

CONTENTS

PAGE

B – Ethernet cabling**Ethernet cabling overview**

B 2

Cabling 4-poles

IP 20

B-1 8

IP 65 / IP 67

B-1 20

Cables

B-1 84

Tools

B-1 90

Cabling 8-poles

IP 20

B-2 6

IP 65 / IP 67

B-2 12

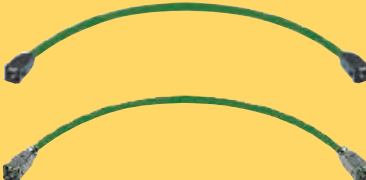
Cables

B-2 44

Tools

B-2 52

Ethernet cabling overview

		Installation Class	Connectors	System Cable
Fast Ethernet 100 Mbit/s 4-pin	Inside (IP 20 Protection Class)		 HARTING RJ Industrial® Connector RJ45, 4-pin IP 20, RJ45, Cat. 5	 HARTING RJ Industrial® System Cable RJ45, 4-wire assembled / overmoulded IP 20, Cat. 5, AWG 22
			 HARTING PushPull Connector RJ45, 4-pin IP 65 / IP 67, Cat. 5	 HARTING PushPull System Cable RJ45, 4-wire assembled / overmoulded IP 65 / IP 67, Cat. 5, AWG 22
	Outside (IP 65 / IP 67 Protection Class)		 Han® PushPull Connector RJ45, 4-pin, plastic or metal IP 65 / IP 67, Cat. 5	 Han® PushPull System Cable RJ45, 4-wire Plastic / Metal IP 65 / IP 67, Cat. 5, AWG 22
			 HARAX® M12 Connector, D-Coding, 4-pin IP 65 / IP 67, Cat. 5	 Han® M12 System Cable D-Coding, 4-wire IP 65 / IP 67, Cat. 5, AWG 22
			 Han® 3 A Connector RJ45, 4-pin, plastic or metal IP 65 / IP 67, Cat. 5	 Han® 3 A System Cable 4-wire IP 65 / IP 67, Cat. 5, AWG 22
			 Han® 3 A Hybrid connector RJ45, 4-pin, plastic or metal IP 65 / IP 67, Cat. 5, with 4x power supply	 Han® 3 A Hybrid System Cable RJ45 , 4-wire plastic / metal IP 65 / IP 67, Cat. 5, AWG 22, stranded with 4x power supply
Gigabit Ethernet 1000 Mbit/s 8-pin	Inside (IP 20 Protection Class)		 HARTING RJ Industrial® Connector, RJ45, 8-pin IP 20, RJ45, Cat. 6	 HARTING RJ Industrial® System Cable RJ45, 8-wire IP 20, Cat. 6, flexible Industrial Ethernet Patch Cable RJ45, 8-wire IP 20, Cat. 5, AWG 26/7
			 HARTING PushPull Connector RJ45, 8-pin IP 65 / IP 67, Cat. 6	 HARTING PushPull System Cable RJ45, 8-wire IP 65 / IP 67, Cat. 6, flexible
	Outside (IP 65 / IP 67 Protection Class)		 Han® 3 A Connector RJ45, 8-pin, plastic or metal IP 65 / IP 67, Cat. 6	 Han® 3 A System Cable RJ45 8-wire IP 65 / IP 67, Cat. 6, flexible
			 Han-Max® Connector RJ45, 8-pin IP 67, Cat. 5	 Han-Max® System Cable RJ45 8-wire IP 65 / IP 67, Cat. 5, flexible

	Outlets and Panel feed-through			Cables	Application			
led		HARTING Cabinet Outlet RJ45 IP 20, Cat. 6		Type A (for fixed layouts)  Industrial Cat. 5 Standard Cable, 4-wire AWG 22 / 1, solid, PVC	Ethernet IEEE 802.3 			
led		HARTING PushPull Panel feed-through RJ45 IP 65 / IP 67, Cat. 5		HARTING PushPull Outlet RJ45 IP 65 / IP 67, Cat. 6	Ethernet IEEE 802.3			
				Type B (for flexible layouts)  Industrial Cat. 5 Stranded Cable, 4-wire AWG 22 / 7, stranded, PVC	Ethernet IEEE 802.3 			
e		Han® M12 Panel feed-through D-Coding IP 65 / IP 67, Cat. 5, straight or angled		 Industrial Cat. 5 Outdoor Cable 4-wire AWG 22 / 7, stranded, PVC	Ethernet IEEE 802.3  			
RJ45,		Han® 3 A Panel feed-through RJ45 IP 65 / IP 67, Cat. 5		Han® 3 A Metal Outlet RJ45 IP 65 / IP 67, Cat. 5		Han® 3 A Metal Outlet RJ45 IP 65 / IP 67, Cat. 6	Industrial Cat. 5 Trailing Cable, 4-wire AWG 22 / 7, stranded, PUR	Ethernet IEEE 802.3 
wire 7, ,		Han® 3 A Hybrid Panel feed-through RJ45 plastic / metal IP 65 / IP 67, Cat. 5				 Industrial Cat. 5 Hybrid Cable, 4-wire AWG 22 / 7, stranded with 4x power supply, FRNC	Ethernet IEEE 802.3 	
e		HARTING Cabinet Outlet RJ45 IP 20, Cat. 6		 Industrial Cat. 5 Stranded Cable, 8-wire AWG 26 / 7, stranded, PUR	Ethernet IEEE 802.3 			
		HARTING PushPull Panel feed-through RJ45 IP 65 / IP 67, Cat. 5		HARTING PushPull Outlet RJ45 IP 65 / IP 67, Cat. 6	 Industrial Cat. 5 Outdoor Cable, 8-wire AWG 26 / 7, stranded, PVC	Ethernet IEEE 802.3		
		Han® 3 A Panel feed-through RJ45 IP 65 / IP 67, Cat. 5		Han® 3 A Metal Outlet RJ45 IP 65 / IP 67, Cat. 5		Han® 3 A Metal Outlet RJ45 IP 65 / IP 67, Cat. 6	Industrial Cat. 6, Stranded Cable 8-wire AWG 27 / 7, stranded, PVC	Ethernet IEEE 802.3 
		Han-Max® Panel feed-through RJ45 IP 67, Cat. 5		 Industrial Cat. 6, Installation Cable, 8-wire, for fixed Installation AWG 23 / 1, solid, FRNC	Ethernet IEEE 802.3 			

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

RJ45

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING
PushPull**HARTING PushPull Hybrid**

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

HARTING PushPull
Hybrid**Han® PushPull**

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han®
PushPull**Han® 3 A**

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 88]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

Han® 3 A
Hybrid**M12 D-coding**

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

M12
D-coding**Cables**

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Cables
Tools

CONTENTS	PAGE
Introduction	B·1 5
Cabling IP 20	
Connector sets	
HARTING RJ Industrial® Connector set RJ45, 4-pole	B·1 8
System cables	
HARTING RJ Industrial® System cable RJ45, 4-wire, straight	B·1 10
HARTING RJ Industrial® System cable RJ45, 4-wire, angled, left/right	B·1 12
HARTING RJ Industrial® System cable RJ45, 4-wire, angled, top/bottom	B·1 14
HARTING RJ Industrial® System cable RJ45, 4-wire, angled, second side open	B·1 16
Distribution modules and Outlets	
HARTING Cabinet Outlet RJ45	B·1 18
Cabling IP 65 / IP 67	
HARTING PushPull	
Connector sets	
HARTING PushPull Connector set RJ45, 4-pole	B·1 20
System cables	
HARTING PushPull System cable RJ45, 4-wire, screwed	B·1 22
HARTING PushPull System cable RJ45, 4-wire, overmoulded	B·1 24
HARTING PushPull System cable RJ45, 4-wire, angled	B·1 26
HARTING PushPull System cable RJ45, 4-wire	B·1 28
Panel feed-throughs	
HARTING PushPull Panel feed-through RJ45	B·1 30
Distribution modules and Outlets	
HARTING PushPull Outlet RJ45	B·1 32

CONTENTS	PAGE
HARTING PushPull Hybrid	B·1 35
Connector sets	
HARTING PushPull Hybrid Connector	B·1 36
System cables	
HARTING PushPull Hybrid System cable	B·1 38
Panel feed-throughs	
HARTING PushPull Hybrid Panel feed-through / Bulkhead mounting housing	B·1 40
HARTING PushPull Hybrid Cable	B·1 42
Han® PushPull	
Connector sets	
Han® PushPull Connector set RJ45, 4-pole	B·1 44
Han® PushPull Connector set SCRJ	B·1 46
System cables	
Han® PushPull System cables RJ45, 4-adrig	B·1 48
Han® 3 A	
Connector sets	
Han® 3 A Connector set RJ45, 4-pole	B·1 52
System cables	
Han® 3 A System cable RJ45, 4-wire	B·1 54
Han® 3 A System cable RJ45, 4-wire	B·1 56
Panel feed-throughs	
Han® 3 A Panel feed-through RJ45	B·1 58
Han® 3 A Double-coupling RJ45	B·1 60
Distribution modules and Outlets	
Han® 3 A Metal Outlet RJ45, Cat. 6	B·1 62
Han® 3 A Metal Outlet RJ45, Cat. 5	B·1 63

CONTENTS	PAGE
Han® 3 A Hybrid	
Connector sets	
Han® 3 A Hybrid Connector set RJ45, 4-pole	B·1 66
System cables	
Han® 3 A Hybrid System cable RJ45, 4-wire	B·1 68
Panel feed-throughs	
Han® 3 A Hybrid Panel feed-through RJ45	B·1 70
Cables	
PROFINET Type B cable, hybrid Industrial Cat. 5 Hybrid cable, 4-wire + 4x Power	B·1 72
M12 D-coding	
Connector sets	
HARAX® M12 Connector D-coding, 4-pole	B·1 74
System cables	
Han® M12 System cable, 4-wire	B·1 76
Han® M12 System cable, 4-wire, second side open	B·1 77
Han® M12 System cable, 4-wire, M12 to RJ45 (IP 20)	B·1 78
Panel feed-throughs	
Han® M12 Panel feed-through D-coding	B·1 80
Cables	
PROFINET Type A cable Industrial Cat. 5 Standard cable, 4-wire	B·1 84
PROFINET Type B cable Industrial Cat. 5 stranded cable, 4-wire	B·1 85
PROFINET Type C cable Industrial Cat. 5 stranded cable, 4-wire useable as trailing cables	B·1 86
PROFINET Type B cable, outdoor Industrial Cat. 5 stranded cable, 4-wire, Outdoor	B·1 87
Additional technical information about overmoulded System cables	B·1 88
Tools	
HARTING RJ Industrial® Mounting tool	B·1 90

Introduction

The chapter on „HARTING Ethernet Cabling – 4-poles” 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

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.

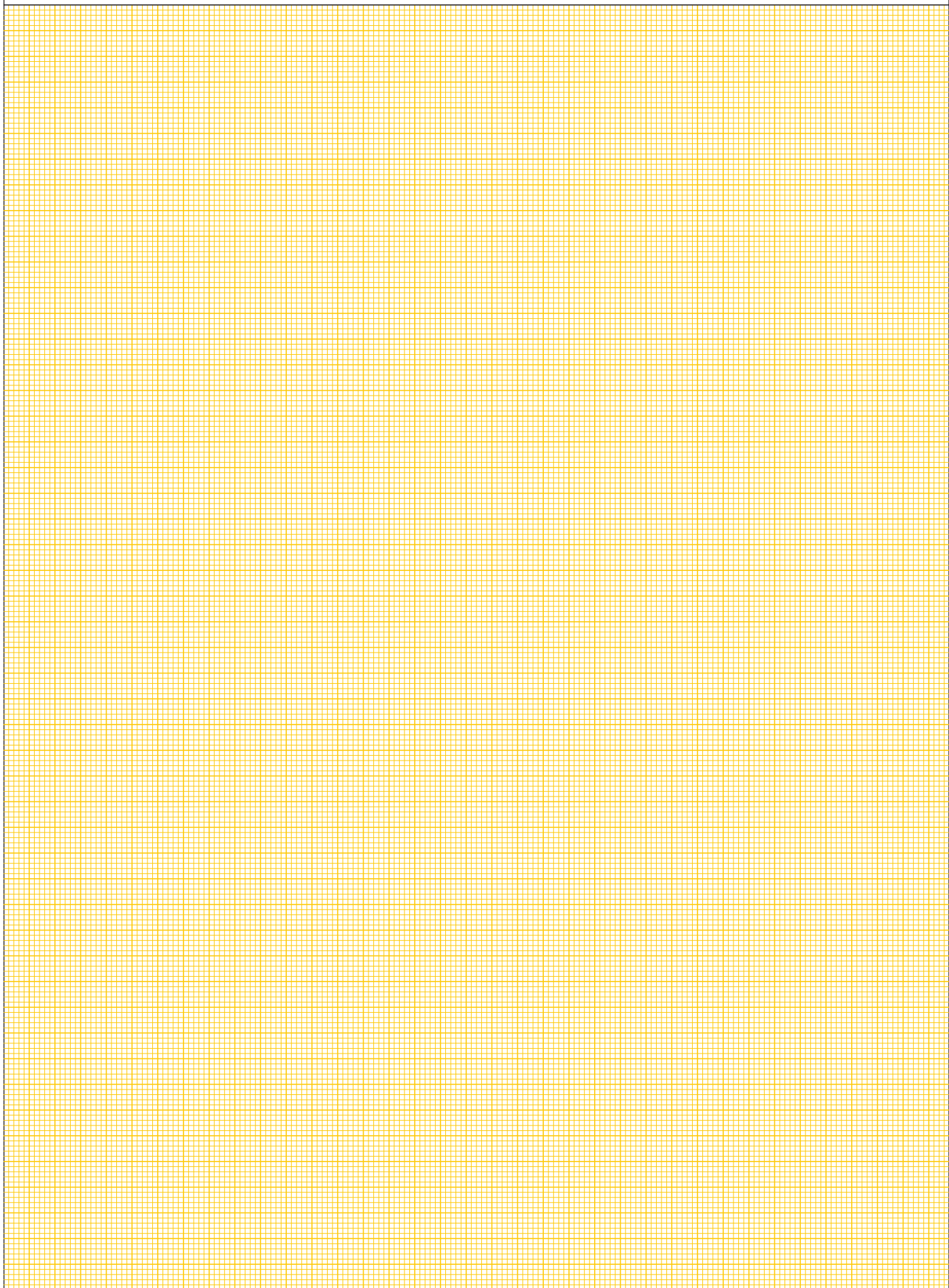
Essentially, all Ethernet-based Fieldbus systems are running on standard-compliant eight-wire cables, according to ISO/IEC 24702 Category 5 /Class D, or higher.

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.

A large rectangular area filled with a fine, light yellow grid pattern, intended for technical drawing or graphing.

IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

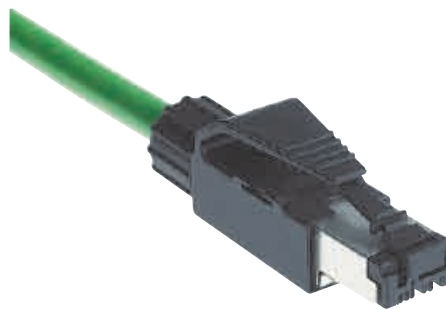
Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Connector sets



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

IP 20	☒	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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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 possible
Wire termination	via IDC contacts, tool-less
Cable options	suitable for solid and stranded cores
– Strand diameter	AWG 24/7 - AWG 22/7 (stranded) AWG 26/7 (special version) AWG 23/1 - AWG 22/1 (solid)
– Cable sheath diameter	6.1 mm - 6.9 mm
Degree of protection	IP 20
Operating temperature range	– 40 °C to +70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	Black

Advantages

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

Identification

Part number

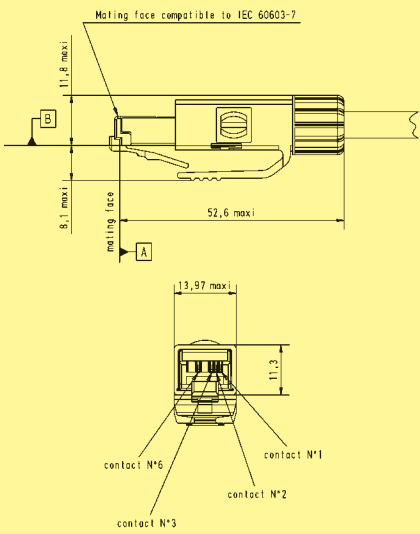
Drawing

Dimensions in mm

HARTING RJ Industrial®
Connector set RJ45, 4-pole
for AWG 24 - AWG 22
for AWG 26

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

09 45 151 1100
09 45 151 1109



RJ45

System cables



HARTING RJ Industrial® System cable

RJ45, 4-wire, straight

RJ45 connection cable for control or distributor cabinets or within controllers



IP 20	☒	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types RJ45, overmoulded

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C
Colour	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

Robust industrial design

Available also as Multiport version for especially space-critical port configurations on switches or devices

Identification	Part number		
	Standard	Multiport	
HARTING RJ Industrial® System cable RJ45, 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 45 771 0025 09 45 771 0027 09 45 771 0051 09 45 771 0053	09 47 343 4006 09 47 343 4009 09 47 343 4012 09 47 343 4018 09 47 343 4020
HARTING RJ Industrial® System cable RJ45, 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 45 771 1125 09 45 771 1127 09 45 771 1151 09 45 771 1153	09 47 343 4034 09 47 343 4037 09 47 343 4040 09 47 343 4046 09 47 343 4048
HARTING RJ Industrial® System cable RJ45, 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 45 771 1166 09 45 771 1168 09 45 771 1173 09 45 771 1175	09 47 343 4090 09 47 343 4093 09 47 343 4096 09 47 343 4102 09 47 343 4104

System cables



HARTING RJ Industrial®

System cable

RJ45, angled, 4-wire

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



IP 20



IP 65 / IP 67



IP 65 / IP 67
to IP 20



Cat. 5



Cat. 6



Connector types

RJ45, overmoulded

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C	– 45 °C to +60 °C
Colour	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

Identification	Part number	
HARTING RJ Industrial® System cable RJ45, 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 RJ45, 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 RJ45, 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 RJ45, 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

RJ45, angled, 4-wire

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



IP 20



IP 65 / IP 67

IP 65 / IP 67
to IP 20

Cat. 5



Cat. 6



Connector types

RJ45, overmoulded

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C	– 45 °C to +60 °C
Colour	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

Identification	Part number	
HARTING RJ Industrial® System cable RJ45, 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 RJ45, 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 RJ45, 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 RJ45, 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



Exit left



Exit right



Exit top



Exit bottom

HARTING RJ Industrial® System cable RJ45 angled, 4-wire

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

IP 20



IP 65 / IP 67

IP 65 / IP 67
to IP 20

Cat. 5



Cat. 6



Connector types

RJ45, overmoulded, one side pre-assembled

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C	– 45 °C to +60 °C
Colour	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

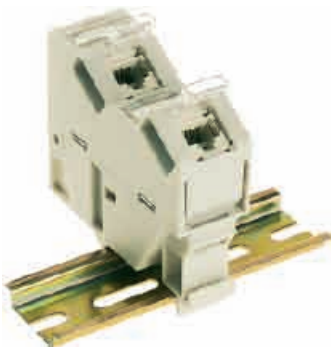
0.5 m / 1 m / 1.5 m / 2 m / 3 m / 5 m
other lengths available on request

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

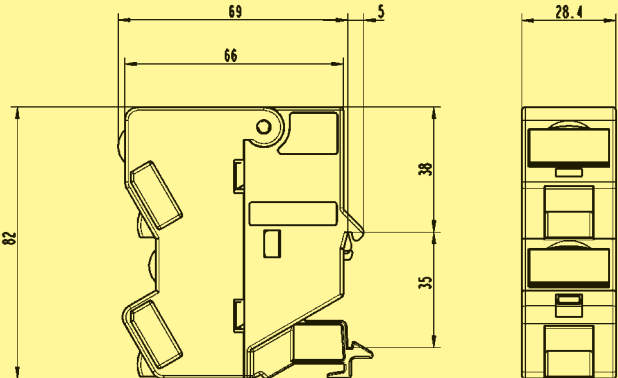
Identification	Part number angled left	angled right	angled top	angled bottom
HARTING RJ Industrial® System cable RJ45 angled, 4-wire one side pre-assembled, second side open Type A				
Length 0.5 m	09 47 050 0001	09 47 060 0001	09 47 030 0001	09 47 040 0001
Length 1.0 m	09 47 050 0002	09 47 060 0002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

Distribution modules and Outlets



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

IP 20	☒	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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 Mbit/s								
Termination	LSA-PLUS module, terminated without special tools								
Strand diameter	AWG 24 - 22 (0.5 mm - 0.65 mm) solid and stranded								
Strand insulation	0.7 mm - 1.6 mm								
Cable diameter	6 mm - 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 to +70 °C								
Housing material	Polycarbonate, UL94 V-0								
Colour	Grey								
Advantages	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 with dust protection caps and labels 2x RJ45 female module, Cat. 6 Assembly instructions	20 76 102 8000		

IP 20**RJ45**

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

IP 65 / IP 67**HARTING PushPull**

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

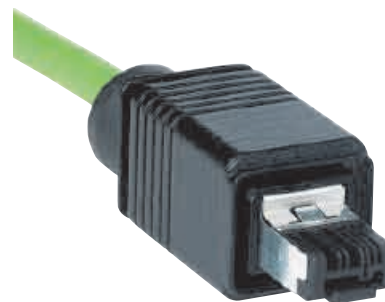
Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Connector sets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector type	HARTING PushPull connector RJ45 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 possible
Wire termination	via IDC contacts
Cable options	
– Strand diameter	AWG 24/7 - AWG 22/7 (stranded) AWG 23/1 - AWG 22/1 (solid)
– Cable sheath diameter	6.5 mm - 8.6 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages

- Tool-less field-assembly
- Suitable for termination of solid and stranded cables

Identification

Part number

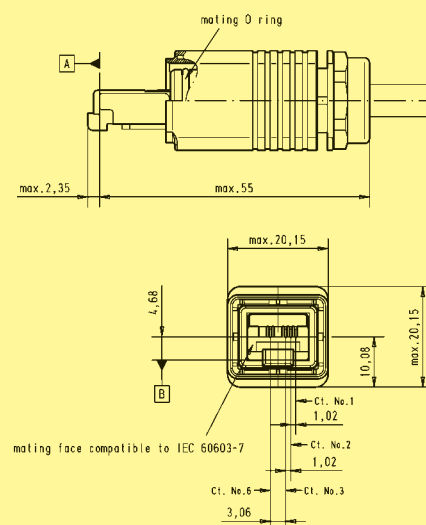
Drawing

Dimensions in mm

HARTING PushPull Connector set RJ45, 4-pole

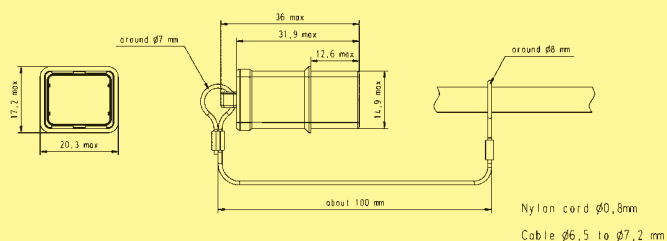
09 45 145 1100

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



Protection cover for PushPull connectors

09 45 845 0001



System cables



HARTING PushPull System cable RJ45, 4-wire

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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types RJ45 PushPull

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C	– 45 °C to +60 °C
Colour	Green	Green	Green	Black

Wiring	4-pole (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

Identification

Part number

HARTING PushPull
System cable RJ45, 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
System cable RJ45, 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
System cable RJ45, 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
System cable RJ45, 4-wire
Outdoor

Length 1.5 m	09 45 701 0064
Length 3.0 m	09 45 701 0066
Length 5.0 m	09 45 701 0068
Length 10.0 m	09 45 701 0073
Length 20.0 m	09 45 701 0075

System cables



HARTING PushPull System cable RJ45, 4-wire

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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types RJ45 PushPull, overmoulded

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C	– 45 °C to +60 °C
Colour	Green	Green	Green	Black

Wiring	4-pole (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 Protected cable duct via overmoulding Easy handling

Identification

Part number

HARTING PushPull
System cable RJ45, 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
System cable RJ45, 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
System cable RJ45, 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
System cable RJ45, 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
System cable RJ45,
4-wire, angled

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



IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types RJ45 PushPull, overmoulded, angled, one side pre-assembled

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C	– 45 °C to +60 °C

Wiring 4-pole (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

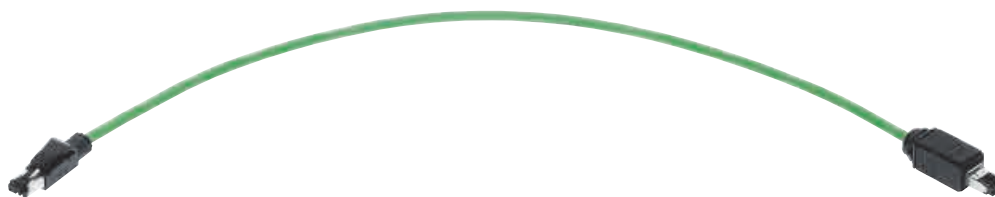
Standard lengths 1.5 m / 3 m / 5 m / 10 m / 20 m
other lengths available on request

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

Identification	Part number angled left	angled right	angled top	angled bottom
HARTING PushPull System cable RJ45, 4-wire, angled 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 System cable RJ45, 4-wire, angled 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 System cable RJ45, 4-wire, angled 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 System cable RJ45, 4-wire, angled 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 System cable RJ45, 4-wire

RJ45 connection cable, PushPull, to RJ45 IP 20

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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Connector types RJ45 PushPull and RJ45 IP 20

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C
Colour	Green	Green	Green

Wiring	4-pole (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

Identification

Part number

HARTING PushPull
System cable RJ45, 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

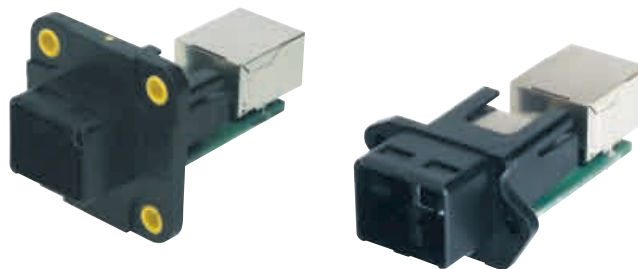
HARTING PushPull
System cable RJ45, 4-wire
Type B

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
System cable RJ45, 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 Panel feed-through RJ45

RJ45 Panel feed-through for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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Number of ports, Copper / Termination	2 / 1x RJ45 (IP 20) 1x RJ45 PushPull (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 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screwable to steel plate covers
Dimensions	see drawing
Panel cut-out	21 mm x 27 mm
Mounting hole	M2.5
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages

- Small, space-saving PushPull interface with IP 65 / IP 67
- Easy handling of RJ45 system cables in the control cabinet
- Mounting to casings
- Category of transmission Cat. 5

HARTING
PushPull

Distribution modules and Outlets

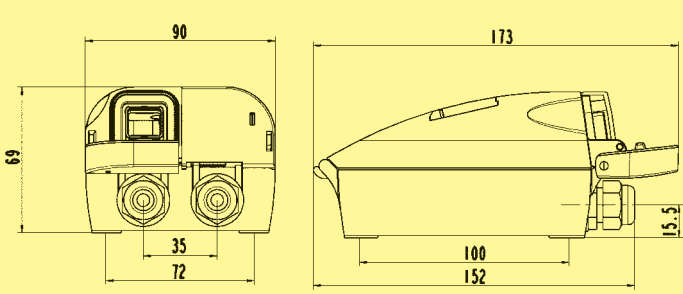
HARTING PushPull Outlet RJ45

RJ45 Industrial Outlet for IP 65 / IP 67 environments



IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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Number of ports, Copper / Termination	2 / RJ45 PushPull (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 Mbit/s
Termination	LSA-PLUS module, terminated without special tools
Strand diameter	AWG 24 - 22 (0.5 mm - 0.65 mm) solid and stranded
Strand insulation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 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 to +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
HARTING PushPull Outlet RJ45 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 1 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 18]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]



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

Advantages

HARTING PushPull Hybrid

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

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

For this new installation solution HARTING offers with the HARTING PushPull Hybrid the trendsetting installation technology.

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

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

By the optional coding pins 6 different codings can be realized.

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

Technical characteristics

Advantages

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

Typical application areas

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

Recommended pin assignment

• Power contacts

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

• Data contacts

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



Structure Hybrid cable

Data: 4x AWG26/7

Power: 3x AWG20/7

Connector set



HARTING PushPull Hybrid

Style according to IEC 61 076-3-106 variant 4 hybrid connectors

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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Number of contacts, Copper / Termination	- Ethernet: 4x, shielded - Power: 3x
Transmission performance	Category 5 / Class D up to 100 MHz according to EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	fully shielded, 360° shielding contact
Power supply	32 V / 5 A
Locking	PushPull technology according to ISO/IEC 24 702 variant 4
Mounting	Field-assembly possible
Wire termination	Crimping contacts
Cable options – Strand diameter	- Ethernet: AWG 26 - Power: AWG 20
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages

- Combined data transmission and power supply up to 5 A / 32 V included to one connector
- HARTING PushPull technology
- Compact design
- High packing density
- Sixfold condable
- Suitable for all Fast-Ethernet variants

Identification	Part number	Drawing	Dimensions in mm
Connector set HARTING PushPull Hybrid connector IP 65/ 67, black, with cable gland and crimp contacts straight angled Accessories – Coding pin set to avoid accidental incorrect mating a coding system is required. This coding pins are inserted without loss of contact.	 09 45 145 1300 09 45 145 1310 09 45 845 1300		
Tools Crimping tool for data contacts Crimping tool for power contacts Insertion and removal tool for data contacts for power contacts	 09 99 000 0596 09 99 000 0175 09 99 000 0513 09 99 000 0171		

System cables



HARTING PushPull Hybrid System cable

type according to IEC 61 076-3-106 variant 4

overmoulded hybrid system cables, for IP 65 / IP 67 applications

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types	HARTING PushPull Hybrid, overmoulded
Cable construction	4 wires, star quad, shielded + 3 power wires
Core structure	Data: 4x AWG 26/7 Power: 3x AWG 20/7
Cable outer diameter	ø (7.0 ±0.4) mm
Sheath material	FRNC
Operating temperature range	-40 to +80 °C
Colour	black
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
Standard lengths	0.5 m / 1 m / 2 m / 3 m / 5 m / 10 m / 20 m other lengths available on request

Advantages

- Combined data- and power-supply
up to 5 A / 32 V included to one connector
- HARTING PushPull technology
- Robust design, suitable for industrial applications
- High packing density
- Sixfold codable
- Suitable for all Fast-Ethernet variants

Identification

Part number

HARTING PushPull Hybrid System cables

2x HARTING PushPull Hybrid
connector

Length 0.5 m	09 47 616 1005
Length 1.0 m	09 47 616 1010
Length 2.0 m	09 47 616 1020
Length 3.0 m	09 47 616 1030
Length 5.0 m	09 47 616 1050
Length 10.0 m	09 47 616 1100
Length 20.0 m	09 47 616 1200

HARTING PushPull Hybrid System cables

1x HARTING PushPull Hybrid
connector
second side open

Length 0.5 m	09 47 610 0005
Length 1.0 m	09 47 610 0010
Length 2.0 m	09 47 610 0020
Length 3.0 m	09 47 610 0030
Length 5.0 m	09 47 610 0050
Length 10.0 m	09 47 610 0100
Length 20.0 m	09 47 610 0200

Structure hybrid cable



Panel feed-throughs



HARTING PushPull Hybrid

type according to IEC 61 076-3-106 variant 4
device side

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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Number of contacts, Copper / Termination	- Data: 4, shielded / solder termination - Power: 3 (5 A / 32 V) / solder termination
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Locking	PushPull Technology acc. to ISO/IEC 24 702 variant 4
Transmission rate	10/100 Mbit/s
Mounting	screwable to steel plate covers
Dimensions	see drawing
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages

- Combined data- and power-supply up to 5 A/32 V included to one connector
- HARTING PushPull technology
- Compact design
- High packing density
- Sixfold codable
- Suitable for all Fast-Ethernet variants

Identification

Part number

Drawing

Dimensions in mm

Components device side

Set straight

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

09 45 245 1300

Set angled

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

09 45 245 1310

Female insert

PCB jack
shielded 180° straight

09 45 545 1300

PCB jack
shielded 90° angled

09 45 545 1305

Housing bulkhead mounting
for female insert straight

09 45 545 1320

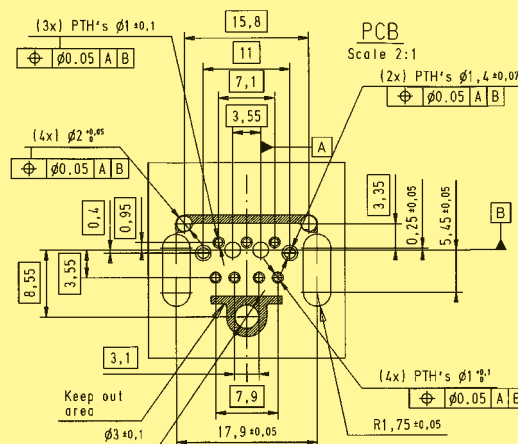
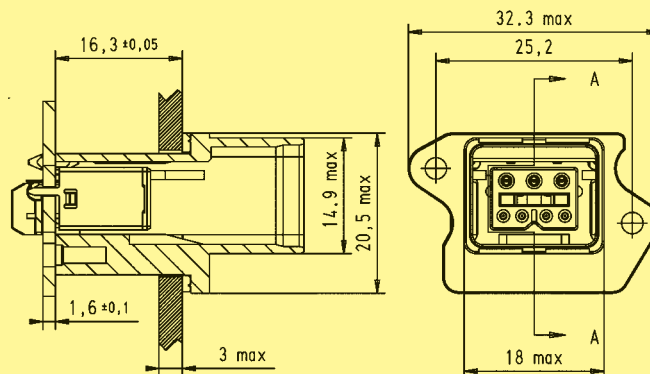
for female insert angled

