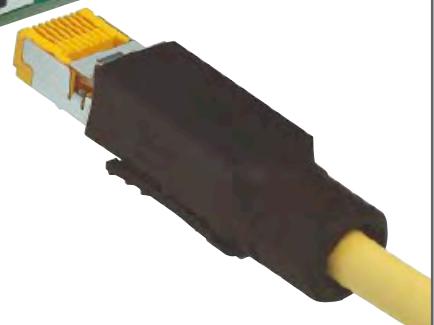
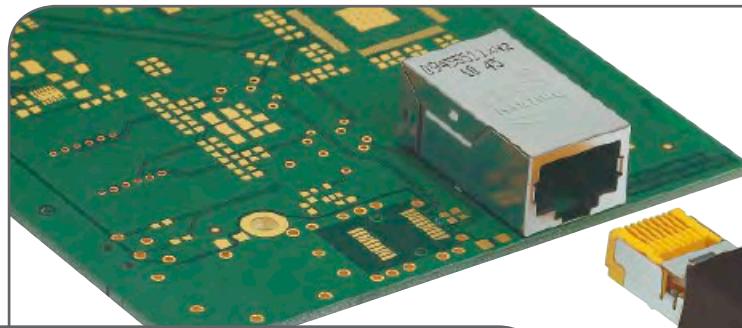


# 01. HARTING RJ INDUSTRIAL® – RJ45 ETHERNET CONNECTORS



Ethernet is coming up to standard industrial interface. Therefore, automation devices, such as controllers, sensors and actuators feature possess 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	IP 20	IP 65 / IP 67	Data	Signal	Power	high performance					
							Data transfer rate	Shielding	Number of contacts, contact density	Voltage, working current		
<b>Cable termination</b>				<b>PCB termination</b>				<b>Application standard</b>				
<i>Han-Quick Lock®</i>		<i>IDC HARAX®</i>		<i>Crimp</i>		THT	SMC	SMT				
<i>Screw</i>		<i>Cage clamp</i>		<i>Axial screw</i>		<i>Press-in</i>						
<b>Housing integration</b>					<i>Separate housing</i>	<i>integrated housing</i>						

1) Piercing contacts



## CONTENTS

## PAGE

Introduction HARTING RJ Industrial®	01.02
HARTING RJ Industrial® RJ45 – Jacks for device integration and accessories	01.04
HARTING RJ Industrial® RJ45 – Coupler and adapter pcb's	01.08
HARTING RJ Industrial® RJ45 – Connectors, 4-poles	01.12
HARTING RJ Industrial® RJ45 Gigalink – Connectors, 8-poles	01.14
HARTING RJ Industrial® 10G	01.15
HARTING RJ Industrial® – Tools	01.16
HARTING RJ Industrial® – System cables	01.17
<i>har-port</i> – Coupler	01.19

# 01. HARTING RJ INDUSTRIAL® – RJ45 ETHERNET CONNECTORS



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 IP 20 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.

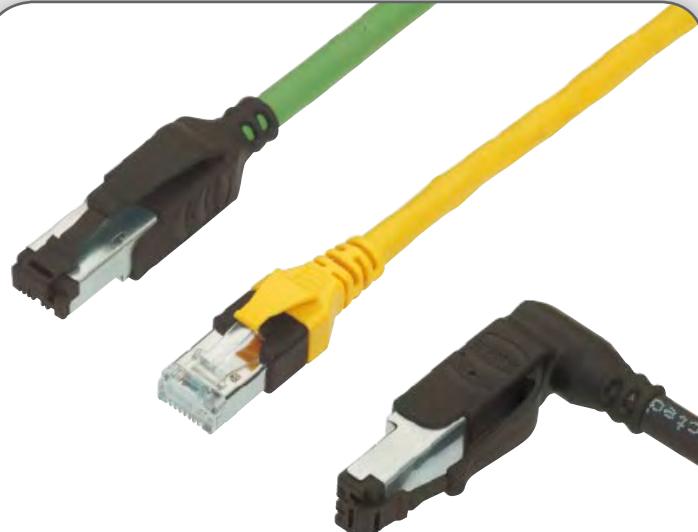


### ASSEMBLED SYSTEM CABLES:

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 11 801 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® 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	IP 20
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

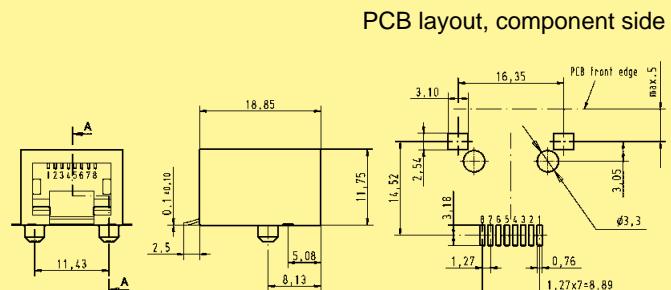
## Identification

## Part No.

## Drawing

## Dimensions in mm

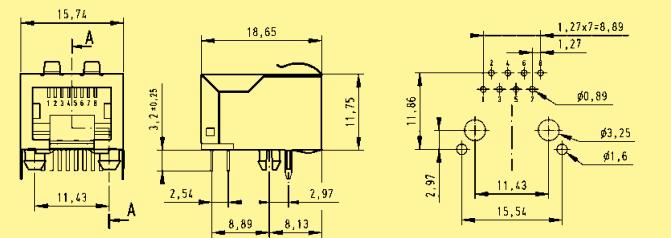
Components device side

09 45 551 11001)  
09 45 551 11102)

