
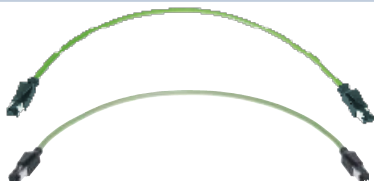









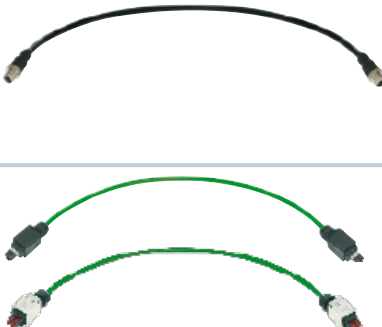



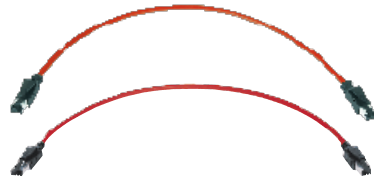

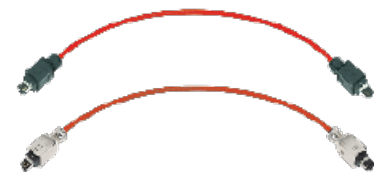





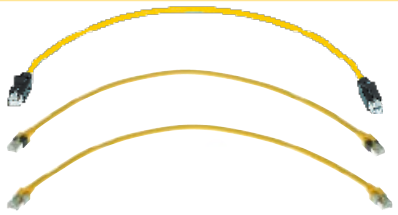














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Fast Ethernet
100 Mbit/s
4-pin & POF
Ethernet IEEE 802.3

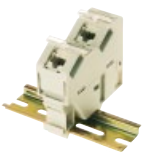














	Connectors	System Cable
Inside IP 20 Protection Class	 <p>HARTING RJ Industrial® RJ45 Connector 4-pin IP 20, RJ45, Cat. 5</p>	 <p>HARTING RJ Industrial System Cable 4-wire assembled / overmoulded IP 20, Cat. 5, AWG 22</p>
	 <p>HARTING PushPull RJ45 Connector 4-pin IP 65 / IP 67, Cat. 5</p>	 <p>HARTING PushPull RJ45 System Cable 4-wire assembled / overmoulded IP 65 / IP 67, Cat. 5, AWG 22</p>
Outside IP 65 / IP 67 Protection Class	 <p>Han® PushPull RJ45 Connector 4-pin plastic / metal IP 65 / IP 67, Cat. 5</p>	 <p>Han® PushPull RJ45 System Cable 4-wire plastic / metal IP 65 / IP 67, Cat. 5, AWG 22</p>
	 <p>Han® 3 A RJ45 Connector 4-pin plastic / metal IP 65 / IP 67, Cat. 5</p>	 <p>Han® 3 A RJ45 System Cable 4-wire IP 65 / IP 67, Cat. 5, AWG 22</p>
	 <p>HARAX® M12 D-coding Connector 4-pin IP 65 / IP 67, Cat. 5 (with IDC contacts)</p>	 <p>Han® M12 D-coding System Cable 4-wire IP 65 / IP 67, Cat. 5, AWG 22</p>
	 <p>Han® PushPull SCRJ Connector POF Variant 14 plastic / metal IP 65 / IP 67</p>	 <p>Han® PushPull SCRJ System Cable, POF Variant 14 plastic / metal IP 65 / IP 67</p>
	 <p>Han® 3 A RJ45 Hybrid Connector, 4-pin plastic / metal IP 65 / IP 67, Cat. 5 with 4x power supply</p>	 <p>Han® 3 A RJ45 Hybrid System Cable, 4-wire plastic / metal IP 65 / IP 67, Cat. 5, AWG 22 stranded with 4x power supply</p>
	 <p>HARTING RJ Industrial® RJ45 Connector 4-pin IP 20, RJ45, Cat. 5</p>	 <p>HARTING RJ Industrial System Cable 4-wire assembled / overmoulded IP 20, Cat. 5, AWG 22</p>
Inside IP 65 / IP 67 Protection Class	 <p>Han® PushPull RJ45 Connector 4-pin plastic / metal IP 65 / IP 67, Cat. 5</p>	 <p>Han® PushPull RJ45 System Cable 4-wire plastic / metal IP 65 / IP 67, Cat. 5, AWG 22</p>
	 <p>HARAX® M12 D-coding Connector 4-pin IP 65 / IP 67, Cat. 5</p>	 <p>Han® M12 D-coding System Cable 4-wire IP 65 / IP 67, Cat. 5, AWG 22</p>

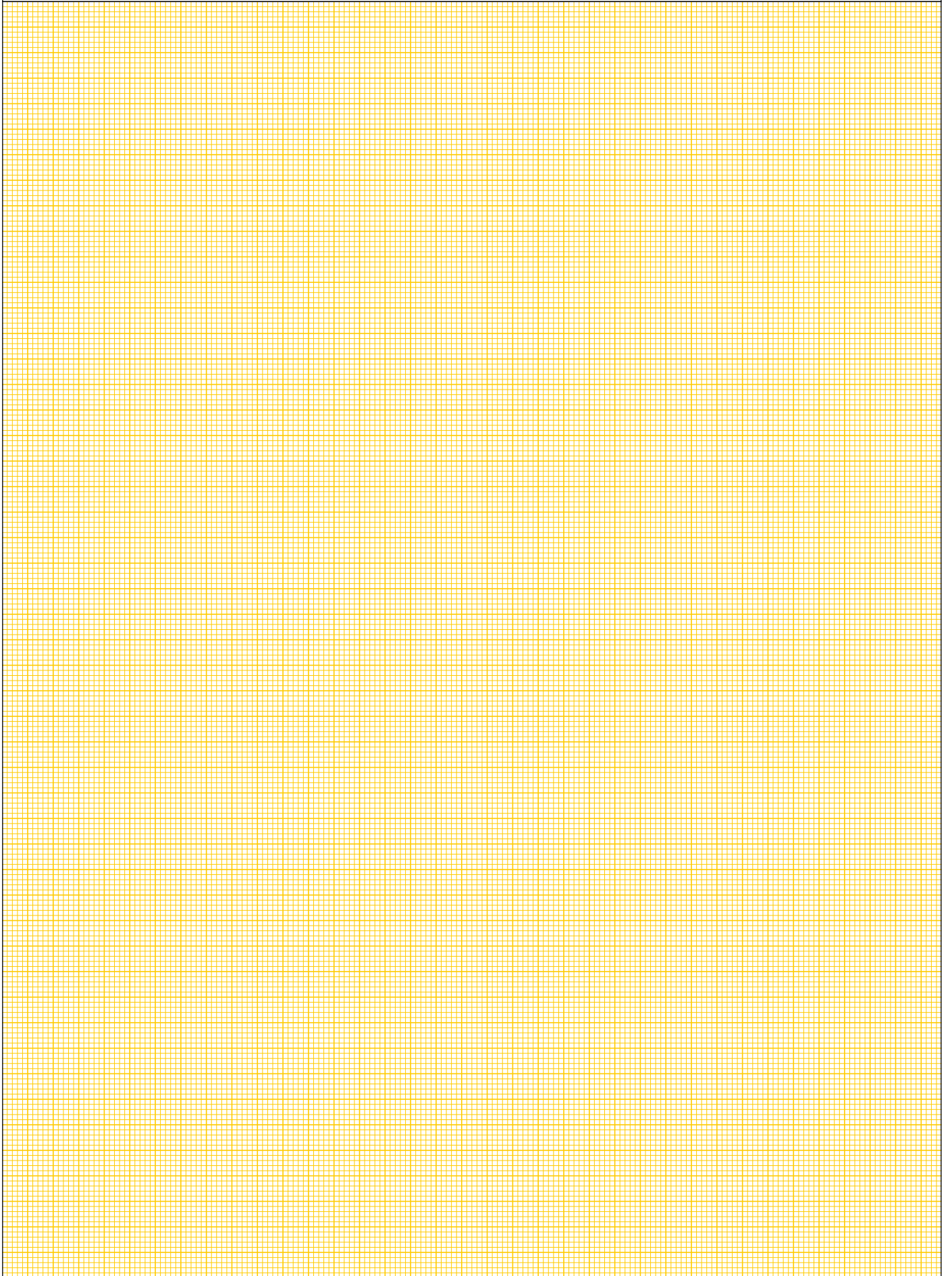
Outlets and Panel feed-through		Cable	Application
<p>® RJ45</p>  <p>HARTING Cabinet Outlet RJ45 IP 20, Cat. 6</p>		<p>Typ A (for fixed layouts)</p>  <p>Industrial Cat. 5 Standard Cable 4-wire AWG 22/1, solid, PVC</p>	
<p>® RJ45</p>  <p>HARTING PushPull RJ45 Panel feed-through IP 65 / IP 67, Cat. 5</p>  <p>HARTING PushPull RJ45 Panel feed-through IP 65 / IP 67, Cat. 5</p>  <p>HARTING PushPull RJ45 Outlet IP 65 / IP 67, Cat. 6</p>		<p>Typ B (for flexible layouts)</p>  <p>Industrial Cat. 5 Stranded Cable 4-wire AWG 22/7, stranded, PVC</p>	
<p>® RJ45</p>  <p>Han® PushPull RJ45 Panel feed-through plastic / metal IP 65 / IP 67, Cat. 6 Socket horizontal, vertical</p>  <p>Han® PushPull RJ45 Gender Changer IP 65 / IP 67, Cat. 6</p>		 <p>Industrial Cat. 5 Outdoor Cable 4-wire AWG 22/7, stranded, PVC</p>	 <p>AIDA*</p>
<p>® RJ45</p>  <p>Han® 3 A RJ45 Panel feed-through IP 65 / IP 67, Cat. 5</p>  <p>Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 5</p>  <p>Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 6</p>		<p>Typ C (for special applications)</p>  <p>Industrial Cat. 5 Trailing Cable 4-wire AWG 22/7, stranded, PUR</p>	
<p>® RJ45</p>  <p>Han® M12 D-coding Panel feed-through IP 65 / IP 67, Cat. 5 straight or angled</p>		<p>Ha-VIS EtherRail® Cable</p>  <p>Ha-VIS EtherRail® Cat. 5 Flexible or ultra flexible cable 4-wire AWG 22/7 or AWG 22/19, Elastomer</p>	
<p>® RJ45</p>  <p>Han® PushPull SCRJ Panel feed-through plastic / metal IP 65 / IP 67</p>		<p>POF Cable</p>  <p>POF Cable Type B flexible, incidental movement or vibrations</p>	 <p>AIDA*</p>
<p>® RJ45</p>  <p>Han® 3 A RJ45 Hybrid Panel feed-through plastic / metal IP 65 / IP 67, Cat. 5</p>		 <p>Industrial Cat. 5 Hybrid Cable 4-wire AWG 22/7, stranded with 4x power supply, FRNC</p>	
<p>® RJ45</p>  <p>HARTING Cabinet Outlet RJ45 IP 20, Cat. 6</p>		<p>Typ B (for flexible layouts)</p>  <p>Industrial Cat. 5 Stranded Cable 4-wire AWG 22/7, stranded, PVC</p>	
<p>® RJ45</p>  <p>Han® PushPull RJ45 Panel feed-through plastic / metal IP 65 / IP 67, Cat. 6 Socket horizontal, vertical</p>  <p>Han® PushPull RJ45 Gender Changer IP 65 / IP 67, Cat. 6</p>		 <p>Industrial Cat. 5 Outdoor Cable 4-wire AWG 22/7, stranded, PVC</p>	
<p>® RJ45</p>  <p>Han® M12 D-coding Panel feed-through IP 65 / IP 67, Cat. 5 straight or angled</p>			

Gigabit Ethernet 1000 Mbit/s 8-pin

	Connectors	System Cable	
Inside IP 20 Protection Class	 <p>HARTING RJ Industrial® / HARTING RJ Industrial® 10G RJ45 Connector 8-pin IP 20, RJ45, Cat. 6</p>	 <p>HARTING RJ Industrial System Cable 8-wire IP 20, Cat. 5, flexible Industrial Ethernet Patchcable RJ45, 8-wire IP 20, Cat. 6 or Cat. 5, AV</p>	
	 <p>HARTING PushPull RJ45 / HARTING PushPull RJ45 10G Connector 8-pin IP 65 / IP 67, Cat. 6</p>	 <p>HARTING PushPull System Cable, flexible 8-wire IP 65 / IP 67, Cat. 6, flex</p>	
	 <p>Han® PushPull RJ45 / Han® PushPull RJ45 10G Connector 8-pin plastic / metal IP 65 / IP 67, Cat. 6</p>	 <p>Han® PushPull RJ45 System Cable 8-wire plastic / metal IP 65 / IP 67, Cat. 6</p>	
	 <p>Han® 3 A RJ45 / Han® 3 A RJ45 10G Connector 8-pin plastic / metal IP 65 / IP 67, Cat. 6</p>	 <p>Han® 3 A RJ45 System Cable 8-wire IP 65 / IP 67, Cat. 6, flex</p>	
	 <p>Han-Max® RJ45 / Han-Max® RJ45 10G Connector 8-pin IP 67, Cat. 6</p>		
Outside IP 65 / IP 67 Protection Class	 <p>han-speed M12 Connector 8-pin IP 67, Cat. 6A</p>	 <p>han-speed M12 System Cable 8-wire IP 67, Cat. 6</p>	
	 <p>Han® 3 A RJ45 Hybrid 10G Connector 8-pin plastic / metal IP 65 / IP 67, Cat. 6 with 4x power supply</p>	 <p>Han® 3 A RJ45 Hybrid System Cable 8-wire IP 65 / IP 67, Cat. 6, flex</p>	
	Ha-VIS preLink® HIFF and accessories	 <p>Ha-VIS preLink® HIFF Jack RJ45</p>	 <p>Ha-VIS preLink® System Cable 8-wire AWG 27/7</p>
		 <p>Ha-VIS preLink® RJ45 Keystone</p>	

Industrial Cabling

	Outlets and Panel feed-through	Cables
Industrial RJ45 8-wire AWG 26/7	 <p>HARTING Cabinet Outlet RJ45 IP 20, Cat. 6</p>	 <p>Industrial Cat. 6_A Stranded cable 8-wire AWG 26/7, stranded, PVC or PUR</p>
RJ45 Panel feed-through Cable	 <p>HARTING PushPull RJ45 10G Panel feed-through IP 65 / IP 67, Cat. 6</p>  <p>HARTING PushPull Outlet RJ45 IP 65 / IP 67, Cat. 6</p>	 <p>Industrial Cat. 6_A Outdoor Cable 8-wire AWG 26/7, stranded, PVC</p>
10G Panel feed-through	 <p>Han® PushPull RJ45 Panel feed-through plastic / metal IP 65 / IP 67, Cat. 6 Socket horizontal, vertical</p>	 <p>Industrial Cat. 5 Stranded cable 8-wire AWG 26/7, stranded, PUR</p>
Cable Panel feed-through	 <p>Han® 3 A RJ45 Panel feed-through IP 65 / IP 67, Cat. 6</p>  <p>Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 5</p>  <p>Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 6</p>	 <p>Industrial Cat. 5 Trailing Cable 8-wire AWG 26/19, PUR</p>
	 <p>Han-Max® Panel feed-through RJ45 IP 65 / IP 67, Cat. 5</p>	 <p>Industrial Cat. 5 Outdoor cable, 8-wire AWG 26/7, stranded, PVC</p>
Hybrid Cable	 <p>Han® 3 A RJ45 Hybrid Panel feed-through plastic / metal IP 65 / IP 67, Cat. 5</p>	 <p>Industrial Cat. 6 Hybrid Cable, 8-wire 4x power supply for fixed and flexible Installation AWG 28/7, PUR</p>
	 <p>Ha-VIS preLink® HIFF RJ45 AP Box IP 20, Cat. 6</p>  <p>Han® 3 A RJ45 Metal Outlet IP 65 / IP 67, Cat. 6</p>	 <p>Industrial Cat. 7 Installation Cable 8-wire for fixed Installation AWG 23/1, solid, PUR</p>

A large rectangular area filled with a fine yellow grid pattern, intended for taking notes.

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

RJ45

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

HARTING
PushPull

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender changer [on page B·1 48]

Han®
PushPull

Han® 3 A

- Connectors [on page B·1 62]
- System cables [on page B·1 64]
- Panel feed-throughs [on page B·1 68]
- Distribution modules and Outlets [on page B·1 74]

Han® 3 A

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 78]
- System cables [on page B·1 80]
- Panel feed-throughs [on page B·1 82]
- Cables [on page B·1 84]

Han® 3 A
Hybrid

M12 D-coding

- Connectors [on page B·1 86]
- System cables [on page B·1 88]
- Panel feed-throughs [on page B·1 94]

M12
D-coding

Cables

- Type A, B, C [on page B·1 98]
- Type B, Outdoor [on page B·1 101]
- Ha-VIS EtherRail® [on page B·1 102]

Cables

Tools

[on page B·1 106]

Tools

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Introduction

The chapter on „HARTING Ethernet Cabling – 4-wire” describes the complete HARTING product line for installing Ethernet cabling at machines, plants and production facilities in an industrial environment.

The product line includes:

- Four-wire cables for setting up flexible connections and for fixed installations.
- Connector components in IP 20 and IP 65 / IP 67 versions, designed for on-site assembly
- Assembled system cables in IP 20 and IP 65 / IP 67 versions
- Industrial outlets, Panel feed-throughs and adapters in IP 20 and IP 65 / IP 67 versions
- Accessories and tools

The four-wire cabling is specially designed for Ethernet transmission of data with a max. transmission rate of 100 Mbit/sec.

Data can be reliably transmitted at either 10 Mbit/sec. or 100 Mbit/sec., with the clear assignment of the four wires to the first, second, third and sixth contacts of the RJ45 connector.

This complies with the following specifications:

- 10 Mbit/sec. Ethernet, corresponding to 10Base-T
- 100 Mbit/sec. Ethernet, corresponding to 100Base-T (Fast Ethernet)

Cabling components based on the M12 D-coding system are also a part of the four-wire cable product line, since both RJ45 and M12 connectors are common in automation engineering.

In addition to IEEE 802.3 Ethernet, the following Ethernet-based Fieldbus applications, with or without real-time functionality, can be transmitted (not a complete listing):

- PROFINET (including PROFINET RT / real-time), according to IEC 61784-5-3
- EtherNet/IP
- Modbus/TCP
- Ethernet Powerlink
- SERCOS III

This type of cabling is driven by the progressive implementation of various Fieldbus systems on Ethernet platforms.

The special requirements placed on the cabling are often developed by manufacturing companies and user organizations. These requirements sometimes

contain specific characteristics for connecting applications and networks.

Withal these somewhat proprietary trends in development, there is also a movement towards international standardization, for example within the IEC SC65C committee. The key points, particularly for the field of cabling, are established in IEC 61918.

However the adoption of the ISO/IEC 24702 norm - for generic cabling in industrial buildings - ensures seamless communication between eight-wire building cabling and four-wire machinery-island cabling.

Essentially, all Ethernet-based Fieldbus systems are running on standard-compliant eight-wire cables, according to ISO/IEC 24702 Category 5 /Class D, or higher.

HARTING’s four-wire cabling components are specified, developed and manufactured in technical compliance with the established requirements mentioned above.

Thus Harting provides the operator with a complete line of cabling products - products which are specially tailored to the requirements of Ethernet-based Fieldbus systems.

An overview of the advantages of four-wire cabling:

- PROFINET compliant cabling infrastructure - can be used for all PROFINET functions and conformance classes.
- Supports all safety features and real-time requirements of PROFINET.
- Can be extended and integrated to existing PROFINET infrastructures without difficulty.
- Compliance with the AIDA Directive (Automation Initiative of German Domestic Automobile Manufacturers) facilitates roll-outs within the automotive industry.
- The use of PROFINET compliant connectors reduces product variety and simplifies the purchasing and storage of components.
- Special solutions for simultaneous (hybrid) and separate transmission of power supplies extend the functionality of the network.
- Superior quality of the cabling system guarantees long life span and high operational reliability.
- Simple and convenient planning, installation and reliable operation of the network save costs and deliver a high ROI.
- The PROFINET cabling system is a part of HARTING’s AUTOMATION IT network solution – all solutions coming from one source.

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding

- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

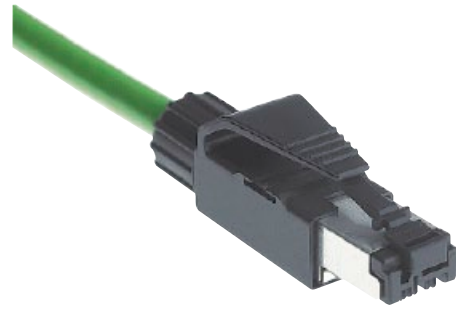
Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail [on page B·1 100]

Tools

[on page B·1 104]

Connector sets



HARTING RJ Industrial®
Connector set, 4-pole
to make up RJ45 system cables

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according 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
Wire termination	Via IDC contacts, tool-less
Cable options	Suitable for solid and stranded cores
– Strand gauge	AWG 24/7 ... AWG 22/7 (stranded) AWG 23/1 ... AWG 22/1 (solid)
– Strand diameter	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)
– Cable sheath diameter	6.1 ... 6.9 mm
Degree of protection	IP 20
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages	<p>RJ45 Ethernet-Data connector suitable for industry</p> <p>Tool-less field-assembly with <i>HARAX</i>® rapid termination in IDC technology</p> <p>Compact design</p> <p>Ergonomical unlocking clip</p> <p>Less weight assures shock- and vibration-resisting connection</p> <p>Category of transmission Cat. 5</p> <p>Suitable for termination of solid and stranded cables</p> <p>Up to 10x reductable</p> <p>PROFINET compliant</p>
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Identification

Part number

Drawing

Dimensions in mm

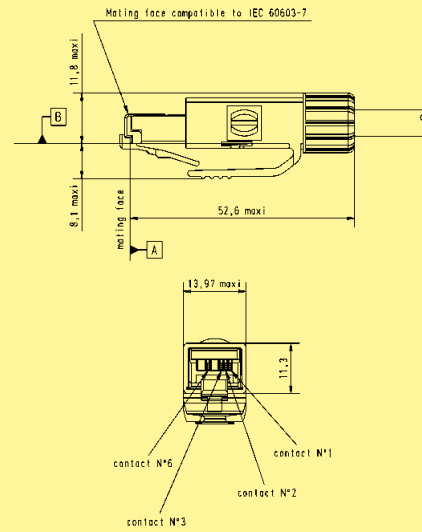
HARTING RJ Industrial®
Connector set, 4-pole
 for AWG 24 ... AWG 22
 great package with 100 pieces

 for AWG 26

 Set consists of:
 Housing including shielding
 splice element
 Cable gland
 Assembly instructions

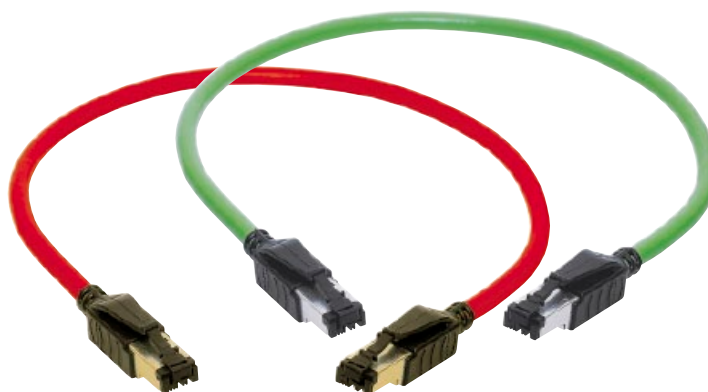
09 45 151 1100
 09 45 151 1108

 09 45 151 1109



System cables

HARTING RJ Industrial®
 System cable, 4-wire, straight
 RJ45 connection cable for control or distributor cabinets or within controllers



RJ45

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types RJ45, overmoulded

Cable types

Cable type	Type A	Type B	Type C
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C
Application PROFINET	Green	Green	Green
Application SERCOS III		Red	Red

Wiring	4-pole, 1:1 (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Advantages	Robust industrial design Available also as Multiport version for especially space-critical port configurations on switches or devices PROFINET compliant SERCOS III compliant

Identification	Part number			
	Standard	Multiport	SERCOS III	
HARTING RJ Industrial® System cable, 4-wire Type A Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	09 45 771 0023	09 47 343 4006		
	09 45 771 0025	09 47 343 4009		
	09 45 771 0027	09 47 343 4012		
	09 45 771 0051	09 47 343 4018		
	09 45 771 0053	09 47 343 4020		
HARTING RJ Industrial® System cable, 4-wire Type B Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	09 45 771 1123	09 47 343 4034	09 47 020 2003 018	
	09 45 771 1125	09 47 343 4037	09 47 020 2005 018	
	09 45 771 1127	09 47 343 4040	09 47 020 2007 018	
	09 45 771 1151	09 47 343 4046	09 47 020 2012 018	
	09 45 771 1153	09 47 343 4048	09 47 020 2014 018	
HARTING RJ Industrial® System cable, 4-wire Type C Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	09 45 771 1164	09 47 343 4090	09 47 020 2023 018	
	09 45 771 1166	09 47 343 4093	09 47 020 2025 018	
	09 45 771 1168	09 47 343 4096	09 47 020 2027 018	
	09 45 771 1173	09 47 343 4102	09 47 020 2032 018	
	09 45 771 1175	09 47 343 4104	09 47 020 2034 018	

System cables



HARTING RJ Industrial®
System cable, 4-wire, straight

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

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types RJ45, overmoulded

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring	4-pole, 1:1 (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	0.5 m / 1 m / 1.5 m / 2 m / 3 m / 5 m other lengths available on request
Advantages	Robust industrial design For especially space-saving cabling PROFINET compliant

RJ45

Identification

Part number

HARTING RJ Industrial®
System cable, angled,
4-wire

one side pre-assembled,
second side open
Type A

Length 1.5 m	09 45 771 0064
Length 3.0 m	09 45 771 0066
Length 5.0 m	09 45 771 0068
Length 10.0 m	09 45 771 0073
Length 20.0 m	09 45 771 0075

HARTING RJ Industrial®
System cable, angled,
4-wire

one side pre-assembled,
second side open
Type B

Length 1.5 m	09 45 771 0123
Length 3.0 m	09 45 771 0125
Length 5.0 m	09 45 771 0127
Length 10.0 m	09 45 771 0151
Length 20.0 m	09 45 771 0153

HARTING RJ Industrial®
System cable, angled,
4-wire

one side pre-assembled,
second side open
Type C

Length 1.5 m	09 45 771 0164
Length 3.0 m	09 45 771 0166
Length 5.0 m	09 45 771 0168
Length 10.0 m	09 45 771 0173
Length 20.0 m	09 45 771 0175

HARTING RJ Industrial®
System cable, angled,
4-wire

one side pre-assembled,
second side open
Outdoor

Length 1.5 m	09 45 771 0102
Length 3.0 m	09 45 771 0104
Length 5.0 m	09 45 771 0106
Length 10.0 m	09 45 771 0111
Length 20.0 m	09 45 771 0113

System cables



HARTING RJ Industrial®
System cable, 4-wire, angled

RJ45 connection cable, angled left to angled right,
for control or distributor cabinets or within controllers

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types RJ45, overmoulded

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring	4-pole, 1:1 (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	0.5 m / 1 m / 1.5 m / 2 m / 3 m / 5 m other lengths available on request
Advantages	Robust industrial design For especially space-saving cabling PROFINET compliant

RJ45

B-1
14

Identification

Part number

HARTING RJ Industrial®
System cable, angled,
4-wire

Type A,
angled left to angled right

Length 0.5 m	09 47 050 6001
Length 1.0 m	09 47 050 6002
Length 1.5 m	09 47 050 6003
Length 2.0 m	09 47 050 6004
Length 3.0 m	09 47 050 6005
Length 5.0 m	09 47 050 6007

HARTING RJ Industrial®
System cable, angled,
4-wire

Type B,
angled left to angled right

Length 0.5 m	09 47 050 6023
Length 1.0 m	09 47 050 6024
Length 1.5 m	09 47 050 6025
Length 2.0 m	09 47 050 6026
Length 3.0 m	09 47 050 6027
Length 5.0 m	09 47 050 6029

HARTING RJ Industrial®
System cable, angled,
4-wire

Type C,
angled left to angled right

Length 0.5 m	09 47 050 6045
Length 1.0 m	09 47 050 6046
Length 1.5 m	09 47 050 6047
Length 2.0 m	09 47 050 6048
Length 3.0 m	09 47 050 6049
Length 5.0 m	09 47 050 6051

HARTING RJ Industrial®
System cable, angled,
4-wire

Outdoor,
angled left to angled right

Length 0.5 m	09 47 050 6067
Length 1.0 m	09 47 050 6068
Length 1.5 m	09 47 050 6069
Length 2.0 m	09 47 050 6070
Length 3.0 m	09 47 050 6071
Length 5.0 m	09 47 050 6073

System cables

HARTING RJ Industrial® System cable, 4-wire, angled

RJ45 connection cable, angled top to angled bottom,
for control or distributor cabinets or within controllers



RJ45

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types RJ45, overmoulded

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring	4-pole, 1:1 (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	0.5 m / 1 m / 1.5 m / 2 m / 3 m / 5 m other lengths available on request
Advantages	Robust industrial design For especially space-saving cabling PROFINET compliant

Identification

Part number

HARTING RJ Industrial®
System cable, angled,
4-wire

Type A,
angeld top to angled bottom

Length 0.5 m	09 47 030 4001
Length 1.0 m	09 47 030 4002
Length 1.5 m	09 47 030 4003
Length 2.0 m	09 47 030 4004
Length 3.0 m	09 47 030 4005
Length 5.0 m	09 47 030 4007

HARTING RJ Industrial®
System cable, angled,
4-wire

Type B,
angeld top to angled bottom

Length 0.5 m	09 47 030 4023
Length 1.0 m	09 47 030 4024
Length 1.5 m	09 47 030 4025
Length 2.0 m	09 47 030 4026
Length 3.0 m	09 47 030 4027
Length 5.0 m	09 47 030 4029

HARTING RJ Industrial®
System cable, angled,
4-wire

Type C,
angeld top to angled bottom

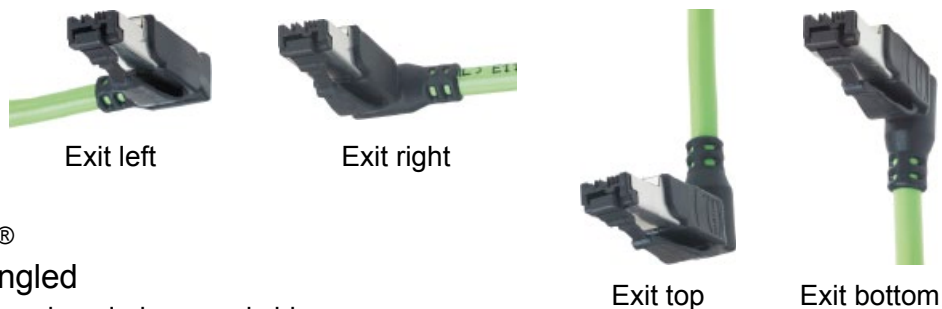
Length 0.5 m	09 47 030 4045
Length 1.0 m	09 47 030 4046
Length 1.5 m	09 47 030 4047
Length 2.0 m	09 47 030 4048
Length 3.0 m	09 47 030 4049
Length 5.0 m	09 47 030 4051

HARTING RJ Industrial®
System cable, angled,
4-wire

Outdoor,
angeld top to angled bottom

Length 0.5 m	09 47 030 4067
Length 1.0 m	09 47 030 4068
Length 1.5 m	09 47 030 4069
Length 2.0 m	09 47 030 4070
Length 3.0 m	09 47 030 4071
Length 5.0 m	09 47 030 4073

System cables



HARTING RJ Industrial® System cable, 4-wire, angled

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

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types RJ45, overmoulded, one side pre-assembled

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring First end 4-pole, (RJ45 contacts 1/2 and 3/6), other side open

Transmission performance Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1

Transmission rate 10/100 Mbit/s

Shielding Fully shielded, 360° shielding contact

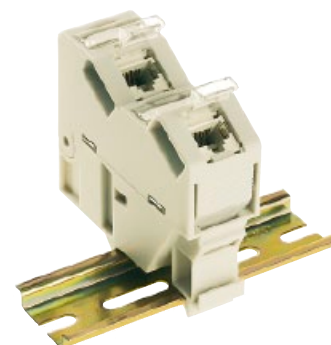
Standard lengths 0.5 m / 1 m / 1.5 m / 2 m / 3 m / 5 m other lengths available on request

Advantages

Robust industrial design
 For especially space-saving cabling
 Exact length can be customised
 HARTING RJ Industrial® connector (09 45 151 1100) as ideal completion
 PROFINET compliant

Identification	Part number angled left	angled right	angled top	angled bottom	
HARTING RJ Industrial® System cable angled, 4-wire one side pre-assembled, second side open Type A	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
HARTING RJ Industrial® System cable angled, 4-wire one side pre-assembled, second side open Type B	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
HARTING RJ Industrial® System cable angled, 4-wire one side pre-assembled, second side open Type C	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
HARTING RJ Industrial® System cable angled, 4-wire one side pre-assembled, second side open Outdoor	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

Distribution modules and Outlets



HARTING Cabinet Outlet RJ45, 8-poles
RJ45 distribution module for IP 20 environments (top-hat rail mounting)

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / RJ45 (Twisted Pair)
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminated without special tools
Strand diameter	AWG 24 ... 22 (0.5 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	6 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	To 35 mm top-hat mounting rail acc. to DIN EN 60 715, alignable
Dimensions (H x W x D)	82 x 28.4 x 74 mm
Degree of protection	IP 20
Operating temperature range	-20 °C ... +70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	Grey
Advantages	<ul style="list-style-type: none"> Simple mounting Cable entering optionally from bottom or from top side Dust protection caps Port identification Angled outputs

Identification	Part number	Drawing	Dimensions in mm
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HARTING Cabinet Outlet RJ45 consisting of: 2-port housing with dust protection caps and labels 2x RJ45 female module, Cat. 6 Assembly instructions	20 76 102 8000		
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RJ45

B-1
20

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding

- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail [on page B·1 100]

Tools

[on page B·1 104]

Connector sets



HARTING PushPull RJ45
 Connector set, 4-pole
 to make up HARTING PushPull system cables RJ45

HARTING PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	HARTING PushPull RJ45 connector acc. to ISO/IEC 24 702, variant 4
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according 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
Wire termination	via IDC contacts, tool-less
Cable options	
– Strand gauge	AWG 24/7 ... AWG 22/7 (stranded) AWG 23/1 ... AWG 22/1 (solid)
– Strand diameter	max. 1.6 mm
– Cable sheath diameter	4.9 ... 8.6 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide and polycarbonate, UL94 V-0
Colour	Black

Advantages	Tool-less field-assembly with <i>HARAX</i> ® rapid termination in IDC technology Suitable for termination of solid and stranded cables Up to 10x reductable Space-saving IP 65 / IP 67 interface Easy handling IP 65 / IP 67 standard interface for structured cabling in buildings according to ISO/IEC 24 702 respectively EN 50 173-3
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Identification

Part number

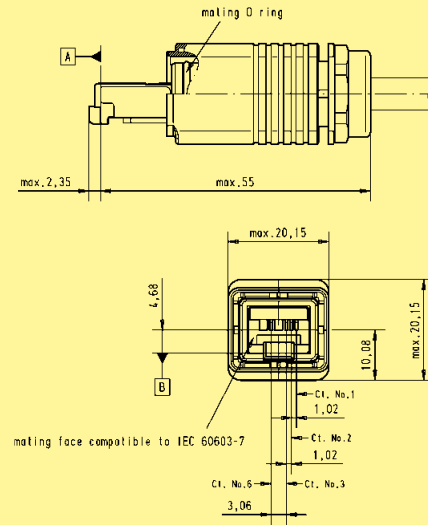
Drawing

Dimensions in mm

HARTING PushPull RJ45 Connector set, 4-pole

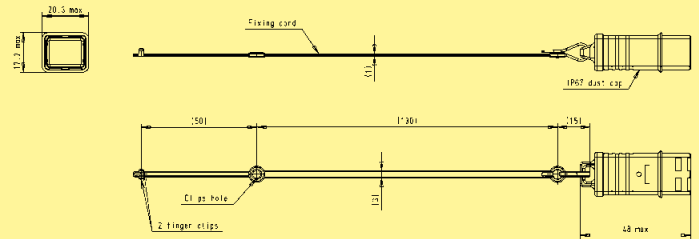
09 45 145 1100

Set consists of:
 PushPull housing with RJ45 connector and shielding
 Cable gland
 Assembly instructions



Protection cover for PushPull connectors

09 45 845 0010



System cables



HARTING PushPull RJ45

System cable, 4-wire

RJ45 connection cable, PushPull screwed, for IP 65 / IP 67 applications

HARTING
PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types HARTING PushPull RJ45

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring	4-poles (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Advantages	Space-saving IP 65 / IP 67 interface Easy handling IP 65 / IP 67 standard interface for structured cabling in buildings according to ISO/IEC 24 702 respectively EN 50 173-3

Identification

Part number

HARTING PushPull RJ45
System cable, 4-wire
Type A

Length 1.5 m	09 45 745 1123
Length 3.0 m	09 45 745 1125
Length 5.0 m	09 45 745 1127
Length 10.0 m	09 45 745 1151
Length 20.0 m	09 45 745 1153

HARTING PushPull RJ45
System cable, 4-wire
Type B

Length 1.5 m	09 45 745 1164
Length 3.0 m	09 45 745 1166
Length 5.0 m	09 45 745 1168
Length 10.0 m	09 45 745 1173
Length 20.0 m	09 45 745 1175

HARTING PushPull RJ45
System cable, 4-wire
Type C

Length 1.5 m	09 45 745 0023
Length 3.0 m	09 45 745 0025
Length 5.0 m	09 45 745 0027
Length 10.0 m	09 45 745 0051
Length 20.0 m	09 45 745 0053