09 45 545 1325

Panel feed-through

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

09 45 245 1320



Cables



HARTING PushPull Hybrid cable

stranded cable to make up
HARTING PushPull Hybrid system cables

IP 20



IP 65 / IP 67



PVC

Cat. 5



Cat. 6



Cable structure

Star quad, double shielding
+ 3 power wires

Core structure

Data: 4x AWG 26/7
Power: 3x AWG 20/7

Cable outer diameter

 $\varnothing (7.0 \pm 0.4) \text{ mm}$

Sheath material

FRNC

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 to +80 °C

Standard lengths

20 m / 50 m / 100 m / 500 m

Colour

Black

Printing

HARTING specific printing

Advantages

- Robust design suitable for industry
- non-halogen
- flame-retarding
- Easy stripping of cable sheath and screening braid with stripping tool 09 45 800 0000
- UL recognised

Identification

Part number

Drawing

Dimensions in mm

HARTING PushPull Hybrid
stranded cables

PVC

20 m ring
50 m ring
100 m ring
500 m drum

09 45 600 0331
09 45 600 0341
09 45 600 0301
09 45 600 0321



IP 20

RJ45

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

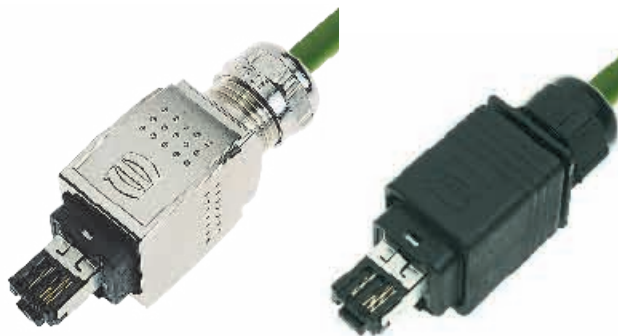
Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Connector sets



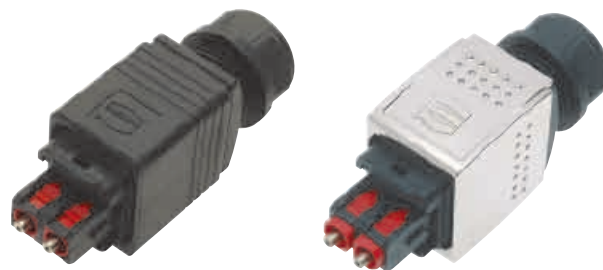
Han® PushPull Connector set RJ45, 4-pole
to make up Han® PushPull system cables RJ45

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector type	Han® PushPull connector RJ45 acc. to ISO/IEC 24 702, variant 14 (AIDA compliant)
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 possible
Wire termination	via IDC contacts
Cable options	
– Strand diameter	AWG 24/7 - AWG 22/7 (stranded) AWG 23/1 - AWG 22/1 (solid)
– Cable sheath diameter	to 9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +70 °C
Housing material	• Polyamide, UL94 V-0 • Zinc die-cast
Colour	• Black • Nickel-plated
Advantages	Field-assembly connector, IP 65 / IP 67 Cat. 5
Mounting information	Tool-less IDC technology

**Han®
PushPull**

Connector sets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☐
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Connector type	Han® PushPull connector SCRJ according to IEC 61 918 (AIDA compliant)
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 9 / 125 µm and 10 / 125 µm HCS® 200/230 POF 1 mm
Mounting	Field-assembly via SC contacts
Cable options	Sheath diameter up to 9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black

Advantages Field-assembly glass fibre connector, IP 65 / IP 67

Identification	Part number	Drawing	Dimensions in mm
Han® PushPull Connector set SCRJ Plastic Set consists of: PushPull housing with SCRJ feeding Cable gland Assembly instructions with SC contacts for POF¹⁾ 1 mm PROFINET-Identification: PROFINET O-Plug RJ45	09 35 241 0422		
Han® PushPull Connector set SCRJ Metal Set consists of: PushPull housing with SCRJ feeding Cable gland Assembly instructions with SC contacts for POF¹⁾ 1 mm PROFINET-Identification: PROFINET O-Plug RJ45	09 35 241 0422		
Components device side - Housing bulkhead mounting Optical transceiver not included plastic metal	09 35 002 0321 09 35 002 0301	Panel cut-out	

¹⁾ POF = Polymer Optical Fibre

System cables



Han® PushPull System cable RJ45, 4-wire

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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types RJ45 Han® PushPull

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C	– 45 °C to +60 °C
Colour	Green	Green	Green	Black

Wiring	4-pole (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

Identification	Part number		
	Plastic version	Metal version	
Han® PushPull System cable RJ45, 4-wire Type A			
Length 1,5 m	09 47 555 5003	09 47 565 6003	
Length 3,0 m	09 47 555 5005	09 47 565 6005	
Length 5,0 m	09 47 555 5007	09 47 565 6007	
Length 10,0 m	09 47 555 5012	09 47 565 6012	
Length 20,0 m	09 47 555 5014	09 47 565 6014	
Han® PushPull System cable RJ45, 4-wire Type B			
Length 1,5 m	09 47 555 5033	09 47 565 6033	
Length 3,0 m	09 47 555 5035	09 47 565 6035	
Length 5,0 m	09 47 555 5037	09 47 565 6037	
Length 10,0 m	09 47 555 5042	09 47 565 6042	
Length 20,0 m	09 47 555 5044	09 47 565 6044	
Han® PushPull System cable RJ45, 4-wire Type C			
Length 1,5 m	09 47 555 5063	09 47 565 6063	
Length 3,0 m	09 47 555 5065	09 47 565 6065	
Length 5,0 m	09 47 555 5067	09 47 565 6067	
Length 10,0 m	09 47 555 5072	09 47 565 6072	
Length 20,0 m	09 47 555 5074	09 47 565 6074	
Han® PushPull System cable RJ45, 4-wire Outdoor			
Length 1,5 m	09 47 555 5093	09 47 565 6093	
Length 3,0 m	09 47 555 5095	09 47 565 6095	
Length 5,0 m	09 47 555 5097	09 47 565 6097	
Length 10,0 m	09 47 555 5102	09 47 565 6102	
Length 20,0 m	09 47 555 5104	09 47 565 6104	

IP 20**RJ45**

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

IP 65 / IP 67**HARTING PushPull**

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

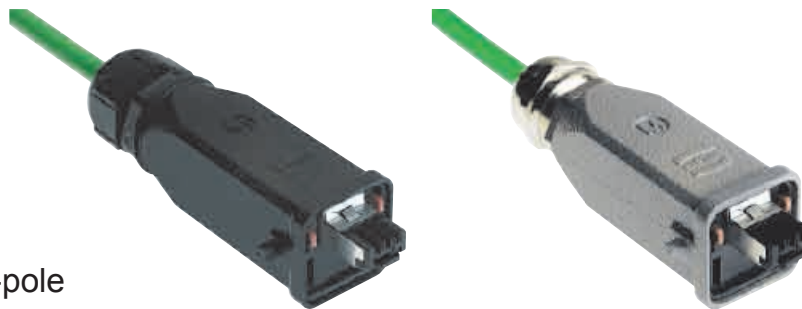
Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Connector sets



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

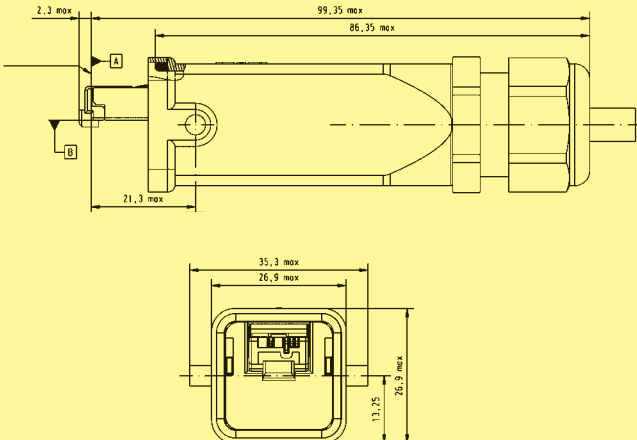
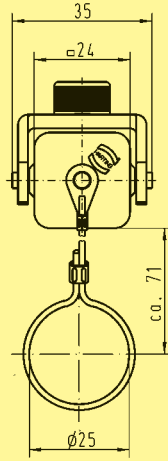
IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector type	Han® 3 A connector RJ45 acc. to IEC 61 918
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	Field-assembly possible
Wire termination	via IDC contacts
Cable options	
– Strand diameter	AWG 24/7 - AWG 22/7 (stranded) AWG 23/1 - AWG 22/1 (solid)
– Cable sheath diameter	6.0 mm - 9.0 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +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, chromatised, powder coated
Colour	Black

Advantages



Field-assembly connector, Cat. 5, IP 65 / IP 67
UL approval E 10 20 79

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

System cables



Han® 3 A System cable RJ45, 4-wire

Han® 3 A RJ45 connection cable for harsh industrial environments

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types

Han® 3 A Metal RJ45

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C
Colour	Green	Green	Green

Wiring

4-pole (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

Identification

Part number

Han® 3 A System cable
RJ45, 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 System cable
RJ45, 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 System cable
RJ45, 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

System cables

Han® 3 A System cable RJ45, 4-wire

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



IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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Connector types

Han® 3 A Metal RJ45 (IP 65 / IP 67) / RJ45 (IP 20)

Cable types

PROFINET 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 to +70 °C	– 40 °C to +70 °C	– 40 °C to +70 °C
Colour	Green	Green	Green

Wiring

4-pole (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

Easy change-over from harsh industrial environment
to protected IP 20 environment

Easy handling for all applications

Identification	Part number	
Han® 3 A System cable RJ45, 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 45 700 1123 09 45 700 1125 09 45 700 1127 09 45 700 1151 09 45 700 1153	
Han® 3 A System cable RJ45, 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 45 700 1164 09 45 700 1166 09 45 700 1168 09 45 700 1173 09 45 700 1175	
Han® 3 A System cable RJ45, 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 45 700 0023 09 45 700 0025 09 45 700 0027 09 45 700 0051 09 45 700 0053	

Panel feed-throughs



Han® 3 A Panel feed-through RJ45

RJ45 Panel feed-through for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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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
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 to +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, chromatised, powder coated
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible Different versions cover all applications Coding possible

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

Panel feed-throughs



Han® 3 A double-coupling RJ45

RJ45 double-coupling for control or distributor cabinets

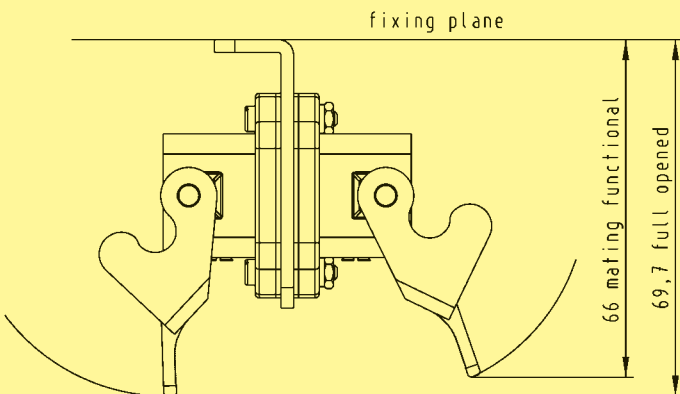
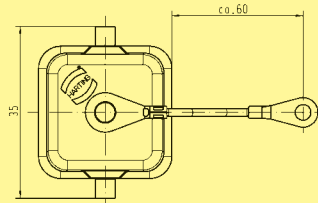
IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, EN 50 173-1
Transmission 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 to +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, chromatised, powder coated
Colour	Black

Advantages

Simple mounting
RJ45 plug-compatible
Different versions cover all applications
Coding possible

Identification	Part number	Drawing	Dimensions in mm
Han® 3 A double-coupling RJ45 Plastic version Accessories IP 65 / IP 67 protection cap for Panel feed-through	09 45 225 1107 09 20 003 5445	 fixing plane 66 mating functional 69,7 full opened	
Han® 3 A double-coupling RJ45 Metal version Standard Accessories IP 65 / IP 67 protection cap for Panel feed-through	09 45 215 1107 09 20 003 5425	Dimensions valid for Plastic version	
Han® 3 A double-coupling RJ45 Metal version M Accessories IP 65 / IP 67 protection cap for Panel feed-through	09 45 215 1110 09 37 003 5405	 35 co. 60	
Accessories Set of coding pins	09 45 820 0000		

Distribution modules and Outlets



Han® 3 A Metal Outlet RJ45, Cat. 6

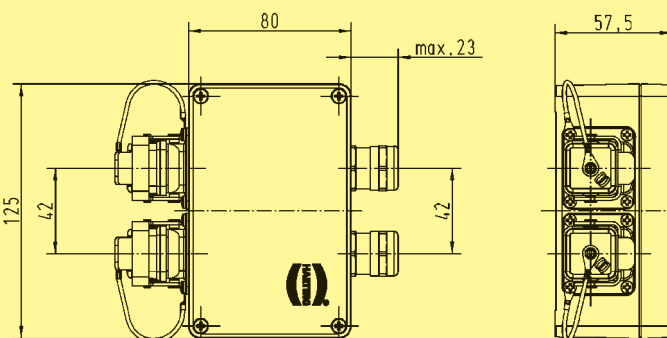
RJ45 Industrial Outlet for IP 65 / IP 67 environments

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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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 mm - 0.65 mm) solid and stranded
Strand insulation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 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 to +70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037

Advantages

Robust metal housing for use in harsh industrial environments
Simple mounting
Lockable Han® 3 A connector ports

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

Distribution modules and Outlets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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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 mm - 0.65 mm) solid and stranded
Strand insulation	0.7 mm - 1.6 mm
Cable diameter	5 mm - 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 to +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
Han® 3 A Metal Outlet RJ45, Cat. 5 consisting of: 2-port metal housing with protection caps, cable glands and blanking piece PCB module with LSA-PLUS strips Label Assembly instructions	09 45 815 1100		

IP 20**RJ45**

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

IP 65 / IP 67**HARTING PushPull**

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Connector sets



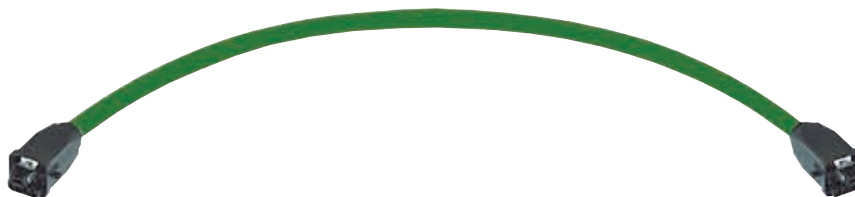
Han® 3 A Hybrid Connector set RJ45, 4-pole
to make up HARTING Han® 3 A Hybrid system cables RJ45

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector type	HARTING Han® 3 A Hybrid connector RJ45 according to IEC 61 918
Number of contacts	4 + 4x power contacts (up to max. 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 possible
Wire termination	via IDC contacts
Cable options	Hybrid cable (2 x 2 data + 4x power)
– Wire diameter (data)	AWG 24/7 - AWG 22/7 (stranded)
– Wire diameter (power)	AWG 23/1 - AWG 22/1 (solid)
– Cable sheath diameter	1.5 mm ² , stranded 10 mm - 11 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to +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 connector, IP 65 / IP 67 Cat. 5

Identification	Part number	Drawing	Dimensions in mm
Han® 3 A Hybrid Connector set RJ45, 4-pole Plastic version straight style Metal version Standard straight style Set consists of: Han® 3 A Hybrid housing including RJ45 connector and shielding Cable gland Assembly instructions	09 45 125 1300 10 12 005 2001	Technical drawing of the Han® 3 A Hybrid Connector set. The side view shows dimensions: 2.3 max, 64.8 max, 51.5 max, 14.95 max, and 21.3 max. The front view shows dimensions: 35.3 max, 26.7 max, 13.25, and 26.7 max. The bottom view shows dimensions: 5.1, 5.1, 5.1, and 5.1.	
Protection cover for Han® 3 A connector Plastic version Metal version Standard	09 20 003 5442 09 20 003 5422	Technical drawing of the Protection cover for Han® 3 A connector. The top view shows dimensions: 35, 24, and 25. The front view shows dimensions: 71 and 25.	Dimensions valid for Plastic version

System cables



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

Han® 3 A Hybrid connection cable for harsh industrial environments

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types	Han® 3 A Hybrid, plastic
Cable types	4 x AWG 22/7, shielded + 4 power cores
Sheath material	FRNC
Wiring	4-pole (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 to +70 °C
Standard lengths	1.5 m / 3 m / 5 m / 10 m / 20 m other lengths available on request
Colour	Green
Advantages	Robust design Use on-site made possible via IP 65 / IP 67 protection Easy handling for applications with additional power supply

Identification

Part number

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

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

Panel feed-throughs



Han® 3 A Hybrid Panel feed-through RJ45

Hybrid Panel feed-through for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (IP 20)
Termination Hybrid supply	4 contacts in the Han® 3 A connector (IP 65 / IP 67) 4 contacts for power supply via cage-clamp terminal to 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
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 to +70 °C
Plastic version	
Housing material	Polyamide, UL94 V-0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey
Advantages	Simple mounting RJ45 plug-compatible Additional power supply via hybrid cable Coding possible

