



**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 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 Twisted-Pair cabling. Protection class, temperature range and mechanical stability satisfy the highest requirements. These 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), Fast Ethernet (100 Mbit/s) and Gigabit Ethernet (1000 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power, Error)

Advantages

- High degree of protection IP 65 / IP 67
- Robust metal housing, zinc 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
- Railway applications
- Automotive industry
- Wind power

Technical characteristics

Ethernet interface

Number of ports	5x, 8x, 10x 10/100Base-T(X)										
mCon 7100-AA:	2x 10/100/1000-T(X)										
Cable types	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5										
Data rate	10 Mbit/s or 100 Mbit/s or 1000 Mbit/s (mCon 7100-AAV only)										
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)										
Diagnosics (via LED)	<ul style="list-style-type: none"> • Status Link (Link/Act) <table border="0" style="margin-left: 20px;"> <tr> <td>Green</td> <td>terminal device is connected</td> </tr> <tr> <td>Green flashing</td> <td>data transmission in process</td> </tr> </table> • Transfer rate (Speed) <table border="0" style="margin-left: 20px;"> <tr> <td>OFF</td> <td>10 Mbit/s</td> </tr> <tr> <td>Yellow</td> <td>100 Mbit/s</td> </tr> <tr> <td>Green</td> <td>1000 Mbit/s (mCon 7100-AAV only)</td> </tr> </table> 	Green	terminal device is connected	Green flashing	data transmission in process	OFF	10 Mbit/s	Yellow	100 Mbit/s	Green	1000 Mbit/s (mCon 7100-AAV only)
Green	terminal device is connected										
Green flashing	data transmission in process										
OFF	10 Mbit/s										
Yellow	100 Mbit/s										
Green	1000 Mbit/s (mCon 7100-AAV only)										
Topology	Line, Ring, Star or mixed										

Power supply

Input voltage	24 / 48 V DC (12 ... 60 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), 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

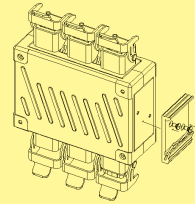
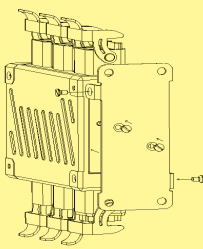
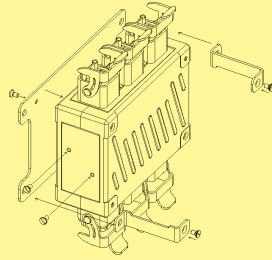
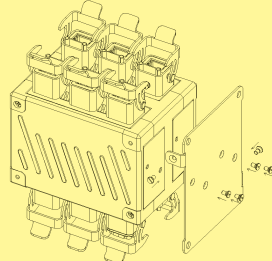
Design features

	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 60529	IP 65 / IP 67	IP 65 / IP 67
Mounting	35 mm top-hat rail acc. to EN 60715, 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 ... +70 °C
Storage temperature	–40 °C ... +85 °C
Relative humidity	10 % ... 95 % (non-condensing)

Identification	Part number Power supply	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 assembly	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



Ethernet Switch HARTING mCon 7050-A1V

5-port Ethernet Switch with extended input voltage range
for use in harsh industrial environments

Managed	IP 67	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	5x 10/100Base-T(X) / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 / 48 V DC Han® 4 A (male)* redundant power supply
Permissible range (min/max)	12 V ... 60 V DC
Input current	approx. 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 ... +70 °C
Approvals	cUL (in preparation)
MTBF	460 000 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 7050-A1V Ethernet Switch, managed Han® 3 A RJ45</p>	<p>20 70 305 4923</p>		
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* Order insert fixing screw 09 20 000 9918 separately



Ethernet Switch HARTING mCon 7050-B1V

5-port Ethernet Switch with extended input voltage range for industrial Ethernet networks with M12 system cabling

Managed	IP 67	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination 5x 10/100Base-T(X) / M12 D-coding (female)

Input voltage / Termination 24 / 48 V DC M12 A-coding (male), redundant power supply

Permissible range (min/max) 12 V ... 60 V DC

Input current approx. 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 ... +70 °C

Approvals cUL (in preparation)

