technical characteristics |
|---|---|---|---|
| For the cabling of Industrial Ethernet networks (for example in accordance with the PROFINET guideline), based on RJ45 connectors. | | | Transmission properties in accordance with ISO/IEC 11 801:2002: Class D |
| | | | Mating face: 2 x RJ45 in acc. with IEC 60 603-7 |
| | | | Protection level: IP20 (if mated) |
| Wiring: Contacts RJ45 1/2 and 3/6 | | | Temperature range -40 °C … +70 °C |
| | | | **Electrical characteristics at 20 °C** |
| | | | Contact resistance: ≤ 20 mΩ |
| | | | Insulation resistance: ≥ 500 MΩ |
| | | | Dielectric withstanding voltage: contact - contact 1 kV / contact - ground 1.5 kV |
| | | | **Electrical characteristics after damp heat cycles** |
| | | | Contact resistance: ≤ 20 mΩ |
| | | | Insulation resistance: ≥ 100 MΩ |
| | | | Dielectric withstanding voltage: contact - contact 1 kV / contact - ground 1.5 kV |
| **HARTING RJ Industrial® system cable RJ45, 4-wire** Type A | | | Cable type: Industrial Ethernet Standard Cable, 2 x 2 x AWG 22/1, double shielding (PROFINET Typ A) |
| Length 1.5 m | 09 45 771 0023 | 09 47 343 4006 | |
| Length 3.0 m | 09 45 771 0025 | 09 47 343 4009 | Sheath: PVC green, Ø 6.5 mm |
| Length 5.0 m | 09 45 771 0027 | 09 47 343 4012 | |
| Length 10.0 m | 09 45 771 0051 | 09 47 343 4018 | Connectors: 2 x HARTING RJ Industrial® |
| Length 20.0 m | 09 45 771 0053 | 09 47 343 4020 | IP20 Data with overmolded housings |
| **HARTING RJ Industrial® system cable RJ45, 4-wire** Type B | | | Cable type: Industrial Ethernet Stranded Cable, 2 x 2 x AWG 22/7, double shielding (PROFINET Typ B) |
| Length 1.5 m | 09 45 771 1123 | 09 47 343 4034 | |
| Length 3.0 m | 09 45 771 1125 | 09 47 343 4037 | Sheath: PVC green, Ø 6.5 mm |
| Length 5.0 m | 09 45 771 1127 | 09 47 343 4040 | |
| Length 10.0 m | 09 45 771 1151 | 09 47 343 4046 | Connectors: 2 x HARTING RJ Industrial® |
| Length 20.0 m | 09 45 771 1153 | 09 47 343 4048 | IP20 Data with overmolded housings |
| **HARTING RJ Industrial® system cable RJ45, 4-wire** Type C | | | Cable type: Industrial Ethernet Trailing Cable, 2 x 2 x AWG 22/7, double shielding (PROFINET Typ C) |
| Length 1.5 m | 09 45 771 1164 | 09 47 343 4090 | |
| Length 3.0 m | 09 45 771 1166 | 09 47 343 4093 | Sheath: PUR green, Ø 6.5 mm |
| Length 5.0 m | 09 45 771 1168 | 09 47 343 4096 | |
| Length 10.0 m | 09 45 771 1173 | 09 47 343 4102 | Connectors: 2 x HARTING RJ Industrial® |
| Length 20.0 m | 09 45 771 1175 | 09 47 343 4104 | IP20 Data with overmolded housings |

Further system cables see HARTING-catalogue "Intelligent Network Solutions"

# HARTING RJ Industrial® – System cables
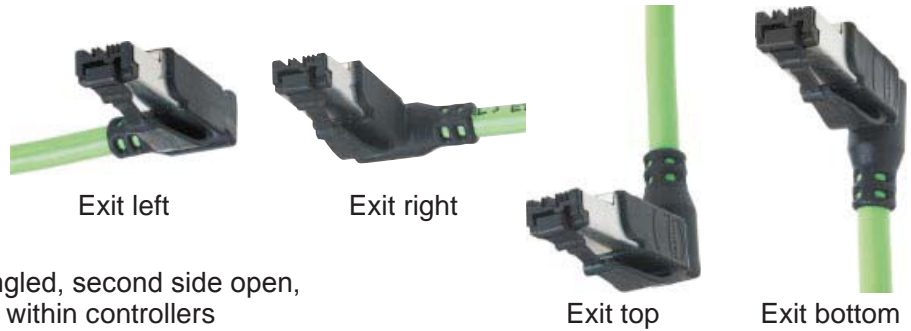
HARTING RJ Industrial®
system cable RJ45
angled, 4-wire, IP20

Exit left

Exit right

RJ45 connection cable, first end angled, second side open,
for control or distributor cabinets or within controllers