Identification	Part number	Drawing	Dimensions in mm
Han® 3 A Hybrid Panel feed-through RJ45 Plastic version Accessories IP 65 / IP 67 protection cap for Panel feed-through	09 45 225 1300 09 20 003 5445		
Han® 3 A Hybrid Panel feed-through RJ45 Metal version Standard Accessories IP 65 / IP 67 protection cap for Panel feed-through	10 12 005 1002 09 20 003 5425		
Accessories Set of coding pins	09 45 820 0000		

Cables

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



IP 20	☐	IP 65 / IP 67	☒	FRNC	Cat. 5	☒	Cat. 6	☐
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Cable structure	Twisted Pair + 4 power cores, double shielding
Core structure	4x AWG 22/7 + 4x 84 x 0.15 (Cord), stranded
Sheath material	FRNC
Cable sheath diameter	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 to +70 °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
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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
20 m ring
50 m ring
100 m ring

09 45 600 0310
09 45 600 0330
09 45 600 0340
09 45 600 0300



IP 20**RJ45**

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

IP 65 / IP 67**HARTING PushPull**

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Connector sets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector type	HARAX® 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 possible
Wire termination	via IDC contacts
Cable options	
– Strand diameter	AWG 24 - AWG 22 (Cord)
– Cable sheath diameter	5.5 mm - 7.2 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 25 °C to +85 °C
Housing material	Metal

Advantages	Field-assembly M12 connector Compact design Tool-less assembly
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Specifications	IEC 60 352-4 IEC 60 947-5-2
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Approvals



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

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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types	2x Han® M12, D-coding, overmoulded
Cable types	4 x AWG 22/7, Star quad, double shielding
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 to +70 °C
Standard lengths	1 m / 3 m / 5 m / 10 m other lengths available on request
Colour	Green
Advantages	• Robust design • Use on-site made possible by IP 65 / IP 67 protection • Useable as trailing cables

Identification	Part number	Drawing	Dimensions in mm
Han® M12 System cable, 4-wire			
Length 1.0 m	21 03 485 1401		
Length 3.0 m	21 03 485 1403		
Length 5.0 m	21 03 485 1405		
Length 10.0 m	21 03 485 1410		

System cables



Han® M12 System cable, 4-wire

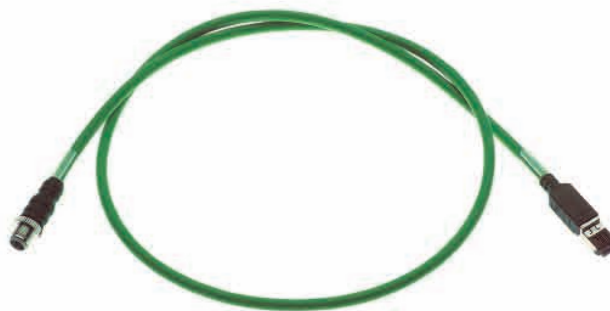
Han® M12 connection cable, D-coding, for harsh industrial environments
second side open

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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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
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 to +70 °C
Standard lengths	1 m / 3 m / 5 m / 10 m other lengths available on request
Colour	Green
Advantages	• Robust design • Use on-site made possible by IP 65 / IP 67 protection • Useable as trailing cables

Identification	Part number	Drawing	Dimensions in mm
Han® M12 System cable, 4-wire Length 1.0 m Length 3.0 m Length 5.0 m Length 10.0 m other lengths	21 03 585 1401 21 03 585 1403 21 03 585 1405 21 03 585 1410 on request		

System cables



Han® M12 RJ45 System cable,
4-wire

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

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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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
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 to +70 °C
Standard lengths	1 m / 3 m / 5 m other lengths available on request
Colour	Green
Advantages	• Robust design • Useable as trailing cables

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
Han® M12 System cable, 4-wire			
Length 1.0 m	09 45 700 5022		
Length 3.0 m	09 45 700 5025		
Length 5.0 m	09 45 700 5027		
Length 10.0 m	09 45 700 5051		

System cables

Additional technical information about overmoulded System cables M12

IP 20	☒	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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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

Panel feed-throughs



Han® M12 Panel feed-through D-coding

M12 Panel feed-through for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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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 to +60 °C
Housing material	Metal / plastic
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible on back side

Identification	Part number	Drawing	Dimensions in mm
Han® M12 Panel feed-through D-coding straight	21 03 381 2400		
Han® M12 Panel feed-through D-coding angled	21 03 381 4400		

IP 20**RJ45**

- Connectors [on page B·1 8]
- System cables [on page B·1 10]
- Distribution modules and Outlets [on page B·1 18]

IP 65 / IP 67**HARTING PushPull**

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Cables



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

for permanent installation or
to make up PROFINET system cables

IP 20	☒	IP 65 / IP 67	☒	PVC	Cat. 5	☒	Cat. 6	☐
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Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/1, solid
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 to +70 °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

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 Standard cable
PROFINET Type A,
4-wire
PVC

20 m ring
50 m ring
100 m ring
500 m drum

09 45 600 0130
09 45 600 0140
09 45 600 0100
09 45 600 0110



Cables



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

IP 20	☒	IP 65 / IP 67	☒	PVC	Cat. 5	☒	Cat. 6	☐
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Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/7, stranded
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 to +70 °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

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 stranded cable
PROFINET Type B,
4-wire
PVC

20 m ring
50 m ring
100 m ring
500 m drum

09 45 600 0132
09 45 600 0142
09 45 600 0102
09 45 600 0112



Cables



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

to connect to mobile equipment
to make up PROFINET system cables

IP 20	☐	IP 65 / IP 67	☒	PUR	Cat. 5	☒	Cat. 6	☐
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Cable structure	Star quad, double shielding
Core structure	4 x AWG 22/7, stranded
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 to +70 °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
Useable as trailing cables
Easy stripping of cable sheath and screening braid with
stripping tool 09 45 800 0000

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 stranded cable,
4-wire,
useable as trailing cables,
PROFINET Type C
PUR

20 m ring
50 m ring
100 m ring
500 m drum

09 45 600 0131
09 45 600 0141
09 45 600 0101
09 45 600 0111



Cables



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

IP 20



IP 65 / IP 67



PVC

Cat. 5



Cat. 6



Cable structure

Star quad, double shielding

Core structure

4 x AWG 22/7, stranded

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 to +60 °C

Standard lengths

20 m / 50 m / 100 m / 500 m

Colour

Black

Printing

HARTING specific printing

Advantages

Robust design suitable for industry

PROFINET compliant

UV protected

Easy stripping of cable sheath and screening braid with
stripping tool 09 45 800 0000

Identification

Part number

Drawing

Dimensions in mm

Industrial Cat. 5 stranded cable,
4-wire, Outdoor,
PROFINET Type B, outdoor
PVC

20 m ring
50 m ring
100 m ring
500 m drum

09 45 600 0135
09 45 600 0145
09 45 600 0105
09 45 600 0115



System cables

Additional technical information about overmoulded System cables

IP 20	☒	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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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 18]

IP 65 / IP 67**HARTING PushPull**

- Connectors [on page B·1 20]
- System cables [on page B·1 22]
- Panel feed-throughs [on page B·1 30]
- Distribution modules and Outlets [on page B·1 32]

HARTING PushPull Hybrid

- Connectors [on page B·1 36]
- System cables [on page B·1 38]
- Panel feed-throughs / Bulkhead mounting housing [on page B·1 40]

Han® PushPull

- Connectors [on page B·1 44]
- System cables [on page B·1 48]

Han® 3 A

- Connectors [on page B·1 52]
- System cables [on page B·1 54]
- Panel feed-throughs [on page B·1 58]
- Distribution modules and Outlets [on page B·1 62]

Han® 3 A Hybrid

- Connectors [on page B·1 66]
- System cables [on page B·1 68]
- Panel feed-throughs [on page B·1 70]
- Cables [on page B·1 72]

M12 D-coding

- Connectors [on page B·1 74]
- System cables [on page B·1 76]
- Panel feed-throughs [on page B·1 80]

Cables

- Type A [on page B·1 84]
- Type B [on page B·1 85]
- Type C [on page B·1 86]
- Type B, Outdoor [on page B·1 87]

Tools

[on page B·1 90]

Identification

Part number

HARTING RJ Industrial®
Stripping Tool

Stripping tool
for Ethernet cables
including blade cassette

09 45 800 0000



Spare blade cassette

09 45 800 0001

The RJ Industrial Stripping Tool is ready to remove insulation from 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.

HARTING RJ Industrial®
LSA-Punch Down Tool

09 45 800 0020



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.

Insertion
and removal tool
for data contacts

09 99 000 0513

for power contacts

09 99 000 0171



IP 20

RJ45

- Connectors [on page B·2 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

RJ45

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

HARTING
PushPull**Han® PushPull**

- Connectors [on page B·2 22]

Han®
PushPull**Han® 3 A**

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han® 3 A

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

Han-Max®

Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Cables

Tools

[on page B·2 52]

Tools

CONTENTS	PAGE
Introduction	B-2 4
Cabling IP 20	
Connector sets	
HARTING RJ Industrial® Connector set RJ45, 8-pole	B-2 6
System cables	
HARTING RJ Industrial® System cable RJ45, 8-wire	B-2 8
HARTING Industrial Ethernet Patch cable RJ45, 8-wire	B-2 9
Distribution modules and Outlets	
HARTING Cabinet Outlet RJ45	B-2 10
Cabling IP 65 / IP 67	
HARTING PushPull	
Connector sets	
HARTING PushPull Connector set RJ45, 8-pole	B-2 12
HARTING PushPull Connector set LC duplex	B-2 14
System cables	
HARTING PushPull System cable RJ45, 8-wire	B-2 16
HARTING PushPull System cable RJ45, 8-wire, to RJ45 (IP 20)	B-2 17
Panel feed-throughs	
HARTING PushPull Panel feed-through RJ45	B-2 18
Distribution modules and Outlets	
HARTING PushPull Outlet RJ45	B-2 20
Han® PushPull	
Connector sets	
Han® PushPull Connector set RJ45, 8-pole	B-2 22

CONTENTS	PAGE
Han® 3 A	
Connector sets	
Han® 3 A Connector set RJ45, 8-pole	B-2 26
System cables	
Han® 3 A System cable RJ45, 8-wire	B-2 28
Panel feed-throughs	
Han® 3 A Panel feed-through RJ45	B-2 30
Han® 3 A Double coupling RJ45	B-2 32
Distribution modules and Outlets	
Han® 3 A Metal Outlet RJ45, Cat. 6	B-2 34
Han® 3 A Metal Outlet RJ45, Cat. 5	B-2 35
Han-Max®	
Connector sets	
Han-Max® Connector set RJ45, 8-pole	B-2 38
Panel feed-throughs	
Han-Max® Panel feed-through RJ45	B-2 40
Cables	
Industrial Cat. 6 cable, stranded, 8-wire, PVC	B-2 44
Industrial Cat. 6 cable, stranded, 8-wire, PUR	B-2 45
Industrial Cat. 6 cable, stranded, 8-wire, flex outdoor	B-2 46
Industrial Cat. 6 cable, stranded, 8-wire, PIMF	B-2 47
Industrial Cat. 5 cable, stranded, 8-wire, PUR	B-2 48
Industrial Cat. 5 outdoor cable, 8-wire, PVC	B-2 49
Tools	
HARTING RJ Industrial® Mounting tool	B-2 52

Introduction

The chapter on „HARTING Ethernet Cabling – 8-poles” 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. 6A (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 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

IP 65 / IP 67**HARTING PushPull**

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

Han® PushPull

- Connectors [on page B·2 22]

Han® 3 A

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Tools

[on page B·2 52]

Connector sets



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

IP 20	☒	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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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 diameter	AWG 27/7 - AWG 24/7
– Strand sheath diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	6.1 mm - 6.9 mm
Degree of protection	IP 20
Operating temperature range	– 40 °C to + 70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	Black

Advantages	Field-assembly connector, Cat. 6
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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)
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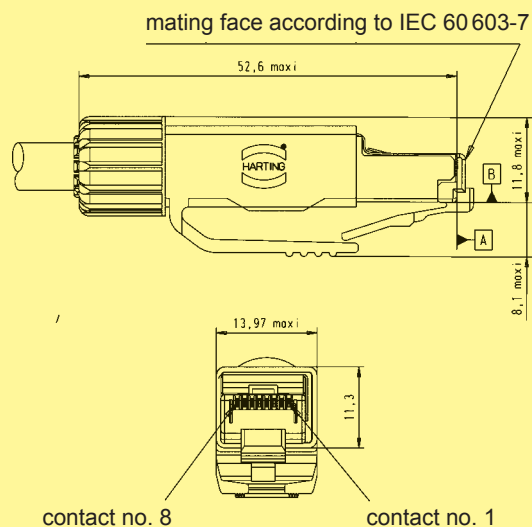
Identification	Part number	Drawing	Dimensions in mm
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HARTING RJ Industrial®
Connector set RJ45, 8-pole

with
White cable manager
Blue cable manager

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

09 45 151 1500
09 45 151 1510



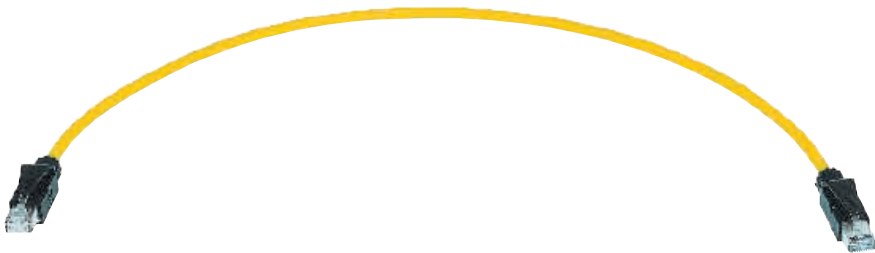
Mounting tools
for RJ45 connector set

09 45 800 0500





System cables



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

IP 20	☒	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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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 to + 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 RJ45, 8-wire	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		

System cables



HARTING Industrial Ethernet Patch cable RJ45, 8-wire

RJ45 connection cable for control or distributor cabinets or within controllers

IP 20	☒	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector types	RJ45, overmoulded
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PUR, non-halogene 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	– 20 °C to + 60 °C

Standard lengths	0.5 m / 1 m / 2 m / 3 m / 5 m / 7.5 m other lengths available on request
Colour	Black or Green

Advantages	Robust design Easy handling for all applications with protection clip for locking lever
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Identification	Part number	
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HARTING Industrial Ethernet
Patch cable RJ45, 8-wire

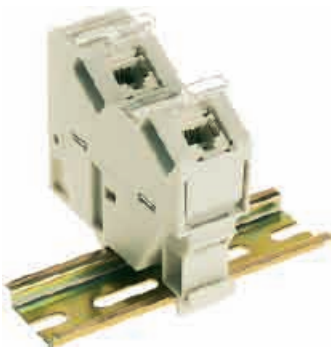
Black

Green

Length 0.5 m	09 45 971 1121	09 45 971 1101
Length 1.0 m	09 45 971 1122	09 45 971 1102
Length 2.0 m	09 45 971 1123	09 45 971 1103
Length 3.0 m	09 45 971 1124	09 45 971 1104
Length 5.0 m	09 45 971 1126	09 45 971 1106
Length 7.0 m	09 45 971 1129	09 45 971 1109



Distribution modules and Outlets



HARTING Cabinet Outlet RJ45

RJ45 distribution module for IP 20 environments (top-hat rail mounting)

IP 20	☒	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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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 mm - 0.65 mm) solid and stranded
Strand insulation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 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 to + 70 °C
Housing material	Polycarbonate, UL94 V-0
Colour	light grey RAL 7035
Advantages	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, Category 6 Assembly instructions	20 76 102 8000		

IP 20

RJ45

- Connectors [on page B·2 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

Han® PushPull

- Connectors [on page B·2 22]

Han® 3 A

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Tools

[on page B·2 52]

Connector sets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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Connector type	PushPull connector RJ45 acc. to ISO/IEC 24 702
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 diameter	AWG 27/7 - AWG 24/7
– Strand sheath diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	6.5 mm – 8.6 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to + 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 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
HARTING PushPull Connector set RJ45, 8-pole with White cable manager Blue cable manager Set consists of: PushPull housing including RJ45 connector and shielding Splice element Cable gland Assembly instructions	09 45 145 1500 09 45 145 1510		
Protection cover for PushPull connectors	09 45 845 0001		
Mounting tools for RJ45 connector set	09 45 800 0500		

Connector sets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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Connector type	PushPull LC duplex connector acc. to IEC 61 076-3-106 variant 4
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	6.5 ... 8.6 mm
Mating cycles	min. 100
Temperature range	-40 °C up to +70 °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)
- EasyInstall Panel feed-through for simple device integration
- Optical module with inserts acc. to IEC 61 754-20
- One-piece LC body assures high mechanical stability
- A & B parts identification for Duplex according TIA 568 standard

Identification	Part number	Drawing	Dimensions in mm
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HARTING PushPull LC duplex Connector set