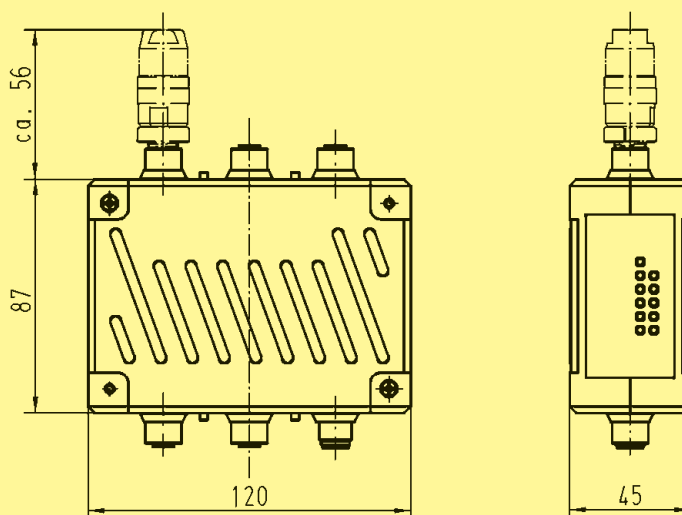
MTBF 462 000 h

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 7050-B1V
Ethernet Switch, managed
M12 D-coding

20 70 305 4943



Ethernet Switch
HARTING mCon 7100-A1V
 10-port Ethernet Switch for use in harsh industrial environments



Managed	IP 67	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	10x 10/100Base-T(X) / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 / 48 V DC Han® 4 A (male)* redundant power supply
Permissible range (min/max)	12 V ... 60 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 ... +70 °C
Approvals	cUL (in preparation)
MTBF	377 000 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 7100-A1V Ethernet Switch, managed Han® 3 A RJ45</p>	<p>20 70 310 4925</p>		
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* Order insert fixing screw 09 20 000 9918 separately



Ethernet Switch HARTING mCon 7100-B1V

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

Managed	IP 67	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	10x 10/100Base-T(X) / M12 D-coding (female)
Input voltage / Termination	24 / 48 V DC M12 A-coding (male), redundant power supply
Permissible range (min/max)	12 V ... 60 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 ... +70 °C
Approvals	cUL (in preparation)
MTBF	378 000 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 7100-B1V Ethernet Switch, managed M12 D-coding</p>	<p>20 70 310 4945</p>		
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mCon 7000

Ethernet Switch
HARTING mCon 7100-AAV
 10-port Ethernet Switch for use
 in harsh industrial environments with 2 Gigabit ports



Unmanaged	IP 67	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) / Han® 3 A RJ45 (female)* 2x 10/100/1000Base-T(X) / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 / 48 V DC / Han® 4 A (male)*, redundant power supply
Permissible range (min/max)	12 V ... 60 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 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 ... +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
HARTING mCon 7100-AAV Ethernet Switch, managed 10 Han® 3 A RJ45 ports	20 70 310 4924		

* Order insert fixing screw 09 20 000 9918 separately

Ethernet Switch
HARTING mCon 7100-A2
 10-port Ethernet Switch for use in harsh industrial environments including interface to external configuration memory



Managed	IP 67	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	10x 10/100Base-T(X) / Han® 3 A RJ45 (female)*
Input voltage / Termination	24 / 48 V DC Han® 4 A (male)* redundant power supply
Permissible range (min/max)	12 V ... 60 V DC
Input current	approx. 180 mA (at 24 V DC)
Interface to external configuration memory	Han-Brid® Cu (female)
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 ... +70 °C
Approvals	cUL (in preparation)
Management	fully managed via Web interface and SNMP

Identification	Part number	Drawing	Dimensions in mm
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HARTING mCon 7100-A2 Ethernet Switch, managed Han® 3 A RJ45	20 70 310 4923		
CM 7100 External configuration memory for Ethernet Switch mCon 7100-A2 / mCon 7100-B2	20 70 310 4001		

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* Order insert fixing screw 09 20 000 9918 separately

Ethernet Switch HARTING mCon 7100-B2

10-port Ethernet Switch for industrial Ethernet networks
with M12 system cabling
including interface to external configuration memory



Managed	IP 67	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination 10x 10/100Base-T(X) / M12 D-coding (female)

Input voltage / Termination 24 / 48 V DC M12 A-coding (male),
redundant power supply

Permissible range (min/max) 12 V ... 60 V DC

Input current approx. 180 mA (at 24 V DC)

Interface to external configuration memory Han-Brid[®] Cu (female)

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 ... +70 °C

Approvals cUL (in preparation)

Management fully managed via Web interface and SNMP

Identification	Part number	Drawing	Dimensions in mm
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HARTING mCon 7100-B2

Ethernet Switch, managed
M12 D-coding

20 70 310 4943

CM 7100

External configuration memory for
Ethernet Switch mCon 7100-A2 /
mCon 7100-B2

20 70 310 4001

