HARTING

Ethernet Network Solutions for the Industry

HARTING People | Power | Partnership

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Quality Connections Worldwide

HARTING was founded in 1945 by the family that still owns the company.

Today, HARTING employs approximately 2,000 people worldwide, including 150 qualified engineers. The sales team, including more than 100 sales engineers, is in daily contact with our customers.

The company is one of the world's leading manufacturers of connectors, and currently has 34 subsidiary companies in Europe, the United States and Asia. In several product areas, HARTING is the market leader.

Great emphasis is placed on close links with customers, including the provision of a 'Just-in-Time'-Service to ensure rapid delivery to key customers.

HARTING products are designed and manufactured using the latest automated techniques, from CAD systems in the research and development department to automatic production techniques on the assembly lines.

Production and quality control is based on a 'zero-defect' philosophy, which can only be reached by the continuous successful implementation of fully automated production techniques. The organisation and procedures for quality assurance are based on the EN ISO 9001 standard. A total of 60 engineers and other employees, most of whom are trained and qualified to standards laid down by the DGQ (German Association of Quality) or the SAQ (Swiss Association of Quality), are employed solely on quality-assurance activities.

List of contents

General information

It is the customer's responsibility to check whether the components illustrated in this catalogue also comply with different regulations from those stated in special fields of applications.

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Errors and mistakes excepted.

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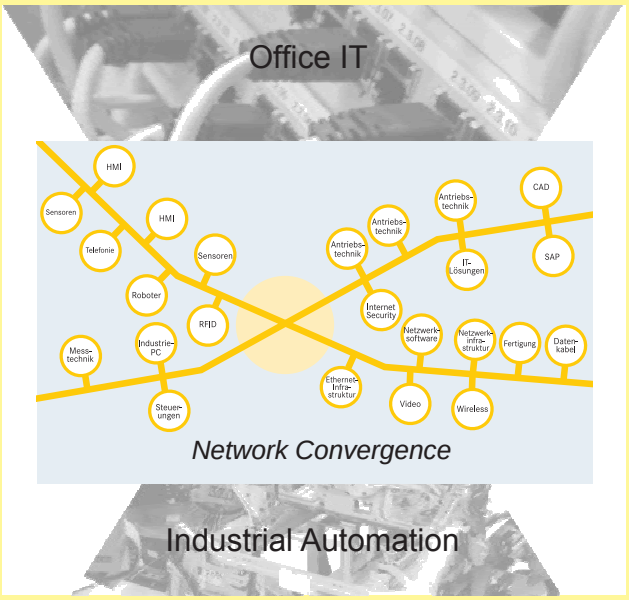
Introduction

Realise a seamless Ethernet Network – with **Automation IT**:

In a global market with constantly new, changing market constraints and changeable buyer behaviour, the smooth flow of information between all members of a value-chain is an absolute must.

Even on the most modern production lines, the networks for automation, telephony, data exchange with business systems and further multi-media services are still separate from one another.

Standard Ethernet now provides the remedy, in which the perfect linking up of Automation and IT into a single network is made possible. Whether industrial control, IP-telephony, video, ERP, Office equipment or sensors – all applications run over an integrated Ethernet network, that is linked up via a cable. In this way, all clients communicate securely and reliably over a single network.



Automation IT

Ethernet facilitates the perfect networking of Automation and IT. At the Hannover Fair 2006 HARTING, together with Cisco Systems, displayed solutions for the modern, scalable, capable and above all reliable network. HARTING stands for the harmonisation of network topologies, components and cabling from the office all the way into the toughest environments.

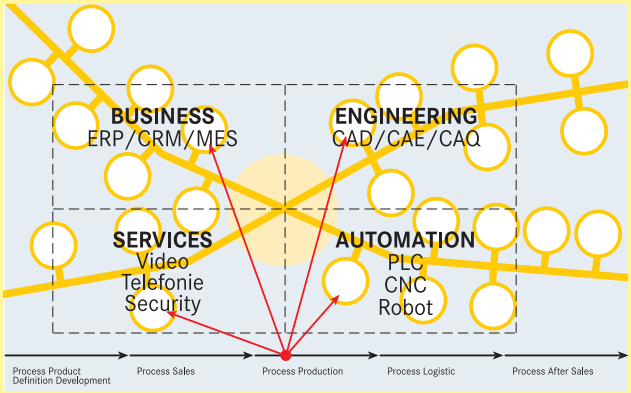
Network performance also ensures the highest availability for time critical processes. Different data streams can be simultaneously recognized and assigned to the appropriate application. The convergence of Automation, Business Systems, Telephony and multi-media services into a single network is in this way guaranteed.

Automation IT means: **Advantage by Convergence**

The convergence of Office IT and Automation / Factory networks opens up potential rationalisations in planning, installation and operation that up until now were not achievable.

Where process speed has been previously restricted by the requirement for gateways between Office and Factory applications, today Automation IT can communicate without barriers or wastage.

From each core process, Automation IT makes possible direct access in real time to the complete data of all applications. The networking of all core processes opens up a previously unknown transparency and speed.



Network applications in industry

Your Advantages at a Glance:

- More transparency for management
- Reduction of installation and operational costs through reduced expenditure for planning, installation and operation

Introduction

- More effective business processes through the linking up of sales and production processes
- Highest availability and performance, even in the toughest surroundings
- Communication without barriers in real time between all network clients
- A single network for Automation, Office IT, Telephony and video-monitoring

In just a few steps to a complete network – with the **Selection Guide**:

Simple selection rules for the whole infrastructure support the building up of a seamless network. Of vital importance is the fact that the network components and the cabling are harmonised with one another.

Ethernet Network Components:

Functional Class

The Functional Class of the active network components is derived from their application. Network components can operate as simple star-couplers as in the eCon range, or take over the more complex tasks of active segment administration embodied by the mCon range. HARTING covers the complete spectrum of industrial applications with eCon, sCon and mCon.

Installation Class

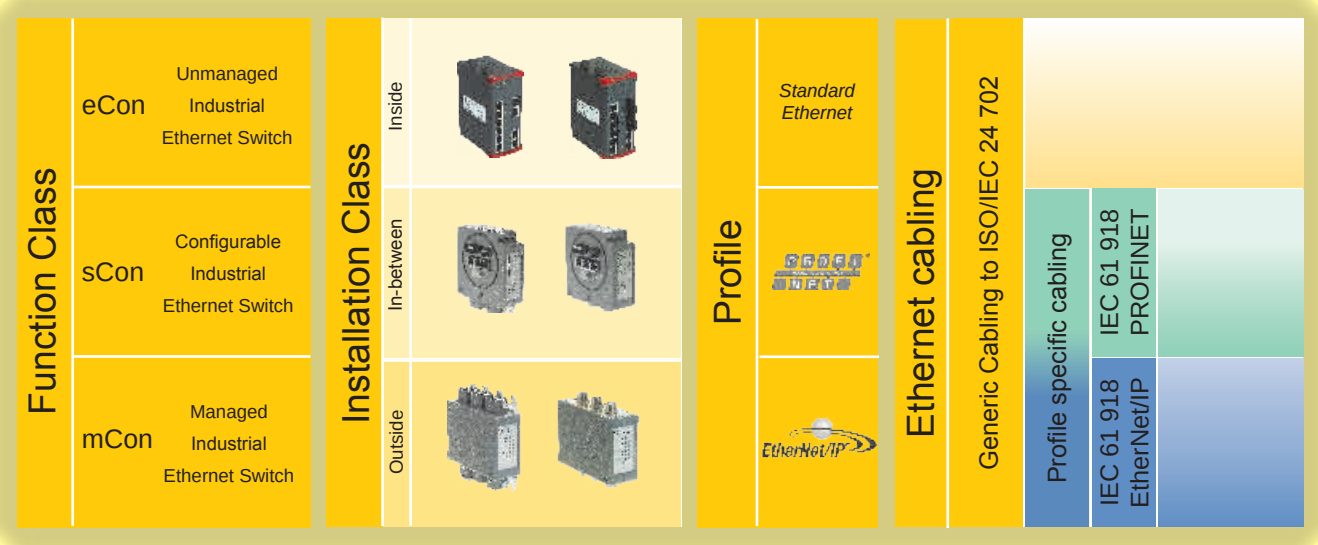
With the Installation Class the installation concept that is appropriate to the application is selected. If, for example, your network components are located in a control cabinet, then the Inside installation class is the right one for you. All HARTING network components are true industrial products, with such well thought-out default properties that they master the toughest environments.

Profile Specification

Through the Profile you select whether special automation-specific functions, such as those required by PROFINET, are integrated into the network components.

HARTING presently supports Conformance Class A of the PROFINET profile. Integration of corresponding additional automation-specific PROFINET functions specified in Conformance Classes B and C will follow soon. That means that HARTING network components can be reliably utilised in standard Ethernet, PROFINET and EtherNet/IP environments.

In this way the right network components are determined in only 3 steps.



The way through the Selection Guide

Structured Cabling:

Structured cabling follows from the particular application, since the determination of network components and other active devices decides the constraints on the cabling - for example, the selection of connectors. The network cabling results from the simple connection of network clients. There are complete cable sets available as well as cables and connectors that can be made up on site. Products are also available for transitional areas like cabinet walls or between two different installation lines, which seamlessly enhance the network.
With the help of the selection guide, you can follow an easy path to a seamless and secure network solution.

What do industrial network components look like in detail?

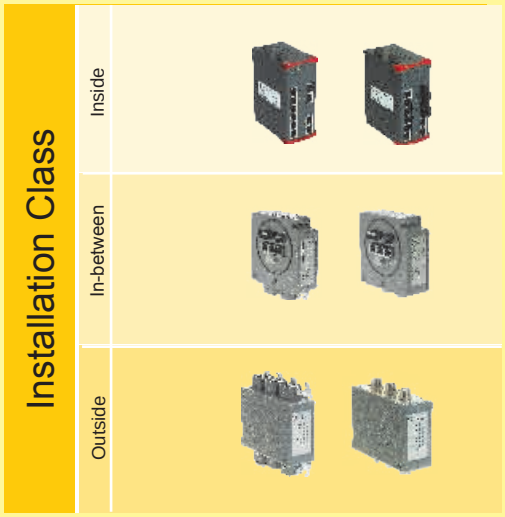
For one thing, an industrial Ethernet component must always have basic functionality such as:

- Wide temperature range capable of meeting industrial application requirements
- High mechanical robustness as well resistance to shock and vibration loads
- EMC characteristics commensurate with the requirements of industrial environments
- Fast Ethernet (100 MBit/s) Switch functionality (IEEE 802.3)
- Store and Forward Switch function with Auto-negotiation and Auto-crossing for easy installation
- Wide application field via electrical and/or optical ports

These fundamental functions are the basis of all HARTING network components and are already implemented in the unmanaged eCon product group. The eCon products are not separately set up by the user or administrator, but are rather plug-and-play components. It follows that an application specific parameterisation is not possible. From this the well thought-out segmentation of the network is a pre-requisite for the use of these components. To achieve this, an exact knowledge of the application must already be available in the planning phase. Unmanaged network components are not necessarily usable in convergent networks.
If application specific or later configuration changes are necessary, then an sCon network component is the appropriate solution. The network component can be made conformant with the application without the use of special management tools. The parameterisation is carried out over the integrated USB interface.

The mCon network components make possible state-of-the-art administration of a network in the office branch. Here management services such as IGMP Query, QoS, VLAN, RSTP, and 802.1 are ready for use. A web server is integrated for easy setting into service or administration over the web. With mCon Ethernet switches, the network services are available that make possible the convergence of office and automation applications.

Apart from the choice of appropriate functions in industrial environments, the selection of the suitable installation class is of particular importance.



Installation Class

Three typical classes can be defined, dependent on the application:

1. **Inside:**
   These network components are used inside a control cabinet to create a star topology, whose clients can be found in the same cabinet. For distribution to the outside of the cabinet, a Patch cable is mostly necessary.
2. **In-between:**
   These network components serve to integrate control cabinets in Ethernet networks as well

Introduction

as the distribution in a star topology within individual control cabinets. Decentralised control cabinets can be easily linked together into a line topology.

3. **Outside:**
   This class defines network components in a high degree of protection, that are used directly on site for the creation of miscellaneous topologies such as star topology most of whose devices are designed to a high protection class. The low number of ports also allows the implementation of simple line topologies.

With this, network components are defined from the criteria of Standard Ethernet. But characteristics remain open which are essential for use in the field of automation. There are profile specifics, only through which a network component can be qualified for PROFINET or EtherNet/IP applications; that is automation standards, which by compatibility with Standard Ethernet, supply a particular functional or interface requirement.

What does cabling for industry look like in detail?

The foundation of industrial network cabling is represented by ISO/IEC 24 702. Apart from generic cabling variants, this standard also supports profile specific cabling for PROFINET and EtherNet/IP. The selected profile also gives the connectors that can be used.

The user's concrete application also defines the optimal solution. Therefore different application specific solutions are made available.

1. The networking of an industrial premise or a widely distributed installation with a large amount of pre-wiring:
   This application forms the basis for the ISO/IEC 24 702, which is based on the cabling between automation islands. The only connector approved for generic cabling, variant 4, standardised in the IEC 61 076-3-106 was selected for the connector concept. Generic cabling is particularly important in this case as network usage can be subject to change and as such flexibility is necessary when giving consideration to different network generations.
   The M12 connector is often ruled out of this type of application, because its use is limited to Fast Ethernet.
2. Networking of manufacturing facilities with comparatively diverse topologies and applications extending into the automation island:
   This application is typical in the production of motor vehicles. In this case, the concept selected should be as flexible as possible and not only meet the technical requirements with regard to data transmission up to Gigabit Ethernet, but also encompass requirements for optical transmission media. As there is little pre-wiring within automation islands (cabling is mostly application-specific), the availability of simple connection techniques for optical and electrical solutions is a pre-condition for the system to be deployed. In addition, immense significance is placed on the plugging compatibility with RJ45 connectors at interface points to the IT network. A concept that fulfils all of these requirements is specified in the IEC Pas 61 076-3-117. Due to its flexibility, this standard has also been taken up for PROFINET.
3. Networking within individual machines:
   These machines represent stand-alone applications that are integrated at a central point within a company-wide network. The interface for the integration falls under application 1 and/or 2. The connectors within the machine are to be selected to meet the requirements of the machine builder. Many factors favour the use of the M12 connector due to the fact that is widely used in sensor technology and generally enjoys high levels of acceptance.

Overview of connectors

List of contents Page

Function Class			Installation Class	Switches
HARTING eCon	unmanaged	Plug & Play Store and Forward Switching Mode Non-blocking Auto-negotiation Auto-polarity Auto-crossing	Inside (Degree of protection IP 30)	**eCon 2000** - 3/4/5 Copper ports - Robust metal housing - Top-hat rail mount - Optimum installation depth eCon 2030 -A eCon 2040 -A eCon 2050 -A **eCon 3000** - 6/8 Copper ports with optional 1/2 F.O. ports - Robust metal housing - Top-hat rail mount - Narrow form factor Without F.O. eCon 3080 -A/A5/A4 8 RJ45 with optional: - Alarm contact - Extended temperature range eCon 3080 -A1 eCon 3080 -A2 8 RJ45, with narrowest housing eCon 3080 -A3
			In-between (Degree of protection IP 67/20)	**eCon 6000** - 5 Copper ports (3 RJ45 and 2 Han® 3 A RJ45 /M12, D-coding) - Robust die-cast aluminium housing - Active panel feed-through - EMC, temperature range and mechanical stability meet the highest requirements - Potential-free alarm contact 5 Port
			Outside (Degree of protection IP 65/67)	**eCon 7000** - 5/10 Copper ports (Han® 3 A RJ45 or M12, D-coding) - Robust die-cast zinc housing - EMC, temperature range and mechanical stability meet the highest requirements 5 Port
HARTING sCon	configurable	via USB-interface configurable through a graphic user interface	Inside (Degree of protection IP 30)	**sCon 3000** - 6/8/10 Copper ports (RJ45) and optional 1/2/3 F.O. ports (SC/ST) - Robust metal housing - Individual configurable - Top-hat rail mounting - Potential-free alarm contact Without F.O. **sCon 3100 -A/AA** 10 RJ45, - Optionally with 2 Gigabit With F.O.
HARTING mCon	managed	SNMP V1 und V3 MIB II Port-Thresholding RSTP DHCP Client IGMP Snooping VLAN QoS Store and Forward Switching Mode Non-blocking Auto-negotiation Auto-polarity Auto-crossing	Inside (Degree of protection IP 30)	**mCon 3000** - 6/8/10 Copper ports and with optionally 1/2/3 F.O.-ports - Robust metal housing - Top-hat rail mounting - Web management Without F.O. **mCon 3100 -A** 10 RJ45 With F.O.
			In-between (Degree of protection IP 67/20)	**mCon 6000** - 5 Copper ports (3 RJ45 and 2 Han® 3 A RJ45 /M12, D-coding) - Robust die-cast aluminium housing - Active panel feed-through - Potential-free alarm contact - Web management 5 Port
			Outside (Degree of protection IP 65/67)	**mCon 7000** - 5/10 Copper ports (Han® 3 A RJ45 or M12, D-coding - Robust die-cast zinc housing - EMC, temperature range and mechanical stability meet the highest requirements - Web management 5 Port
HARTING pCon		Industrial Power supply 24 V	Outside (Degree of protection IP 65/67)	**pCon 7000** – Robust die-cast zinc housing – Worldwide application through wide range of input voltage: 115 V / 230 V AC (Auto-ranging) – Output voltage: 24 V DC – Power output: 95 W – Operating Temperature: – 25 °C to + 75 °C – Power input socket: Han® 4 A – Active PFC – Mechanical stability meets the highest demands

Application

With F.O. – SC

eCon 3061 -AD
6 RJ45, 1 SC

eCon 3062 -AD/-AD2/-AF
6 RJ45, 2 SC also available with:
- Extended temperature range
- Single mode

eCon 3062 -AD1

eCon 3082 -AD
8 RJ45, 2 SC

eCon 3082 -AD1

With F.O. – ST

eCon 3061 -AE
6 RJ45, 1 ST

eCon 3062 -AE
6 RJ45, 2 ST

eCon 3062 -AE1

eCon 3082 -AE
8 RJ45, 2 ST

eCon 3082 -AE1

eCon 9000

- 7 Han® M12 D-coding +1
- Robust metal housing
- 19" rack mount
- Small form-factor

eCon 9080 -B

Standard Ethernet

PROFINET

eCon 2000 / eCon 3000 / eCon 9000

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eCon 6050 -A
3 RJ45, 2 Han® 3 A RJ45

eCon 6050 -BA
3 RJ45, 2 M12

Hybrid

eCon 6080 -HA
- 6 RJ45, 6-position screw terminal block, 2 HARTING RJ Industrial® Hybrid
- Redundant power inputs 18V - 30V DC

Standard Ethernet

PROFINET

eCon 6000

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eCon 7050 -A
5 Han® 3 A RJ45

eCon 7050 -B
5 M12

10 Port

eCon 7100 -A
10 Han® 3 A RJ45

eCon 7100 -B
10 M12

Standard Ethernet

PROFINET

eCon 7000

SC

sCon 3061 -AD
6 RJ45, 1 SC

sCon 3082 -AD
8 RJ45, 2 SC

sCon 3063 -AD
6 RJ45, 3 SC

ST

sCon 3061 -AE
6 RJ45, 1 ST

sCon 3082 -AE
8 RJ45, 2 ST

sCon 3063 -AE
6 RJ45, 3 ST

Standard Ethernet

PROFINET

sCon 3000 / sCon 9000

SC

mCon 3061 -AD
6 RJ45, 1 SC

mCon 3082 -AD
8 RJ45, 2 SC

mCon 3063 -AD
6 RJ45, 3 SC

mCon 9000

- 7 Han® M12, D-coding +1
- Robust metal housing
- 19" rack mount
- Small form-factor

mCon 9080 -B

Standard Ethernet

EtherNet/IP

PROFINET

mCon 3000 / mCon 9000

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mCon 6050 -A
3 RJ45, 2 Han® 3 A RJ45

mCon 6050 -BA
3 RJ45, 2 M12

Standard Ethernet

EtherNet/IP

PROFINET

mCon 6000

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mCon 7050 -A
5 Han® 3 A RJ45

mCon 7050 -B
5 M12

10 Port

mCon 7100 -A
10 Han® 3 A RJ45

mCon 7100 -B
10 M12

Standard Ethernet

EtherNet/IP

PROFINET

mCon 7000

pCon 7095 -24A
Outlet socket:
2 Han® 4 A

pCon 7095 -24B
Outlet socket:
2 M12, A-coding

pCon 2060 -24
Outlet socket:
2 cable clamps

Standard Ethernet

PROFINET

pCon 7000 / pCon 2000

Notes

List of contents Page

List of contents Page

HARTING eCon 2000 – Introduction and features

Ethernet Switch
HARTING eCon 2000

Ethernet switches, unmanaged,
for flat mounting onto top-hat mounting rail
in control cabinets

General Description

The Fast Ethernet switches of the product family HARTING eCon 2000 are suitable for industrial applications and support both Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s). The product family enables the connection of up to 5 network devices (according to type) over shielded Twisted Pair cables.

Through its horizontal mounting and the clearly laid out integrated LEDs on each port, the eCon 2000 Ethernet switch family supports fast and easy network diagnosis. The eCon Ethernet switch operates as an unmanaged switch in Store and Forward Switching Mode and supports Auto-crossing, Auto-negotiation and Auto-polarity

Due to their mechanical attachment, the eCon 2000 Fast Ethernet switches can be mounted on or dismounted from standard 35 mm top-hat rails without tools.

Features

- Auto-crossing
- Auto-negotiation
- Auto-polarity
- Store and Forward Switching Mode

Advantages

- Flat housing format
- Robust metal housing
- Adapted for mounting onto top-hat mounting rail 35 mm according to EN 60 715
- RoHS compliant

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems

Technical characteristics

Ethernet interface RJ45

Number of ports	3x / 4x / 5x 10/100Base-TX
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s (RJ45)
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Terminating method	RJ45 (Twisted Pair)
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF
Topology	Line, Star or mixed

Power supply

Input voltage	24 V DC (12 to 30 V DC)
Terminating method	3-pole pluggable screw contact (24 V; GND; PE)
Diagnostics (via LED)	Power supply

Design features

Housing material	Aluminium, anodised
Dimensions (W x H x D)	46.5 x 25.5 x 105 mm (without connectors)
Degree of protection acc. to DIN 60 529	IP 30
Mounting	35 mm top-hat rail acc. to EN 60 715
Weight	approx. 0.5 kg

Environmental conditions

Operating temperature	– 10 °C to + 70 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

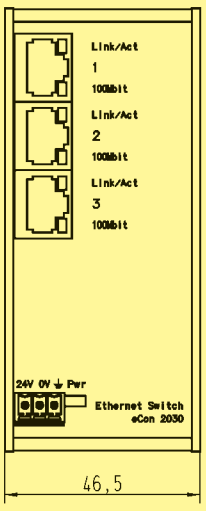
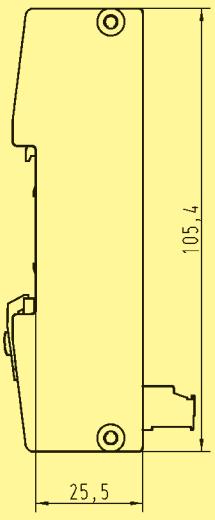
HARTING eCon 2000

Ethernet Switch
HARTING eCon 2030-A

3-port Ethernet switch for flat mounting onto top-hat mounting rail in control cabinets

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	3x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 100 mA (at 24 V DC)
Housing material	Aluminium, anodised
Dimensions (W x H x D)	46.5 x 25.5 x 105 mm (without connectors)
Weight	approx. 0.5 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 2030-A Ethernet switch with 3 ports RJ45	20 76 103 3000		

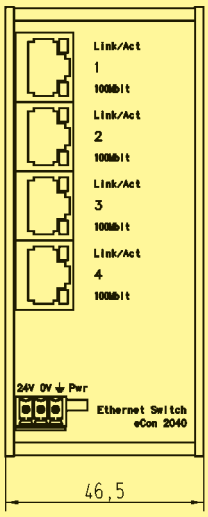
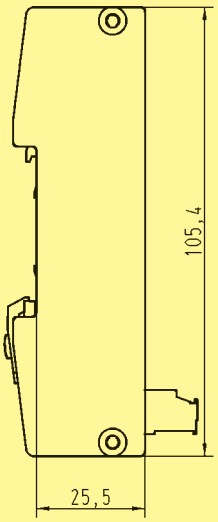
HARTING eCon 2000

Ethernet Switch
HARTING eCon 2040-A

4-port Ethernet switch for flat mounting onto top-hat mounting rail in control cabinets

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	4x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 100 mA (at 24 V DC)
Housing material	Aluminium, anodised
Dimensions (W x H x D)	46.5 x 25.5 x 105 mm (without connectors)
Weight	approx. 0.5 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 2040-A Ethernet switch with 4 ports RJ45	20 76 104 3000		

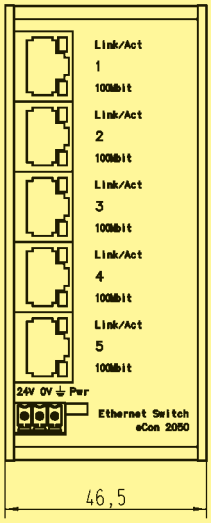
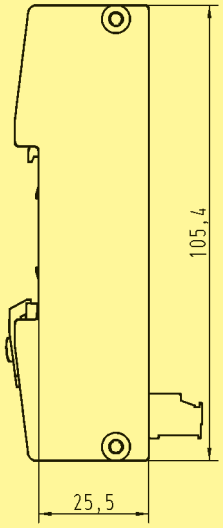
HARTING eCon 2000

Ethernet Switch
HARTING eCon 2050-A

5-port Ethernet switch for flat mounting onto top-hat mounting rail in control cabinets

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	5x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 100 mA (at 24 V DC)
Housing material	Aluminium, anodised
Dimensions (W x H x D)	46.5 x 25.5 x 105 mm (without connectors)
Weight	approx. 0.5 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 2050-A Ethernet switch with 5 ports RJ45	20 76 105 3000		

HARTING eCon 3000 – Introduction and features

Ethernet Switch
HARTING eCon 3000

Ethernet switches, unmanaged,
for installation in control cabinets

General Description

The Fast Ethernet switches of the product family HARTING eCon 3000 are suitable for industrial applications and support both Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s). The product family enables the connection of up to 10 network devices (according to type) over shielded Twisted Pair cables and fibre-optic cables (Multi- and Singlemode).

The eCon 3000 Ethernet switch product family, with its integrated LEDs on each port, supports fast and easy network diagnosis.

The eCon Ethernet switch operates as an unmanaged switch in Store and Forward Switching Mode and supports Auto-crossing, Auto-negotiation and Auto-polarity.

Features

- Auto-crossing
- Auto-negotiation
- Auto-polarity
- Store and Forward Switching Mode

Advantages

- Small housing
- Robust metal housing
- Adapted for mounting onto top-hat mounting rail 35 mm according to EN 60 715
- RoHS compliant

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems

Technical characteristics

Ethernet interface RJ45

Number of ports	6x / 8x 10/100Base-TX
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s (RJ45)
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Terminating method	RJ45 (Twisted Pair)
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF
Topology	Line, Star or mixed

Power supply

Input voltage	24 V DC (12 to 30 V DC)
Terminating method	3-pole pluggable screw contact (24 V; GND; PE)
Diagnostics (via LED)	Power supply

Design features

Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Degree of protection acc. to DIN 60 529	IP 30
Mounting	35 mm top-hat rail acc. to EN 60 715
Weight	approx. 0.6 kg

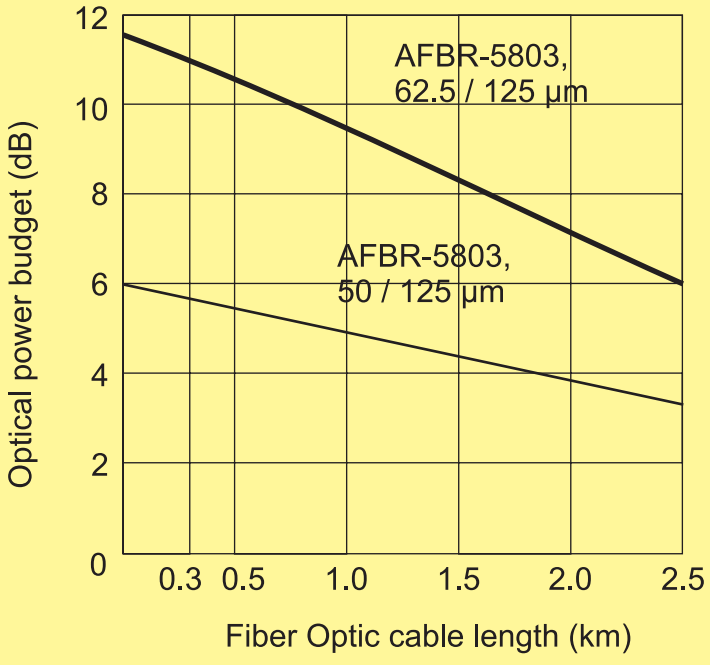
Environmental conditions

Operating temperature	– 10 °C to + 70 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

Technical characteristics - F.O. termination

Ethernet interface – F.O.