HARTING PushPull RJ45
System cable, 4-wire
Outdoor

Length 1.5 m	09 45 745 0064
Length 3.0 m	09 45 745 0066
Length 5.0 m	09 45 745 0068
Length 10.0 m	09 45 745 0073
Length 20.0 m	09 45 745 0075

System cables



HARTING PushPull RJ45

System cable, 4-wire

RJ45 connection cable, PushPull, overmoulded, for IP 65 / IP 67 applications

HARTING
PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types HARTING PushPull RJ45, overmoulded

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring	4-poles (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Advantages	<ul style="list-style-type: none"> Space-saving IP 65 / IP 67 interface Protected cable duct via overmoulding Easy handling IP 65 / IP 67 standard interface for structured cabling in buildings according to ISO/IEC 24 702 respectively EN 50 173-3

Identification

Part number

HARTING PushPull RJ45
System cable, 4-wire
Type A

Length 1.5 m	09 47 363 6003
Length 3.0 m	09 47 363 6005
Length 5.0 m	09 47 363 6007
Length 10.0 m	09 47 363 6012
Length 20.0 m	09 47 363 6014

HARTING PushPull RJ45
System cable, 4-wire
Type B

Length 1.5 m	09 47 363 6025
Length 3.0 m	09 47 363 6027
Length 5.0 m	09 47 363 6029
Length 10.0 m	09 47 363 6034
Length 20.0 m	09 47 363 6036

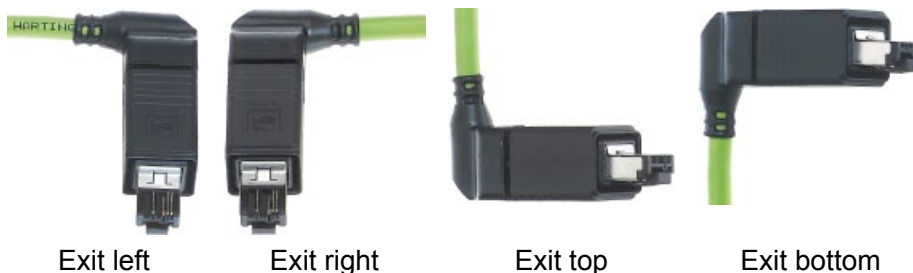
HARTING PushPull RJ45
System cable, 4-wire
Type C

Length 1.5 m	09 47 363 6047
Length 3.0 m	09 47 363 6049
Length 5.0 m	09 47 363 6051
Length 10.0 m	09 47 363 6056
Length 20.0 m	09 47 363 6058

HARTING PushPull RJ45
System cable, 4-wire
Outdoor

Length 1.5 m	09 47 363 6069
Length 3.0 m	09 47 363 6071
Length 5.0 m	09 47 363 6073
Length 10.0 m	09 47 363 6078
Length 20.0 m	09 47 363 6080

System cables



HARTING PushPull RJ45
System cable, angled,
4-wire

RJ45 connection cable, PushPull, for IP 65 / IP 67 applications,
first end angled, second side open,

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types HARTING PushPull RJ45, overmoulded, angled,
one side pre-assembled

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring 4-poles (RJ45 contacts 1/2 and 3/6)

Transmission performance Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1

Transmission rate 10/100 Mbit/s

Shielding Fully shielded, 360° shielding contact

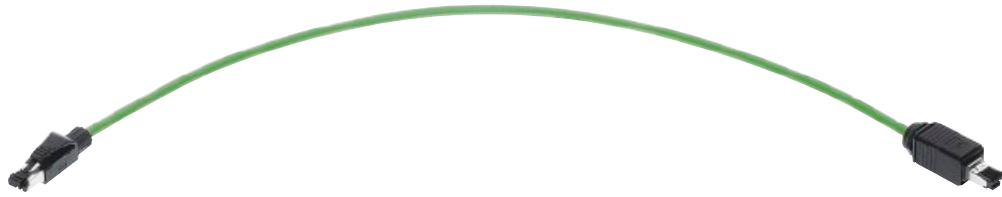
Standard lengths 1.5 m / 3 m / 5 m / 10 m / 20 m
other lengths available on request

Advantages

- Robust cable duct via overmoulding
- For especially space-saving cabling
- Exact length can be customised
- HARTING RJ Industrial® connector (09 45 151 1100) as ideal completion
- IP 65 / IP 67 standard interface for structured cabling in buildings according to ISO/IEC 24 702 respectively EN 50 173-3

Identification	Part number angled left	angled right	angled top	angled bottom
HARTING PushPull RJ45 System cable, angled, 4-wire one side pre-assembled, second side open Type A Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	09 47 390 0003 09 47 390 0005 09 47 390 0007 09 47 390 0012 09 47 390 0014	09 47 400 0003 09 47 400 0005 09 47 400 0007 09 47 400 0012 09 47 400 0014	09 47 370 0003 09 47 370 0005 09 47 370 0007 09 47 370 0012 09 47 370 0014	09 47 380 0003 09 47 380 0005 09 47 380 0007 09 47 380 0012 09 47 380 0014
HARTING PushPull RJ45 System cable, angled, 4-wire one side pre-assembled, second side open Type B Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	09 47 390 0025 09 47 390 0027 09 47 390 0029 09 47 390 0034 09 47 390 0036	09 47 400 0025 09 47 400 0027 09 47 400 0029 09 47 400 0034 09 47 400 0036	09 47 370 0025 09 47 370 0027 09 47 370 0029 09 47 370 0034 09 47 370 0036	09 47 380 0025 09 47 380 0027 09 47 380 0029 09 47 380 0034 09 47 380 0036
HARTING PushPull RJ45 System cable, angled, 4-wire one side pre-assembled, second side open Type C Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	09 47 390 0047 09 47 390 0049 09 47 390 0051 09 47 390 0056 09 47 390 0058	09 47 400 0047 09 47 400 0049 09 47 400 0051 09 47 400 0056 09 47 400 0058	09 47 370 0047 09 47 370 0049 09 47 370 0051 09 47 370 0056 09 47 370 0058	09 47 380 0047 09 47 380 0049 09 47 380 0051 09 47 380 0056 09 47 380 0058
HARTING PushPull RJ45 System cable, angled, 4-wire one side pre-assembled, second side open Outdoor Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	09 47 390 0069 09 47 390 0071 09 47 390 0073 09 47 390 0078 09 47 390 0080	09 47 400 0069 09 47 400 0071 09 47 400 0073 09 47 400 0078 09 47 400 0080	09 47 370 0069 09 47 370 0071 09 47 370 0073 09 47 370 0078 09 47 370 0080	09 47 380 0069 09 47 380 0071 09 47 380 0073 09 47 380 0078 09 47 380 0080

System cables



HARTING PushPull RJ45
System cable, 4-wire
RJ45 connection cable, PushPull, to RJ45 IP 20

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types HARTING PushPull RJ45 and RJ45 IP 20

Cable types

Cable type	Type A	Type B	Type C
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C
Application PROFINET	Green	Green	Green

Wiring	4-poles (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Advantages	Space-saving IP 65 / IP 67 interface Easy change-over from harsh industrial environment to protected IP 20 environment Easy handling for all applications

HARTING PushPull

Identification

Part number

HARTING PushPull RJ45
System cable, 4-wire
Type A

Length 1.5 m	09 45 701 1123
Length 3.0 m	09 45 701 1125
Length 5.0 m	09 45 701 1127
Length 10.0 m	09 45 701 1151
Length 20.0 m	09 45 701 1153

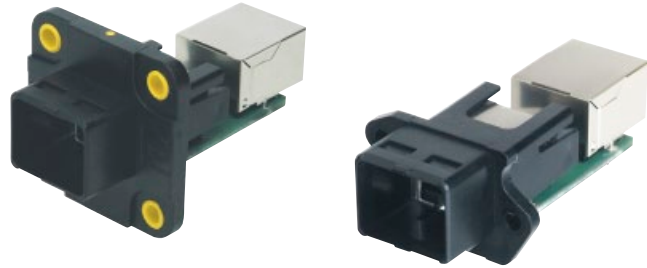
HARTING PushPull RJ45
System cable, 4-wire
Type B

Length 1.5 m	09 45 701 1164
Length 3.0 m	09 45 701 1166
Length 5.0 m	09 45 701 1168
Length 10.0 m	09 45 701 1173
Length 20.0 m	09 45 701 1175

HARTING PushPull RJ45
System cable, 4-wire
Type C

Length 1.5 m	09 45 701 0023
Length 3.0 m	09 45 701 0025
Length 5.0 m	09 45 701 0027
Length 10.0 m	09 45 701 0051
Length 20.0 m	09 45 701 0053

Panel feed-throughs



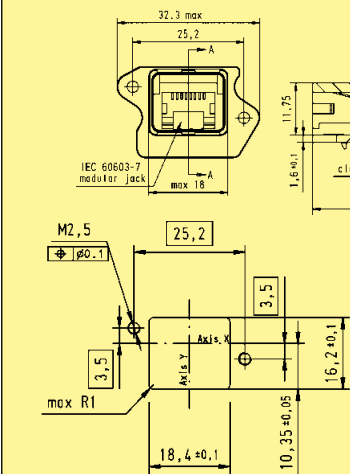
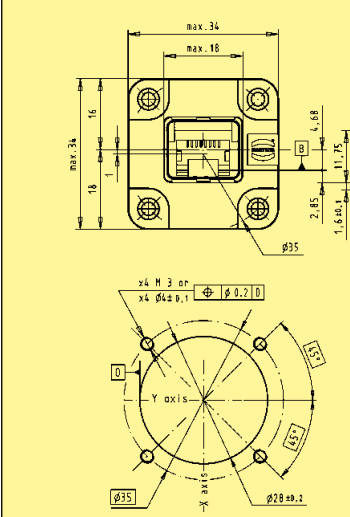
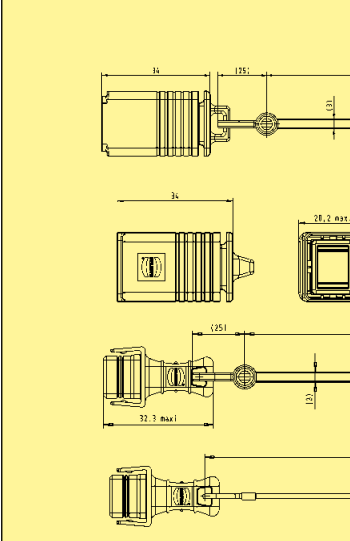

HARTING PushPull RJ45 Panel feed-through, 8-poles

RJ45 Panel feed-through for control or distributor cabinets

HARTING
PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x RJ45 (IP 20) 1x HARTING PushPull RJ45 (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	21 mm x 27 mm (Compact) ø 28 ... 30 mm (EasyInstall)
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polycarbonate, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Metallic
Advantages	<p>Small, space-saving PushPull interface with IP 65 / IP 67</p> <p>Easy handling of RJ45 system cables in the control cabinet</p> <p>Mounting to casings</p> <p>Category of transmission Cat. 5</p> <p>IP 65 / IP 67 standard interface for structured cabling in buildings according to ISO/IEC 24 702 respectively EN 50 173-3</p>

Identification	Part number	Drawing	Dimensions in mm
<p>HARTING PushPull RJ45 Compact Panel feed-through plastic</p> <p>consisting of: Housing bulkhead mounting Compact including flat gasket 2x RJ45 female module mounted on PCB Assembly instructions board drillings for M2.5</p>	09 45 245 1102	 <p>IEC 60603-7 modulator jack max 18</p> <p>19.2 max 15.7 max 13.2 after screwing 3.6 11l 11.75 1.6 max 1 clearance min 4.15 (2) 45 max 2.85 4.68 7.45 14.9 max 20.5 max</p> <p>M2,5 $\text{H}\ \text{Ø}0.1$ 25,2 3,5 3,5 max R1 16,2 ±0,1 10,35 ±0,05 18,4 ±0,1</p> <p>panel cut out</p>	
<p>HARTING PushPull RJ45 EasyInstall Panel feed-through plastic</p> <p>metal</p> <p>consisting of: Housing bulkhead mounting Easy Install including integrated seal RJ45 female module mounted on PCB Assembly instructions board drillings for M3</p>	09 45 245 1130 09 45 292 1130	 <p>max 34 max 16 max 34 16 18 max 19,55 max 16,2 0,8 to 10 mm Panel thickness 13,2 6 11,75 4,68 2,85 1,6 max 1 max 43,8 7,45 max 14,9 4</p> <p>$\text{H}\ \text{Ø}0.2 \ 0$ x4 M 3 or x4 $\text{H}\ \text{Ø}4 \ 0,1$ 16,5 65° Y axis X axis Ø28 ±0,2 Ø35</p> <p>panel cut out</p>	
<p>Protection cover IP 65 / IP 67, with fixing ring</p> <p>Version with active locking and plastic strap for fixing screw M3</p> <p>Version with active locking without fixing screw</p> <p>Version with passive locking and plastic strap for fixing screw M3</p> <p>Version with passive locking and Nylon strap for fixing screw M2,5 / M3</p>	09 45 845 0014 09 45 845 0015 09 45 845 0009 09 45 845 0011 024	 <p>34 125 180 183.1 Hole for M3 screw for panel fixing 17.45 15.7 16.05 19.3 16 19.3</p> <p>28.2 max 17.1 max</p> <p>125 186 183.1 Hole for M3 screw for panel fixing 17.45 max 15 max</p> <p>130 17.45 max 18 max</p>	
<p>Transport protection for housing bulkhead mounting, IP 40</p>	09 45 845 0003	 <p>max 16,2 16,05 max 19,3 max 16 max 19,3</p> <p>max 10</p>	

Distribution modules and Outlets

HARTING PushPull RJ45 Outlet, 8-poles
 RJ45 Industrial Outlet for IP 65 / IP 67 environments



HARTING PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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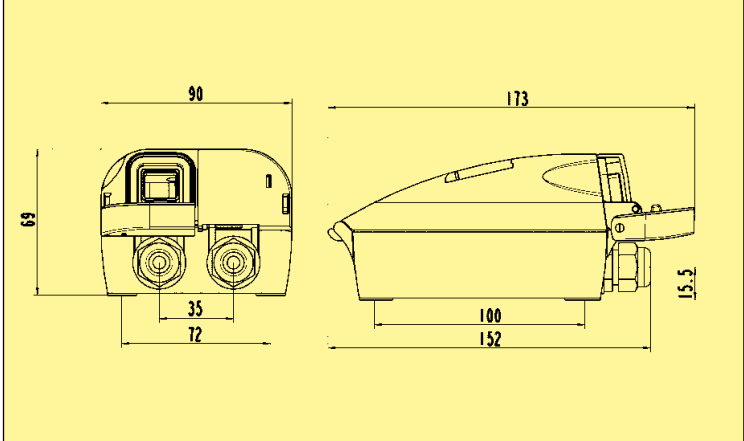
Number of ports, Copper / Termination	2 / HARTING PushPull RJ45 (IP 65 / IP 67)
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminated without special tools
Strand diameter	AWG 24 ... 22 (0.5 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	6 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	Wall mounting
Dimensions (H x W x D)	152 x 90 x 69 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-20 °C ... +70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	Black (similar RAL 9011) or White (similar RAL 9010)
Advantages	Simple mounting Cable entering optionally from bottom or from top side Self-closing protection caps in IP 65 / IP 67 IP 65 / IP 67 label

Identification	Part number	Drawing	Dimensions in mm
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HARTING PushPull RJ45 Outlet
 Black
 white

consisting of:
 2-port outlet housing with protection caps, cable management, cable glands and label
 2x RJ45 female modules, Category 6
 1x blind plug (if only one cable is used)
 Assembly instructions

09 45 845 1500
 09 45 845 1501



IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding

- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail [on page B·1 100]

Tools

[on page B·1 104]

Connector sets

Han® PushPull RJ45
 Connector set, 4-pole, plastic
 to make up Han® PushPull system cables RJ45



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector acc. to ISO/IEC 24 702
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according 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
Wire termination	Via IDC contacts, tool-less
Cable options	Suitable for solid and stranded cores
– Strand gauge	AWG 24/7 ... AWG 22/7 (stranded) AWG 23/1 ... AWG 22/1 (solid)
– Strand diameter	max. 1.6 mm
– Cable sheath diameter	5 ... 9.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages
 Field-assembly connector, IP 65 / IP 67
 Category of transmission Cat. 5

Mounting information
 Tool-less field-assembly with *HARAX*® rapid termination in IDC technology
 Up to 10x reconductable
 PROFINET compliant
 AIDA compliant

Identification	Part number	Drawing	Dimensions in mm
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Han® PushPull RJ45 connector set
Plastic

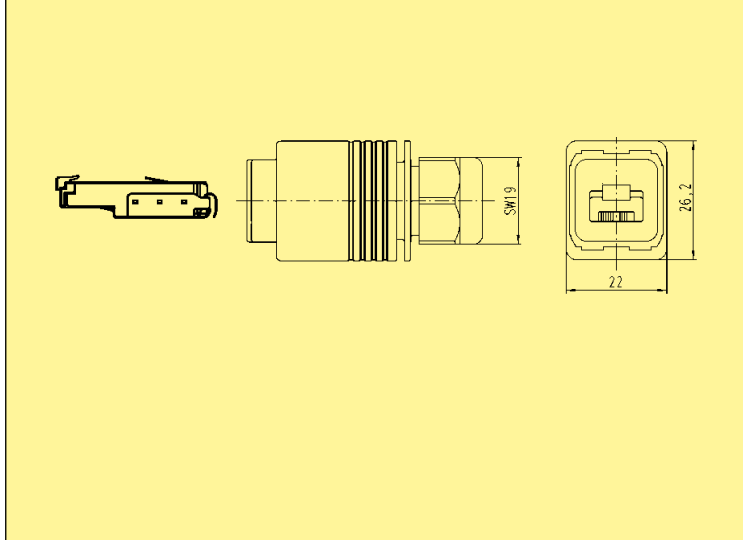
Set consists of:
 PushPull housing with male insert HARTING RJ Industrial® Category 5, 4-pole, IDC contact and shielding
 Cable gland
 Assembly instructions

6.5 ... 9.5 mm clamp range

5 ... 8 mm clamp range

09 35 221 0421

09 35 222 0421

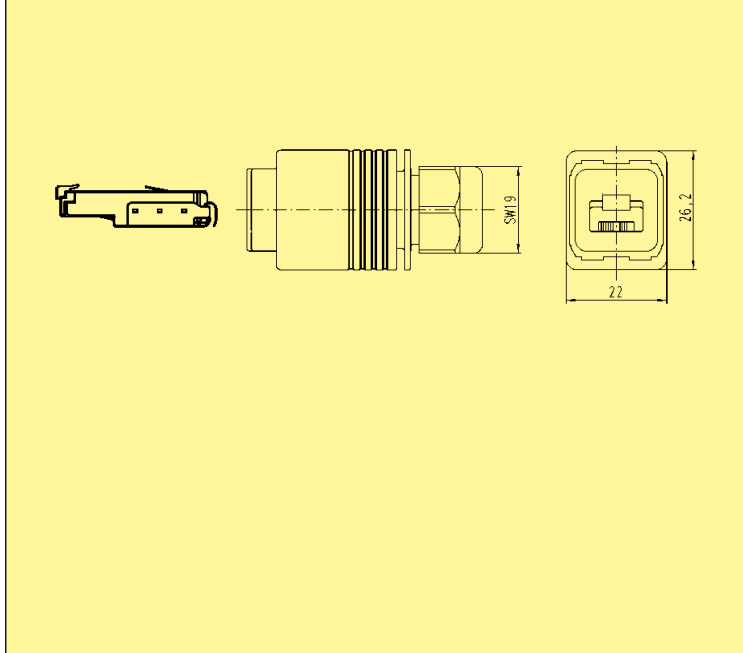


Han® PushPull RJ45 PN connector set
Plastic

Set consists of:
 PushPull housing with male insert HARTING RJ Industrial® Category 5, 4-pole, IDC contact and shielding
 Cable gland
 Assembly instructions

6.5 ... 9.5 mm clamp range
 PROFINET identification:
 PROFINET O-Plug RJ45

09 35 226 0421



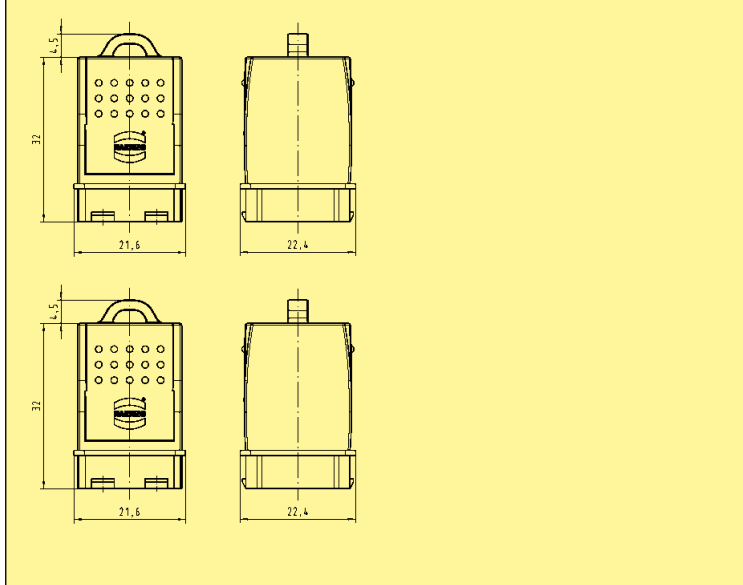
Protection Cover

IP 65 / IP 67

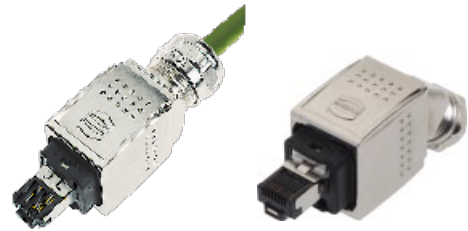
IP 40

09 35 002 5411

09 35 002 5412



Connector sets



Han® PushPull RJ45
 Connector set, 4-pole, metal
 to make up Han® PushPull RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector acc. to ISO/IEC 24 702
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according 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
Wire termination	Via IDC contacts, tool-less
Cable options	Suitable for solid and stranded cores
– Strand gauge	AWG 24/7 ... AWG 22/7 (stranded) AWG 23/1 ... AWG 22/1 (solid)
– Strand diameter	max. 1.6 mm
– Cable sheath diameter	4 ... 11 mm (straight) 6.5 ... 9.5 mm (angled)
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast
Colour	Nickel-plated

Advantages Field-assembly connector, IP 65 / IP 67
 Category of transmission Cat. 5

Mounting information Tool-less field-assembly with *HARAX*® rapid termination in IDC technology
 Up to 10x reconductable
 PROFINET compliant
 AIDA compliant

Han® PushPull

Identification	Part number	Drawing	Dimensions in mm
<p>Han® PushPull RJ45 connector set, metal</p> <p>Set consists of: PushPull housing with male insert HARTING RJ Industrial® Category 5, 4-pole, IDC contact and shielding Cable gland Assembly instructions</p> <p>4 ... 11 mm clamp range straight entry</p>	<p>09 35 221 0401</p>		
<p>Han® PushPull RJ45 PN connector set, metal</p> <p>Set consists of: PushPull housing with male insert HARTING RJ Industrial® PN Category 5, 4-pole, IDC contact and shielding Cable gland Assembly instructions</p> <p>4 ... 11 mm clamp range straight entry PROFINET identification: PROFINET O-Plug RJ45</p> <p>Set consists of: PushPull housing with male insert HARTING RJ Industrial® PN Category 5, 4-pole, IDC contact and shielding Cable gland Assembly instructions</p> <p>clamp range 6.5 ... 9.5 mm angled entry, bottom</p>	<p>09 35 226 0401</p>		
<p>Set consists of: PushPull housing with male insert HARTING RJ Industrial® PN Category 5, 4-pole, IDC contact and shielding Cable gland Assembly instructions</p> <p>clamp range 6.5 ... 9.5 mm angled entry, top</p>	<p>09 35 226 0402</p>	<p>Gesamtlänge montiert ca. 77 complete assembled ca. 77</p> <p>22,5</p> <p>28 ca. 37</p> <p>45°</p> <p>Dichtung für Kabeldurchmesser 6,5-9,5mm sealing for cable-diameter 6,5-9,5mm</p> <p>SW17</p>	
<p>Protection Cover</p> <p>IP 65 / IP 67</p>	<p>09 35 002 5411</p>		

Connector sets

Han® PushPull Connector set
 SCRJ, plastic
 to make up Han® PushPull system cables SCRJ



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® PushPull SCRJ connector according to IEC 61 754-24
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of fibres	2
Transmission performance	Depends on the fibre type used
Fibre types	Glass fibre MM 50 / 125 µm and 62.5 / 125 µm Glass fibre SM 10 / 125 µm POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm
Mounting	Field-assembly via SC contacts
Cable options	
– Cable sheath diameter	6.5 ... 9.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black
Advantages	Field-assembly F.O. connector, IP 65 / IP 67 PROFINET compliant AIDA compliant

Han® PushPull

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

Identification	Part number	Drawing	Dimensions in mm
<p>Han® PushPull SCRJ Connector set Plastic</p> <p>Set consists of: PushPull housing with SCRJ feeding Cable gland Assembly instructions SC POF¹⁾ contact 1 mm PROFINET identification: PROFINET O-Plug SCRJ</p>	<p>09 35 241 0421</p>		
<p>Set consists of: PushPull housing with SCRJ feeding Cable gland Assembly instructions</p>	<p>09 35 241 0422</p>		
<p>SC contacts order separately</p>			
<p>Set consists of: housing IP 20 with SCRJ feeding SC POF¹⁾ contact 1 mm</p>	<p>09 35 002 4002</p>		
<p>Contacts</p> <p>SC POF¹⁾ contact, 1 mm SC 125 GI contact SC 230 HCS^{®2)} contact</p>	<p>20 10 001 5217 20 10 125 5211 20 10 230 5211</p>		

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

Connector sets



Han® PushPull SCRJ
 Connector set, metal
 to make up Han® PushPull SCRJ system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® PushPull SCRJ connector according to IEC 61 754-24
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of fibres	2
Transmission performance	Depends on the fibre type used
Fibre types	Glass fibre MM 50 / 125 µm and 62.5 / 125 µm Glass fibre SM 10 / 125 µm POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm
Mounting	Field-assembly via SC contacts
Cable options	
– Cable sheath diameter	6.5 ... 9.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast
Colour	Nickel-plated
Advantages	Field-assembly F.O. connector, IP 65 / IP 67 PROFINET compliant AIDA compliant

Han® PushPull

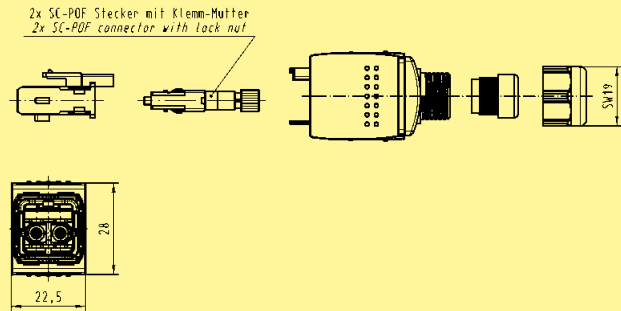
¹⁾ POF = Polymer-Optical Fibre
²⁾ HCS® = Hard Clad Silica (registered trademark of SpecTran Corporation)

Identification	Part number	Drawing	Dimensions in mm
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Han® PushPull SCRJ Connector set Metal

Set consists of:
 PushPull housing with SCRJ feeding
 Cable gland
 Assembly instructions
 SC POF¹⁾ contact 1 mm
 PROFINET identification:
 PROFINET O-Plug SCRJ

09 35 241 0401



Set consists of:
 PushPull housing with SCRJ feeding
 Cable gland
 Assembly instructions

09 35 241 0402

Order SC contacts separately

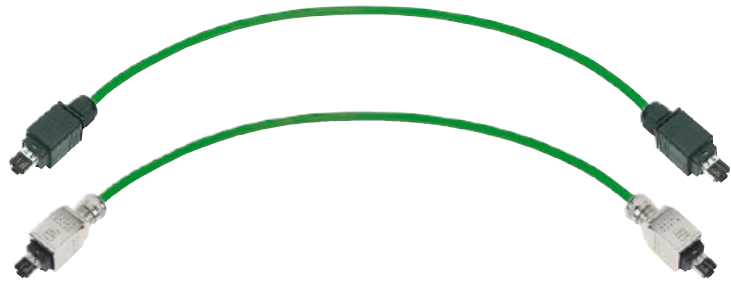
Contacts

SC POF¹⁾ contact, 1 mm
 SC 125 GI contact
 SC 230 HCS²⁾ contact

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

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

System cables



Han® PushPull RJ45
System cable, 4-wire

RJ45 connection cable, Han® PushPull, for IP 65 / IP 67 applications

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types Han® PushPull RJ45

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring	4-poles (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Advantages	Space-saving IP 65 / IP 67 interface AIDA compliant PROFINET compliant Easy handling

Han® PushPull

Identification	Part number		
	Plastic version	Metal version	Metal, overmoulded
Han® PushPull RJ45 System cable, 4-wire Type A			
Length 1.5 m	09 47 555 5003	09 47 565 6003	09 47 565 7003
Length 3.0 m	09 47 555 5005	09 47 565 6005	09 47 565 7005
Length 5.0 m	09 47 555 5007	09 47 565 6007	09 47 565 7007
Length 10.0 m	09 47 555 5012	09 47 565 6012	09 47 565 7012
Length 20.0 m	09 47 555 5014	09 47 565 6014	09 47 565 7014
Han® PushPull RJ45 System cable, 4-wire Type B			
Length 1.5 m	09 47 555 5033	09 47 565 6033	09 47 565 7033
Length 3.0 m	09 47 555 5035	09 47 565 6035	09 47 565 7035
Length 5.0 m	09 47 555 5037	09 47 565 6037	09 47 565 7037
Length 10.0 m	09 47 555 5042	09 47 565 6042	09 47 565 7042
Length 20.0 m	09 47 555 5044	09 47 565 6044	09 47 565 7044
Han® PushPull RJ45 System cable, 4-wire Type C			
Length 1.5 m	09 47 555 5063	09 47 565 6063	09 47 565 7063
Length 3.0 m	09 47 555 5065	09 47 565 6065	09 47 565 7065
Length 5.0 m	09 47 555 5067	09 47 565 6067	09 47 565 7067
Length 10.0 m	09 47 555 5072	09 47 565 6072	09 47 565 7072
Length 20.0 m	09 47 555 5074	09 47 565 6074	09 47 565 7074
Han® PushPull RJ45 System cable, 4-wire Outdoor			
Length 1.5 m	09 47 555 5093	09 47 565 6093	09 47 565 7093
Length 3.0 m	09 47 555 5095	09 47 565 6095	09 47 565 7055
Length 5.0 m	09 47 555 5097	09 47 565 6097	09 47 565 7097
Length 10.0 m	09 47 555 5102	09 47 565 6102	09 47 565 7102
Length 20.0 m	09 47 555 5104	09 47 565 6104	09 47 565 7104

System cables



Han® PushPull SCRJ System cable

SCRJ connection cable, Han® PushPull, for IP 65 / IP 67 applications

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types Han® PushPull SCRJ

Cable types

Cable type	Type B
Cables	for indoor applications
Fibre type	polymere fibre
Sheath material	PUR
Single strand diameter	2.2 mm
Sheath diameter	7.8 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Application PROFINET	Green

Standard lengths 1 m / 2 m / 5 m / 10 m / 20 m
other lengths available on request

Advantages Space-saving IP 65 / IP 67 interface
AIDA compliant
PROFINET compliant
Easy handling

Han® PushPull

Identification	Part number	
	Plastic version	Metal version
Han® PushPull SCRJ System cable both sides pre-assembled, SCRJ connectors IP 20 to IP 20 Length 1.0 m Length 2.0 m Length 5.0 m Length 10.0 m Length 20.0 m	33 02 211 0010 001 33 02 211 0020 001 33 02 211 0050 001 33 02 211 0100 001 33 02 211 0200 001	
Han® PushPull SCRJ System cable one side pre-assembled, SCRJ connector IP 20 to open Length 1.0 m Length 2.0 m Length 5.0 m Length 10.0 m Length 20.0 m	33 02 111 0010 001 33 02 111 0020 001 33 02 111 0050 001 33 02 111 0100 001 33 02 111 0200 001	
Han® PushPull SCRJ System cable both sides pre-assembled, SCRJ connectors IP 65 / IP 67 to IP 20 Length 1.0 m Length 2.0 m Length 5.0 m Length 10.0 m Length 20.0 m	33 53 411 0010 001 33 53 411 0020 001 33 53 411 0050 001 33 53 411 0100 001 33 53 411 0200 001	33 53 411 0010 002 33 53 411 0020 002 33 53 411 0050 002 33 53 411 0100 002 33 53 411 0200 002
Han® PushPull SCRJ System cable both sides pre-assembled, SCRJ connectors IP 65 / IP 67 to IP 65 / IP 67 Length 1.0 m Length 2.0 m Length 5.0 m Length 10.0 m Length 20.0 m	33 53 211 0010 001 33 53 211 0020 001 33 53 211 0050 001 33 53 211 0100 001 33 53 211 0200 001	33 53 211 0010 002 33 53 211 0020 002 33 53 211 0050 002 33 53 211 0100 002 33 53 211 0200 002
Han® PushPull SCRJ System cable one side pre-assembled, SCRJ connector IP 65 / IP 67 to open Length 1.0 m Length 2.0 m Length 5.0 m Length 10.0 m Length 20.0 m	33 53 111 0010 001 33 53 111 0020 001 33 53 111 0050 001 33 53 111 0100 001 33 53 111 0200 001	33 53 111 0010 002 33 53 111 0020 002 33 53 111 0050 002 33 53 111 0100 002 33 53 111 0200 002

Panel feed through



Han® PushPull RJ45
Panel feed through, plastic

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector acc. to ISO/IEC 24 702
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact (Cat. 6)
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black
Advantages	Device integration via RJ45 PCB connectors PROFINET compliant AIDA compliant

Han® PushPull

Identification

Part number

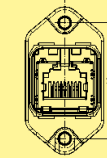
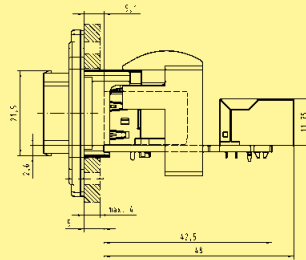
Drawing

Dimensions in mm

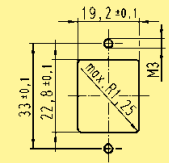
Han® PushPull RJ45
Panel feed through

including housing and
printed board
with 2 x RJ45 jack
horizontally mounted

09 35 221 0331

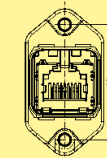
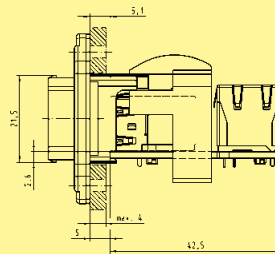


Panel cut out

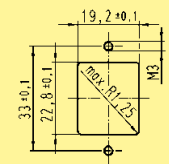


including housing and
printed board
with RJ45 jack and
RJ45 jack vertically mounted
in the IP 20 range

09 35 223 0331

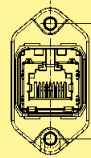
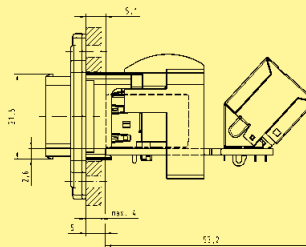


Panel cut out

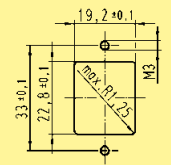


including housing and
printed board
with RJ45 jack and
47° jack vertically mounted
in the IP 20 range

09 35 224 0331

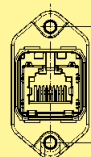
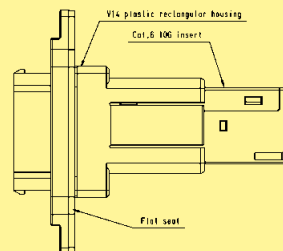


Panel cut out

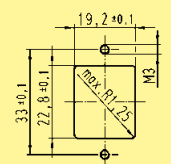


including housing and
bulkhead Cat. 6
with 2 RJ45 jacks
horizontally mounted
in the IP 20 range

09 35 225 0331



Panel cut out



Panel feed through



Han® PushPull RJ45
Panel feed through, metal

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector acc. to ISO/IEC 24 702
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1 Category 6 / Class E _A suitable for 1 / 10 Gigabit Ethernet
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact (Cat. 6)
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast
Colour	Nickel-plated
Advantages	Device integration via RJ45 PCB connectors PROFINET compliant AIDA compliant

Identification

Part number

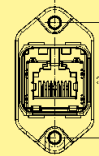
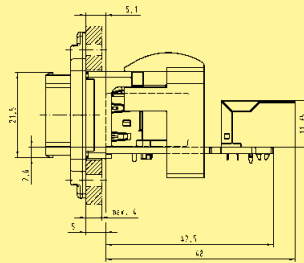
Drawing

Dimensions in mm

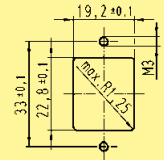
Han® PushPull RJ45 Panel feed through

including housing and
printed board
with 2 x RJ45 jack
horizontally mounted

09 35 221 0311

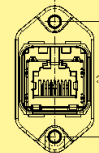
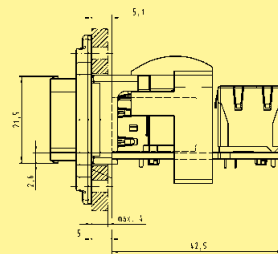


