



Ethernet Switch HARTING mCon 9000

Ethernet Switch, managed, for installation in a 19" rack

General Description

The Ethernet Switches of the product family HARTING mCon 9000 are recommended for use in the widest range of industrial applications and support Ethernet (10 Mbit/s), Fast Ethernet (100 Mbit/s) and Gigabit Ethernet (1000 Mbit/s). The product family enables the connection of up to 10 network devices over Twisted Pair cables or F.O. cables. Optionally for some mCon 9000 Ethernet Switches additional end-devices 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 Ethernet Switch operates 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), Fast Ethernet (100 Mbit/s) and Gigabit Ethernet (1000 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power)
- Pluggable in 19" racks
- mCon 9070-BV:
Power input on the front
no backplane necessary

Advantages

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

Application fields

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

Technical characteristics RJ45

Ethernet interface

Number of ports	8x 10/100Base-T(X) 2x 10/100/1000Base-T(X) (depending on type)
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)
Termination, front	RJ45
Diagnostics (via LED)	<ul style="list-style-type: none"> • Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 1000 Mbit/s: Green 100 Mbit/s: Yellow 10 Mbit/s: OFF
Topology	Line, Ring, Star or mixed

Power supply

Input voltage	24 / 48 V DC (8 ... 60 V DC)
Termination	DIN frame connector, Type F
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	Aluminium, anodised
Degree of protection acc. to DIN 60529	IP 20 (front side IP 40, when mounted)
Mounting	19" rack, 3 U
Weight	approx. 0.6 kg

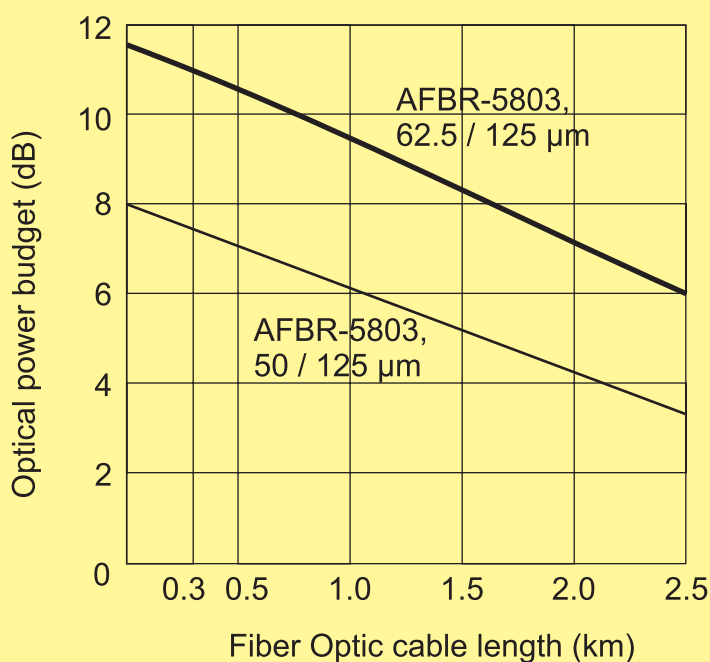
Environmental conditions

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

Technical characteristics F.O. terminations

Ethernet interface – F.O.

Number of ports	2x 100Base-FX
Cable types according to IEEE 802.3	<ul style="list-style-type: none"> • Multimode fibre, 1300 nm; 50 / 125 µm or 62.5 / 125 µm
Data rate	100 Mbit/s
Maximum cable length	<ul style="list-style-type: none"> • 2000 m (Multimode)
Termination	SC-D female / ST female
Diagnostics (via LED)	<ul style="list-style-type: none"> • Status Link – Green • Data transfer (Act) – Green flashing
Wavelength	1300 nm
Transceive power T(X) max. (dynamic)	<ul style="list-style-type: none"> • -14 dBm (50 / 125 µm) • -14 dBm (62.5 / 125 µm)
Transmission power T(X) min.	<ul style="list-style-type: none"> • -23.5 dBm (50 / 125 µm) • -20 dBm (62.5 / 125 µm)
Receive power RX typical (dynamic)	<ul style="list-style-type: none"> • -33.9 dBm (window) • -35.2 dBm (centre)
Receive power RX max. (dynamic)	-14 dBm
Signal detection (dynamic)	-33 dBm
Topology	Line, Ring, Star or mixed



Technical characteristics M12 D-coding

Ethernet interface

Number of ports	7x / 8x 10/100Base-T(X)
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)
Termination, front	M12 D-coding
Diagnostics (via LED)	<ul style="list-style-type: none"> • Status Link – Green • Data transfer (Act) – Green flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: OFF
Topology	Line, Ring, Star or mixed