Exit top

Exit bottom

| Identification | | angled left | angled right | angled top | angled bottom |
|---|---|---|---|---|---|
| | | | Part number | | |
| HARTING RJ Industrial®<br>System cable RJ45<br>angled, 4-wire | | | | | |
| one side pre-assembled,<br>second side open | Length 0.5 m | 09 47 050 0001 | 09 47 060 0001 | 09 47 030 0001 | 09 47 040 0001 |
| | Length 1.0 m | 09 47 050 0002 | 09 47 060 0002 | 09 47 030 0002 | 09 47 040 0002 |
| Cable type A, green<br>2 x 2 x AWG 22/1 | Length 1.5 m | 09 47 050 0003 | 09 47 060 0003 | 09 47 030 0003 | 09 47 040 0003 |
| | Length 2.0 m | 09 47 050 0004 | 09 47 060 0004 | 09 47 030 0004 | 09 47 040 0004 |
| | Length 3.0 m | 09 47 050 0005 | 09 47 060 0005 | 09 47 030 0005 | 09 47 040 0005 |
| | Length 5.0 m | 09 47 050 0007 | 09 47 060 0007 | 09 47 030 0007 | 09 47 040 0007 |
| HARTING RJ Industrial®<br>System cable RJ45<br>angled, 4-wire | | | | | |
| one side pre-assembled,<br>second side open | Length 0.5 m | 09 47 050 0023 | 09 47 060 0023 | 09 47 030 0023 | 09 47 040 0023 |
| | Length 1.0 m | 09 47 050 0024 | 09 47 060 0024 | 09 47 030 0024 | 09 47 040 0024 |
| Cable type B, green<br>2 x 2 x AWG 22/7 | Length 1.5 m | 09 47 050 0025 | 09 47 060 0025 | 09 47 030 0025 | 09 47 040 0025 |
| | Length 2.0 m | 09 47 050 0026 | 09 47 060 0026 | 09 47 030 0026 | 09 47 040 0026 |
| | Length 3.0 m | 09 47 050 0027 | 09 47 060 0027 | 09 47 030 0027 | 09 47 040 0027 |
| | Length 5.0 m | 09 47 050 0029 | 09 47 060 0029 | 09 47 030 0029 | 09 47 040 0029 |
| HARTING RJ Industrial®<br>System cable RJ45<br>angled, 4-wire | | | | | |
| one side pre-assembled,<br>second side open | Length 0.5 m | 09 47 050 0045 | 09 47 060 0045 | 09 47 030 0045 | 09 47 040 0045 |
| | Length 1.0 m | 09 47 050 0046 | 09 47 060 0046 | 09 47 030 0046 | 09 47 040 0046 |
| Cable type C, green<br>2 x 2 x AWG 22/7 | Length 1.5 m | 09 47 050 0047 | 09 47 060 0047 | 09 47 030 0047 | 09 47 040 0047 |
| | Length 2.0 m | 09 47 050 0048 | 09 47 060 0048 | 09 47 030 0048 | 09 47 040 0048 |
| | Length 3.0 m | 09 47 050 0049 | 09 47 060 0049 | 09 47 030 0049 | 09 47 040 0049 |
| | Length 5.0 m | 09 47 050 0051 | 09 47 060 0051 | 09 47 030 0051 | 09 47 040 0051 |
| HARTING RJ Industrial®<br>System cable RJ45<br>angled, 4-wire | | | | | |
| one side pre-assembled,<br>second side open | Length 0.5 m | 09 47 050 0067 | 09 47 060 0067 | 09 47 030 0067 | 09 47 040 0067 |
| | Length 1.0 m | 09 47 050 0068 | 09 47 060 0068 | 09 47 030 0068 | 09 47 040 0068 |
| Outdoor cable, black<br>2 x 2 x AWG 22/7 | Length 1.5 m | 09 47 050 0069 | 09 47 060 0069 | 09 47 030 0069 | 09 47 040 0069 |
| | Length 2.0 m | 09 47 050 0070 | 09 47 060 0070 | 09 47 030 0070 | 09 47 040 0070 |
| | Length 3.0 m | 09 47 050 0071 | 09 47 060 0071 | 09 47 030 0071 | 09 47 040 0071 |
| | Length 5.0 m | 09 47 050 0073 | 09 47 060 0073 | 09 47 030 0073 | 09 47 040 0073 |

Further system cables see HARTING-catalogue "Intelligent Network Solutions"

**PROFI NET**
INDUSTRIAL ETHERNET
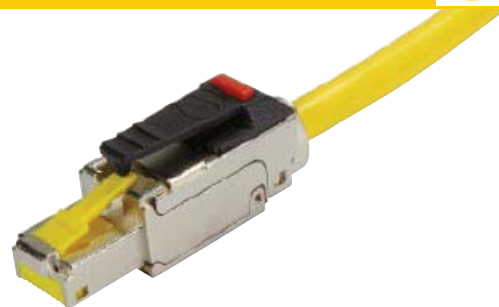
Ha-VIS preLink® RJ45 connector

## Advantages

- RJ45 Ethernet-Data connector suitable for industry

- Compact and robust design

- 360° shielding

- Ergonomically unlocking clip

- Category of transmission Cat. $6_A$

- Suitable for solid and stranded wires

- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Category $6_A$, Class $E_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category $6_A$ / Class $E_A$ up to 500 MHz 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 | IDC termination |
| Cable termination for preLink® terminal module, yellow, 20 82 000 0001 Connectable cables | |
|   – Conductor cross section | AWG 23 … AWG 22 (solid and stranded) |
|   – Conductor diameter | 1.3 … 1.6 mm |
| Cable termination for preLink® terminal module, white, 20 82 000 0003 Connectable cables | |
|   – Conductor cross section | AWG 27 … AWG 26 (solid and stranded) |
|   – Conductor diameter | 0.8 … 1.1 mm |
| Cable diameter | 5 … 9 mm |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Ha-VIS preLink® RJ45 connector | 20 82 101 0010 | | |
| Ha-VIS preLink® RJ45 terminal module | | | |
|     AWG 22/23, yellow[1] | 20 82 000 0001 | | |
|     AWG 26/27, white[1] | 20 82 000 0003 | | |
| Ha-VIS preLink® assembly tool | 20 82 000 9901 | | |

complete_assembled ca. 47,5    14,4

position - 1   8

| Identification | Colour | Part number |
|---|---|---|
| Colour clips for colour coding the Ha-VIS preLink® connectors | White | 09 45 850 0001 |
| | Grey | 09 45 850 0002 |
| | Yellow | 09 45 850 0003 |
| | Magenta | 09 45 850 0005 |
| | Red | 09 45 850 0007 |
| | Blue | 09 45 850 0008 |
| | Green | 09 45 850 0009 |
| | Brown | 09 45 850 0010 |

[1] Packaging with 10 pieces

# HARTING Ethernet cabling Ha-VIS preLink®

HARTING

PROFI® NET
INDUSTRIAL ETHERNET

Ha-VIS preLink® RJ45 jacks (HIFF)

## Advantages

- Compact and robust design

- Category of transmission Cat. 6

- Suitable for solid and stranded wires

- Compatible with HIFF dimensions for use in:

  – Han® 3 A series with HIFF adapter   09 45 515 0024

  – HARTING PushPull (V4)
  Compact bulkhead mounting housing   09 45 545 0028
  EasyInstall bulkhead mounting housing   09 45 545 0032

  – Han® PushPull (V14)
  Panel feed-through plastic   09 35 012 0331
  Panel feed-through metal rectangular   09 35 012 0311
  Panel feed-through metal circular   09 35 012 0312

  – *har*-port   09 45 452 0000

- Suitable for PoE (IEEE 802.3af)
  and PoE+ (IEEE 802.3at)