Panel cut out

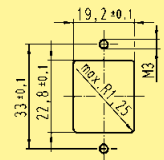


including housing and
printed board
with RJ45 jack and
RJ45 jack vertically mounted
in the IP 20 range

09 35 223 0311

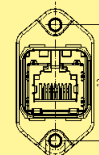
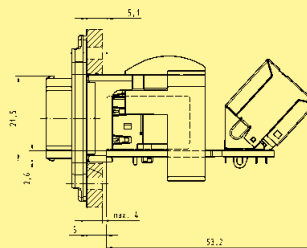


Panel cut out

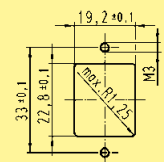


including housing and
printed board
with RJ45 jack and
47° jack vertically mounted
in the IP 20 range

09 35 224 0311

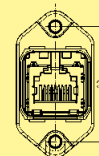
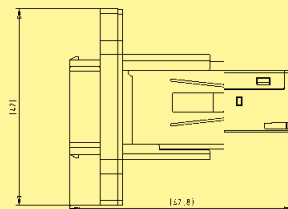


Panel cut out

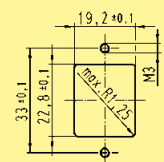


including housing and
bulkhead Cat. 6
with 2 x RJ45 jacks
horizontally mounted
in the IP 20 range

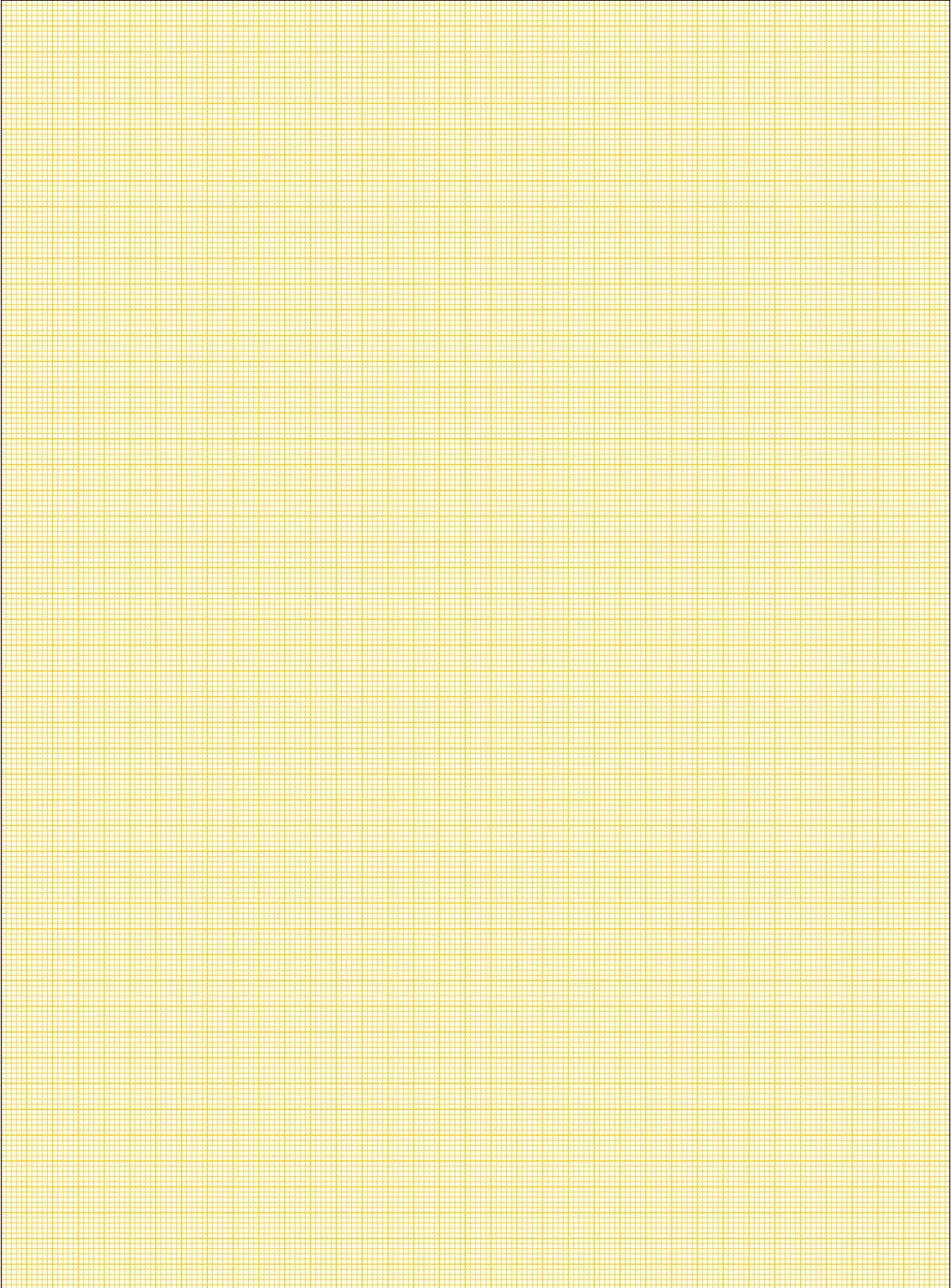
09 35 225 0311



Panel cut out



Identification	Part number	Drawing	Dimensions in mm
<p>Han® PushPull RJ45 Panel feed through</p> <p>including bulkhead housing for circular panel cut out, flat seal and HARTING RJ Industrial® 10G RJ45 bulkhead, isolated bulkhead fixture</p> <p>to mount HIFF inserts (e.g. HARTING RJ Industrial® 10G RJ45 coupler or Ha-VIS preLink® RJ45 module) including bulkhead housing for rectangular panel cut out, incl. plastic adapter Order inserts separately</p> <p>to mount HIFF inserts (e.g. HARTING RJ Industrial® 10G RJ45 coupler or Ha-VIS preLink® RJ45 module) including bulkhead housing for circular panel cut out, incl. plastic adapter and fixing nut Order inserts separately</p>	<p>09 35 225 0312</p> <p>09 35 012 0311</p> <p>09 35 012 0312</p>	<p>Panel cut out</p>	<p>Panel cut out dimensions: 19,2 ± 0,1; 33 ± 0,1; 27,8 ± 0,1; M3; 100x111,25</p>
<p>Patch cord 1.5 mm² for potential equalization between RJ45 insert and bulkhead housing</p> <p>with 2 x flat receptacle</p> <p>with flat receptacle and ring terminal M3</p>	<p>09 45 500 0001</p> <p>09 45 500 0002</p>	<p>2x isolated flat receptacle type 2,6x0,8mm</p> <p>1x wire stranded 1,5sqmm yellow-green</p> <p>1x isolated flat receptacle type 2,6x0,8mm</p> <p>1x wire stranded 1,5sqmm yellow-green</p> <p>1x ring terminal M3</p>	
<p>Ha-VIS preLink® Set RJ45 female AWG 22/23</p> <p>consists of:</p> <ul style="list-style-type: none"> • 1x Ha-VIS preLink® module RJ45 female • 1x Ha-VIS preLink® termination block • 1x cable clip 	<p>20 82 001 0001</p>		



Panel feed through



Han® PushPull SCRJ
Panel feed through, plastic

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® PushPull SCRJ connector according to IEC 61 754-24
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of fibres	2
Transmission performance	Depends on the fibre type used
Fibre types	Glass fibre MM 50 / 125 µm and 62.5 / 125 µm Glass fibre SM 10 / 125 µm POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black
Advantages	Han® PushPull SCRJ for POF ¹⁾ is according the requirements of AIDA (German Domestic Automobile Manufacturers) PROFINET compliant AIDA compliant

Han® PushPull

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

Identification

Part number

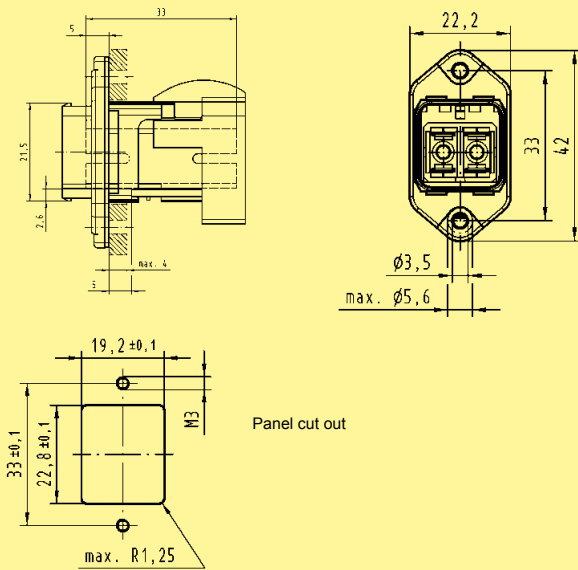
Drawing

Dimensions in mm

Han® PushPull SCRJ
Panel feed through

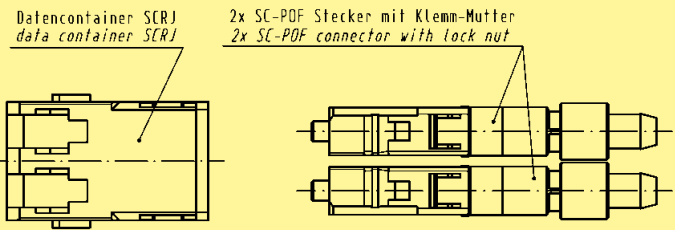
Panel feed through

09 35 242 0333



SCRJ IP 20
POF connector

09 35 002 4002



Contacts

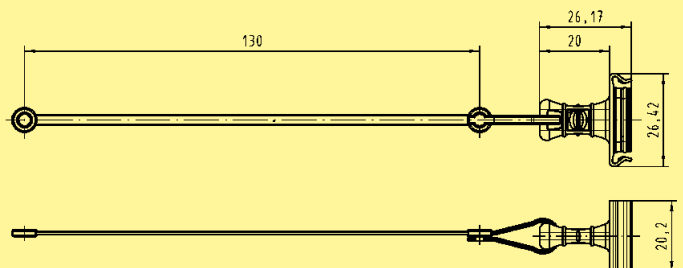
SC POF¹⁾ contact, 1 mm
SC 125 GI contact
SC 230 HCS²⁾ contact

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

Protection Cover

with cord IP 65 / IP 67

09 35 002 5402



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

Panel feed through



Han® PushPull SCRJ
Panel feed through, metal

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® PushPull SCRJ connector according to IEC 61 754-24
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of fibres	2
Transmission performance	Depends on the fibre type used
Fibre types	Glass fibre MM 50 / 125 µm and 62.5 / 125 µm Glass fibre SM 10 / 125 µm POF ¹⁾ 1 mm HCS ²⁾ 200 µm / 230 µm
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast
Colour	Nickel-plated
Advantages	Han® PushPull SCRJ for POF ¹⁾ is according the requirements of AIDA (German Domestic Automobile Manufacturers) PROFINET compliant AIDA compliant

¹⁾ POF = Polymer-Optical Fibre

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

Gender Changer



Han® PushPull RJ45
Gender Changer, metal

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector acc. to ISO/IEC 24 702
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Mounting	Surface mounting with 4 screws type M5
Operating temperature range	-20 °C ... +70 °C
Housing material	Aluminium, anodised
Advantages	Extension of Han® PushPull system cable RJ45 Robust design AIDA compliant Only one connection according to PROFINET guideline

Han® PushPull

Identification

Part number

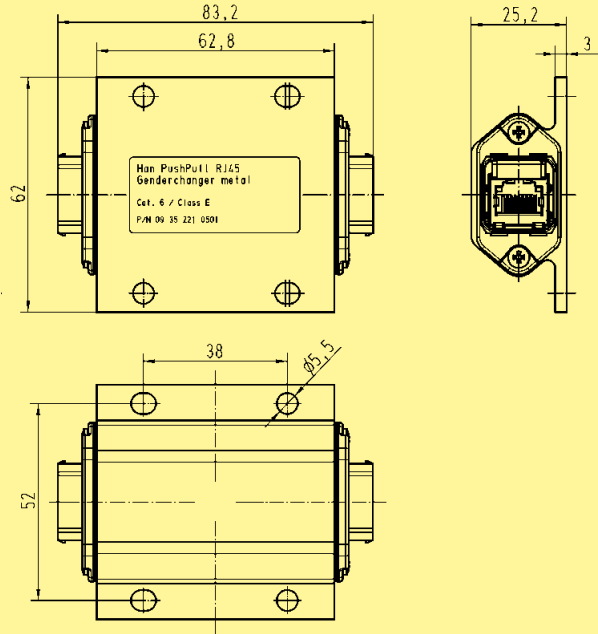
Drawing

Dimensions in mm

Han® PushPull RJ45
Gender Changer, metal

including housing and
printed board
with 2x RJ45 jack

09 35 221 0501



IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding

- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

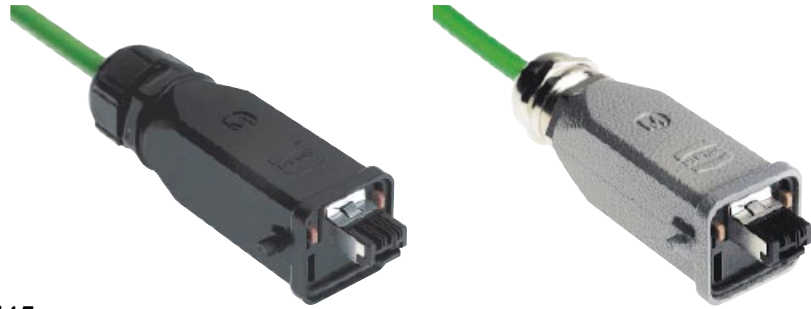
Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail [on page B·1 100]

Tools

[on page B·1 104]

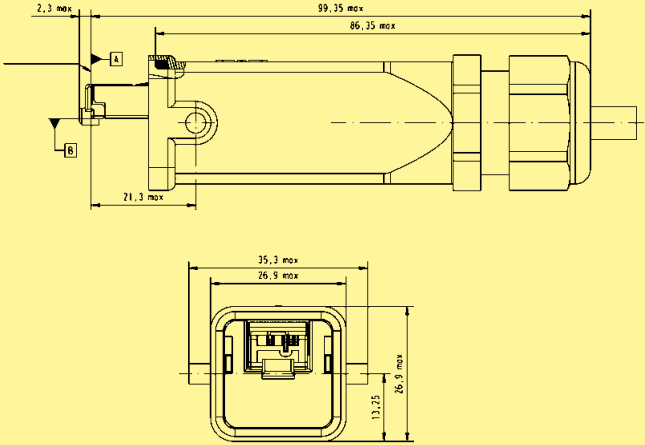
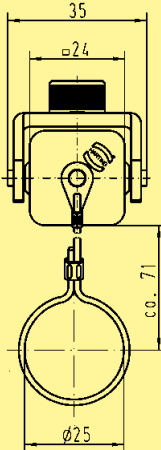
Connector sets



Han® 3 A RJ45
Connector set, 4-pole
to make up Han® 3 A system cables RJ45

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® 3 A RJ45 connector acc. to IEC 61 918
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according 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
Wire termination	Via IDC contacts, tool-less
Cable options	
– Strand gauge	AWG 24/7 ... AWG 22/7 (stranded) AWG 23/1 ... AWG 22/1 (solid)
– Strand diameter	max. 1.6 mm
– Cable sheath diameter	5 ... 9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	<p>Tool-less field-assembly with <i>HARAX</i>® rapid termination in IDC technology</p> <p>Category of transmission Cat. 5</p> <p>Coding possible</p> <p>Up to 10x reductable</p> <p>PROFINET compliant</p>

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 Connector set, 4-pole</p> <p>Plastic version straight style angled style</p> <p>Metal version Standard straight style angled style</p> <p>Metal version M straight style angled style</p> <p>Set consists of: Han® 3 A housing including RJ45 connector and shielding Cable gland Assembly instructions</p>	<p>09 45 125 1100 09 45 125 1104</p> <p>09 45 115 1100 09 45 115 1104</p> <p>09 45 115 1102 09 45 115 1106</p>	 <p>Dimensions valid for straight Plastic version</p>	
<p>Protection cover for Han® 3 A connector</p> <p>Plastic version Metal version Standard Metal version M</p>	<p>09 20 003 5442 09 20 003 5422 09 37 003 5402</p>	 <p>Dimensions valid for Plastic version</p>	
<p>Set of coding pins</p>	<p>09 46 820 0000</p>		

System cables



Han® 3 A RJ45
System cable, 4-wire

Han® 3 A RJ45 connection cable for harsh industrial environments

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types Han® 3 A RJ45 metal

Cable types

Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable	Copper, stranded, shielded
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C	-45 °C ... +60 °C
Application PROFINET	Green	Green	Green	Black

Wiring 4-poles, 1:1 (RJ45 contacts 1/2 and 3/6)

Transmission performance Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1

Transmission rate 10/100 Mbit/s

Shielding Fully shielded, 360° shielding contact

Standard lengths 1.5 m / 3 m / 5 m / 10 m / 20 m
other lengths available on request

Advantages

- Robust design
- Use on-site made possible by IP 65 / IP 67 protection
- Easy handling for all applications
- PROFINET compliant

Identification

Part number

Han® 3 A RJ45
System cable, 4-wire
Type A

Length 1.5 m	09 45 715 1123
Length 3.0 m	09 45 715 1125
Length 5.0 m	09 45 715 1127
Length 10.0 m	09 45 715 1151
Length 20.0 m	09 45 715 1153

Han® 3 A RJ45
System cable, 4-wire
Type B

Length 1.5 m	09 45 715 1164
Length 3.0 m	09 45 715 1166
Length 5.0 m	09 45 715 1168
Length 10.0 m	09 45 715 1173
Length 20.0 m	09 45 715 1175

Han® 3 A RJ45
System cable, 4-wire
Type C

Length 1.5 m	09 45 715 0023
Length 3.0 m	09 45 715 0025
Length 5.0 m	09 45 715 0027
Length 10.0 m	09 45 715 0051
Length 20.0 m	09 45 715 0053

Han® 3 A RJ45
System cable, 4-wire
Outdoor

Length 1.5 m	09 45 715 0064
Length 3.0 m	09 45 715 0066
Length 5.0 m	09 45 715 0068
Length 10.0 m	09 45 715 0073
Length 20.0 m	09 45 715 0075

System cables

Han® 3 A RJ45 System cable, 4-wire

Han® 3 A RJ45 connection cable for harsh industrial environments, change-over to IP 20



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types Han® 3 A RJ45 metal (IP 65 / IP 67) / RJ45 (IP 20)

Cable types

Cable type	Type A	Type B	Type C
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, useable as trailing cable
Wire gauge	4 x AWG 22/1	4 x AWG 22/7	4 x AWG 22/7
Sheath material	PVC	PVC	PUR
Operating temperature range	-40 °C ... +70 °C	-40 °C ... +70 °C	-40 °C ... +70 °C
Application PROFINET	Green	Green	Green

Wiring	4-pole, 1:1 (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request

Advantages	<ul style="list-style-type: none"> Robust design Easy change-over from harsh industrial environment to protected IP 20 environment Easy handling for all applications PROFINET compliant
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Identification

Part number

Han® 3 A RJ45
System cable, 4-wire
Type A

Length 1.5 m	09 45 700 1123
Length 3.0 m	09 45 700 1125
Length 5.0 m	09 45 700 1127
Length 10.0 m	09 45 700 1151
Length 20.0 m	09 45 700 1153

Han® 3 A RJ45
System cable, 4-wire
Type B

Length 1.5 m	09 45 700 1164
Length 3.0 m	09 45 700 1166
Length 5.0 m	09 45 700 1168
Length 10.0 m	09 45 700 1173
Length 20.0 m	09 45 700 1175

Han® 3 A RJ45
System cable, 4-wire
Type C

Length 1.5 m	09 45 700 0023
Length 3.0 m	09 45 700 0025
Length 5.0 m	09 45 700 0027
Length 10.0 m	09 45 700 0051
Length 20.0 m	09 45 700 0053

Panel feed-throughs



Han® 3 A RJ45
 Panel feed-through, 8-poles, Cat. 5
 RJ45 Panel feed-through for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (IP 20)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	<ul style="list-style-type: none"> Simple mounting RJ45 plug-compatible Different versions cover all applications Coding possible PROFINET compliant

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 Panel feed-through</p> <p>Plastic version straight style angled style</p> <p>Accessories IP 65 / IP 67 protection cap for Panel feed-through</p>	<p>09 45 225 1100 09 45 225 1108</p> <p>09 20 003 5445</p>		
<p>Han® 3 A RJ45 Panel feed-through</p> <p>Metal version Standard straight style straight style including self-closing protection cap angled style</p> <p>Accessories IP 65 / IP 67 protection cap for Panel feed-through</p>	<p>09 45 215 1100 09 45 215 1103 09 45 215 1108</p> <p>09 20 003 5425</p>	<p>panel cut out</p>	<p>Dimensions valid for straight Plastic version</p>
<p>Han® 3 A RJ45 Panel feed-through</p> <p>Metal version M straight style angled style</p> <p>Accessories IP 65 / IP 67 protection cap for Panel feed-through</p>	<p>09 45 215 1102 09 45 215 1109</p> <p>09 37 003 5405</p>		<p>Dimensions valid for Plastic version</p>
<p>Accessories Set of coding pins</p>	<p>09 45 820 0000</p>		

Panel feed-throughs



Han® 3 A RJ45 10G
 Panel feed-through, 8-poles
 RJ45 Panel feed-through for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (Twisted Pair) (IP 20)
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	<ul style="list-style-type: none"> Simple mounting RJ45 plug-compatible Various versions cover all applications Coding possible PROFINET compliant

Han® 3 A

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 10G Panel feed-through Plastic version straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 225 1560</p> <p>09 20 003 5445</p>		
<p>Han® 3 A RJ45 10G Panel feed-through Metal version Standard straight style</p> <p>straight style including self-closing protection cap</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1560</p> <p>09 45 215 1562</p> <p>09 20 003 5425</p>		
<p>Han® 3 A RJ45 10G Panel feed-through Metal version M straight style</p>	<p>09 45 215 1561</p>		
<p>Han® 3 A RJ45 10G insert</p> <p>for Han® 3 A housings</p>	<p>09 45 200 1560</p>		
<p>Accessories Set of coding pins</p>	<p>09 45 820 0000</p>		

Panel feed-throughs



Han® 3 A RJ45
 Double-coupling, 8-poles
 RJ45 double-coupling for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	<ul style="list-style-type: none"> Simple mounting RJ45 plug-compatible Different versions cover all applications Coding possible PROFINET compliant

Identification	Part number	Drawing	Dimensions in mm
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Han® 3 A RJ45 double-coupling

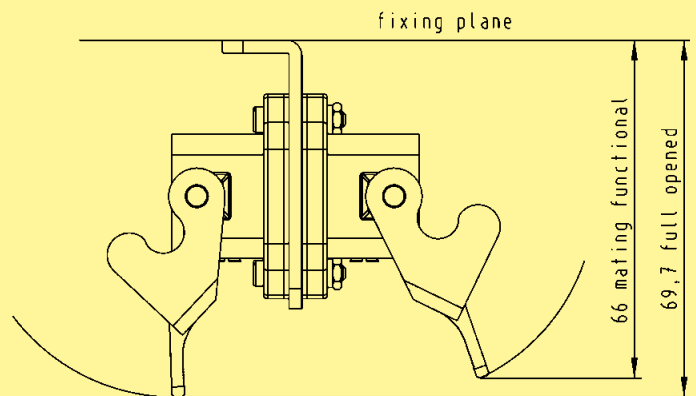
Plastic version

09 45 225 1107

Accessories

IP 65 / IP 67 protection cap for Panel feed-through

09 20 003 5445



Dimensions valid for Plastic version

Han® 3 A RJ45 double-coupling

Metal version Standard

09 45 215 1107

Accessories

IP 65 / IP 67 protection cap for Panel feed-through

09 20 003 5425

Han® 3 A RJ45 double-coupling

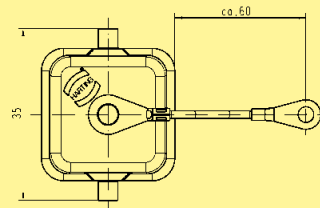
Metal version M

09 45 215 1110

Accessories

IP 65 / IP 67 protection cap for Panel feed-through

09 37 003 5405



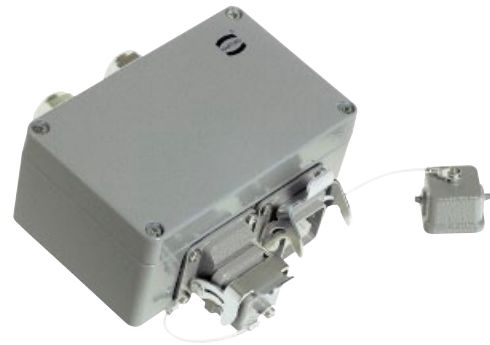
Dimensions valid for Plastic version

Accessories

Set of coding pins

09 45 820 0000

Distribution modules and Outlets



Han® 3 A RJ45
Metal Outlet, Cat. 6, 8-poles
RJ45 Industrial Outlet for IP 65 / IP 67 environments

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminated without special tools
Strand diameter	AWG 24 ... 22 (0.5 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	5 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	Wall mounting
Dimensions (H x W x D)	125 x 80 x 57.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-20 °C ... +70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037
Advantages	<ul style="list-style-type: none"> Robust metal housing for use in harsh industrial environments Simple mounting Lockable Han® 3 A connector ports PROFINET compliant

Identification	Part number	Drawing	Dimensions in mm
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<p>Han® 3 A RJ45 Metal Outlet, Cat. 6</p> <p>consisting of: 2-port metal housing with protection caps and cable glands 2x RJ45 female module, Cat. 6 Assembly instructions</p>	<p>20 79 302 0922</p>		
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Han® 3 A

Distribution modules and Outlets



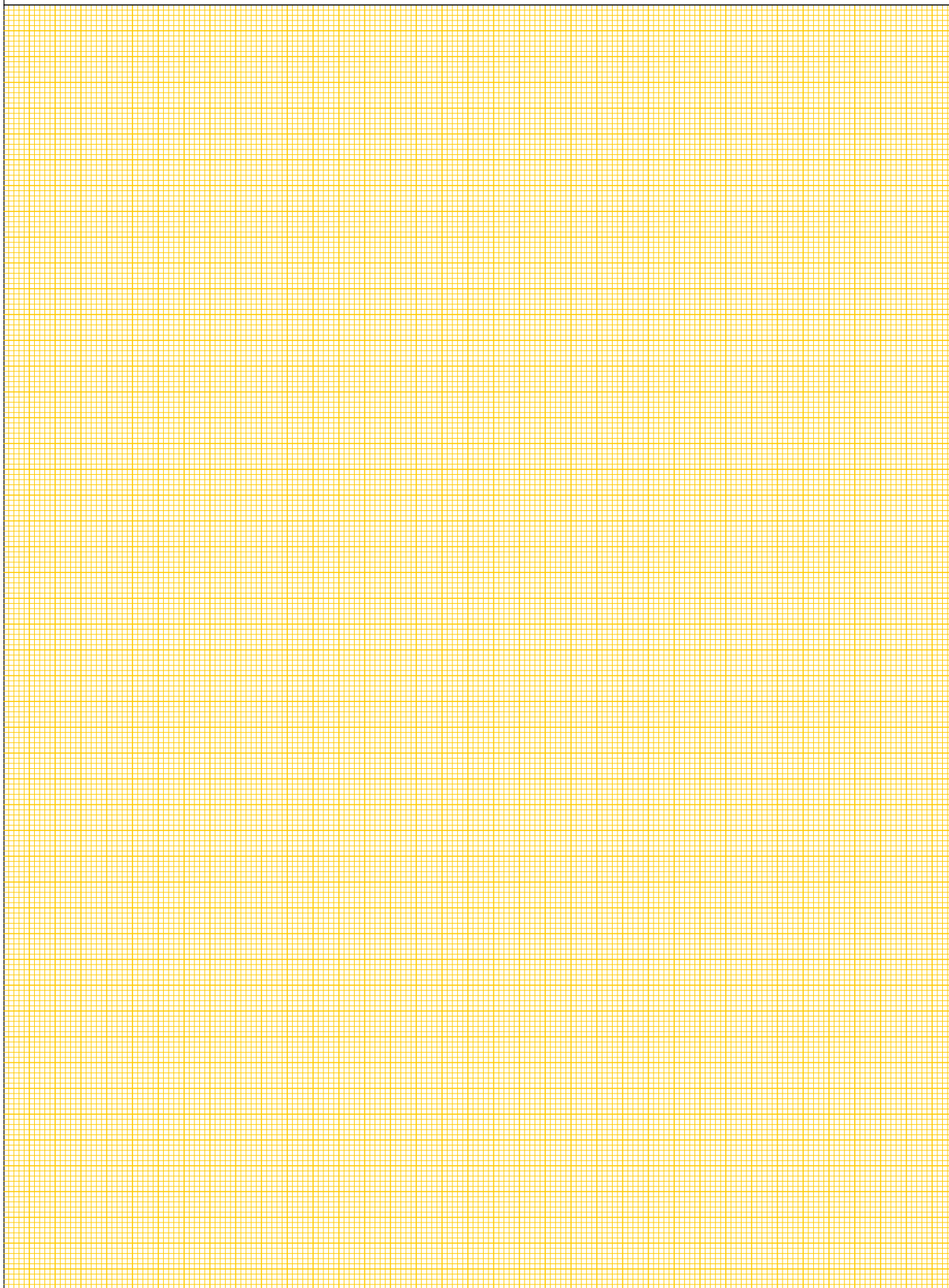
Han® 3 A RJ45
Metal Outlet, Cat. 5, 8-poles
 RJ45 Industrial Outlet for IP 65 / IP 67 environments

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminating via LSA-PLUS tool
Strand diameter	AWG 26 ... 22 (0.35 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	5 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	Wall mounting
Dimensions (H x W x D)	105 x 105 x 40.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037
Advantages	<ul style="list-style-type: none"> Robust metal housing for use in harsh industrial environments Simple mounting Cable feeding optionally from the left or from the right side Lockable Han® 3 A connector ports PROFINET compliant

Identification	Part number	Drawing	Dimensions in mm
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<p>Han® 3 A RJ45 Metal Outlet, Cat. 5</p> <p>consisting of: 2-port metal housing with protection caps, cable glands and blanking piece PCB module with LSA-PLUS strips Label Assembly instructions</p>	<p>09 45 815 1100</p>		
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IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding

- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

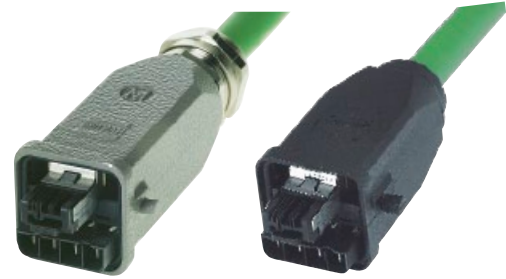
Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail [on page B·1 100]

Tools

[on page B·1 104]

Connector sets



Han® 3 A RJ45 Hybrid
Connector set, 4-pole
to make up Han® 3 A RJ45 Hybrid system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Han® 3 A RJ45 Hybrid connector according to IEC 61 918
Number of contacts	4 + 4x power contacts (48 V / 16 A)
Transmission performance	Category 5 / Class D up to 100 MHz according 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
Wire termination	Via IDC contacts, tool-less
Cable options	Hybrid cable (2 x 2 data + 4x power)
– Wire gauge (data)	AWG 24/7 ... AWG 22/7 (stranded)
	AWG 23/1 ... AWG 22/1 (solid)
– Wire gauge (power)	1.5 mm ² , stranded
– Strand diameter (data)	max. 1.6 mm
– Strand diameter (power)	max. 2.6 mm
– Cable sheath diameter	10 ... 11 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Advantages	Tool-less field-assembly with <i>HARAX</i> ® rapid termination in IDC technology Category of transmission Cat. 5 PROFINET compliant

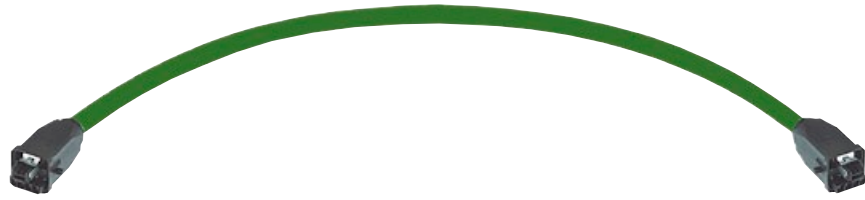
Han® 3 A Hybrid

Identification	Part number	Drawing	Dimensions in mm
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<p>Han® 3 A RJ45 Hybrid Connector set, 4-pole</p> <p>Plastic version straight style</p> <p>09 45 125 1300</p>	<p>09 45 125 1300</p>		
<p>Metal version Standard straight style</p> <p>10 12 005 2001</p> <p>Set consists of: Han® 3 A Hybrid housing including RJ45 connector and shielding Cable gland Assembly instructions</p>	<p>10 12 005 2001</p>		

<p>Protection cover for Han® 3 A connector</p> <p>Plastic version Metal version Standard</p> <p>09 20 003 5442 09 20 003 5422</p>	<p>09 20 003 5442 09 20 003 5422</p>	<p>Dimensions valid for Plastic version</p>	<p>Dimensions valid for Plastic version</p>
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System cables



Han® 3 A Hybrid System cable RJ45, 4-wire

Han® 3 A Hybrid connection cable for harsh industrial environments

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types	Han® 3 A RJ45 Hybrid, plastic / metal
Cable types	4 x AWG 22/7, star quad, shielded + 4 power cores
Sheath material	FRNC
Wiring	4-poles (RJ45 contacts 1/2 and 3/6)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s + Power supply
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-20 °C ... +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Green
Advantages	<ul style="list-style-type: none"> Robust design Use on-site made possible via IP 65 / IP 67 protection Easy handling for applications with additional power supply PROFINET compliant

Han® 3 A Hybrid

Identification

Part number

Han® 3 A RJ45 Hybrid
System cable, 4-wire,
plastic

Length 1.5 m	09 45 725 1323
Length 3.0 m	09 45 725 1325
Length 5.0 m	09 45 725 1327
Length 10.0 m	09 45 725 1351
Length 20.0 m	09 45 725 1353

Han® 3 A RJ45 Hybrid
System cable, 4-wire,
metal

Length 1.5 m	09 45 715 1364
Length 3.0 m	09 45 715 1366
Length 5.0 m	09 45 715 1368
Length 10.0 m	09 45 715 1373
Length 20.0 m	09 45 715 1375

Panel feed-throughs



Han® 3 A RJ45 Hybrid
Panel feed-through, 8-poles

Hybrid Panel feed-through for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (IP 20)
Termination power supply	4x contacts in the Han® 3 A connector (IP 65 / IP 67) 4x contacts for power supply via cage-clamp terminal (48 V / 16 A) (IP 20)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible Additional power supply via hybrid cable Coding possible PROFINET compliant

Han® 3 A Hybrid

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 Hybrid Panel feed-through Plastic version straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 225 1300</p> <p>09 20 003 5445</p>		<p>panel cut out</p>
<p>Han® 3 A RJ45 Hybrid Panel feed-through Metal version Standard straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>10 12 005 1002</p> <p>09 20 003 5425</p>		
<p>Han® 3 A RJ45 Hybrid Panel feed-through Metal version M straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1301</p> <p>09 37 003 5405</p>		<p>panel cut out</p>
<p>Accessories Set of coding pins</p>	<p>09 45 820 0000</p>		

Cables

Industrial Cat. 5 Hybrid Cable
PROFINET Hybrid Type B,
4-wire + 4 power wires
to make up hybrid system cables



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	FRNC	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	Star quad + 4 power cores, double shielding
Core structure	4x AWG 22/7, star quad, shielded + 4 power cores, 84 x 0.15, , stranded
Sheath material	FRNC
Cable sheath diameter	9.7 ... 10.3 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Operating temperature range	-20 °C ... +80 °C
Standard lengths	10 m / 20 m / 50 m / 100 m
Colour	Green
Printing	HARTING specific printing
Advantages	Robust design suitable for industry PROFINET compliant Additional power supply Halogen free, LSZH UL AWM 21 282

Han® 3 A Hybrid

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 Hybrid cable PROFINET Hybrid Type B, 4x data + 4x power wires FRNC	10 m ring	09 45 600 0310	
	20 m ring	09 45 600 0330	
	50 m ring	09 45 600 0340	
	100 m reel	09 45 600 0300	
	500 m reel	09 45 600 0320	

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding

- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail [on page B·1 100]

Tools

[on page B·1 104]

Connector sets



HARAX® M12
 Connector D-coding, 4-pole
 to make up HARTING system cables M12

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	<i>HARAX®</i> connector M12-L, D-coding
Number of contacts	4
Transmission performance	Class D according to ISO/IEC 11 801:2002
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly
Wire termination	Via IDC contacts
Cable options	
– Strand diameter	AWG 24 ... AWG 22 (Cord)
– Cable sheath diameter	4.5 ... 8.8 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–25 °C ... +85 °C
Housing material	Metal
Advantages	Field-assembly M12 connector Compact design Tool-less assembly
Specifications	IEC 60 352-4 IEC 60 947-5-2
Approvals	

M12
D-coding

Identification

Part number

Drawing

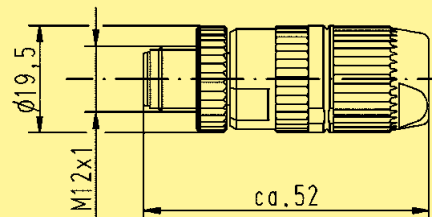
Dimensions in mm

HARAX® M12
Connector D-coding,
4-pole, male

straight style



21 03 281 1405

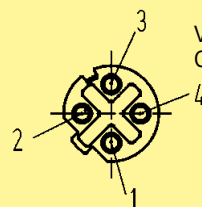
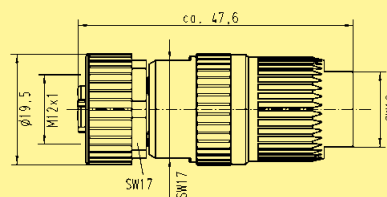