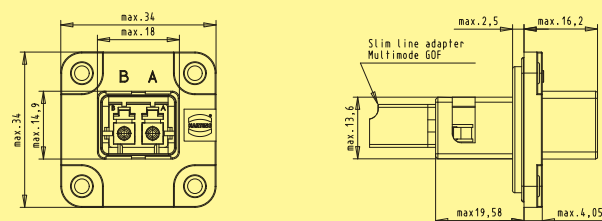
Cable side

Multimode GOF

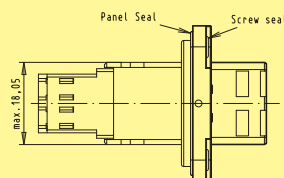
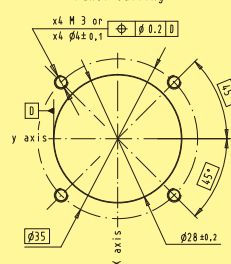
09 57 441 0500

Singlemode GOF

09 57 441 0501



Panel cutting



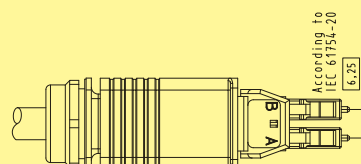
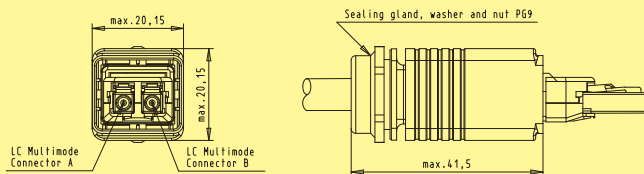
Device side

Multimode GOF

09 57 402 0500

Singlemode GOF

09 57 402 0501



System cables



HARTING PushPull System cable RJ45, 8-wire

RJ45 connection cable HARTING PushPull for IP 65 / IP 67 applications

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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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 to + 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
System cable RJ45, 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



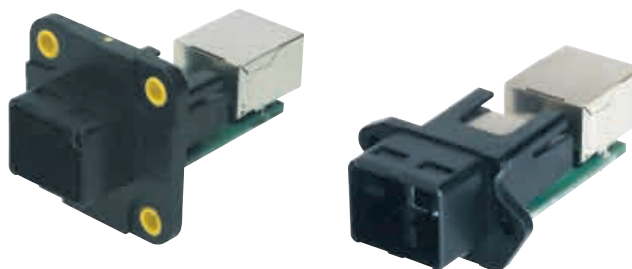
HARTING PushPull System cable RJ45, 8-wire
connection cable HARTING PushPull to RJ45 (IP 20)

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☐	Cat. 6	☒
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Connector types	HARTING PushPull and RJ45 (IP 20)
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 to + 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		Drawing	Dimensions in mm
	PVC	PUR		
HARTING PushPull System cable RJ45, 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 Panel feed-through RJ45

RJ45 Panel feed-through for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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Number of ports, Copper / Termination	2 / 1x RJ45 (IP 20) 1x RJ45 PushPull (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	21 mm x 27 mm
Mounting drillings	M2.5
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to + 70 °C
Housing material	Polyamide, UL94 V-0
Colour	Black
Advantages	Small, space-saving PushPull interface with IP 65 / IP 67 Easy handling of RJ45 system cables in the control cabinet

Identification	Part number	Drawing	Dimensions in mm
HARTING PushPull Panel feed-through RJ45 consisting of: Housing bulkhead mounting Compact including flat gasket RJ45 female module mounted on PCB Assembly instructions board drillings for M2.5	09 45 245 1102		
HARTING PushPull Panel feed-through RJ45 consisting of: Housing bulkhead mounting EasyInstall with integrated seal, 2x RJ45-jacks mounting on PCB board drillings for M3	09 45 245 1130		
Protection cover for housing bulkhead mounting with cord IP 65 / IP 67 fixing ring for M2.5 Version with active locking	for screw M2,5 09 45 845 0004		
Version with passive locking	09 45 845 0009		
IP 40 transport protection rubber, for housing bulkhead mounting	09 45 845 0003		

Distribution modules and Outlets

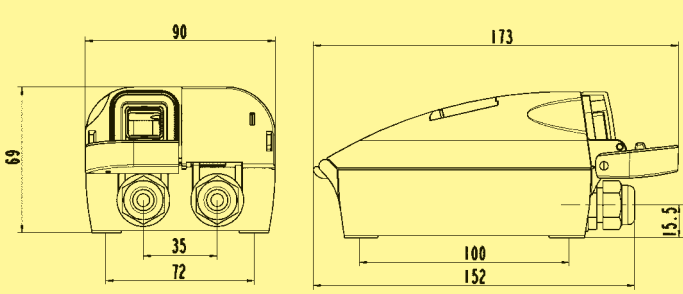
HARTING PushPull Outlet RJ45

RJ45 Industrial Outlet for IP 65 / IP 67 environments



IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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Number of ports, Copper / Termination	2 / RJ45 PushPull (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 mm - 0.65 mm) solid and stranded
Strand insulation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 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 to + 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
HARTING PushPull Outlet RJ45 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 1 cable is used) Assembly instructions	09 45 845 1500 09 45 845 1501		

IP 20

RJ45

- Connectors [on page B·2 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

Han® PushPull

- Connectors [on page B·2 22]

Han® 3 A

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Tools

[on page B·2 52]

Connector sets



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

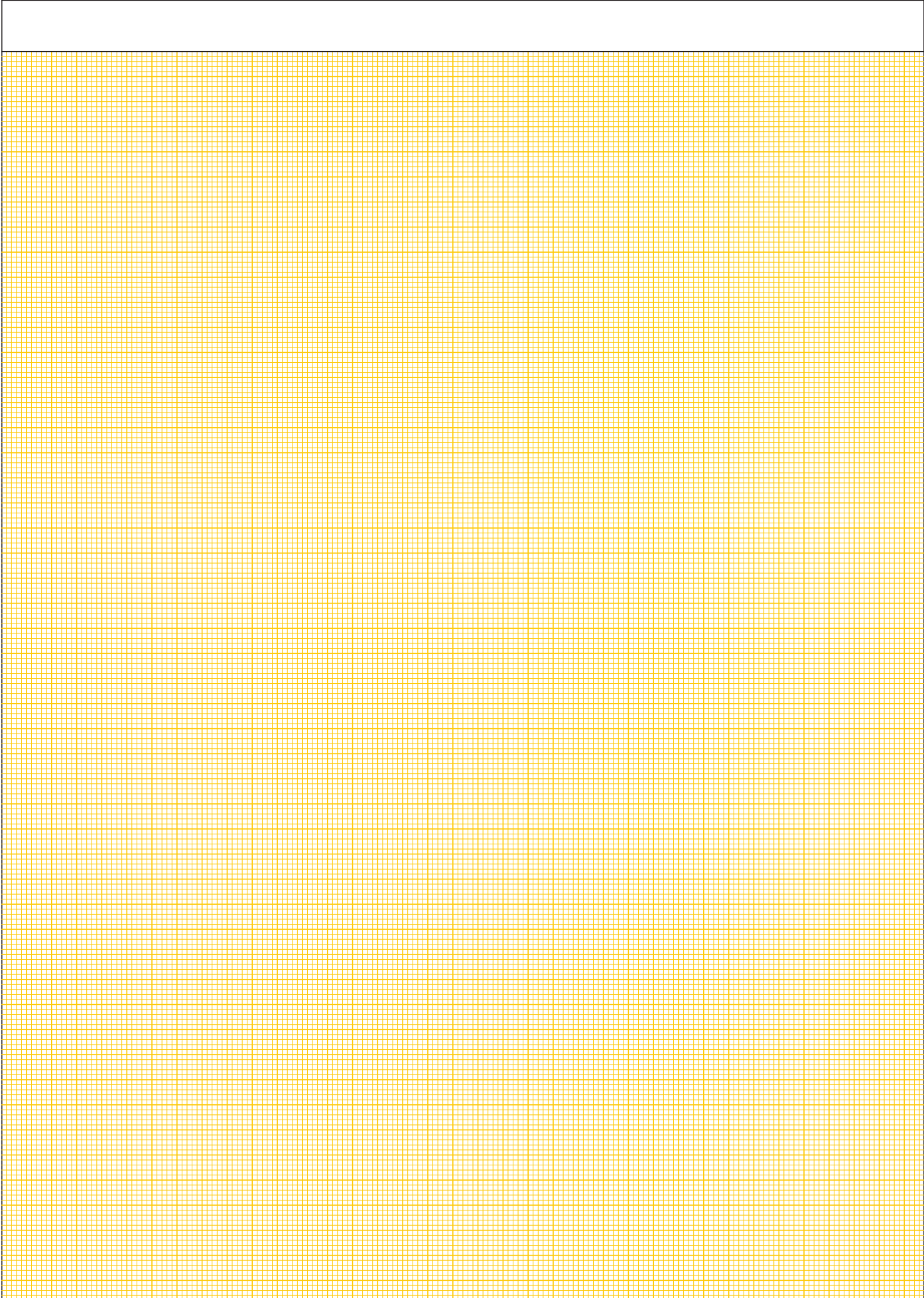
IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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Connector type	Han® PushPull connector RJ45 acc. to IEC 61 076-3-117, variant 14
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 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 diameter	AWG 27/7 - AWG 24/7 (stranded)
– Strand sheath diameter	AWG 23/1 - AWG 22/1 (solid)
– Cable sheath diameter	max. 1.05 mm (including insulation) up to 9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to + 70 °C
Housing material	Polyamide, UL94 V-0 / Metal
Colour	Black

Advantages	Space-saving connector assembly via PushPull interface Field-assembly connector, Cat. 6, in IP 65 / IP 67 tool-less fast termination technique
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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)
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Identification	Part number	Drawing	Dimensions in mm
Han® PushPull Connector set RJ45, 8-pole Plastic Cable diameter 6.5 - 9.5 mm White cable manager Blue cable manage	09 35 223 0421 09 35 224 0421		
Metal Cable diameter 4 - 11 mm White cable manager Blue cable manage	09 35 223 0401 09 35 224 0401		



IP 20

RJ45

- Connectors [on page B·2 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

Han® PushPull

- Connectors [on page B·2 22]

Han® 3 A

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

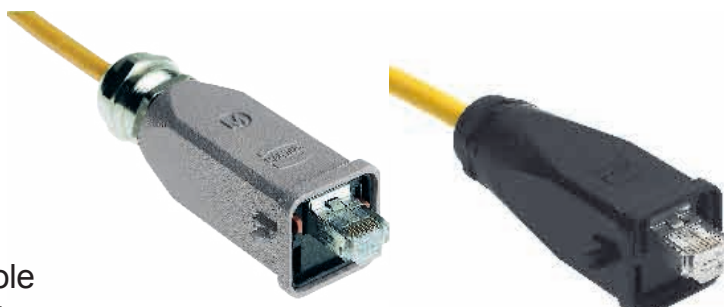
Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Tools

[on page B·2 52]

Connector sets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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Connector type	Han® 3 A connector RJ45
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 diameter	AWG 27/7 - AWG 24/7
– Strand sheath diameter	max. 1.05 mm (including insulation)
– Cable sheath diameter	6.5 mm - 6.9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to + 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, chromatised, powder coated
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	Dimensions in mm
Han® 3 A Connector set RJ45, 8-pole Plastic version with White cable manager Blue cable manager Metal version Standard with White cable manager Blue cable manager Metal version M with White cable manager Blue cable manager Set consists of: Han® 3 A housing including RJ45 connector and shielding Cable gland Assembly instructions	09 45 125 1500 09 45 125 1510 09 45 115 1500 09 45 115 1510 09 45 115 1502 09 45 115 1512	mating face according to IEC 60 603-7 Dimensions valid for Metal version Standard	
Protection cover for Han® 3 A connector Plastic version Metal version Standard Metal version M	09 20 003 5442 09 20 003 5422 09 37 003 5402	 Dimensions valid for Plastic version	
Mounting tools for RJ45 connector set	09 45 800 0500		

System cables



Han® 3 A System cable RJ45, 8-wire

RJ45 connector cable Han® 3 A for IP 65 / IP 67 applications

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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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 to + 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
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Identification	Part number		Drawing	Dimensions in mm
	PVC	PUR		

Han® 3 A System cable RJ45,
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

Panel feed-throughs



Han® 3 A Panel feed-through RJ45

RJ45 Panel feed-through for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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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
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 to + 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, chromatised, powder coated
Colour	Black

Advantages

Simple mounting
RJ45 plug-compatible
Various versions cover all applications
Coding possible

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

Panel feed-throughs

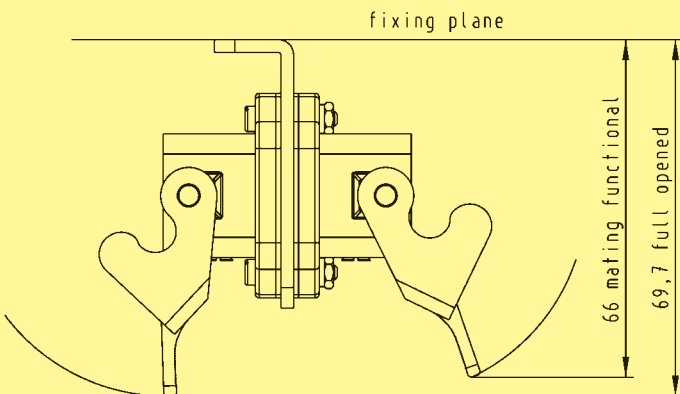
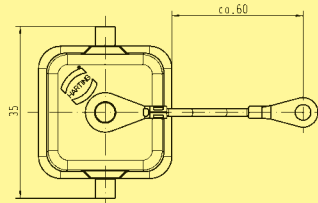


Han® 3 A double-coupling RJ45

RJ45 double-coupling for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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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 to + 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, chromatised, powder coated
Colour	Black
Advantages	Simple mounting RJ45 plug-compatible Various versions cover all applications Coding possible

Identification	Part number	Drawing	Dimensions in mm
Han® 3 A double-coupling RJ45 Plastic version Accessories IP 65 / IP 67 protection cover for Panel feed-through	09 45 225 1107 09 20 003 5445	 Dimensions valid for Plastic version	
Han® 3 A double-coupling RJ45 Metal version Standard Accessories IP 65 / IP 67 protection cover for Panel feed-through	09 45 215 1107 09 20 003 5425	Dimensions valid for Plastic version	
Han® 3 A double-coupling RJ45 Metal version M Accessories IP 65 / IP 67 protection cover for Panel feed-through	09 45 215 1110 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 Metal Outlet RJ45, Cat. 6

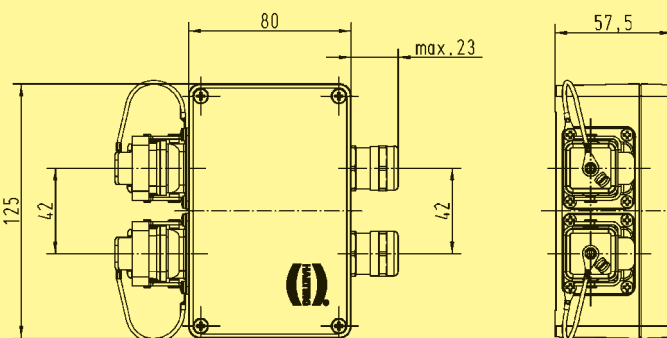
RJ45 Industrial Outlet for IP 65 / IP 67 environments

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☐	Cat. 6	☒
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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 mm - 0.65 mm) solid and stranded
Strand insulation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 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 to + 70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037

Advantages	Robust metal housing for use in harsh industrial environments Simple mounting Lockable Han® 3 A connector ports
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Identification	Part number	Drawing	Dimensions in mm
Han® 3 A Metal Outlet RJ45, Cat. 6 consisting of: 2-port metal housing with protection caps and cable glands 2x RJ45 female module, Cat. 6 Assembly instructions	20 79 302 0922		

Distribution modules and Outlets



Han® 3 A Metal Outlet RJ45, Cat. 5

RJ45 Industrial Outlet for IP 65 / IP 67 environments

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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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 mm - 0.65 mm) solid and stranded
Strand insulation	0.7 mm - 1.6 mm
Cable diameter	5 mm - 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 to + 70 °C
Housing material	Aluminium, die-cast
Colour	Grey RAL 7037

Advantages

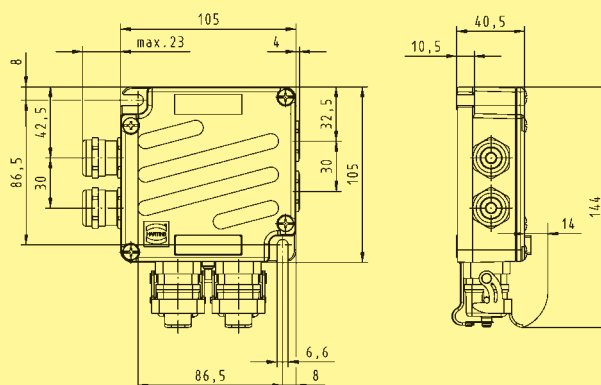
Robust metal housing for use in harsh industrial environments
Simple mounting
Cable feeding optionally from the left or from the right side
Lockable Han® 3 A connector ports

Identification	Part number	Drawing	Dimensions in mm
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Han® 3 A Metal Outlet RJ45, 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



IP 20

RJ45

- Connectors [on page B·2 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

Han® PushPull

- Connectors [on page B·2 22]

Han® 3 A

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Tools

[on page B·2 52]