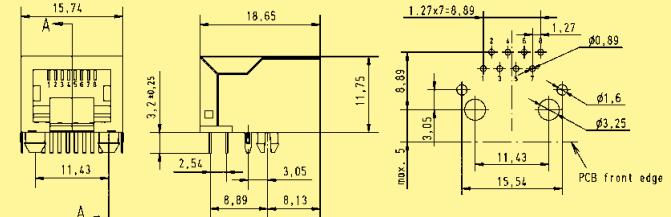
RJ45 jack (low profile)

Solder variant SMD,  
90° angled

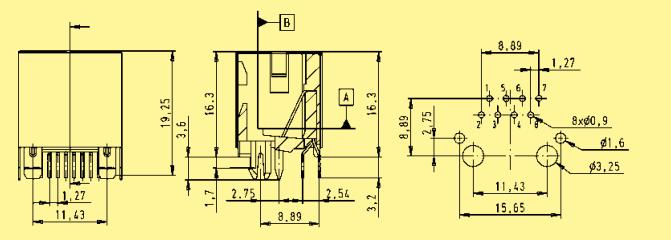
09 45 551 11011)

Solder variant THT,  
90° angled  
with EMC contacts

09 45 551 11021)

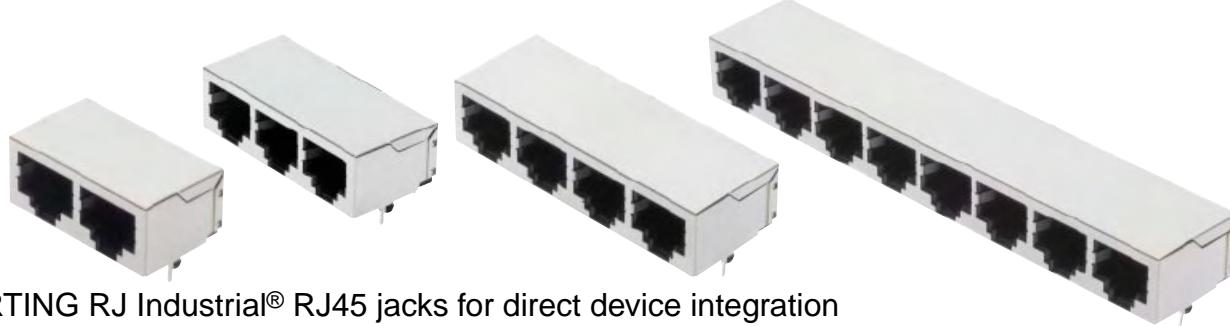
Solder variant THT,  
90° angled

09 45 551 11021)

Solder variant THT,  
vertical

09 45 551 11033)

<sup>1)</sup> Packaging: Blister à 120 pieces<sup>2)</sup> Packaging: Tape & Reel à 130 pieces<sup>3)</sup> Packaging: Blister à 80 pieces



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 60 603-7
Number of contacts	8
Degree of protection	IP 20
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 No.

### Drawing

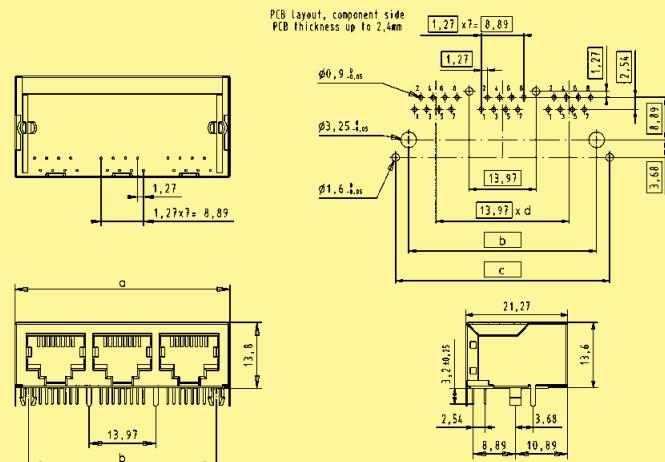
### Dimensions in mm

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

	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® 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	IP 20
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

Components device side

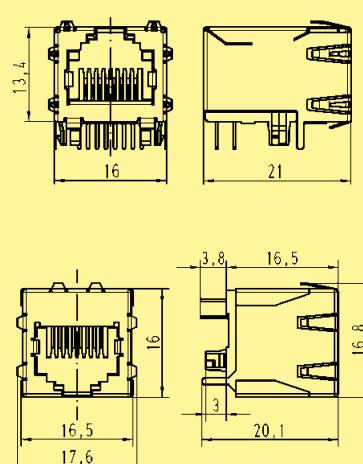
RJ45 jack (Standard)