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Category $6_A$, Class $E_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category $6_A$ / Class $E_A$ up to 500 MHz 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 | IDC termination |
| Cable termination for preLink® terminal module, yellow, 20 82 000 0001 Connectable cables | |
| – Conductor cross section | AWG 23 … AWG 22 (solid and stranded) |
| – Conductor diameter | 1.3 … 1.6 mm |
| Cable termination for preLink® terminal module, white, 20 82 000 0003 Connectable cables | |
| – Conductor cross section | AWG 27 … AWG 26 (solid and stranded) |
| – Conductor diameter | 0.8 … 1.1 mm |
| Cable diameter | 5 … 9 mm |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| **Ha-VIS preLink® set RJ45 jack** | | | |
| consists of: • 1x RJ45 module • 1x terminal module • 1x cable tie | | | 13,15 |
| AWG 22/23 | 20 82 001 0001 | | |
| AWG 26/27 | 20 82 001 0002 | | 36,9 |
| **Ha-VIS preLink® RJ45 jack module** | 20 82 000 0002 | | 41 |
| **Ha-VIS preLink® RJ45 terminal module** | | | 15,6 |
| AWG 22/23, yellow[1] | 20 82 000 0001 | | |
| AWG 26/27, white[1] | 20 82 000 0003 | | |
| **Ha-VIS preLink® protection cover** | 20 82 000 9915 | | |
| **Ha-VIS preLink® unlocking tool** | 20 82 000 9916 | | |
| **Ha-VIS preLink® assembly tool** | 20 82 000 9901 | | |

[1] Packaging with 10 pieces

## Ha-VIS preLink®
## 19" Patch panel, HIFF

## Advantages

- Flexible, suitable for Ha-VIS preLink® modules RJ45 jack and HARTING RJ Industrial® modules in HIFF size

- Economical, time-saving installation due to the slidable module carrier, frontward and backward removal

- Safety, additional strain-relief

- Fully shielded modules connected by module carrier

- Earth bolt

- IP20 installation for distributors and switch cabinets

## Technical characteristics

| | |
|---|---|
| Number of modules | 24 |
| Transmission performance | Category 6 / Class $E_A$ up to 500 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | up to 10 Gbit/s |
| Assembly | in 19" racks acc. to IEC/DIN EN 60 297-3-100 (DIN 41 494-1) |
| Dimensions (W x H x D) | 482.6 mm (19") x 44.5 mm (1 U) x 181 mm |
| Degree of protection | IP20 |
| Operating temperature range | -40 °C … +70 °C |
| Material module carrier, 2-parts front cover | steel sheet stainless steel |

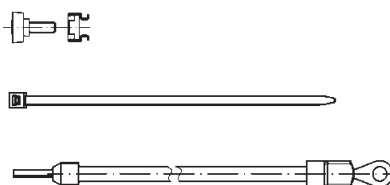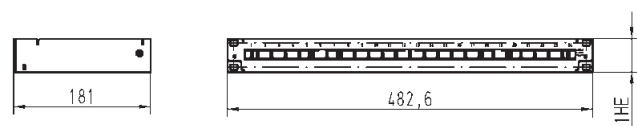| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Ha-VIS preLink® 19" patch panel, unloaded<br><br>Suitable modules:<br>• Ha-VIS preLink® RJ45 jack, HIFF<br>• mixed loading possible<br><br>Range of delivery::<br>• Screw set M5<br><br>• 24  cable ties<br><br>• 1x earth conductor 6 mm² | 20 82 400 0001 | 181    482,6    1HE | |

# HARTING Ethernet cabling Ha-VIS preLink®

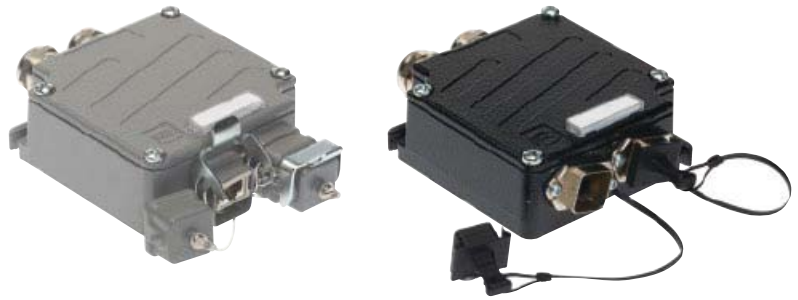Ha-VIS preLink®
HIFF RJ45 AP Box

## Advantages

- Flexible, suitable for on-wall mounting or for top-hat mounting rail (35 mm)

- Economical, time-saving installation due to the use of pre-assembled data cables with Ha-VIS preLink® termination

- Robust design, powder-coated steel plate housing

- Structured cabling for industrial premises

## Technical characteristics

| | |
|---|---|
| Number of ports, Copper / Termination | 2 / RJ45 jack HIFF |
| Transmission performance | Category 6 / Class $E_A$ up to 500 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | up to 10 Gbit/s |
| Shielding | Fully shielded, 360° shielding contact |
| Cable diameter | 5 mm ... 9 mm |
| Mounting | on-wall or DIN Rail |
| Dimensions (WxHxD) | 60 x 81 x 70 mm |
| Degree of protection | IP20 |
| Operating temperature | -40 °C … +70 °C |
| Housing material | steel plate |
| Colour | Anthracite grey (RAL 7016) |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Ha-VIS preLink® HIFF RJ45 AP Box<br><br>RJ45 wall-mounted box consisting of:<br>• 1x steel-plate housing, 2-parts<br>• 2x Ha-VIS preLink® Set, RJ45 jack HIFF, AWG 22/23<br>• 2x grommet with membrane<br>• 1x assembly instruction | 20 82 101 0220 |  | |
| Accessory<br><br>DIN Rail mounting bracket | 20 80 000 0003 |  | |

Ha-VIS preLink®
Han® PushPull Metal Outlet
and Han® 3 A Metal Outlet

## Advantages

- Simple mounting, fixing and earth connection both outside

- Fast termination of data cables due to Ha-VIS preLink® technology

- Structured cabling for industrial premises

- Mating face AIDA compliant, protection cover incl.