Connector sets



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

IP 20	☐	IP 65 / IP 67	☒	IP 65 / IP 67 to IP 20	☐	Cat. 5	☒	Cat. 6	☐
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Connector type	Bayonet connector RJ45 acc. to IEC 24 702
Number of contacts	8
Transmission performance	Category 5e up to 100 MHz according to TIA/EIA 568-B
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact or unshielded
Mounting	Field-assembly possible
Wire termination	via crimp contacts
Cable options	
– Strand diameter	AWG 26 - AWG 24 (Cord)
– Cable sheath diameter	4 mm – 8 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 25 °C to + 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. 5e, IP 65 / IP 67 Shielded or unshielded
-------------------	--

Identification	Part number	Drawing	Dimensions in mm
Han-Max® Connector set RJ45, 8-pole STP UTP Set consists of: Bayonet housing including RJ45 connector Cable gland Assembly instructions	09 15 300 0402 09 15 300 0401		
Protection cover for Han-Max® connector	09 15 300 5401		

Panel feed-throughs



Han-Max® Panel feed-through RJ45

RJ45 Panel feed-through for control or distributor cabinets

IP 20	☐	IP 65 / IP 67	☐	IP 65 / IP 67 to IP 20	☒	Cat. 5	☒	Cat. 6	☐
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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 5e up to 100 MHz
according to TIA/EIA 568-B

Transmission rate 10/100/1000 Mbit/s

Shielding fully shielded, 360° shielding contact
or unshielded

Mounting screwable to steel plate covers

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 to + 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

Han-Max® Panel feed-through RJ45

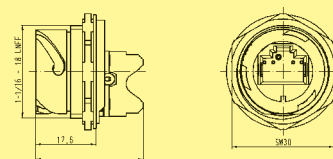
fully shielded (STP)
unshielded (UTP)

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

Part number

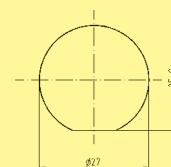
09 15 300 0302
09 15 300 0301

Drawing



	Length l (mm)
09 15 300 0301	31,5
09 15 300 0302	42,0

Panel cut-out
for max.
wall thickness
2.3 mm

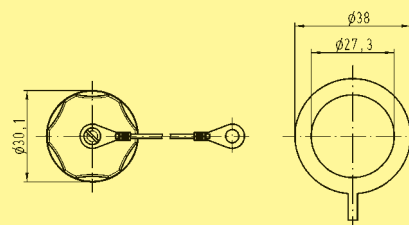


Protection cover

for Panel feed-through



09 15 300 5411



IP 20

RJ45

- Connectors [on page B·2 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

Han® PushPull

- Connectors [on page B·2 22]

Han® 3 A

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Tools

[on page B·2 52]

Cables



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

IP 20	☒	IP 65 / IP 67	☒	PVC	Cat. 5	☐	Cat. 6	☒
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	Cord, 4 x 2 x AWG 27/7
Sheath material	PVC
Cable sheath diameter	6.7 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	– 10 °C to + 80 °C

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

Advantages

Robust design suitable for industry
Optimal performance reserves



flame retardant
best usable for all 8-wire HARTING RJ45 connectors

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6 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



Cables



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

IP 20	☒	IP 65 / IP 67	☒	PUR	Cat. 5	☐	Cat. 6	☒
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	Cord, 4 x 2 x AWG 27/7
Sheath material	PUR
Cable sheath diameter	6.7 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	– 40 °C to + 70 °C

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

Advantages

Robust design suitable for industry
Optimal performance reserves
halogen free
flame retardant sheath material

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6 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



Cables



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

IP 20	☒	IP 65 / IP 67	☒	PVC	Cat. 5	☐	Cat. 6	☒
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	Cord, 4 x 2 x AWG 27/7
Sheath material	PVC
Cable sheath diameter	6.6 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	– 10 °C to + 80 °C

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

Advantages

Robust design suitable for industry
Optimal performance reserves
Usable for outdoor applications
UL recognised

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6 cable, stranded,
8-wire
PVC

20 m ring
50 m ring
100 m ring
500 m drum

09 45 600 0531
09 45 600 0541
09 45 600 0501
09 45 600 0521



Cables



Industrial Cat. 6_A installation cable, 8-wire, FRNC
to fixed laying in industrial environments

IP 20	☒	IP 65 / IP 67	☒	FRNC	Cat. 5	☐	Cat. 6	☒
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Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	4 x 2 x AWG 23/1, solid
Sheath material	FRNC
Cable sheath diameter	7.4 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 Mbit/s and 1/10 Gbit/s
Shielding	paired shielded with additional cable shield
Operating temperature range	– 20 °C to + 60 °C

Supply lengths	500 m / 1000 m
Colour	Black

Advantages	Robust design suitable for industry Optimal performance reserves Usable for transfer rate up to 10 Gigabit Ethernet non-halogene
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Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 6_A
installation cable, 8-wire
FRNC

500 m drum
1000 m drum

09 45 600 0650
09 45 600 0660



Cables



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

IP 20	☒	IP 65 / IP 67	☒	PUR	Cat. 5	☒	Cat. 6	☐
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Cable structure	4 x 2, Twisted Pair, shielded
Core structure	Cord, 4 x 2 x AWG 26/7
Sheath material	PUR
Cable sheath diameter	6.7 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 to + 60 °C

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

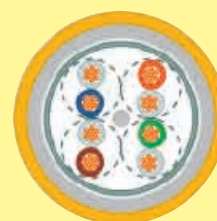
Advantages	Robust design suitable for industry non-halogene UL recognised flame retardant oil proof with Fast Connect inside sheath
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Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 stranded cable,
8-wire
PUR

20 m ring
50 m ring
100 m ring
500 m drum

09 45 600 0430
09 45 600 0440
09 45 600 0400
09 45 600 0420



Cables



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

IP 20	☒	IP 65 / IP 67	☒	PVC	Cat. 5	☒	Cat. 6	☐
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Cable structure	4 x 2, Twisted Pair, shielded
Core structure	Cord, 4 x 2 x AWG 26/7
Sheath material	PVC
Cable sheath diameter	6.7 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 to + 60 °C

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

Advantages

Robust design suitable for industry
Applicable also for outside applications
UL recognised
flame retardant
weather proof
with Fast Connect inside sheath

Identification	Part number	Drawing	Dimensions in mm
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Industrial Cat. 5 outdoor cable,
8-wire

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



IP 20

RJ45

- Connectors [on page B·2 6]
- System cables [on page B·2 8]
- Distribution modules and Outlets [on page B·2 10]

IP 65 / IP 67

HARTING PushPull

- Connectors [on page B·2 12]
- System cables [on page B·2 16]
- Panel feed-throughs [on page B·2 18]
- Distribution modules and Outlets [on page B·2 20]

Han® PushPull

- Connectors [on page B·2 22]

Han® 3 A

- Connectors [on page B·2 26]
- System cables [on page B·2 28]
- Panel feed-throughs [on page B·2 30]
- Distribution modules and Outlets [on page B·2 34]

Han-Max®

- Connectors [on page B·2 38]
- Panel feed-throughs [on page B·2 40]

Cables

- Industrial Cat. 6, stranded, PVC [on page B·2 44]
- Industrial Cat. 6, stranded, PUR [on page B·2 45]
- Industrial Cat. 6, stranded, outdoor, PVC [on page B·2 46]
- Industrial Cat. 6_A, solid, PIMF [on page B·2 47]
- Industrial Cat. 5, stranded, PUR [on page B·2 48]
- Industrial Cat. 5, stranded, outdoor, PVC [on page B·2 49]

Tools

[on page B·2 52]

Identification

Part number

HARTING RJ Industrial® Stripping Tool

Stripping tool
for Ethernet cables
including blade cassette

09 45 800 0000



The RJ Industrial Stripping Tool is ready to remove insulation from cables for fast mounting with diameters from 2.5 to 8 mm quick and easy. It allows to remove cable sheath and shielding braid in one.

Spare blade cassette

09 45 800 0001

HARTING RJ Industrial® LSA-Punch Down Tool

09 45 800 0020



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.

Insertion and removal tool for data contacts

09 99 000 0513



for power contacts

09 99 000 0171



HARTING RJ Industrial® Gigalink-Mounting tools

for HARTING RJ Industrial®
Gigalink connectors

09 45 800 0500



With the RJ Industrial Gigalink Assembly Tool Ethernet connectors can be quickly, easily and reliably connected to flexible cables.

Standard / Approvals

		eCon 2000	eCon 3000	eCon 4000	eCon 9000	eCon 6000	eCon 7000	sCon 3000	sCon 9000	pCon 7000	pCon 2000
				mCon 4000	mCon 9000	mCon 6000	mCon 7000	mCon 3000			
Mechanical stability											
Shock assay	IEC 60 068-2-27	X	X	X	X	X	X	X	X	X	X
Vibration	IEC 60 068-2-6	X	X	X	X	X	X	X	X	X	X
Rail standard	EN 50 155, Class 1		X	X	X	X	X	X	X	X	
EMC standards											
Interference immunity ESD	IEC 61 000-4-2	X	X	X	X	X	X	X	X	X	X
Interference immunity HF, radiated	IEC 61 000-4-3	X	X	X	X	X	X	X	X	X	X
Interference immunity Burst	IEC 61 000-4-4	X	X	X	X	X	X	X	X	X	X
Interference immunity Surge	IEC 61 000-4-5	X	X	X	X	X	X	X	X	X	X
Interference immunity	IEC 61 000-4-6	X	X	X	X	X	X	X	X	X	X
Emitted radiation	EN 55 011, Class	A	A	A	A	A	A	A	A	B	B
Emitted radiation	EN 55 022, Class	A	A	A	A	A	A	A	A	B	B
System perturbation	IEC 61 000-3-3									X	X
Rail standard	EN 50 121-3-2		X	X	X	X	X	X	X	X	

Overview old – new product names

Part number	Identification	
	Old	New
20 76 108 3000	ESC TP08	eCon 3080-A
20 76 108 3001	ESC TP08-F	eCon 3080-A1
20 76 108 3002	ESC TP08-S	eCon 3080-A2
20 76 108 3003	ESC TP08-S-F	eCon 3080-A3
20 76 108 3004	ESC TP08 EXT	eCon 3080-A4
20 76 108 3005	ESC TP08-Plus	eCon 3080-A5
20 76 107 3100	ESC TP06/FX01-SC	eCon 3061-AD
20 76 108 3100	ESC TP06/FX02-SC	eCon 3062-AD
20 76 108 3101	ESC TP06/FX02-SC-F	eCon 3062-AD1
20 76 108 3103	ESC TP06/FX02-SC-SM	eCon 3062-AF
20 76 110 3100	ESC TP08/FX02-SC	eCon 3082-AD
20 76 110 3101	ESC TP08/FX02-SC-F	eCon 3082-AD1
20 76 107 3200	ESC TP06/FX01-ST	eCon 3061-AE
20 76 108 3200	ESC TP06/FX02-ST	eCon 3062-AE
20 76 108 3201	ESC TP06/FX02-ST-F	eCon 3062-AE1
20 76 110 3200	ESC TP08/FX02-ST	eCon 3082-AE
20 76 110 3201	ESC TP08/FX02-ST-F	eCon 3082-AE1
20 73 305 3921	ESC 67-30 TP05U RJ1	eCon 6050-A
20 73 305 3941	ESC 67-30 TP05U M12	eCon 6050-BA
20 73 308 3972	ESC 67-30 TP08U RJ1 Hybrid	eCon 6080-HA
20 70 305 3921	ESC 67-10 TP05U RJ1	eCon 7050-A
20 70 305 3941	ESC 67-10 TP05U M12	eCon 7050-B
20 70 310 3921	ESC 67-10 TP10U RJ1	eCon 7100-A
20 70 310 3941	ESC 67-10 TP10U M12	eCon 7100-B
20 76 208 7000	ESC 20-19 TP07/01 U M12	eCon 9080-B

Overview old – new product names

Part number	Identification	
	Old	New
20 76 110 1000	ESC TP10-SmartCon	sCon 3100-A
20 76 110 1001	ESC TP10-Giga-SmartCon	sCon 3100-AA
20 76 107 1100	ESC TP06/FX01-SC-SmartCon	sCon 3061-AD
20 76 109 1100	ESC TP06/FX03-SC-SmartCon	sCon 3063-AD
20 76 110 1100	ESC TP08/FX02-SC-SmartCon	sCon 3082-AD
20 76 107 1200	ESC TP06/FX01-ST-SmartCon	sCon 3061-AE
20 76 109 1200	ESC TP06/FX03-ST-SmartCon	sCon 3063-AE
20 76 110 1200	ESC TP08/FX02-ST-SmartCon	sCon 3082-AE
20 76 106 7000	ESC 20-19 TP06-S1-SmartCon	sCon 9080-A
20 76 110 4000	ESC TP10-M	mCon 3100-A
20 76 107 4100	ESC TP06/FX01-SC-M	mCon 3061-AD
20 76 109 4100	ESC TP06/FX03-SC-M	mCon 3063-AD
20 76 110 4100	ESC TP08/FX02-SC-M	mCon 3082-AD
20 76 107 4200	ESC TP06/FX01-ST-M	mCon 3061-AE
20 76 109 4200	ESC TP06/FX03-ST-M	mCon 3063-AE
20 76 110 4200	ESC TP08/FX02-ST-M	mCon 3082-AE
20 73 305 4921	ESC 67-30 TP05M RJ1	mCon 6050-A
20 73 305 4941	ESC 67-30 TP05M M12	mCon 6050-BA
20 70 305 4921	ESC 67-10 TP05M RJ1	mCon 7050-A
20 70 305 4941	ESC 67-10 TP05M M12	mCon 7050-B
20 70 310 4921	ESC 67-10 TP10M RJ1	mCon 7100-A
20 70 310 4941	ESC 67-10 TP10M M12	mCon 7100-B
20 76 208 7001	ESC 20-19 TP07/01 M M12	mCon 9080-B
20 80 300 3011	IPS 67-10 1-2-95W Han 3 A	pCon 7095-24A
20 80 300 3012	IPS 67-10 1-2-95W M12	pCon 7095-24B

Overview old – new product names

Part number	Identification	
	Old	New
09 45 845 1500	HARTING RJ Industrial Outlet PushPull	HARTING PushPull Outlet RJ45
09 45 845 1501	HARTING RJ Industrial Outlet PushPull	HARTING PushPull Outlet RJ45
09 45 245 1102	IP 67 PushPull Panel feed-through	HARTING PushPull Panel feed-through RJ45
09 45 971 112x	RJ Industrial Standard Patch cable IP 20	HARTING Industrial Ethernet Patch cable RJ45, 8-wire, Black
09 45 971 110x	RJ Industrial Standard Patch cable IP 20	HARTING Industrial Ethernet Patch cable RJ45, 8-wire, Green
09 45 751 15xx	RJ Industrial Fieldpatch IP 20	HARTING Industrial Ethernet System cable RJ45, 8-wire, Green
09 45 745 15xx	RJ Industrial Fieldpatch IP 67 PushPull	HARTING PushPull System cable RJ45, 8-wire, Green
09 45 715 15xx	RJ Industrial Fieldpatch IP 67 Data 3A	Han® 3 A System cable RJ45, 8-wire, Green
09 45 151 15x0	IP 20 Data-Connector, 4 pairs	HARTING RJ Industrial® Connectors RJ45, 8-pole
09 45 145 15x0	IP 67 PushPull Connector, 4 pairs	HARTING PushPull Connectors RJ45, 8-pole
09 45 125 15x0	IP 67 Data 3A Connector, 4 pairs	Han® 3 A Connectors RJ45, 8-pole
09 45 115 15xx	IP 67 Data 3A Connector, 4 pairs	Han® 3 A Connectors RJ45, 8-pole
09 45 600 05x0	Gigabit Ethernet wire, 4 pairs	Industrial Cat. 6 cable, stranded, 8-wire, PVC
09 45 600 06x0	Gigabit Ethernet wire, 4 pairs, halogen-free	Industrial Cat. 6 cable, stranded, 8-wire, PUR
09 45 600 02x0	Industrial Ethernet cable, 4 pairs	Industrial Cat. 5 outdoor cable, 8-wire
09 45 600 04x0	Industrial Ethernet cable, 4 pairs	Industrial Cat. 5 cable, stranded, 8-wire, PUR