Solder variant overmolded (THT), 90° angled

#### Part No.

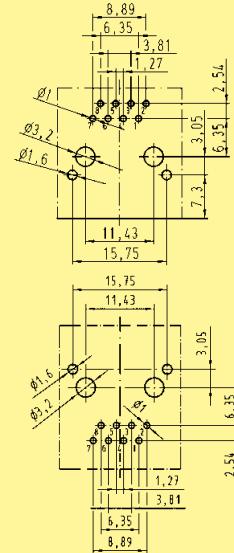
09 35 002 2101<sup>1)</sup>

#### Drawing



#### Dimensions in mm

PCB layout, component side



Solder variant overmolded (THT), 180° straight



## HARTING RJ Industrial® RJ45 jacks with transformer

RJ45  
RJ Industrial

## 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

## Technical characteristics

Mating face	RJ45 acc. to IEC 60603-7
Number of contacts	8
Degree of protection	IP 20
Rated voltage	30 V DC
Rated current	8 mA DC
Temperature range	-25 °C ... +70 °C

## Identification

## Part No.

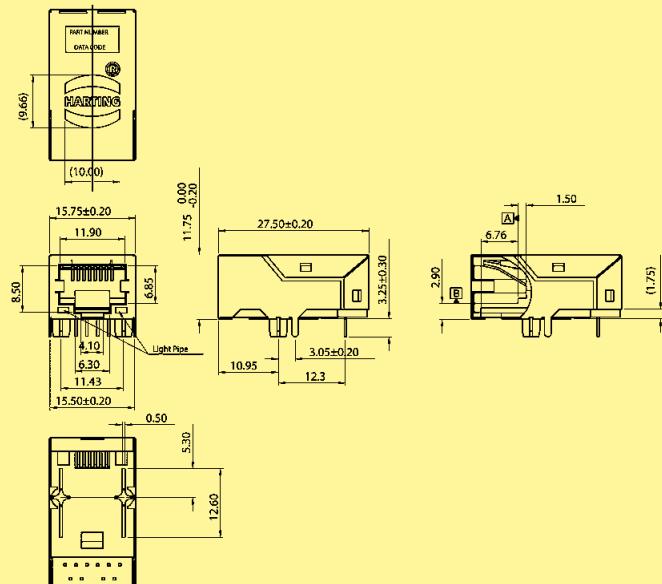
## Drawing

## Dimensions in mm

## Components device side

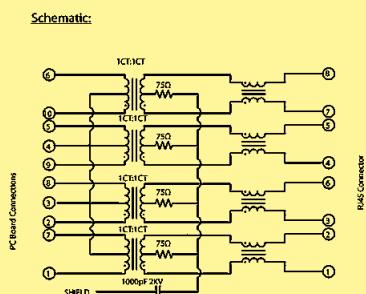
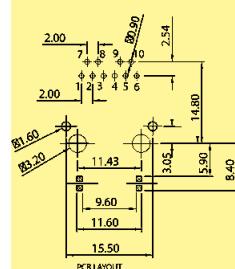
RJ45 jack with transformer (low profile)  
10/100 Mbit Ethernet  
90° angled, THT

09 45 551 11301)



RJ45 jack with transformer (low profile)  
1 Gbit Ethernet  
90° angled, THT

09 45 551 15301)



Customer specific versions on request

1) Packaging: Blister à 56 pieces



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

## Advantages

- Compatible with Han® 3 A1) 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 No.	Drawing	Dimensions in mm
Coupler PCB 2x RJ45 8-poles			
2 x RJ45 jack (09 45 551 1102)	09 45 545 1130		
1 x RJ45 jack horizontal (09 45 551 1102) and 1 x RJ45 jack vertical (09 45 551 1103)	09 45 545 1138		
Adapter PCB 1x RJ45 8-poles to solder points	09 45 545 1134		
Adapter PCB 1x RJ45 8-poles cage clamp, 5-pole, 1.5 mm²	09 45 545 1135		

<sup>1)</sup> with suitable adapter, see page 04.04



HARTING RJ Industrial® 10G RJ45 bulkhead

RJ45  
RJ Industrial

## Advantages

- Compact and robust design
- 360° shielding
- Compatible with HIFF dimensions for use in the Han® 3 A series with the Han® 3 A HIFF adapter 09 45 515 0024 or in the PushPull series with the HARTING PushPull Compact bulkhead mounting housing 09 45 545 0028 or the HARTING PushPull EasyInstall bulkhead mounting housing 09 45 545 0032

## Technical characteristics

Mating face	RJ45 acc. to IEC 60 603-7
Number of contacts	8
Transmission category	Cat. 6, performance class EA, suitable for 1/10 Gigabit Ethernet
Degree of protection	IP 20
Matting cycles	min. 750
Temperature range	-40 °C ... +70 °C
Housing material	Zinc die-cast, nickel-plated
Flammability acc. to UL 94	V-0