View
Connection side

HARAX® M12
Connector D-coding,
4-pole, female

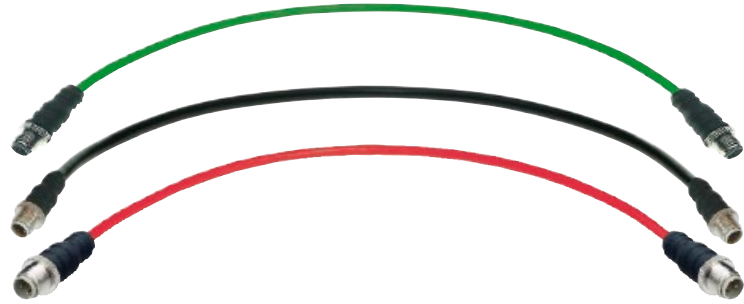
straight style

21 03 281 2405



View
Connection side

System cables



Han® M12
 System cable, 4-wire, straight
 Han® M12 connection cable, D-coding,
 for harsh industrial environments, pre-assembled on both sides

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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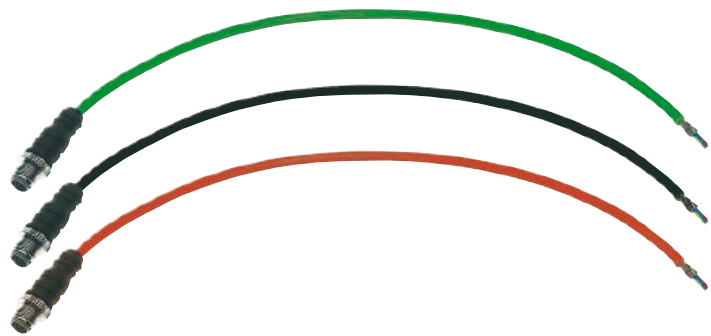
Connector types	2x Han® M12 D-coding, overmoulded
Cable types	4 x AWG 22/7, Star quad, double shielding
Sheath material	PUR / PVC
Wiring	4-pole, 1:1
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-25 °C ... +70 °C
Standard lengths	1 m / 1.5 m / 3 m / 5 m / 7.5 m / 10 m / 20 m other lengths available on request
Colour	Green / Black Red (SERCOS III)
Advantages	Robust design Use on-site made possible by IP 65 / IP 67 protection PUR variants are useable as trailing cables

M12 D-coding

Identification	Part number			Drawing	Dimensions in mm
	PUR	PVC	SERCOS III PUR		
Han® M12 System cable, 4-wire	Green	Black	Red		
Length 1.0 m	21 03 485 1401	09 47 222 2002	09 47 222 2002 018		
Length 1.5 m	21 03 485 1451	09 47 222 2003	09 47 222 2003 018		
Length 3.0 m	21 03 485 1403	09 47 222 2005	09 47 222 2005 018		
Length 5.0 m	21 03 485 1405	09 47 222 2006	09 47 222 2007 018		
Length 7.5 m	21 03 485 1457	09 47 222 2022	09 47 222 2018 018		
Length 10.0 m	21 03 485 1410	09 47 222 2011	09 47 222 2012 018		
Length 20.0 m	21 03 485 1420	09 47 222 2013	09 47 222 2014 018		

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System cables



Han® M12
System cable, 4-wire

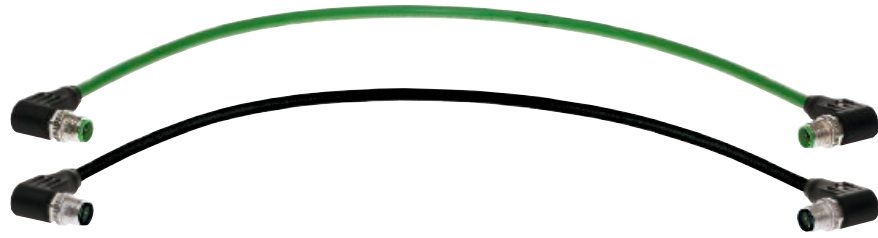
Han® M12 connection cable, D-coding,
for harsh industrial environments, second side open

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types	1x Han® M12 D-coding, overmoulded second side open
Cable types	4 x AWG 22/7, Star quad, double shielding
Sheath material	PUR / PVC
Wiring	4-pole
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-25 °C ... +70 °C
Standard lengths	1 m / 1.5 m / 3 m / 5 m / 7.5 m / 10 m / 20 m other lengths available on request
Colour	Green / Black Red (SERCOS III)
Advantages	Robust design Use on-site made possible by IP 65 / IP 67 protection PUR variants are useable as trailing cables

Identification	Part number			Drawing	Dimensions in mm
	PUR	PVC	SERCOS III PUR		
Han® M12 System cable, 4-wire	Green	Black	Red		
Length 1.0 m	21 03 585 1401	09 47 220 0002	09 47 220 0002 018		
Length 1.5 m	21 03 585 1451	09 47 220 0003	09 47 220 0003 018		
Length 3.0 m	21 03 585 1403	09 47 220 0005	09 47 220 0005 018		
Length 5.0 m	21 03 585 1405	09 47 220 0006	09 47 220 0007 018		
Length 7.5 m	21 03 585 1457	09 47 220 0022	09 47 220 0018 018		
Length 10.0 m	21 03 585 1410	09 47 220 0011	09 47 220 0012 018		
Length 20.0 m	21 03 585 1420	09 47 220 0013	09 47 220 0014 018		

System cables



Han® M12

System cable, 4-wire, angled

Han® M12 connection cable, D-coding, for harsh industrial environments
pre-assembled on both sides

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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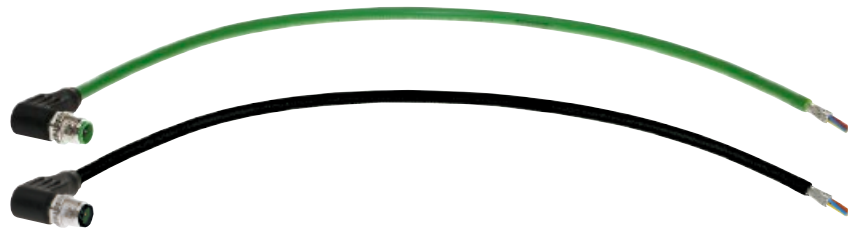
Connector types	2x Han® M12 D-coding, angled, overmoulded
Cable types	4 x AWG 22/7, Star quad, double shielding
Sheath material	PUR / PVC
Wiring	4-pole, 1:1
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-25 °C ... +70 °C
Standard lengths	1 m / 1.5 m / 3 m / 5 m / 7.5 m / 10 m / 20 m other lengths available on request
Colour	Green / Black
Advantages	Robust design Use on-site made possible by IP 65 / IP 67 protection PUR variants are useable as trailing cables

M12
D-coding

Identification	Part number		Drawing	Dimensions in mm
	PUR	PVC		
Han® M12 System cable, angled, 4-wire	Green	Black		
Length 1.0 m	21 03 485 3401	09 47 808 0002		
Length 1.5 m	21 03 485 3451	09 47 808 0003		
Length 3.0 m	21 03 485 3403	09 47 808 0005		
Length 5.0 m	21 03 485 3405	09 47 808 0006		
Length 7.5 m	21 03 485 3457	09 47 808 0022		
Length 10.0 m	21 03 485 3410	09 47 808 0011		
Length 20.0 m	21 03 485 3420	09 47 808 0013		

B-1
90

System cables



Han® M12

System cable, 4-wire, angled

Han® M12 connection cable, D-coding, for harsh industrial environments second side open

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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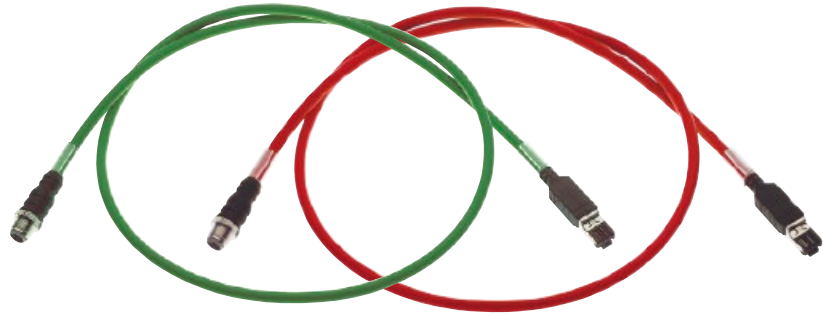
Connector types	1x Han® M12 D-coding, angled, overmoulded second side open
Cable types	4 x AWG 22/7, Star quad, double shielding
Sheath material	PUR / PVC
Wiring	4-pole
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-25 °C ... +70 °C
Standard lengths	1 m / 1.5 m / 3 m / 5 m / 7.5 m / 10 m / 20 m other lengths available on request
Colour	Green / Black
Advantages	<p>Robust design</p> <p>Use on-site made possible by IP 65 / IP 67 protection</p> <p>PUR variants are useable as trailing cables</p>

Identification	Part number		Drawing	Dimensions in mm
	PUR	PVC		
Han® M12 System cable, angled, 4-wire	Green	Black		
Length 1.0 m	21 03 585 3401	09 47 800 0002		
Length 1.5 m	21 03 585 3451	09 47 800 0003		
Length 3.0 m	21 03 585 3403	09 47 800 0005		
Length 5.0 m	21 03 585 3405	09 47 800 0006		
Length 7.5 m	21 03 585 3457	09 47 800 0022		
Length 10.0 m	21 03 585 3410	09 47 800 0011		
Length 20.0 m	21 03 585 3420	09 47 800 0013		

M12 D-coding

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System cables



Han® M12 / RJ45
System cable, 4-wire

Han® M12 connection cable, D-coding, to RJ45 (IP 20), overmoulded

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types	Han® M12 D-coding, overmoulded (IP 65 / IP 67) RJ45 4-pole, contacts 1/2 and 3/6, overmoulded (IP 20)
Cable types	4 x AWG 22/7, Star quad, double shielding
Sheath material	PUR / PVC
Wiring	4-pole
Transmission performance	Cat. 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-25 °C ... +70 °C
Standard lengths	1 m / 3 m / 5 m / 10 m other lengths available on request
Colour	Green / Black Red (SERCOS III)
Advantages	Robust design PUR variants are useable as trailing cables PROFINET compliant

Contact assignment	Signal	M12 D-coding	RJ45
	TD+	1	1
	TD-	3	2
	RD+	2	3
	RD-	4	6

Identification	Part number			Drawing	Dimensions in mm
	PUR	PVC	SERCOS III PUR		
Han® M12 / RJ45 System cable, 4-adrig	Green	Black	Red		
Length 1.0 m	09 45 700 5022	09 45 700 5063	09 47 220 2003 018		
Length 3.0 m	09 45 700 5025	09 45 700 5066	09 47 220 2005 018		
Length 5.0 m	09 45 700 5027	09 45 700 5068	09 47 220 2007 018		
Length 10.0 m	09 45 700 5051	09 45 700 5073	09 47 220 2012 018		
Length 20.0 m	09 45 700 5053	09 45 700 5075	09 47 220 2014 018		

M12
D-coding

B-1
92

Additional technical information about overmoulded system cables can be found on page B-1 91

System cables

Additional technical information about overmoulded System cables M12

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Electrical characteristics at 20 °C

Contact resistance:	≤ 20 mΩ
Insulation resistance:	≥ 500 MΩ
Dielectric withstand 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 withstand voltage:	
contact - contact	1 kV
contact - ground	1.5 kV

For reliable and proof connection it is recommended to use the dynamometric screwdriver Han® M12 (part number 09 99 000 0382; see page B-1 104).

Panel feed-throughs



Han® M12
 Panel feed-through D-coding
 M12 Panel feed-through for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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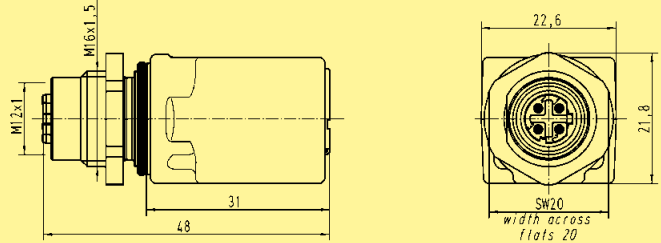
Number of ports, Copper / Termination	2 / 1x M12 D-coding (IP 65 / IP 67) 1x RJ45 (IP 20)
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	Diameter 16.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-5 °C ... +60 °C
Housing material	Metal / plastic
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible on back side PROFINET compliant

M12
D-coding

Identification	Part number	Drawing	Dimensions in mm
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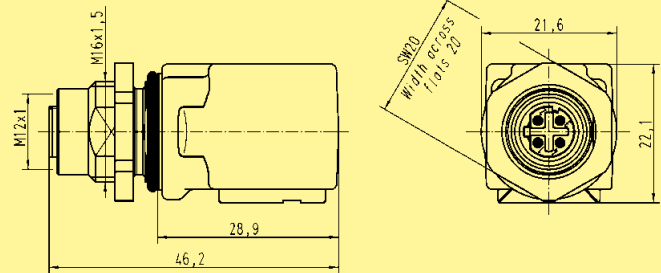
Han® M12
Panel feed-through
D-coding
straight

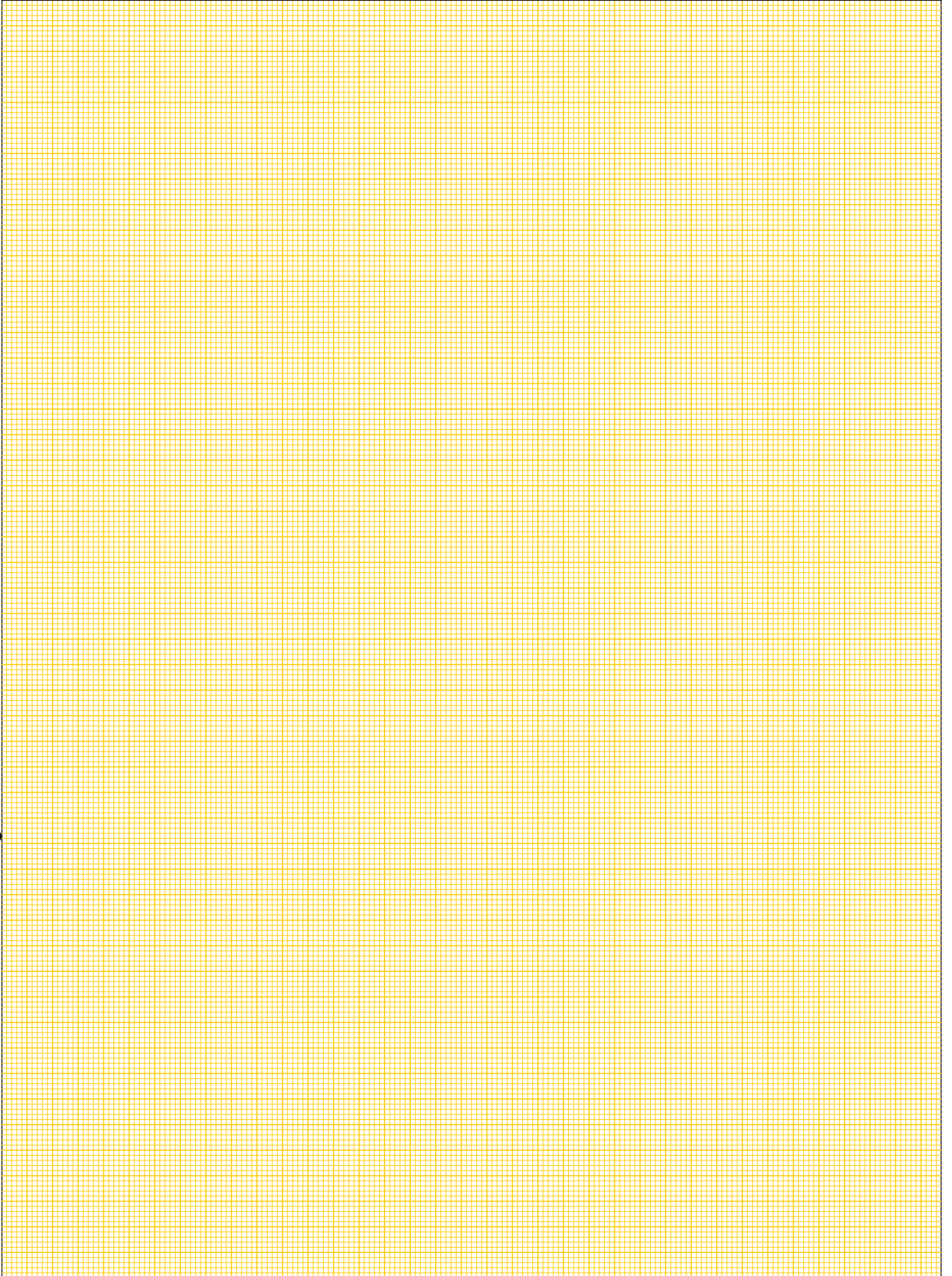
21 03 381 2400



Han® M12
Panel feed-through
D-coding
angled

21 03 381 4400





M12
D-coding

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding

- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail® [on page B·1 100]

Tools

[on page B·1 104]

Cables



Industrial Cat. 5 Standard cable, 4-wire
Type A

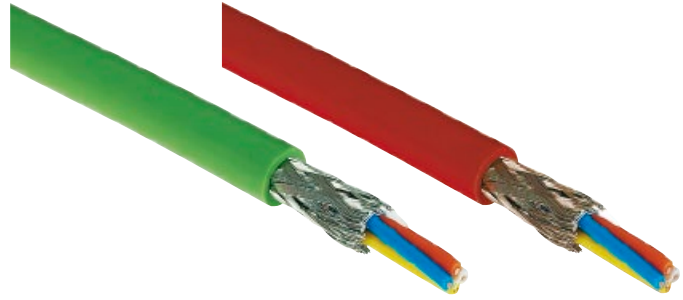
for permanent installation or to make up PROFINET system cables

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PVC	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/1, solid
Wire insulation	PE, Ø 1.5 mm
Sheath material	PVC
Cable sheath diameter	6.5 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Operating temperature range	-40 °C ... +75 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green
Printing	HARTING specific printing
Advantages	Robust design suitable for industry PROFINET compliant Easy stripping of cable sheath and screening braid with stripping tool 09 45 800 0000 RoHS compliant

Identification	Part number PVC	Drawing	Dimensions in mm
Industrial Cat. 5 Standard cable Type A, 4-wire	Green		
20 m ring	09 45 600 0130		
50 m ring	09 45 600 0140		
100 m ring	09 45 600 0100		
500 m drum	09 45 600 0110		

Cables



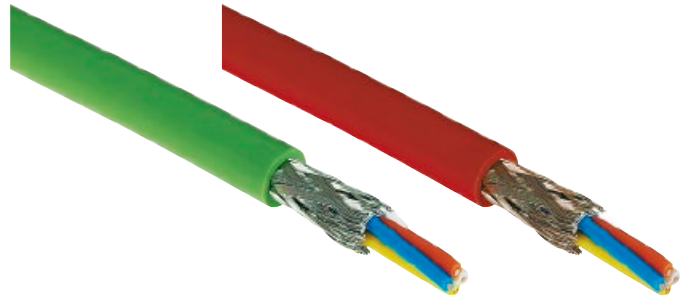
Industrial Cat. 5 stranded cable, 4-wire
Type B
to make up PROFINET / SERCOS III system cables

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PVC	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/7, tinned copper wire, stranded
Wire insulation	PE, Ø 1.56 mm
Sheath material	PVC
Cable sheath diameter	6.5 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Operating temperature range	-40 °C ... +70 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green (PROFINET) Red (SERCOS III)
Printing	HARTING specific printing
Advantages	<p>Robust design suitable for industry</p> <p>PROFINET compliant (Green)</p> <p>SERCOS III compliant (Red)</p> <p>Easy stripping of cable sheath and screening braid with stripping tool 09 45 800 0000</p> <p>RoHS compliant</p>

Identification	Part number			Drawing	Dimensions in mm
	PUR	PVC	SERCOS III PUR		
Industrial Cat. 5 stranded cable Type B, 4-wire	Green	Green	Red		
20 m ring	09 45 600 0139	09 45 600 0132	09 45 600 0134		
50 m ring	09 45 600 0149	09 45 600 0142	09 45 600 0144		
100 m ring	09 45 600 0109	09 45 600 0102	09 45 600 0104		
500 m drum	09 45 600 0119	09 45 600 0112	09 45 600 0114		

Cables

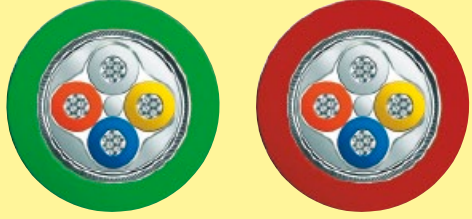


Industrial Cat. 5 stranded cable, 4-wire,
useable as trailing cables,
Type C

to connect to mobile equipment
to make up PROFINET / SERCOS III system cables

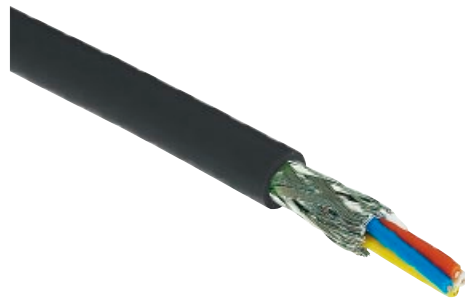
IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PUR	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/7, stranded
Wire insulation	PE, Ø 1.5 mm
Sheath material	PUR
Cable sheath diameter	6.5 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Operating temperature range	-40 °C ... +70 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green (PROFINET) Red (SERCOS III)
Printing	HARTING specific printing
Advantages	Robust design suitable for industry PROFINET compliant (Green) SERCOS III compliant (Red) Useable as trailing cables Easy stripping of cable sheath and screening braid with stripping tool 09 45 800 0000 RoHS compliant

Identification	Part number		Drawing	Dimensions in mm
	PUR	SERCOS III PUR		
Industrial Cat. 5 stranded cable, 4-wire, useable as trailing cables, Type C				
	Green	Red		
20 m ring	09 45 600 0131	09 45 600 0137		
50 m ring	09 45 600 0141	09 45 600 0147		
100 m ring	09 45 600 0101	09 45 600 0107		
500 m drum	09 45 600 0111	09 45 600 0117		

Cables

Cables



Industrial Cat. 5 stranded cable, 4-wire,
Type B, outdoor
to make up PROFINET system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PVC	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/7, stranded
Wire insulation	PE, Ø 1.56 mm
Sheath material	PVC
Cable sheath diameter	6.5 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Operating temperature range	-45 °C ... +60 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Black
Printing	HARTING specific printing
Advantages	<p>Robust design suitable for industry</p> <p>PROFINET compliant</p> <p>UV protected</p> <p>Easy stripping of cable sheath and screening braid with stripping tool 09 45 800 0000</p> <p>RoHS compliant</p>

Identification	Part number PVC	Drawing	Dimensions in mm
Industrial Cat. 5 stranded cable, 4-wire, Type B, outdoor 20 m ring 50 m ring 100 m ring 500 m drum	Black 09 45 600 0135 09 45 600 0145 09 45 600 0105 09 45 600 0115		

Cables



Ha-VIS EtherRail®
stranded cable, Cat. 5, 4-wire
for installation within and outside rail vehicles

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	Elastomer	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
-------	--------------------------	---------------	-------------------------------------	-----------	--------	-------------------------------------	--------	--------------------------

Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/7, tinned copper wire, stranded
Wire insulation	PE-Foam Skin, Ø 1.5 mm
Sheath material	Elastomer, electron beam cross-linked
Cable sheath diameter	6.6 +/-0.2 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Operating temperature range	-40 °C ... +90 °C
Standard lengths	100 m / 500 m / 1000 m
Colour	Black
Tests / Certificats	Tests and certificats according to DIN, N FF, BS and ASTM, detail information see Technical Data sheet
Advantages	<p>Robust design</p> <p>Fire protection according to EN 45 545-1, -2 and -5</p> <p>Flame-retardant and heat resistant according to DIN 5510 (1-4) and EN 50 264-1</p> <p>UV protected</p> <p>RoHS compliant</p> <p>Halogen free</p> <p>small Ø permits RJ45 assembly</p>

Identification	Part number Elastomer	Drawing	Dimensions in mm
Ha-VIS EtherRail® stranded cable, Cat. 5 4-wire 100 m ring 500 m drum 1000 m drum	Black 09 45 600 0108 09 45 600 0118 09 45 600 0128		

Cables



Ha-VIS EtherRail®
 ultra flexible cable, Cat. 5, 4-wire
 for installation within and outside rail vehicles and especially between coaches

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	Elastomer	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
-------	--------------------------	---------------	-------------------------------------	-----------	--------	-------------------------------------	--------	--------------------------

Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/19, tinned copper wire, ultra flexible
Wire insulation	PE, Ø 1.98 mm
Sheath material	Elastomer, electron beam cross-linked
Cable sheath diameter	7.4 +/- 1 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Operating temperature range	-40 °C ... +90 °C
Standard lengths	100 m / 500 m / 1000 m
Colour	Black
Tests / Certificats	Tests and certificats according to DIN, N FF, BS and ASTM, detail information see Technical Data sheet
Advantages	Robust design, especially suitable between coaches Fire protection according to EN 45 545-1, -2 and -5 Flame-retardant and heat resistant according to DIN 5510 (1-4) and EN 50 264-1 UV protected RoHS compliant Halogen free

Identification	Part number Elastomer	Drawing	Dimensions in mm
Ha-VIS EtherRail® ultra flexible cable, Cat. 5 4-wire 100 m ring 500 m drum 1000 m drum	Black 09 45 600 0138 09 45 600 0148 09 45 600 0158		

System cables

Additional technical information about overmoulded System cables

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Electrical characteristics at 20 °C

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

Electrical characteristics after damp heat cycles

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

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 20]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 22]
- System cables [on page B·1 24]
- Panel feed-throughs [on page B·1 32]
- Distribution modules and Outlets [on page B·1 34]

Han® PushPull

- Connectors [on page B·1 36]
- System cables [on page B·1 44]
- Panel feed-throughs / Gender Changer [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 60]
- System cables [on page B·1 62]
- Panel feed-throughs [on page B·1 66]
- Distribution modules and Outlets [on page B·1 72]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·1 76]
- System cables [on page B·1 78]
- Panel feed-throughs [on page B·1 80]
- Cables [on page B·1 82]

M12 D-coding







- Connectors [on page B·1 84]
- System cables [on page B·1 86]
- Panel feed-throughs [on page B·1 92]

Cables

- Type A, B, C [on page B·1 96]
- Type B, Outdoor [on page B·1 99]
- Ha-VIS EtherRail [on page B·1 100]

Tools

[on page B·1 104]

Identification	Part number	
<p>HARTING RJ Industrial® Stripping Tool Stripping tool for Ethernet cables including blade cassette</p> <p>Spare blade cassette</p>	<p>09 45 800 0000</p> <p>09 45 800 0001</p>	 <p>The RJ Industrial Stripping Tool is ready to remove insulation from Ethernet 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.</p>
<p>Stripping tool</p>	<p>09 45 800 0002</p>	
<p>HARTING RJ Industrial® LSA-Punch Down Tool</p>	<p>09 45 800 0020</p>	 <p>The LSA-Punch Down Tool is used to wire RJ45 Industrial Metal Outlets (part no. 09 45 815 1100). The various conductors are cut to length and inserted into the insulation displacement contacts in a single pass.</p>
<p>Han® M12 dynamometric screwdriver SW 18 or 13</p>	<p>09 99 000 0382</p>	
<p>Cable shear</p>	<p>09 45 800 0004</p>	
<p>Wire cutter</p>	<p>09 45 800 0005</p>	

IP 20

RJ45

- Connectors [on page B·2 8]
- System cables [on page B·2 12]
- Distribution modules and Outlets [on page B·2 19]

RJ45

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 22]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 32]

HARTING
PushPull

Han® PushPull

- Connectors [on page B·2 34]
- System cables [on page B·2 42]
- Panel feed-throughs / Gender Changer [on page B·2 44]

Han®
PushPull

Han® 3 A

- Connectors [on page B·2 54]
- System cables [on page B·2 58]
- Panel feed-throughs [on page B·2 60]
- Distribution modules and Outlets [on page B·2 66]

Han® 3 A

Han® 3 A RJ45 Hybrid

- Connectors [on page B·2 70]
- System cables [on page B·2 72]
- Panel feed-throughs [on page B·2 74]
- Cables [on page B·2 76]

Han® 3 A
RJ45 Hybrid

har-speed M12

- Connectors [on page B·2 78]
- System cables [on page B·2 80]

har-speed
M12

Han-Max®

- Connectors [on page B·2 82]
- Panel feed-throughs [on page B·2 86]

Han-
Max®

Cables

- Industrial Cat. 6_A [on page B·2 90]
- Industrial Cat. 5 [on page B·2 93]
- Industrial Cat. 7 [on page B·2 96]

Cables

Tools

[on page B·2 100]

Tools

B·2

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HARTING Industrial Ethernet Patch cable RJ45, overmoulded, 8-wire, Cat. 5 / 5e	B-2 12
HARTING Industrial Ethernet Patch cable RJ45, overmoulded, 8-wire, Cat. 6	B-2 14
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Cabling IP 65 / IP 67	
HARTING PushPull	
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Panel feed-throughs / Gender Changer	
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Han® 3 A	
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Connector sets

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System cables

Han® 3 A RJ45 Hybrid System cable, 8-wire	B-2 72
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Han® 3 A RJ45 Hybrid System cable, 8-wire, Outdoor	B-2 73
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Panel feed-throughs

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Cables

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har-speed M12

Connector sets

har-speed M12 Connector set, 8-pole	B-2 78
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Systemkabel

har-speed M12 System cable, 8-wire	B-2 80
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Han-Max®

Connector sets

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Panel feed-throughs

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Industrial Cat. 7 cable, stranded, 8-wire, PUR elastomer	B-2 97
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HARTING mounting tools	B-2 100

Introduction

The chapter on „HARTING Ethernet Cabling – 8-wire” describes the complete HARTING product line for installing application-neutral cabling at machines, plants and buildings in an industrial environment.

The product line includes:

- Eight-wire cables for setting up flexible connections and for fixed installations.
- Connector components in IP 20 and IP 65 / IP 67, designed for on-site assembly
- Assembled system cables in IP 20 and IP 65 / IP 67 versions
- Industrial outlets, Panel feed-throughs and adapters in IP 20 and IP 65 / IP 67 versions
- Accessories and tools

The advantage of application-neutral eight-wire cabling is that all necessary services from all applications can be transmitted without needing to change cable.

This is especially important for all IP-based data, for control protocols and also for voice services such as those carried by Ethernet according to IEEE 802.3x.

- 10 and 100 Mbit/sec. Ethernet, corresponding to 10Base-T and 100Base-T (Fast Ethernet)
- Gigabit Ethernet according to IEEE 802.3ab, corresponding to 1000Base-T
- Voice over IP (VoIP)
- Analog voice, data and video signals
- Power over Ethernet (PoE) according to IEEE 802.3af and future applications such as:
- 10 Gigabit Ethernet according to IEEE 802.3an
- Power over Ethernet Plus (PoE+) according to IEEE 802.3af

and also Ethernet-based Fieldbus applications, with and without real-time functionality, such as:

- PROFINET (including PROFINET RT / real-time), according to IEC 61784-5-3
- EtherNet/IP, Modbus/TCP and Ethernet Powerlink

This type of cabling is globally standardized because of the advantages it offers and its distribution through ISO/IEC 11801. In Europe it has been established in EN 50173-3.

The special requirements for industrial cable use are described in the ISO/IEC 24702 and in its European equivalent EN 50173-3.

HARTING's eight-wire cabling components are specified, developed and manufactured in strict

technical compliance with the established requirements mentioned above.

The trends are towards higher transmission rates and larger bandwidths, but operators are also seeking environmentally-safe products and products which are safe in cases of malfunction or fire.

For these latter two areas of safety, HARTING is constantly developing and testing its products. Individual components are also certified accordingly.

Thus in this chapter, products are specified for:

- Cat. 5 (up to 100 MHz), Cat. 6 (up to 250 MHz), and Cat. 6_A (up to 500 MHz)
- Non-Halogen cabling materials such as LSZH, FRNC and PUR
- Suitable for use in electrical or distribution cabinets under IP 20. Also for use in harsh industrial environments and for outdoor installations corresponding to IP 65 / IP 67

To the user, HARTING provides a high-performance, future-oriented line of cabling products which are sure to fulfill all present and future requirements.