- PROFINET compatible

## Technical characteristics

| | |
|---|---|
| Number of ports, Copper / Termination | 2 x Han® PushPull RJ45 (IP65 / IP67) or Han® 3 A RJ45 |
| Transmission performance | Category 6 / Class $E_A$ up to 500 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | up to 10 Gbit/s |
| Termination | Ha-VIS preLink® |
| Wire gauge | AWG 24 ... 22 (0.25 mm² ... 0.34 mm²) solid and stranded |
| Strand diameter | Ø 1.3 mm ... 1.6 mm |
| Cable diameter | 7.2 mm ... 8 mm |
| Shielding | Fully shielded 360° flexible shielding termination |
| Mounting | Wall mounting |
| Dimensions (H x W x D) | 105 x 105 x 40.5 mm |
| Degree of protection | IP65 / IP67 |
| Operating temperature range | -40 °C … +70 °C |
| Housing material | Aluminium, die-cast |
| Colour | Black |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Ha-VIS preLink® Han® PushPull Metal Outlet consists of: • 1x Housing including protection covers • 2x Ha-VIS preLink® Set RJ45 jack AWG 22/23 • 2x Cable gland with slotted seal • 1x Assembly instruction | 20 82 104 0101 |  | |
| Ha-VIS preLink® Han® 3 A Metal Outlet consists of: • 1x Housing including protection covers • 2x Ha-VIS preLink® Set RJ45 jack AWG 22/23 • 2x Cable gland with slotted seal • 1x Assembly instruction | 20 82 102 0101 |  | |
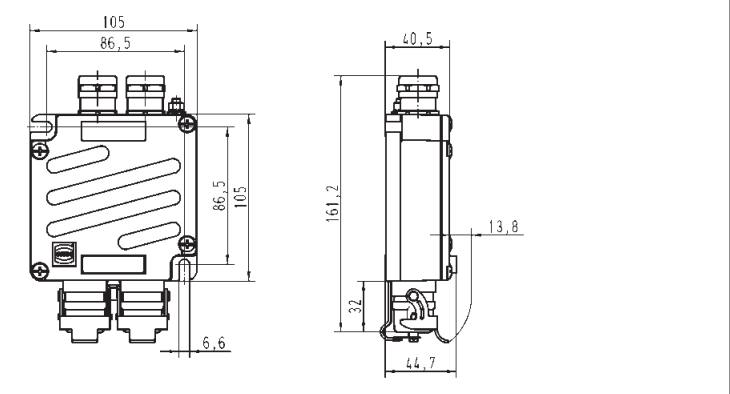
**PROFI NET** INDUSTRIAL ETHERNET ®

## Ha-VIS preLink® RJ45 jack (keystone version)

## Advantages

- RJ45 Ethernet-Data jack suitable for industry

- Compact and robust design

- 360° shielding

- Ergonomically unlocking clip

- Category of transmission Cat. $6_A$

- Suitable for solid and stranded wires

- Compatible with keystone panel cut out acc. to IEC 60 603-7

- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)
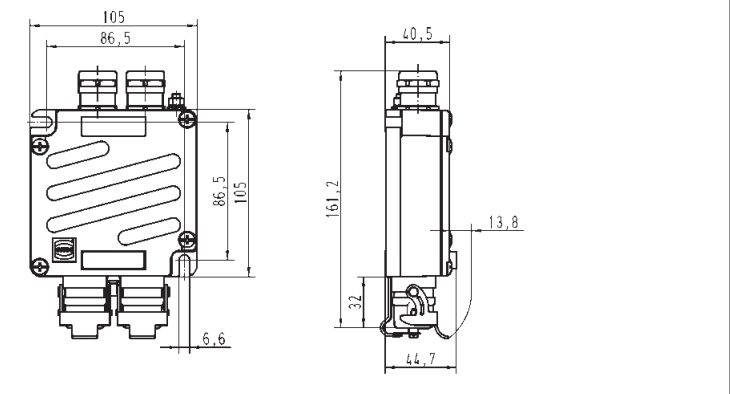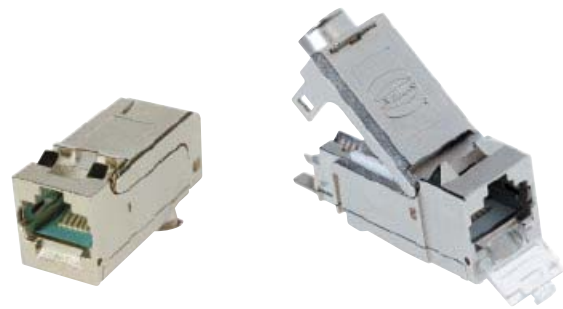
## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Category $6_A$, Class $E_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category $6_A$ / Class $E_A$ up to 500 MHz 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 | IDC termination |
| Cable termination for preLink® terminal module, yellow, 20 82 000 0001 Connectable cables | |
| – Conductor cross section | AWG 23 … AWG 22 (solid and stranded) |
| – Conductor diameter | 1.3 … 1.6 mm |
| Cable termination for preLink® terminal module, white, 20 82 000 0003 Connectable cables | |
| – Conductor cross section | AWG 27 … AWG 26 (solid and stranded) |
| – Conductor diameter | 0.8 … 1.1 mm |
| Cable diameter | 5 … 9 mm |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Ha-VIS preLink® set RJ45 keystone jack consists of: • 1x RJ45 module • 1x terminal module • 1x cable tie  AWG 22/23 | 20 82 501 0001 | | |
| Ha-VIS preLink® RJ45 keystone jack module | 20 82 500 0001 | | |
| Ha-VIS preLink® RJ45 angled keystone jack module | 20 82 500 0002[2] | | |
| Ha-VIS preLink® RJ45 terminal module  AWG 22/23, yellow[1] | 20 82 000 0001 | | |
| AWG 26/27, white[1] | 20 82 000 0003 | | |
| Ha-VIS preLink® protection cover | 20 82 000 9915 | | |
| Ha-VIS preLink® unlocking tool | 20 82 000 9916 | | |
| Ha-VIS preLink® assembly tool | 20 82 000 9901 | | |

[1] Packaging with 10 pieces
[2] Packaging with 24 pieces

# HARTING Ethernet cabling Ha-VIS preLink®

Ha-VIS preLink®
19" Patch panel, keystone

## Advantages

- Suitable for Ha-VIS preLink® RJ45 module in keystone size

  - Economic due to easy design

  - Safety, additional strain-relief

  - Fully shielded modules connected through metal holding fixture

  - Earth bolt

## Technical characteristics

| | |
|---|---|
| Number of modules | 24 |
| Transmission performance | Category 6 / Class $E_A$ up to 500 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | up to 10 Gbit/s |
| Module design | Keystone size acc. to EN 60 603-7:2009 |
| Assembly | in 19" racks acc. to IEC/DIN EN 60 297-3-100 (DIN 41 494-1) |
| Dimensions (W x H x D) | 482.6 mm (19") x 44.5 mm (1 U) x 107 mm |
| Degree of protection | IP20 |
| Operating temperature range | -40 °C … +70 °C |
| Material | steel sheet |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Ha-VIS preLink® 19" patch panel, keystone | 20 82 405 0001 | | |
| Range of delivery: 24 pieces of: • Ha-VIS preLink® RJ45 keystone jack • terminal modules for AWG 22 / 23 • strain relief | | | |
| Ha-VIS preLink® 19" patch panel, keystone empty | 20 82 400 0002 | | |
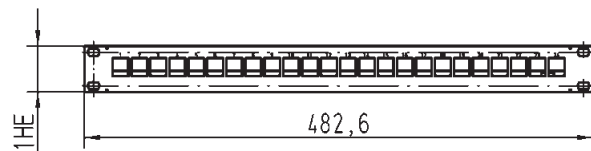
## HARTING Cabinet Outlet RJ45, 8-poles