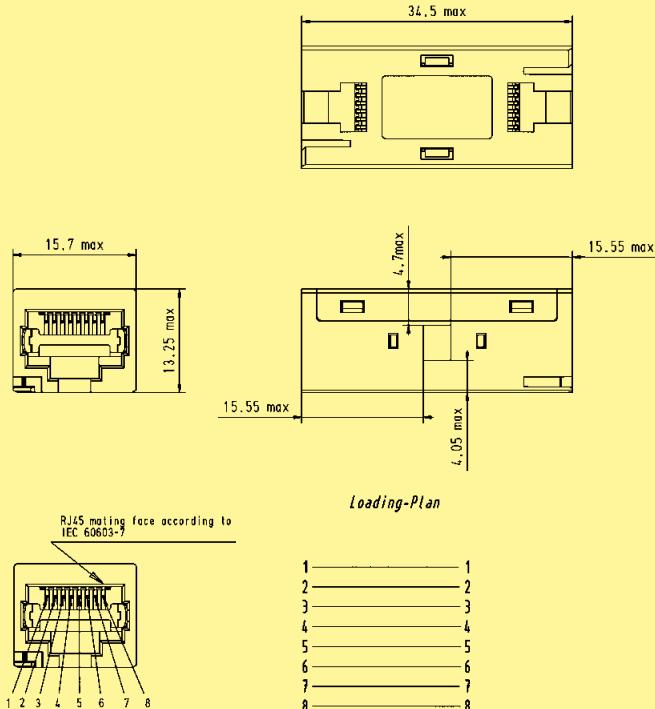
### Identification

HARTING RJ Industrial® 10G  
RJ45 bulkhead

### Part No.

09 45 545 1560

### Drawing





Ha-VIS preLink® RJ45 jack

## Advantages

- Compact and robust design
- 360° shielding
- Compatible with HIFF dimensions for use in the Han® 3 A series with the Han® 3 A HIFF adapter 09 45 515 0024 or in the PushPull series with the HARTING PushPull Compact bulkhead mounting housing 09 45 545 0028 or the HARTING PushPull EasyInstall bulkhead mounting housing 09 45 545 0032

## Technical characteristics

Mating face	RJ45 acc. to IEC 60 603-7
Number of contacts	8
Transmission category	Cat. 6, performance class E <sub>A</sub> , suitable for 1/10 Gigabit Ethernet
Connectable cables	
- Conductor cross section	AWG 22 - AWG 24 solid and stranded (0.25 - 0.34 mm <sup>2</sup> )
- Cable diameter	5 - 9 mm
- Conductor diameter	1.3 - 1.6 mm
Degree of protection	IP 20
Mating cycles	min. 750
Temperature range	-40 °C ... +70 °C
Housing material	Zinc die-cast, nickel-plated

Identification	Part No.	Drawing	Dimensions in mm
Ha-VIS preLink® set RJ45 jack consists of: • 1x RJ45 module • 1x terminal module • 1x cable tie	20 82 001 0001		
Ha-VIS preLink® RJ45 jack module	20 82 000 0002		
Ha-VIS preLink® RJ45 terminal module AWG 22/23	20 82 000 0001		
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		

available  
Q3 / 2012



## HARTING RJ Industrial® cable jack

RJ45  
RJ Industrial

### 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

### Technical characteristics

Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	8
Transmission category	Category 6, class E <sub>A</sub> , suitable for 1/10 Gigabit Ethernet
Transmission performance	Category 6 / Class E <sub>A</sub> 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	<ul style="list-style-type: none"> <li>- Conductor cross section AWG 27 ... AWG 24 (solid/stranded)<sup>1)</sup></li> <li>AWG 24 ... AWG 22 (solid/stranded)<sup>2)</sup></li> <li>- Conductor diameter max. 1.6 mm (incl. insulation)</li> <li>- Cable diameter 5 ... 9 mm</li> </ul>
Mating cycles	min. 750
Degree of protection	IP 20
Temperature range	-40 °C ... +70 °C
Housing material	Zinc die-cast, nickel-plated

Identification	Part No.	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		

<sup>1)</sup> For part number 09 45 545 1561

<sup>2)</sup> For part number 09 45 545 1562 and 09 45 545 1120



## 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

## 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) max. 1.6 mm (09 45 151 1100 / 09 45 151 1108) max. 1.2 mm (09 45 151 1109) 6.1 ... 6.9 mm
- Conductor diameter	min. 750
- Cable diameter	IP 20
Mating cycles	-40 °C ... +70 °C
Degree of protection	Polyamide, UL 94-V0
Temperature range	black
Housing material	UL approval (E102079)
Colour	

### Identification

HARTING RJ Industrial® connector set RJ45, 4-poles

incl.:  
housing with shielding,  
splicing element, cable gland  
and instruction manual

like 09 45 151 1100  
but for AWG 26

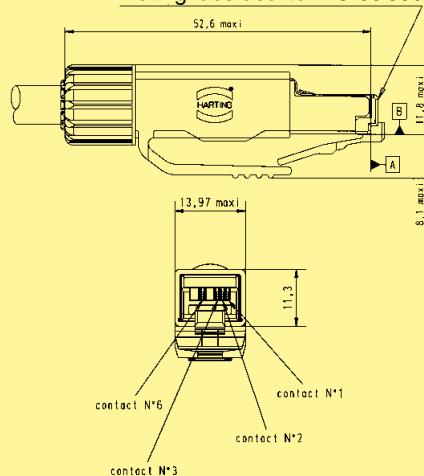
### Part No.