Number of ports	1x / 2x 100Base-FX
Cable types according to IEEE 802.3	• Multimode fibre, 1300 nm; 50 / 125 µm or 62.5 / 125 µm • Singlemode fibre, 1300 nm; 9 µm
Data rate	100 Mbit/s
Maximum cable length	• 2000 m (Multimode) • 15 km (Singlemode)
Terminating method	SC-D female / ST female
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing
Wave length	1300 nm
Transceive power TX max. (dynamic)	• -14 dBm (50 / 125 µm) • -14 dBm (62.5 / 125 µm)
Transmission power TX min.	• -23.5 dBm (50 / 125 µm) • -20 dBm (62.5 / 125 µm)
Receive power RX typical (dynamic)	• -33.9 dBm (window) • -35.2 dBm (centre)
Receive power RX max. (dynamic)	-14 dBm
Signal detection (dynamic)	-33 dBm
Topology	Line, Star or mixed



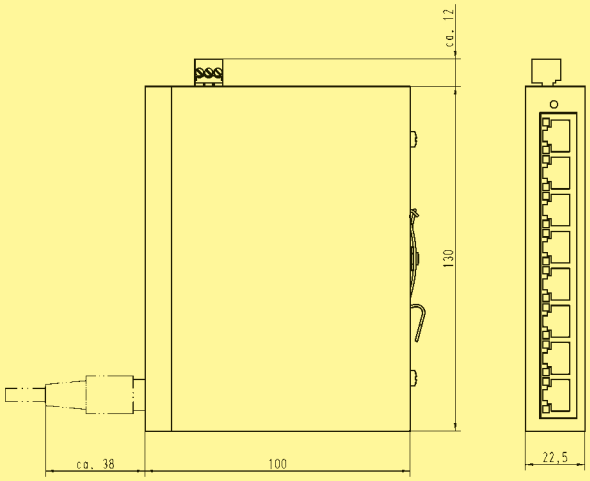
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3080-A

8-port Ethernet switch for vertical installation in control cabinets

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 150 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3080-A Ethernet switch with 8 ports RJ45	20 76 108 3000		

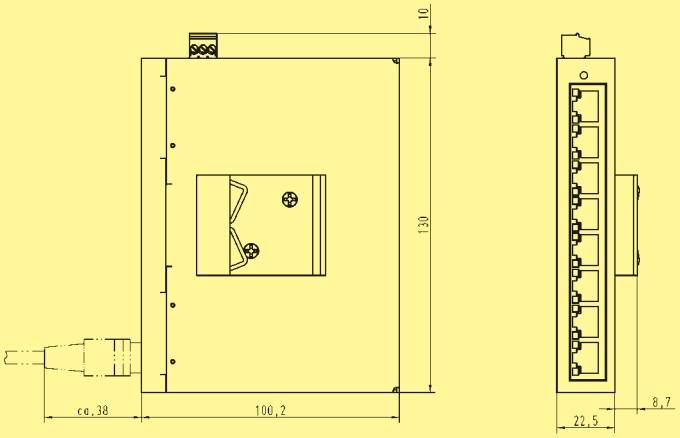
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3080-A1

8-port Ethernet switch for flat installation in control cabinets

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 150 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 23 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3080-A1 Ethernet switch with 8 ports RJ45	20 76 108 3001		

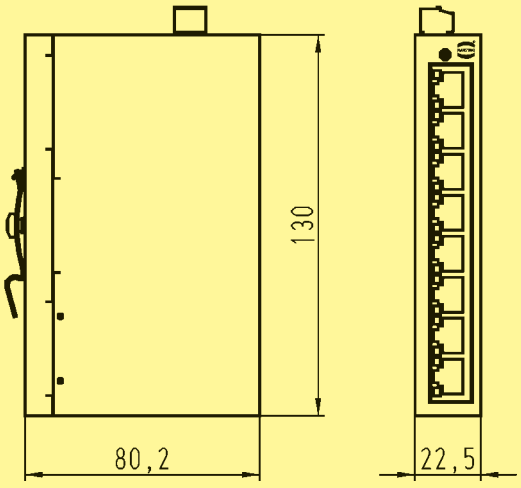
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3080-A2

8-port Ethernet switch for vertical installation
in control cabinets; low installation depth

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 150 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 80 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3080-A2 Ethernet switch with 8 ports RJ45	20 76 108 3002		

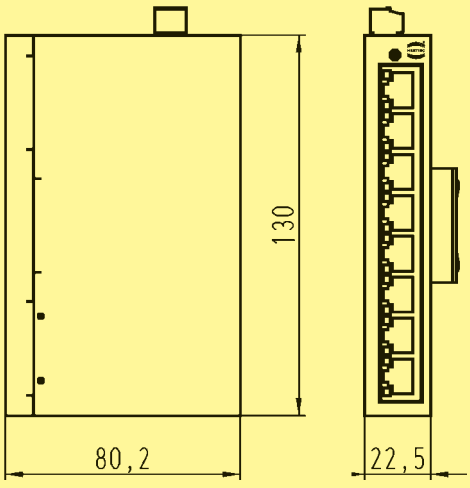
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3080-A3

8-port Ethernet switch for flat installation in control cabinets

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 150 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 23 x 80 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3080-A3 Ethernet switch with 8 ports RJ45	20 76 108 3003		

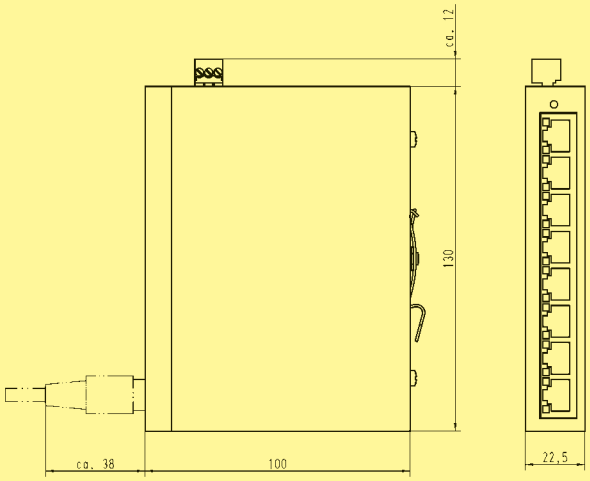
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3080-A4

8-port Ethernet switch for vertical installation
in control cabinets, with extended temperature range

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 30 V DC
Input current	approx. 150 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3080-A4 Ethernet switch with 8 ports RJ45	20 76 108 3004		

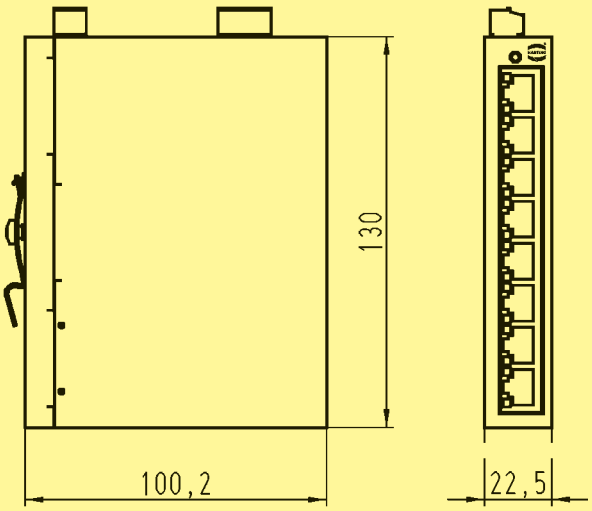
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3080-A5

8-port Ethernet switch for vertical installation
in control cabinets, including redundant power supply & link monitoring

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 5-pole pluggable contact (24 V; GND; PE); redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 170 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3080-A5 Ethernet switch with 8 ports RJ45	20 76 108 3005		

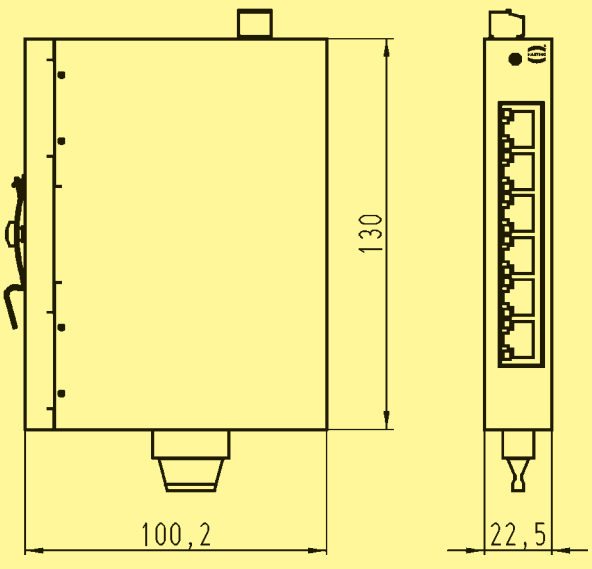
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3061-AD

7-port Ethernet switch for vertical installation
in control cabinets including 1 F.O. port (SC, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 200 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3061-AD Ethernet switch with 6 ports RJ45 1 port F.O.	20 76 107 3100		

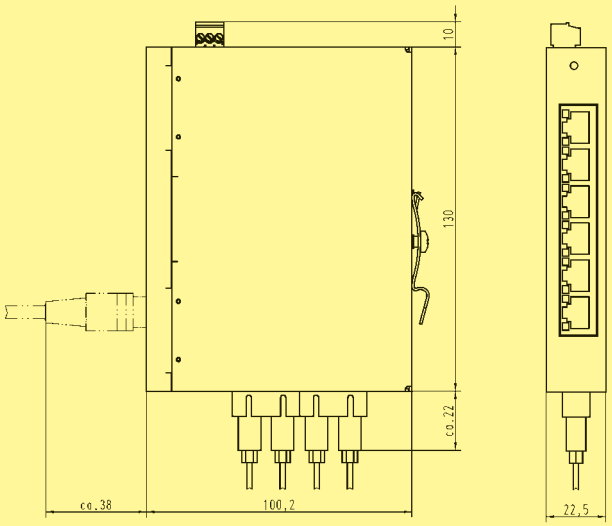
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3062-AD

8-port Ethernet switch for vertical installation
in control cabinets including 2 F.O. ports (SC, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	max. 240 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

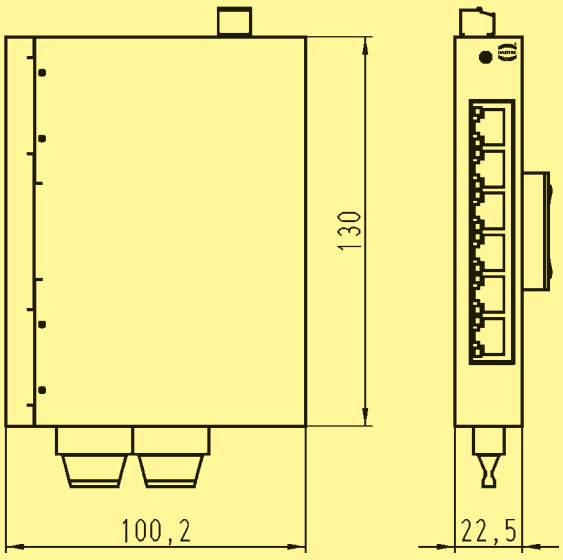
Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3062-AD Ethernet switch with 6 ports RJ45 2 ports F.O.	20 76 108 3100		

Ethernet Switch
HARTING eCon 3062-AD1

8-port Ethernet switch for flat installation
in control cabinets including 2 F.O. ports (SC, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 240 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 23 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3062-AD1 Ethernet switch with 6 ports RJ45 2 ports F.O.	20 76 108 3101		

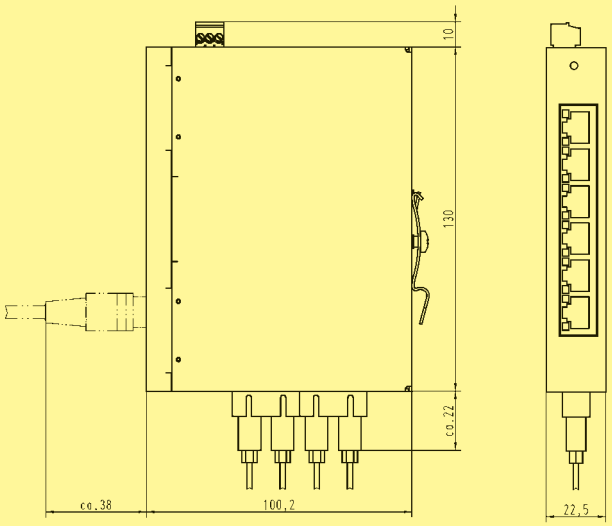
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3062-AD2

8-port Ethernet switch including 2 F.O. ports (SC, SM); extended temperature range

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 240 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3062-AD2 Ethernet switch with 6 ports RJ45 2 ports F.O.	20 76 108 3102		

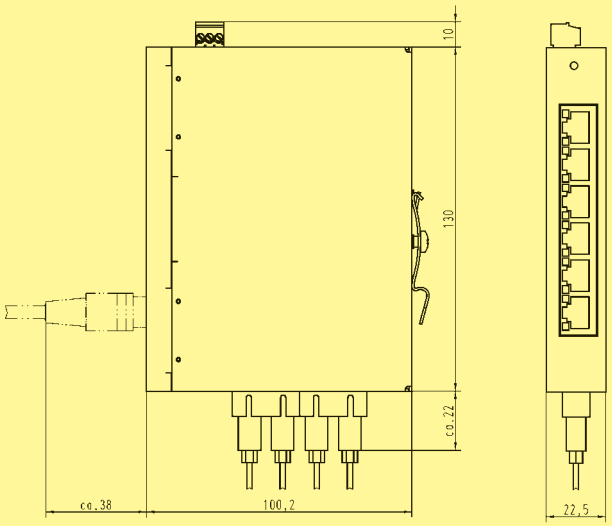
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3062-AF

8-port Ethernet switch for vertical installation
in control cabinets including 2 F.O. ports (SC, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female Singlemode fibre, 1300 nm; 9 µm
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 240 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3062-AF Ethernet switch with 6 ports RJ45 2 ports F.O.	20 76 108 3103		

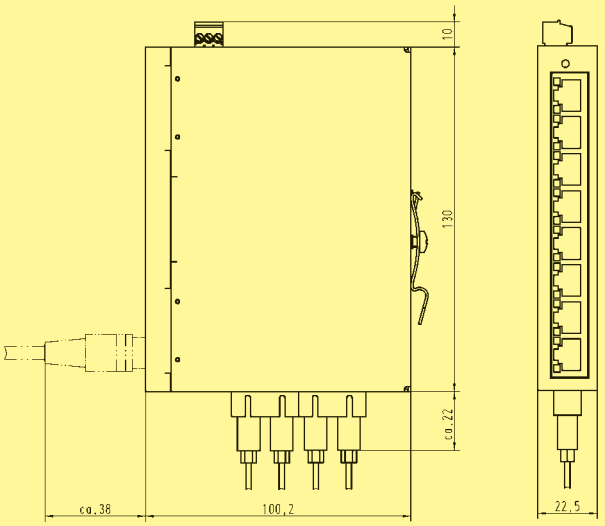
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3082-AD

10-port Ethernet switch for vertical installation
in control cabinets including 2 F.O. ports (SC, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 280 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

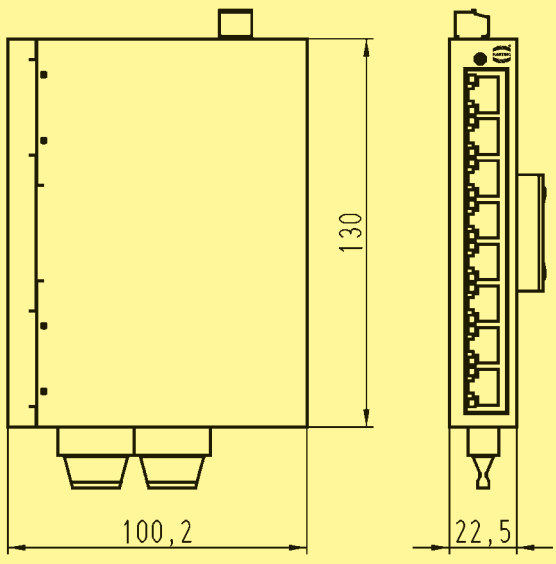
Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3082-AD Ethernet switch with 8 ports RJ45 2 ports F.O.	20 76 110 3100		

Ethernet Switch
HARTING eCon 3082-AD1

10-port Ethernet switch for flat installation
in control cabinets including 2 F.O. ports (SC, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 280 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 23 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3082-AD1 Ethernet switch with 8 ports RJ45 2 ports F.O.	20 76 110 3101		

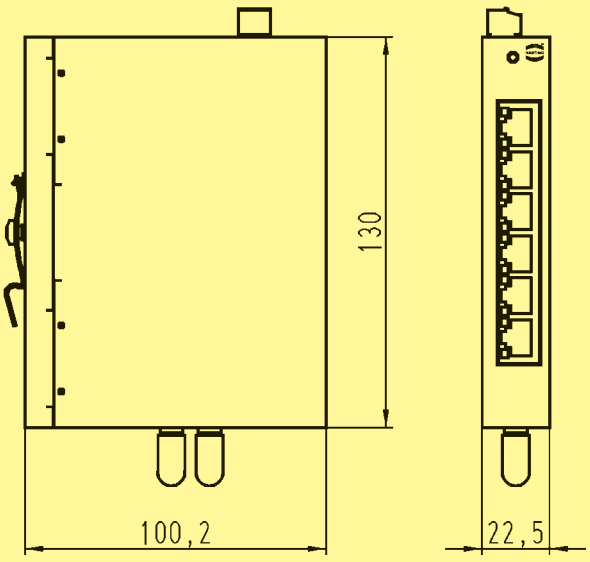
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3061-AE

7-port Ethernet switch for vertical installation
in control cabinets including 1 F.O. port (ST, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 200 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3061-AE Ethernet switch with 6 ports RJ45 1 port F.O.	20 76 107 3200		

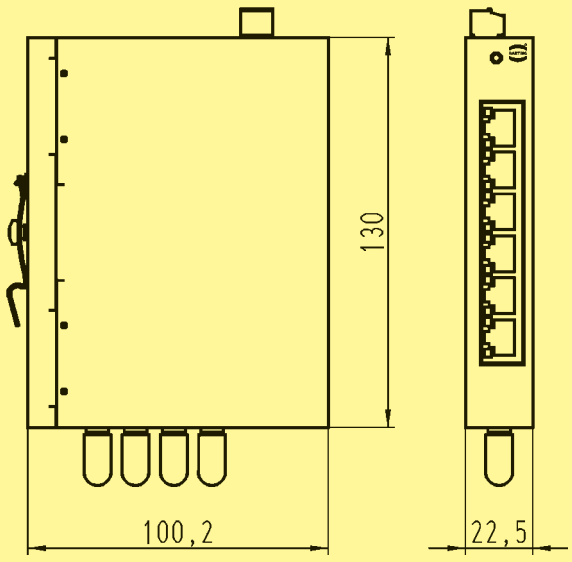
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3062-AE

8-port Ethernet switch for vertical installation
in control cabinets including 2 F.O. ports (ST, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 240 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3062-AE Ethernet switch with 6 ports RJ45 2 ports F.O.	20 76 108 3200		

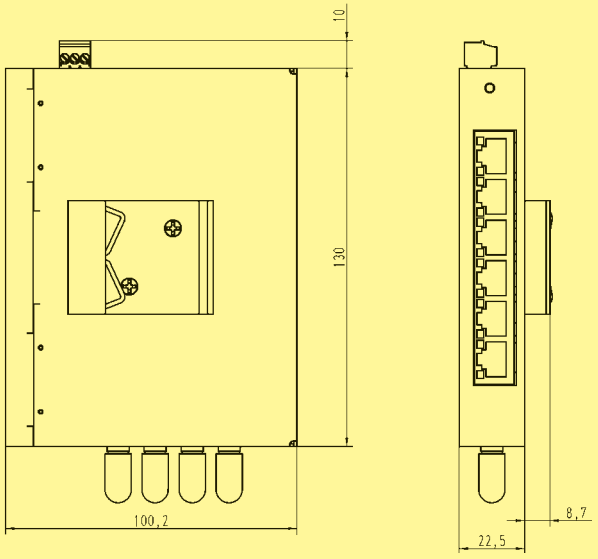
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3062-AE1

8-port Ethernet switch for flat installation
in control cabinets including 2 F.O. ports (ST, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 240 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 23 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3062-AE1 Ethernet switch with 6 ports RJ45 2 ports F.O.	20 76 108 3201		

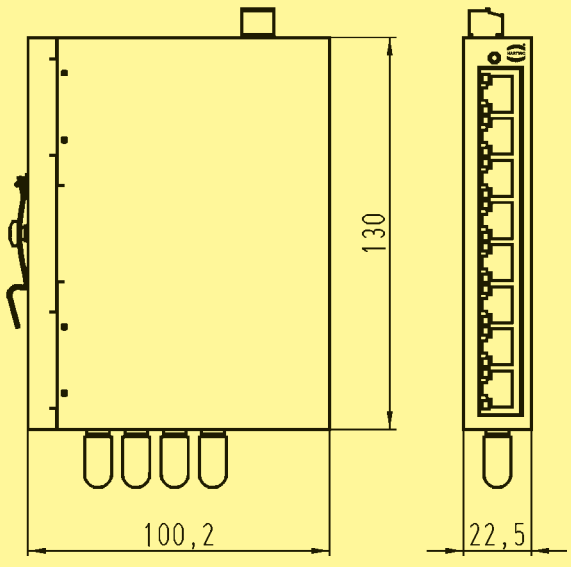
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3082-AE

10-port Ethernet switch for vertical installation
in control cabinets including 2 F.O. ports (ST, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 280 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3082-AE Ethernet switch with 8 ports RJ45 2 ports F.O.	20 76 110 3200		

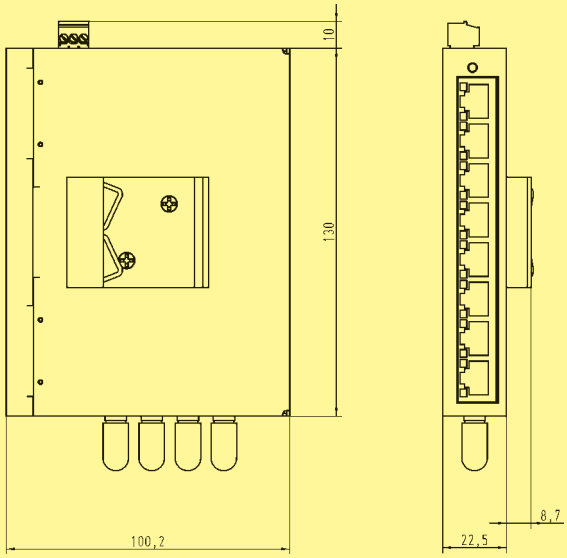
HARTING eCon 3000

Ethernet Switch
HARTING eCon 3082-AE1

10-port Ethernet switch for flat installation
in control cabinets including 2 F.O. ports (ST, MM)

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; GND; PE)
Permissible range	12 V to 48 V DC
Input current	approx. 280 mA (at 24 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 23 x 100 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 10 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 3082-AE1 Ethernet switch with 8 ports RJ45 2 ports F.O.	20 76 110 3201		

Ethernet Switch
HARTING eCon 9000
8-port Ethernet switch, unmanaged, for installation in a 19'' rack

General Description

The Fast Ethernet switches of the product family HARTING eCon 9000 are recommended for use in the widest range of industrial applications and support both Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s). The product family enables the connection of up to 7 network devices over shielded Twisted Pair cables. An additional end-device can be connected via the DIN male connector.

The eCon 9000 Ethernet switch family, with its integrated LEDs on each port, supports fast and easy network diagnosis. The eCon Ethernet switch operates as an unmanaged switch in Store and Forward Switching mode and supports Auto-crossing, Auto-negotiation and Auto-polarity.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode, non-blocking
- Auto-crossing, Auto-negotiation, Auto-polarity
- Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power)
- Pluggable in 19“ racks

Advantages

- Robust metal housing
- EMC, temperature range and mechanical stability meet the highest demands
- PROFINET compatible

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems
- Railway applications

Technical characteristics

Ethernet interface

Number of ports	8x 10/100Base-TX
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s (RJ45)
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Terminating method, front side	M12, D-coding
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF
Topology	Line, Star or mixed

Power supply

Input voltage	24 V DC
Terminating method	DIN frame connector, Type F
Diagnostics (via LED)	Power supply

Design features

Housing material	Aluminium, anodised
Dimensions (W x H x D)	50.5 mm (10 HP) x 128.4 mm (3 U) x 173.5 mm
Degree of protection acc. to DIN 60 529	IP 30
Mounting	19“ rack, 3 U
Weight	approx. 0.6 kg

Environmental conditions

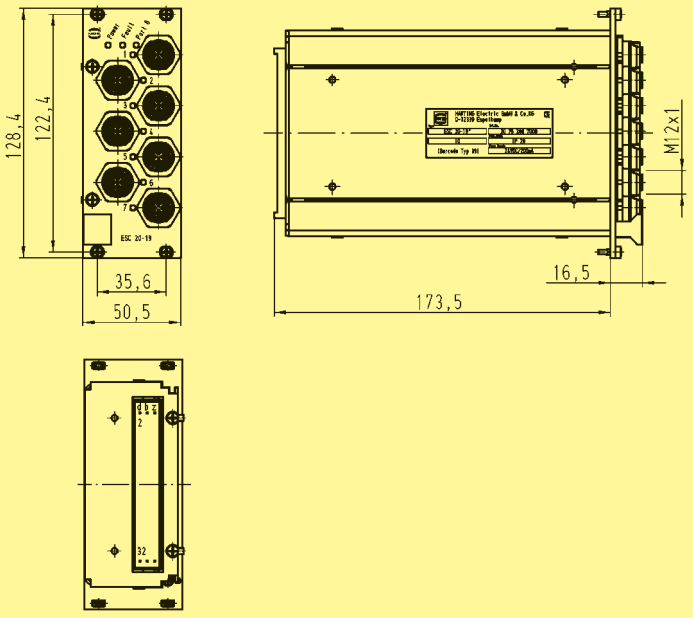
Operating temperature	– 20 °C to + 75 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

Ethernet Switch
HARTING eCon 9080-B

8-port Ethernet switch for installation in a 19'' rack

unmanaged	IP 20	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / 7x front sided M12, D-coding 1x on the back plane
Input voltage / Termination	24 V DC / DIN frame connector, Type F
Permissible range	18 V to 48 V DC
Input current	approx. 125 mA (at 24 V DC)
Housing material	Aluminium, anodised
Dimensions (W x H x D)	50.5 mm (10 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.6 kg
Operating temperature	– 20 °C to + 75 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 9080-B Ethernet switch 7 ports M12, D-coding 1 port on the back plane	20 76 208 7000		

HARTING eCon 6000 – Introduction and features

Ethernet Switch
HARTING eCon 6000

In-between Ethernet switches, unmanaged,
for use in harsh industrial environments

General Description

The In-Between Fast Ethernet switches of the product family HARTING eCon 6000 are an integrated solution, which unites Ethernet switch and panel feed-through into one device. The compact housing is mounted directly onto the outside panel of a control cabinet or terminal box. Up to six IP 20 ports are available within the cabinet, according to switch type, for the connection of Ethernet clients. For connections outside the control cabinet, the eCon 6000 offers two IP 65 / IP 67 Ethernet ports.