RJ45 distribution module for IP20 environments
(top-hat rail mounting)

## Advantages

- Simple mountng

- Dust protection caps

- Port identification

- Angled output

## Technical characteristics
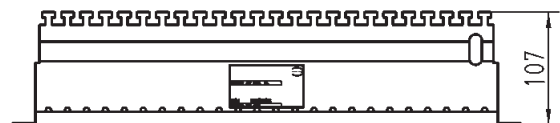
| | |
|---|---|
| Number of ports, Copper / Termination | 1 / RJ45 (Twisted Pair) |
| Transmission performance | Category $6_A$ / Class $E_A$ up to 250 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Mounting | To 35 mm top-hat mounting rail acc. to DIN EN 60 715, alignable |
| Dimensions (H x W x D) | 71 x 18 x 68 mm |
| Degree of protection | IP20 |
| Operating temperature range | –20 °C … +70 °C |
| Housing material | Polyamide, UL94 V-0 |
| Colour | Grey |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| HARTING RJ Industrial® Cabinet Outlet RJ45 | 09 45 851 0000 | | |
| Protection cover set for 09 45 851 0000 | 09 45 851 0001 | | |
| Usable RJ45 cable jacks • Ha-VIS preLink® keystone set AWG 22/23 (with Ha-VIS preLink® terminal block) | 20 82 501 0001 | | |
| • Ha-VIS preLink® keystone set (without Ha-VIS preLink® terminal block) | 20 82 500 0001 | | |
| Usable with Ha-VIS preLink® terminal blocks • Ha-VIS preLink® terminal block AWG 22/23 (24) | 20 82 000 0001 | | |
| • Ha-VIS preLink® terminal block AWG 26/27 | 20 82 500 0003 | | |
| Usable RJ45 cable jacks • RJ45 keystone module IDC AWG 24 – AWG 22 | 09 45 545 1564 | | |
| • RJ45 keystone module IDC AWG 27 – AWG 26 | 09 45 545 1563 | | |
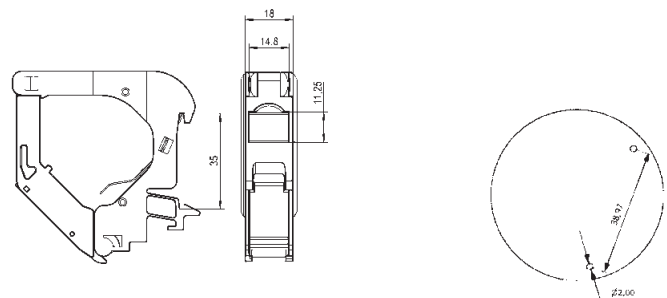
Ha-VIS preLink® Patch cables

## Advantages

• Pre-assembled system cable, fast, flexible and reliable in the application

• Simple in handling

• Robust in design

• Installation of Ha-VIS preLink® cables for industrial environment

• Connection cable for control or distributor cabinets or within controllers

## Technical characteristics

| | |
|---|---|
| Cable types | 4 x 2 AWG 27/7, shielded, S/FTP Cat. 7 |
| Sheath material | PUR |
| Wiring | TIA/EIA 568B, 1:1 |
| Transmission performance | Category 6 / Class $E_A$ up to 500 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | up to 10 Gbit/s |
| Shielding | Copper braid, tinned |
| Operating temperature range fixed operation flexible operation | -35 °C … +70 °C -5 °C ... +50 °C |
| Standard lengths | 0.6 m / 1 m / 2 m / 3 m / 5 m / 10 m other lengths available on request |
| Colour | Yellow |

| Identification | | | Part number | Drawing | Dimensions in mm |
|---|---|---|---|---|---|
| Ha-VIS preLink® Patch cable | | | Yellow | | |
| terminal module to one side, secured by protection cap  (I) | Length | 0.2 m | 20 82 600 1002 | | |
| | | 0.4 m | 20 82 600 1004 | | |
| | | 0.6 m | **20 82 600 1006** | | |
| | | 0.8 m | 20 82 600 1008 | | |
| | | 1.0 m | **20 82 600 1010** | | |
| | | 2.0 m | **20 82 600 1020** | | |
| | | 3.0 m | **20 82 600 1030** | | |
| | | 4.0 m | 20 82 600 1040 | | |
| | | 5.0 m | **20 82 600 1050** | | |
| | | 10.0 m | **20 82 600 1100** | | |
| terminal module to both sides, secured by protection cap  (II) | Length | 0.2 m | 20 82 600 2002 | | |
| | | 0.4 m | 20 82 600 2004 | | |
| | | 0.6 m | **20 82 600 2006** | | |
| | | 0.8 m | 20 82 600 2008 | | |
| | | 1.0 m | **20 82 600 2010** | | |
| | | 2.0 m | **20 82 600 2020** | | |
| | | 3.0 m | **20 82 600 2030** | | |
| | | 4.0 m | 20 82 600 2040 | | |
| | | 5.0 m | **20 82 600 2050** | | |
| | | 10.0 m | **20 82 600 2100** | | |
| Side 1 with terminal module, secured by protection cap  Side 2 RJ45 overmoulded, with locking lever protection  (III) | Length | 0.2 m | 20 82 601 1002 | | |
| | | 0.4 m | 20 82 601 1004 | | |
| | | 0.6 m | **20 82 601 1006** | | |
| | | 0.8 m | 20 82 601 1008 | | |
| | | 1.0 m | **20 82 601 1010** | | |
| | | 2.0 m | **20 82 601 1020** | | |
| | | 3.0 m | **20 82 601 1030** | | |
| | | 4.0 m | 20 82 601 1040 | | |
| | | 5.0 m | **20 82 601 1050** | | |
| | | 10.0 m | **20 82 601 1100** | | |