09 45 151 1100  
09 45 151 1108<sup>1)</sup>

09 45 151 1109

### Drawing

Mating face acc. to IEC 60 603-7



### Dimensions in mm

<sup>1)</sup> Packaging with 100 sets



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

RJ45  
RJ Industrial

## 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

## Technical characteristics

Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	4
Transmission category	Category 5, class D, suitable for 1/10 Gigabit Ethernet
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	<ul style="list-style-type: none"> <li>- Conductor cross section AWG 27 ... AWG 22 (solid / stranded)</li> <li>- Conductor diameter max. 1.6 mm (incl. insulation)</li> <li>- Cable diameter 4.5 ... 9 mm (straight version)</li> <li>4.5 up to 8 mm (45° angled version)</li> </ul>
Mating cycles	min. 750
Degree of protection	IP 20
Temperature range	-40 °C ... +70 °C
Housing material	Polyamide, UL 94-V0
Colour	black

Identification	Part No.	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		

Identification	Colour	Part No.
Colour clips for colour coding the HARTING RJ Industrial® PN connector	White	09 45 850 0001
If required the colour clips can be equipped with an RFID-chip for automatic patch cable-ID recognition and storage.	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® 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

### Technical characteristics

Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	Field-assembly
Cable termination	with piercing contacts
Connectable cables	<ul style="list-style-type: none"> <li>- Conductor cross section AWG 28/7 ... AWG 24/7 (stranded)</li> <li>- Conductor diameter max. 1.05 mm (incl. insulation)</li> <li>- Cable diameter 6.1 ... 6.9 mm</li> </ul>
Mating cycles	min. 750
Degree of protection	IP 20
Temperature range	-40 °C ... +70 °C
Housing material	Polycarbonate, UL 94-V0
Colour	black
	UL approval (E102079)

### Reference note:

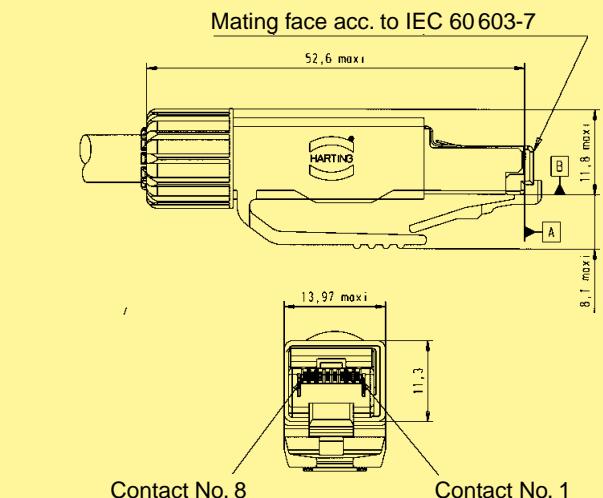
For cat. 6 patch cords it is recommended to use one connector with a white cable manager and one with a blue cable manager, in order to optimise the crosstalk between different signal pairs.

### Identification

### Part No.

### Drawing

### Dimensions in mm



HARTING RJ Industrial® connector set RJ45, 8-poles

09 45 151 1500  
09 45 151 1500 XL<sup>1)</sup>

Wire manager white

09 45 151 1510  
09 45 151 1510 XL<sup>1)</sup>

Wire manager blue

incl.:  
housing with shielding, cable gland  
and instruction manual

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

09 45 151 1520



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

RJ45  
RJ Industrial

## 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

## Technical characteristics

Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	8
Transmission category	Category 6, class E <sub>A</sub> , suitable for 1/10 Gigabit Ethernet
Transmission performance	Category 6 / Class E <sub>A</sub> 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	<ul style="list-style-type: none"> <li>- Conductor cross section AWG 27 ... AWG 22 (solid / stranded)</li> <li>- Conductor diameter max. 1.6 mm (incl. insulation)</li> <li>- Cable diameter 4.5 ... 9 mm (straight version)</li> <li>4.5 up to 8 mm (45° angled version)</li> </ul>
Mating cycles	min. 750
Degree of protection	IP 20
Temperature range	-40 °C ... +70 °C
Housing material	Polyamide, UL 94-V0
Colour	black

Identification	Part No.	Drawing	Dimensions in mm
HARTING RJ Industrial® 10G connector set RJ45, 8-poles			
straight version	09 45 151 1560		
45° angled version (four different cable outlets possible)	09 45 151 1561		

Identification	Colour	Part No.
Colour clips for colour coding the HARTING RJ Industrial® 10G connector	White	09 45 850 0001
If required the colour clips can be equipped with an RFID-chip for automatic patch cable-ID recognition and storage.	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

Identification	Part No.	
<b>HARTING RJ Industrial® Stripping Tool</b> Stripping tool for Ethernet cables including blade cassette	09 45 800 0000	 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.
Spare blade cassette	09 45 800 0001	
Stripping tool	09 45 800 0002	
<b>HARTING RJ Industrial® Gigalink Mounting tools</b> for HARTING RJ Industrial® Gigalink connectors  for HARTING RJ Industrial® Gigalink Cat. 6A connectors (available Q3/2012)	09 45 800 0500	 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, IP 20**  
RJ45 patch cords for switch cabinet or PLC