The Ethernet switch supports both line- and star-topology networks, as well as mixed forms, which beginning at a switch cabinet, link further Ethernet clients directly into a machine or plant. The LEDs integrated into the switch support network diagnostics even with the switch cabinet closed. Additionally, fault signals can be sent via the alarm contact directly to higher level controllers or to a control room.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode, non-blocking
- 5 / 8 ports unmanaged
- Auto-crossing, Auto-negotiation, Auto-polarity
- Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power, Error)
- Up to 4 levels of priority
- Alarm signalling contact
- Standard or hybrid cabling

Advantages

- High degree of protection IP 65 / IP 67
- Robust metal housing
- Can be used directly in industrial environments
- Active panel feed-through
- EMC, temperature range and mechanical stability meet the highest demands
- PROFINET compatible

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems

Technical characteristics

Ethernet interface

Number of ports	5 (2 x IP 65 / IP 67 – 3 x IP 20) 8 (2 x IP 65 / IP 67 – 6 x IP 20)
Cable types	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s / Auto-crossing, Auto-negotiation, Auto-polarity
Maximum cable length	100 m (with Category 5 cable acc. to EN 50 173)
Termination device-side	On the outside of control cabinet (female): 2 x M12, D-coding 2 x Han® 3 A RJ45 2 x Han® 3 A Hybrid On the inside of control cabinet: 3x / 6x RJ45
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Yellow flashing
Topology	Line, Star or mixed

Power supply

Input voltage	24 V DC (18 to 30 V DC)	
Termination device-side	On the inside of control cabinet:	5-pole screw terminal, pluggable for redundant power supply additional 6-pole screw terminal, plug-in, for Hybrid supply (eCon 6080-HA only)
Diagnostics (via LED)	Power supply	

Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A (on the inside of control cabinet) 3-pole pluggable screw contact	
Diagnostics (via LED)	Error – Red	

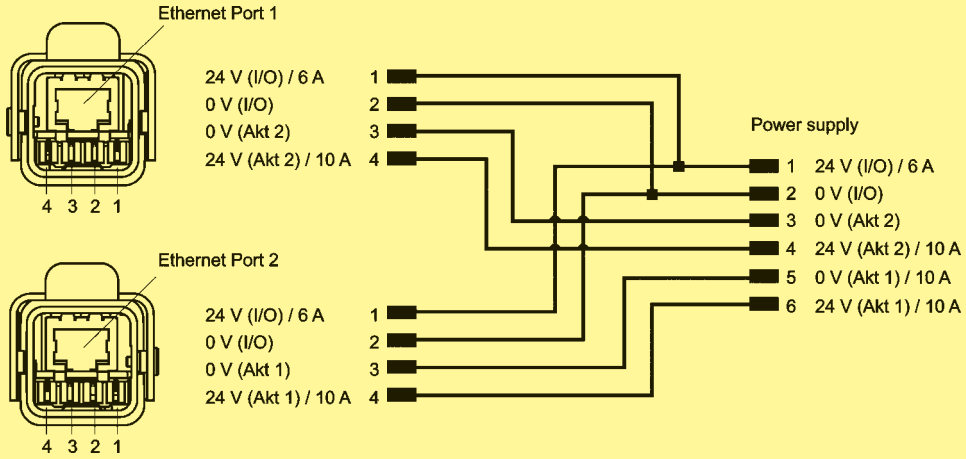
Design features

Housing material	Aluminium die-cast	
Dimensions (W x H x D)	105 x 40 x 105 mm (without connectors)	
Degree of protection acc. to DIN 60 529	IP 65 / IP 67 IP 20	On the outside of control cabinet connector On the inside of control cabinet
Mounting	Directly onto control cabinets or terminal boxes	
Weight	approx. 0.8 kg	

Environmental conditions

Operating temperature	– 40 °C to + 70 °C 0 °C to + 55 °C (Hybrid)
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

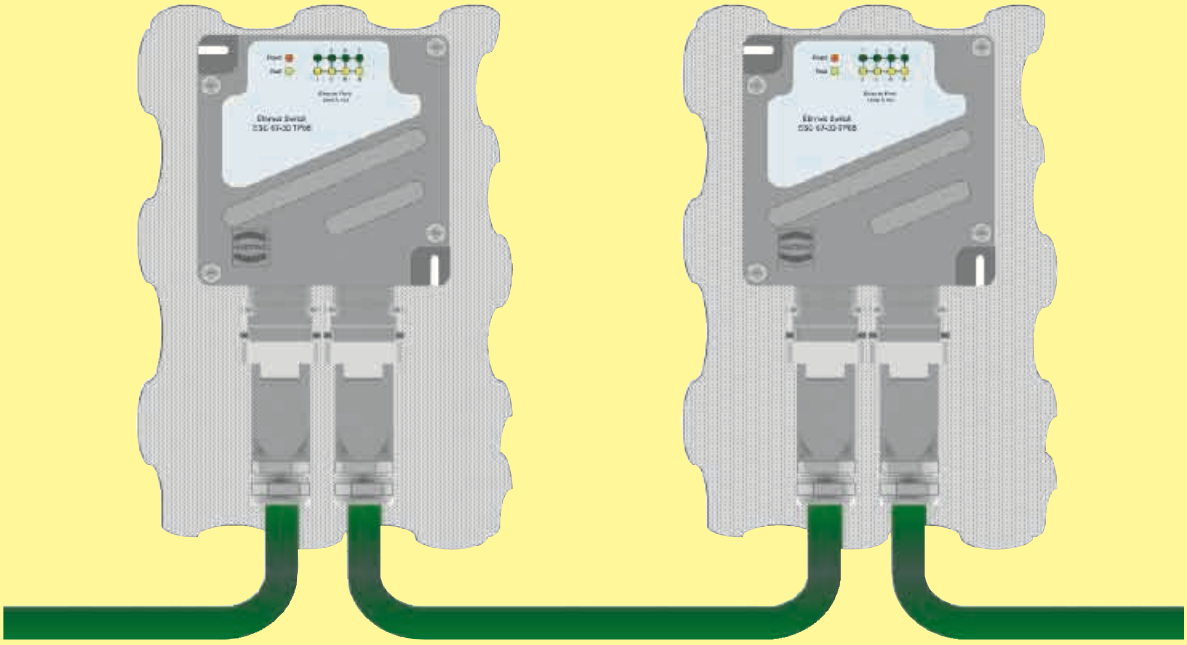
HARTING eCon 6080-HA – Hybrid connector - Contact assignment 24 V DC



HARTING eCon 6080-HA – Power supply, alternative 1

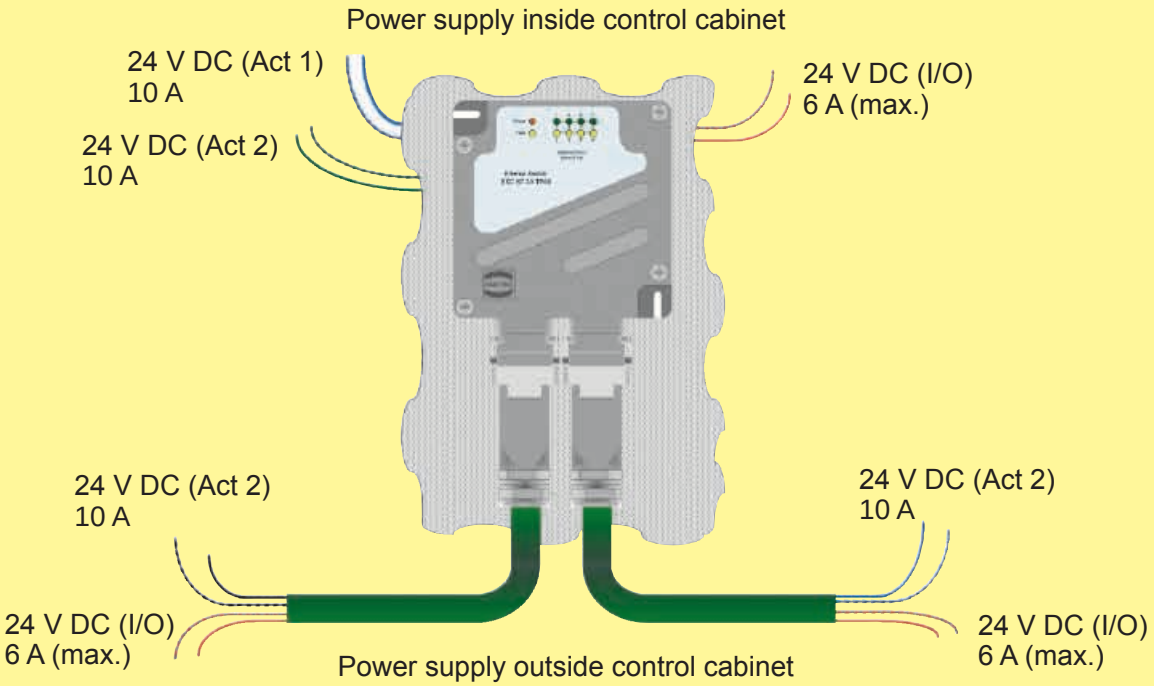
Voltage supply and distribution are made by both hybrid ports.

A feed over the post plug connector in the inside of the control cabinet is not implemented.



HARTING eCon 6080-HA – Power supply, alternative 2

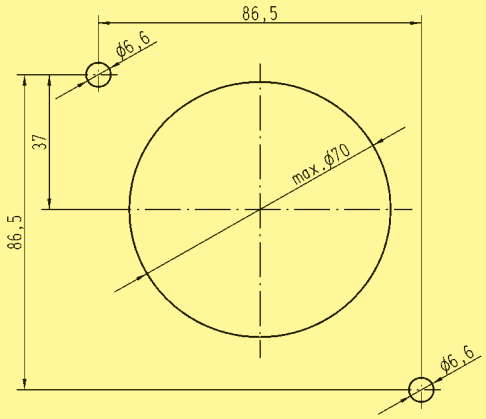
The feed is made by the post plug connector on the control cabinet inside of the Ethernet switch, the distribution by means of the hybrid plug connectors.



Accessories HARTING eCon 6000

Identification	Part number
Mounting plate on the inside of control cabinet	20 80 000 0004

Mounting information



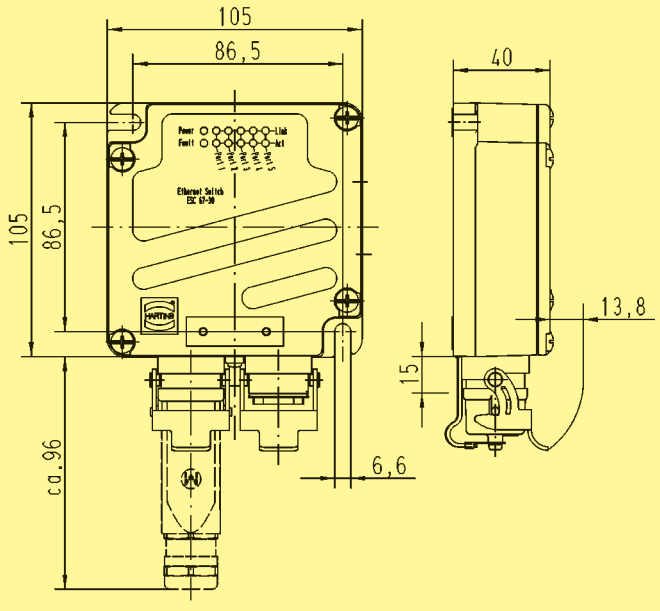
HARTING eCon 6000

Ethernet Switch
HARTING eCon 6050-A

5-port In-between Ethernet switch for networking of control cabinets in line topology

unmanaged	IP 67 / IP 20	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	5x 10/100Base-TX / 2x Han® 3 A RJ45 (IP 65 / IP 67)* 3x RJ45 (Twisted Pair) (IP 20)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 100 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A (on the inside of control cabinet) 3-pole pluggable screw contact
Housing material	Aluminium die-cast
Dimensions (W x H x D)	105 x 40 x 105 mm (without connectors)
Weight	approx. 0.8 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 6050-A Fast Ethernet switch 5 ports	20 73 305 3921		

* Order insert fixing screw 09 20 000 9918 separately

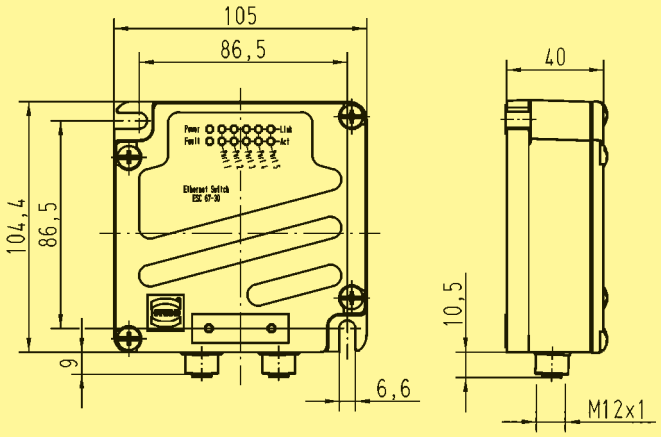
HARTING eCon 6000

Ethernet Switch
HARTING eCon 6050-BA

5-port In-between Ethernet switch
for industrial line topologies (M12 system cabling)

unmanaged	IP 67 / IP 20	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	5x 10/100Base-TX / 2x M12, D-coding (IP 65 / IP 67) 3x RJ45 (Twisted Pair, IP 20)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 100 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A (on the inside of control cabinet) 3-pole pluggable screw contact
Housing material	Aluminium die-cast
Dimensions (W x H x D)	105 x 40 x 105 mm (without connectors)
Weight	approx. 0.8 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 6050-BA Fast Ethernet switch 5 ports	20 73 305 3941		

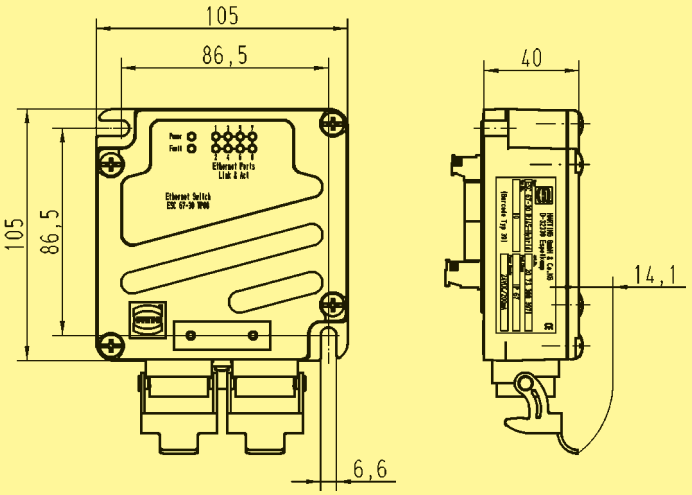
HARTING eCon 6000

Ethernet Switch
HARTING eCon 6080-HA

In-between Ethernet switch for hybrid line topologies

unmanaged	IP 65 / IP 20	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / 2x Han® 3 A RJ45 (IP 65 / IP 67)* 6x RJ45 (Twisted Pair, IP 20)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply 6-pole screw terminal, pluggable, for hybrid supply
Permissible range	12 V to 30 V DC
Input current	approx. 150 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A (control cabinet) 3-pole pluggable screw contact
Housing material	Aluminium die-cast
Dimensions (W x H x D)	105 x 40 x 105 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 55 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 6080-HA Ethernet switch Hybrid 8 ports	20 73 308 3972		

* Order insert fixing screw 09 20 000 9918 separately

Ethernet Switch
HARTING eCon 7000

Ethernet switches, unmanaged, for use in harsh industrial environments

General Description

The Fast Ethernet switches of the product family HARTING eCon 7000 allow, according to type, the connection of up to 10 end units in industrial networks.

Protection class, temperature range and mechanical stability meet the highest demands. These Fast Ethernet switches can therefore be used directly in industrial environments.

Through their use, a reduction of cabling costs in the construction of industrial networks will be achieved. The Ethernet switches facilitate any kind of network configuration. All connections are plugged, which ensures that assembly and disassembly is fast and reliable.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode, non-blocking
- 5 / 10 ports unmanaged
- Auto-crossing, Auto-negotiation, Auto-polarity
- Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power, Error)

Advantages

- High degree of protection IP 65 / IP 67
- Robust metal housing
- Can be used directly in industrial environments
- EMC, temperature range and mechanical stability meet the highest demands
- PROFINET compatible

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems
- Railway applications

Technical characteristics

Ethernet interface

Number of ports	5x, 10x 10/100Base-TX
Cable types	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s
Maximum cable length	100 m (with Category 5 cable acc. to EN 50 173)
Termination device-side	Han® 3 A RJ45 (female) M12, D-coding (female)
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Yellow flashing
Topology	Line, Star or mixed

Power supply

Input voltage	24 V DC (16.8 to 30 V DC)
Termination device-side	Han® 4 A (male), redundant power supply (including fixing screw 09 20 000 9918, to maintain IP 67), M12, A-coding (male)
Diagnostic (via LED)	Power supply – Green

Alarm signalling contact (eCon 7100 only)

	Change-over contact, potential-free, 24 V DC / 0.5 A
Termination device-side	Han® 3 A (male) M12, D-coding (male)
Diagnostic (via LED)	Error – Red

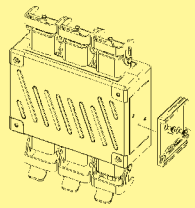
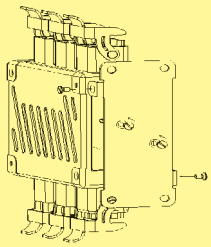
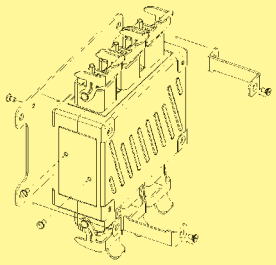
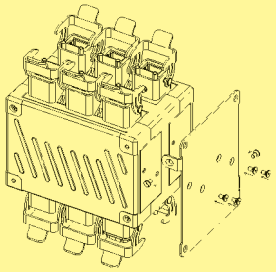
Design features

	eCon 7050	eCon 7100
Housing material	Zinc die-cast	Zinc die-cast
Dimensions (W x H x D)	45 x 120 x 87 mm	90 x 120 x 87 mm
Degree of protection acc. to DIN 60 529	IP 65 / IP 67	IP 65 / IP 67
Mounting	35 mm top-hat rail acc. to EN 60 715, Panel mounting, vertical assembly, Panel mounting, flat assembly	Panel mounting, vertical assembly
Weight	approx. 0.8 kg	approx. 1.4 kg

Environmental conditions

Operating temperature	– 40 °C to + 70 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

Identification	Part number Power supply	Alarm signalling contact (eCon 7100 only)
Hood metal, straight, metric	19 20 003 1440[1)]	19 20 003 1440
Protection cover Han® 3 A	09 20 003 5426	09 20 003 5426
Han® 4 A female insert	09 20 004 2711	
Han® 3 A female insert		09 20 003 2711
Cable gland metal IP 65, metric M20, cable diameter: 5 - 9 mm	19 00 000 5080	
HARAX® M12-L circular connector A-coding	21 03 212 2305	

Identification	Part number	Drawing	Dimensions in mm
Set for assembly on standard rail according to DIN EN 60 715	20 80 000 0003		
Set for panel mounting vertical assembly	20 80 010 0001		
Set for panel mounting flat	20 80 024 0002		
Set for panel mounting eCon 7100 vertical assembly	20 80 010 0002		

[1)] Order insert fixing screw 09 20 000 9918 separately

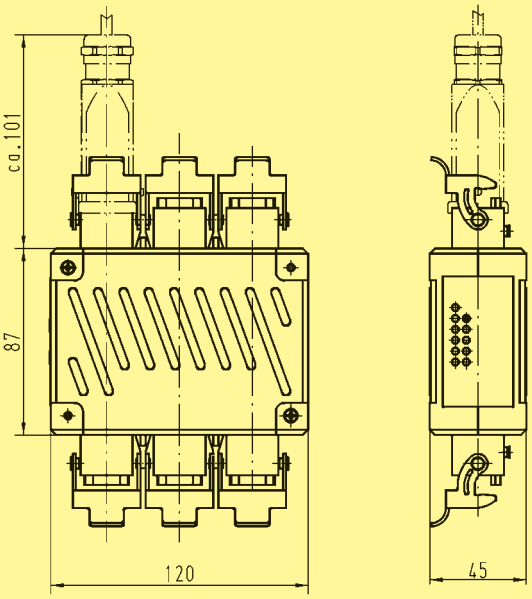
HARTING eCon 7000

Ethernet Switch
HARTING eCon 7050-A

5-port Ethernet switch for use in harsh industrial environments

unmanaged	IP 67	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	5x 10/100Base-TX / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 V DC / Han® 4 A (male)*, redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	approx. 110 mA (at 24 V DC)
Housing material	Zinc die-cast
Dimensions (W x H x D)	45 x 120 x 87 mm (without connectors)
Weight	approx. 0.8 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 7050-A Ethernet switch, unmanaged 5 ports Han® 3 A RJ45	20 70 305 3921		

* Order insert fixing screw 09 20 000 9918 separately

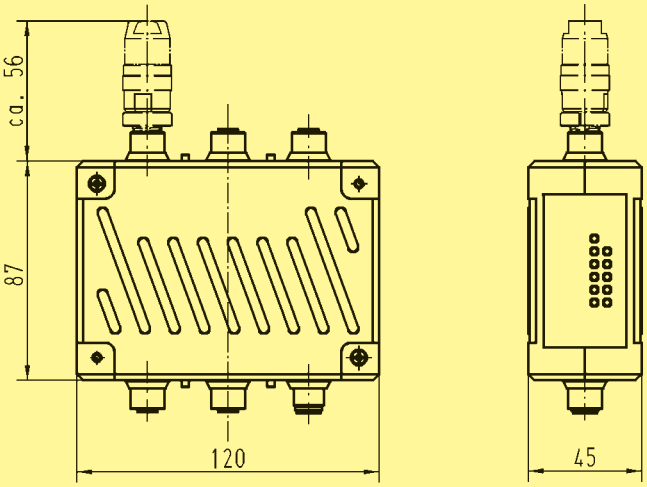
HARTING eCon 7000

Ethernet Switch
HARTING eCon 7050-B

5-port Ethernet switch for industrial Ethernet networks
with M12 system cabling

unmanaged	IP 67	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	5x 10/100Base-TX / M12, D-coding (female)
Input voltage / Termination	24 V DC / M12, A-coding (male), redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	approx. 110 mA (at 24 V DC)
Housing material	Zinc die-cast
Dimensions (W x H x D)	45 x 120 x 87 mm (without connectors)
Weight	approx. 0.8 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 7050-B Ethernet switch, unmanaged 5 ports M12, D-coding	20 70 305 3941		

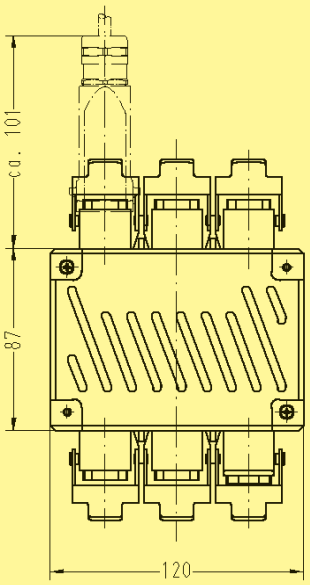
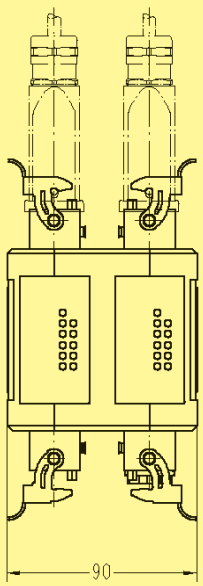
HARTING eCon 7000

Ethernet Switch
HARTING eCon 7100-A

10-port Ethernet switch for use
in harsh industrial environments

unmanaged	IP 65	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	10x 10/100Base-TX / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 V DC / Han® 4 A (male)*, redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	approx. 180 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A Han® 3 A (male)*
Housing material	Zinc die-cast
Dimensions (W x H x D)	90 x 120 x 87 mm (without connectors)
Weight	approx. 1.4 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 7100-A Ethernet switch, unmanaged 10 ports Han® 3 A RJ45	20 70 310 3921		

* Order insert fixing screw 09 20 000 9918 separately

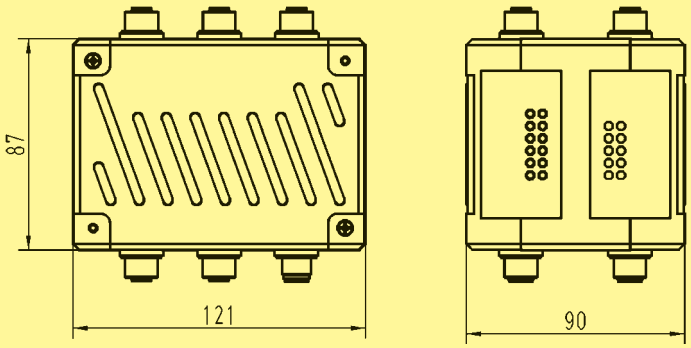
HARTING eCon 7000

Ethernet Switch
HARTING eCon 7100-B

10-port Ethernet switch for industrial Ethernet networks
with M12 system cabling

unmanaged	IP 67	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	10x 10/100Base-TX / M12, D-coding (female)
Input voltage / Termination	24 V DC / M12, A-coding (male), redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	approx. 180 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A M12, D-coding (male)
Housing material	Zinc die-cast
Dimensions (W x H x D)	90 x 120 x 87 mm (without connectors)
Weight	approx. 1.4 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING eCon 7100-B Ethernet switch, unmanaged 10 ports M12, D-coding	20 70 310 3941		

Notes

List of contents Page

sCon 3000

sCon 9000

Introduction

For the user, HARTING's novel and innovative solutions open up new, more convenient and extensive options for configuring unmanaged Ethernet switches. The solutions available to date offered only very limited or basic options for making alterations to different settings on an Ethernet switch.

The user made changes to the settings or the configuration via the DIP switches on the Ethernet switch. The extensive possibilities for applications were physically restricted by the enormous space requirements of the mechanical solution.

Now for the first time, HARTING's sCon solution makes it possible for the user to realise more configurations than have been possible to date.

Ease of handling and simple operation have been designed in to meet real-life application requirements. Simple and fast configuration is what this solution aims to achieve.

All sCon Ethernet switches can be configured via a USB connection cable.

At first sight, sCon Ethernet switches do not differ from the Ethernet switches available to date. However, the possibilities that sCon has to offer become more than apparent to the user when he connects the Ethernet switch via the front-side USB socket to a PC, laptop or hand-held PC.

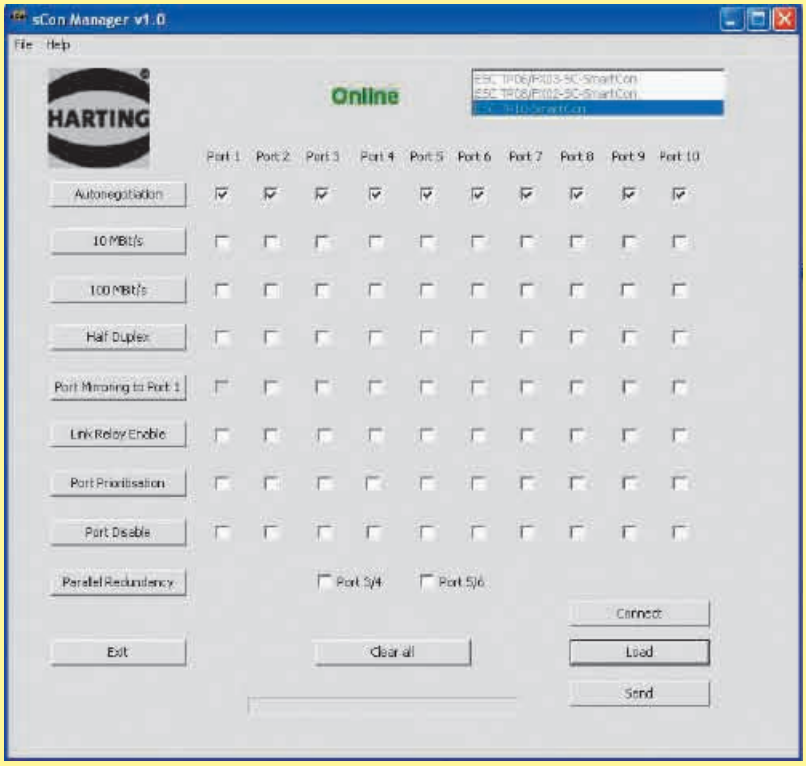


Figure 1 *The Start-up menu*

Once the sCon Ethernet switch has been connected to a PC, it can be accessed on-screen in much the same manner as a commercially available USB stick (Figure 1: The Start-up menu).

The user only has to copy the sCon software in advance onto the PC. No administrator rights are required. The Ethernet switch does not have to be connected to a power supply for configuration purposes. That means that the configuration procedure can take place at the user's location of choice: in the office, workshop or production facility. The sCon Ethernet switch automatically detects which power supply is connected: mains supply or power supply via the USB port. Please note that it is not possible to operate the Ethernet switch purely via the USB port. For normal industrial operations, the power must be supplied via one of the redundant inputs.

Introduction

Making configuration settings by means of DIP switches may appear to be uncomplicated. However, accidentally making an alteration to the configuration can happen more quickly than one would think possible, and in so doing make considerable changes to the previously set procedures. The sCon family prevents these inadvertent alterations to the configuration. No alteration can be made to the configuration without an USB connection and the software.

Each configuration can be archived and the backups retrieved for future projects. By making backups of the configuration, all settings can be conveniently stored in case servicing is necessary.

Archived configurations can be imported and printed out when convenient. These extensive options in sCon ensure that data security enjoys the significance it deserves.

The switch configuration is transmitted only when a new configuration is uploaded via the corresponding 'Send' button. This means that until the data has actually been uploaded, it is still possible to read-in the 'old' data from the sCon Ethernet switch via the Refresh option. This means it is easily possible to reverse any inadvertent activation in the corresponding menu.

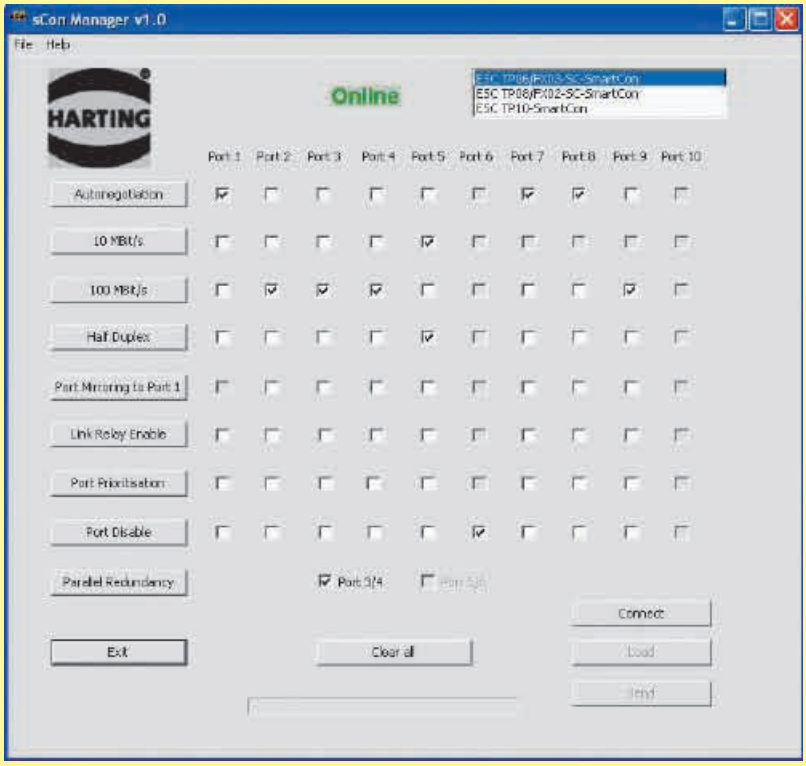


Figure 2 *Example of a configuration*

Once configured, the Ethernet switch can be utilised immediately. The configuration remains stored in the Ethernet switch after the USB cable is removed.

Meeting international standards, the USB port described is recognised as state-of-the-art technology. The standardised possibility for worldwide utilisation with all notebooks, PCs and Palmtops (revisions 1.0, 1.1 and 2.0) mean that this technology is suitable for universal usage.

The intuitive, but extensive options setting via the relevant buttons and the various options offered by sCon extend the range of applications for unmanaged Ethernet switches. With sCon, the gap between unmanaged and manageable switches is getting smaller.

It is true that sCon is a solution for unmanaged Ethernet switches; however, it comes very close to managed Ethernet switch functionality.

HARTING sCon 3000 – Introduction and features

Ethernet Switch
HARTING sCon 3000
Ethernet switch family, unmanaged,
for mounting onto top-hat mounting rail
in control cabinets including sCon functions

General Description

The Fast Ethernet switches of the product family HARTING sCon 3000 can be configured via USB port for special or more performance-oriented industrial usages. There are almost no limits to the different possibilities.