An overview of the advantages of eight-wire cabling:

- Profile-independent cabling infrastructure which can be used for all Ethernet applications
- Supports all safety features and real-time requirements of various applications
- Can be extended and integrated into existing IT infrastructures without difficulty
- Conforms to ISO/IEC 24702 standard and facilitates roll-outs at companies operating internationally.
- The use of standardized connectors reduces product variety and simplifies the purchasing and storage of components
- Future-oriented design ensures the convenient application of new technologies such as Gigabit Ethernet or PoE
- Superior quality of the cabling system guarantees long life span and high operational reliability
- Simple and convenient planning, installation and reliable operation of the network - thus saving costs and delivering a high ROI
- The eight-wire generic cabling system is a part of HARTING's AUTOMATION IT network solution - all solutions coming from one source

IP 20

RJ45

- Connectors [on page B-2 8]
- System cables [on page B-2 12]
- Distribution modules and Outlets [on page B-2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B-2 22]
- System cables [on page B-2 28]
- Panel feed-throughs [on page B-2 30]
- Distribution modules and Outlets [on page B-2 32]

Han® PushPull

- Connectors [on page B-2 34]
- System cables [on page B-2 42]
- Panel feed-throughs / Gender Changer [on page B-2 44]

Han® 3 A

- Connectors [on page B-2 54]
- System cables [on page B-2 58]
- Panel feed-throughs [on page B-2 60]
- Distribution modules and Outlets [on page B-2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B-2 70]
- System cables [on page B-2 72]
- Panel feed-throughs [on page B-2 74]
- Cables [on page B-2 76]

har-speed M12

- Connectors [on page B-2 78]
- System cables [on page B-2 80]

Han-Max®

- Connectors [on page B-2 82]
- Panel feed-throughs [on page B-2 86]

Cables

- Industrial Cat. 6_A [on page B-2 90]
- Industrial Cat. 5 [on page B-2 93]
- Industrial Cat. 7 [on page B-2 96]

Tools

[on page B-2 100]

Connector sets



HARTING RJ Industrial®
Connector set, 8-pole
to make up RJ45 system cables

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according 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 possible
Wire termination	Via piercing contacts
Cable options	
– Strand gauge	AWG 28/7 ... AWG 24/7 (stranded)
– Strand diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	6.1 ... 6.9 mm
Degree of protection	IP 20
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black
Advantages	Field-assembly connector, Cat. 6
Mounting information	If the cable is assembled on both sides, please use one connector set with white and one connector set with blue cable manager (assures optimal transmission behavior)

Identification	Part number	Drawing	Dimensions in mm
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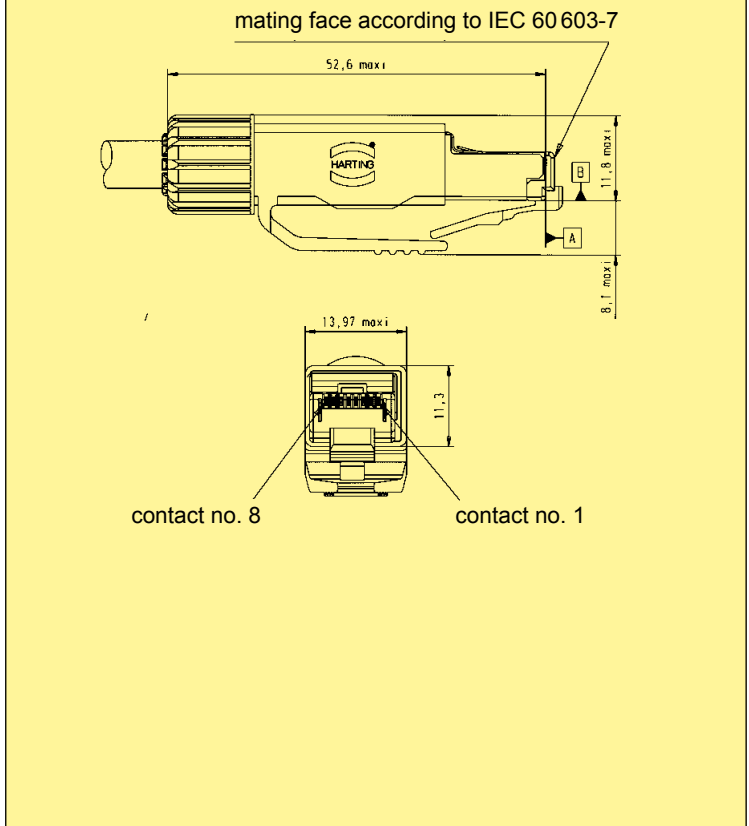
HARTING RJ Industrial®
Connector set, 8-pole
 with
 White cable manager
 great package with 100 pieces

Blue cable manager
 great package with 100 pieces

Set consists of:
 Housing including shielding
 Splice element
 Cable gland
 Assembly instructions

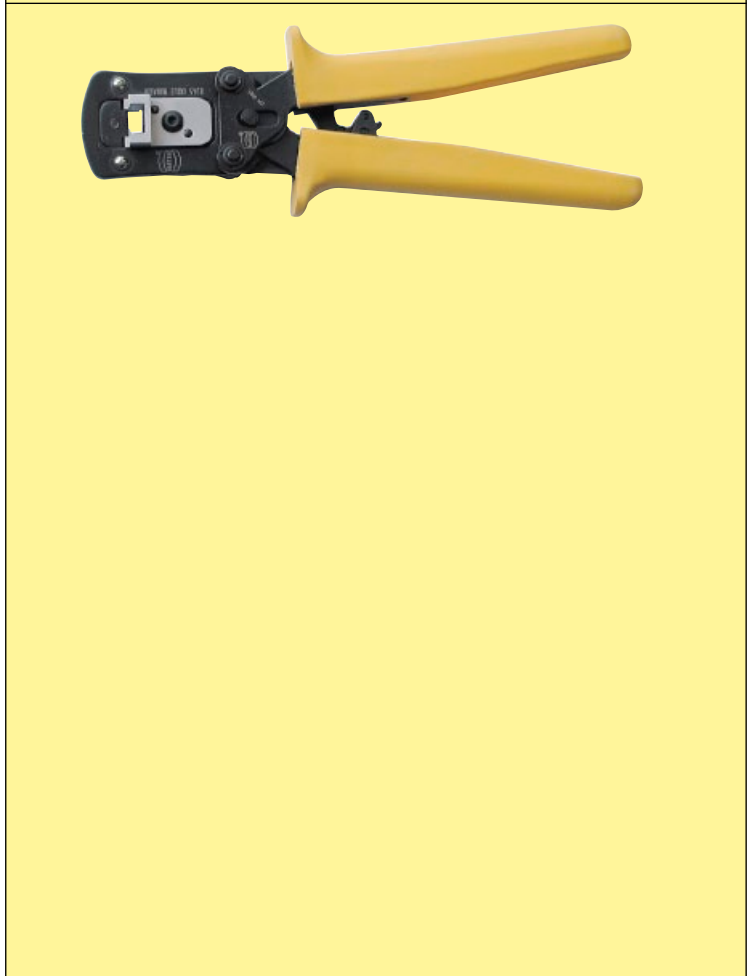
09 45 151 1500
 09 45 151 1500 XL

09 45 151 1510
 09 45 151 1510 XL



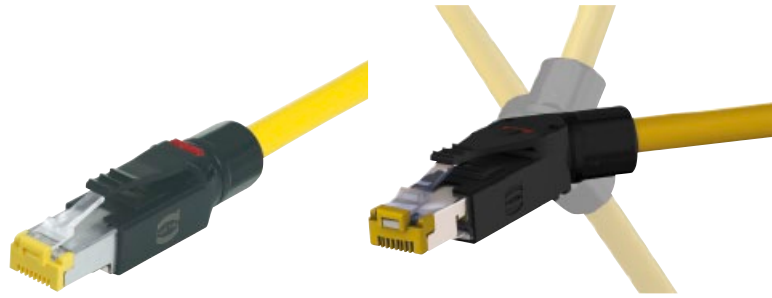
HARTING RJ Industrial®
Gigalink Mounting tools
 for HARTING RJ Industrial®
 Gigalink connectors

09 45 800 0500



Connector sets

HARTING RJ Industrial® 10G
Connector set, 8-pole
to make up RJ45 system cables



IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly possible
Wire termination	Via IDC contacts, tool-less
Cable options	
– Strand gauge	AWG 27 ... AWG 22 (solid / stranded)
– Strand diameter	max. 1.6 mm (including insulation)
– Cable sheath diameter	4.5 ... 9 mm
Degree of protection	IP 20
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black
Advantages	<p>RJ45 Ethernet-Data connector suitable for industry</p> <p>Tool-less field-assembly with <i>HARAX</i>® rapid termination in IDC technology</p> <p>Compact design</p> <p>Ergonomical unlocking clip</p> <p>Less weight assures shock- and vibration-resisting connection</p> <p>Category of transmission Cat. 6</p> <p>Suitable for termination of solid and stranded cables</p>

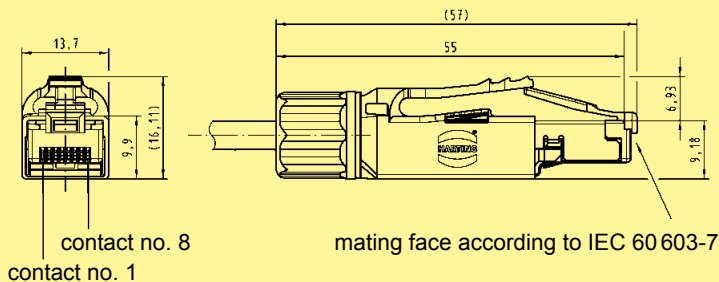
Identification	Part number	Drawing	Dimensions in mm
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**HARTING RJ Industrial® 10G
Connector set,
8-pole**

Set consists of:
Housing including shielding
Splice element
Cable gland
Assembly instructions

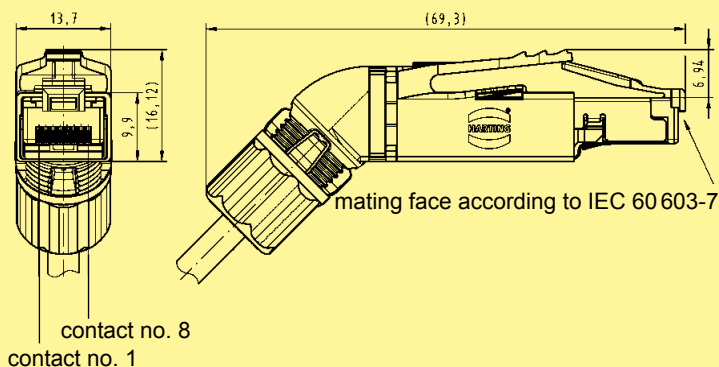
straight

09 45 151 1560



angled
45° angled version
(four different cable outlets possible)

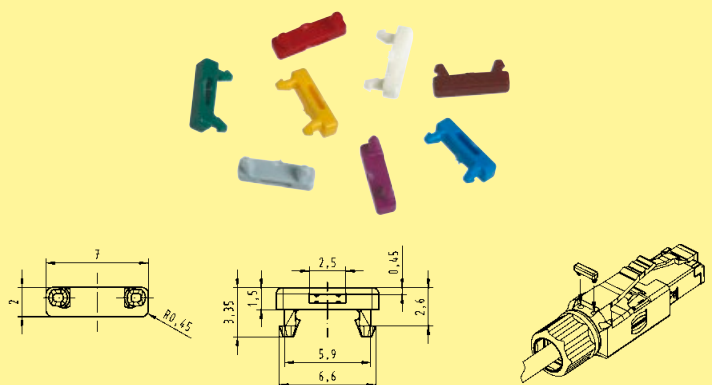
09 45 151 1561



**HARTING RJ Industrial® 10G
colour clips**

for HARTING RJ Industrial® 10G
connectors
package with 50 pieces

Colour:	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



System cables



HARTING RJ Industrial®
 Patch cable, overmoulded, 8-wire, Cat. 5 / Cat. 5e
 RJ45 connection cable for control or distributor cabinets or within controllers

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector types	RJ45, overmoulded, with locking lever protection
Cable types	4 x 2, Twisted Pair, shielded, SF/UTP
Sheath material	PUR, halogen free LSZH
Wiring	8-pole, 1:1
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	0 °C ... +60 °C
Standard lengths	0.5 m / 1 m / 2 m / 3 m / 5 m / 7.5 m other lengths available on request
Colour	Yellow
Advantages	<ul style="list-style-type: none"> Robust industrial design High operational reliability in vibration-prone locations Halogen free RoHS compliant

Identification	Part number	Drawing	Dimensions in mm
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**HARTING RJ Industrial®
Patch cable, 8-wire,
Cat. 5 / 5e, overmoulded**

Yellow

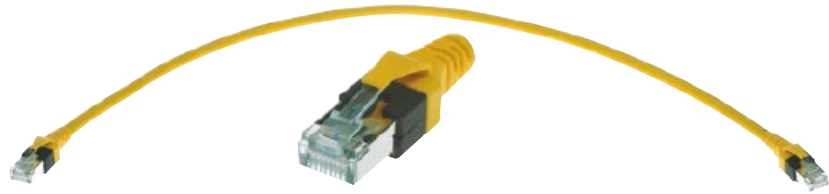
Length	0.20	09 47 474 7001
Length	0.30	09 47 474 7002
Length	0.40	09 47 474 7003
Length	0.50	09 47 474 7004
Length	0.60	09 47 474 7005
Length	0.70	09 47 474 7006
Length	0.80	09 47 474 7007
Length	0.90	09 47 474 7008
Length	1.00	09 47 474 7009
Length	1.50	09 47 474 7010
Length	2.00	09 47 474 7011
Length	2.50	09 47 474 7012
Length	3.00	09 47 474 7013
Length	3.50	09 47 474 7024
Length	4.00	09 47 474 7014
Length	5.00	09 47 474 7015
Length	6.00	09 47 474 7016
Length	7.00	09 47 474 7017
Length	7.50	09 47 474 7018
Length	8.00	09 47 474 7019
Length	9.00	09 47 474 7020
Length	10.00	09 47 474 7021
Length	15.00	09 47 474 7022
Length	20.00	09 47 474 7023

**HARTING RJ Industrial®
colour clips
for HARTING RJ Industrial®
connectors
package with 10 pieces**

Colour:	Grey	09 45 850 0002
	Yellow	09 45 850 0003
	Orange	09 45 850 0005
	Red	09 45 850 0007
	Blue	09 45 850 0008
	Green	09 45 850 0009
	Black	09 45 850 0011



System cables



HARTING RJ Industrial®
 Patch cable, overmoulded, 8-wire, Cat. 6
 RJ45 connection cable for control or distributor cabinets or within controllers

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	RJ45, overmoulded, with locking lever protection
Cable types	4 x 2, Twisted Pair, shielded, S/FTP
Sheath material	PUR, halogen free LSZH
Wiring	8-pole, 1:1 or crossed
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	0 °C ... +60 °C
Standard lengths	0.5 m / 1 m / 2 m / 3 m / 5 m / 7.5 m other lengths available on request
Colour	Yellow
Advantages	<ul style="list-style-type: none"> Robust industrial design Easy handling for all applications Halogen free RoHS compliant

RJ45

Identification	Part number		Drawing	Dimensions in mm
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HARTING RJ Industrial®
Patch cable, 8-wire,
Cat. 6, overmoulded

		Yellow 1:1	Yellow crossed
Length	0,20	09 47 474 7101	09 47 474 7141
Length	0,30	09 47 474 7102	09 47 474 7142
Length	0,40	09 47 474 7103	09 47 474 7143
Length	0,50	09 47 474 7104	09 47 474 7144
Length	0,60	09 47 474 7105	09 47 474 7145
Length	0,70	09 47 474 7106	09 47 474 7146
Length	0,80	09 47 474 7107	09 47 474 7147
Length	0,90	09 47 474 7108	09 47 474 7148
Length	1,00	09 47 474 7109	09 47 474 7149
Length	1,50	09 47 474 7110	09 47 474 7150
Length	2,00	09 47 474 7111	09 47 474 7151
Length	2,50	09 47 474 7112	09 47 474 7152
Length	3,00	09 47 474 7113	09 47 474 7153
Length	4,00	09 47 474 7114	09 47 474 7154
Length	5,00	09 47 474 7115	09 47 474 7155
Length	6,00	09 47 474 7116	09 47 474 7156
Length	7,00	09 47 474 7117	09 47 474 7157
Length	7,50	09 47 474 7118	09 47 474 7158
Length	8,00	09 47 474 7119	09 47 474 7159
Length	9,00	09 47 474 7120	09 47 474 7160
Length	10,00	09 47 474 7121	09 47 474 7161
Length	15,00	09 47 474 7122	09 47 474 7162
Length	20,00	09 47 474 7123	09 47 474 7163

HARTING RJ Industrial®
colour clips
for HARTING RJ Industrial®
connectors
package with 10 pieces

Colour:	Grey	09 45 850 0002
	Yellow	09 45 850 0003
	Orange	09 45 850 0005
	Red	09 45 850 0007
	Blue	09 45 850 0008
	Green	09 45 850 0009
	Black	09 45 850 0011



System cables



Ha-VIS Smart Patch Cable IP 20 Cat. 6

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	HARTING RJ45 Industrial®
Cable types	4 x 2, Twisted Pair, shielded, AWG 27
Sheath material	PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C to +70 °C
Standard lengths	1 m / 2 m / 5 m / 7 m / 10 m other lengths available on request
Colour	Yellow
Advantages	<ul style="list-style-type: none"> Easy and fast illuminated detection of patch cables via integrated LEDs Compact and space saving plug by dual boot design Capable for Multiport applications Flame retardant Halogen free Colour coding option

Identification	Part number PUR	Drawing	Dimensions in mm
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Ha-VIS Smart Patch Cable IP 20 Cat. 6	Yellow			
	Length 1.0 m			09 47 474 7201
	Length 2.0 m			09 47 474 7203
	Length 5.0 m			09 47 474 7206
	Length 7.0 m			09 47 474 7208
	Length 10.0 m			09 47 474 7211
further lengths on request				

Identification

Part number

Drawing

Dimensions in mm

Ha-VIS Smart Patchkabel
Detektor

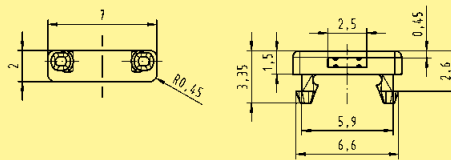
09 47 900 0001



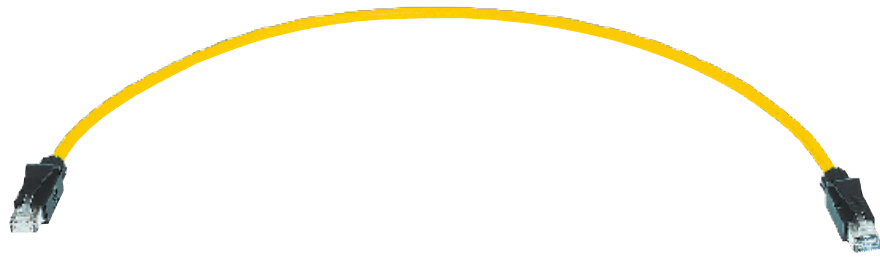
HARTING RJ Industrial® 10G
colour clips

for HARTING RJ Industrial® 10G
connectors
package with 50 pieces

Colour:	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



System cables



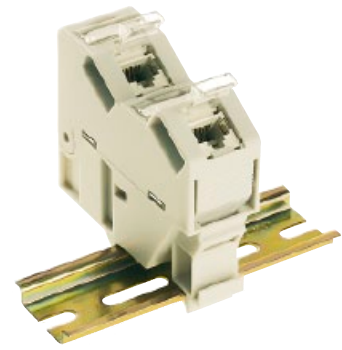
HARTING RJ Industrial®
System cable, 8-wire, Cat. 6
RJ45 connection cable for control or distributor cabinets or within controllers

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	RJ45
Cable types	4 x 2, Twisted Pair, shielded, PIMF
Sheath material	PVC / PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C ... +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Yellow
Advantages	Robust industrial design High operational reliability in vibration-prone locations

Identification	Part number		Drawing	Dimensions in mm
	PVC	PUR		
HARTING RJ Industrial® System cable, 8-wire, Cat. 6	Yellow	Yellow		
Length 1.5 m	09 45 751 1523	09 45 751 1563		
Length 3.0 m	09 45 751 1525	09 45 751 1565		
Length 5.0 m	09 45 751 1527	09 45 751 1567		
Length 10.0 m	09 45 751 1551	09 45 751 1572		
Length 20.0 m	09 45 751 1553	09 45 751 1574		

Distribution modules and Outlets



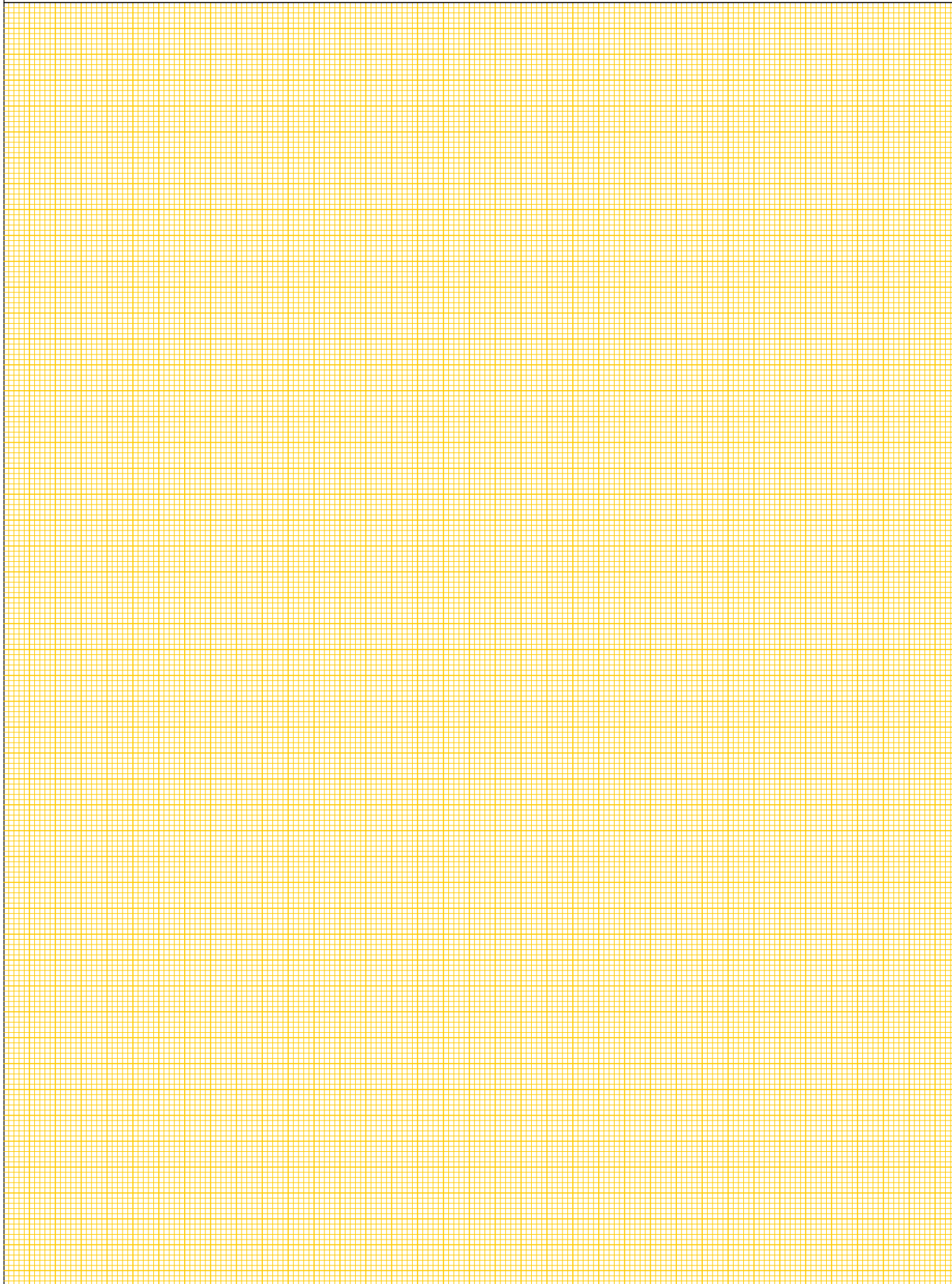
HARTING Cabinet Outlet RJ45, 8-poles
RJ45 distribution module for IP 20 environments (top-hat rail mounting)

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / RJ45 (Twisted Pair)
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminated without special tools
Strand diameter	AWG 24 ... 22 (0.5 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	6 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	To 35 mm top-hat mounting rail acc. to DIN EN 60 715, alignable
Dimensions (H x W x D)	82 x 28.4 x 74 mm
Degree of protection	IP 20
Operating temperature range	-20 °C ... +70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	Light grey RAL 7035
Advantages	<ul style="list-style-type: none"> Simple mounting Cable entering optionally from bottom or from top side Dust protection caps Port identification Angled outputs

Identification	Part number	Drawing	Dimensions in mm
HARTING Cabinet Outlet RJ45 consisting of: 2-port housing including dust protection caps and labels 2x RJ45 female modules, Cat. 6 Assembly instructions	20 76 102 8000		

RJ45



IP 20

RJ45

- Connectors [on page B·2 8]
- System cables [on page B·2 12]
- Distribution modules and Outlets [on page B·2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 22]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 32]

Han® PushPull

- Connectors [on page B·2 34]
- System cables [on page B·2 42]
- Panel feed-throughs / Gender Changer [on page B·2 44]

Han® 3 A

- Connectors [on page B·2 54]
- System cables [on page B·2 58]
- Panel feed-throughs [on page B·2 60]
- Distribution modules and Outlets [on page B·2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·2 70]
- System cables [on page B·2 72]
- Panel feed-throughs [on page B·2 74]
- Cables [on page B·2 76]

har-speed M12

- Connectors [on page B·2 78]
- System cables [on page B·2 80]

Han-Max®

- Connectors [on page B·2 82]
- Panel feed-throughs [on page B·2 86]

Cables

- Industrial Cat. 6_A [on page B·2 90]
- Industrial Cat. 5 [on page B·2 93]
- Industrial Cat. 7 [on page B·2 96]

Tools

[on page B·2 100]

Connector sets



HARTING PushPull RJ45
Connector set, 8-pole
to make up PushPull RJ45 system cables

HARTING
PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	HARTING PushPull RJ45 connector acc. to ISO/IEC 24 702, variant 4
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according 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 possible
Wire termination	Via piercing contacts
Cable options	
– Strand gauge	AWG 28/7 ... AWG 24/7 (stranded)
– Strand diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	4.9 ... 8.6 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide and polycarbonate, UL94 V-0
Colour	Black
Advantages	Space-saving connector assembly via PushPull interface Standard conform to ISO/IEC 24 702
Mounting information	If the cable is assembled on both sides, please use one connector set with white and one connector set with blue cable manager (assures optimal transmission behavior)

Identification	Part number	Drawing	Dimensions in mm
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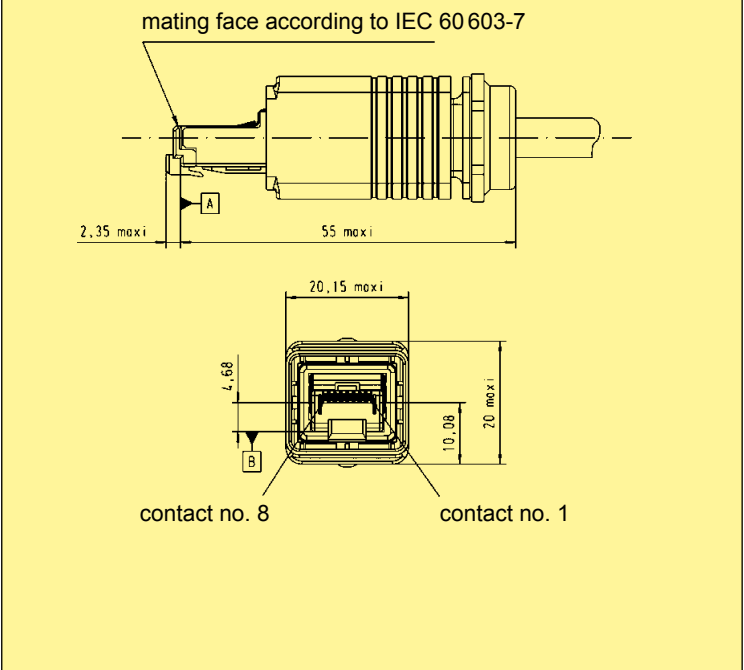
HARTING PushPull RJ45 Connector set, 8-pole
 with
 White cable manager
 great package with 100 pieces

Blue cable manager
 great package with 100 pieces

Set consists of:
 PushPull housing including RJ45 connector and shielding
 Splice element
 Cable gland
 Assembly instructions

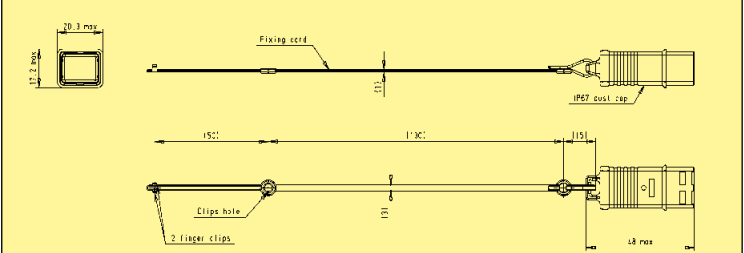
09 45 145 1500
09 45 145 1500 XL

09 45 145 1510
09 45 145 1510 XL



Protection cover
 for PushPull connectors

09 45 845 0010



HARTING RJ Industrial® Gigalink Mounting tools
 for HARTING RJ Industrial® Gigalink connectors

09 45 800 0500



Connector sets



HARTING PushPull RJ45 10G
 Connector set, 8-pole
 to make up PushPull RJ45 system cables

HARTING PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	HARTING PushPull RJ45 connector acc. to ISO/IEC 24 702, variant 4
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly
Wire termination	Via IDC contacts, tool-less
Cable options	
– Strand gauge	AWG 27 ... AWG 22 (solid / stranded)
– Strand diameter	max. 1.6 mm (including insulation)
– Cable sheath diameter	4.9 ... 8.6 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Plastic version	
Housing material	Polyamide and polycarbonate, UL94 V-0
Colour	Black
Advantages	Space-saving connector assembly via PushPull interface Field-assembly connector, in IP 65 / IP 67 Standard conform to ISO/IEC 24 702

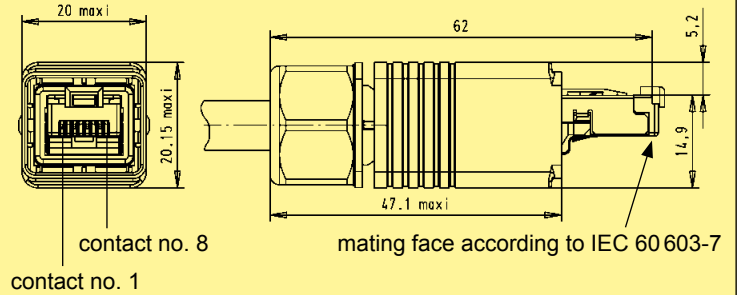
Identification**Part number****Drawing****Dimensions in mm**

HARTING PushPull RJ45 10G Connector set, 8-pole

plastic version

09 45 145 1560

Set consists of:
PushPull housing including RJ45 connector and shielding
Splice element
Cable gland
Assembly instructions

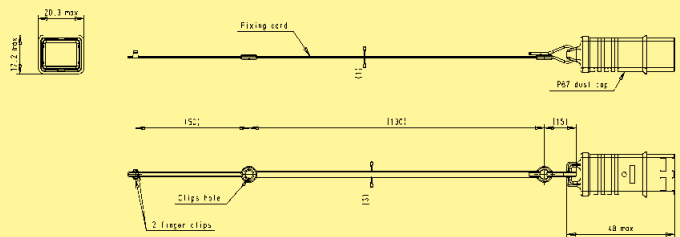


Dimensions valid for plastic version

Protection cover for PushPull connectors

plastic version

09 45 845 0010



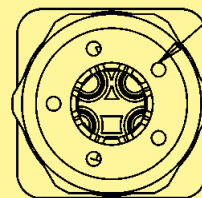
HARTING PushPull RJ45 10G colour clips

for HARTING PushPull RJ45 10G connectors
package with 10 pieces

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



On request : color ring for Pg9 nut
TB 09 45 840 001X



Connector sets



HARTING PushPull LC duplex
Connector set
Panel feed-through and connector

HARTING
PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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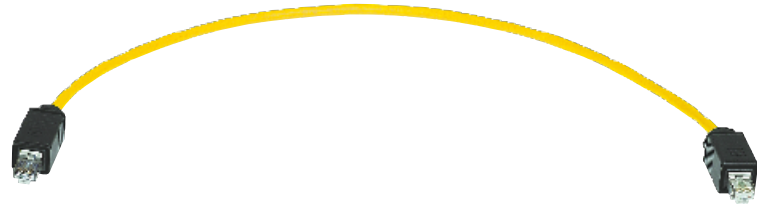
Connector type	HARTING PushPull LC duplex connector acc. to IEC 61 754-20-100								
Number of contacts	2								
Transmission rate	10/100/1000 Mbit/s								
Locking	PushPull Technology acc. to IEC 61 076-3-106 variant 4								
Degree of protection	IP 65 / IP 67								
Mating face	LC acc. to IEC 61 754-20								
Cable diameter	4.9 ... 8.6 mm								
Mating cycles	min. 100								
Temperature range	-40 °C ... +85 °C								
Housing material	Plastic, Polyamide, UL94 V-0								
Colour	Black								

Advantages

- Optical PushPull connector based on LC with small form factor (requires 50 % compared to SC and ST)
- Optical module with inserts acc. to IEC 61 754-20
- One-piece LC body assures high mechanical stability
- A & B parts identification for duplex according TIA 568 standard

Identification	Part number	Drawing	Dimensions in mm
<p>HARTING PushPull LC duplex Connector set</p> <p>Cable side</p> <p>Multimode GOF 09 57 402 0500 000</p> <p>Singlemode GOF 09 57 402 0501 000</p> <p>Device side EasyInstall</p> <p>Multimode GOF 09 57 441 0500 000</p> <p>Singlemode GOF 09 57 441 0501 000</p> <p>Device side Compact housing</p> <p>Multimode GOF 09 57 442 0502 001</p> <p>Singlemode GOF 09 57 442 0503 001</p>			
<p>Protection cover for PushPull connectors</p> <p>for PushPull device side with active locking M3 09 45 845 0014</p> <p>with passive locking M3 09 45 845 0009</p>			

System cables



HARTING PushPull RJ45
 System cable, 8-wire
 RJ45 connection cable HARTING PushPull for IP 65 / IP 67 applications

HARTING PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	HARTING PushPull
Cable types	4 x 2, Twisted Pair, shielded, PIMF
Sheath material	PVC / PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C ... +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Yellow
Advantages	Standardised PushPull interface for IP 65 / IP 67 according to ISO/IEC 24 702 Easy and safe operation Especially space-saving

Identification	Part number		Drawing	Dimensions in mm
	PVC	PUR		

HARTING PushPull RJ45 System cable, 8-wire	Yellow	Yellow		
Length 1.5 m	09 45 745 1523	09 45 744 1523		
Length 3.0 m	09 45 745 1525	09 45 744 1525		
Length 5.0 m	09 45 745 1527	09 45 744 1527		
Length 10.0 m	09 45 745 1551	09 45 744 1532		
Length 20.0 m	09 45 745 1553	09 45 744 1534		

System cables



HARTING PushPull RJ45
 System cable, 8-wire
 connection cable HARTING PushPull to RJ45 (IP 20)

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	HARTING PushPull and RJ45 (IP 20)
Cable types	4 x 2, Twisted Pair, shielded, PIMF
Sheath material	PVC
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C ... +70 °C

Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Yellow

Advantages

Standardised PushPull interface for IP 65 / IP 67 according to ISO/IEC 24 702

Easy transition from harsh industrial environment into saved IP 20 environment

Identification	Part number PVC	Drawing	Dimensions in mm
HARTING PushPull RJ45 System cable, 8-wire	Yellow		
Length 1.5 m	09 45 701 1509		
Length 3.0 m	09 45 701 1510		
Length 5.0 m	09 45 701 1511		
Length 10.0 m	09 45 701 1512		
Length 20.0 m	09 45 701 1514		

Panel feed-throughs



HARTING PushPull RJ45 10G

Panel feed-through, 8-poles

RJ45 Panel feed-through for control or distributor cabinets

HARTING
PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x RJ45 (IP 20) 1x PushPull RJ45 (IP 65 / IP 67)
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	21 mm x 27 mm (Compact) ø 28 ... 30 mm (EasyInstall)
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	Black
Advantages	<p>Small, space-saving PushPull interface with IP 65 / IP 67</p> <p>Easy handling of RJ45 system cables in the control cabinet</p> <p>Mounting to casings</p> <p>Category of transmission Cat. 6</p> <p>IP 65 / IP 67 standard interface for structured cabling for buildings according to ISO/IEC 24 702 respectively EN 50 173-3</p>

Identification	Part number	Drawing	Dimensions in mm
<p>HARTING PushPull RJ45 Compact Panel feed-through plastic</p> <p>consisting of: Housing bulkhead mounting Compact including flat gasket 2x RJ45 female module mounted on PCB Assembly instructions board drillings for M2.5</p>	09 45 245 1560		
<p>HARTING PushPull RJ45 EasyInstall Panel feed-through plastic</p> <p>consisting of: Housing bulkhead mounting Easy Install including integrated seal RJ45 female module mounted on PCB Assembly instructions board drillings for M3</p>	09 45 245 1590		
<p>Protection cover IP 65 / IP 67, with fixing ring</p> <p>Version with active locking and plastic strap for fixing screw M3</p> <p>Version with active locking without fixing screw</p> <p>Version with passive locking and plastic strap for fixing screw M3</p> <p>Version with passive locking and Nylon strap for fixing screw M2,5 / M3</p>	09 45 845 0014 09 45 845 0015 09 45 845 0009 09 45 845 0011 024		
<p>Transport protection for housing bulkhead mounting, IP 40</p>	09 45 845 0003		

Distribution modules and Outlets

HARTING PushPull RJ45 Outlet, 8-poles
RJ45 Industrial Outlet for IP 65 / IP 67 environments



HARTING PushPull

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / PushPull RJ45 (IP 65 / IP 67)
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminated without special tools
Strand diameter	AWG 24 ... 22 (0.5 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	6 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	Wall mounting
Dimensions (H x W x D)	152 x 90 x 69 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-20 °C ... +70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	Black (similar RAL 9011) or White (similar RAL 9010)
Advantages	<p>Simple mounting</p> <p>Cable entering optionally from bottom or from top side</p> <p>Self-closing protection caps in IP 65 / IP 67</p> <p>IP 65 / IP 67 label</p> <p>IP 65 / IP 67 standard interface for structured cabling for buildings according to ISO/IEC 24 702 respectively EN 50 173-3</p>

Identification	Part number	Drawing	Dimensions in mm
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<p>HARTING PushPull RJ45 Outlet</p> <p>Black white</p> <p>consisting of: 2-port outlet housing with protection caps, cable management, cable glands and label 2x RJ45 female modules, Category 6 1x blind plug (if only one cable is used) Assembly instructions</p>	<p>09 45 845 1500 09 45 845 1501</p>		
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IP 20

RJ45

- Connectors [on page B·2 8]
- System cables [on page B·2 12]
- Distribution modules and Outlets [on page B·2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 22]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 32]

Han® PushPull

- Connectors [on page B·2 34]
- System cables [on page B·2 42]
- Panel feed-throughs / Gender Changer [on page B·2 44]

Han® 3 A

- Connectors [on page B·2 54]
- System cables [on page B·2 58]
- Panel feed-throughs [on page B·2 60]
- Distribution modules and Outlets [on page B·2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·2 70]
- System cables [on page B·2 72]
- Panel feed-throughs [on page B·2 74]
- Cables [on page B·2 76]

har-speed M12

- Connectors [on page B·2 78]
- System cables [on page B·2 80]

Han-Max®

- Connectors [on page B·2 82]
- Panel feed-throughs [on page B·2 86]

Cables

- Industrial Cat. 6_A [on page B·2 90]
- Industrial Cat. 5 [on page B·2 93]
- Industrial Cat. 7 [on page B·2 96]

Tools

[on page B·2 100]

Connector sets



Han® PushPull RJ45
Connector set, 8-pole
to make up Han® PushPull RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according 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 possible
Wire termination	Via piercing contacts
Cable options	
– Strand gauge	AWG 27/7 ... AWG 24/7 (stranded)
– Strand diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	5 ... 8 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages

- Space-saving connector assembly via PushPull interface
- Field-assembly connector, Cat. 6, in IP 65 / IP 67
- AIDA compliant

Mounting information

If the cable is assembled on both sides, please use one connector set with white and one connector set with blue cable manager (assures optimal transmission behavior)

Han® PushPull

Identification

Part number

Drawing

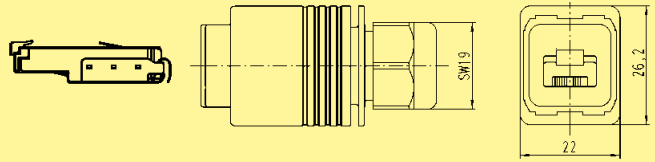
Dimensions in mm

Han® PushPull RJ45
Connector set, 8-pole

Plastic

Cable diameter 5 ... 8 mm
White cable manager
Blue cable manage

09 35 223 0421
09 35 224 0421



HARTING RJ Industrial®
Gigalink Mounting tools
for HARTING RJ Industrial®
Gigalink connectors

09 45 800 0500



Han®
PushPull

Connector sets



Han® PushPull RJ45 10G
 Connector set, 8-pole
 to make up Han® PushPull RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly
Wire termination	Via IDC contacts , tool-less
Cable options	Suitable for solid and stranded cores
– Strand gauge	AWG 27 ... AWG 22 (solid / stranded)
– Strand diameter	max. 1.6 mm (including insulation)
– Cable sheath diameter	6.5 ... 9.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages

- Space-saving connector assembly via PushPull interface
- Field-assembly connector, in IP 65 / IP 67
- AIDA compliant