Overview old – new product names

Part number	Identification	
	Old	New
20 79 302 0922	HARTING RJ Industrial Metal Outlet Cat. 6	Han® 3 A Metal Outlet RJ45, Cat. 6
09 45 815 1100	HARTING RJ Industrial Metal Outlet	Han® 3 A Metal Outlet RJ45, Cat. 5
20 73 302 4941	Industrial outlet with Metal housing INO 67 M12	HARTING M12 Metal Outlet D-coding, Cat. 5
09 42 2x5 11xx	IP 67 Data 3A-Panel feed-through	Han® 3 A Panel feed-through RJ45
09 45 2x5 11xx	IP 67 Data 3A-Hybrid double-coupling	Han® 3 A Hybrid double-coupling RJ45
09 45 225 1300	IP 67 Hybrid-Panel feed-through	Han® 3 A Hybrid panel feed-through RJ45
10 12 005 1003	HARTING RJ Industrial Hybrid double-coupling IP 67 (Metal)	Han® 3 A Hybrid double-coupling RJ45
21 03 381 x400	Adapter M12-RJ45	Han® M12 Panel feed-through D-coding
21 03 485 14xx	System cable with circular connector Han M12	Han® M12 System cable, 4-wire
09 45 971 11xx	RJ Industrial standard Patch cable IP 20	HARTING Industrial Ethernet Patch cable RJ45, 8-wire
09 45 771 xxxx	RJ Industrial overmoulded IP 20	HARTING RJ Industrial® System cable RJ45, 4-wire
09 47 050 60xx	RJ Industrial overmoulded IP 20	HARTING RJ Industrial® System cable RJ45, angled, 4-wire
09 45 715 xxxx	RJ Industrial Fieldpatch IP 67 Data 3A	Han® 3 A System cable RJ45, 4-wire
09 45 700 xxxx	RJ Industrial Fieldpatch IP 67 Data 3A	Han® 3 A System cable RJ45, 4-wire
09 45 715 13xx	RJ Industrial Fieldpatch IP 67 Hybrid	Han® 3 A Hybrid system cables RJ45, 4-wire
09 45 7xx xxxx	RJ Industrial Fieldpatch IP 67 PushPull	HARTING PushPull System cable RJ45, 4-wire
09 45 701 xxxx	RJ Industrial Fieldpatch IP 67 PushPull	HARTING PushPull System cable RJ45, 4-wire
21 03 485 140x	System cable with circular connector Han M12	Han® M12 System cable, 4-wire
21 03 281 1405	HARAX circular connector M12-L	HARAX® M12 Connector D-coding, 4-pole
09 15 300 030x	Han-Max® Panel feed-through	Han-Max® Panel feed-through RJ45
09 15 300 040x	Han-Max® cable side	Han-Max® Connector set RJ45, 8-pole

List of part numbers



Part number	Page	Part number	Page	Part number	Page	Part number	Page
09 15 300 0301	B-2 41	09 35 222 0421	B-1 45	09 45 145 1100	B-1 21	09 45 245 1130	B-2 19
09 15 300 0302	B-2 41			09 45 145 1300	B-1 37	09 45 245 1300	B-1 41
09 15 300 030x	Z 5	09 35 223 0401	B-2 23	09 45 145 1310	B-1 37	09 45 245 1310	B-1 41
09 15 300 0401	B-2 39	09 35 223 0421	B-2 23	09 45 145 1500	B-2 13	09 45 245 1320	B-1 41
09 15 300 0402	B-2 39			09 45 145 1510	B-2 13		
09 15 300 040x	Z 5	09 35 224 0401	B-2 23	09 45 145 15x0	Z 4	09 45 2x5 11xx	Z 5
09 15 300 5401	B-2 39	09 35 224 0421	B-2 23				
09 15 300 5411	B-2 41					09 45 343 4009	B-1 11
		09 35 241 0402	B-1 47	09 45 151 1100	B-1 9		
		09 35 241 0422	B-1 47	09 45 151 1109	B-1 9	09 45 545 1300	B-1 41
				09 45 151 1500	B-2 7	09 45 545 1305	B-1 41
09 20 003 2711	A-1 52			09 45 151 1510	B-2 7	09 45 545 1320	B-1 41
09 20 003 2711	A-3 36	09 37 003 5402	B-1 53	09 45 151 15x0	Z 4	09 45 545 1325	B-1 41
09 20 003 5422	B-1 53	09 37 003 5402	B-2 27				
09 20 003 5422	B-1 67	09 37 003 5405	B-1 59	09 45 215 1100	B-1 59	09 45 600 0100	B-1 84
09 20 003 5422	B-2 27	09 37 003 5405	B-1 61	09 45 215 1100	B-2 31	09 45 600 0101	B-1 86
09 20 003 5425	B-1 59	09 37 003 5405	B-2 31	09 45 215 1102	B-1 59	09 45 600 0102	B-1 85
09 20 003 5425	B-1 61	09 37 003 5405	B-2 33	09 45 215 1102	B-2 31	09 45 600 0105	B-1 87
09 20 003 5425	B-1 71			09 45 215 1103	B-1 59	09 45 600 0110	B-1 84
09 20 003 5425	B-2 31			09 45 215 1103	B-2 31	09 45 600 0111	B-1 86
09 20 003 5425	B-2 33	09 40 945 0003	B-1 31	09 45 215 1107	B-1 61	09 45 600 0112	B-1 85
09 20 003 5426	A-1 52			09 45 215 1107	B-2 33	09 45 600 0115	B-1 87
09 20 003 5426	A-3 36			09 45 215 1108	B-1 59	09 45 600 0130	B-1 84
09 20 003 5442	B-1 53			09 45 215 1108	B-2 31	09 45 600 0131	B-1 86
09 20 003 5442	B-1 67	09 42 2x5 11xx	Z 5	09 45 215 1109	B-1 59	09 45 600 0132	B-1 85
09 20 003 5442	B-2 27			09 45 215 1109	B-2 31	09 45 600 0135	B-1 87
09 20 003 5445	B-1 59			09 45 215 1110	B-1 61	09 45 600 0140	B-1 84
09 20 003 5445	B-1 61			09 45 215 1110	B-2 33	09 45 600 0141	B-1 86
09 20 003 5445	B-1 71	09 45 115 1100	B-1 53			09 45 600 0142	B-1 85
09 20 003 5445	B-2 31	09 45 115 1102	B-1 53	09 45 225 1100	B-1 59	09 45 600 0145	B-1 87
09 20 003 5445	B-2 33	09 45 115 1104	B-1 53	09 45 225 1100	B-2 31	09 45 600 0200	B-2 49
		09 45 115 1106	B-1 53	09 45 225 1107	B-1 61	09 45 600 0220	B-2 49
09 20 004 2711	A-1 52	09 45 115 1500	B-2 27	09 45 225 1107	B-2 33	09 45 600 0230	B-2 49
09 20 004 2711	A-3 36	09 45 115 1502	B-2 27	09 45 225 1108	B-1 59	09 45 600 0240	B-2 49
		09 45 115 1510	B-2 27	09 45 225 1108	B-2 31	09 45 600 02x0	Z 4
		09 45 115 1512	B-2 27	09 45 225 1300	B-1 71	09 45 600 0300	B-1 72
		09 45 115 15xx	Z 4	09 45 225 1300	Z 5	09 45 600 0301	B-1 42
09 35 002 0301	B-1 45					09 45 600 0310	B-1 72
09 35 002 0303	B-1 47	09 45 125 1100	B-1 53			09 45 600 0321	B-1 42
09 35 002 0321	B-1 45	09 45 125 1104	B-1 53	09 45 245 1102	B-1 31	09 45 600 0330	B-1 72
09 35 002 0323	B-1 47	09 45 125 1300	B-1 67	09 45 245 1102	B-2 19	09 45 600 0331	B-1 42
		09 45 125 1500	B-2 27	09 45 245 1102	Z 4	09 45 600 0340	B-1 72
09 35 221 0401	B-1 45	09 45 125 1510	B-2 27	09 45 245 1130	B-1 31	09 45 600 0341	B-1 42
09 35 221 0421	B-1 45	09 45 125 15x0	Z 4			09 45 600 0400	B-2 48

List of part numbers



Part number	Page	Part number	Page	Part number	Page	Part number	Page
09 45 600 0420	B-2 48	09 45 701 0023	B-1 29	09 45 715 1523	B-2 28	09 45 745 1527	B-2 16
09 45 600 0430	B-2 48	09 45 701 0025	B-1 29	09 45 715 1525	B-2 28	09 45 745 1551	B-2 16
09 45 600 0440	B-2 48	09 45 701 0027	B-1 29	09 45 715 1527	B-2 28	09 45 745 1553	B-2 16
09 45 600 04x0	Z 4	09 45 701 0051	B-1 29	09 45 715 1551	B-2 28	09 45 745 15xx	Z 4
09 45 600 0501	B-2 46	09 45 701 0053	B-1 29	09 45 715 1553	B-2 28		
09 45 600 0502	B-2 44	09 45 701 0064	B-1 23	09 45 715 1563	B-2 28	09 45 751 1523	B-2 8
09 45 600 0521	B-2 46	09 45 701 0066	B-1 23	09 45 715 1565	B-2 28	09 45 751 1525	B-2 8
09 45 600 0522	B-2 44	09 45 701 0068	B-1 23	09 45 715 1567	B-2 28	09 45 751 1527	B-2 8
09 45 600 0531	B-2 46	09 45 701 0073	B-1 23	09 45 715 1572	B-2 28	09 45 751 1551	B-2 8
09 45 600 0532	B-2 44	09 45 701 0075	B-1 23	09 45 715 1574	B-2 28	09 45 751 1553	B-2 8
09 45 600 0541	B-2 46	09 45 701 1123	B-1 29	09 45 715 15xx	Z 4	09 45 751 1563	B-2 8
09 45 600 0542	B-2 44	09 45 701 1125	B-1 29	09 45 715 xxxx	Z 5	09 45 751 1565	B-2 8
09 45 600 05x0	Z 4	09 45 701 1127	B-1 29			09 45 751 1567	B-2 8
09 45 600 0600	B-2 45	09 45 701 1151	B-1 29	09 45 725 1323	B-1 69	09 45 751 1572	B-2 8
09 45 600 0620	B-2 45	09 45 701 1153	B-1 29	09 45 725 1325	B-1 69	09 45 751 1574	B-2 8
09 45 600 0630	B-2 45	09 45 701 1164	B-1 29	09 45 725 1327	B-1 69	09 45 751 15xx	Z 4
09 45 600 0640	B-2 45	09 45 701 1166	B-1 29	09 45 725 1351	B-1 69		
09 45 600 0650	B-2 47	09 45 701 1168	B-1 29	09 45 725 1353	B-1 69	09 45 771 0023	B-1 11
09 45 600 0660	B-2 47	09 45 701 1173	B-1 29			09 45 771 0025	B-1 11
09 45 600 06x0	Z 4	09 45 701 1175	B-1 29	09 45 744 1523	B-2 16	09 45 771 0027	B-1 11
		09 45 701 1509	B-2 17	09 45 744 1525	B-2 16	09 45 771 0051	B-1 11
		09 45 701 1510	B-2 17	09 45 744 1527	B-2 16	09 45 771 0053	B-1 11
		09 45 701 1511	B-2 17	09 45 744 1532	B-2 16	09 45 771 1123	B-1 11
09 45 700 0023	B-1 57	09 45 701 1512	B-2 17	09 45 744 1534	B-2 16	09 45 771 1125	B-1 11
09 45 700 0025	B-1 57	09 45 701 1514	B-2 17			09 45 771 1127	B-1 11
09 45 700 0027	B-1 57	09 45 701 xxxx	Z 5			09 45 771 1151	B-1 11
09 45 700 0051	B-1 57			09 45 745 0023	B-1 23	09 45 771 1153	B-1 11
09 45 700 0053	B-1 57	09 45 715 0023	B-1 55	09 45 745 0025	B-1 23	09 45 771 1164	B-1 11
09 45 700 1123	B-1 57	09 45 715 0025	B-1 55	09 45 745 0027	B-1 23	09 45 771 1166	B-1 11
09 45 700 1125	B-1 57	09 45 715 0027	B-1 55	09 45 745 0051	B-1 23	09 45 771 1168	B-1 11
09 45 700 1127	B-1 57	09 45 715 0051	B-1 55	09 45 745 0053	B-1 23	09 45 771 1173	B-1 11
09 45 700 1151	B-1 57	09 45 715 0053	B-1 55	09 45 745 1123	B-1 23	09 45 771 1175	B-1 11
09 45 700 1153	B-1 57	09 45 715 1123	B-1 55	09 45 745 1125	B-1 23	09 45 771 xxxx	Z 5
09 45 700 1164	B-1 57	09 45 715 1125	B-1 55	09 45 745 1127	B-1 23		
09 45 700 1166	B-1 57	09 45 715 1127	B-1 55	09 45 745 1151	B-1 23	09 45 7xx xxxx	Z 5
09 45 700 1168	B-1 57	09 45 715 1151	B-1 55	09 45 745 1153	B-1 23		
09 45 700 1173	B-1 57	09 45 715 1153	B-1 55	09 45 745 1164	B-1 23	09 45 800 0000	B-1 90
09 45 700 1175	B-1 57	09 45 715 1164	B-1 55	09 45 745 1166	B-1 23	09 45 800 0000	B-2 52
09 45 700 5022	B-1 78	09 45 715 1166	B-1 55	09 45 745 1168	B-1 23	09 45 800 0001	B-1 90
09 45 700 5025	B-1 78	09 45 715 1168	B-1 55	09 45 745 1173	B-1 23	09 45 800 0001	B-2 52
09 45 700 5027	B-1 78	09 45 715 1173	B-1 55	09 45 745 1175	B-1 23	09 45 800 0020	B-1 90
09 45 700 5051	B-1 78	09 45 715 1175	B-1 55	09 45 745 1523	B-2 16	09 45 800 0020	B-2 52
09 45 700 xxxx	Z 5	09 45 715 13xx	Z 5	09 45 745 1525	B-2 16		

List of part numbers



Part number	Page	Part number	Page	Part number	Page	Part number	Page
09 45 800 0500	B-2 7	09 45 971 1126	B-2 9	09 47 030 4026	B-1 15	09 47 050 0001	B-1 17
09 45 800 0500	B-2 13	09 45 971 1129	B-2 9	09 47 030 4027	B-1 15	09 47 050 0002	B-1 17
09 45 800 0500	B-2 27	09 45 971 112x	Z 4	09 47 030 4029	B-1 15	09 47 050 0003	B-1 17
09 45 800 0500	B-2 52	09 45 971 11xx	Z 5	09 47 030 4045	B-1 15	09 47 050 0004	B-1 17
				09 47 030 4046	B-1 15	09 47 050 0005	B-1 17
09 45 815 1100	B-1 63			09 47 030 4047	B-1 15	09 47 050 0007	B-1 17
09 45 815 1100	B-2 35	09 46 820 0000	B-1 53	09 47 030 4048	B-1 15	09 47 050 0023	B-1 17
09 45 815 1100	Z 5			09 47 030 4049	B-1 15	09 47 050 0024	B-1 17
09 45 820 0000	B-1 59			09 47 030 4051	B-1 15	09 47 050 0025	B-1 17
09 45 820 0000	B-1 61			09 47 030 4067	B-1 15	09 47 050 0026	B-1 17
09 45 820 0000	B-1 71	09 47 030 0001	B-1 17	09 47 030 4068	B-1 15	09 47 050 0027	B-1 17
09 45 820 0000	B-2 31	09 47 030 0002	B-1 17	09 47 030 4069	B-1 15	09 47 050 0029	B-1 17
09 45 820 0000	B-2 33	09 47 030 0003	B-1 17	09 47 030 4070	B-1 15	09 47 050 0045	B-1 17
		09 47 030 0004	B-1 17	09 47 030 4071	B-1 15	09 47 050 0046	B-1 17
		09 47 030 0005	B-1 17	09 47 030 4073	B-1 15	09 47 050 0047	B-1 17
09 45 845 0001	B-1 21	09 47 030 0007	B-1 17			09 47 050 0048	B-1 17
09 45 845 0001	B-2 13	09 47 030 0023	B-1 17			09 47 050 0049	B-1 17
09 45 845 0003	B-2 19	09 47 030 0024	B-1 17			09 47 050 0051	B-1 17
09 45 845 0004	B-1 31	09 47 030 0025	B-1 17			09 47 050 0067	B-1 17
09 45 845 0004	B-2 19	09 47 030 0026	B-1 17	09 47 040 0001	B-1 17	09 47 050 0068	B-1 17
09 45 845 0006	B-1 31	09 47 030 0027	B-1 17	09 47 040 0002	B-1 17	09 47 050 0069	B-1 17
09 45 845 0006	B-2 19	09 47 030 0029	B-1 17	09 47 040 0003	B-1 17	09 47 050 0070	B-1 17
09 45 845 0009	B-1 31	09 47 030 0045	B-1 17	09 47 040 0004	B-1 17	09 47 050 0071	B-1 17
09 45 845 0009	B-2 19	09 47 030 0046	B-1 17	09 47 040 0005	B-1 17	09 47 050 0073	B-1 17
09 45 845 1300	B-1 37	09 47 030 0047	B-1 17	09 47 040 0007	B-1 17	09 47 050 6001	B-1 13
09 45 845 1500	B-1 32	09 47 030 0048	B-1 17	09 47 040 0023	B-1 17	09 47 050 6002	B-1 13
09 45 845 1500	B-2 20	09 47 030 0049	B-1 17	09 47 040 0024	B-1 17	09 47 050 6003	B-1 13
09 45 845 1500	Z 4	09 47 030 0051	B-1 17	09 47 040 0025	B-1 17	09 47 050 6004	B-1 13
09 45 845 1501	B-1 32	09 47 030 0067	B-1 17	09 47 040 0026	B-1 17	09 47 050 6005	B-1 13
09 45 845 1501	B-2 20	09 47 030 0068	B-1 17	09 47 040 0027	B-1 17	09 47 050 6007	B-1 13
09 45 845 1501	Z 4	09 47 030 0069	B-1 17	09 47 040 0029	B-1 17	09 47 050 6023	B-1 13
		09 47 030 0070	B-1 17	09 47 040 0045	B-1 17	09 47 050 6024	B-1 13
09 45 971 1101	B-2 9	09 47 030 0071	B-1 17	09 47 040 0046	B-1 17	09 47 050 6025	B-1 13
09 45 971 1102	B-2 9	09 47 030 0073	B-1 17	09 47 040 0047	B-1 17	09 47 050 6026	B-1 13
09 45 971 1103	B-2 9	09 47 030 4001	B-1 15	09 47 040 0048	B-1 17	09 47 050 6027	B-1 13
09 45 971 1104	B-2 9	09 47 030 4002	B-1 15	09 47 040 0049	B-1 17	09 47 050 6029	B-1 13
09 45 971 1106	B-2 9	09 47 030 4003	B-1 15	09 47 040 0051	B-1 17	09 47 050 6045	B-1 13
09 45 971 1109	B-2 9	09 47 030 4004	B-1 15	09 47 040 0067	B-1 17	09 47 050 6046	B-1 13
09 45 971 110x	Z 4	09 47 030 4005	B-1 15	09 47 040 0068	B-1 17	09 47 050 6047	B-1 13
09 45 971 1121	B-2 9	09 47 030 4007	B-1 15	09 47 040 0069	B-1 17	09 47 050 6048	B-1 13
09 45 971 1122	B-2 9	09 47 030 4023	B-1 15	09 47 040 0070	B-1 17	09 47 050 6049	B-1 13
09 45 971 1123	B-2 9	09 47 030 4024	B-1 15	09 47 040 0071	B-1 17	09 47 050 6051	B-1 13
09 45 971 1124	B-2 9	09 47 030 4025	B-1 15	09 47 040 0073	B-1 17	09 47 050 6067	B-1 13