Description	Part No. Standard	Part No. Multiport	Technical characteristics																				
For the cabling of Industrial Ethernet networks (for example in accordance with the PROFINET guideline), based on RJ45 connectors.  Wiring: Contacts RJ45 1/2 and 3/6			<p>Transmission properties in accordance with ISO/IEC 11 801:2002: Class D</p> <p>Mating face: 2 x RJ45 in acc. with IEC 60 603-7</p> <p>Protection level: IP 20 (if mated)</p> <p>Temperature range -40 °C ... +70 °C</p>																				
<b>HARTING RJ Industrial® system cable RJ45, 4-wire</b>  Type A			<p><b>Electrical characteristics at 20 °C</b></p> <table> <tr> <td>Contact resistance:</td> <td><math>\leq 20 \text{ m}\Omega</math></td> </tr> <tr> <td>Insulation resistance:</td> <td><math>\geq 500 \text{ M}\Omega</math></td> </tr> <tr> <td>Dielectric withstand voltage:</td> <td></td> </tr> <tr> <td>    contact - contact</td> <td>1 kV</td> </tr> <tr> <td>    contact - ground</td> <td>1.5 kV</td> </tr> </table> <p><b>Electrical characteristics after damp heat cycles</b></p> <table> <tr> <td>Contact resistance:</td> <td><math>\leq 20 \text{ m}\Omega</math></td> </tr> <tr> <td>Insulation resistance:</td> <td><math>\geq 100 \text{ M}\Omega</math></td> </tr> <tr> <td>Dielectric withstand voltage:</td> <td></td> </tr> <tr> <td>    contact - contact</td> <td>1 kV</td> </tr> <tr> <td>    contact - ground</td> <td>1.5 kV</td> </tr> </table>	Contact resistance:	$\leq 20 \text{ m}\Omega$	Insulation resistance:	$\geq 500 \text{ M}\Omega$	Dielectric withstand voltage:		contact - contact	1 kV	contact - ground	1.5 kV	Contact resistance:	$\leq 20 \text{ m}\Omega$	Insulation resistance:	$\geq 100 \text{ M}\Omega$	Dielectric withstand voltage:		contact - contact	1 kV	contact - ground	1.5 kV
Contact resistance:	$\leq 20 \text{ m}\Omega$																						
Insulation resistance:	$\geq 500 \text{ M}\Omega$																						
Dielectric withstand voltage:																							
contact - contact	1 kV																						
contact - ground	1.5 kV																						
Contact resistance:	$\leq 20 \text{ m}\Omega$																						
Insulation resistance:	$\geq 100 \text{ M}\Omega$																						
Dielectric withstand voltage:																							
contact - contact	1 kV																						
contact - ground	1.5 kV																						
Length 1.5 m	09 45 771 0023	09 47 343 4006	Cable type: Industrial Ethernet Standard Cable, 2 x 2 x AWG 22/1, double shielding (PROFINET Typ A)																				
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	Connectors: 2 x HARTING RJ Industrial® IP 20 Data with overmolded housings																				
Length 10.0 m	09 45 771 0051	09 47 343 4018																					
Length 20.0 m	09 45 771 0053	09 47 343 4020																					
<b>HARTING RJ Industrial® system cable RJ45, 4-wire</b>  Type B			<p>Cable type: Industrial Ethernet Stranded Cable, 2 x 2 x AWG 22/7, double shielding (PROFINET Typ B)</p>																				
Length 1.5 m	09 45 771 1123	09 47 343 4034	Sheath: PVC green, Ø 6.5 mm																				
Length 3.0 m	09 45 771 1125	09 47 343 4037	Connectors: 2 x HARTING RJ Industrial® IP 20 Data with overmolded housings																				
Length 5.0 m	09 45 771 1127	09 47 343 4040																					
Length 10.0 m	09 45 771 1151	09 47 343 4046																					
Length 20.0 m	09 45 771 1153	09 47 343 4048																					
<b>HARTING RJ Industrial® system cable RJ45, 4-wire</b>  Type C			<p>Cable type: Industrial Ethernet Trailing Cable, 2 x 2 x AWG 22/7, double shielding (PROFINET Typ C)</p>																				
Length 1.5 m	09 45 771 1164	09 47 343 4090	Sheath: PUR green, Ø 6.5 mm																				
Length 3.0 m	09 45 771 1166	09 47 343 4093	Connectors: 2 x HARTING RJ Industrial® IP 20 Data with overmolded housings																				
Length 5.0 m	09 45 771 1168	09 47 343 4096																					
Length 10.0 m	09 45 771 1173	09 47 343 4102																					
Length 20.0 m	09 45 771 1175	09 47 343 4104																					