Activation of parallel redundancy or port prioritisation will be clearly increased the availability and reliabilty of data communications through the sCon 3000.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode, non-blocking, unmanaged
- Auto-crossing, Auto-negotiation, Auto-polarity
- Diagnostics LEDs (Link status, Act, Data transmission rate, Power, Error)
- Following settings are available via USB port:
  - Alarm signalling contact
  - Auto-negotiation
  - 10/100/1000 Mbit/s
  - Full/Half Duplex
  - Parallel redundancy
  - Port enable / disable
  - Port priority
  - Port mirroring

Advantages

- Individually configurable via USB port
- Metal housing
- EMC, temperature range and mechanical stability meet the toughest demands

Application fields

- Industrial automation
- Power distribution systems
- Automotive industry
- Mechanical engineering

Technical characteristics

Ethernet interface RJ45	
Number of ports	6x / 8x / 10x 10/100Base-TX, 2x 10/100/1000Base-TX
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s, 100 Mbit/s or 1000 Mbit/s (RJ45)
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Terminating method	RJ45 (Twisted Pair)
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF 1000 Mbit/s: Green
Topology	Line, Star or mixed
Power supply	
Input voltage	24 V DC (12 to 30 V DC)
Terminating method	5-pole screw terminal, pluggable for redundant power supply
Diagnostics (via LED)	Power supply
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Design features	
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Degree of protection acc. to DIN 60 529	IP 30
Mounting	• 35 mm top-hat rail acc. to EN 60 715 • Panel mounting, vertical assembly
Weight	approx. 0.6 kg
Environmental conditions	
Operating temperature	0 °C to + 70 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

Technical characteristics - F.O. termination

Ethernet interface – F.O.

Number of ports	1x / 2x / 3x 100Base-FX
Cable types according to IEEE 802.3	• Multimode fibre, 1300 nm; 50 / 125 µm or 62.5 / 125 µm • Singlemode fibre, 1300 nm; 9 µm
Data rate	100 Mbit/s
Maximum cable length	• 2000 m (Multimode) • 15 km (Singlemode)
Terminating method	SC-D female / ST female
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing
Wave length	1300 nm
Transceive power TX max. (dynamic)	• -14 dBm (50 / 125 µm) • -14 dBm (62.5 / 125 µm)
Transmission power TX min.	• -23.5 dBm (50 / 125 µm) • -20 dBm (62.5 / 125 µm)
Receive power RX typical (dynamic)	• -33.9 dBm (window) • -35.2 dBm (centre)
Receive power RX max. (dynamic)	-14 dBm
Signal detection (dynamic)	-33 dBm
Topology	Line, Star or mixed

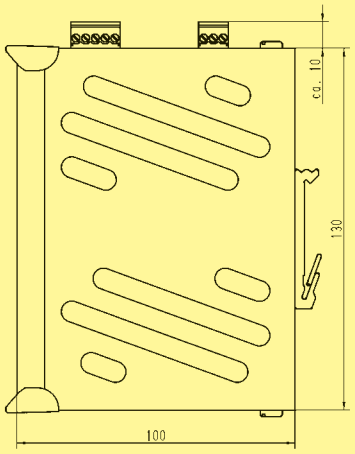
HARTING sCon 3000

Ethernet Switch
HARTING sCon 3100-A

10-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	10x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 170 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3100-A Ethernet switch with 10 ports RJ45 including Set for assembly on standard rail	20 76 110 1000		

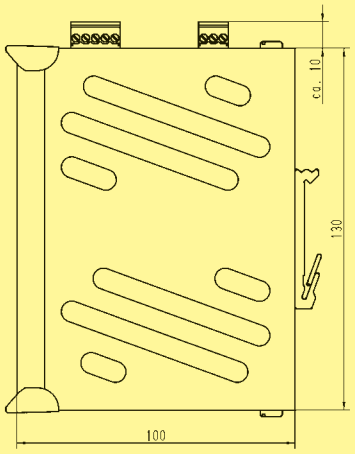
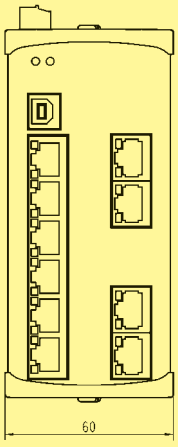
HARTING sCon 3000

Ethernet Switch
HARTING sCon 3100-AA

10-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 2 Gigabit ports and sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair) 2x 10/100/1000Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 250 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3100-AA Ethernet switch with 10 ports RJ45 including Set for assembly on standard rail	20 76 110 1001		

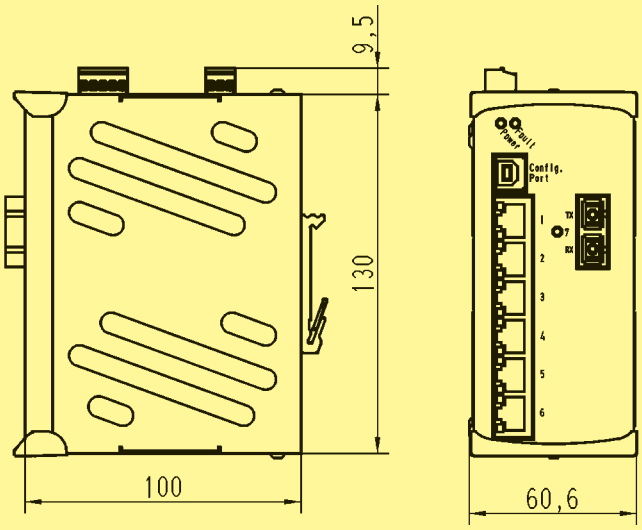
HARTING sCon 3000

Ethernet Switch
HARTING sCon 3061-AD

7-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 1 F.O. port (SC, MM) and sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100Base-FX / Multimode fibre, 1300 nm, 50/125 µm SC-D female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 240 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3061-AD Ethernet switch 6 ports RJ45 1 port SC including Set for assembly on standard rail	20 76 107 1100		

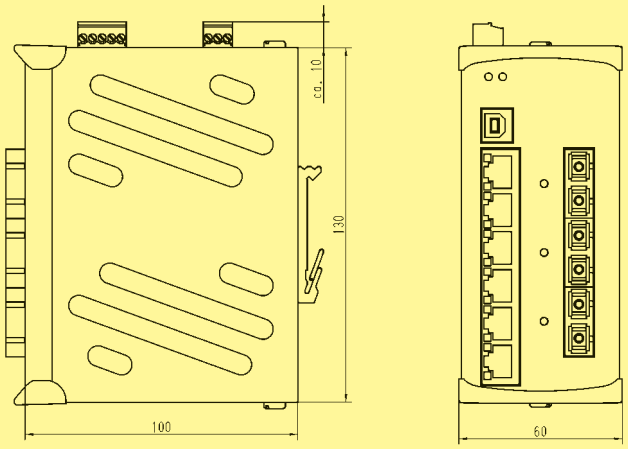
HARTING sCon 3000

Ethernet Switch
HARTING sCon 3063-AD

9-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 3 F.O. ports (SC, MM) and sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	3x 100Base-FX / Multimode fibre, 1300 nm, 50/125 µm SC-D female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 290 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

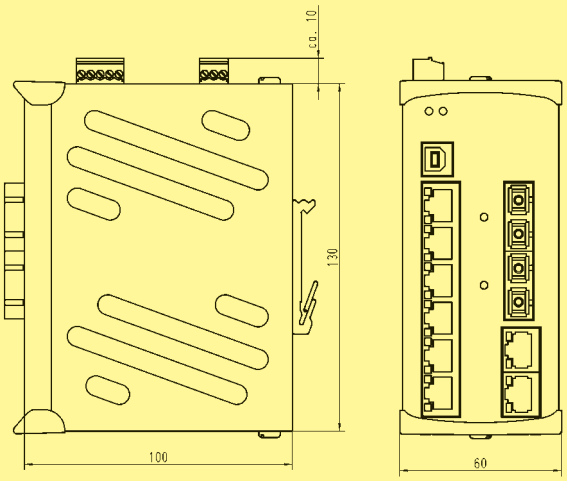
Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3063-AD Ethernet switch 6 ports RJ45 3 ports SC including Set for assembly on standard rail	20 76 109 1100		

Ethernet Switch
HARTING sCon 3082-AD

10-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 2 F.O. ports (SC, MM) and sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / Multimode fibre, 1300 nm, 50/125 µm SC-D female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 260 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3082-AD Ethernet switch 8 ports RJ45 2 ports SC including Set for assembly on standard rail	20 76 110 1100		

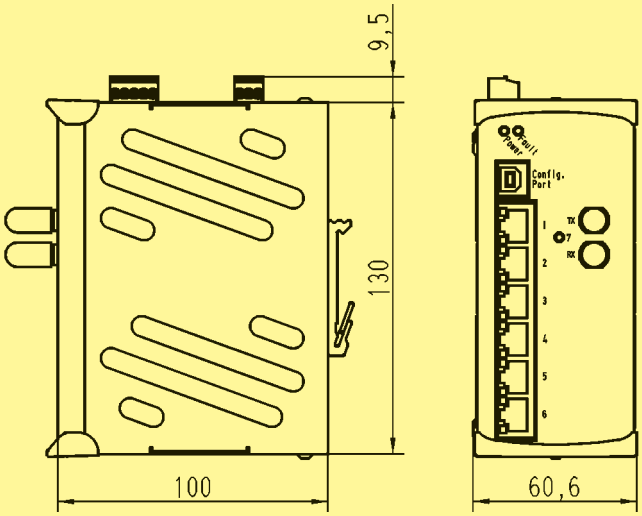
HARTING sCon 3000

Ethernet Switch
HARTING sCon 3061-AE

7-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 1 F.O. port (ST, MM) and sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100Base-FX / Multimode fibre, 1300 nm, 50/125 µm ST female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 240 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

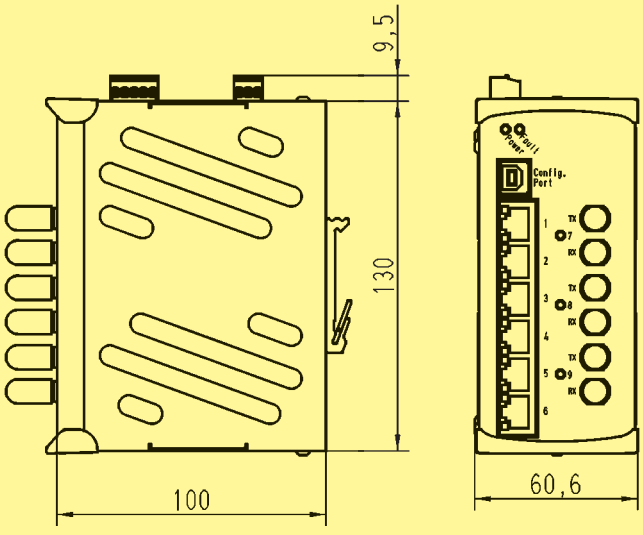
Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3061-AE Ethernet switch 6 ports RJ45 1 port ST including Set for assembly on standard rail	20 76 107 1200		

Ethernet Switch
HARTING sCon 3063-AE

9-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 3 F.O. ports (ST, MM) and sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	3x 100Base-FX / Multimode fibre, 1300 nm, 50/125 µm ST female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 290 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3063-AE Ethernet switch 6 ports RJ45 3 ports ST including Set for assembly on standard rail	20 76 109 1200		

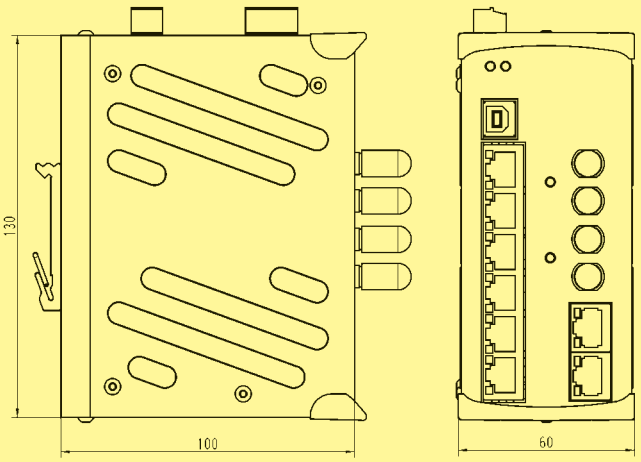
HARTING sCon 3000

Ethernet Switch
HARTING sCon 3082-AE

10-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 2 F.O. ports (ST, MM) and sCon functions

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / Multimode fibre, 1300 nm, 50/125 µm ST female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 260 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 3082-AE Ethernet switch 8 ports RJ45 2 ports ST including Set for assembly on standard rail	20 76 110 1200		

Ethernet Switch
HARTING sCon 9000

6-port Ethernet switch, unmanaged, for installation in a 19'' rack including sCon functions

General Description

The Fast Ethernet switches of the product family HARTING sCon 9000 enable the connection of up to 6 network devices over shielded Twisted Pair cables. Temperature range and mechanical stability provide high operational safety and meet the highest industrial demands.

The Fast Ethernet switches of the type sCon 9000 can be used directly in industrial environments as a powerful and industrial solution. Maximum flexibility is guaranteed by the use of sCon.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode, non-blocking
- Auto-crossing, Auto-negotiation, Auto-polarity
- Pluggable in 19“ racks
- Diagnostics LEDs (Link status, Act, Data transmission rate, Power, Error)
- Following settings are available via USB port:
  - Alarm signalling contact
  - Auto-negotiation
  - 10/100/1000 Mbit/s
  - Full/Half Duplex
  - Parallel redundancy
  - Port enable / disable
  - Port priority
  - Port mirroring

Advantages

- Individual configurable via USB port
- EMC, temperature range and mechanical stability meet the toughest demands

Application fields

- Industrial automation
- Automotive industry
- Power distribution systems
- Mechanical engineering

Technical characteristics

Ethernet interface RJ45

Number of ports	6x 10/100Base-TX
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s (RJ45)
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Terminating method	RJ45 (Twisted Pair)
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF
Topology	Line, Star or mixed

Power supply

Input voltage	24 V DC (12 to 30 V DC)
Terminating method	DIN frame connector, Type H
Diagnostics (via LED)	Power supply

Design features

Housing material	Metal (slot)
Dimensions (W x H x D)	60.7 mm (12 HP) x 128.4 mm (3 U) x 173.5 mm
Degree of protection acc. to DIN 60 529	IP 20
Mounting	19“ rack, 3 U
Weight	approx. 0.5 kg

Environmental conditions

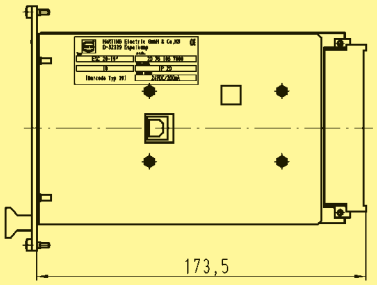
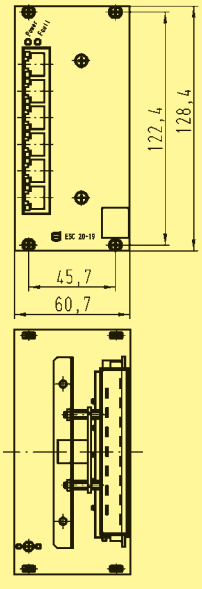
Operating temperature	– 20 °C to + 75 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

Ethernet Switch
HARTING sCon 9060-A

6-port Ethernet switch for installation in a 19'' rack including sCon functions

unmanaged	IP 20	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45
Input voltage / Termination	24 V DC / DIN frame connector, Type H
Permissible range	12 V to 30 V DC
Input current	approx. 125 mA (at 24 V DC)
Housing material	Metal (slot)
Dimensions (W x H x D)	60.7 mm (12 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.5 kg
Operating temperature	– 20 °C to + 75 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
HARTING sCon 9060-A Ethernet switch 6 ports RJ45	20 76 106 7000		

Notes

List of contents Page

Management function

Basic functions

- Store and Forward Switching Mode (IEEE 802.3)
- Multicast filtering and bandwidth limiting
- IGMP Snooping and Querier
- VLAN
- Rapid Spanning Tree (RSTP)
- QoS (802.1p)
- DHCP Client

SNMP

- SNMP V1 and SNMP V3
- Enterprice (HARTING MIB)
- MIB II
  - RMON (statistic, history, alarm, events)
  - Dot1Bridge
  - SnmpDot3mauMIB
  - PtopoMIB
  - EntityMIB
  - RstpMIB
  - System
  - ifMIB
  - Icmp
  - Ip
  - Tcp
  - at
  - Udp
  - Snmp
  - transmission

Web-based access (password protection)

- Status overview
- Port settings
- Network configuration
- Password settings
- Alarm settings
- Diagnostic
- Parameter Import / Export
- Firmware Import / Export

Additional services

- DHCP
- SMTP
- Parameter and firmware import and export via TFTP
- System time via SNTP
- Service Mode via port 1

Diagnostic

- LEDs for Power, Link, Status, Data transmission and Fault
- Port diagnostic
- Port Mirroring
- History
- Alarms via E-mail or SNMP Traps
- Signalling contact for low voltage detection or Link break

Additional informationen about Management functions and Firmware updates please find on our Web server.

HARTING mCon 3000 – Introduction and features

Ethernet Switch
HARTING mCon 3000
Ethernet switches, managed,
for mounting onto top-hat mounting rail
in control cabinets

General Description

The fully managed Fast Ethernet switches of the product family HARTING mCon 3000 are suitable for industrial applications and support both Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s). The product family enables the connection of up to 10 network devices (according to type) over shielded Twisted Pair cables and fibre-optic cables (Multi- and Single-mode). The mCon 3000 Ethernet switch family, with its integrated LEDs on each port, supports fast and easy network diagnosis.

The mCon 3000 Ethernet switches are designed for an effective, industrial and individual using. They support both SNMP and an easy Web interface for management functions.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode
- up to 10 ports, managed, non-blocking, IP 20
- Auto-crossing, Auto-negotiation, Auto-polarity

Advantages

- Metal housing
- EMC, temperature range and mechanical stability meet the highest demands
- Integrated management functions

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems

Technical characteristics

Ethernet interface RJ45	
Number of ports	6x / 8x / 10x 10/100Base-TX, 2x 10/100/1000Base-TX
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s, 100 Mbit/s or 1000 Mbit/s (RJ45)
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Terminating method	RJ45 (Twisted Pair)
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF 1000 Mbit/s: Green
Topology	Ring, Line, Star
Power supply	
Input voltage	24 V DC (12 to 30 V DC)
Terminating method	5-pole screw terminal, pluggable for redundant power supply
Diagnostics (via LED)	Power supply
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Design features	
Housing material	Metal housing (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Degree of protection acc. to DIN 60 529	IP 30
Mounting	• 35 mm top-hat rail acc. to EN 60 715 • Panel mounting, vertical assembly
Weight	approx. 0.6 kg
Environmental conditions	
Operating temperature	0 °C to + 70 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

Technical characteristics - F.O. termination

Ethernet interface – F.O.

Number of ports	2x / 3x 100Base-FX
Cable types according to IEEE 802.3	• Multimode fibre, 1300 nm; 50 / 125 µm or 62.5 / 125 µm • Singlemode fibre, 1300 nm; 9 µm
Data rate	100 Mbit/s
Maximum cable length	• 2000 m (Multimode) • 15 km (Singlemode)
Terminating method	SC-D female / ST female
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing
Wave length	1300 nm
Transceive power TX max. (dynamic)	• -14 dBm (50 / 125 µm) • -14 dBm (62.5 / 125 µm)
Transmission power TX min.	• -23.5 dBm (50 / 125 µm) • -20 dBm (62.5 / 125 µm)
Receive power RX typical (dynamic)	• -33.9 dBm (window) • -35.2 dBm (centre)
Receive power RX max. (dynamic)	-14 dBm
Signal detection (dynamic)	-33 dBm
Topology	Ring, Line, Star

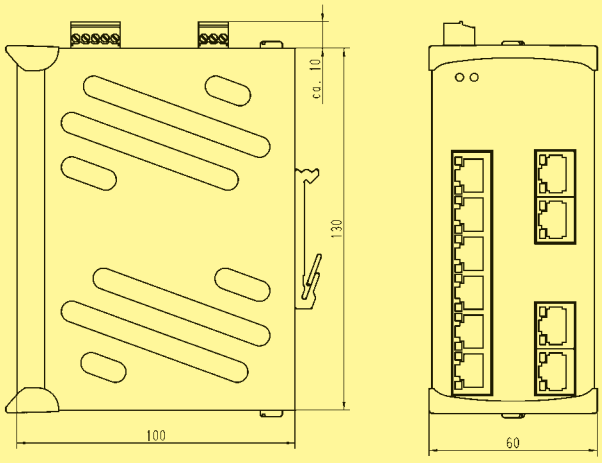
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3100-A

10-port Ethernet switch for mounting onto top-hat mounting rail in control cabinets

managed	IP 30	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	10x 10/100Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 190 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3100-A Ethernet switch, managed 10 ports RJ45 including Set for assembly on standard rail	20 76 110 4000		

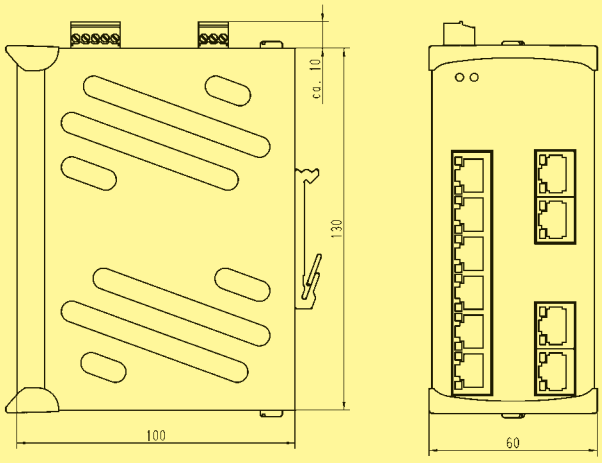
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3100-AA

10-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 2 Gigabit ports

unmanaged	IP 30	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair) 2x 10/100/1000Base-TX / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 250 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3100-AA Ethernet switch, managed 10 ports RJ45 including Set for assembly on standard rail	20 76 110 4001		

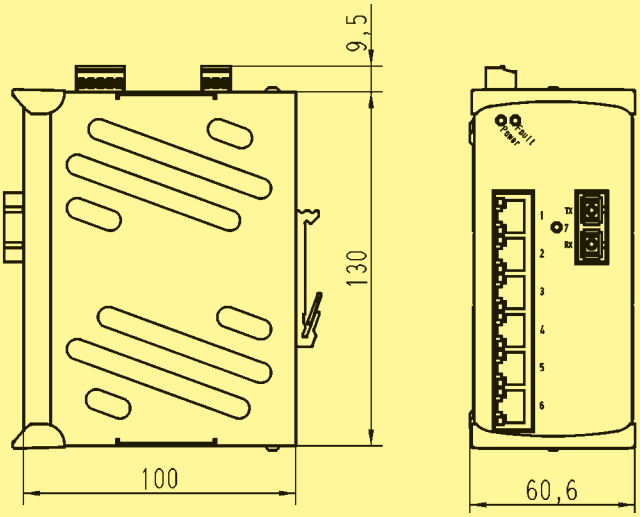
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3061-AD

7-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 1 F.O. port (SC, MM)

managed	IP 30	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 270 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3061-AD Ethernet switch, managed 6 ports RJ45 1 port SC including Set for assembly on standard rail	20 76 107 4100		

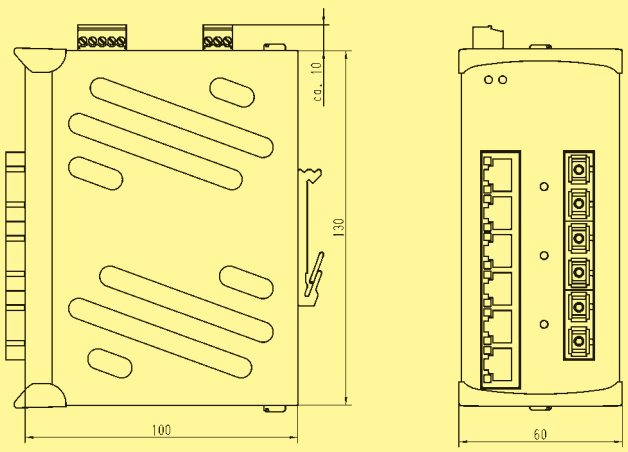
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3063-AD

9-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 3 F.O. ports (SC, MM)

managed	IP 30	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	3x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 320 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3063-AD Ethernet switch, managed 6 ports RJ45 3 ports SC including Set for assembly on standard rail	20 76 109 4100		

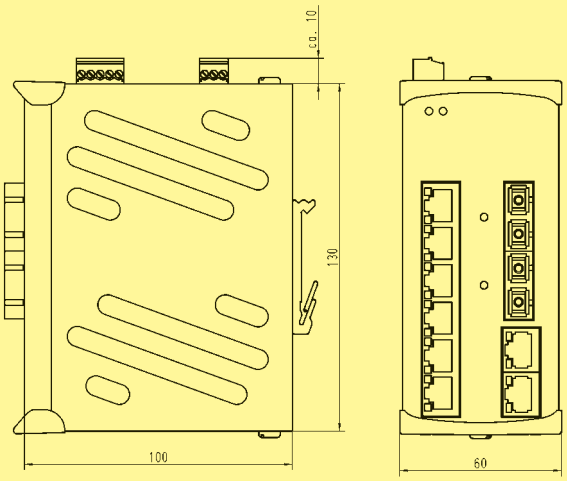
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3082-AD

10-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 2 F.O. ports (SC, MM)

managed	IP 30	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 290 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3082-AD Ethernet switch, managed 8 ports RJ45 2 ports SC including Set for assembly on standard rail	20 76 110 4100		

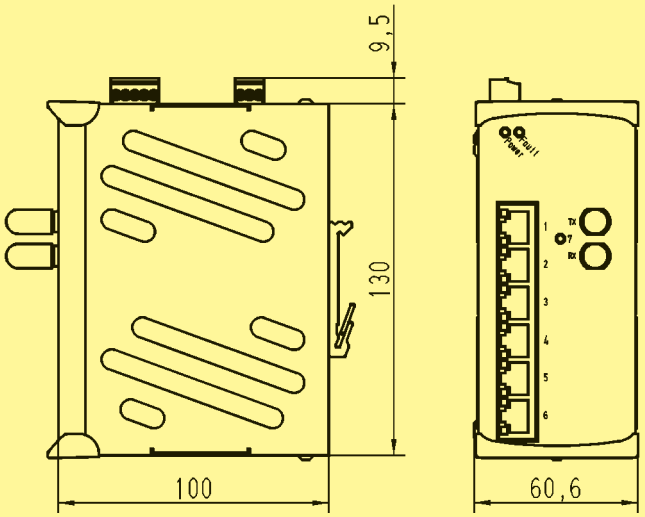
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3061-AE

7-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 1 F.O. port (ST, MM)

managed	IP 30	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 270 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3061-AE Ethernet switch, managed 6 ports RJ45 1 port ST including Set for assembly on standard rail	20 76 107 4200		

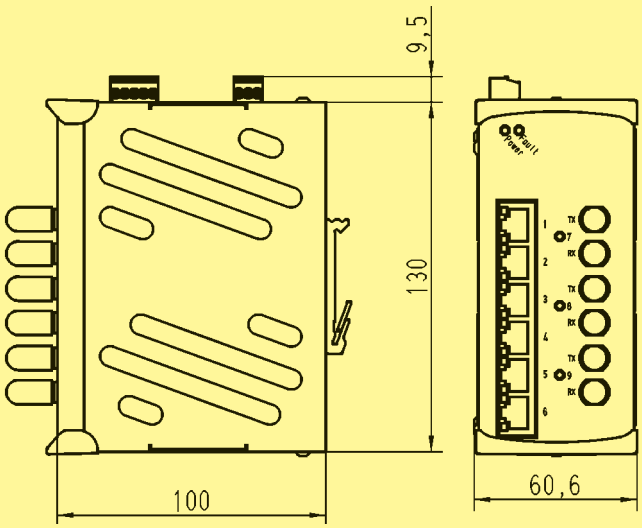
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3063-AE

9-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 3 F.O. ports (ST, MM)

managed	IP 30	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	6x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	3x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 320 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3063-AE Ethernet switch, managed 6 ports RJ45 3 ports ST including Set for assembly on standard rail	20 76 109 4200		

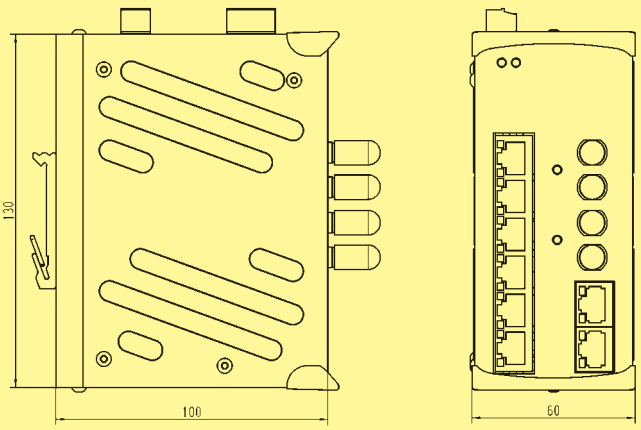
HARTING mCon 3000

Ethernet Switch
HARTING mCon 3082-AE

10-port Ethernet switch for mounting onto top-hat mounting rail
in control cabinets including 2 F.O. ports (ST, MM)

managed	IP 30	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	8x 10/100Base-TX / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	12 V to 30 V DC
Input current	approx. 290 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Metal (powder coated)
Dimensions (W x H x D)	59 x 104 x 132 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	0 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 3082-AE Ethernet switch, managed 8 ports RJ45 2 ports ST including Set for assembly on standard rail	20 76 110 4200		

HARTING mCon 9000 – Introduction and features

Ethernet Switch
HARTING mCon 9000
8-port Ethernet switch, managed, for installation in a 19'' rack

General Description

The Fast Ethernet switches of the product family HARTING mCon 9000 are recommended for use in the widest range of industrial applications and support both Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s). The product family enables the connection of up to 7 network devices over shielded Twisted Pair cables. An additional end-device can be connected via the DIN male connector. The mCon 9000 Ethernet switch family, with its integrated LEDs on each port, supports fast and easy network diagnosis.