Han® PushPull

Identification

Part number

Drawing

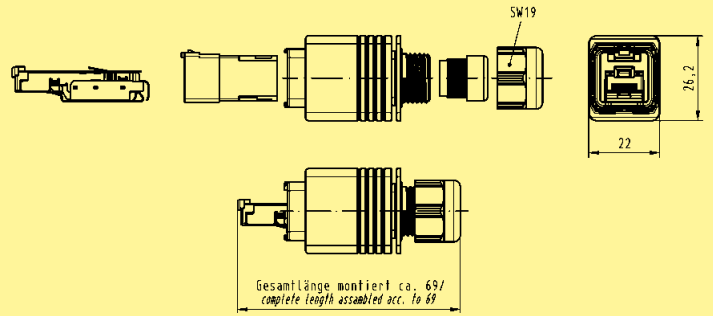
Dimensions in mm

Han® PushPull RJ45 10G
Connector set, 8-pole

Plastic

Cable diameter 6.5 ... 9.5 mm

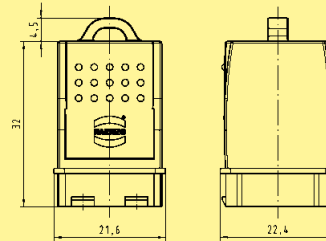
09 35 225 0421



Protection Cover

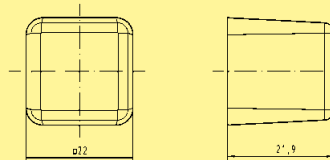
IP 65 / IP 67

09 35 002 5411



IP 40

09 35 002 5412



Connector sets



Han® PushPull RJ45
Connector set, 8-pole
to make up Han® PushPull RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according 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 possible
Wire termination	Via piercing contacts
Cable options	
– Strand gauge	AWG 27/7 ... AWG 24/7 (stranded)
– Strand diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	4 ... 11 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast
Colour	Nickel-plated
Advantages	Space-saving connector assembly via PushPull interface Field-assembly connector, Cat. 6, in IP 65 / IP 67 AIDA compliant
Mounting information	If the cable is assembled on both sides, please use one connector set with white and one connector set with blue cable manager (assures optimal transmission behavior)

Han® PushPull

Identification

Part number

Drawing

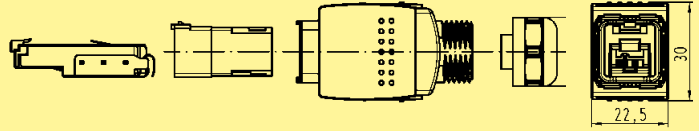
Dimensions in mm

Han® PushPull RJ45
Connector set, 8-pole

Metal

Cable diameter 4 ... 11 mm
White cable manager
Blue cable manage

09 35 223 0401
09 35 224 0401



HARTING RJ Industrial®
Gigalink Mounting tools
for HARTING RJ Industrial®
Gigalink connectors

09 45 800 0500



Han®
PushPull

Connector sets



Han® PushPull RJ45 10G
Connector set, 8-pole
to make up Han® PushPull RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly
Wire termination	Via IDC contacts , tool-less
Cable options	Suitable for solid and stranded cores
– Strand gauge	AWG 27 ... AWG 22 (solid / stranded)
– Strand diameter	max. 1.6 mm (including insulation)
– Cable sheath diameter	4 ... 11 mm (straight) 6.5 ... 9.5 mm (angled)
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast
Colour	Nickel-plated

Advantages	Space-saving connector assembly via PushPull interface Field-assembly connector, in IP 65 / IP 67 AIDA compliant
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Han® PushPull

Identification

Part number

Drawing

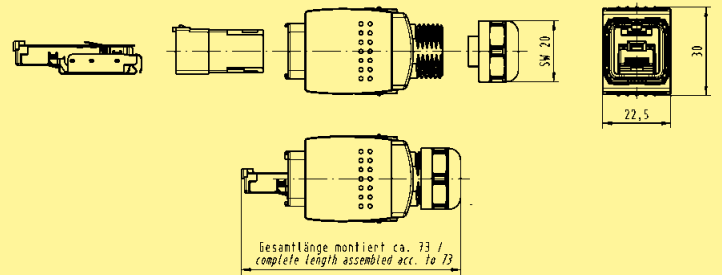
Dimensions in mm

Han® PushPull RJ45 10G
Connector set, 8-pole

Metal

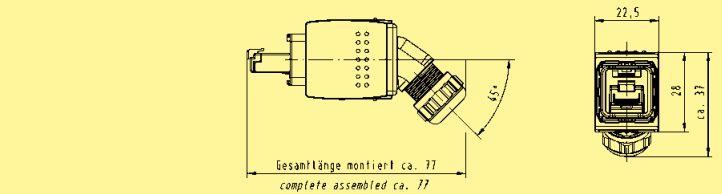
Cable diameter 4 ... 11 mm
straight entry

09 35 225 0401



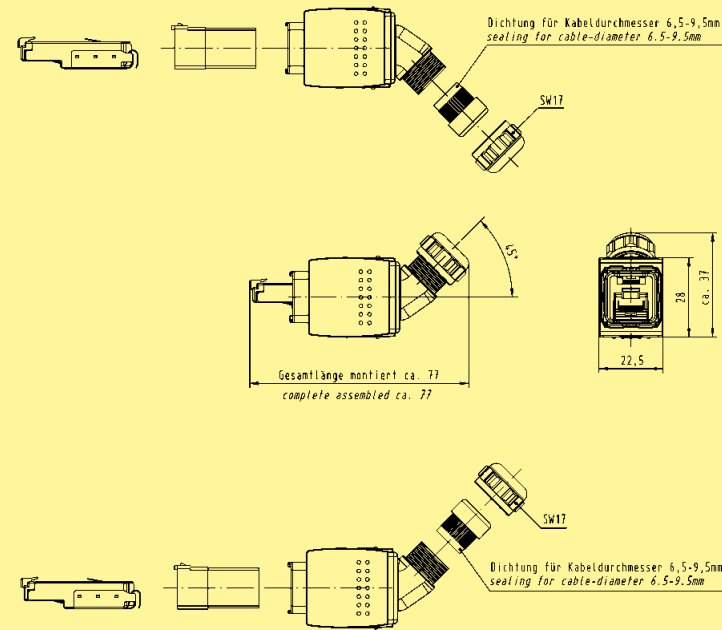
Cable diameter 6.5 ... 9.5 mm
angled entry, bottom

09 35 225 0402



Cable diameter 6.5 ... 9.5 mm
angled entry, top

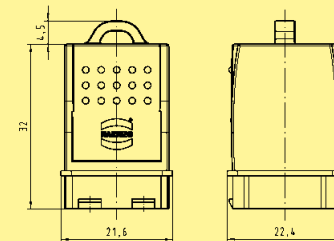
09 35 225 0403



Protection Cover

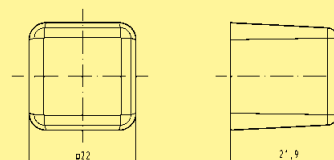
IP 65 / IP 67

09 35 002 5411



IP 40

09 35 002 5412



Han®
PushPull

System cables



Han® PushPull RJ45
System cable, 8-wire

RJ45 connector cable Han® PushPull for IP 65 / IP 67 applications

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	Han® PushPull RJ45
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C ... +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Yellow
Advantages	<ul style="list-style-type: none"> Standardised PushPull interface for IP 65 / IP 67 Easy and safe operation Especially space-saving AIDA compliant

Han® PushPull

Identification	Part number		Drawing	Dimensions in mm
	Plastic	Metal		
Han® PushPull RJ45 System cable, 8-wire Length 1.5 m Length 3.0 m Length 5.0 m Length 10.0 m Length 20.0 m	Yellow	Yellow		
	09 47 575 7001	09 47 585 8001		
	09 47 575 7002	09 47 585 8002		
	09 47 575 7003	09 47 585 8003		
	09 47 575 7004	09 47 585 8004		
	09 47 575 7005	09 47 585 8005		

Panel feed through



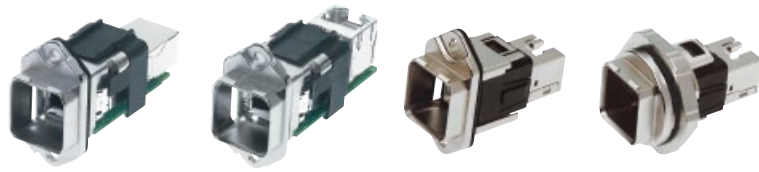
Han® PushPull RJ45
Panel feed through, plastic

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1 Category 6 / Class E _A suitable for 1 / 10 Gigabit Ethernet
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact (Cat. 6)
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Operating temperature range	–40 °C ... +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black
Advantages	<ul style="list-style-type: none"> Device integration via RJ45 PCB connectors Compact design High packing density AIDA compliant

Identification	Part number	Drawing	Dimensions in mm
<p>Han® PushPull RJ45 Panel feed through</p> <p>including housing and printed board Cat. 5 with 2 x RJ45 jack horizontally mounted</p> <p>including housing and printed board Cat. 5 with RJ45 jack and RJ45 jack vertically mounted in the IP20 range</p> <p>including housing and printed board Cat. 5 with RJ45 jack and 47° jack vertically mounted in the IP20 range</p>	<p>09 35 221 0331</p> <p>09 35 223 0331</p> <p>09 35 224 0331</p>		<p>Panel cut out</p>
<p>Han® PushPull RJ45 Panel feed through, Cat. 6</p> <p>including housing and HARTING RJ Industrial® 10G RJ45 coupler</p>	<p>09 35 225 0331</p>		<p>Panel cut out</p>
<p>Han® PushPull RJ45 Panel feed through</p> <p>for assembly with all HIFF compatible inserts (e.g. Ha-VIS preLink®)</p> <p>Please order inserts separately.</p>	<p>09 35 012 0331</p>		<p>Panel cut out</p>
<p>Ha-VIS preLink® Set Cat. 6 RJ45 female AWG 22/23</p> <p>consists of:</p> <ul style="list-style-type: none"> • 1x Ha-VIS preLink® module RJ45 female • 1x Ha-VIS preLink® termination block • 1x cable clip 	<p>20 82 001 0001</p>		

Panel feed through



Han® PushPull RJ45
Panel feed through, metal

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector
Locking	PushPull technology according to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1 Category 6 / Class E _A suitable for 1 / 10 Gigabit Ethernet
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact (Cat. 6)
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast
Colour	Nickel-plated
Advantages	<ul style="list-style-type: none"> Device integration via RJ45 PCB connectors Compact design High packing density AIDA compliant

Han® PushPull

Identification

Part number

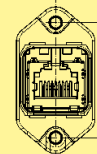
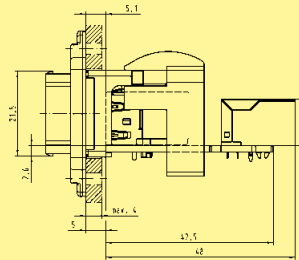
Drawing

Dimensions in mm

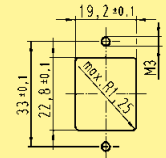
Han® PushPull RJ45 Panel feed through

including housing, bulkhead mounting,
with flat seal and printed board Cat. 5
with 2 x RJ45 jack
horizontally mounted

09 35 221 0311

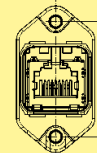
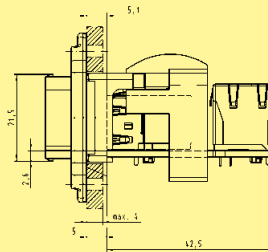


Panel cut out

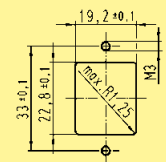


including housing, bulkhead mounting,
with flat seal and printed board Cat. 5
with RJ45 jack and
RJ45 jack vertically mounted
in the IP 20 range

09 35 223 0311

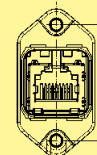
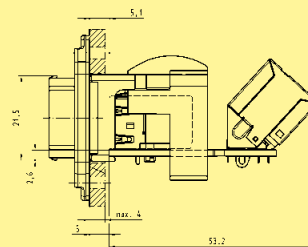


Panel cut out

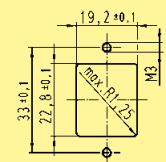


including housing, bulkhead mounting,
with flat seal and printed board Cat. 5
with RJ45 jack and
47° jack vertically mounted
in the IP 20 range

09 35 224 0311

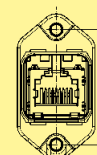
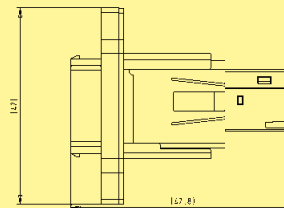


Panel cut out

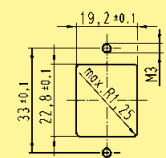


including housing, bulkhead mounting,
with flat seal and bulkhead Cat. 6
with 2 x RJ45 jack
horizontally mounted

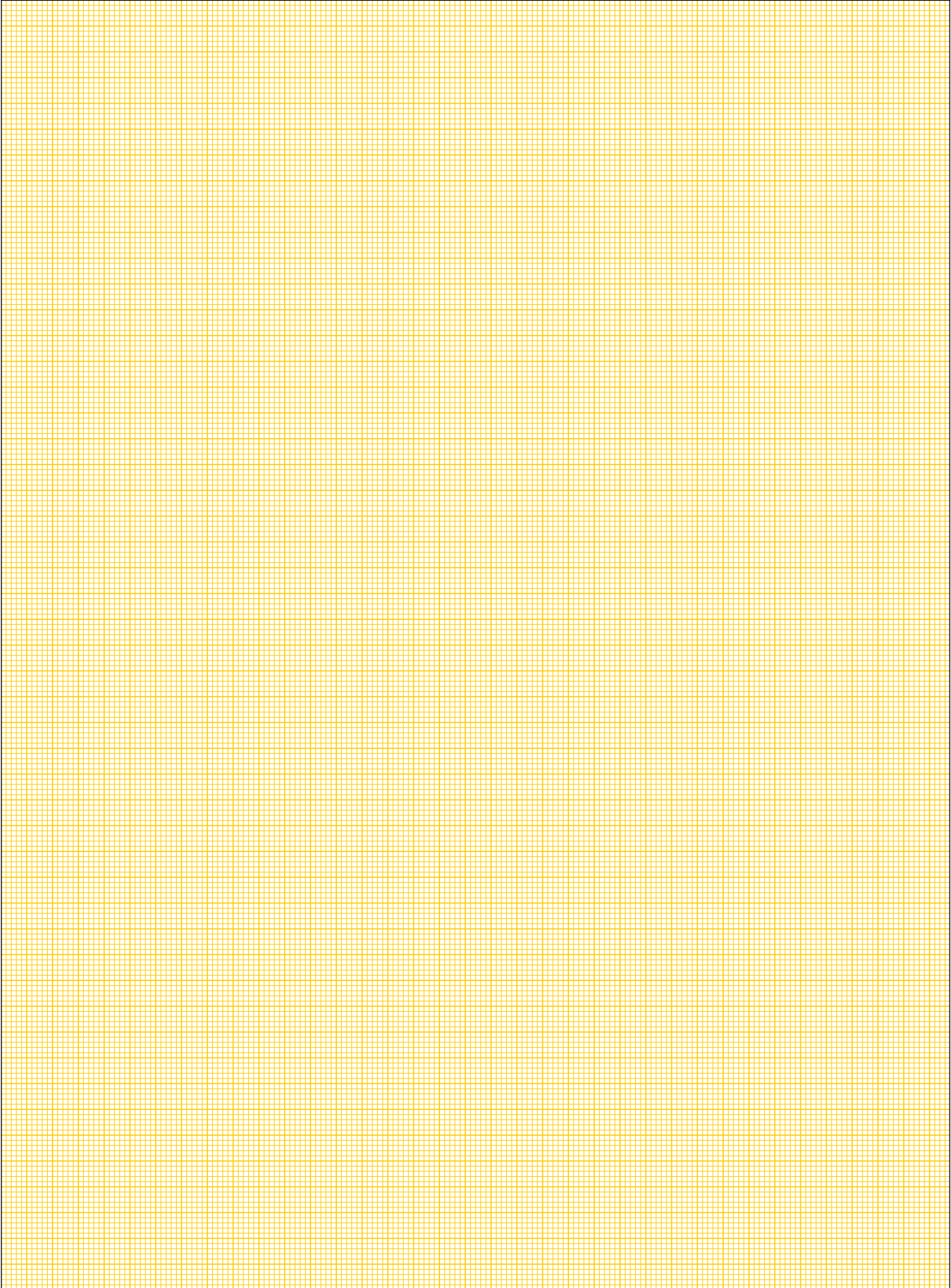
09 35 225 0311



Panel cut out



Identification	Part number	Drawing	Dimensions in mm
<p>Han® PushPull RJ45 Panel feed through</p> <p>including bulkhead housing for circular panel cut out, flat seal and HARTING RJ Industrial® 10G RJ45 bulkhead, isolated bulkhead fixture</p> <p>to mount HIFF inserts (e.g. HARTING RJ Industrial® 10G RJ45 coupler or Ha-VIS preLink® RJ45 module) including bulkhead housing for rectangular panel cut out, incl. plastic adapter Order inserts separately</p> <p>to mount HIFF inserts (e.g. HARTING RJ Industrial® 10G RJ45 coupler or Ha-VIS preLink® RJ45 module) including bulkhead housing for circular panel cut out, incl. plastic adapter and fixing nut Order inserts separately</p>	<p>09 35 225 0312</p> <p>09 35 012 0311</p> <p>09 35 012 0312</p>		<p>Panel cut out</p>
<p>Patch cord 1.5 mm² for potential equalization between RJ45 insert and bulkhead housing</p> <p>with 2 x flat receptacle</p> <p>with flat receptacle and ring terminal M3</p>	<p>09 45 500 0001</p> <p>09 45 500 0002</p>		
<p>Ha-VIS preLink® Set RJ45 female AWG 22/23</p> <p>consists of:</p> <ul style="list-style-type: none"> • 1x Ha-VIS preLink® module RJ45 female • 1x Ha-VIS preLink® termination block • 1x cable clip 	<p>20 82 001 0001</p>		



Gender Changer



Han® PushPull RJ45
Gender Changer, metal

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® PushPull RJ45 connector
Locking	PushPull technology acc. to IEC/PAS 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Degree of protection	IP 65 / IP 67
Mating cycles	min. 750
Mounting	Surface mounting with 4 screws type M5
Operating temperature range	-20 °C ... +70 °C
Housing material	Aluminium, anodised
Advantages	<p>Extension of Han® PushPull system cable RJ45</p> <p>Robust design</p> <p>Only one connection according to PROFINET guideline according to IEC 11 801 chapter 10.2.4</p> <p>AIDA compliant</p>

Identification

Part number

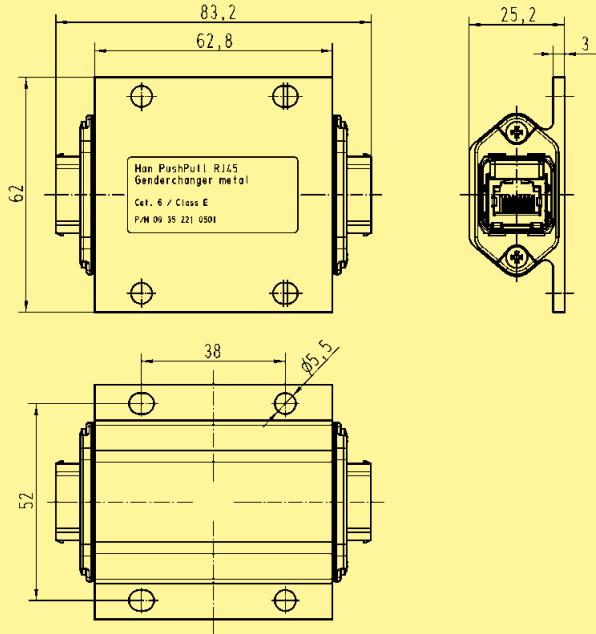
Drawing

Dimensions in mm

Han® PushPull RJ45
Gender Changer

including housing and
printed board Cat. 6
with 2x RJ45 jack

09 35 221 0501



IP 20

RJ45

- Connectors [on page B-2 8]
- System cables [on page B-2 12]
- Distribution modules and Outlets [on page B-2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B-2 22]
- System cables [on page B-2 28]
- Panel feed-throughs [on page B-2 30]
- Distribution modules and Outlets [on page B-2 32]

Han® PushPull

- Connectors [on page B-2 34]
- System cables [on page B-2 42]
- Panel feed-throughs / Gender Changer [on page B-2 44]

Han® 3 A

- Connectors [on page B-2 54]
- System cables [on page B-2 58]
- Panel feed-throughs [on page B-2 60]
- Distribution modules and Outlets [on page B-2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B-2 70]
- System cables [on page B-2 72]
- Panel feed-throughs [on page B-2 74]
- Cables [on page B-2 76]

har-speed M12

- Connectors [on page B-2 78]
- System cables [on page B-2 80]

Han-Max®

- Connectors [on page B-2 82]
- Panel feed-throughs [on page B-2 86]

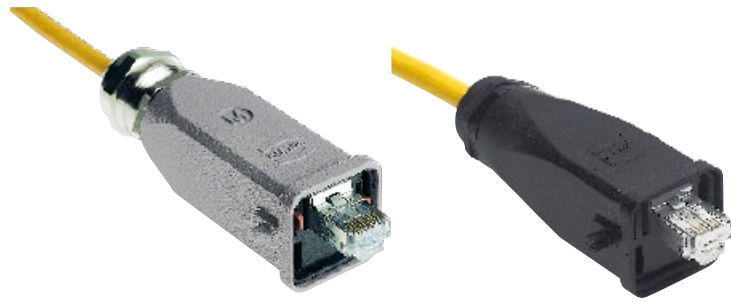
Cables

- Industrial Cat. 6_A [on page B-2 90]
- Industrial Cat. 5 [on page B-2 93]
- Industrial Cat. 7 [on page B-2 96]

Tools

[on page B-2 100]

Connector sets



Han® 3 A RJ45
Connector set, 8-pole
to make up Han® 3 A RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® 3 A RJ45 connector
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according 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 possible
Wire termination	Via piercing contacts
Cable options	
– Strand gauge	AWG 28/7 ... AWG 24/7 (stranded)
– Strand diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	5 ... 9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	Very robust metal housing Field-assembly connector, Cat. 6, IP 65 / IP 67
Mounting information	If the cable is assembled on both sides, please use one connector set with white and one connector set with blue cable manager (assures optimal transmission behavior)

Identification	Part number	Drawing
<p>Han® 3 A RJ45 Connector set, 8-pole</p> <p>Plastic version with White cable manager Blue cable manager</p> <p>Metal version Standard with White cable manager Blue cable manager</p> <p>Metal version M with White cable manager Blue cable manager</p> <p>Set consists of: Han® 3 A housing including RJ45 connector and shielding Cable gland Assembly instructions</p>	<p>09 45 125 1500 09 45 125 1510</p> <p>09 45 115 1500 09 45 115 1510</p> <p>09 45 115 1502 09 45 115 1512</p>	<p>mating face according to IEC 60 603-7</p> <p>Dimensions valid for Metal version Standard</p>
<p>Protection cover for Han® 3 A connector</p> <p>Plastic version Metal version Standard Metal version M</p>	<p>09 20 003 5442 09 20 003 5422 09 37 003 5402</p>	<p>Dimensions valid for Plastic version</p>
<p>HARTING RJ Industrial® Gigalink Mounting tools for HARTING RJ Industrial® Gigalink connectors</p>	<p>09 45 800 0500</p>	

Connector sets



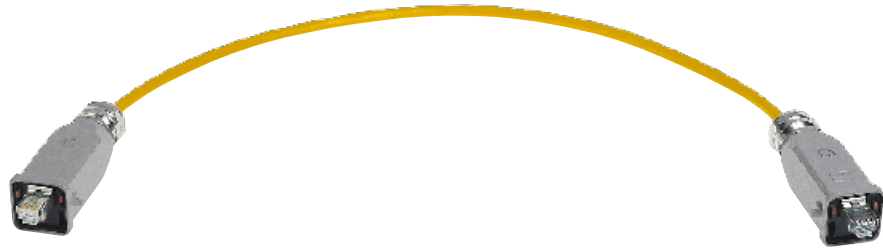
Han® 3 A RJ45 10G
Connector set, 8-pole
to make up Han® 3 A RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® 3 A RJ45 connector
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly
Wire termination	Via IDC contacts , tool-less
Cable options	
– Strand gauge	AWG 27 ... AWG 22 (solid, stranded)
– Strand diameter	max. 1.6 mm (including insulation)
– Cable sheath diameter	5 ... 9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Advantages	Robust metal housing Field-assembly connector, IP 65 / IP 67

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 10G Connector set, 8-pole</p> <p>Plastic version</p> <p>Metal version Standard</p> <p>Set consists of: Han® 3 A housing including RJ45 connector and shielding Cable gland Assembly instructions</p>	<p>09 45 125 1560</p> <p>09 45 115 1560</p>	<p>mating face according to IEC 60 603-7</p>	
<p>Han® 3 A RJ45 10G insert, 8-pole</p> <p>for Han® 3 A hoods</p>	<p>09 45 100 1560</p>	<p>contact 1 contact 8</p>	
<p>Protection cover for Han® 3 A connector</p> <p>Plastic version Metal version Standard Metal version M</p>	<p>09 20 003 5442 09 20 003 5422 09 37 003 5402</p>		<p>Dimensions valid for Plastic version</p>
<p>Accessories Set of coding pins</p>	<p>09 45 820 0000</p>		

System cables



Han® 3 A RJ45
 System cable, 8-wire
 RJ45 connector cable Han® 3 A for IP 65 / IP 67 applications

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	Han® 3 A RJ45
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PVC / PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C ... +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Yellow
Advantages	Very robust metal housing Han® 3 A for IP 65 / IP 67 Additional locking

Identification	Part number		Drawing	Dimensions in mm
	PVC	PUR		
Han® 3 A RJ45 System cable, 8-wire	Yellow	Yellow		
Length 1.5 m	09 45 715 1523	09 45 715 1563		
Length 3.0 m	09 45 715 1525	09 45 715 1565		
Length 5.0 m	09 45 715 1527	09 45 715 1567		
Length 10.0 m	09 45 715 1551	09 45 715 1572		
Length 20.0 m	09 45 715 1553	09 45 715 1574		

Han® 3 A

System cables



Han® 3 A RJ45
System cable, 8-wire

RJ45 connector cable Han® 3 A for IP 65 / IP 67 applications to RJ45 (IP 20)

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	Han® 3 A RJ45 (IP 65 / IP 67) RJ45 (IP 20)
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PVC / PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C to +70 °C

Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Yellow

Advantages	<p>Very robust metal housing Han® 3 A for IP 65 / IP 67</p> <p>Additional locking</p> <p>Easy change-over from harsh industrial environment to protected IP 20 environment</p> <p>Easy handling for all applications</p>
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Identification	Part number		Drawing	Dimensions in mm
	PVC	PUR		
Han® 3 A RJ45 System cable, 8-wire IP 65 / IP 67 to IP 20	Yellow	Yellow		
Length 1.5 m	09 45 701 1564	09 45 701 1534		
Length 3.0 m	09 45 701 1566	09 45 701 1536		
Length 5.0 m	09 45 701 1568	09 45 701 1538		
Length 10.0 m	09 45 701 1573	09 45 701 1543		
Length 20.0 m	09 45 701 1575	09 45 701 1545		

Panel feed-throughs



Han® 3 A RJ45
 Panel feed-through, 8-poles
 RJ45 Panel feed-through for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (Twisted Pair) (IP 20)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible Various versions cover all applications Coding possible

Han® 3 A

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 Panel feed-through</p> <p>Plastic version straight style angled style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 225 1100 09 45 225 1108</p> <p>09 20 003 5445</p>	<p>IEC 60503-7 SMC modular jack 12mm height above PC-board</p> <p>Dimensions valid for straight Plastic version</p>	
<p>Han® 3 A RJ45 Panel feed-through</p> <p>Metal version Standard straight style straight style including self-closing protection cap angled style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1100 09 45 215 1103 09 45 215 1108</p> <p>09 20 003 5425</p>	<p>panel cut out</p>	
<p>Han® 3 A RJ45 Panel feed-through</p> <p>Metal version M straight style angled style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1102 09 45 215 1109</p> <p>09 37 003 5405</p>	<p>Dimensions valid for Plastic version</p>	
<p>Accessories Set of coding pins</p>	<p>09 45 820 0000</p>		

Panel feed-throughs



Han® 3 A RJ45 10G
Panel feed-through, 8-poles
RJ45 Panel feed-through for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (Twisted Pair) (IP 20)
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible Various versions cover all applications Coding possible

Han® 3 A

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 10G Panel feed-through Plastic version straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 225 1560</p> <p>09 20 003 5445</p>		<p>panel cut out</p>
<p>Han® 3 A RJ45 10G Panel feed-through Metal version Standard straight style</p> <p>straight style including self-closing protection cap</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1560</p> <p>09 45 215 1562</p> <p>09 20 003 5425</p>		<p>panel cut out</p>
<p>Han® 3 A RJ45 10G Panel feed-through Metal version M straight style</p>	<p>09 45 215 1561</p>		<p>panel cut out</p>
<p>Han® 3 A RJ45 10G insert</p> <p>for Han® 3 A housings</p>	<p>09 45 200 1560</p>		
<p>Accessories Set of coding pins</p>	<p>09 45 820 0000</p>		

Panel feed-throughs



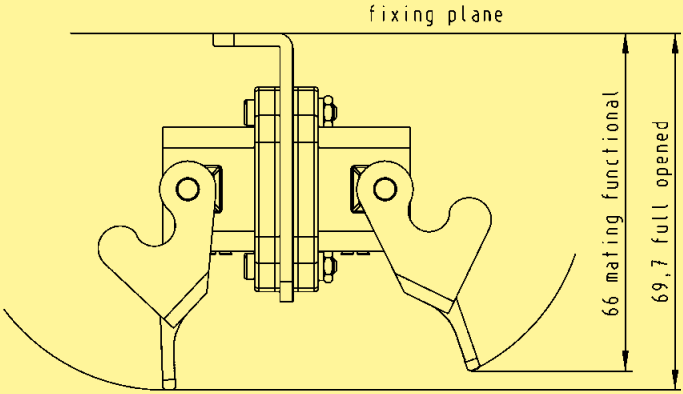
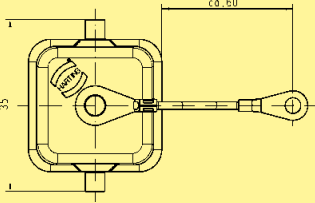
Han® 3 A RJ45
 double-coupling, 8-poles
 RJ45 double-coupling for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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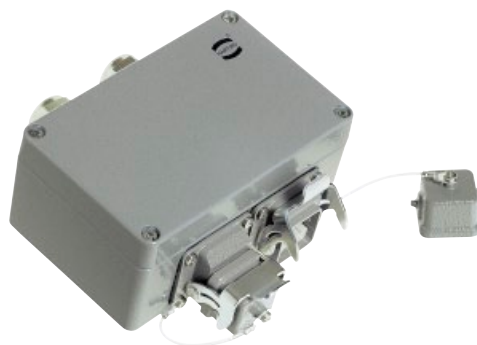
Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C

Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black

Advantages	Simple mounting RJ45 plug-compatible Various versions cover all applications Coding possible
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Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 double-coupling Plastic version</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 225 1107</p> <p>09 20 003 5445</p>		
<p>Han® 3 A RJ45 double-coupling Metal version Standard</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1107</p> <p>09 20 003 5425</p>	<p>Dimensions valid for Plastic version</p>	
<p>Han® 3 A RJ45 double-coupling Metal version M</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1110</p> <p>09 37 003 5405</p>		
<p>Accessories Set of coding pins</p>	<p>09 45 820 0000</p>	<p>Dimensions valid for Plastic version</p>	

Distribution modules and Outlets



Han® 3 A RJ45
Metal Outlet, Cat. 6, 8-poles
RJ45 Industrial Outlet for IP 65 / IP 67 environments

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminated without special tools
Strand diameter	AWG 24 ... 22 (0.5 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	5 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	Wall mounting
Dimensions (H x W x D)	125 x 80 x 57.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-20 °C ... +70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037
Advantages	<p>Robust metal housing for use in harsh industrial environments</p> <p>Simple mounting</p> <p>Lockable Han® 3 A connector ports</p>

Identification	Part number	Drawing	Dimensions in mm
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<p>Han® 3 A RJ45 Metal Outlet, Cat. 6</p> <p>consisting of: 2-port metal housing with protection caps and cable glands 2x RJ45 female module, Cat. 6 Assembly instructions</p>	20 79 302 0922		
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Han® 3 A

Distribution modules and Outlets



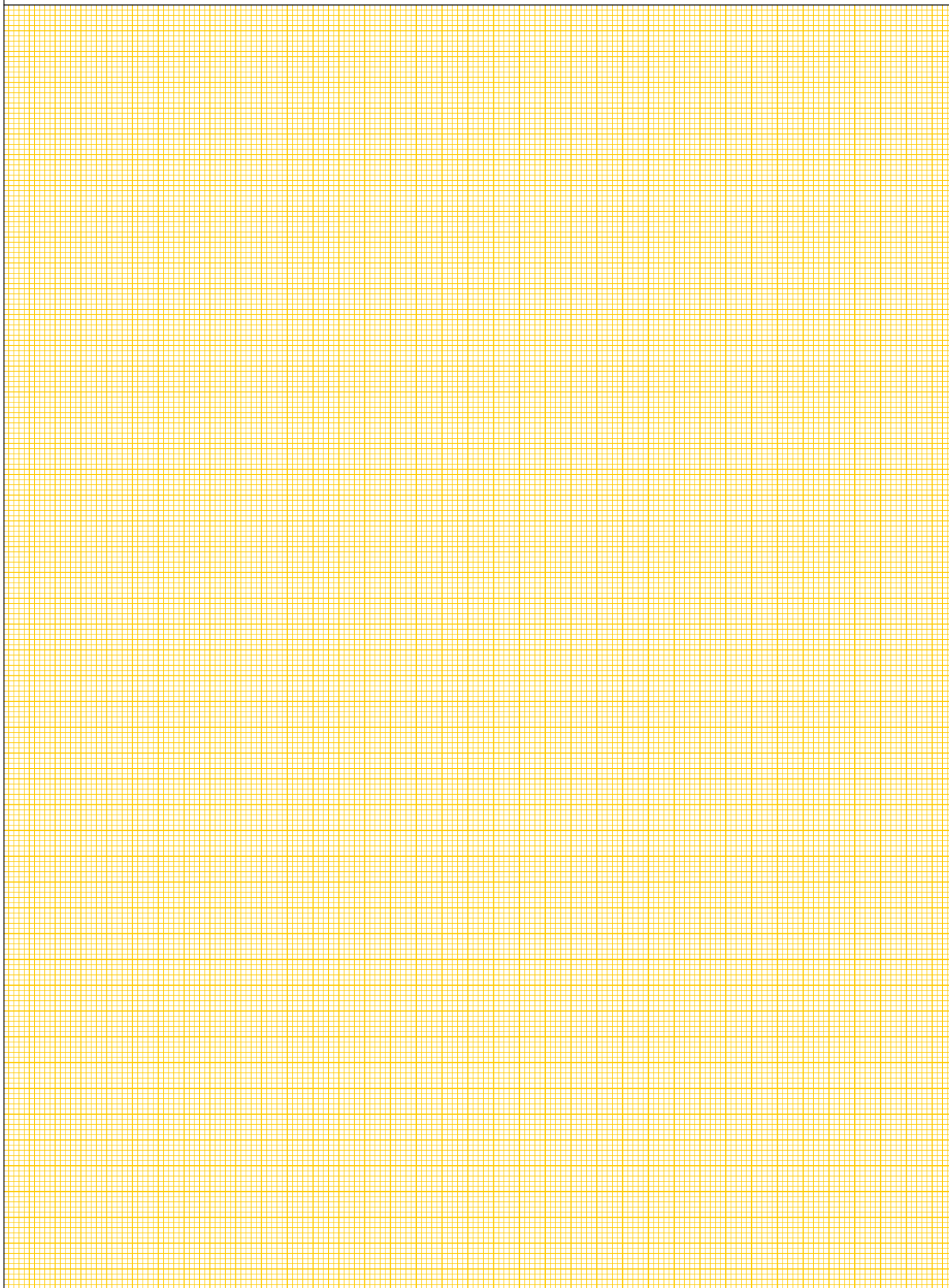
Han® 3 A RJ45
Metal Outlet, Cat. 5, 8-poles
 RJ45 Industrial Outlet for IP 65 / IP 67 environments

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Termination	LSA-PLUS module, terminating via LSA-PLUS tool
Strand diameter	AWG 26 ... 22 (0.35 ... 0.65 mm) solid and stranded
Strand insulation	0.7 ... 1.6 mm
Cable diameter	5 ... 9 mm
Shielding	Fully shielded, 360° shielding contact
Mounting	Wall mounting
Dimensions (H x W x D)	105 x 105 x 40.5 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037
Advantages	Robust metal housing for use in harsh industrial environments Simple mounting Cable feeding optionally from the left or from the right side Lockable Han® 3 A connector ports

Identification	Part number	Drawing	Dimensions in mm
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Han® 3 A RJ45 Metal Outlet, Cat. 5 consisting of: 2-port metal housing with protection caps, cable glands and blanking plug PCB module with LSA-PLUS strips Label Assembly instructions	09 45 815 1100		
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IP 20

RJ45

- Connectors [on page B·2 8]
- System cables [on page B·2 12]
- Distribution modules and Outlets [on page B·2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 22]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 32]

Han® PushPull

- Connectors [on page B·2 34]
- System cables [on page B·2 42]
- Panel feed-throughs / Gender Changer [on page B·2 44]

Han® 3 A

- Connectors [on page B·2 54]
- System cables [on page B·2 58]
- Panel feed-throughs [on page B·2 60]
- Distribution modules and Outlets [on page B·2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·2 70]
- System cables [on page B·2 72]
- Panel feed-throughs [on page B·2 74]
- Cables [on page B·2 76]

har-speed M12

- Connectors [on page B·2 78]
- System cables [on page B·2 80]

Han-Max®

- Connectors [on page B·2 82]
- Panel feed-throughs [on page B·2 86]

Cables

- Industrial Cat. 6_A [on page B·2 90]
- Industrial Cat. 5 [on page B·2 93]
- Industrial Cat. 7 [on page B·2 96]