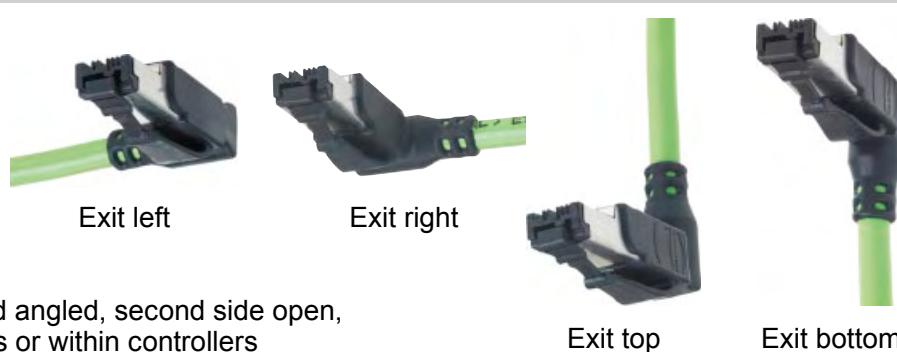
Further system cables see HARTING-catalogue "Intelligent Network Solutions"

# HARTING RJ Industrial® – System cables



**HARTING RJ Industrial®  
system cable RJ45  
angled, 4-wire, IP 20**

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



Identification	angled left	angled right	Part No. angled top	angled bottom	
<b>HARTING RJ Industrial® System cable RJ45 angled, 4-wire</b>					
one side pre-assembled, second side open	Length 0.5 m Length 1.0 m Length 1.5 m Length 2.0 m Length 3.0 m Length 5.0 m	09 47 050 0001 09 47 050 0002 09 47 050 0003 09 47 050 0004 09 47 050 0005 09 47 050 0007	09 47 060 0001 09 47 060 0002 09 47 060 0003 09 47 060 0004 09 47 060 0005 09 47 060 0007	09 47 030 0001 09 47 030 0002 09 47 030 0003 09 47 030 0004 09 47 030 0005 09 47 030 0007	09 47 040 0001 09 47 040 0002 09 47 040 0003 09 47 040 0004 09 47 040 0005 09 47 040 0007
<b>HARTING RJ Industrial® System cable RJ45 angled, 4-wire</b>					
one side pre-assembled, second side open	Length 0.5 m Length 1.0 m Length 1.5 m Length 2.0 m Length 3.0 m Length 5.0 m	09 47 050 0023 09 47 050 0024 09 47 050 0025 09 47 050 0026 09 47 050 0027 09 47 050 0029	09 47 060 0023 09 47 060 0024 09 47 060 0025 09 47 060 0026 09 47 060 0027 09 47 060 0029	09 47 030 0023 09 47 030 0024 09 47 030 0025 09 47 030 0026 09 47 030 0027 09 47 030 0029	09 47 040 0023 09 47 040 0024 09 47 040 0025 09 47 040 0026 09 47 040 0027 09 47 040 0029
<b>HARTING RJ Industrial® System cable RJ45 angled, 4-wire</b>					
one side pre-assembled, second side open	Length 0.5 m Length 1.0 m Length 1.5 m Length 2.0 m Length 3.0 m Length 5.0 m	09 47 050 0045 09 47 050 0046 09 47 050 0047 09 47 050 0048 09 47 050 0049 09 47 050 0051	09 47 060 0045 09 47 060 0046 09 47 060 0047 09 47 060 0048 09 47 060 0049 09 47 060 0051	09 47 030 0045 09 47 030 0046 09 47 030 0047 09 47 030 0048 09 47 030 0049 09 47 030 0051	09 47 040 0045 09 47 040 0046 09 47 040 0047 09 47 040 0048 09 47 040 0049 09 47 040 0051
<b>HARTING RJ Industrial® System cable RJ45 angled, 4-wire</b>					
one side pre-assembled, second side open	Length 0.5 m Length 1.0 m Length 1.5 m Length 2.0 m Length 3.0 m Length 5.0 m	09 47 050 0067 09 47 050 0068 09 47 050 0069 09 47 050 0070 09 47 050 0071 09 47 050 0073	09 47 060 0067 09 47 060 0068 09 47 060 0069 09 47 060 0070 09 47 060 0071 09 47 060 0073	09 47 030 0067 09 47 030 0068 09 47 030 0069 09 47 030 0070 09 47 030 0071 09 47 030 0073	09 47 040 0067 09 47 040 0068 09 47 040 0069 09 47 040 0070 09 47 040 0071 09 47 040 0073

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



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

Number of ports	2x USB Typ A
Mounting	Screwable in cover plates
Degree of protection	IP 20
Mating cycles	min. 1500
Temperature range	-25 °C ... +70 °C
Housing material	Polyamide

### Identification

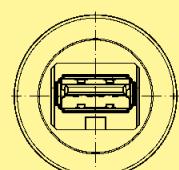
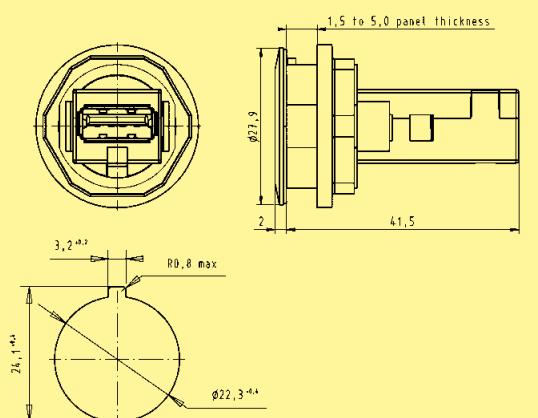
### Part No.