List of part numbers



Part number	Page	Part number	Page	Part number	Page	Part number	Page
09 47 050 6068	B-1 13	09 47 343 4093	B-1 11	09 47 370 0071	B-1 27	09 47 390 0071	B-1 27
09 47 050 6069	B-1 13	09 47 343 4096	B-1 11	09 47 370 0073	B-1 27	09 47 390 0073	B-1 27
09 47 050 6070	B-1 13	09 47 343 4102	B-1 11	09 47 370 0078	B-1 27	09 47 390 0078	B-1 27
09 47 050 6071	B-1 13	09 47 343 4104	B-1 11	09 47 370 0080	B-1 27	09 47 390 0080	B-1 27
09 47 050 6073	B-1 13						
09 47 050 60xx	Z 5						
		09 47 363 6003	B-1 25	09 47 380 0003	B-1 27	09 47 400 0003	B-1 27
		09 47 363 6005	B-1 25	09 47 380 0005	B-1 27	09 47 400 0005	B-1 27
09 47 060 0001	B-1 17	09 47 363 6007	B-1 25	09 47 380 0007	B-1 27	09 47 400 0007	B-1 27
09 47 060 0002	B-1 17	09 47 363 6012	B-1 25	09 47 380 0012	B-1 27	09 47 400 0012	B-1 27
09 47 060 0003	B-1 17	09 47 363 6014	B-1 25	09 47 380 0014	B-1 27	09 47 400 0014	B-1 27
09 47 060 0004	B-1 17	09 47 363 6025	B-1 25	09 47 380 0025	B-1 27	09 47 400 0025	B-1 27
09 47 060 0005	B-1 17	09 47 363 6027	B-1 25	09 47 380 0027	B-1 27	09 47 400 0027	B-1 27
09 47 060 0007	B-1 17	09 47 363 6029	B-1 25	09 47 380 0029	B-1 27	09 47 400 0029	B-1 27
09 47 060 0023	B-1 17	09 47 363 6034	B-1 25	09 47 380 0034	B-1 27	09 47 400 0034	B-1 27
09 47 060 0024	B-1 17	09 47 363 6036	B-1 25	09 47 380 0036	B-1 27	09 47 400 0036	B-1 27
09 47 060 0025	B-1 17	09 47 363 6047	B-1 25	09 47 380 0047	B-1 27	09 47 400 0047	B-1 27
09 47 060 0026	B-1 17	09 47 363 6049	B-1 25	09 47 380 0049	B-1 27	09 47 400 0049	B-1 27
09 47 060 0027	B-1 17	09 47 363 6051	B-1 25	09 47 380 0051	B-1 27	09 47 400 0051	B-1 27
09 47 060 0029	B-1 17	09 47 363 6056	B-1 25	09 47 380 0056	B-1 27	09 47 400 0056	B-1 27
09 47 060 0045	B-1 17	09 47 363 6058	B-1 25	09 47 380 0058	B-1 27	09 47 400 0058	B-1 27
09 47 060 0046	B-1 17	09 47 363 6069	B-1 25	09 47 380 0069	B-1 27	09 47 400 0069	B-1 27
09 47 060 0047	B-1 17	09 47 363 6071	B-1 25	09 47 380 0071	B-1 27	09 47 400 0071	B-1 27
09 47 060 0048	B-1 17	09 47 363 6073	B-1 25	09 47 380 0073	B-1 27	09 47 400 0073	B-1 27
09 47 060 0049	B-1 17	09 47 363 6078	B-1 25	09 47 380 0078	B-1 27	09 47 400 0078	B-1 27
09 47 060 0051	B-1 17	09 47 363 6080	B-1 25	09 47 380 0080	B-1 27	09 47 400 0080	B-1 27
09 47 060 0067	B-1 17						
09 47 060 0068	B-1 17						
09 47 060 0069	B-1 17	09 47 370 0003	B-1 27	09 47 390 0003	B-1 27	09 47 555 5003	B-1 49
09 47 060 0070	B-1 17	09 47 370 0005	B-1 27	09 47 390 0005	B-1 27	09 47 555 5005	B-1 49
09 47 060 0071	B-1 17	09 47 370 0007	B-1 27	09 47 390 0007	B-1 27	09 47 555 5007	B-1 49
09 47 060 0073	B-1 17	09 47 370 0012	B-1 27	09 47 390 0012	B-1 27	09 47 555 5012	B-1 49
		09 47 370 0014	B-1 27	09 47 390 0014	B-1 27	09 47 555 5014	B-1 49
		09 47 370 0025	B-1 27	09 47 390 0025	B-1 27	09 47 555 5033	B-1 49
09 47 343 4006	B-1 11	09 47 370 0027	B-1 27	09 47 390 0027	B-1 27	09 47 555 5035	B-1 49
09 47 343 4012	B-1 11	09 47 370 0029	B-1 27	09 47 390 0029	B-1 27	09 47 555 5037	B-1 49
09 47 343 4018	B-1 11	09 47 370 0034	B-1 27	09 47 390 0034	B-1 27	09 47 555 5042	B-1 49
09 47 343 4020	B-1 11	09 47 370 0036	B-1 27	09 47 390 0036	B-1 27	09 47 555 5044	B-1 49
09 47 343 4034	B-1 11	09 47 370 0047	B-1 27	09 47 390 0047	B-1 27	09 47 555 5063	B-1 49
09 47 343 4037	B-1 11	09 47 370 0049	B-1 27	09 47 390 0049	B-1 27	09 47 555 5065	B-1 49
09 47 343 4040	B-1 11	09 47 370 0051	B-1 27	09 47 390 0051	B-1 27	09 47 555 5067	B-1 49
09 47 343 4046	B-1 11	09 47 370 0056	B-1 27	09 47 390 0056	B-1 27	09 47 555 5072	B-1 49
09 47 343 4048	B-1 11	09 47 370 0058	B-1 27	09 47 390 0058	B-1 27	09 47 555 5074	B-1 49
09 47 343 4090	B-1 11	09 47 370 0069	B-1 27	09 47 390 0069	B-1 27	09 47 555 5093	B-1 49

List of part numbers



Part number	Page	Part number	Page	Part number	Page	Part number	Page
09 47 555 5095	B-1 49	09 57 402 0500	B-2 15	20 70 305 3921	A-1 53	20 76 102 3100	A-1 28
09 47 555 5097	B-1 49	09 57 402 0501	B-2 15	20 70 305 3921	Z 2	20 76 102 3101	A-1 29
09 47 555 5102	B-1 49			20 70 305 3923	A-1 55	20 76 102 8000	B-1 18
09 47 555 5104	B-1 49	09 57 441 0500	B-2 15	20 70 305 3941	A-1 54	20 76 102 8000	B-2 10
		09 57 441 0501	B-2 15	20 70 305 3941	Z 2		
09 47 565 6003	B-1 49			20 70 305 3943	A-1 56	20 76 103 3000	A-1 6
09 47 565 6005	B-1 49			20 70 305 4921	A-3 37		
09 47 565 6007	B-1 49			20 70 305 4921	Z 3	20 76 104 3000	A-1 7
09 47 565 6012	B-1 49			20 70 305 4922	A-3 39		
09 47 565 6014	B-1 49	09 99 000 0171	B-1 37	20 70 305 4941	A-3 38	20 76 105 3000	A-1 8
09 47 565 6033	B-1 49	09 99 000 0171	B-1 90	20 70 305 4941	Z 3	20 76 105 3001	A-1 10
09 47 565 6035	B-1 49	09 99 000 0171	B-2 52	20 70 305 4942	A-3 40		
09 47 565 6037	B-1 49	09 99 000 0175	B-1 37			20 76 106 7000	A-2 19
09 47 565 6042	B-1 49	09 99 000 0513	B-1 37	20 70 310 3921	A-1 57	20 76 106 7000	Z 3
09 47 565 6044	B-1 49	09 99 000 0513	B-1 90	20 70 310 3921	Z 2		
09 47 565 6063	B-1 49	09 99 000 0513	B-2 52	20 70 310 3924	A-1 59	20 76 107 1100	A-2 9
09 47 565 6065	B-1 49	09 99 000 0596	B-1 37	20 70 310 3941	A-1 58	20 76 107 1100	Z 3
09 47 565 6067	B-1 49			20 70 310 3941	Z 2	20 76 107 1102	A-2 15
09 47 565 6072	B-1 49			20 70 310 4001	A-3 44	20 76 107 1200	A-2 12
09 47 565 6074	B-1 49			20 70 310 4001	A-3 45	20 76 107 1200	Z 3
09 47 565 6093	B-1 49			20 70 310 4921	Z 3	20 76 107 3100	A-1 20
09 47 565 6095	B-1 49			20 70 310 4922	A-3 41	20 76 107 3100	Z 2
09 47 565 6097	B-1 49			20 70 310 4923	A-3 44	20 76 107 3200	A-1 25
09 47 565 6102	B-1 49	10 12 005 1002	B-1 71	20 70 310 4924	A-3 43	20 76 107 3200	Z 2
09 47 565 6104	B-1 49	10 12 005 1003	Z 5	20 70 310 4941	Z 3	20 76 107 4100	A-3 10
		10 12 005 2001	B-1 67	20 70 310 4942	A-3 42	20 76 107 4100	Z 3
				20 70 310 4943	A-3 45	20 76 107 4200	A-3 13
						20 76 107 4200	Z 3
09 47 610 0005	B-1 39						
09 47 610 0010	B-1 39					20 76 108 3000	A-1 16
09 47 610 0020	B-1 39					20 76 108 3000	Z 2
09 47 610 0030	B-1 39			20 73 302 4941	Z 5	20 76 108 3001	A-1 17
09 47 610 0050	B-1 39					20 76 108 3001	Z 2
09 47 610 0100	B-1 39	19 00 000 5080	A-1 52	20 73 305 3921	A-1 46	20 76 108 3002	A-1 18
09 47 610 0200	B-1 39	19 00 000 5080	A-3 36	20 73 305 3921	Z 2	20 76 108 3002	Z 2
				20 73 305 3941	A-1 47	20 76 108 3003	Z 2
				20 73 305 3941	Z 2	20 76 108 3004	A-1 19
09 47 616 1005	B-1 39			20 73 305 4921	A-3 31	20 76 108 3004	Z 2
09 47 616 1010	B-1 39			20 73 305 4921	Z 3	20 76 108 3005	Z 2
09 47 616 1020	B-1 39			20 73 305 4941	A-3 32	20 76 108 3100	A-1 21
09 47 616 1030	B-1 39			20 73 305 4941	Z 3	20 76 108 3100	Z 2
09 47 616 1050	B-1 39					20 76 108 3101	Z 2
09 47 616 1100	B-1 39	19 20 003 1440	A-1 52	20 73 308 3972	A-1 48	20 76 108 3102	A-1 22
09 47 616 1200	B-1 39	19 20 003 1440	A-3 36	20 73 308 3972	Z 2	20 76 108 3103	Z 2

List of part numbers

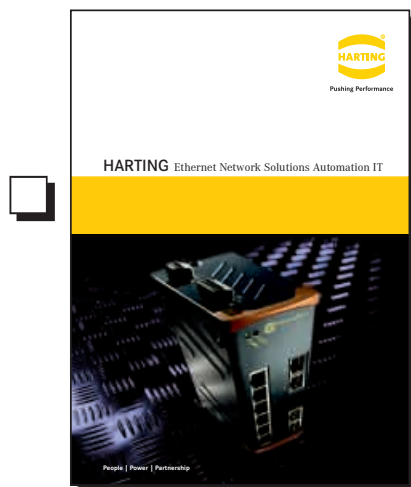


Part number	Page	Part number	Page	Part number	Page	Part number	Page
20 76 108 3103	A-1 23	20 76 116 3000	A-1 9	21 03 212 2305	A-1 52		
20 76 108 3200	A-1 26			21 03 212 2305	A-3 36		
20 76 108 3200	Z 2	20 76 207 7000	A-1 40				
20 76 108 3201	Z 2	20 76 207 7001	A-3 26	21 03 281 1405	B-1 75		
				21 03 281 1405	Z 5		
		20 76 208 7000	A-1 41	21 03 281 2405	B-1 75		
20 76 109 1100	A-2 10	20 76 208 7000	Z 2				
20 76 109 1100	Z 3	20 76 208 7001	A-3 27	21 03 381 2400	B-1 81		
20 76 109 1200	A-2 13	20 76 208 7001	Z 3	21 03 381 4400	B-1 81		
20 76 109 1200	Z 3			21 03 381 x400	Z 5		
20 76 109 4100	A-3 11						
20 76 109 4100	Z 3	20 77 208 3001	A-1 32	21 03 485 1401	B-1 76		
20 76 109 4200	A-3 14	20 77 208 4001	A-3 18	21 03 485 1403	B-1 76		
20 76 109 4200	Z 3			21 03 485 1405	B-1 76		
				21 03 485 140x	Z 5		
20 76 110 1000	A-2 7			21 03 485 1410	B-1 76		
20 76 110 1000	Z 3	20 79 302 0922	B-1 62	21 03 485 14xx	Z 5		
20 76 110 1001	A-2 8	20 79 302 0922	B-2 34				
20 76 110 1001	Z 3	20 79 302 0922	Z 5	21 03 585 1401	B-1 77		
20 76 110 1100	A-2 11			21 03 585 1403	B-1 77		
20 76 110 1100	Z 3			21 03 585 1405	B-1 77		
20 76 110 1102	A-2 16			21 03 585 1410	B-1 77		
20 76 110 1200	A-2 14	20 80 000 0003	A-1 52				
20 76 110 1200	Z 3	20 80 000 0003	A-3 36				
20 76 110 3100	A-1 24	20 80 000 0003	A-4 3				
20 76 110 3100	Z 2	20 80 000 0004	A-1 45				
20 76 110 3101	Z 2	20 80 000 0004	A-3 30				
20 76 110 3200	A-1 27	20 80 000 3121	A-4 7				
20 76 110 3200	Z 2	20 80 000 3122	A-4 8				
20 76 110 3201	Z 2						
20 76 110 4000	A-3 8	20 80 010 0001	A-1 52				
20 76 110 4000	Z 3	20 80 010 0001	A-3 36				
20 76 110 4001	A-3 9	20 80 010 0001	A-4 3				
20 76 110 4100	A-3 12	20 80 010 0002	A-1 52				
20 76 110 4100	Z 3	20 80 010 0002	A-3 36				
20 76 110 4200	A-3 15						
20 76 110 4200	Z 3	20 80 024 0002	A-1 52				
20 76 110 7000	A-1 37	20 80 024 0002	A-3 36				
20 76 110 7001	A-3 23	20 80 024 0002	A-4 3				
20 76 110 7100	A-1 38						
20 76 110 7101	A-3 24	20 80 300 3011	A-4 4				
20 76 110 7200	A-1 39	20 80 300 3011	Z 3				
20 76 110 7201	A-3 25	20 80 300 3012	A-4 5				
		20 80 300 3012	Z 3				

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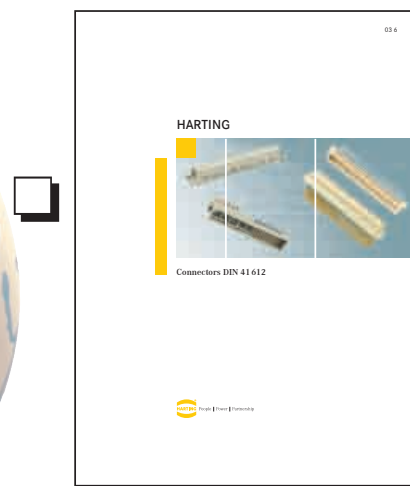
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