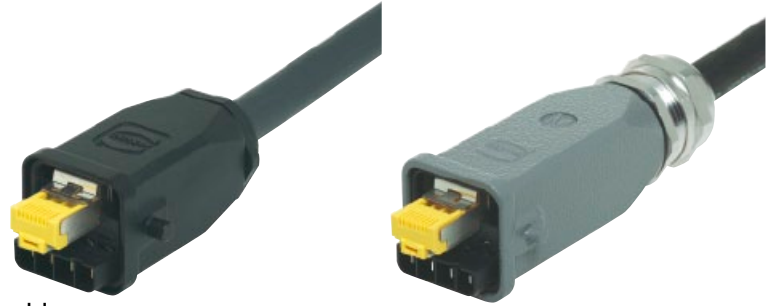
Tools

[on page B·2 100]

Connector sets

Han® 3 A RJ45 Hybrid 10G
Connector set, 8-pole

to make up Han® 3 A RJ45 Hybrid system cables



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	Han® 3 A RJ45 Hybrid connector
Number of contacts	8x RJ45 + 4x power contacts (up to max. 48 V / 16 A)
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly
Wire termination	Via IDC contacts , tool-less
Cable options	Hybrid cable, (4 x 2 data + 4x power)
– Strand gauge (data)	AWG 27 ... AWG 22 (solid / stranded)
– Strand gauge (power)	1.5 mm ² (stranded)
– Strand diameter (data)	max. 1.6 mm
– Strand diameter (power)	max. 2.6 mm
– Cable sheath diameter	10 ... 11 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Plastic version	
Housing material	Polyamide and polycarbonate, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	Tool-less fast termination technique via IDC contacts Field-assembly connector PROFINET compliant

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 Hybrid Connector set, 8-pole</p> <p>Plastic version</p> <p>Metal version Standard</p> <p>Set consists of: Han® 3 A housing including RJ45 Hybrid connector and shielding Cable gland Assembly instructions</p>	<p>09 45 125 1760</p> <p>09 45 115 1760</p>	<p>① ... mating face according to IEC 60603-7</p>	
<p>Han® 3 A RJ45 Hybrid Connector set, 8-pole</p> <p>for Han® 3 A hoods and housings</p>	<p>09 45 100 1760</p>		
<p>Protection cover for Han® 3 A connector</p> <p>Plastic version</p> <p>Metal version Standard</p>	<p>09 20 003 5442</p> <p>09 20 003 5422</p>	<p>Dimensions valid for Plastic version</p>	

System cables



Han® 3 A RJ45 Hybrid
 System cable, 8-wire, Outdoor, plastic
 RJ45 Hybrid connector cable Han® 3 A plastic for IP 65 / IP 67 applications

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	Han® 3 A RJ45 Hybrid, plastic
Cable types	4 x 2, Twisted Pair, shielded + 4 power cores
Sheath material	PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C ... +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Black

Advantages	Robust plastic housing Han® 3 A for IP 65 / IP 67 Easy handling for applications with additional power supply
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Identification	Part number PUR	Drawing	Dimensions in mm
Han® 3 A RJ45 Hybrid System cable, 8-wire Outdoor	Black		
Length 1.5 m	09 45 725 1503		
Length 3.0 m	09 45 725 1505		
Length 5.0 m	09 45 725 1507		
Length 10.0 m	09 45 725 1512		
Length 20.0 m	09 45 725 1514		

Han® 3 A
RJ45 Hybrid

System cables



Han® 3 A RJ45 Hybrid
System cable, 8-wire, Outdoor, metal
RJ45 Hybrid connector cable Han® 3 A metal for IP 65 / IP 67 applications

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	Han® 3 A RJ45 Hybrid, metal
Cable types	4 x 2, Twisted Pair, shielded + 4 power cores
Sheath material	PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-10 °C to +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Black
Advantages	Robust metal housing Han® 3 A for IP 65 / IP 67 Easy handling for applications with additional power supply

Identification	Part number PUR	Drawing	Dimensions in mm
Han® 3 A RJ45 Hybrid System cable, 8-wire Outdoor	Black		
Length 1.5 m	09 45 725 1533		
Length 3.0 m	09 45 725 1535		
Length 5.0 m	09 45 725 1537		
Length 10.0 m	09 45 725 1542		
Length 20.0 m	09 45 725 1544		

Panel feed-throughs



Han® 3 A RJ45 Hybrid
Panel feed-through, 8-poles

RJ45 Hybrid Panel feed-through for control or distributor cabinets

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (Twisted Pair) (IP 20)
Termination power supply	4 contacts in the Han® 3 A RJ45 Hybrid connector 4 contacts for power supply via cage-clamp terminal up to 48 V, 16 A
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Mounting	Screwable to steel plate covers
Dimensions	See drawing
Panel cut-out	20 mm x 22 mm
Mounting hole	Diameter 3.4 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Metal version M	
Housing material	Zinc, die-cast
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible Additional power supply via hybrid cable Coding possible

Identification	Part number	Drawing	Dimensions in mm
<p>Han® 3 A RJ45 Hybrid Panel feed-through Plastic version straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 225 1300</p> <p>09 20 003 5445</p>		<p>panel cut out</p>
<p>Han® 3 A RJ45 Hybrid Panel feed-through Metal version Standard straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>10 12 005 1002</p> <p>09 20 003 5425</p>		<p>panel cut out</p>
<p>Han® 3 A RJ45 Hybrid Panel feed-through Metal version M straight style</p> <p>Accessories IP 65 / IP 67 protection cover for Panel feed-through</p>	<p>09 45 215 1301</p> <p>09 37 003 5405</p>		<p>panel cut out</p>

Cables



Industrial Cat. 6 Hybrid
Installation cable, 8-wire

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	FRNC		Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF 4 power cores
Core structure	4 x 2 x AWG 28/7, stranded 4x 84 * 0.15 mm (cord 1.5 mm ²), stranded
Sheath material	PUR
Cable sheath diameter	10 ... 10.6 mm
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Paired shielded with additional cable shield
Operating temperature range	-20 °C ... +80 °C
Supply lengths	20 m / 50 m / 100 m other lengths on request
Colour	Black
Advantages	<ul style="list-style-type: none"> Robust design suitable for industry Additional power supply Halogen free RoHS compliant UV proof Outdoor capable

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6 Hybrid installation cable, 8-wire PUR			
	20 m ring	09 45 600 0332	
	50 m ring	09 45 600 0342	
	100 m drum	09 45 600 0302	

Han® 3 A
RJ45 Hybrid

IP 20

RJ45

- Connectors [on page B·2 8]
- System cables [on page B·2 12]
- Distribution modules and Outlets [on page B·2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 22]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 32]

Han® PushPull

- Connectors [on page B·2 34]
- System cables [on page B·2 42]
- Panel feed-throughs / Gender Changer [on page B·2 44]

Han® 3 A

- Connectors [on page B·2 54]
- System cables [on page B·2 58]
- Panel feed-throughs [on page B·2 60]
- Distribution modules and Outlets [on page B·2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·2 70]
- System cables [on page B·2 72]
- Panel feed-throughs [on page B·2 74]
- Cables [on page B·2 76]

har-speed M12

- Connectors [on page B·2 78]
- System cables [on page B·2 80]

Han-Max®

- Connectors [on page B·2 82]
- Panel feed-throughs [on page B·2 86]

Cables

- Industrial Cat. 6_A [on page B·2 90]
- Industrial Cat. 5 [on page B·2 93]
- Industrial Cat. 7 [on page B·2 96]

Tools

[on page B·2 100]

Connector sets

har-speed M12
Connector, 8-pole
to make up *har-speed* M12 system cables



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	<i>har-speed</i> M12 connector X coding acc. to IEC 61076-2-109
Number of contacts	8
Transmission performance	Category 6 _A / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Wire termination	Via crimp contacts
Cable options	<ul style="list-style-type: none"> – Strand gauge AWG 28 ... AWG 24 (stranded) – Strand diameter max. 1.05 mm (including insulation) – Cable sheath diameter 4.5 ... 8.8 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +85 °C
Housing material	Metal
Advantages	<p>Very robust metal housing M12 with degree of protection IP 65 / IP 67</p> <p>Vibration proof crimp connection</p> <p>Maximum data rates through the configuration of the contacts in conformance with Ethernet technology</p> <p>Minimal interaction and perfect shielding through paired shielding of the contacts</p> <p>Fault proof connection through coding of the connector face. A connection error with other 8-pole M12's is impossible</p> <p>PROFINET compliant Type X mating face</p>

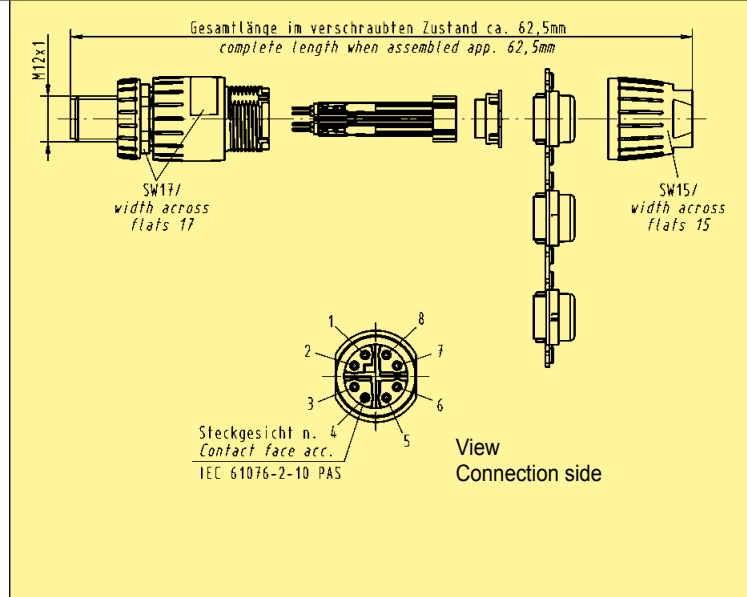
har-speed
M12

Identification	Part number	Drawing	Dimensions in mm
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har-speed M12
connector, 8-pole, male

straight style

21 03 881 5805



Crimp contacts, male

21 01 100 9014

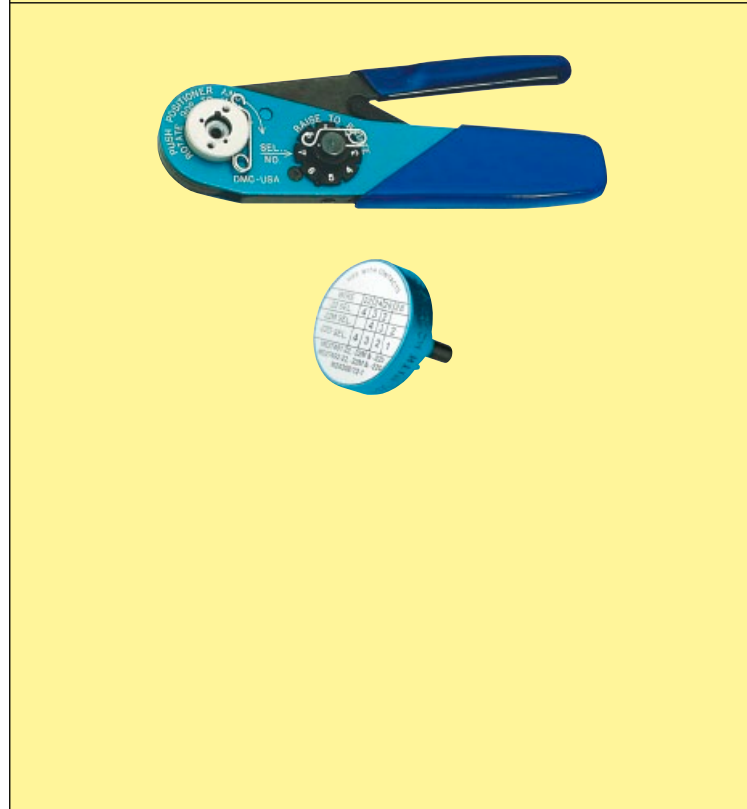


Crimping tool

Locator

09 99 000 0501

09 99 000 0525



System cables



har-speed M12
System cable, 8-wire

har-speed M12 connector cable for IP 65 / IP 67 applications

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	har-speed M12 connector X coding acc. to IEC 61076-2-109
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PUR
Wiring	8-pole, 1:1
Transmission performance	Category 6 _A / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Operating temperature range	-40 °C ... +70 °C
Standard lengths	0.5 m / 1 m / 1.5 m / 2 m / 2.5 m other lengths available on request
Colour	Yellow
Advantages	<p>Very robust metal housing M12 with degree of protection IP 65 / IP 67</p> <p>Vibration proof crimp connection</p> <p>Maximum data rates through the configuration of the contacts in conformance with Ethernet technology</p> <p>Minimal interaction and perfect shielding through paired shielding of the contacts</p> <p>Fault proof connection through coding of the connector face. A connection error with other 8-pole M12's is impossible</p> <p>PROFINET compliant Type X mating face</p>

har-speed M12

Identification	Part number PUR	Drawing	Dimensions in mm
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har-speed M12 system cable, 8-wire	Yellow	<p>Steckgesicht n. Contact face acc. IEC 61076-2-10 PAS</p> <p>SW171 width across flats 17</p>	M12-L	
	Length 0.5 m			21 03 483 5850
	Length 1.0 m			21 03 483 5801
	Length 1.5 m			21 03 483 5851
	Length 2.0 m			21 03 483 5802
	Length 2.5 m			21 03 483 5852

IP 20

RJ45

- Connectors [on page B·2 8]
- System cables [on page B·2 12]
- Distribution modules and Outlets [on page B·2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 22]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 32]

Han® PushPull

- Connectors [on page B·2 34]
- System cables [on page B·2 42]
- Panel feed-throughs / Gender Changer [on page B·2 44]

Han® 3 A

- Connectors [on page B·2 54]
- System cables [on page B·2 58]
- Panel feed-throughs [on page B·2 60]
- Distribution modules and Outlets [on page B·2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B·2 70]
- System cables [on page B·2 72]
- Panel feed-throughs [on page B·2 74]
- Cables [on page B·2 76]

har-speed M12

- Connectors [on page B·2 78]
- System cables [on page B·2 80]

Han-Max®

- Connectors [on page B·2 82]
- Panel feed-throughs [on page B·2 86]

Cables

- Industrial Cat. 6_A [on page B·2 90]
- Industrial Cat. 5 [on page B·2 93]
- Industrial Cat. 7 [on page B·2 96]

Tools

[on page B·2 100]

Connector sets



Han-Max® RJ45
 Connector set, 8-pole
 to make up Han-Max® RJ45 system cables

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Bayonet connector RJ45 acc. to IEC 24 702
Number of contacts	8
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact or unshielded
Mounting	Field-assembly
Wire termination	Via piercing contacts
Cable options	
– Strand gauge	AWG 26 ... AWG 24 (stranded)
– Strand diameter	max. 1.0 mm (including isolation)
– Cable sheath diameter	4 ... 8 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–25 °C ... +80 °C
Housing material	Zinc, die-cast, nickel-plated
Colour	Metal
Advantages	Very robust IP 65 / IP 67 connector with bayonet nut Field-assembly connector, Cat. 5, IP 65 / IP 67 Shielded or unshielded

Identification

Part number

Drawing

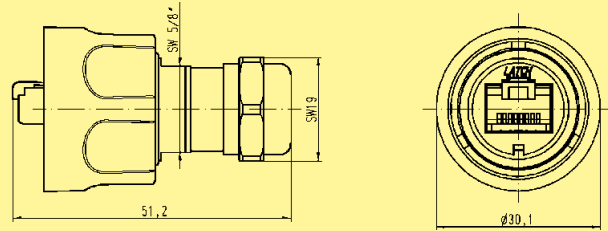
Dimensions in mm

Han-Max® RJ45
connector set , 8-pole

STP
UTP

09 15 300 0402
09 15 300 0401

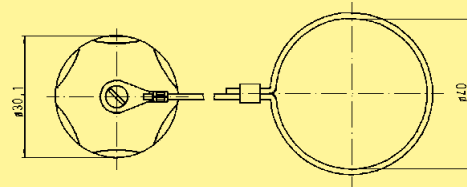
Set consists of:
Bayonet housing including RJ45
connector
Cable gland
Assembly instructions



Protection cover
for Han-Max® connector



09 15 300 5401



Connector sets

Han-Max® RJ45 10G
Connector set, 8-pole
to make up Han-Max® RJ45 system cables



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Connector type	Bayonet connector RJ45 acc. to IEC 24 702
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s / 1/10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly
Wire termination	Via IDC contacts, tool-less
Cable options	
– Strand gauge	AWG 27 ... AWG 22 (solid / stranded)
– Strand diameter	max. 1.6 mm (including isolation)
– Cable sheath diameter	4 ... 8 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc, die-cast, nickel-plated
Colour	Metal
Advantages	Very robust IP 65 / IP 67 connector with bayonet nut Field-assembly connector, IP 65 / IP 67

Identification

Part number

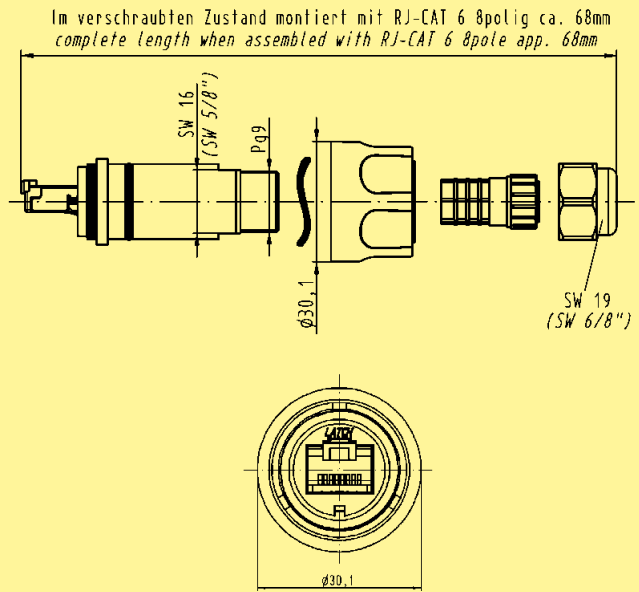
Drawing

Dimensions in mm

Han-Max® RJ45 10G connector set, 8-pole

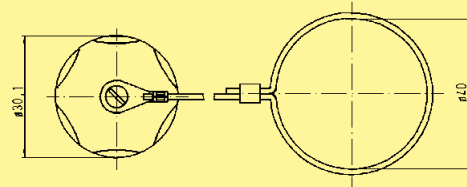
09 15 300 0431

Set consists of:
 Bayonet housing including RJ45 connector
 Cable gland
 Assembly instructions



Protection cover for Han-Max® connector

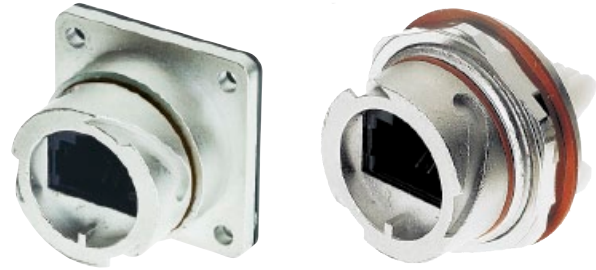
09 15 300 5401



Panel feed-throughs

Han-Max® RJ45 Panel feed-through

RJ45 Panel feed-through for control or distributor cabinets



IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input checked="" type="checkbox"/>	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Number of ports, Copper / Termination	1x RJ45 (IP 65 / IP 67) on LSA-PLUS IDC terminal (IP 20) 1x RJ45 Bayonet (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Fully shielded, 360° shielding contact or unshielded
Mounting	Screwable to steel plate covers
Wire termination	Via IDC contacts, tool-less
Cable options – Strand gauge	AWG 24 ... AWG 22 (solid / stranded)
Dimensions	See drawing
Panel cut-out	See drawing
Mounting hole	Diameter 27 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	–25 °C ... +85 °C
Housing material	Zinc, die-cast, nickel-plated
Colour	Metal
Advantages	Solid metal interface IP 65 / IP 67 with bayonet nut Shielded or unshielded

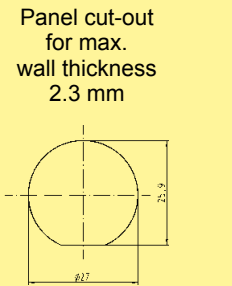
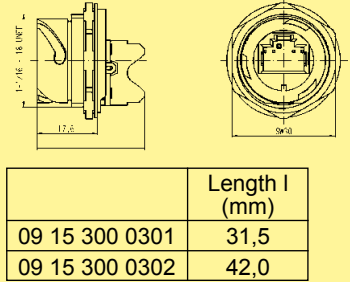
Identification Part number Drawing Dimensions in mm

Han-Max® RJ45 Panel feed-through

fully shielded (STP)
unshielded (UTP)

consisting of:
Bulkhead mounted including seal
RJ45 female module, mounted
on PCB
LSA-PLUS termination blocks
on the rear side

09 15 300 0302
09 15 300 0301



Han-Max® RJ45 housing, bulkhead mounting

fully shielded (STP)

09 15 300 0312

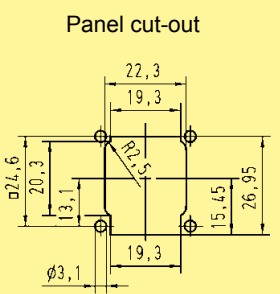
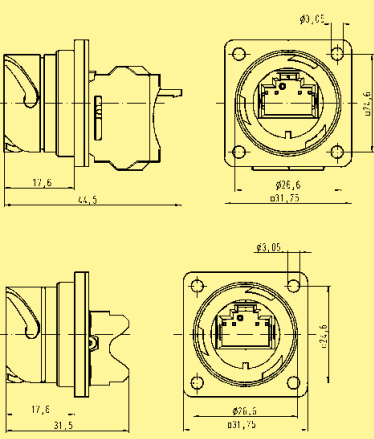
unshielded (UTP)

09 15 300 0311

consisting of:
bulkhead mounted including seal
RJ45 female module, mounted
on PCB
LSA-PLUS termination blocks
on the rear side

09 15 300 0312

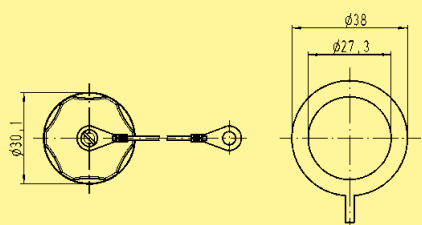
09 15 300 0311



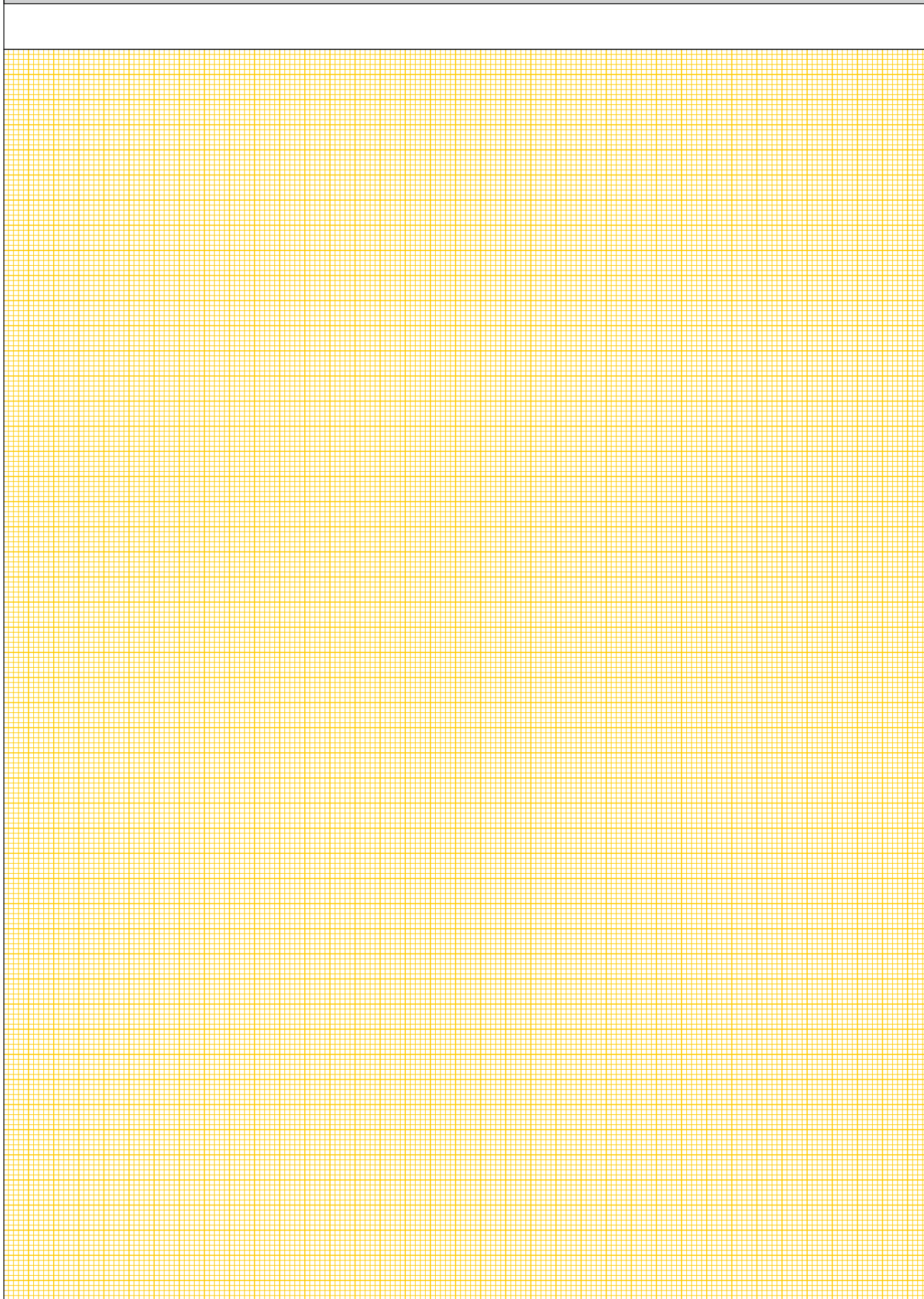
Protection cover for Panel feed-through

09 15 300 5411

09 15 300 5411



Han-Max®



IP 20

RJ45

- Connectors [on page B-2 8]
- System cables [on page B-2 12]
- Distribution modules and Outlets [on page B-2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B-2 22]
- System cables [on page B-2 28]
- Panel feed-throughs [on page B-2 30]
- Distribution modules and Outlets [on page B-2 32]

Han® PushPull

- Connectors [on page B-2 34]
- System cables [on page B-2 42]
- Panel feed-throughs / Gender Changer [on page B-2 44]

Han® 3 A

- Connectors [on page B-2 54]
- System cables [on page B-2 58]
- Panel feed-throughs [on page B-2 60]
- Distribution modules and Outlets [on page B-2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B-2 70]
- System cables [on page B-2 72]
- Panel feed-throughs [on page B-2 74]
- Cables [on page B-2 76]

har-speed M12

- Connectors [on page B-2 78]
- System cables [on page B-2 80]

Han-Max®

- Connectors [on page B-2 82]
- Panel feed-throughs [on page B-2 86]

Cables

- Industrial Cat. 6_A [on page B-2 90]
- Industrial Cat. 5 [on page B-2 93]
- Industrial Cat. 7 [on page B-2 96]

Tools

[on page B-2 100]


Cables



Industrial Cat. 6_A cable, stranded, 8-wire, PVC
to make up flexible connections
(one- or two-sided assembled system cables)

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PVC	Cat. 5	<input type="checkbox"/>	Cat. 6 _A	<input checked="" type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	4 x 2 x AWG 26/7, tinned copper wire
Wire insulation	PE, Ø 1.05 mm
Sheath material	PVC
Cable sheath diameter	6.3 mm ... 6.9 mm
Transmission performance	Category 6 _A / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s, 10 Gbit/s
Shielding	Paired shielded with additional cable shield
Operating temperature range	-20 °C ... +80 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Yellow

Advantages	Robust design suitable for industry Optimal performance reserves  UL, AWM style 20 276 Flame retardant RoHS compliant Best usable for all 8-wire HARTING RJ45 connectors
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Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6 _A cable, stranded, 8-wire PVC 20 m ring 50 m ring 100 m ring 500 m drum	09 45 600 0532 09 45 600 0542 09 45 600 0502 09 45 600 0522		
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Cables



Industrial Cat. 6_A cable, stranded, 8-wire, PUR
to make up flexible connections
(one- or two-sided assembled system cables)

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PUR		Cat. 5	<input type="checkbox"/>	Cat. 6 _A	<input checked="" type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	4 x 2 x AWG 26/7, tinned copper wire
Wire insulation	PE, Ø 1.05 mm
Sheath material	PUR
Cable sheath diameter	6.3 mm ... 6.9 mm
Transmission performance	Category 6 _A / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s, 10 Gbit/s
Shielding	Paired shielded with additional cable shield
Operating temperature range	-40 °C ... +80 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Yellow
Advantages	<ul style="list-style-type: none"> Robust design suitable for industry Optimal performance reserves Halogen free RoHS compliant Flame retardant sheath material

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6 _A cable, stranded, 8-wire PUR 20 m ring 50 m ring 100 m ring 500 m drum	09 45 600 0630 09 45 600 0640 09 45 600 0600 09 45 600 0620		
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Cables



Industrial Cat. 6_A cable, stranded, 8-wire, PVC, Outdoor
to make up flexible connections
(one- or two-sided assembled system cables)

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PVC		Cat. 5	<input type="checkbox"/>	Cat. 6 _A	<input checked="" type="checkbox"/>
-------	-------------------------------------	---------------	-------------------------------------	-----	--	--------	--------------------------	---------------------	-------------------------------------

Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	4 x 2 x AWG 26/7, tinned copper wire
Wire insulation	PE, Ø 1.05 mm
Sheath material	PVC
Cable sheath diameter	6.3 mm ... 6.9 mm
Transmission performance	Category 6 _A / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s, 10 Gbit/s
Shielding	Paired shielded with additional cable shield
Operating temperature range	-20 °C ... +80 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Black
Advantages	<ul style="list-style-type: none"> Robust design suitable for industry Optimal performance reserves Usable for outdoor applications UV proof RoHS compliant UL, AWM style 20 276

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6 _A stranded cable, 8-wire, Outdoor PVC	20 m ring	09 45 600 0531	
	50 m ring	09 45 600 0541	
	100 m ring	09 45 600 0501	
	500 m drum	09 45 600 0521	

Cables

Cables



Industrial Cat. 5 cable, stranded, 8-wire, PUR
to make up flexible connections
(one- or two-sided assembled system cables)

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PUR	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded
Core structure	4 x 2 x AWG 26/7, tinned copper wire
Wire insulation	PE, Ø 1.0 mm
Sheath material	PUR
Cable sheath diameter	6.5 ... 6.9 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Foil screen and additional plaited cable
Operating temperature range	-10 °C ... +60 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Yellow
Advantages	<ul style="list-style-type: none"> Robust design suitable for industry Halogen free UL, AWM style 21 586 Flame retardant Oil proof RoHS compliant With Fast Connect inside sheath

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 stranded cable, 8-wire PUR	20 m ring	09 45 600 0430	
	50 m ring	09 45 600 0440	
	100 m ring	09 45 600 0400	
	500 m drum	09 45 600 0420	

Cables



Industrial Cat. 5 high flexible cable, 8-wire, PUR trailing

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	FRNC		Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded
Core structure	4 x 2 x AWG 26/19, tinned copper wire
Wire insulation	PE, Ø 1.0 mm
Sheath material	PUR
Cable sheath diameter	6.8 mm
Transmission performance	Category 5 / 5e / Class D up to 100 MHz according to EN 50288-2-2:2004, IEC 61 156-6:2002
Transmission rate	10/100/1000 Mbit/s
Shielding	Paired shielded with additional cable shield
Operating temperature range	
- fix operation	-40 °C ... +85 °C
- flexible operation	0 °C ... +50 °C
Bending cycles	5 million
Supply lengths	20 m / 50 m / 100 m / 500 m
Colour	Yellow
Advantages	<p>Robust design suitable for industry</p> <p>Usable as trailing cables in drag chains and fit for torsion strength</p> <p>Usable for transfer rate up to 1 Gigabit Ethernet</p> <p>Halogen free</p> <p>Flame retardant</p> <p>Free silicone oil</p> <p>RoHS compliant</p>

Identification	Part number	Drawing	Dimensions in mm
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Identification	Part number	Drawing	Dimensions in mm
Industrial Cat. 5 / 5e installation cable, 8-wire PUR			
20 m ring	09 45 600 0136		
50 m ring	09 45 600 0146		
100 m ring	09 45 600 0106		
500 m drum	09 45 600 0156		

Cables



Industrial Cat. 5 stranded cable, 8-wire, PVC, Outdoor
to make up flexible connections
(one- or two-sided assembled system cables)

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PVC	Cat. 5	<input checked="" type="checkbox"/>	Cat. 6	<input type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded
Core structure	4 x 2 x AWG 26/7, tinned copper wire
Wire insulation	PE, Ø 1.0 mm
Sheath material	PVC
Cable sheath diameter	6.5 ... 6.9 mm
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	Foil screen and additional plaited cable
Operating temperature range	-10 °C ... +60 °C

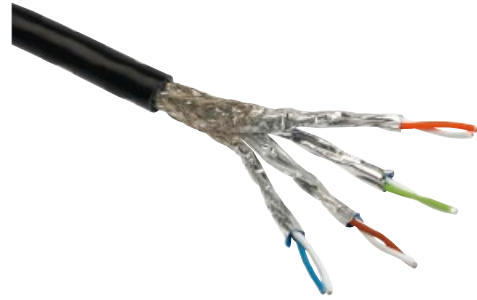
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Black

Advantages	<ul style="list-style-type: none"> Robust design suitable for industry Applicable also for outside applications UL, AWM style 2969 Flame retardant Weather proof UV resistant RoHS compliant With Fast Connect inside sheath
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Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 stranded cable, 8-wire, outdoor PVC 20 m ring 50 m ring 100 m ring 500 m drum	09 45 600 0230 09 45 600 0240 09 45 600 0200 09 45 600 0220		
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Cables



Ha-VIS EtherRail®
flexible data cable, Cat. 7, 8-wire

for installation within and outside rail vehicles and buses

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	Elastomer	Cat. 5	<input checked="" type="checkbox"/>	Cat. 7	<input type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	4 x 2 x AWG 24/7, tinned copper wire
Wire insulation	PE, Ø 1.55 mm
Sheath material	Elastomer, electron beam, cross-linked
Cable sheath diameter	(8.8 +/- 0.2) mm
Transmission performance	Category 7 / Class D, E, EA, F up to 600 MHz according to ISO/IEC 11 801 and EN 50 173-1
Transmission rate	1/10 Gbit/s
Shielding	Paired shielded with additional cable shield
Operating temperature range	-40 °C ... +90 °C
Supply lengths	100 m / 500 m / 1000 m
Colour	Black

Advantages

- Transmission of Gigabit and 10 Gigabit Ethernet acc. IEEE 802.3 and multimedia services
- For installation within and outside rail vehicles and buses
- Fire protection acc. EN 45 545-1, -2 and -5, flame retardant and heat resistant acc. DIN 5510 (1-4) and EN 50 264-1
- UV resistant, RoHS conform, halogen free LSZH
- Designed to be compatible with products from HARTING like *har-speed* M12 Crimp and Han® GigaBit module.