### Drawing

### Dimensions in mm

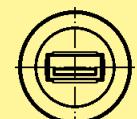
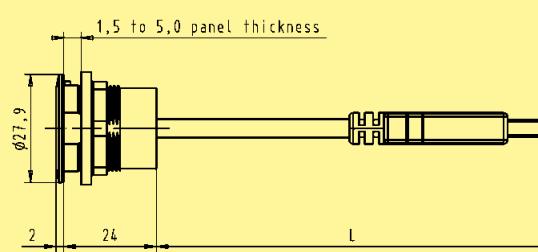
**har-port USB 2.0 A-A coupler**

09 45 452 1901



**har-port USB 3.0 A-A coupler**

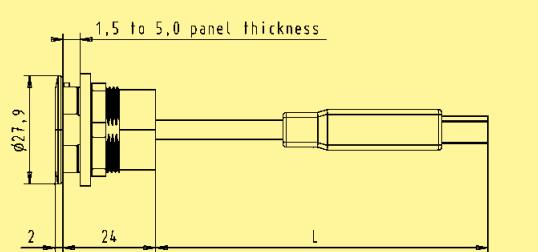
09 45 452 1902



**har-port USB 2.0 A-A coupler with cable**

Length: 0.5 m  
1.0 m  
1.5 m  
2.0 m  
3.0 m  
5.0 m

09 45 452 1920  
09 45 452 1921  
09 45 452 1922  
09 45 452 1923  
09 45 452 1924  
09 45 452 1925



**har-port USB 2.0 B-B coupler with cable**

Length: 0.5 m  
1.0 m  
1.5 m  
2.0 m  
3.0 m

09 45 452 1910  
09 45 452 1911  
09 45 452 1912  
09 45 452 1913  
09 45 452 1914

# har-port coupler



## har-port RJ45 coupler

### Advantages

- Compact and well-shaped service interface in a timeless attractive design
- Easy mounting
- Transmission category 6, performance class E<sub>A</sub>, 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 <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 in cover plates
Degree of protection	IP 20
Mating cycles	min. 750
Temperature range	-25 °C ... +70 °C
Housing material	Polyamide

### Identification

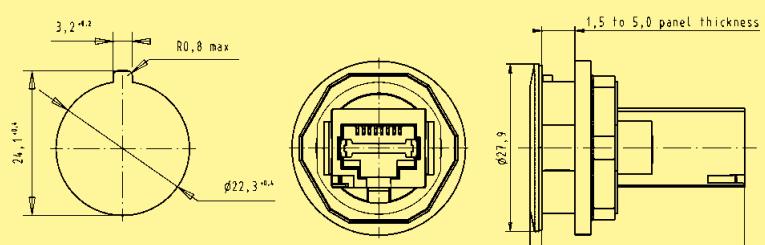
### Part No.

### Drawing

### Dimensions in mm

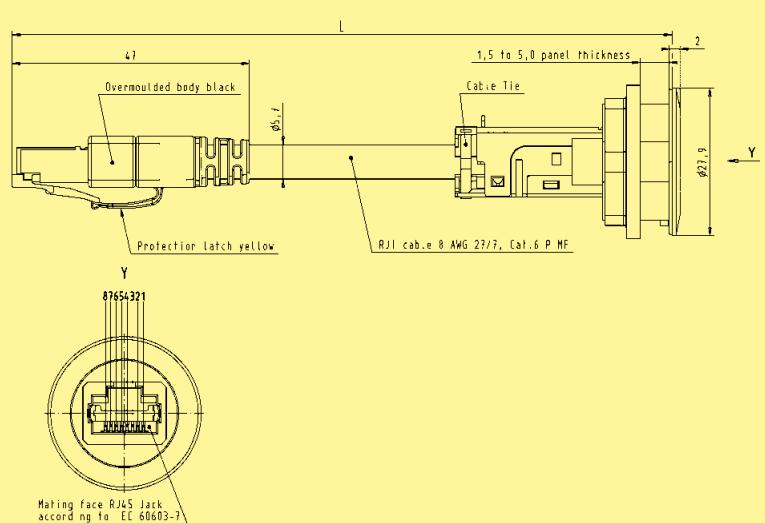
har-port RJ45 Cat. 6 coupler

09 45 452 1560



har-port RJ45 Cat. 6 coupler with cable

Length:	0.2 m	09 45 452 1501
	0.5 m	09 45 452 1504
	1.0 m	09 45 452 1509
	1.5 m	09 45 452 1510
	2.0 m	09 45 452 1511
	3.0 m	09 45 452 1513
	5.0 m	09 45 452 1516



har-port HIFF coupler housing (for all HIFF compatible modules)

09 45 452 0000



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 No.	Drawing	Dimensions in mm
<b>Accessories</b>			
har-port protection cover IP 65 / IP 67 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		position for har-port label 09 45 502 0003
har-port blind cover IP 65 / 67	09 45 502 0004		