Power supply

Input voltage	24 / 48 V DC (8 ... 60 V DC)
Diagnostics (via LED)	Power supply

Alarm signalling contact (mCon 9080-BV only)

Change-over contact, potential-free, 24 V DC / 0.5 A

Design features

Housing material	Aluminium, anodised
Degree of protection acc. to DIN 60529	IP 20 (front side IP 40, when mounted)
Mounting	19" rack, 3 U
Weight	approx. 0.6 kg

Environmental conditions

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



Ethernet Switch
HARTING mCon 9100-AAV
 10-port Ethernet Switch for installation in a 19" rack

Managed	IP 20	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	8x 10/100Base-T(X) / RJ45 2x 10/100/1000 Base-T(X) / RJ45
Input voltage / Termination	24 / 48 V DC / DIN frame connector, Type F
Permissible range (min/max)	8 V ... 60 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
Housing material	Aluminium, anodised
Dimensions (W x H x D)	60.6 mm (12 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.6 kg
Operating temperature	-40 °C ... +70 °C
MTBF	720 000 h
Management	fully managed via Web interface and SNMP Functions see page A-3 3

Identification	Part number	Drawing	Dimensions in mm
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<p>HARTING mCon 9100-AAV Ethernet Switch, managed 10 ports RJ45</p>	<p>20 76 110 7002</p>		
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mCon 9000



Ethernet Switch
HARTING mCon 9082-ADV
 10-port Ethernet Switch for installation in a 19" rack

Managed	IP 20	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	8x 10/100Base-T(X) / RJ45
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 / 48 V DC / DIN frame connector, Type F
Permissible range (min/max)	8 V ... 60 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
Housing material	Aluminium, anodised
Dimensions (W x H x D)	60.6 mm (12 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.6 kg
Operating temperature	-40 °C ... +70 °C
Approvals	cUL (in preparation)
MTBF	750 000 h
Management	fully managed via Web interface and SNMP Functions see page A-3 3

Identification	Part number	Drawing	Dimensions in mm
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HARTING mCon 9082-ADV Ethernet Switch, managed 8 ports RJ45 2 ports F.O.	20 76 110 7101		

mCon 9000



Ethernet Switch
HARTING mCon 9082-AEV
 10-port Ethernet Switch for installation in a 19" rack

Managed	IP 20	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	8x 10/100Base-T(X) / RJ45
Number of ports, F.O. / Termination	2x 100Base-FX / ST female
Input voltage / Termination	24 / 48 V DC / DIN frame connector, Type F
Permissible range (min/max)	8 V ... 60 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
Housing material	Aluminium, anodised
Dimensions (W x H x D)	60.6 mm (12 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.6 kg
Operating temperature	-40 °C ... +70 °C
Approvals	cUL (in preparation)
MTBF	715 000 h
Management	fully managed via Web interface and SNMP Functions see page A-3 3

Identification	Part number	Drawing	Dimensions in mm
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<p>HARTING mCon 9082-AEV Ethernet Switch, managed 8 ports RJ45 2 ports F.O.</p>	<p>20 76 110 7201</p>		
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Ethernet Switch
HARTING mCon 9070-BV
 7-port Ethernet Switch for installation in a 19" rack

Managed	IP 20	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	7x 10/100Base-T(X) / M12 D-coding
Input voltage / Termination	24 / 48 V DC / M12 A-coding (on front side)
Permissible range (min/max)	8 V ... 60 V DC
Input current	approx. 130 mA (at 24 V DC)
Housing material	Aluminium, anodised
Dimensions (W x H x D)	60.6 mm (12 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.6 kg
Operating temperature	-40 °C ... +70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A-3 3

Identification	Part number	Drawing	Dimensions in mm
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<p>HARTING mCon 9070-BV Ethernet Switch, managed 7 ports, M12 D-coding</p>	<p>20 76 207 7001</p>		
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mCon 9000



Ethernet Switch
HARTING mCon 9080-BV
 8-port Ethernet Switch for installation in a 19" rack

Managed	IP 20	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	8x 10/100Base-T(X) / M12 D-coding
Input voltage / Termination	24 / 48 V DC / DIN frame connector, Type F
Permissible range (min/max)	8 V ... 60 V DC
Input current	approx. 130 mA (at 24 V DC)
Alarm signalling contact	Change-over contact, potential-free, 24 V DC / 0.5 A
Housing material	Aluminium, anodised
Dimensions (W x H x D)	60.6 mm (12 HP) x 128.4 mm (3 U) x 173.5 mm
Weight	approx. 0.6 kg
Operating temperature	-40 °C ... +70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP Functions see page A:3 3

Identification	Part number	Drawing	Dimensions in mm
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HARTING mCon 9080-BV
 Ethernet Switch, managed
 8 ports M12 D-coding

20 76 208 7002