# HARTING Ethernet cabling Ha-VIS preLink®
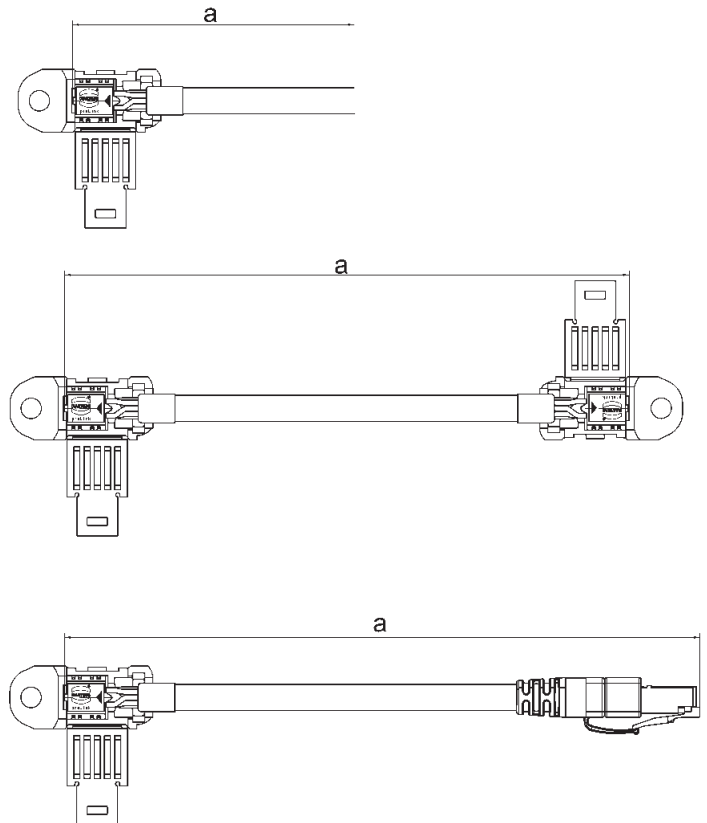
Ha-VIS preLink® Extender

## Advantages

- Simple, fast and reliable connection of data cables

- Compact and robust design

- 360° shielding

- Category of transmission Cat. 6$_A$

- Suitable for solid and stranded wires

## Application

- Extension of cables for data communication

- Connection of cables with different cross-sections

- Linking of fire compartments

## Technical characteristics

| | |
|---|---|
| Connector type | RJ45 connector acc. to IEC 60 603-7 |
| Number of contacts | 8 |
| Transmission category | Category 6$_A$, Class E$_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category 6$_A$ / Class E$_A$ up to 500 MHz 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 | IDC termination |
| Cable termination for preLink® terminal module, yellow, 20 82 000 0001 Connectable cables | |
| – Conductor cross section | AWG 23 … AWG 22 (solid and stranded) |
| – Conductor diameter | 1.3 … 1.6 mm |
| Cable termination for preLink® terminal module, white, 20 82 000 0003 Connectable cables | |
| – Conductor cross section | AWG 27 … AWG 26 (solid and stranded) |
| – Conductor diameter | 0.8 … 1.1 mm |
| Cable diameter | 5 … 9 mm |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| Ha-VIS preLink® Extender | 20 82 101 0001 | 57,4 / 65,7 | 13,15 / 15,6 |
| Ha-VIS preLink® RJ45 terminal module | | | |
| AWG 22/23, yellow[1] | 20 82 000 0001 | | |
| AWG 26/27, white[1] | 20 82 000 0003 | | |
| Ha-VIS preLink® assembly tool | 20 82 000 9901 | | |

[1] Packaging with 10 pieces

**PROFI® NET**
INDUSTRIAL ETHERNET

Mating face

Ha-VIS preLink® M12 connector
D-coding
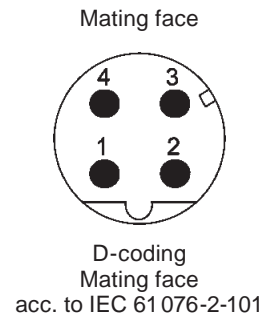
D-coding
Mating face
acc. to IEC 61 076-2-101

## Advantages

- M12 Ethernet-Data connector suitable for industry

- Robust design

- 360° shielding

- Suitable for solid and stranded wires

- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)
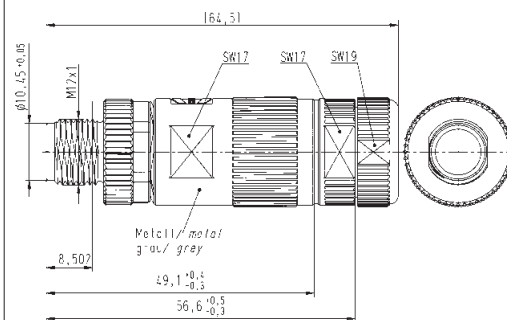
## Technical characteristics

| | |
|---|---|
| Connector type | M12 D-coding acc. to IEC 61 076-2-101 |
| Number of contacts | 4 |
| Transmission category | Category 5, Class D, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category 5 / Class D up to 200 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s |
| Shielding | fully shielded, 360° shielding contact |
| Mounting | IDC termination |

Cable termination for preLink® terminal module, yellow, 20 82 000 0001
Connectable cables
 – Conductor cross section　AWG 23 … AWG 22 (solid and stranded)
 – Conductor diameter　1.3 … 1.6 mm

Cable termination for preLink® terminal module, white, 20 82 000 0003
Connectable cables
 – Conductor cross section　AWG 27 … AWG 26 (solid and stranded)
 – Conductor diameter　0.8 … 1.1 mm

| | |
|---|---|
| Cable diameter | 5 … 9 mm |
| Degree of protection | IP65 / IP67 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

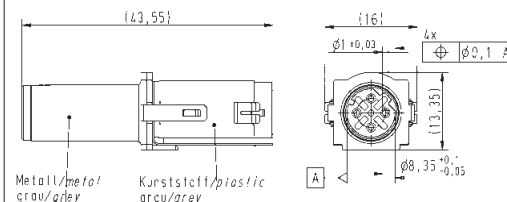| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| preLink® M12 housing | 20 82 000 1210 | | |
| preLink® M12 male module<br>Male<br>4 poles,<br>D-coding | 20 82 005 1214 | | |
| preLink® M12 connector set<br>D-coding | 20 82 005 0001 | | |
| Ha-VIS preLink® RJ45 terminal module　　AWG 22/23, yellow[1] | 20 82 000 0001 | | |
| 　　AWG 26/27, white[1] | 20 82 000 0003 | | |
| Ha-VIS preLink® assembly tool | 20 82 000 9901 | | |