The mCon 9000 Ethernet switches operate as an managed switch in Store and Forward Switching Mode and support Auto-crossing, Auto-negotiation and Auto-polarity.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode, non-blocking
- 8 ports, managed
- Auto-crossing, Auto-negotiation, Auto-polarity
- Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power)
- Pluggable in 19“ racks

Advantages

- Robust metal housing
- Management function integrated
- EMC, temperature range and mechanical stability meet the highest demands
- PROFINET compatible

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems
- Railway applications

Technical characteristics

Ethernet interface

Number of ports	8x 10/100Base-TX
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Terminating method, front side	M12, D-coding
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF
Topology	Ring, Line, Star

Power supply

Input voltage	24 V DC (18 to 48 V DC)
Terminating method	DIN frame connector, Type F
Diagnostics (via LED)	Power supply

Design features

Housing material	Aluminium, anodised
Dimensions (W x H x D)	50.5 mm (10 HP) x 128.4 mm (3 U) x 173.5 mm
Degree of protection acc. to DIN 60 529	IP 30
Mounting	19“ rack
Weight	approx. 0.6 kg

Environmental conditions

Operating temperature	– 20 °C to + 75 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

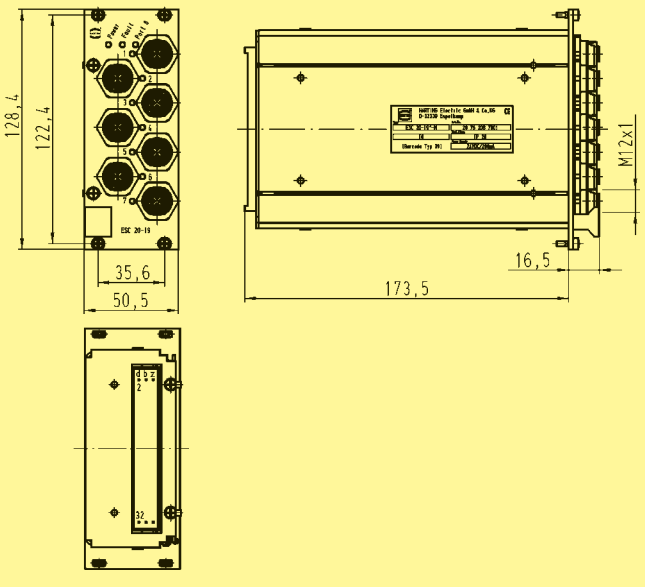
HARTING mCon 9000

Ethernet Switch
HARTING mCon 9080-B

8-port Ethernet switch for installation in a 19'' rack

managed	IP 20	PROFINET compatible ☒	EtherNet/IP compatible ☐

Number of ports, Copper / Termination	8x 10/100Base-TX / 7x front sided M12, D-coding 1x on the back plane
Input voltage / Termination	24 V DC / DIN frame connector, Type F
Permissible range	18 V to 48 V DC
Input current	125 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A 3-pole pluggable screw contact
Housing material	Aluminium, anodised
Dimensions (W x H x D)	50.5 mm (10 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.6 kg
Operating temperature	– 20 °C to + 75 °C
Approvals	cUL (in preparation)
Management	fully managed via SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 9080-B Ethernet switch, managed 7 ports M12, D-coding 1 port on the back plane	20 76 208 7001		

HARTING mCon 6000 – Introduction and features

Ethernet Switch
HARTING mCon 6000
In-between Ethernet switch, managed,
for use in harsh industrial environments

General Description

Based on the In-Between concept – Ethernet switch and panel feed-through in one unit – the managed Fast Ethernet switches of the product family HARTING mCon 6000 support network services to optimise the configuration and use of industrial networks.

The compact housing is mounted directly onto the outside panel of a switch cabinet or terminal box. Up to three IP 20 ports are available within the cabinet, according to switch type, for the connection of Ethernet clients. Outside the control cabinet, the mCon 6000 offers two IP 65 / IP 67 Ethernet ports for network connections over IEC 802.3 Shielded Twisted-Pair cabling.

They support both SNMP and an easy Web interface for management functions.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode
- 3 ports, managed, non-blocking, IP 20
  2 ports, managed, non-blocking, IP 65 / IP 67
- Auto-crossing, Auto-negotiation, Auto-polarity

Advantages

- High degree of protection IP 65 / IP 67
- Robust metal housing
- Can be used directly in industrial environments
- EMC, temperature range and mechanical stability meet the highest demands
- Integrated management functions

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems

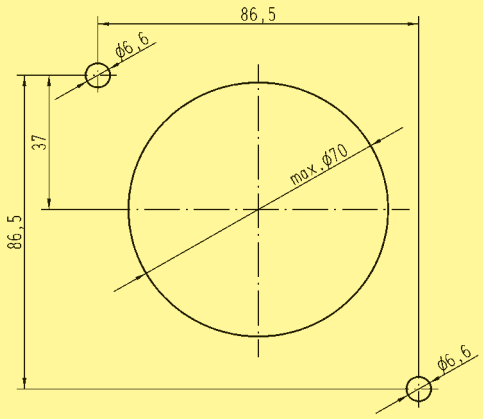
Technical characteristics

Ethernet interface	
Number of ports	5 (2x IP 65 / IP 67 – 3x IP 20)
Cable types	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s
Maximum cable length	100 m (with Category 5 cable acc. to EN 50 173)
Termination, device-side	On the outside of control cabinet: 2x Han® 3 A (female) 2x M12, D-coding (female) On the inside of control cabinet: 3x RJ45
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Yellow flashing
Topology	Ring, Line, Star
Power supply	
Input voltage	24 V DC (18 to 30 V DC)
Termination device-side	5-pole screw terminal, pluggable for redundant power supply (inside of control cabinet)
Diagnostic (via LED)	Power supply – Green
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A (on the inside of control cabinet) 3-pole pluggable screw contact
Diagnostic (via LED)	Error – Red
Design features	
Housing material	Aluminium die-cast
Dimensions (W x H x D)	105 x 40 x 105 mm (without connectors)
Degree of protection acc. to DIN 60 529	IP 65 / IP 67 On the outside of control cabinet connector IP 20 On the inside of control cabinet
Mounting	Directly on control cabinets or terminal boxes
Weight	approx. 0.6 kg
Environmental conditions	
Operating temperature	– 40 °C to + 70 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

Accessories HARTING mCon 6000

Identification	Part number
Mounting plate on the inside of control cabinet	20 80 000 0004

Mounting information



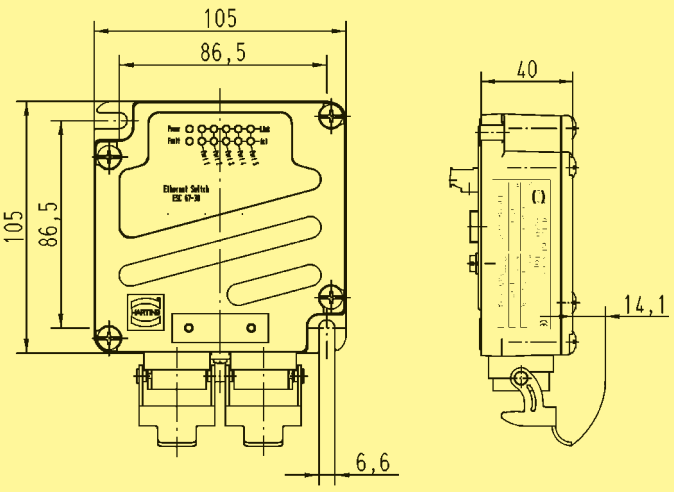
HARTING mCon 6000

Ethernet Switch
HARTING mCon 6050-A

5-port Ethernet switch
for mounting on the outside of control cabinets

managed	IP 67 / IP 20	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	5x 10/100Base-TX / 2x Han® 3 A RJ45 (IP 65 / IP 67)* 3x RJ45 (Twisted Pair) (IP 20)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	18 V to 30 V DC
Input current	approx. 160 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A (on the inside of control cabinet) 3-pole pluggable screw contact
Housing material	Aluminium die-cast
Dimensions (W x H x D)	105 x 40 x 105 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 6050-A Ethernet switch, managed Han® 3 A RJ45	20 73 305 4921		

* Order insert fixing screw 09 20 000 9918 separately

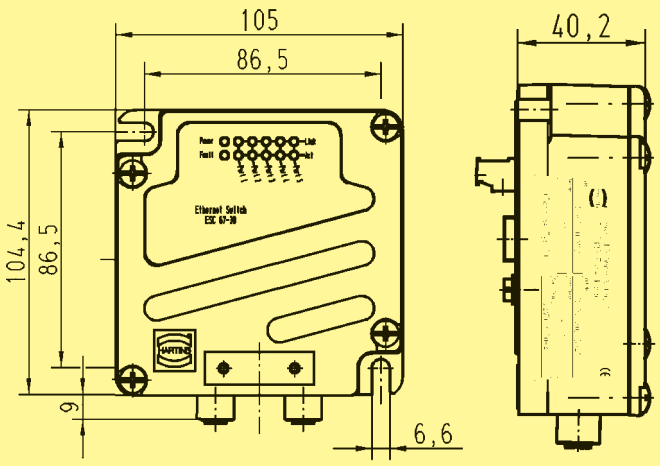
HARTING mCon 6000

Ethernet Switch
HARTING mCon 6050-BA

5-port Ethernet switch
for mounting on the outside of control cabinets (M12 system cabling)

managed	IP 67 / IP 20	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	5x 10/100Base-TX / 2x M12, D-coding (IP 65 / IP 67) 3x RJ45 (Twisted Pair) (IP 20)
Input voltage / Termination	24 V DC / 5-pole screw terminal, pluggable redundant power supply
Permissible range	18 V to 30 V DC
Input current	approx. 160 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A (on the inside of control cabinet) 3-pole pluggable screw contact
Housing material	Aluminium die-cast
Dimensions (W x H x D)	105 x 40 x 105 mm (without connectors)
Weight	approx. 0.6 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 6050-BA Ethernet switch, managed M12, D-coding	20 73 305 4941		

HARTING mCon 7000 – Introduction and features

Ethernet Switch
HARTING mCon 7000

Ethernet switch, managed, for harsh industrial environments

General Description

If additional services for networks in harsh industrial environments (filtering, prioritisation, topology), or individual network configurations are required, then the Fast Ethernet switches of the product family HARTING mCon 7000 come into play.

These managed switches allow the connection of up to 10 end-units, according to switch type, over IEC 802.3 Shielded Twisted-Pair cabling. Protection class, temperature range and mechanical stability satisfy the highest requirements. These Fast Ethernet switches can therefore be directly used in industrial environments.

They support both SNMP and an easy Web interface for management functions.

Features

- Ethernet switch acc. to IEEE 802.3
- Store and Forward Switching Mode
- 5 or 10 ports, managed, non-blocking
- Auto-crossing, Auto-negotiation, Auto-polarity
- Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power, Error)

Advantages

- High degree of protection IP 65 / IP 67
- Robust metal housing, zink die-cast
- Can be used directly in industrial environments
- EMC, temperature range and mechanical stability meet the highest demands
- Integrated management functions

Application fields

- Industrial automation
- Automotive industry
- Wind power
- Power distribution systems

Technical characteristics

Ethernet interface

Number of ports	5x, 10x 10/100Base-TX
Cable types	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s or 100 Mbit/s
Maximum cable length	100 m (with Category 5 cable acc. to EN 50 173)
Termination device-side	Han® 3 A RJ45 (female) M12, D-coding (female)
Diagnostics (via LED)	• Status Link – Green • Data transfer (Act) – Yellow flashing
Topology	Ring, Line, Star

Power supply

Input voltage	24 V DC (16.8 to 30 V DC)
Termination device-side	Han® 4 A (male), redundant power supply (including fixing screw 09 20 000 99 8, to maintain IP 67) M12, A-coding (male), redundant power supply
Diagnostic (via LED)	Power supply – Green

Alarm signalling contact

(mCon 7100 only)	Change-over contact, potential-free, 24 V DC / 0.5 A
Termination device-side	Han® 3 A (male) M12, D-coding (male)
Diagnostic (via LED)	Error – Red

Design features

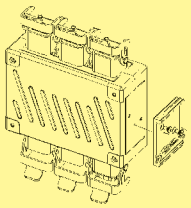
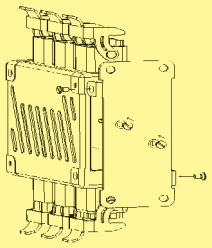
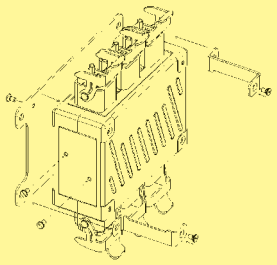
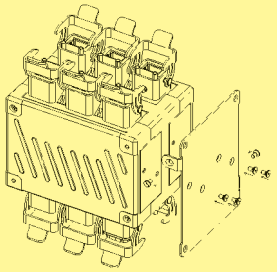
	mCon 7050	mCon 7100
Housing material	Zinc die-cast	Zinc die-cast
Dimensions (W x H x D)	45 x 120 x 87 mm	90 x 120 x 87 mm
Degree of protection acc. to DIN 60 529	IP 65 / IP 67	IP 65 / IP 67
Mounting	35 mm top-hat rail acc. to EN 60 715, Panel mounting, vertical assembly, Panel mounting, flat assembly	Panel mounting, vertical assembly
Weight	approx. 0.8 kg	approx. 1.4 kg

Environmental conditions

Operating temperature	– 40 °C to + 70 °C
Storage temperature	– 40 °C to + 85 °C
Relative humidity	30 % to 95 % (non-condensing)

HARTING mCon 7000 – Accessories

Identification	Part number Power supply	Part number Alarm signalling contact (mCon 7100 only)
Hood metal, straight, metric	19 20 003 1440[1)]	19 20 003 1440
Protection cover Han® 3 A	09 20 003 5426	09 20 003 5426
Han® 4 A female insert	09 20 004 2711	
Han® 3 A female insert		09 20 003 2711
Cable gland metal IP 65, metric M20, cable diameter: 5 - 9 mm	19 00 000 5080	
HARAX® M12-L circular connector A-coding	21 03 212 2305	

Identification	Part number	Drawing	Dimensions in mm
Set for assembly on standard rail according to DIN EN 60 715	20 80 000 0003		
Set for panel mounting vertical assembly	20 80 010 0001		
Set for panel mounting flat	20 80 024 0002		
Set for panel mounting mCon 7100 vertical assembly	20 80 010 0002		

[1)] Order insert fixing screw 09 20 000 9918 separately

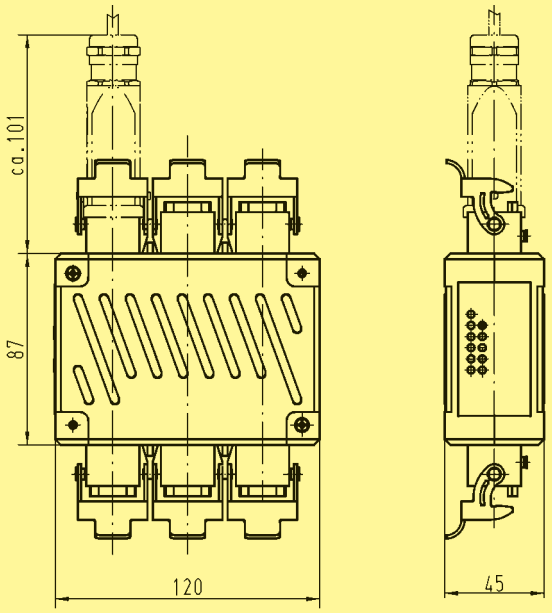
HARTING mCon 7000

Ethernet Switch
HARTING mCon 7050-A

5-port Ethernet switch for use
in harsh industrial environments

managed	IP 67	PROFINET compatible [X]	EtherNet/IP compatible [X]

Number of ports, Copper / Termination	5x 10/100Base-TX / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 V DC Han® 4 A (male)* redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	160 mA (at 24 V DC)
Housing material	Zinc die-cast
Dimensions (W x H x D)	45 x 120 x 87 mm (without connectors)
Weight	approx. 0.8 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 7050-A Ethernet switch, managed Han® 3 A RJ45	20 70 305 4921		

* Order insert fixing screw 09 20 000 9918 separately

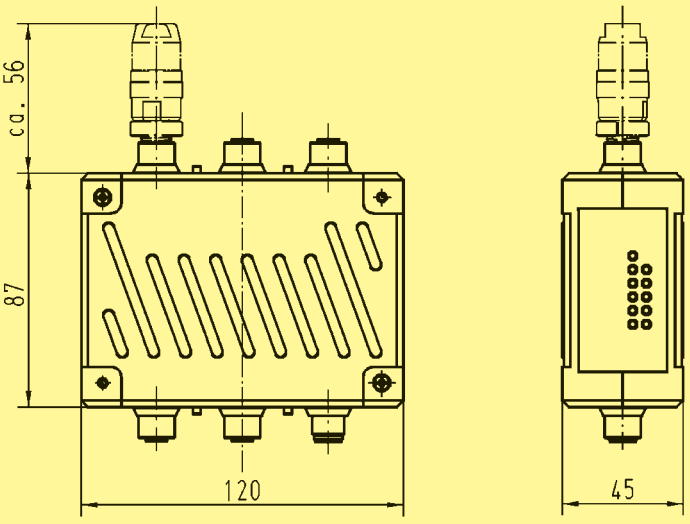
HARTING mCon 7000

Ethernet Switch
HARTING mCon 7050-B

5-port Ethernet switch for industrial Ethernet networks
with M12 system cabling

managed	IP 67	PROFINET compatible X	EtherNet/IP compatible X

Number of ports, Copper / Termination	5x 10/100Base-TX / M12, D-coding (female)
Input voltage / Termination	24 V DC M12, A-coding (male), redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	160 mA (at 24 V DC)
Housing material	Zinc die-cast
Dimensions (W x H x D)	45 x 120 x 87 mm (without connectors)
Weight	approx. 0.8 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

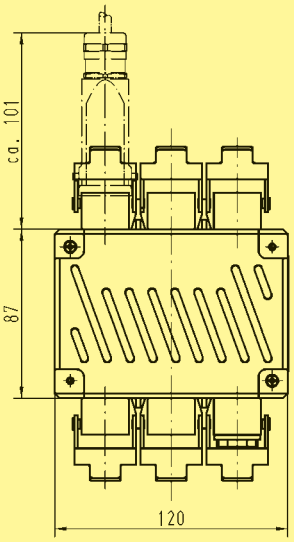
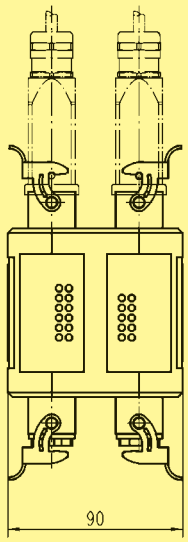
Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 7050-B Ethernet switch, managed M12, D-coding	20 70 305 4941		

HARTING mCon 7000

Ethernet Switch
HARTING mCon 7100-A
10-port Ethernet switch for use in harsh industrial environments

managed	IP 65	PROFINET compatible X	EtherNet/IP compatible X

Number of ports, Copper / Termination	10x 10/100Base-TX / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 V DC Han® 4 A (male)* redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	260 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A Han® 3 A (male)*
Housing material	Zinc die-cast
Dimensions (W x H x D)	90 x 120 x 87 mm (without connectors)
Weight	approx. 1.4 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 7100-A Ethernet switch, managed Han® 3 A RJ45	20 70 310 4921		

* Order insert fixing screw 09 20 000 9918 separately

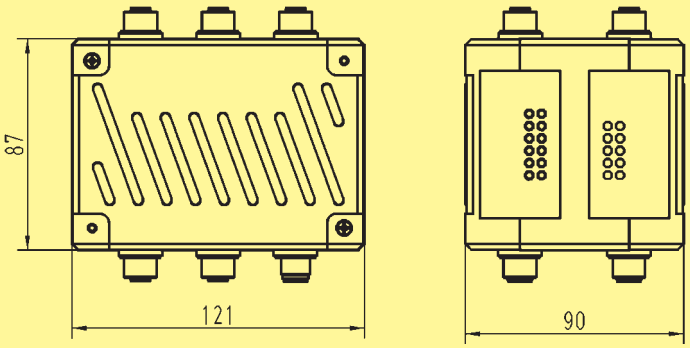
HARTING mCon 7000

Ethernet Switch
HARTING mCon 7100-B

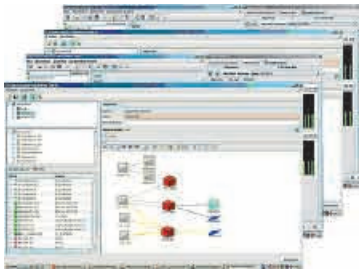
10-port Ethernet switch for industrial Ethernet networks
with M12 system cabling

managed	IP 67	PROFINET compatible X	EtherNet/IP compatible X

Number of ports, Copper / Termination	10x 10/100Base-TX / M12, D-coding (female)
Input voltage / Termination	24 V DC M12, A-coding (male), redundant power supply
Permissible range	16.8 V to 30 V DC
Input current	260 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A M12, D-coding (male)
Housing material	Zinc die-cast
Dimensions (W x H x D)	90 x 120 x 87 mm (without connectors)
Weight	approx. 1.4 kg
Operating temperature	– 40 °C to + 70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A·M 2

Identification	Part number	Drawing	Dimensions in mm
HARTING mCon 7100-B Ethernet switch, managed M12, D-coding	20 70 310 4941		

List of contents Page



Industrial VIS//ON

Automation IT Network Manager

General Description

Industrial VIS//ON supports the complete process of network planning, net and system configuration, documentation and management.

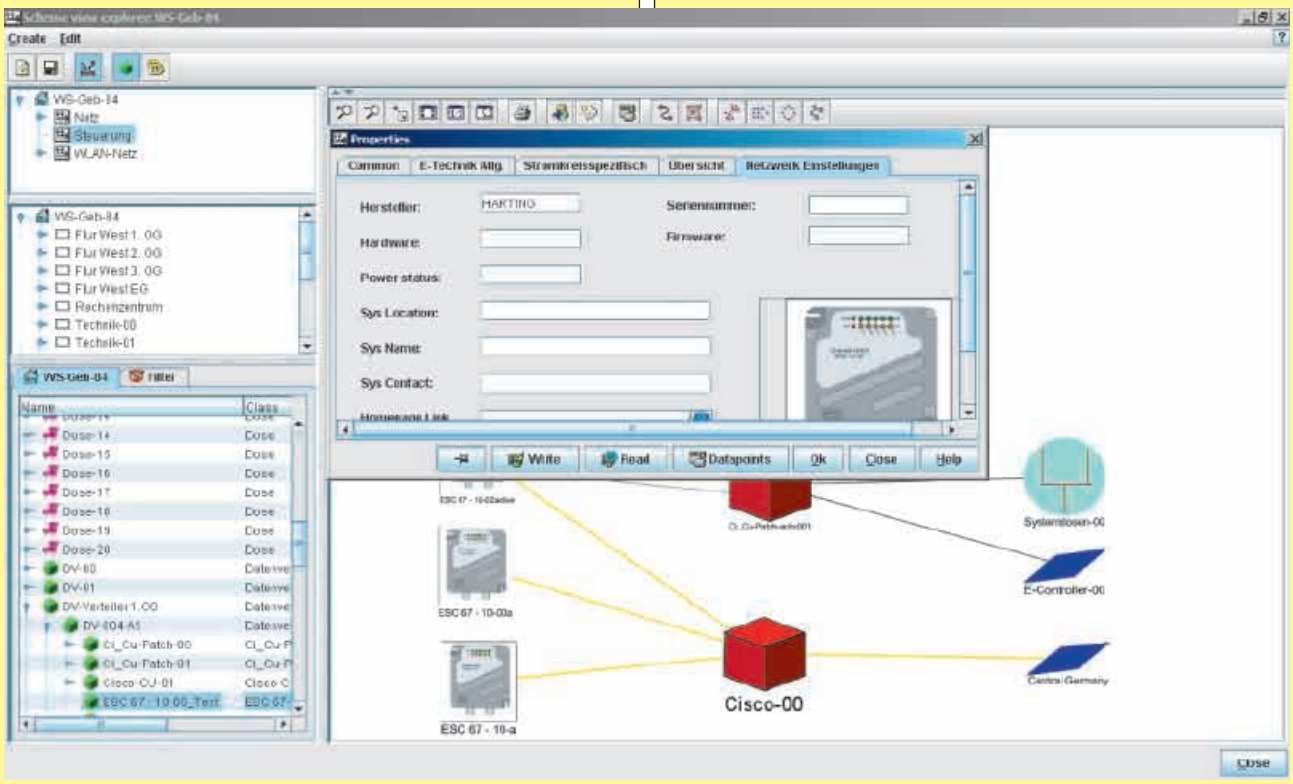
It offers network and port scanning, topology recognition and automatic inventory through the scanning of designated IP and MAC address ranges.

All configuration data can conveniently be read into defined templates or freely analysed and interpreted via the MIB-browser.

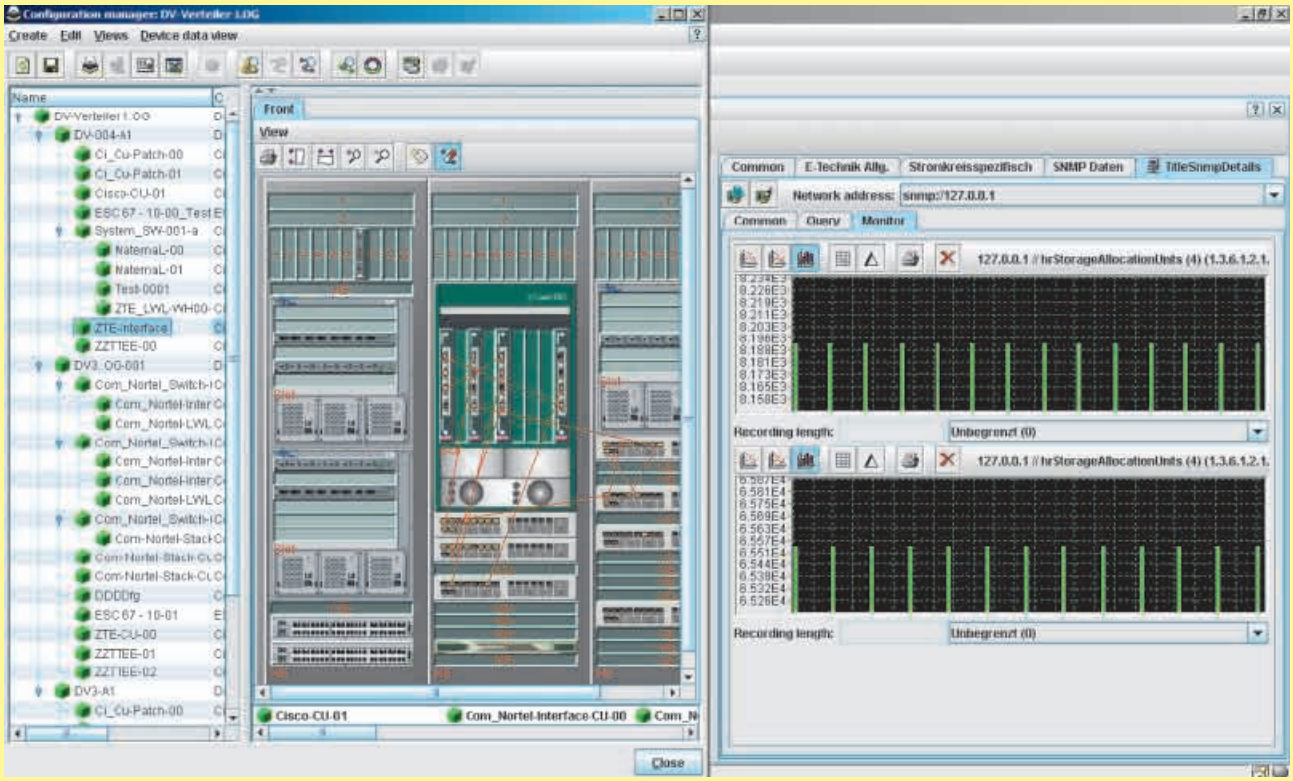
Industrial VIS//ON supports all SNMP protocols, OPC and various derivatives and also automation bus systems and control technology.

The software is available in a range of languages, is multi-client capable and, due to being based on Java technology, runs on all system platforms (Windows, Linux and Unix) and in all networks (LAN, Intranet, Internet).

With these features, Industrial VIS//ON has the greatest possible flexibility of operation.



Plan View with Topology and Device Configuration

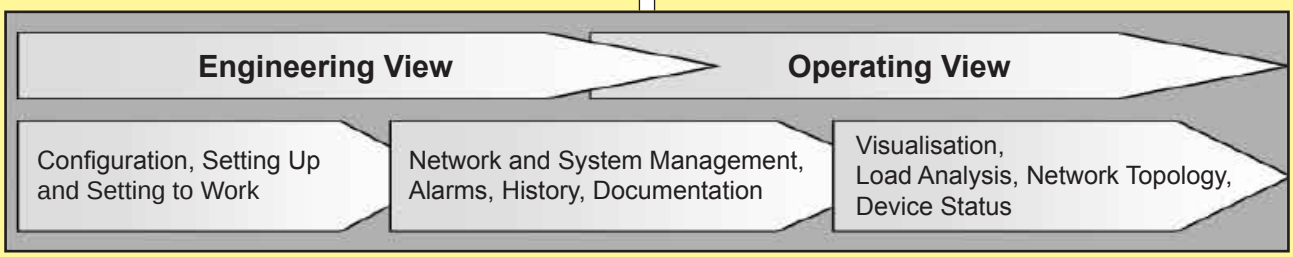


Configuration manager with cabinet overview and network monitoring

The **Configuration View** allows the user to configure, measure and set-up systems and networks. This function will frequently be used more often than the **Operation View**, which monitors all components and connections of the network (alphanumerically, topologically and schematically) and offers error management and alarms.

Industrial VIS//ON is a modular component of a supervisory facility, network and factory management solution comprising:

- Real Estate and Building Management
- Device, System and Configuration Management
- Network and Infrastructure Management
- Cable Management
- Maintenance and Service management
- SCADA with the integration of various bus systems
- Problem management
- Billing / Accounting
- Workflow



Content of the Configuration View and Operation View Functions

Identification	Part number	Package Contents
Industrial VIS//ON Automation IT Network Manager	20 89 900 4900	Software on CD and Manual (German and English version)

HARTING pCon 7000 – Industrial Power supply

Industrial Power supplies
Serial HARTING pCon 7000

for decentralised power supply
with degree of protection IP 65 / IP 67

General Description

The power supplies of the product family HARTING pCon 7000 are designed for the decentralised supply of power to control units, Ethernet and other automation components in industrial areas and harsh environments. With their wide range of input voltage, the units are suitable for world-wide use. As a result the devices can be installed without problems in any factory in the world; in production cells or machines or on walls, columns and mounting rails.