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS EtherRail® flexible data cable, PIMF 4x2xAWG24/7, Cat. 7			
	10 m ring	09 45 600 0964	
	100 m ring	09 45 600 0692	
	500 m reel	09 45 600 0691	
	1000 m reel	09 45 600 0690	

Cables



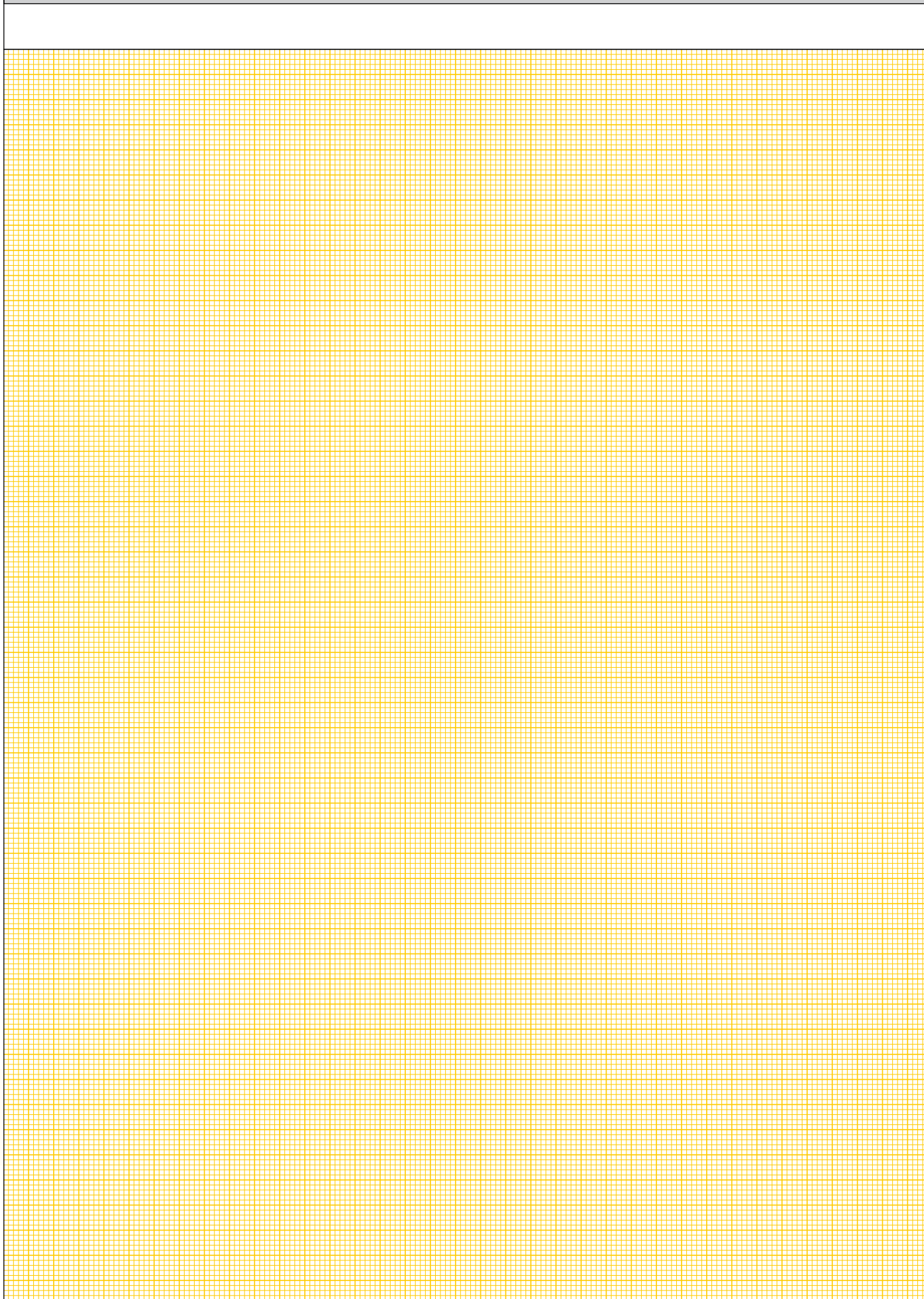
Industrial Cat. 7 cable, 8-wire, PUR

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	PUR	Cat. 5	<input checked="" type="checkbox"/>	Cat. 7	<input type="checkbox"/>
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	4 x 2 x AWG 23/1, solid copper wire
Wire insulation	PE, Ø 1.4 mm
Sheath material	PUR Elastomer
Cable sheath diameter	8.3 mm
Transmission performance	Category 7 / Class F up to 600 MHz according to ISO/IEC 11 801 and EN 50 173-1
Transmission rate	1/10 Gbit/s
Shielding	Paired shielded with additional cable shield
Operating temperature range	
- fix operation	-40 °C ... +70 °C
- flexible operation	-10 °C ... +50 °C
Supply lengths	100 m / 500 m / 1000 m
Colour	Yellow
Advantages	<p>Robust design suitable for industry</p> <p>Transmission of Gigabit and 10 Gigabit Ethernet acc. IEEE 802.3 and multimedia services</p> <p>Flame retardant</p> <p>Oil retardant</p> <p>RoHS conform</p> <p>Halogen free</p>

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 / 5e installation cable, 8-wire PUR			
	100 m ring	09 45 600 0651	
	500 m reel	09 45 600 0650	
	1000 m reel	09 45 600 0660	



IP 20

RJ45

- Connectors [on page B-2 8]
- System cables [on page B-2 12]
- Distribution modules and Outlets [on page B-2 19]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B-2 22]
- System cables [on page B-2 28]
- Panel feed-throughs [on page B-2 30]
- Distribution modules and Outlets [on page B-2 32]

Han® PushPull

- Connectors [on page B-2 34]
- System cables [on page B-2 42]
- Panel feed-throughs / Gender Changer [on page B-2 44]

Han® 3 A

- Connectors [on page B-2 54]
- System cables [on page B-2 58]
- Panel feed-throughs [on page B-2 60]
- Distribution modules and Outlets [on page B-2 66]

Han® 3 A RJ45 Hybrid

- Connectors [on page B-2 70]
- System cables [on page B-2 72]
- Panel feed-throughs [on page B-2 74]
- Cables [on page B-2 76]

har-speed M12

- Connectors [on page B-2 78]
- System cables [on page B-2 80]

Han-Max®







- Connectors [on page B-2 82]
- Panel feed-throughs [on page B-2 86]

Cables

- Industrial Cat. 6_A [on page B-2 90]
- Industrial Cat. 5 [on page B-2 93]
- Industrial Cat. 7 [on page B-2 96]

Tools

[on page B-2 100]

Identification	Part number	
<p>HARTING RJ Industrial® Stripping Tool Stripping tool for Ethernet cables including blade cassette</p> <p>Spare blade cassette</p>	<p>09 45 800 0000</p> <p>09 45 800 0001</p>	 <p>The RJ Industrial Stripping Tool is ready to remove insulation from cables for fast mounting with diameters from 2.5 ... 8 mm quick and easy. It allows to remove cable sheath and shielding braid in one.</p>
<p>Stripping tool</p>	<p>09 45 800 0002</p>	
<p>HARTING RJ Industrial® LSA-Punch Down Tool</p>	<p>09 45 800 0020</p>	 <p>The LSA-Punch Down Tool is used to wire RJ45 Industrial Metal Outlets (part no. 09 45 815 1100). The various conductors are cut to length and inserted into the insulation displacement contacts in a single pass.</p>
<p>HARTING RJ Industrial® Gigalink Mounting tools for HARTING RJ Industrial® Gigalink connectors</p>	<p>09 45 800 0500</p>	 <p>With the RJ Industrial Gigalink Assembly Tool Ethernet connectors can be quickly, easily and reliably connected to flexible cables.</p>
<p>Wire cutter</p>	<p>09 45 800 0005</p>	
<p>Cable shear</p>	<p>09 45 800 0004</p>	

IP 20

Ha-VIS preLink®

- Connectors [on page B·3 6]
- System cables [on page B·3 10]
- Distribution modules and Outlets [on page B·3 14]

Ha-VIS preLink®
IP 20

IP 65 / IP 67

Ha-VIS preLink®

- Outlets [on page B·3 20]
- Hoods/Housings components [on page B·3 21]

Tools and Accessories

[on page B·3 24]

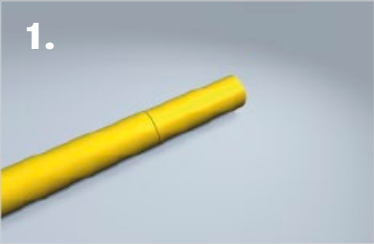
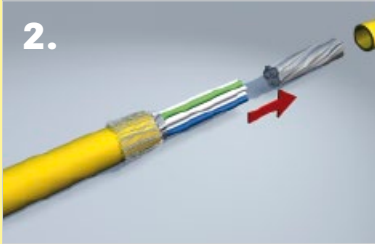
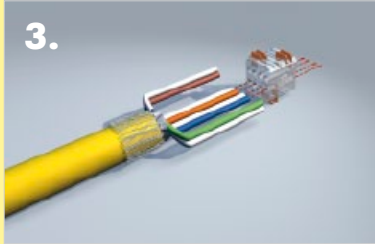
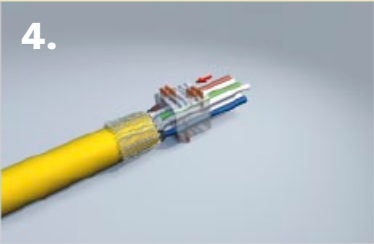

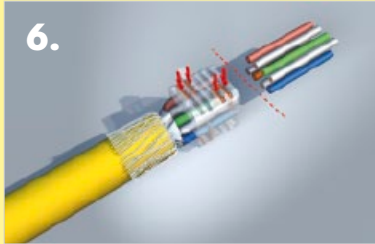
Ha-VIS preLink®
IP 65 / IP 67
Tools
Accessories

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Introduction	B-3 3
Cabling IP 20	
Connector sets	
Ha-VIS preLink® RJ45 HIFF	B-3 6
Ha-VIS preLink® RJ45 Keystone	B-3 8
System cables	
Ha-VIS preLink® Patch cable, 8-wire, termination block, second side open	B-3 10
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Outlets	
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Han® 3 A RJ45 HIFF Adapter	B-3 21
Han® PushPull variant 14	B-3 21
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Ha-VIS preLink® tools	B-3 24

Introduction and Features

HARTING's preLink® cabling system presents you with a completely new concept for data network cabling. The central point is the structural separation of the cable connection from the plug-in connector. The data cable is initially only provided with a cable termination as a part of this innovative assembly technology. The cable termination is similar in principle to a wire-end ferrule, and passes the HF performance of the cable to the connector module.

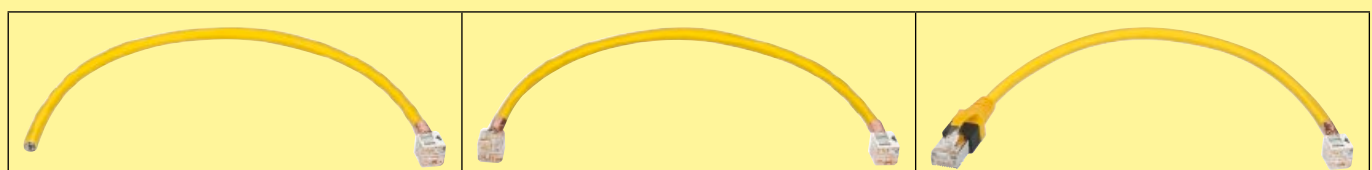
The connection between the termination block and the individual wires of the cable is done using insulation displacement connection and is therefore stable in the long-term and vibration-proof. The block's compact design only minimally increases the diameter of the cable, so that the assembled cable can be pulled through the narrowest cable duct. This means that a defined and checkable data transmission route is created, the link before the link – the Ha-VIS preLink®.

<p>1.</p>  <p>Strip cable back about 5 cm.</p>	<p>2.</p>  <p>Shorten braided shielding and fold back over the cable. Remove foil shielding.</p>	<p>3.</p>  <p>Untwist the pairs and arrange the wires by colour code.</p>
<p>4.</p>  <p>Observing the colour coding, insert the wires into the Ha-VIS preLink® cable terminal and push the terminal back to the cable sheath.</p>	<p>5.</p>  <p>Position the Ha-VIS preLink® installation tool and press until fully closed.</p>	<p>6.</p>  <p>The installation tool securely presses all eight IDC contacts into the final position and also cuts the wire ends to the correct length. Assembly of the Ha-VIS preLink® cable termination is complete.</p>

Assembling the termination block

The pre-assembled cable link can be combined with a suitable module in this application in a plug or socket design to form a single unit. This creates either a Permanent Link (in accordance with ISO/IEC 11 801 (EN 50 173)) or an end-to-end link (PROFINET).

As it is possible to exchange the data modules, there is the greatest possible flexibility for the user and the link is future-proof. Other advantages such as safety and economy result from the use of pre-assembled system cabling and cable links as well as the use of coordinated installation materials like patch panels, junction boxes and housing components.



Assembled system cables

Introduction and Features

Features:

Mating profile	RJ45 according to IEC 60 603-7
No. of contacts	8
Transmission characteristics	Category 6, suitable for Class E _A
Cable diameter	5 mm ... 9 mm
Wire cross-section	AWG 22 ... AWG 27, depending on termination block, solid or stranded
Single wire diameter	1.0 mm ... 1.6 mm, depending on termination block
Degree of protection	IP 20 IP 65 / IP 67 with suitable housing (Han® 3 A, Han® PushPull, HARTING PushPull)
Mating cycles	min. 750
Temperature range	-40 °C ... +70 °C
Material	Zinc die-cast, nickel-plated

IP 20

Ha-VIS preLink®

- Connectors [on page B-3 6]
- System cables [on page B-3 10]
- Distribution modules and Outlets [on page B-3 14]

IP 65 / IP 67

Ha-VIS preLink®

- Outlets [on page B-3 20]
- Hoods/Housings components [on page B-3 21]

Tools and Accessories

[on page B-3 24]

Connector sets



Ha-VIS preLink®
RJ45 HIFF

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	up to 10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly possible
Wire termination	Via Ha-VIS preLink® terminal module
Cable options	
– Strand gauge	0.25 mm ² ... 0.34 mm ²
– Strand diameter	AWG 22 ... AWG 24 (stranded and solid)
– Cable sheath diameter	1.3 mm ... 1.6 mm (including isolation)
Degree of protection	IP 20
Operating temperature range	–40 °C ... +70 °C
Housing material	Zinc die-cast, nickel-plated

Advantages

Small size, suitable for hoods and housings of series Han® 3 A, Han® PushPull variant 14 and HARTING PushPull RJ45 connectors variant 4

Consistent connection technology in the cabling system

Quick and easy assembling of data cables

Identification	Part number	Drawing	Dimensions in mm
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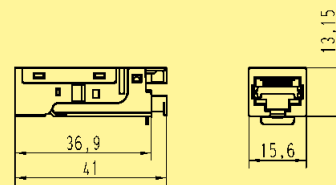
Ha-VIS preLink® set
RJ45 jack
AWG 22/23

- Set consists of:
- 1x RJ45 module
 - 1x terminal module
 - 1x cable tie

20 82 001 0001

Ha-VIS preLink® module
RJ45 jack

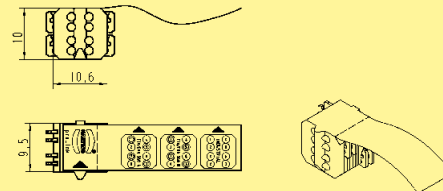
20 82 000 0002



Ha-VIS preLink® terminal module
AWG 22/23

Contact block with IDC termination

20 82 000 0001



Ha-VIS preLink®
IP 20

Connector sets



Ha-VIS preLink®
RJ45 Keystone

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector type	RJ45 connector acc. to IEC 60 603-7
Number of contacts	8
Transmission performance	Category 6 / Class E _A up to 500 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	up to 10 Gbit/s
Shielding	Fully shielded, 360° shielding contact
Mounting	Field-assembly possible
Wire termination	Via Ha-VIS preLink® terminal module
Cable options	
– Strand gauge	0.25 mm ² ... 0.34 mm ²
– Strand diameter	AWG 22 ... AWG 24 (stranded and solid)
– Cable sheath diameter	1.3 mm ... 1.6 mm (including isolation)
Degree of protection	5 ... 9 mm
Operating temperature range	IP 20
Housing material	–40 °C ... +70 °C
Advantages	Zinc die-cast, nickel-plated
	Simple, fast and reliable connection of data cables
	Integrated dust protection cover, removable
	Structured cabling for industrial premises
	For panel cut-outs according to EN 60 603-7 (Keystone holding fixture)

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS preLink® set
 RJ45 jack
 AWG 22/23 Keystone

Set consists of:

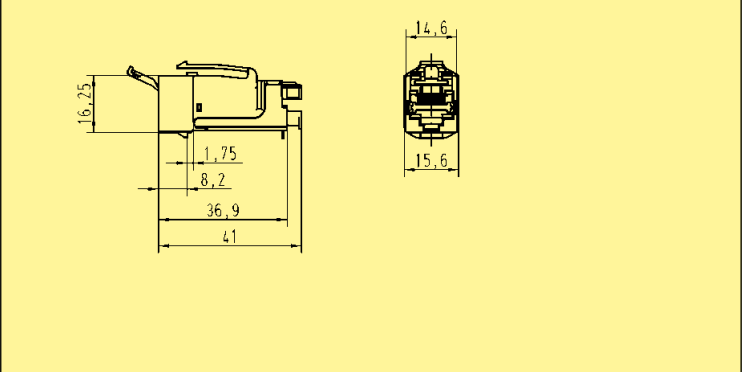
- 1x RJ45 module, Keystone jack
- 1x terminal module
- 1x cable tie

20 82 501 0001



Ha-VIS preLink® module
 RJ45 jack, Keystone

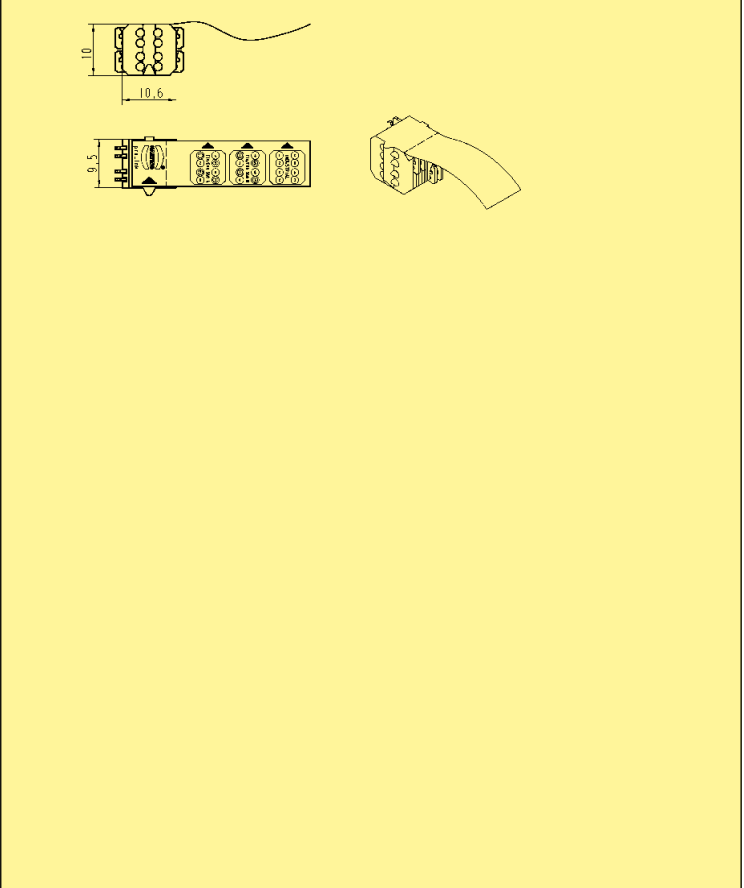
20 82 500 0001



Ha-VIS preLink® terminal module
 AWG 22/23

Contact block with IDC termination

20 82 000 0001



System cables



Ha-VIS preLink® Patch cables

terminal module to one side, secured by protection cap

Ha-VIS preLink®
IP 20

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	1x terminal module, secured by protection cap second side open
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 according 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	-35 °C ... +70 °C
flexible operation	-5 °C ... +50 °C
Standard lengths	0.2 m / 0.4 m / 0.6 m / 0.8 m / 1 m / 2 m / 3 m / 4 m / 5 m / 10 m other lengths available on request
Colour	Yellow
Advantages	<p>Pre-assembled system cable, fast, flexible and reliable in the application</p> <p>Simple in handling</p> <p>Robust in design</p> <p>Installation of Ha-VIS preLink® cables for industrial environment</p> <p>Connection cable for control or distributor cabinets or within controllers</p>

Identification	Part number	Drawing	Dimensions in mm
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Identification	Part number	Drawing	Dimensions in mm
Ha-VIS preLink® Patch cable	Yellow		
Length 0.2 m	20 82 600 1002		
Length 0.4 m	20 82 600 1004		
Length 0.6 m	20 82 600 1006		
Length 0.8 m	20 82 600 1008		
Length 1.0 m	20 82 600 1010		
Length 2.0 m	20 82 600 1020		
Length 3.0 m	20 82 600 1030		
Length 4.0 m	20 82 600 1040		
Length 5.0 m	20 82 600 1050		
Length 10.0 m	20 82 600 1100		

System cables



Ha-VIS preLink® Patch cables

terminal module to both sides, secured by protection cap

Ha-VIS preLink®
IP 20

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	terminal module, secured by protection cap
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 according 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	-35 °C ... +70 °C
flexible operation	-5 °C ... +50 °C
Standard lengths	0.2 m / 0.4 m / 0.6 m / 0.8 m / 1 m / 2 m / 3 m / 4 m / 5 m / 10 m other lengths available on request
Colour	Yellow
Advantages	<p>Pre-assembled system cable, fast, flexible and reliable in the application</p> <p>Simple in handling</p> <p>Robust in design</p> <p>Installation of Ha-VIS preLink® cables for industrial environment</p> <p>Connection cable for control or distributor cabinets or within controllers</p>

Identification	Part number	Drawing	Dimensions in mm
Ha-VIS preLink® Patch cable	Yellow		
Length 0.2 m	20 82 600 2002		
Length 0.4 m	20 82 600 2004		
Length 0.6 m	20 82 600 2006		
Length 0.8 m	20 82 600 2008		
Length 1.0 m	20 82 600 2010		
Length 2.0 m	20 82 600 2020		
Length 3.0 m	20 82 600 2030		
Length 4.0 m	20 82 600 2040		
Length 5.0 m	20 82 600 2050		
Length 10.0 m	20 82 600 2100		

System cables



Ha-VIS preLink® Patch cables

Side 1 with terminal module, secured by protection cap
 Side 2 RJ45 overmoulded, with locking lever protection

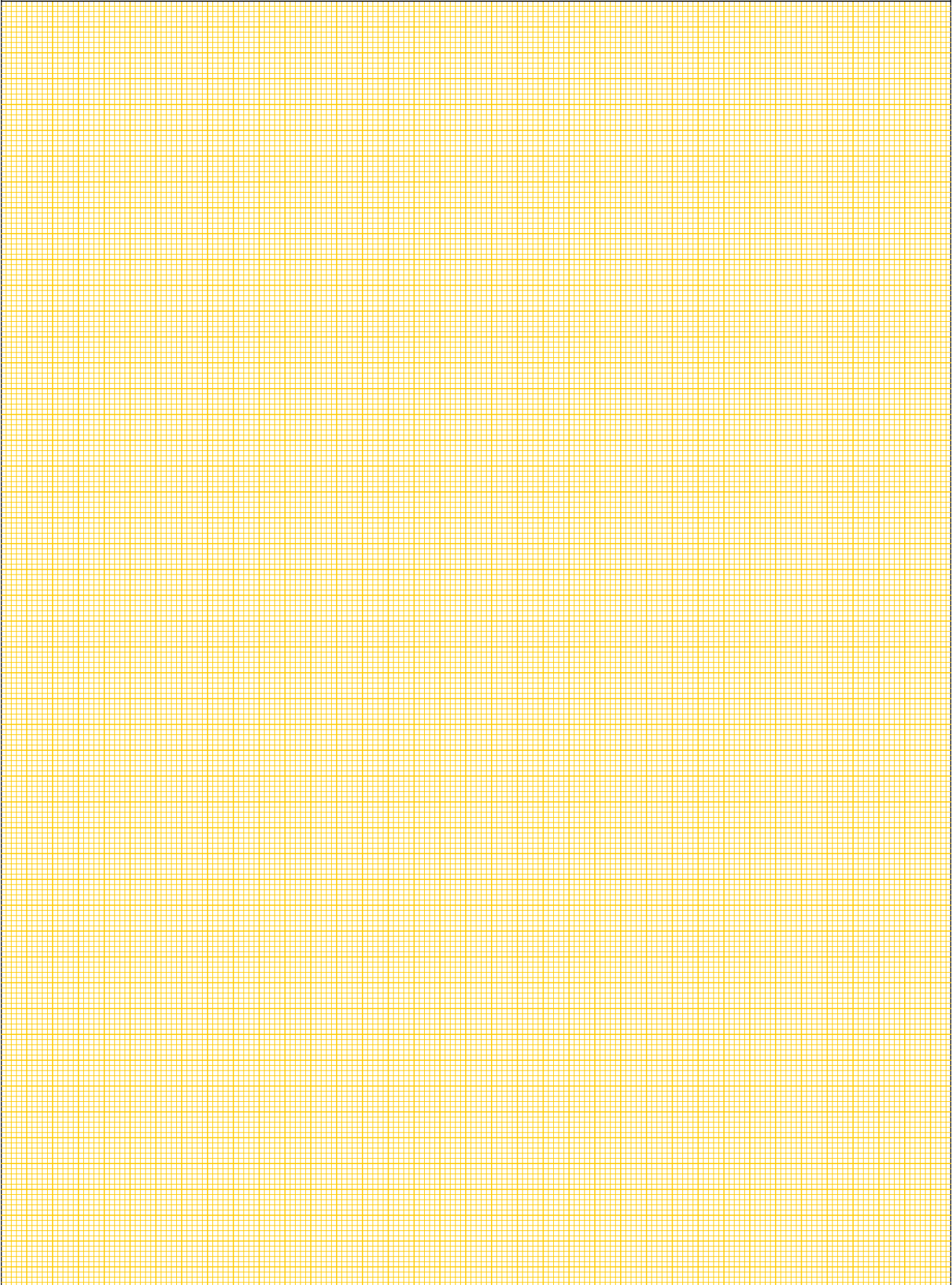
Ha-VIS preLink®
IP 20

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Connector types	1x terminal module, secured by protection cap 1x RJ45, overmoulded, with locking lever protection
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 according 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 -35 °C ... +70 °C flexible operation -5 °C ... +50 °C
Standard lengths	0.2 m / 0.4 m / 0.6 m / 0.8 m / 1 m / 2 m / 3 m / 4 m / 5 m / 10 m other lengths available on request
Colour	Yellow
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

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

Identification	Part number	Drawing	Dimensions in mm
Ha-VIS preLink® Patch cable	Yellow		
Length 0.2 m	20 82 601 1002		
Length 0.4 m	20 82 601 1004		
Length 0.6 m	20 82 601 1006		
Length 0.8 m	20 82 601 1008		
Length 1.0 m	20 82 601 1010		
Length 2.0 m	20 82 601 1020		
Length 3.0 m	20 82 601 1030		
Length 4.0 m	20 82 601 1040		
Length 5.0 m	20 82 601 1050		
Length 10.0 m	20 82 601 1100		



Patch panel



Ha-VIS preLink®
19" Patch panel

Ha-VIS preLink®
IP 20

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of modules	24				
Transmission performance	Category 6 / Class E _A up to 500 MHz according 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	IP 20				
Operating temperature range	-40 °C ... +70 °C				
Material	<table border="0"> <tr> <td>module carrier, 2-parts</td> <td>steel sheet</td> </tr> <tr> <td>front cover</td> <td>stainless steel</td> </tr> </table>	module carrier, 2-parts	steel sheet	front cover	stainless steel
module carrier, 2-parts	steel sheet				
front cover	stainless steel				
Advantages	<p>Flexible, suitable for Ha-VIS preLink® modules RJ45 jack and HARTING RJ Industrial® modules in HIFF size</p> <p>Economical, time-saving installation due to the slidable module carrier, frontward and backward removal</p> <p>Safety, additional strain-relief</p> <p>Fully shielded modules connected by module carrier</p> <p>Earth bolt</p> <p>Structured cabling for industrial premises</p> <p>IP 20 installation for distributors and switch cabinets</p>				

Identification

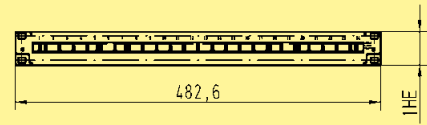
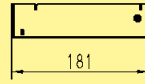
Part number

Drawing

Dimensions in mm

Ha-VIS preLink®
19" patch panel, unloaded

20 82 400 0001

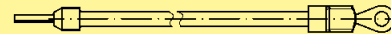
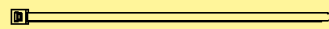


Suitable modules:

- Ha-VIS preLink® RJ45 jack, HIFF
- HARTING RJ Industrial® 10G bulkhead
- mixed loading possible

Range of delivery::

- Screw set M5
- 24 cable ties
- 1x earth conductor 6 mm²



Wall-mounted box



Ha-VIS preLink®
HIFF RJ45 AP Box

Ha-VIS preLink®
IP 20

IP 20	<input checked="" type="checkbox"/>	IP 65 / IP 67	<input type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / RJ45 jack HIFF
Transmission performance	Category 6 / Class E _A up to 500 MHz according 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	max. Ø 9 mm
Mounting	on-wall or DIN Rail
Dimensions (WxHxD)	60 x 81 x 70 mm
Degree of protection	IP 20
Operating temperature	-40 °C ... +70 °C
Housing material	steel plate
Colour	Anthracite grey (RAL 7016)
Advantages	<p>Flexible, suitable for on-wall mounting or for top-hat mounting rail (35mm)</p> <p>Economical, time-saving installation due to the use of pre-assembled data cables with Ha-VIS preLink® termination</p> <p>Robust design, powder-coated steel plate housing</p> <p>Structured cabling for industrial premises</p>

Identification

Part number

Drawing

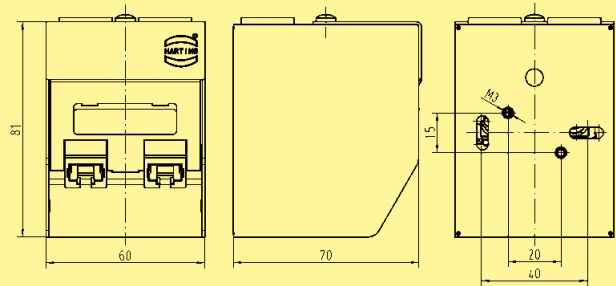
Dimensions in mm

Ha-VIS preLink® HIFF RJ45 AP Box

RJ45 wall-mounted box
consisting of:

- 1x steel-plate housing, 2-parts
- 2x Ha-VIS preLink® Set,
RJ45 jack HIFF, AWG 22/23
- 2x grommet with membrane
- 1x assembly instruction

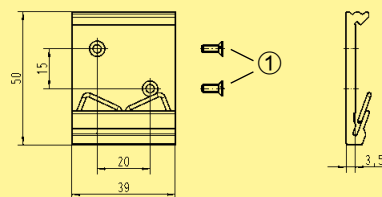
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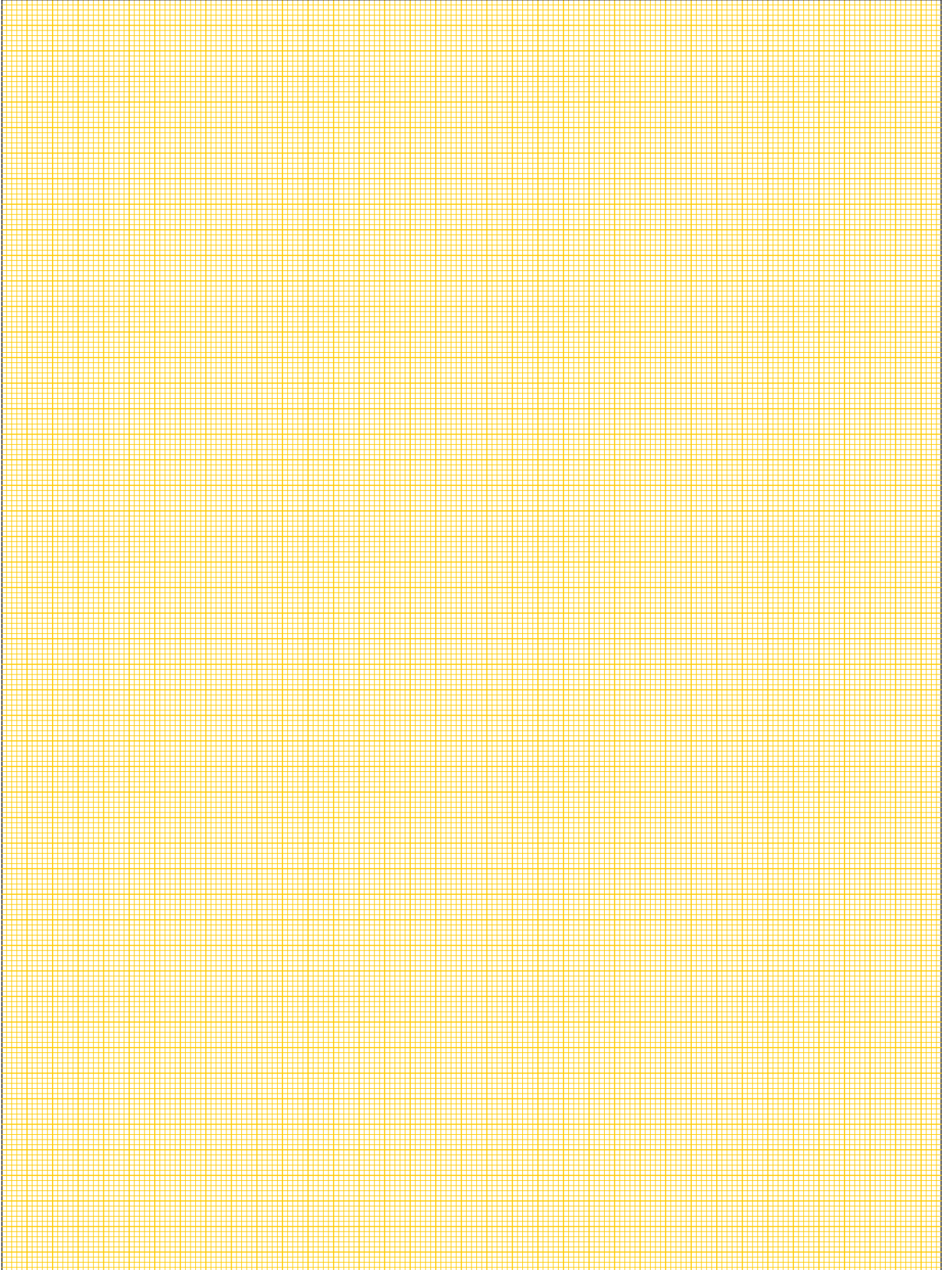


Accessory

DIN Rail mounting bracket

20 80 000 0003





IP 20

Ha-VIS preLink®

- Connectors [on page B-3 6]
- System cables [on page B-3 10]
- Distribution modules and Outlets [on page B-3 14]

IP 65 / IP 67

Ha-VIS preLink®

- Outlets [on page B-3 20]
- Hoods/Housings components [on page B-3 21]

Tools and Accessories

[on page B-3 24]

Outlets



Ha-VIS preLink®
Han® 3 A Metal Outlet

Ha-VIS preLink®
IP 65 / IP 67

IP 20	<input type="checkbox"/>	IP 65 / IP 67	<input checked="" type="checkbox"/>	IP 65 / IP 67 to IP 20	<input type="checkbox"/>	Cat. 5	<input type="checkbox"/>	Cat. 6	<input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 6 / Class E _A up to 500 MHz according 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 ... 0.34 mm) solid and stranded
Strand diameter	Ø 1.3 ... 1.6 mm
Cable diameter	7.2 ... 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	IP 65 / IP 67
Operating temperature range	-40 °C ... +70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037
Advantages	<p>Simple mounting, fixing and earth connection both outside</p> <p>Fast termination of data cables due to Ha-VIS preLink® technology</p> <p>Structured cabling for industrial premises</p> <p>PROFINET compatible</p>

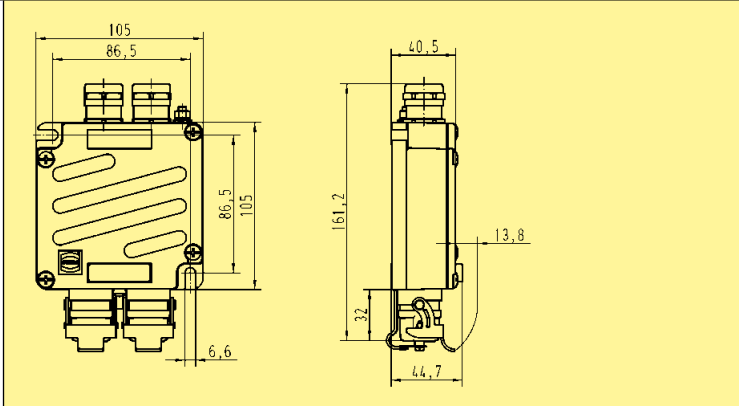
Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS preLink®
Han® 3 A Metal Outlet

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



Hoods/Housings components for applications in IP 65 / IP 67

Identification	Part number	Drawing
<p>Han® 3 A RJ45 HIFF Adapter to mount HIFF inserts in Han® 3 A hoods/housings e.g.</p> <ul style="list-style-type: none"> • housings, bulkhead mounting • housings, bulkhead mounting, with cap • housings, surface mounting • hoods, cable to cable <p>Hoods/Housings see catalogue „Industrial Connectors Han®“</p>	<p>09 45 515 0024</p>	
<p>Han® PushPull acc. to IEC 61 076-3-117, variant 14 Panel feed-through for angular panel cut-out</p> <p>for circular panel cut-out</p>	<p>09 35 012 0311</p> <p>09 35 012 0312</p>	
<p>HARTING PushPull Compact bulkhead housing acc. to IEC 61 076-3-106, variant 4 to mount HIFF inserts</p>	<p>09 45 545 0028</p>	
<p>HARTING PushPull EasyInstall bulkhead housing acc. to IEC 61 076-3-106, variant 4 to mount HIFF inserts</p>	<p>09 45 545 0032</p>	

IP 20

Ha-VIS preLink®

- Connectors [on page B·3 6]
- System cables [on page B·3 10]
- Distribution modules and Outlets [on page B·3 14]


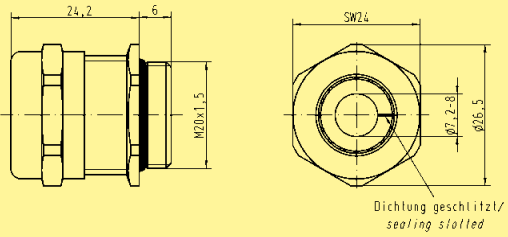

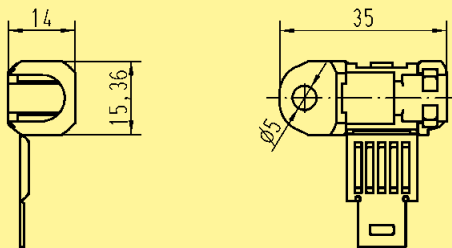
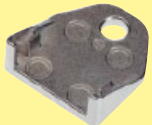
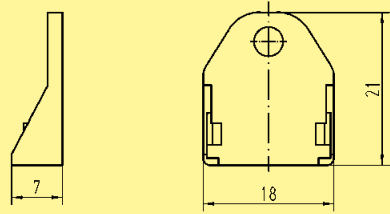

IP 65 / IP 67

Ha-VIS preLink®

- Outlets [on page B·3 20]
- Hoods/Housings components [on page B·3 21]

Tools and Accessories

[on page B·3 24]

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