[1] Packaging with 10 pieces

# HARTING Ethernet cabling Ha-VIS preLink®

**PROFI NET®**
INDUSTRIAL ETHERNET

HARTING
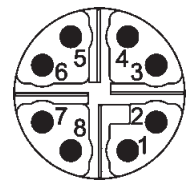
Mating face

X-coding
Mating face
acc. to IEC 61 076-2-101

## Ha-VIS preLink® M12 connector X-coding

## Advantages

- M12 Ethernet-Data connector suitable for industry

- Robust design

- 360° shielding

- Category of transmission Cat. 6$_A$

- Suitable for solid and stranded wires

- Suitable for PoE (IEEE 802.3af) and PoE+ (IEEE 802.3at)
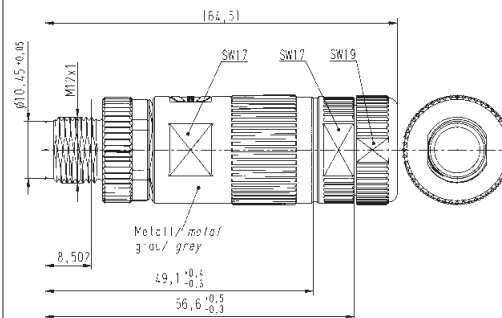
## Technical characteristics

| | |
|---|---|
| Connector type | M12 X-coding acc. to IEC 61 076-2-101 |
| Number of contacts | 8 |
| Transmission category | Category 6$_A$, Class E$_A$, suitable for 1/10 Gigabit Ethernet |
| Transmission performance | Category 6$_A$ / Class E$_A$ up to 500 MHz 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 | IDC termination |
| Cable termination for preLink® terminal module, yellow, 20 82 000 0001 | |
| Connectable cables | |
| – Conductor cross section | AWG 23 … AWG 22 (solid and stranded) |
| – Conductor diameter | 1.3 … 1.6 mm |
| Cable termination for preLink® terminal module, white, 20 82 000 0003 | |
| Connectable cables | |
| – Conductor cross section | AWG 27 … AWG 26 (solid and stranded) |
| – Conductor diameter | 0.8 … 1.1 mm |
| Cable diameter | 5 … 9 mm |
| Degree of protection | IP65 / IP67 |
| Mating cycles | min. 750 |
| Temperature range | -40 °C ... +70 °C |
| Housing material | Zinc die-cast, nickel-plated |

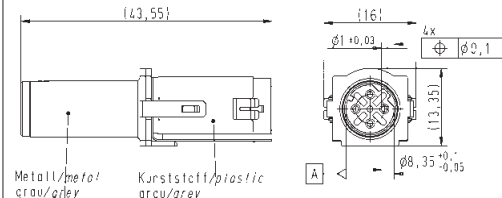| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| preLink® M12 housing | 20 82 000 1210 | | |
| preLink® M12 male module<br>Male<br>8 poles,<br>X-coding | 20 82 006 1218 | | |
| preLink® M12 connector set<br>X-coding | 20 82 005 0002 | | |
| Ha-VIS preLink® RJ45 terminal module     AWG 22/23, yellow[1] | 20 82 000 0001 | | |
|                                          AWG 26/27, white[1] | 20 82 000 0003 | | |
| Ha-VIS preLink® assembly tool | 20 82 000 9901 | | |

[1] Packaging with 10 pieces

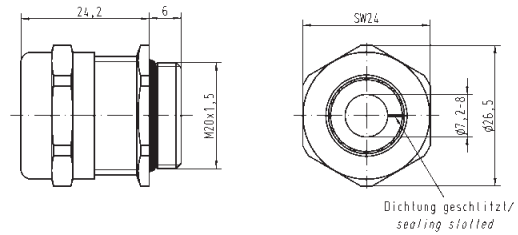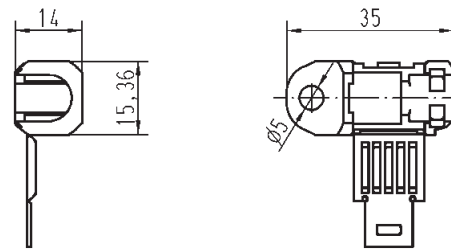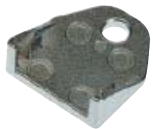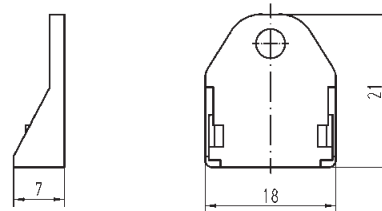| Identification | Part number | |
|---|---|---|
| Cable gland M20x1.5 for pre-terminated Ha-VIS preLink® cable assemblies<br><br>with slotted seal<br><br>Cable-sheath 7.2 mm ... 8.0 mm<br><br>Cable-sheath 4.0 mm ... 6.5 mm | 19 00 000 5020<br><br>19 00 000 5079 | |
| Protection cover for pre-terminated Ha-VIS preLink® cable assemblies<br><br>Set of 10 pieces | 20 82 000 9915 | |
| Unlocking tool for Ha-VIS preLink® RJ45 module<br><br>Set of 5 pieces | 20 82 000 9916 | |
| HARTING Assembly tool for Ha-VIS preLink® terminal module | 20 82 000 9901 | |

# *har*-port coupler

HARTING
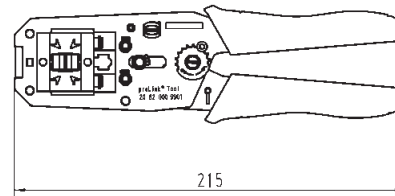


*har*-port USB coupler

## Advantages

- Compact and well-shaped service interface in a timeless attractive design
- Easy mounting
- Compact and robust design
- Practical accessories