For easy installation, mounting sets for panels or standard DIN rails are available. The pluggable connections guarantee an easy and secure assembly. The pCon 7000 Industrial Power supply is available with either M12 or Han® 4 A output terminations.

Features

- Wide input range for world-wide use
- Active PFC
- High efficiency
- Easy installation and pluggable connections

Advantages

- High degree of protection IP 65 / 67
- Robust metal housing, powder coated
- Wide operating temperature range and mechanical stability for highest demands
- Can be used directly in industrial environments
- Compact design and high power density
- Shock and vibration resistant
- Proof against sustained short-circuits, overloads and no-load operation
- International approvals

Application fields

- Industrial automation
- Automotive industry
- Power generation and distribution
- Railway applications

Technical characteristics

Design features

Housing	Zinc die-cast, powder coated RAL 7037
Dimensions (W x H x D)	77.5 x 87 x 120 mm (without connectors)
Weight	approx. 1.2 kg
Degree of protection acc. to DIN 60 529	IP 65 / IP 67

Mechanical stability

Shock assay	acc. to IEC 60 068-2-27 (Half sinus shock 15 g / 11 ms)
Vibration	according to DIN EN 60 068-2-6
Rail standard	according to DIN EN 50 155, Class 1

Environmental conditions

Operating / storage temperature	-25 °C to 75 °C / -40 °C to +85 °C
Relative humidity	30 % to 95 % (non-condensing)

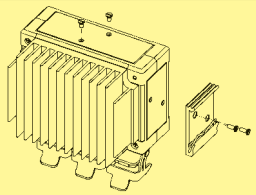
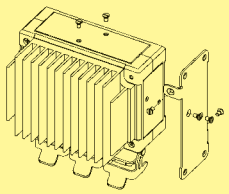
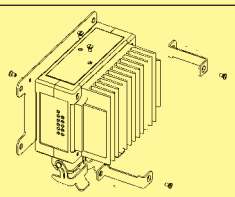
Approvals CE, UL in preparation

Product standards EN 50 178 (VDE 0160), EN 60 950 (SELV), EN 60 204 (PELV)

EMC standards

Interference immunity ESD	IEC 61 000-4-2
Interference immunity HF, radiated	IEC 61 000-4-3
Interference immunity Burst	IEC 61 000-4-4
Interference immunity Surge	IEC 61 000-4-5
Interference immunity	IEC 61 000-4-6
Emitted radiation	EN 55 011, (EN 55 022) class B
System perturbation	IEC 61 000-3-3
Rail standard	EN 50 121-3-2

Accessories

Identification	Part number	Drawing	Dimensions in mm
Set for assembly on standard rail according to DIN EN 60715	20 80 000 0003		
Set for panel mounting vertical assembly	20 80 010 0001		
Set for panel mounting flat	20 80 024 0002		

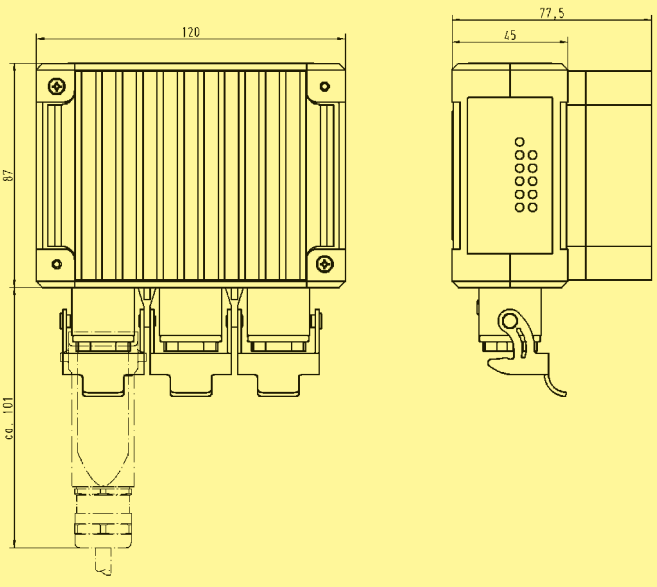
HARTING pCon 7000

Industrial Power supply
HARTING pCon 7095-24A

for decentralised power supply with degree of protection IP 65 / IP 67
including output termination 2x Han® 4 A

Han® 3 A Male / Han® 4 A female	IP 65 / IP 67	24 V DC	95 W

Input		**Output**	
Rated voltage	110 to 240 V AC (Wide input range)	Output voltage	24 V DC (fixed ± 0.5 V tolerance)
Input voltage range	85 to 264 V AC (100 to 375 V DC)	Output current	3.9 A
Input rated current	< 2 A	Max. output power	95 W
Input current	< 30 A (active limiting)	Power failure bridging time	> 20 ms (at 230 V AC)
Input frequency	47 to 63 Hz	Remaining ripple	< 50 mVss (at rated values)
Input fuse	internal T 2 A	Sensibility	< 2%
Recommended pre-fuse	B 10 A (EN 60 898)	Protection function	Proof against sustained short-circuits, overloads and no-load operation
Protection class	I (including PE termination)	Overload behavior	Limiting current > 1.4 x I_{nom} (U/I characteristic)
Power input termination	Han® 3 A male insert	Load output termination	2x Han® 4 A female insert
Input voltage indication	LED Green	Output voltage indication	LED Yellow (OFF at V_{out} < 22.5 V DC)
General data			
Product standards	EN 60 950 (SELV)	Efficiency	> 85%
Approvals	GS, UL in preparation		

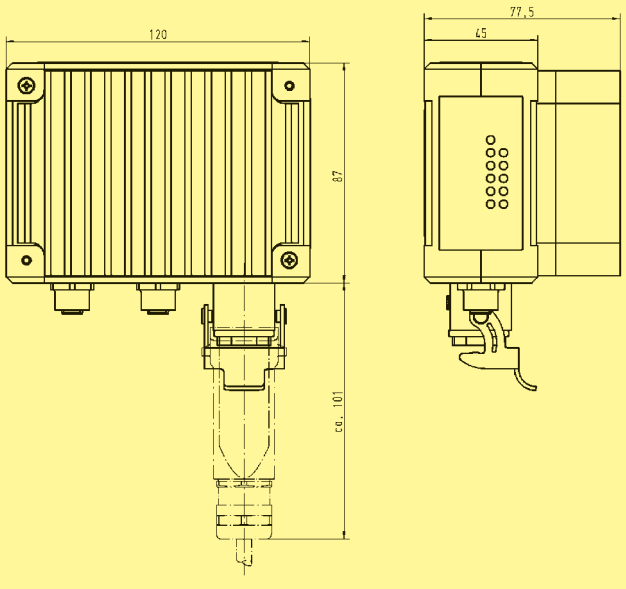
Identification	Part number	Drawing	Dimensions in mm
HARTING pCon 7095-24A Industrial Power supply with Han® 4 A termination	20 80 300 3011		

Industrial Power supply
HARTING pCon 7095-24B

for decentralised power supply with degree of protection IP 65 / IP 67
including output termination 2x M12, A-coding

Han® 3 A Male / M12, A-coding female	IP 65 / IP 67	24 V DC	95 W

Input		**Output**	
Rated voltage	110 to 240 V AC (Wide input range)	Output voltage	24 V DC (fixed ± 0.5 V tolerance)
Input voltage range	85 to 264 V AC (100 to 375 V DC)	Output current	3.9 A
Input rated current	< 2 A	Max. output power	95 W
Input current	< 30 A (active limiting)	Power failure bridging time	> 20 ms (at 230 V AC)
Input frequency	47 to 63 Hz	Remaining ripple	< 50 mVss (at rated values)
Input fuse	internal T 2 A	Sensibility	< 2%
Recommended pre-fuse	B 10 A (EN 60 898)	Protection function	Proof against sustained short-circuits, overloads and no-load operation
Protection class	I (including PE termination)	Overload behavior	Limiting current > 1.4 x I_{nom} (U/I characteristic)
Power input termination	Han® 3 A male insert	Load output termination	2x M12, A-coding, female
Input voltage indication	LED Green	Output voltage indication	LED Yellow (OFF at V_{out} < 22.5 V DC)
General data			
Product standards	EN 60 950 (SELV)	Efficiency	> 85%
Approvals	GS, UL in preparation		

Identification	Part number	Drawing	Dimensions in mm
HARTING pCon 7095-24B Industrial Power supply with M12, A-coding termination	20 80 300 3012		

HARTING pCon 2000 – Industrial Power supply

Industrial Power supplies
Serial HARTING pCon 2000
for centralised power supply
in control cabinets with degree of protection IP 20

General Description

The power supplies of the product family HARTING pCon 2000 are designed for power supply solutions for control units, Ethernet and other automation components. With their wide range of input voltage, the units are suitable for world-wide use.

The quick connection technique guarantees easy installation.

Features

- Wide input range for world-wide use
- Active PFC
- High efficiency up to 91.5 Prozent
- Easy installation and toolless connection
- Range of operation temperature up to 70 °C without derating

Advantages

- Wide operating temperature range
- Compact design and high power density
- Proof against sustained short-circuits, overloads and no-load operation
- International approvals
- Protection class II (no earth connection necessary)
- Proof against dynamic overload (150% rated current for up to 2.5 seconds)

Application fields

- Industrial automation
- Automotive industry
- Power generation and distribution

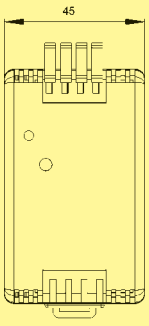
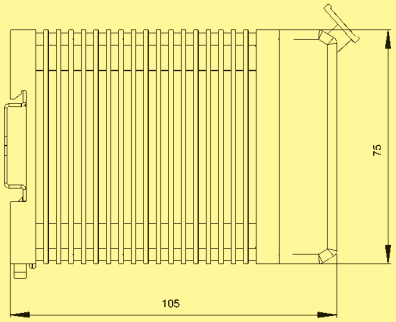
HARTING pCon 2000

Industrial Power supply
HARTING pCon 2060-24

for centralised power supply in control cabinets
with degree of protection IP 20

2x spring-type terminals	IP 20	24 V DC	60 W

Input		**Output**	
Rated voltage	100 to 240 V AC (Wide input range)	Output voltage	24 V DC ± 1% (setting range 23 - 29 V)
Input voltage range	85 to 264 V AC (100 to 375 V DC)	Output current	2.5 A
Input rated current	< 0.7 A at 230 V < 1.3 A at 100 V	Max. output power	60 W
Input current	< 40 A (active limiting)	Power failure bridging time	> 100 ms (at 230 V AC) > 15 ms (at 115 V AC)
Input frequency	47 to 63 Hz	Remaining ripple	< 40 mVss (at rated values)
Input fuse	internal T 4 A	Sensibility	< 2%
Recommended pre-fuse	B 16 A (EN 60 898)	Protection function	Proof against sustained short-circuits, overloads and no-load operation
Protection class	II (no earth connection necessary)	Overload behavior	Limiting current 2.7 A (static) / 5.0 A (dynamic)
		Output voltage indication	LED Green
General data			
Termination Power / Load	Spring-type terminal 0.3 - 2.5 mm² / AWG 28 - 12 (solid) / 0.3 - 4 mm² / AWG 28 - 12 (stranded)		
Product standards	EN 60 950 (SELV)	Efficiency	91.5% (230 V) / 90% (115 V)
Approvals	GS, cCSA$_{US}$ (UL 60 950, UL 508)	Weight	approx. 250 g

Identification	Part number	Drawing	Dimensions in mm
HARTING pCon 2060-24 Industrial Power supply for mounting onto 35 mm top-hat mounting rail according to DIN EN 50 022	20 80 000 3121	 	

Notes

List of contents Page

C – Ethernet cabling

Generic Cabling acc. to ISO/IEB 24702

Outlets and Panel feed-throughs

HARTING Cabinet Outlet RJ45
IP 20, Cat. 6

HARTING PushPull
Panel Feed-through RJ45
IP 65/67, Cat. 5

HARTING PushPull Outlet RJ45
IP 65/67, Cat. 6

Profile-specific Cabling

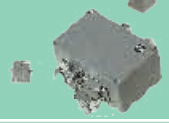
IEC 61918 PROFINET

HARTING Cabinet Outlet RJ45
IP 20, Cat. 6

Han® 3 A
Panel Feed-through RJ45
IP 65/67, Cat. 5

Han® M12 Panel Feed-through
D-coding
IP 65/67, Cat. 5, angled or straight

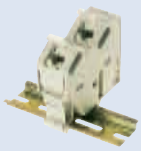
Han® 3 A Metal Outlet
RJ45
IP 65/67, Cat. 5



Han® 3 A Metal Outlet
RJ45
IP 65, Cat. 6

Han® 3 A Panel Feed-through
RJ45 Hybrid
IP 65/67, Cat. 5,
also available in plastic

IEC 61918 EtherNet/IP



HARTING Cabinet
Outlet RJ45
IP 20, Cat. 6

Han-Max®
Panel Feed-through RJ45
IP 67, Cat. 5e

Han-Max®
Bulkhead Mounting RJ45
IP 67, Cat. 5e

Connectors

HARTING RJ Industrial®
Connector RJ45, 8-pin
IP 20, RJ45, Cat. 6

HARTING PushPull Connector
RJ45, 8-pin
IP 65/67, Cat. 6

HARTING PushPull Connector
LC Duplex
IP 65/67, Cat. 6

HARTING RJ Industrial® Connector
RJ45, 4-pin
IP 20, RJ45, Cat. 5

Han® PushPull Connector
RJ45, 4-pin
IP 65/67, Cat. 5

Han® PushPull Connector SCRJ
IP 65/67

Han® 3 A Connector
RJ45, 4-pin
IP 65/67, Cat. 5

Han® M12 Connector, D-coding,
4-pin
IP 65/67, Cat. 5

Han® 3 A Hybrid connector
RJ45, 4-pin
IP 65/67, Cat. 5, with 4x power supply

HARTING RJ Industrial® Connector,
8-pin
IP 20, RJ45, Cat. 6

Han-Max® Connector RJ45,
8-pin
IP 67, Cat. 5e

Han® M12 Connector
D-coding, 4-pin
IP 65/67, Cat. 5

Cables	System Cables	
 Industrial Cat. 5 Stranded Cable, 8-wire AWG 26/7, stranded, PUR	 Industrial Ethernet Patch Cable RJ45, 8-wire IP 20, Cat. 5, AWG 26/7, PUR	Generic Cabling
 Industrial Cat. 5 Outdoor Cable, 8-wire AWG 26/7, stranded, PVC	 HARTING RJ Industrial® Stranded System Cable RJ45, 8-wire IP 20, Cat. 6, AWG 27/7, stranded, PVC	
 Industrial Cat. 6 Stranded Cable, 8-wire AWG 27/7, stranded, PVC/PUR	 HARTING PushPull System Cable RJ45, 8-wire IP 65/67, Cat. 6, AWG 27/7, stranded, PVC	
Type A (for fixed layouts)  Industrial Cat. 5 Standard Cable, 4-wire AWG 22/1, solid, PVC	 HARTING RJ Industrial® Stranded System Cable RJ45, extruded, 4-wire IP 20, Cat. 5, AWG 22/7, stranded, PVC	Profile-specific Cabling – PROFINET
Type B (for flexible layouts)  Industrial Cat. 5 Stranded Cable, 4-wire AWG 22/7, stranded, PVC	 Han® 3 A Stranded System Cable RJ45, 4-wire IP 65/67, Cat. 5, AWG 22/7, stranded, PVC	
 Industrial Cat. 5 Outdoor Cable 4-wire AWG 22/7, stranded, PVC		
Type C (for special applications)  Industrial Cat. 5 Trailing Cable, 4-wire AWG 22/7, stranded, PUR	 Han® M12 Stranded System Cable D-coding, 4-wire IP 65/67, Cat. 5, AWG 22/7, stranded, PUR	
 Industrial Cat. 5 Hybrid Cable, 4-wire AWG 22/7, stranded with 4x power supply, FRNC	 Han® 3 A Stranded System Cable RJ45 Hybrid, 4-wire IP 65/67, Cat. 5, AWG 22/7, stranded with 4x power supply, FRNC	
 Industrial Cat. 5 Stranded Cable, 8-wire AWG 26/7, stranded, PUR	 Industrial Ethernet Patch Cable RJ45, 8-wire IP 20, Cat. 5, AWG 26/7, PUR	Profile-specific Cabling – EtherNet/IP
 Industrial Cat. 5 Outdoor Cable, 8-wire AWG 26/7, stranded, PVC	 HARTING RJ Industrial® Stranded System Cable RJ45, 8-wire IP 20, Cat. 6, AWG 27/7, stranded, PVC	
 Industrial Cat. 6, Stranded Cable 8-wire AWG 27/7, stranded, PVC/PUR	 Han® M12 Stranded System Cable D-coding, 4-wire IP 65/67, Cat. 5, AWG 26/7, stranded, PUR	

Notes

List of contents Page

Introduction

The chapter **"Generic Cabling"** shows HARTING's complete cabling portfolio, which simply and efficiently networks machinery, equipment and controllers.

"Generic" here stands for profile independent, which means that the cabling infrastructure is laid out with **IEEE 802.3** as the fundamental transfer protocol and consequently all cables and connectors are 8-wire. With this every Ethernet based protocol and / or profile can be carried over the cabling infrastructure.

In order to guarantee that the cabling system is future-proof, the portfolio is oriented towards the current European and International cabling standards, for example **ISO/IEC 24 702** and the draft European standard **prEN 50 173-1: 2006**.

The use of connector types specified in the above standards in all components, for example the **HARTING PushPull RJ45**, offers the user a high degree of compatibility, reduces equipment maintenance and handling, decreases stock of replacement parts and thereby substantially reduces costs.

HARTING's generic cabling system also allows the seamless integration of machinery, equipment and controller networks into the customer's existing **IT network**. A large variety of process control functions can now be initiated or monitored from supervisory computers without modification or other efforts. System resources such as databases can be made available to or fed by all network connected devices. Operator workflows and processes can be made continuously simpler, faster and more efficient.

This generic cabling system is part of HARTING's comprehensive **Automation IT** network solution, which brings together active network technology, cabling and solutions for device and equipment power supply.

The generic cabling system's product portfolio covers:

- **Distributors and Connector boxes:** Termination and distribution of cables in harsh IP 65 / IP 67 environments, but also within control or distribution cabinets.
- **Panel feed-throughs:** To ensure cable introduction from IP 65 / IP 67 environments into control or distribution cabinets.
- **System cables:** Made-up system cables for quick connection of terminal boxes, distributors or active devices with machines, equipment and controllers.
- **Connectors:** Connector sets to make up specific system cables onsite.
- **Cables:** A comprehensive cable portfolio for the laying out / manufacture of system cables onsite.

The advantages of the HARTING generic cabling system at-a-glance:

- **Profile independent cabling structure**, usable for all Ethernet applications
- Supports all **safety features** and **real-time requirements** of the diverse applications
- Can be expanded and integrated into existing **IT infrastructures** without problems
- Conformance to **ISO/IEC 24 702** makes roll-outs easier in international firms
- Use of **standardised connectors** reduces the variety of parts and makes purchasing and stocking of components easier
- **Future-proof** cabling and connectors allow the problem-free deployment of new technology such as **Gigabit Ethernet** or **PoE**
- The high **quality** of the cabling system guarantees a long **useful life** and **reliable operations**
- Simple planning, installation and reliable operation **saves costs** and delivers a high ROI
- The generic cabling system is part of **HARTING's one-stop Automation IT** network solution

Distribution modules and Outlets

HARTING Cabinet Outlet RJ45

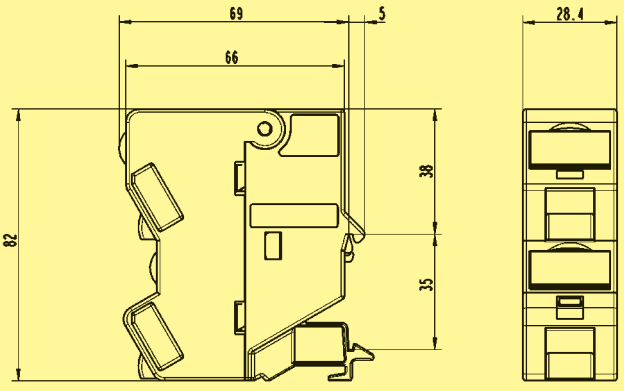
RJ45 distribution module for IP 20 environments (top-hat rail mounting)

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

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, prEN 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 isolation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 9 mm
Shielding	fully shielded, 360° shielding contact
Mounting	mounting onto 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, V0
Colour	light grey RAL 7035

Advantages

- Simple mounting
- Cable entering ether from bottom or from top
- Dust protection covers
- Port identification
- Angled outputs

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

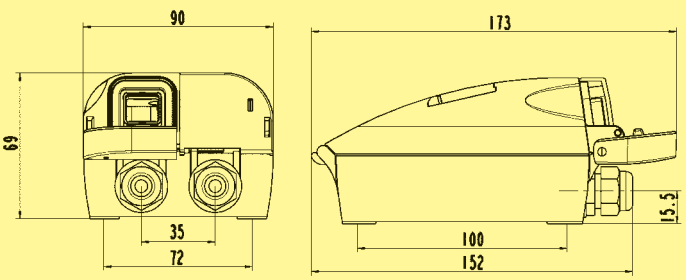
Distribution modules and Outlets

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 ☒

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, prEN 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 isolation	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, V0, UL 94-0
Colour	Black (similar RAL 9011) or White (similar RAL 9010)
Advantages	Simple mounting Cable entering ether from bottom or from top Self-close protection covers 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 covers, cable management, cable glands and label 2x RJ45 female modules, Category 6 1x blind plug (if only only 1 cable is used) Assembly instructions	09 45 845 1500 09 45 845 1501		

Notes

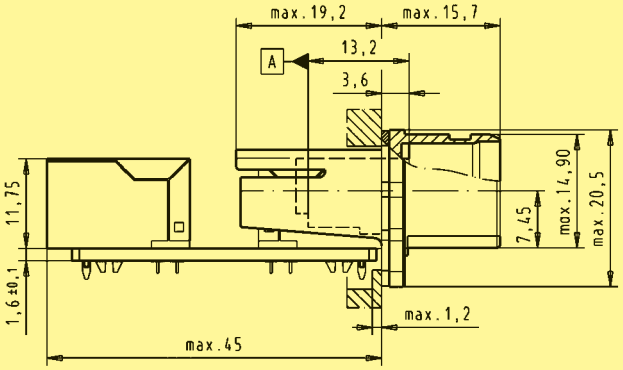
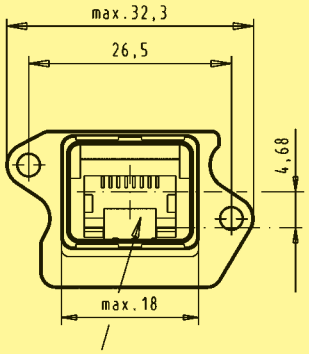
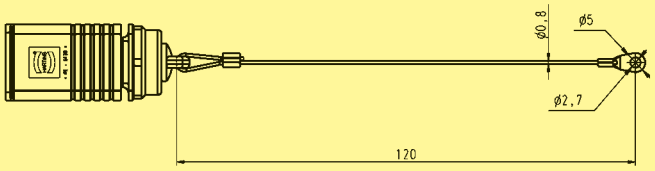
Panel feed-throughs

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	☐

Number of ports, Copper / Termination	2 / 1x RJ45 (Twisted Pair) (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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
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, UL 94-V0
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 including flat gasket RJ45 female module mounted on PCB Assembly instructions	09 45 245 1102	  IEC 60603.7 modular jack	
Protection cover for panel feed-through	09 45 845 0004		

System cables

HARTING Industrial Ethernet Patch cable RJ45, 8-wire

RJ45 connection cable for control or distributor cabinets or within controllers

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

Connector types	RJ45, overmoulded
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PUR, halogen-free LSZH
Wiring	8-pole, 1:1
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Black or Green
Advantages	Robust design Easy handling for all applications

Identification	Part number	
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

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
X	☐	☐	☐	X

Connector types	RJ45
Cable types	4 x 2, Twisted Pair, shielded, PIMF
Sheath material	PVC
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Green
Advantages	Robust industrial design High operation reliability in case of vibrations too

Identification	Part number	Drawing	Dimensions in mm
HARTING RJ Industrial System cable RJ45, 8-wire	Green		
Length 1.5 m	09 45 751 1523		
Length 3.0 m	09 45 751 1525		
Length 5.0 m	09 45 751 1527		
Length 10.0 m	09 45 751 1551		
Length 20.0 m	09 45 751 1553		

System cables

HARTING PushPull System cable RJ45, 8-wire

RJ45 connection cable PushPull for IP 65 / IP 67 applications

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

Connector types	RJ45 PushPull
Cable types	4 x 2, Twisted Pair, shielded, PIMF
Sheath material	PVC
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Green

Advantages

- Standardised PushPull interface for IP 65 / IP 67
- Easy and safe operation
- Especially space-saving

Identification	Part number	Drawing	Dimensions in mm
HARTING PushPull System cable RJ45, 8-wire	Green		
Length 1.5 m	09 45 745 1523		
Length 3.0 m	09 45 745 1525		
Length 5.0 m	09 45 745 1527		
Length 10.0 m	09 45 745 1551		
Length 20.0 m	09 45 745 1553		

System cables

Han® 3 A System cable RJ45, 8-wire

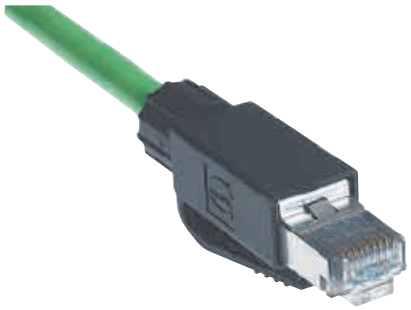
RJ45 connector cable Han® 3 A for IP 65 / IP 67 applications

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

Connector types	Han® 3 A RJ45
Cable types	4 x 2, Twisted Pair, shielded, PIMF
Sheath material	PVC
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Green
Advantages	Very robust metal housing Han® 3 A for IP 65 / IP 67 Additional locking

Identification	Part number	Drawing	Dimensions in mm
Han® 3 A System cable RJ45, 8-wire	Green		
Length 1.5 m	09 45 715 1523		
Length 3.0 m	09 45 715 1525		
Length 5.0 m	09 45 715 1527		
Length 10.0 m	09 45 715 1551		
Length 20.0 m	09 45 715 1553		

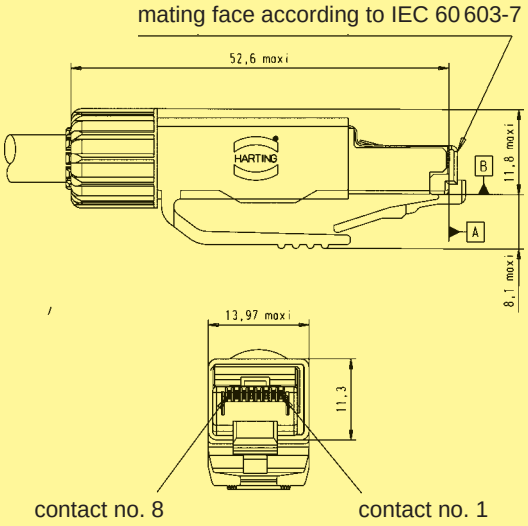
Connector sets



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
X	☐	☐	☐	X

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, prEN 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 – Cable sheath diameter	 AWG 42/7 - AWG 27/7 6.5 mm - 6.9 mm
Degree of protection	IP 20
Operating temperature range	– 40 °C to + 70 °C
Housing material	Polycarbonate, UL 94-V0
Colour	Black
Advantages	Field-assembly connector, Cat. 6
Mounting information	If the cable is assembled on both sides, please use one connector set with white and one connector set with blue cable manager (delivers optimal transmission behavior)

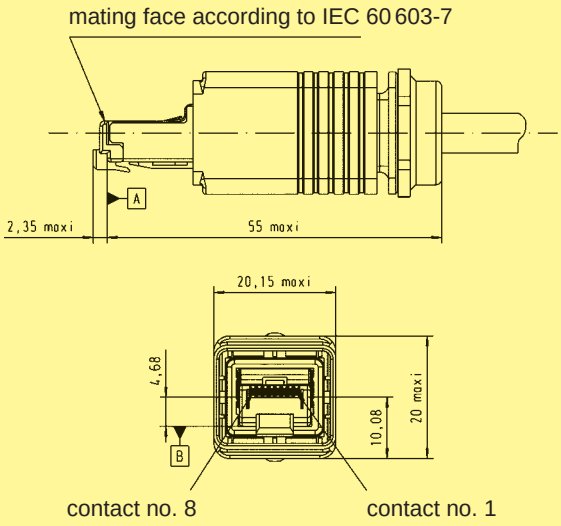
Identification	Part number	Drawing	Dimensions in mm
HARTING RJ Industrial® Connector set RJ45, 8-pole with cable manager White cable manager Blue Set consists of: Housing including shielding Cable gland Assembly instructions	 09 45 151 1500 09 45 151 1510		
Mounting tools for RJ45 connector set	09 45 800 0500		

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 ☒

Connector type	PushPull connector RJ45 acc. to IEC 24 702
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 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 – Cable sheath diameter	 AWG 42/7 - AWG 27/7 6.5 mm - 8.6 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to + 70 °C
Housing material	Polyamide, UL 94-V0
Colour	Black
Advantages	Space-saving connector assembly via PushPull interface Field-assembly connector, Cat. 6, in 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 (delivers optimal transmission behavior)

Identification	Part number	Drawing	Dimensions in mm
HARTING PushPull Connector set RJ45, 8-pole with cable manager White cable manager Blue Set consists of: PushPull housing including RJ45 connector and shielding 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		

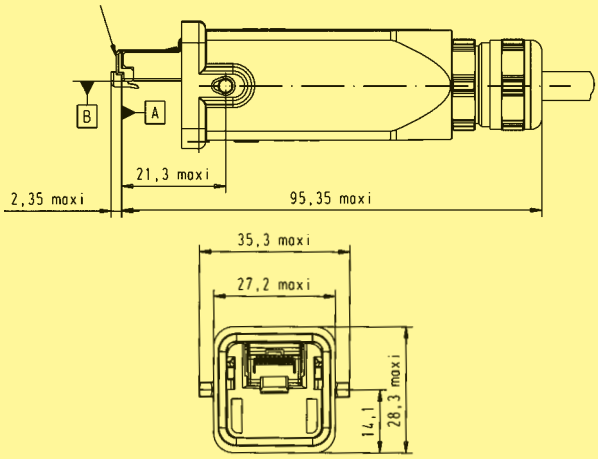
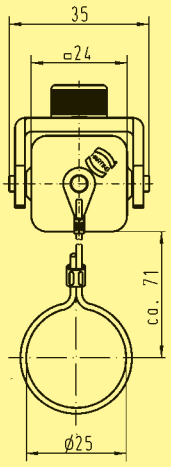
Connector sets

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 ☒

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, prEN 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 42/7 - AWG 27/7
– 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, UL 94-V0
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 (delivers optimal transmission behavior)

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

Cables

Industrial Cat. 6 cable, stranded, 8-wire, PVC

to make up flexible connections
(one- or two-sided assembled system cables)

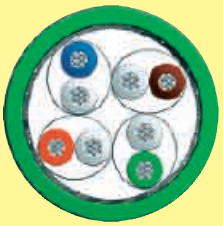
IP 20	IP 65 / IP 67	PVC	Cat. 5	Cat. 6
X	X		☐	X

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	6.8 mm
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 10 °C to + 70 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green

Advantages

Robust industrial-compatible design
Optimal power reserves

Identification	Part number	Drawing	Dimensions in mm
Industrial Cat. 6 cable, stranded, 8-wire PVC			
20 m ring	09 45 600 0530		
50 m ring	09 45 600 0540		
100 m ring	09 45 600 0500		
500 m drum	09 45 600 0520		



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, halogen-free	Cat. 5	Cat. 6
☒	☒		☐	☒

Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	Cord, 4 x 2 x AWG 27/7
Sheath material	PUR, halogen-free
Cable sheath diameter	6.8 mm
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 40 °C to + 70 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green
Advantages	Robust industrial-compatible design Halogen-free

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

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
X	X		X	☐

Cable structure	4 x 2, Twisted Pair, shielded, PIMF
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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 45 °C to + 60 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Black

Advantages

Robust industrial-compatible design
Applicable also for outside applications

Identification	Part number	Drawing	Dimensions in mm
Industrial Cat. 5 outdoor cable, 8-wire			
20 m ring	09 45 600 0230		
50 m ring	09 45 600 0240		
100 m ring	09 45 600 0200		
500 m drum	09 45 600 0220		

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
X	X		X	☐

Cable structure	4 x 2, Twisted Pair, shielded, PIMF
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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 45 °C to + 60 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green
Advantages	Robust industrial-compatible design Halogen-free

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

Notes

List of contents Page

List of contents Page

Introduction

"**Profile-specific Cabling – PROFINET**" shows HARTING's complete cabling portfolio, which simply and efficiently networks PROFINET-conformant machines, equipment and controllers.

PROFINET is the continuation of PROFIBUS technology, based on **Ethernet TCP/IP**. There are in principle two different functional classes:

- **PROFINET CBA** (Component-based Automation) for communications between intelligent automation devices
- **PROFINET IO** for communications between a controller and decentralised field devices

Three performance classes are implemented:

- **TCP/IP** – ethernet communications without real-time requirements
- **RT** – real-time communication for I/O data traffic, in particular in automation technology
- **IRT** – isosynchronous real-time communication, especially for all motion control applications

Essentially, all PROFINET applications can transmit over a future-proof generic cabling system. However the PNO (PROFINET User Organisation) has developed special guidelines for cabling components and installation practices and so all PROFINET cables and connectors are implemented with **4 wires**.

In contrast to generic cabling, PROFINET defines interfaces for power supply and/or the general transmission of data and power (so-called **hybrid** solutions). The HARTING PROFINET cabling portfolio includes these connector types, for example the **Han® 3 A Hybrid**.

The use of connector types defined in the PROFINET guidelines, for example the **Han® PushPull RJ45**, that are also recommended by **AIDA** (**A**utomation **I**nitiative German **D**omestic **A**utomobile Manufacturers), offers customers a high level of compatibility within PROFINET conformant cabling.

HARTING's PROFINET cabling system consequently allows an easy machine-, equipment- and controller-network enhancement within a customer's existing PROFINET structure.

This PROFINET cabling system is part of HARTING's comprehensive **Automation IT** network solution, which brings together active network technology, cabling and solutions for device and equipment power supply.

The PROFINET cabling system's product portfolio covers:

- **Distributors and Connector boxes:** Termination and distribution of cables in harsh IP 65 / IP 67 environments, but also within control or distribution cabinets.
- **Panel feed-throughs:** To ensure reliable cable introduction from IP 65 / IP 67 environments into control or distribution cabinets.
- **System cables:** Made-up system cables for quick connection of terminal boxes, distributors or active devices with machines, equipment and controllers.
- **Connectors:** Connector sets to make up specific system cables onsite.
- **Cables:** A comprehensive cable portfolio for the laying out / manufacture of system cables onsite.

The advantages of the HARTING PROFINET cabling system at-a-glance

- **PROFINET conformant cabling infrastructure**, usable for all PROFINET functional and performance classes
- Supports all PROFINET **safety features** and **real-time requirements**
- Can be expanded and integrated into existing **PROFINET infrastructures** without problems
- Conformance with AIDA guidelines makes roll-outs in the auto industry easier
- Use of PROFINET conformant **connectors** reduces the variety of parts and makes purchasing and stocking of components easier
- Special solutions for simultaneous (Hybrid) and/or separate power transmission enhances network functionality
- The high **quality** of the cabling system guarantees a long **useful life** and **reliable operations**
- Simple planning, installation and reliable operation **saves costs** and delivers a high ROI
- The PROFINET cabling system is part of **HARTING's one-stop Automation IT** network solution

Distribution modules and Outlets

HARTING Cabinet Outlet RJ45

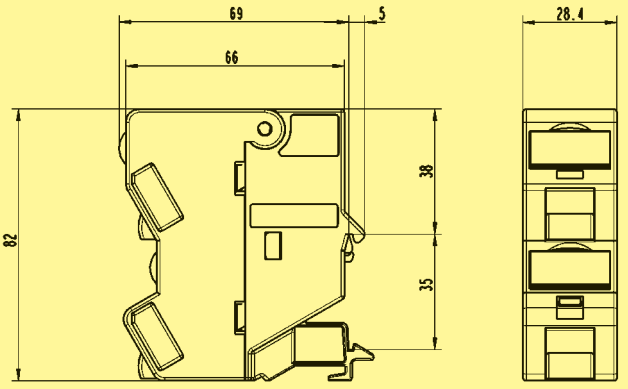
RJ45 distribution module for IP 20 environments (top-hat rail mounting)

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

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, prEN 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 isolation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 9 mm
Shielding	fully shielded, 360° shielding contact
Mounting	mounting onto 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, V0
Colour	Grey

Advantages

- Simple mounting
- Cable entering ether from bottom or from top
- Dust protection covers
- Port identification
- Angled outputs

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

Distribution modules and Outlets

Han® 3 A Metal Outlet RJ45, Cat. 6

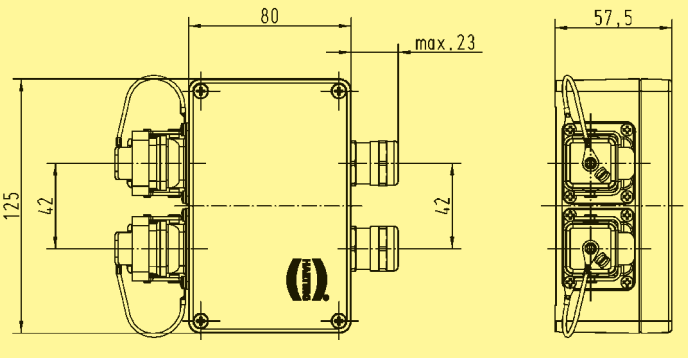
RJ45 Industrial Outlet for IP 65 / IP 67 environments

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

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, prEN 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 isolation	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 connector ports Han® 3 A

Identification	Part number	Drawing	Dimensions in mm
Han® 3 A Metal Outlet RJ45, Cat. 6 consisting of: 2 port-metal housing with protection covers 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

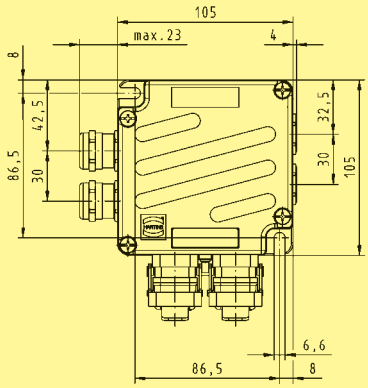
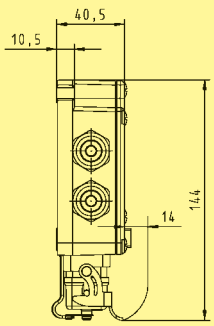
RJ45 Industrial Outlet for IP 65 / IP 67 environments

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

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, prEN 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 isolation	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 ether from the left or from the right side
- Lockable connector ports Han® 3 A

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

Notes

Panel feed-throughs

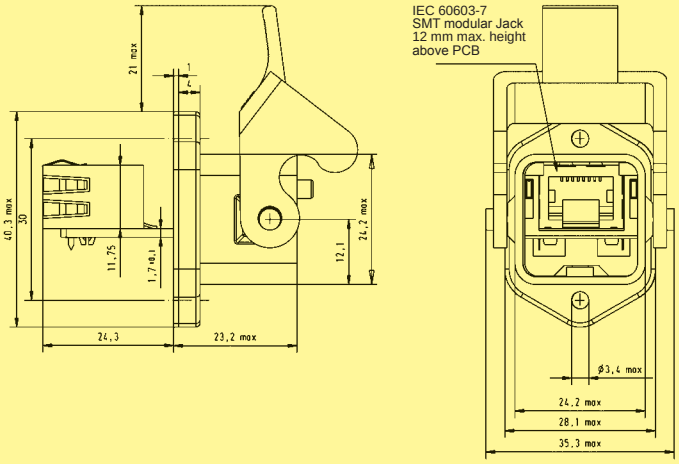
Han® 3 A Panel feed-through RJ45

RJ45 panel feed-through for control or distributor cabinets

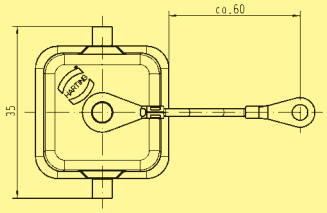
IP 20 ☐	IP 65 / IP 67 ☐	IP 65 / IP 67 to IP 20 ☒	Cat. 5 ☒	Cat. 6 ☐

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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
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, UL 94-V0
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 operational cases
	Coding possible

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



Dimensions valid for straight Plastic version



Dimensions valid for Plastic version

Panel feed-throughs

Han® 3 A double-coupling RJ45

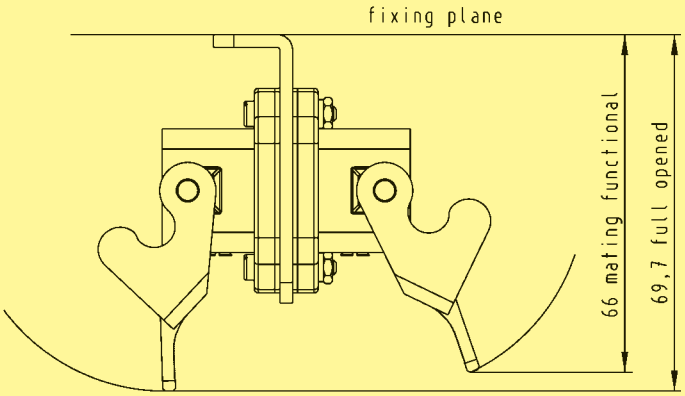
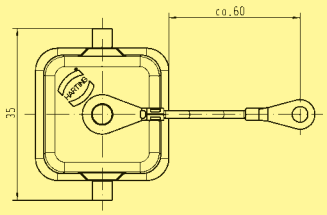
RJ45 double-coupling for control or distributor cabinets

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

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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
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, UL 94-V0
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 operational cases
- Coding possible

Identification	Part number	Drawing	Dimensions in mm
Han® 3 A double-coupling RJ45 Plastic version	09 45 225 1107		
Accessories Protection cover IP 65 / IP 67 for panel feed-through	09 20 003 5445		
Han® 3 A double-coupling RJ45 Metal version Standard	09 45 215 1107	Dimensions valid for Plastic version	
Accessories Protection cover IP 65 / IP 67 for panel feed-through	09 20 003 5425		
Han® 3 A double-coupling RJ45 Metal version M	09 45 215 1110		
Accessories Protection cover IP 65 / IP 67 for panel feed-through	09 37 003 5405	Dimensions valid for Plastic version	
Accessories Set of coding pins	09 45 820 0000		

Panel feed-throughs

Han® 3 A Hybrid panel feed-through RJ45

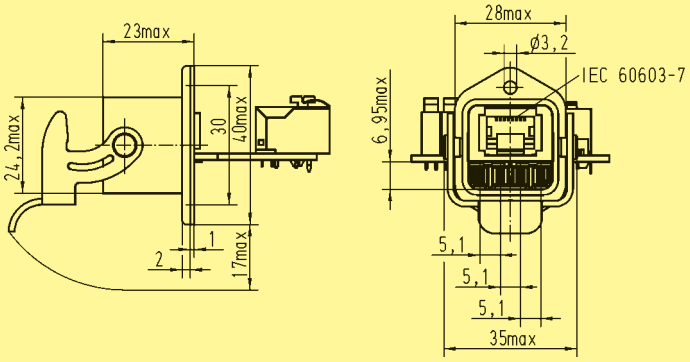
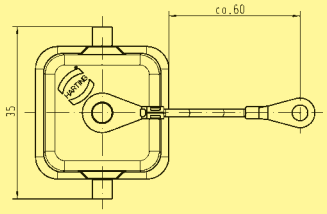
Hybrid panel feed-through for control or distributor cabinets

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

Number of ports, Copper / Termination	2 / 1x Han® 3 A RJ45 (IP 65 / IP 67) 1x RJ45 (Twisted Pair) (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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
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, UL 94-V0
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	09 45 225 1300		
Accessories Protection cover IP 65 / IP 67 for panel feed-through	09 20 003 5445		
Han® 3 A Hybrid Panel feed-through RJ45 Metal version Standard	10 12 005 1002		
Accessories Protection cover IP 65 / IP 67 for panel feed-through	09 20 003 5425		
Accessories Set of coding pins	09 45 820 0000		

Panel feed-throughs

Han® 3 A Hybrid double-coupling RJ45

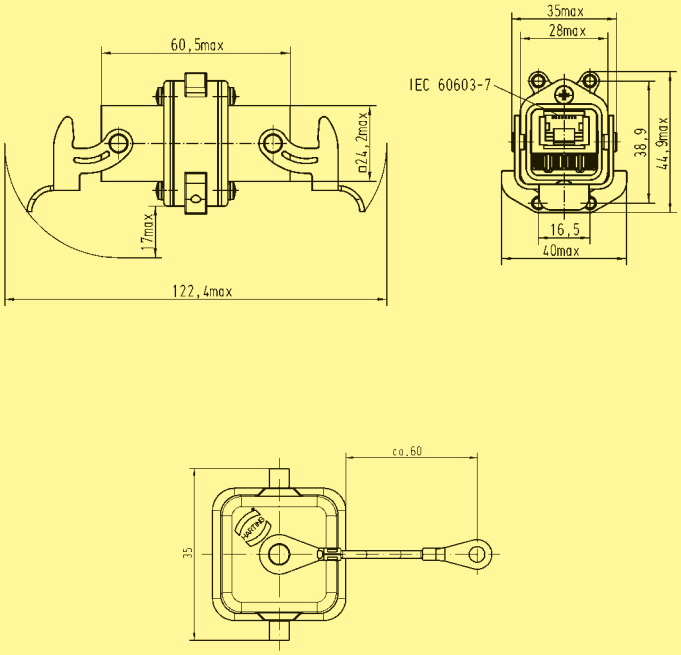
Hybrid double-coupling for control or distributor cabinets

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

Number of ports, Copper / Termination	2 / Han® 3 A RJ45 (IP 65 / IP 67)
Termination Hybrid supply	4 contacts in the Han® 3 A connector (IP 65 / IP 67)
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
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
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 Hybrid double-coupling RJ45 Metal version Standard	10 12 005 1003		
Accessories Protection cover IP 65 / IP 67 for panel feed-through	09 20 003 5425		
Accessories Set of coding pins	09 45 820 0000		

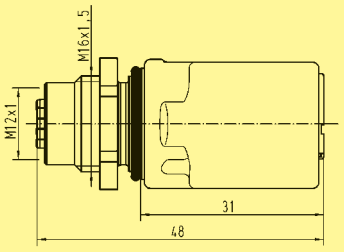
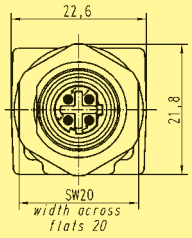
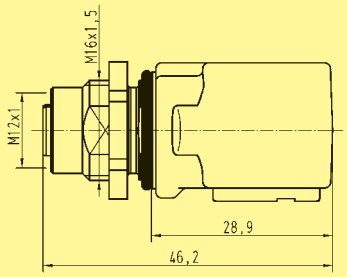
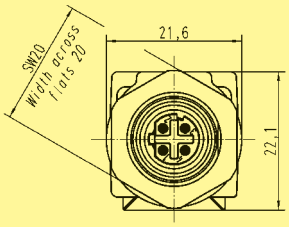
Panel feed-throughs

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 ☐

Number of ports, Copper / Termination	2 / 1x M12, D-coding (IP 65 / IP 67) 1x RJ45 (Twisted Pair) (IP 20)
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
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		

Notes

System cables

HARTING Industrial Ethernet Patch cable RJ45, 8-wire

RJ45 connection cable for control or distributor cabinets or within controllers

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

Connector types	RJ45, overmoulded
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PUR, halogen-free LSZH
Wiring	8-pole, 1:1
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Black or Green
Advantages	Robust design Easy handling for all applications

Identification	Part number	
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 7.5 m	09 45 971 1129	09 45 971 1109

System cables

HARTING RJ Industrial® System cable RJ45, 4-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
☒	☐	☐	☒	☐

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, trailing cables useable
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 on request
Advantages	Robust industrial design Available also as Multiport version for especially space-critical port configurations on switches or devices

Additional technical information about overmoulded system cables find on page C·P 43

Identification	Part number Standard	Part number Multiport
HARTING RJ Industrial® System cable RJ45, 4-wire		
Type A		
Length 1.5 m	09 45 771 0023	09 47 343 4006
Length 3.0 m	09 45 771 0025	09 47 343 4009
Length 5.0 m	09 45 771 0027	09 47 343 4012
Length 10.0 m	09 45 771 0051	09 47 343 4018
Length 20.0 m	09 45 771 0053	09 47 343 4020
HARTING RJ Industrial® System cable RJ45, 4-wire		
Type B		
Length 1.5 m	09 45 771 1123	09 47 343 4034
Length 3.0 m	09 45 771 1125	09 47 343 4037
Length 5.0 m	09 45 771 1127	09 47 343 4040
Length 10.0 m	09 45 771 1151	09 47 343 4046
Length 20.0 m	09 45 771 1153	09 47 343 4048
HARTING RJ Industrial® System cable RJ45, 4-wire		
Type C		
Length 1.5 m	09 45 771 1164	09 47 343 4090
Length 3.0 m	09 45 771 1166	09 47 343 4093
Length 5.0 m	09 45 771 1168	09 47 343 4096
Length 10.0 m	09 45 771 1173	09 47 343 4102
Length 20.0 m	09 45 771 1175	09 47 343 4104

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, trailing cables useable	Copper, stranded, shielded
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 on request

Advantages

Robust industrial design

For especially space-saving cabling

Additional technical information about overmoulded system cables find on page C·P 43

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, trailing cables useable	Copper, stranded, shielded
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 on request

Advantages

Robust industrial design

For especially space-saving cabling

Additional technical information about overmoulded system cables find on page C·P 43

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, trailing cables useable	Copper, stranded, shielded
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 on request

Advantages

- Robust industrial design
- For especially space-saving cabling
- Exact length can be adjusted
- Use HARTING RJ45 connector (09 45 151 1100)

Additional technical information about overmoulded system cables find on page C·P 43

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

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 ☐

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, trailing cables useable
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 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 ☐

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, trailing cables useable
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 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	09 45 700 1123
Length 3.0 m	09 45 700 1125
Length 5.0 m	09 45 700 1127
Length 10.0 m	09 45 700 1151
Length 20.0 m	09 45 700 1153
Han® 3 A System cable RJ45, 4-wire Type B	
Length 1.5 m	09 45 700 1164
Length 3.0 m	09 45 700 1166
Length 5.0 m	09 45 700 1168
Length 10.0 m	09 45 700 1173
Length 20.0 m	09 45 700 1175
Han® 3 A System cable RJ45, 4-wire Type C	
Length 1.5 m	09 45 700 0023
Length 3.0 m	09 45 700 0025
Length 5.0 m	09 45 700 0027
Length 10.0 m	09 45 700 0051
Length 20.0 m	09 45 700 0053

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 ☐

Connector types	Han® 3 A Hybrid, plastic
Cable types	2 x 2 x AWG 22/7, Twisted Pair, 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, prEN 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 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	Drawing	Dimensions in mm
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		

System cables

HARTING PushPull System cable RJ45, 4-wire

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

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

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, trailing cables useable	Copper, stranded, shielded
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 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 ☐

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, trailing cables useable	Copper, stranded, shielded
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 on request
Advantages	Space-saving IP 65 / IP 67 interface Protected cable duct via overmoulding Easy handling

Additional technical information about overmoulded system cables find on page C·P 43

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


Exit left


Exit right


Exit top


Exit bottom

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 ☐

Connector types: RJ45 PushPull, overmoulded, angled, one side pre-assembled

Cable types

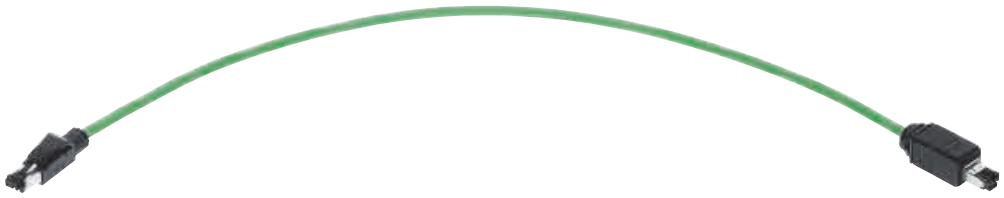
PROFINET Cable type	Type A	Type B	Type C	Outdoor
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, trailing cables useable	Copper, stranded, shielded
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 x AWG 22/7	2 x 2 x AWG 22/7
Sheath material	PVC	PVC	PUR	PVC
Operating 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, prEN 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 on request
Advantages	robust cable duct via overmoulding For especially space-saving cabling Exact length can be adjusted Use HARTING PushPull RJ45 connector (09 45 145 1100)

Additional technical information about overmoulded system cables find on page C·P 43

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

Connector types	RJ45 PushPull and RJ45 IP 20

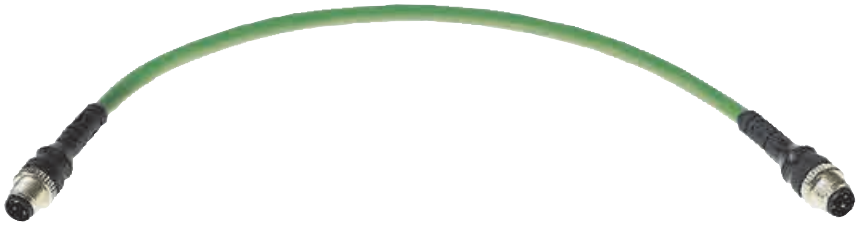
Cable types

PROFINET Cable type	Type A	Type B	Type C
Cables	Copper, solid, shielded	Copper, stranded, shielded	Copper, stranded, shielded, trailing cables useable
Wire gauge	2 x 2 x AWG 22/1	2 x 2 x AWG 22/7	2 x 2 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, prEN 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 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

System cables



Han® M12 System cable, 4-wire

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

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

Connector types	Han® M12, D-coding, overmoulded
Cable types	2 x 2 x AWG 22/7, Twisted Pair, shielded
Sheath material	PUR
Wiring	4-pole (RJ45 contacts 1/2 and 3/6)
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Green
Advantages	Robust design Use on-site made possible by IP 65 / IP 67 protection

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		

Additional technical information about overmoulded system cables find on page C·P 43

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
☒	☒	☐	☒	☐

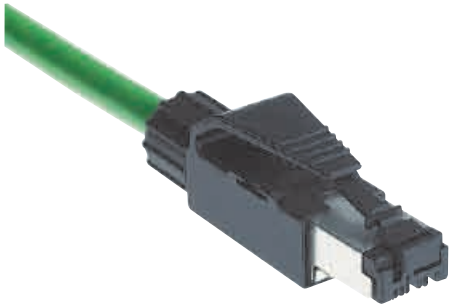
Electrical characteristics at 20 °C

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

Electrical characteristics after damp heat cycles

Contact resistance:	≤ 20 mΩ
Insulation resistance:	≥ 100 MΩ
Dielectric withstand voltage:	
contact - contact	1 kV
contact - ground	1.5 kV

Connector sets

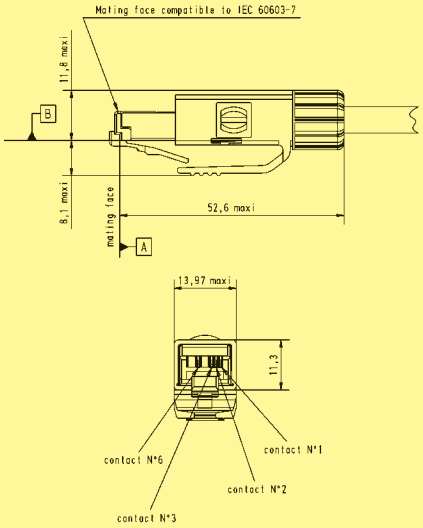


HARTING RJ Industrial® Connector set RJ45, 4-pole
to make up RJ45 system cables PROFINET

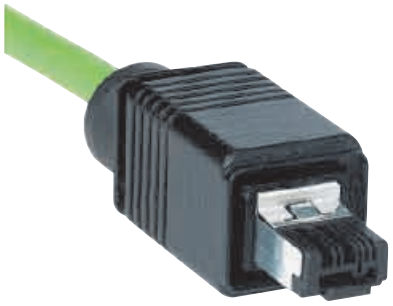
IP 20	IP 65 / IP 67	IP 65 / IP 67 to IP 20	Cat. 5	Cat. 6
X	☐	☐	X	☐

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, prEN 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 23/1 - AWG 22/1 (solid)
– Cable sheath diameter	6.5 mm - 6.9 mm
Degree of protection	IP 20
Operating temperature range	– 40 °C to + 70 °C
Housing material	Polycarbonate, UL 94-V0
Colour	Black

Advantages Field-assembly connector, Cat. 5

Identification	Part number	Drawing	Dimensions in mm
HARTING RJ Industrial® Connector set RJ45, 4-pole Set consists of: Housing including shielding splice element Cable gland Assembly instructions	09 45 151 1100		

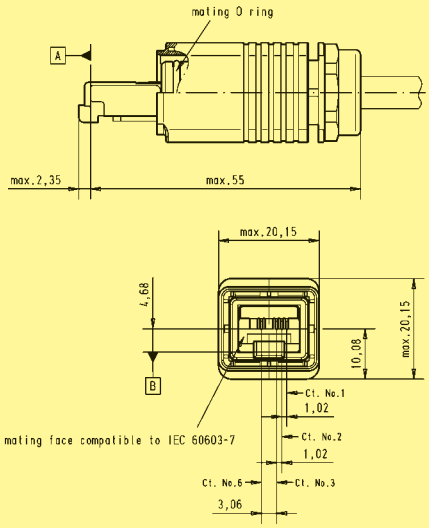
Connector sets



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 ☐

Connector type	HARTING PushPull connector RJ45 acc. to IEC 24 702
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 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, UL 94-V0
Colour	Black
Advantages	Field-assembly connector, IP 65 / IP 67 Cat. 5
Mounting information	Tool-less assembly

Identification	Part number	Drawing	Dimensions in mm
HARTING PushPull Connector set RJ45, 4-pole Set consists of: PushPull housing with RJ45 connector and shielding Cable gland Assembly instructions	09 45 145 1100		
Protection cover for PushPull connectors	09 45 845 0001		

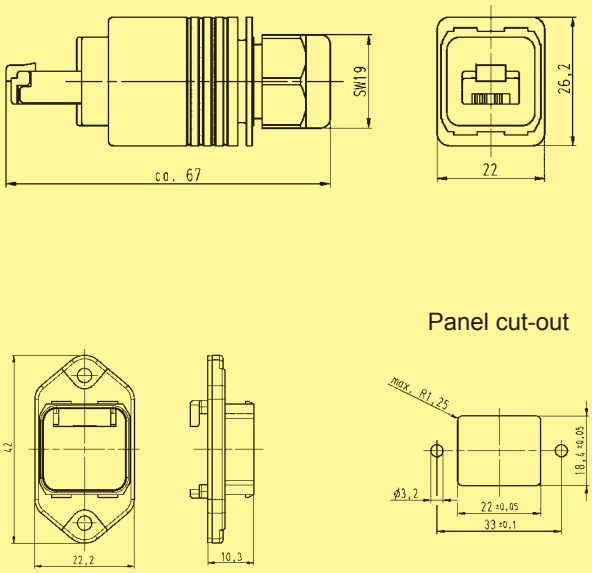
Connector sets

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 ☐

Connector type	Han PushPull connector RJ45 acc. to IEC 61 918 (AIDA compliant)
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 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, UL 94-V0
Colour	Black
Advantages	Field-assembly connector, IP 65 / IP 67 Cat. 5
Mounting information	Tool-less IDC technology