## Technical characteristics

| | |
|---|---|
| Mounting | Screwable in cover plates (thread M22 x 1) |
| Degree of protection | IP20 |
| Mating cycles | min. 1500 |
| Temperature range | -25 °C ... +70 °C |
| Housing material | Polyamide |

| | Part number | | | |
|---|---|---|---|---|
| Identification | silver | black | Drawing | Dimensions in mm |
| **har-port USB 2.0 coupler** | | | | |
| Type A jack – Type A jack | 09 45 452 1901 | 09 45 452 1903 | | |
| **har-port USB 3.0 coupler** | | | | |
| Type A jack – Type A jack | 09 45 452 1902 | 09 45 452 1904 | | |
| **har-port USB 2.0 coupler with cable** | | | | |
| Type A jack – Type A connector | | | | |
| Length: 0.5 m | 09 45 452 1920 | 09 45 452 1960 | | |
| 1.0 m | 09 45 452 1921 | 09 45 452 1961 | | |
| 1.5 m | 09 45 452 1922 | 09 45 452 1962 | | |
| 2.0 m | 09 45 452 1923 | 09 45 452 1963 | | |
| 3.0 m | 09 45 452 1924 | 09 45 452 1964 | | |
| 5.0 m | 09 45 452 1925 | 09 45 452 1965 | | |
| Type B jack – Type B connector | | | | |
| Length: 0.5 m | 09 45 452 1910 | | | |
| 1.0 m | 09 45 452 1911 | | | |
| 1.5 m | 09 45 452 1912 | | | |
| 2.0 m | 09 45 452 1913 | | | |
| 3.0 m | 09 45 452 1914 | | | |
| 5.0 m | 09 45 452 1915 | | | |

# *har*-port coupler

## *har*-port USB coupler

| Identification | Part number silver | Part number black | Drawing | Dimensions in mm |
|---|---|---|---|---|
| **_har_-port USB 2.0 coupler** | | | | |
| 2 x Type A jack – Type A connector | | | | |
| Length: 0.5 m | 09 45 452 1950 | | | |
| 1.0 m | 09 45 452 1951 | | | |
| 1.5 m | 09 45 452 1952 | | | |
| 2.0 m | 09 45 452 1953 | | | |
| 3.0 m | 09 45 452 1954 | | | |
| 5.0 m | 09 45 452 1955 | | | |
| **_har_-port USB 3.0 coupler** | | | | |
| Type A jack – Type A connector | | | | |
| Length: 0.5 m | 09 45 452 1930 | 09 45 452 1970 | | |
| 1.0 m | 09 45 452 1931 | 09 45 452 1971 | | |
| 1.5 m | 09 45 452 1932 | 09 45 452 1972 | | |
| 2.0 m | 09 45 452 1933 | 09 45 452 1973 | | |
| 3.0 m | 09 45 452 1934 | 09 45 452 1974 | | |
| 5.0 m | 09 45 452 1935 | 09 45 452 1975 | | |
| **_har_-port USB 2.0 coupler** | | | | |
| Type Mini-B jack – Type A connector | | | | |
| Length: 0.5 m | 09 45 452 1940 | | | |

# har-port coupler

HARTING

har-port RJ45 coupler

## Advantages

- Compact and well-shaped service interface in a timeless attractive design
- Easy mounting
- Transmission category 6, performance class $E_A$, suitable for 1/10 Gigabit Ethernet
- Compact and robust design
- Practical accessories

## Technical characteristics

| | |
|---|---|
| Number of ports | 2x RJ45 |
| Transmission performance | Category 6 / class $E_A$ acc. to ISO/IEC 11 801:2002, EN 50 173-1 |
| Transmission rate | 10/100 Mbit/s and 1/10 Gbit/s |
| Shielding | Fully shielded, 360° shielding contact |
| Mounting | Screwable in cover plates |
| Degree of protection | IP20 |
| Mating cycles | min. 750 |
| Temperature range | -25 °C ... +70 °C |
| Housing material | Polyamide |

| Identification | Part number silver | Part number black | Drawing | Dimensions in mm |
|---|---|---|---|---|
| har-port RJ45 Cat. 6 coupler | 09 45 452 1560 | 09 45 452 1561 | | |
| har-port RJ45 Cat. 6 coupler with cable | | | | |
| Length: 0.15 m | 09 45 452 1500 | 09 45 452 1530 | | |
| 0.2 m | 09 45 452 1501 | 09 45 452 1531 | | |
| 0.3 m | 09 45 452 1502 | 09 45 452 1532 | | |
| 0.5 m | 09 45 452 1504 | 09 45 452 1534 | | |
| 0.7 m | 09 45 452 1506 | 09 45 452 1536 | | |
| 1.0 m | 09 45 452 1509 | 09 45 452 1539 | | |
| 1.5 m | 09 45 452 1510 | 09 45 452 1540 | | |
| 2.0 m | 09 45 452 1511 | 09 45 452 1541 | | |
| 2.5 m | 09 45 452 1512 | 09 45 452 1542 | | |
| 3.0 m | 09 45 452 1513 | 09 45 452 1543 | | |
| 3.5 m | 09 45 452 1514 | 09 45 452 1544 | | |
| 4.0 m | 09 45 452 1515 | 09 45 452 1545 | | |
| 5.0 m | 09 45 452 1516 | 09 45 452 1546 | | |
| 7.5 m | 09 45 452 1517 | 09 45 452 1547 | | |
| 10.0 m | 09 45 452 1518 | 09 45 452 1548 | | |
| har-port HIFF coupler housing (for all HIFF compatible modules) | 09 45 452 0000 | 09 45 452 0001 | | |

# *har*-port coupler

## *har*-port RJ45 coupler

| Identification | Part number silver | Drawing | Dimensions in mm |
|---|---|---|---|
| *har*-port audio interface 3.5 mm<br><br>stereo phone jack jack to connector<br><br>Length:  1.0 m<br>  2.0 m | 09 45 452 1000<br>09 45 452 1001 | | |
| HDMI video interface | 09 45 452 1010 | | |

# *har*-port coupler



*har*-port accessories

## Advantages

- Compact and well-shaped service interface in a timeless attractive design
- Easy mounting
- Compact and robust design
- Practical accessories

## Technical characteristics

| | |
|---|---|
| Temperature range | -25 °C ... +70 °C |
| Housing material | Polyamide |

| Identification | Part number | Drawing | Dimensions in mm |
|---|---|---|---|
| **Accessories** | | | |
| *har*-port protection cover IP65 / IP67 black | 09 45 502 0000 | | |
| *har*-port sealing cover | 09 45 502 0001 | | |
| *har*-port label holder | 09 45 502 0002 | | |
| *har*-port label for label holder 09 45 502 0002 | 09 45 502 0003 | | |
| *har*-port blind cover IP65 / IP67 | 09 45 502 0004 | | |
| *har*-port protection cover IP65 / IP67 transparent | 09 45 502 0005 | | |
| *har*-port protection cover IP65 / IP67 metal | 09 45 502 0006 | | |



har-port label holder
09 45 502 0002

position for har-port label
09 45 502 0003