Identification	Part number	Drawing	Dimensions in mm
Han® PushPull Connector set RJ45, 4-pole Set consists of: PushPull housing with RJ45 connectors and shielding Cable gland Assembly instructions	09 35 221 0421		

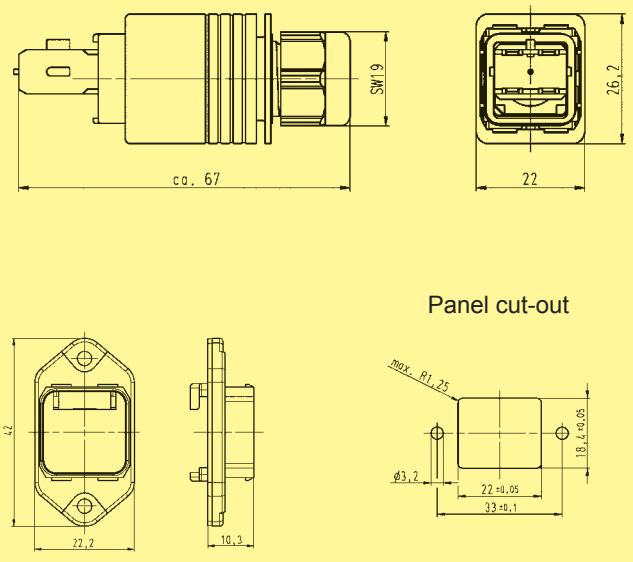
Connector sets

Han® PushPull Connector set SCRJ

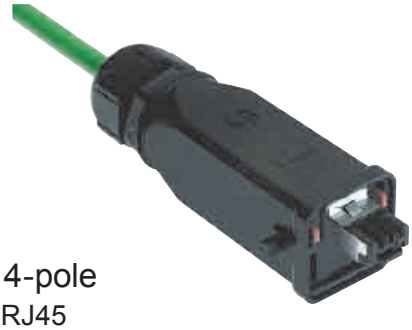
to make up Han® PushPull system cables SCRJ

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

Connector type	Han PushPull connector SCRJ according to IEC 61 918 (AIDA compliant)
Number of fibres	2
Transmission performance	depends on the used fibre type
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 IDC 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, UL 94-V0
Colour	Black
Advantages	Field-assembly glass fibre connector, IP 65 / IP 67

Identification	Part number	Drawing	Dimensions in mm
Han® PushPull Connector set SCRJ Set consists of: PushPull housing with SCRJ feeding Cable gland Assembly instructions Note: Order SC ferrules separately	09 35 221 0422		

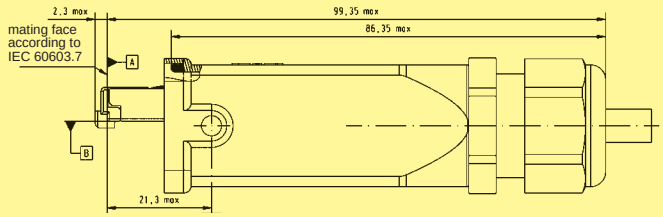
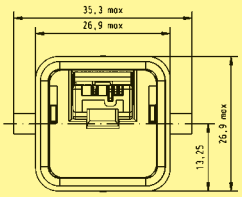
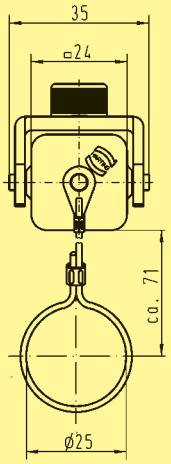
Connector sets



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 ☐

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, prEN 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 - 6.9 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to + 70 °C
Plastic version	
Housing material	Polyamide, UL 94-V0
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
	Tool-less assembly

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

Connector sets

Han® 3 A Hybrid Connector set RJ45, 4-pole

to make up HARTING Han® 3 A Hybrid system cables RJ45

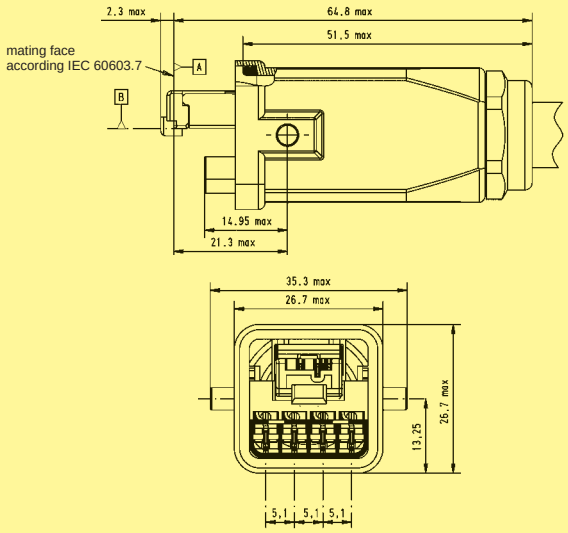
IP 20 ☐	IP 65 / IP 67 ☒	IP 65 / IP 67 to IP 20 ☐	Cat. 5 ☒	Cat. 6 ☐

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, prEN 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 (2x 2 data + 4x power)
– Wire diameter (data)	AWG 24/7 - AWG 22/7 (stranded) AWG 23/1 - AWG 22/1 (solid)
– Wire diameter (power)	1.5 mm^2, stranded
– Cable sheath diameter	10 mm - 11 mm
Degree of protection	IP 65 / IP 67
Operating temperature range	– 40 °C to + 70 °C
Plastic version	
Housing material	Polyamide, UL 94-V0
Colour	Black
Metal version Standard	
Housing material	Zinc, die-cast
Colour	Grey

Advantages

Field-assembly connector, IP 65 / IP 67
Cat. 5

Tool-less assembly

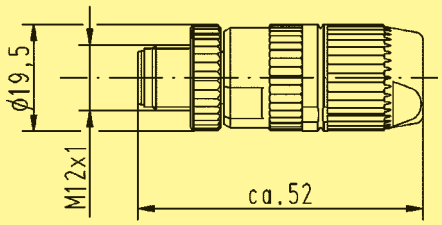
Identification	Part number	Drawing	Dimensions in mm
Han® 3 A Hybrid Connector set RJ45, 4-pole Plastic version straight style Metal version Standard straight style Set consists of: Han® 3 A Hybrid housing including RJ45 connector and shielding Cable gland Assembly instructions	09 45 125 1300 10 12 005 2001		
Protection cover for Han® 3 A connector Plastic version Metal version Standard	 09 20 003 5442 09 20 003 5422		

Connector sets

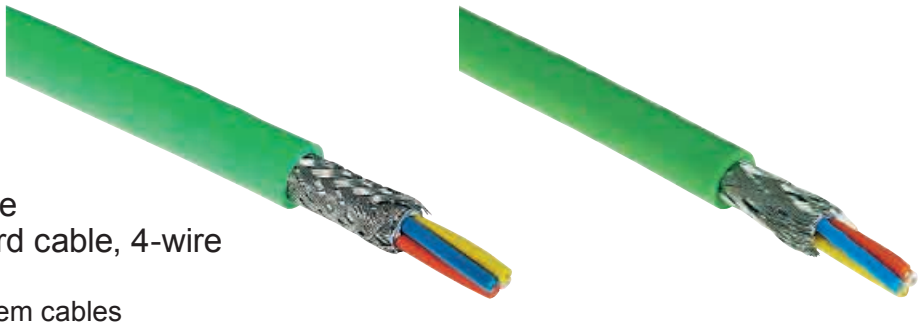
HARAX® M12 Connector D-coding, 4-pole
to make up HARTING system cables M12

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

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 – Cable sheath diameter	 AWG 24 - AWG 22 (Cord) 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 Tool-less assembly

Identification	Part number	Drawing	Dimensions in mm
HARAX® M12 Connector D-coding, 4-pole straight style	21 03 281 1405	  View Connection side	

Cables



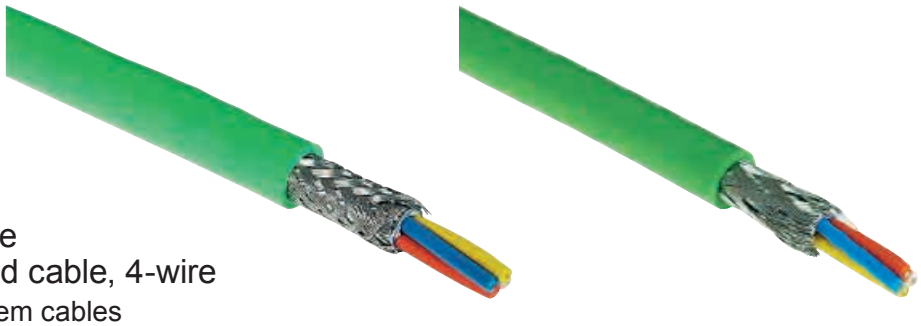
PROFINET Type A cable
Industrial Cat. 5 Standard cable, 4-wire
for permanent installation or
to make up PROFINET system cables

IP 20	IP 65 / IP 67	PVC	Cat. 5	Cat. 6
X	X		X	❐

Cable structure	Star quad, double shielding
Core structure	2 x 2 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, prEN 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 industrial-compatible design PROFINET compliant

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

Cables



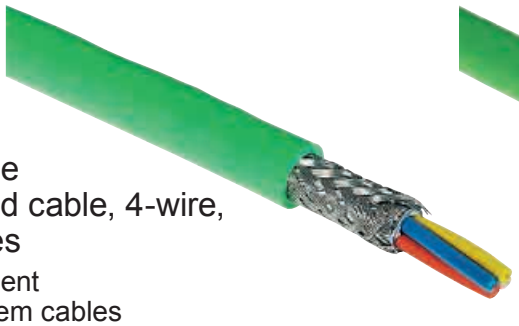
PROFINET Type B cable
Industrial Cat. 5 stranded cable, 4-wire
to make up PROFINET system cables

IP 20	IP 65 / IP 67	PVC	Cat. 5	Cat. 6
X	X		X	☐

Cable structure	Star quad, double shielding
Core structure	2 x 2 x AWG 22/7 (Cord)
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, prEN 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 industrial-compatible design PROFINET compliant

Identification	Part number	Drawing	Dimensions in mm
PROFINET Type B cable Industrial Cat. 5 stranded cable, 4-wire PVC			
20 m ring	09 45 600 0132		
50 m ring	09 45 600 0142		
100 m ring	09 45 600 0102		
500 m drum	09 45 600 0112		

Cables



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

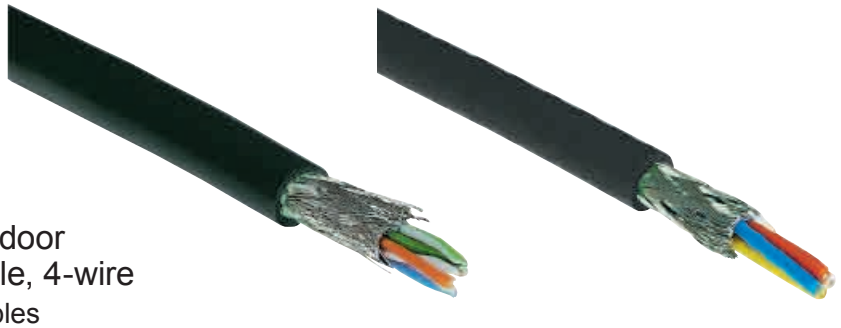
to connect to mobile equipment
to make up PROFINET system cables

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

Cable structure	Star quad, double shielding
Core structure	2 x 2 x AWG 22/7 (Cord)
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, prEN 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 industrial-compatible design PROFINET compliant Useable as trailing cables

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

Cables



PROFINET Type B cable, outdoor
Industrial Cat. 5 stranded cable, 4-wire
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	2 x 2 x AWG 22/7 (Cord)
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, prEN 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 industrial-compatible design PROFINET compliant UV protected

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

Cables

PROFINET Type B cable, Hybrid Industrial Cat. 5 Hybrid cable, 4-wire + 4 x Power

to make up Hybrid system cables

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

Cable structure	Twisted Pair + 4 power cores, double shielding
Core structure	2 x 2 x AWG 22/7 + 4x 84 x 0.15 (Cord)
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, prEN 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 industrial-compatible design PROFINET compliant Additional power supply

Identification	Part number	Drawing	Dimensions in mm
PROFINET Type B cable, Hybrid Industrial Cat. 5 Hybrid cable, 4-wire + 4 x Power FRNC			
10 m ring	09 45 600 0310		
20 m ring	09 45 600 0330		
50 m ring	09 45 600 0340		
100 m ring	09 45 600 0300		

List of contents Page

Introduction

The chapter **"Profile Specific Cabling – EtherNet/IP"** shows the complete HARTING cabling portfolio, that links machinery, equipment and controllers in accordance with the **ODVA guidelines**.

EtherNet/IP together with **DeviceNet™** and **ControlNet™** uses a general application layer – the **"Common Industrial Protocol"** (CIP™). CIP™ makes possible the use of general software and hardware interfaces and consequently the integrated connection of Automation components from the field level over the control level up to the management level. EtherNet/IP demonstrates the implementation of CIP™ over TCP/IP and **Ethernet over IEEE 802.3**.

Fundamentally all EtherNet/IP applications can be carried over a future-proof generic cabling system. ODVA approves of several variants of cabling infrastructure and includes **shielded cabling** (STP) as well as **unshielded** (UTP). Unshielded systems contain a high risk of **EMC** interference and consequently to service reliability. The exact use of UTP systems must be checked – in case of doubt a shielded system is to be preferred.

Together with the possibility of linking 8-wire cables and connectors, EtherNet/IP already leans relatively strongly on the principles of generic cabling.

However in contrast to generic cabling, EtherNet/IP IP 65 / IP 67 infrastructure solutions go back to a special bayonet-interface for connectors and these are also included in the HARTING range of EtherNet/IP cabling, e.g. Han-Max®.

HARTING's EtherNet/IP cabling portfolio consequently allows a simple expansion of the networks for machines, equipment and controllers within customer's existing EtherNet/IP structures.

The portfolio is part of HARTING's comprehensive **Automation IT** network solution, which brings together active network technology, cabling and solutions for device and equipment power supply.

The EtherNet/IP cabling product portfolio covers:

- **Distributors and Connector boxes:** Termination and distribution of cables in harsh IP 65 / IP 67 environments, but also within control or distribution cabinets.
- **Panel feed-throughs:** To ensure cable introduction from IP 65 / IP 67 environments into control or distribution cabinets.
- **System cables:** Made-up system cables for quick connection of terminal boxes, distributors or active devices with machines, equipment and controllers.
- **Connectors:** Connector sets to make up specific system cables onsite.
- **Cables:** A comprehensive cable portfolio for the laying out / manufacture of system cables onsite.

The advantages of the HARTING EtherNet/IP cabling system at-a-glance:

- EtherNet/IP conformant cabling infrastructure, usable for EtherNet/IP, DeviceNet™ and ControlNet™ applications
- Supports all safety features and real-time requirements of EtherNet/IP
- Can be expanded and integrated into existing EtherNet/IP infrastructures without problems
- Conformance to ODVA guidelines makes roll-outs easier in firms which have set up EtherNet/IP as the communications platform
- Use of ODVA-recommended connectors reduces the variety of parts and makes purchasing and stocking of components easier
- Closeness to generic cabling allows the use of Gigabit Ethernet or PoE in the network
- The high quality of the cabling system guarantees a long useful life and reliable operations
- Simple planning, installation and reliable operation saves costs and delivers a high ROI
- The EtherNet/IP cabling system is part of HARTING's one-stop Automation IT network solution

Distribution modules and Outlets

HARTING Cabinet Outlet RJ45

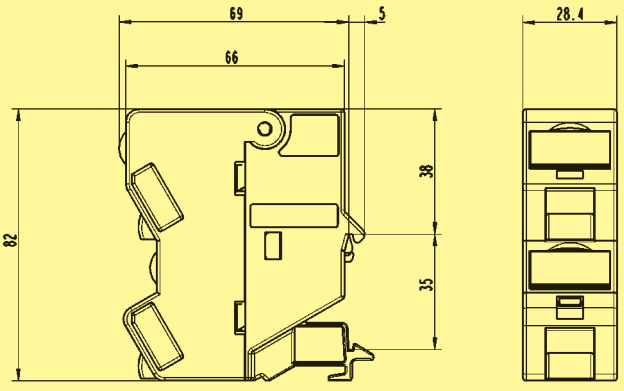
RJ45 distribution module for IP 20 environments (top-hat rail mounting)

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

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, prEN 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 isolation	0.7 mm - 1.6 mm
Cable diameter	6 mm - 9 mm
Shielding	fully shielded, 360° shielding contact
Mounting	mounting onto 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, V0
Colour	light grey RAL 7035

Advantages

- Simple mounting
- Cable entering ether from bottom or from top
- Dust protection covers
- Port identification
- Angled outputs

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

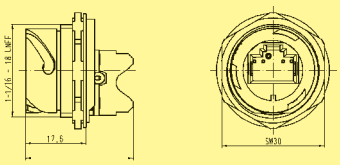
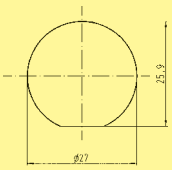
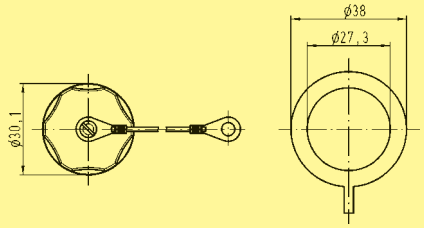
Panel feed-throughs

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
☐	☐	☒	☒	☐

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 and unshielded
Mounting	screw-on type on steel plate walls
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 and unshielded

Identification	Part number	Drawing	Dimensions in mm
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	09 15 300 0302 09 15 300 0301		Panel cut-out for max. wall thickness 2.3 mm 
Protection cover for panel feed-through 	09 15 300 5411		

	Length l (mm)
09 15 300 0301	31.5
09 15 300 0302	42.0

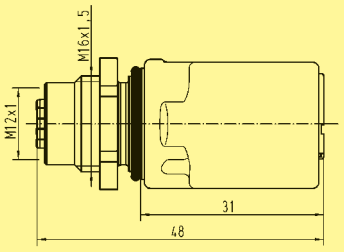
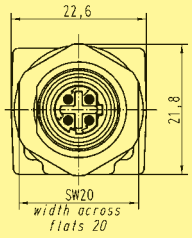
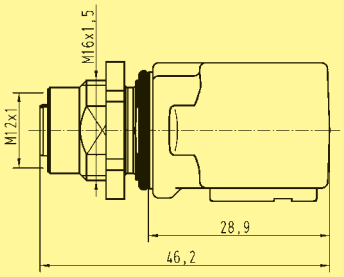
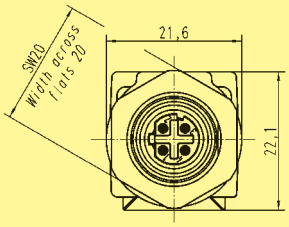
Panel feed-throughs

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 ☐

Number of ports, Copper / Termination	2 / 1x M12, D-coding (IP 65 / IP 67) 1x RJ45 (Twisted Pair) (IP 20)
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
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	 	

System cables

HARTING Industrial Ethernet Patch cable RJ45, 8-wire

RJ45 connection cable for control or distributor cabinets or within controllers

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

Connector types	RJ45, overmoulded
Cable types	4 x 2, Twisted Pair, shielded
Sheath material	PUR, halogen-free LSZH
Wiring	8-pole, 1:1
Transmission performance	Category 5 / Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Black or Green
Advantages	Robust design Easy handling for all applications

Identification	Part number	
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 7.5 m	09 45 971 1129	09 45 971 1109

System cables

HARTING RJ Industrial® System cable RJ45, 8-wire

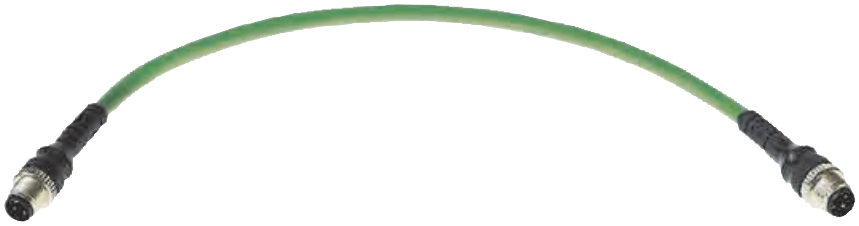
RJ45 connection cable for control or distributor cabinets or within controllers

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

Connector types	RJ45
Cable types	4 x 2, Twisted Pair, shielded PIMF
Sheath material	PVC
Wiring	8-pole, 1:1
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Green
Advantages	Robust industrial design High operational reliability in vibration-prone locations

Identification	Part number	Drawing	Dimensions in mm
HARTING RJ Industrial System cable RJ45, 8-wire	Green		
Length 1.5 m	09 45 751 1523		
Length 3.0 m	09 45 751 1525		
Length 5.0 m	09 45 751 1527		
Length 10.0 m	09 45 751 1551		
Length 20.0 m	09 45 751 1553		

System cables



Han® M12 System cable, 4-wire

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

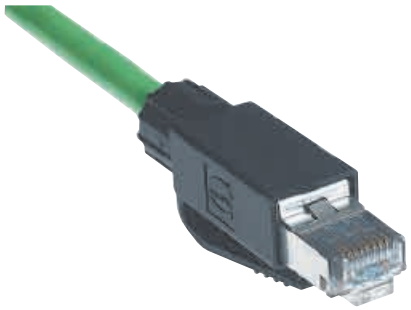
IP 20 ☐	IP 65 / IP 67 ☒	IP 65 / IP 67 to IP 20 ☐	Cat. 5 ☒	Cat. 6 ☐

Connector types	Han® M12, D-coding, overmoulded
Cable types	2 x 2 x AWG 22/7, Twisted Pair, shielded
Sheath material	PUR
Wiring	4-pole (RJ45 contacts 1/2 and 3/6)
Transmission performance	Class D up to 100 MHz according to ISO/IEC 11 801:2002, prEN 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 on request
Colour	Green
Advantages	Robust design Use on-site made possible by IP 65 / IP 67 protection

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		

Notes

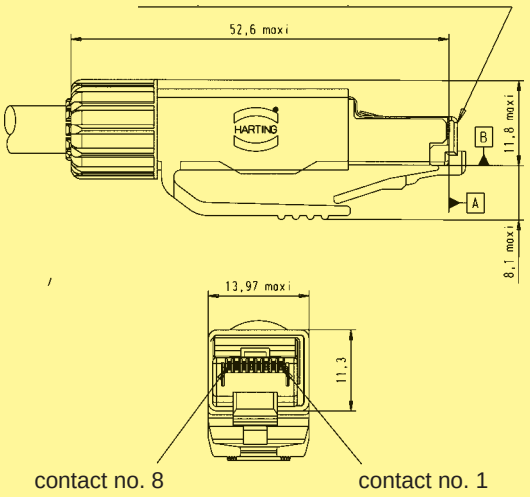
Connector sets



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
☒	☐	☐	☐	☒

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, prEN 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 – Cable sheath diameter	 AWG 42/7 - AWG 27/7 6.5 mm - 6.9 mm
Degree of protection	IP 20
Operating temperature range	– 40 °C to + 70 °C
Housing material	Polycarbonate, UL 94-V0
Colour	Black
Advantages	Field-assembly connector, Cat. 6
Mounting information	If the cable is assembled on both sides, please use one connector set with white and one connector set with blue cable manager (delivers optimal transmission behavior)

Identification	Part number	Drawing	Dimensions in mm
HARTING RJ Industrial® Connector set RJ45, 8-pole with cable manager White cable manager Blue Set consists of: Housing including shielding Cable gland Assembly instructions	 09 45 151 1500 09 45 151 1510	mating face according to IEC 60 603-7  contact no. 8 contact no. 1	
Mounting tools for RJ45 connector set	09 45 800 0500		

Connector sets

Han-Max® Connector set RJ45, 8-pole

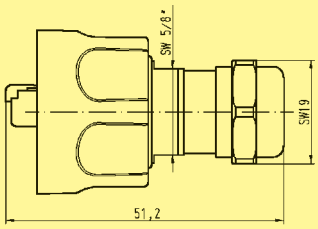
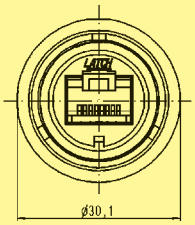
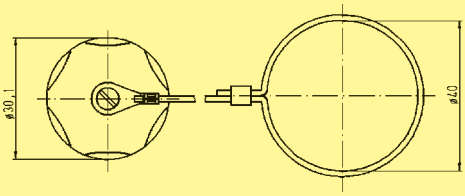
to make up PushPull system cables RJ45

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

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 and unshielded
Mounting	Field-assembly possible
Wire termination	via crimp contacts
Cable options	
– Strand diameter	AWG 24 - AWG 26 (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

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		

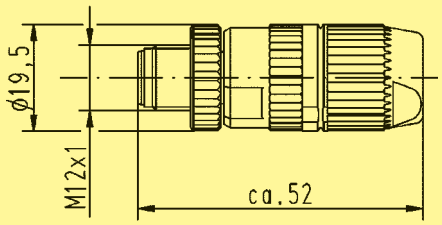
Connector sets

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 ☐

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 – Cable sheath diameter	 AWG 24 - AWG 22 (Cord) 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 Tool-less assembly

Identification	Part number	Drawing	Dimensions in mm
HARAX® M12 Connector D-coding, 4-pole			
straight style	21 03 281 1405		



View
Connection side

Cables

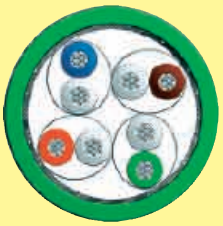
Industrial Cat. 6 cable, stranded, 8-wire, PVC

to make up flexible connections
(one- or two-sided assembled system cables)

IP 20	IP 65 / IP 67	PVC	Cat. 5	Cat. 6
X	X		☐	X

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	6.8 mm
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 10 °C to + 70 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green
Advantages	Robust industrial-compatible design Optimal power reserves

Identification	Part number	Drawing	Dimensions in mm
Industrial Cat. 6 cable, stranded, 8-wire PVC			
20 m ring	09 45 600 0530		
50 m ring	09 45 600 0540		
100 m ring	09 45 600 0500		
500 m drum	09 45 600 0520		



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, halogen-free	Cat. 5	Cat. 6
☒	☒		☐	☒

Cable structure	4 x 2, Twisted Pair, shielded, PIMF
Core structure	Cord, 4 x 2 x AWG 27/7
Sheath material	PUR, halogen-free
Cable sheath diameter	6.8 mm
Transmission performance	Category 6 / Class E up to 250 MHz according to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 40 °C to + 70 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green
Advantages	Robust industrial-compatible design Halogen-free

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

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
X	X		X	☐

Cable structure	4 x 2, Twisted Pair, shielded, PIMF
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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 45 °C to + 60 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Black

Advantages

Robust industrial-compatible design
Applicable also for outside applications

Identification	Part number	Drawing	Dimensions in mm
Industrial Cat. 5 outdoor cable, 8-wire			
20 m ring	09 45 600 0230		
50 m ring	09 45 600 0240		
100 m ring	09 45 600 0200		
500 m drum	09 45 600 0220		

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
X	X		X	☐

Cable structure	4 x 2, Twisted Pair, shielded, PIMF
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, prEN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	each pair shielded and additional shield for the whole cable
Operating temperature range	– 45 °C to + 60 °C
Standard lengths	20 m / 50 m / 100 m / 500 m
Colour	Green
Advantages	Robust industrial-compatible design Halogen-free

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

Notes

List of contents Page

Identification	Part number	
HARTING RJ Industrial® Gigalink-Mounting tools for 4-pair HARTING RJ Industrial® Gigalink connectors	**09 45 800 0500**	 With the RJ Industrial Gigalink Assembly Tool 4-pair connectors can be quickly, easily and reliably connected to flexible cables.
HARTING RJ Industrial® Stripping Tool Stripping tool for 2-pair PROFINET cables including blade cassette Blade cassette	**09 45 800 0000** **09 45 800 0001**	 The RJ Industrial Stripping Tool allows the insulation to be quickly and easily removed from 2-pair Industrial Ethernet cables with diameters between 2.5 - 8 mm. The tool is pre-set for a cable diameter of 6.5 mm. It allows the cable sheath and screening braid to be stripped consistently and simultaneously.
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, see page C·P 6). The various conductors are cut to length and inserted into the insulation displacement contacts in a single pass.

Standard / Approvals

		eCon 2000	eCon 3000	eCon 6000	eCon 7000	eCon 9000	sCon 3000	sCon 9000	pCon 7000	pCon 2000
				mCon 6000	mCon 7000	mCon 9000	mCon 3000			
Mechanical stability										
Shock assay	IEC 60 068-2-27	X	X	X	X	X	X	X	X	X
Vibration	IEC 60 068-2-6	X	X	X	X	X	X	X	X	X
Rail standard	EN 50 155, Class 1		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
Interference immunity HF, radiated	IEC 61 000-4-3	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
Interference immunity Surge	IEC 61 000-4-5	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
Emitted radiation	EN 55 011, Class A	X	X	X	X	X	X	X	X	X
Emitted radiation	EN 55 022, Class A	X	X	X	X	X	X	X	X	X
System perturbation	IEC 61 000-3-3								X	X
Rail standard	EN 50 121-3-2		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 RJI	eCon 6050-A
20 73 305 3941	ESC 67-30 TP05U M12	eCon 6050-BA
20 73 308 3972	ESC 67-30 TP08U RJI Hybrid	eCon 6080-HA
20 70 305 3921	ESC 67-10 TP05U RJI	eCon 7050-A
20 70 305 3941	ESC 67-10 TP05U M12	eCon 7050-B
20 70 310 3921	ESC 67-10 TP10U RJI	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 RJI	mCon 6050-A
20 73 305 4941	ESC 67-30 TP05M M12	mCon 6050-BA
20 70 305 4921	ESC 67-10 TP05M RJI	mCon 7050-A
20 70 305 4941	ESC 67-10 TP05M M12	mCon 7050-B
20 70 310 4921	ESC 67-10 TP10M RJI	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 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

List of part numbers

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List of part numbers

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