



Ethernet Switch

Ha-VIS mCon 3000 Next Generation

Ethernet Switches, managed, for mounting onto top-hat mounting rail in control cabinets

General Description

The fully Managed Ethernet Switches of the product family Ha-VIS mCon 3000 enable the connection of up to 10 network devices (according to type) over RJ45 ports or SFP modules on lowest area.

Degree of protection, mechanical stability and the comprehensive management software provide for high operation safety and meet highest demands.

The Ha-VIS mCon 3000 Ethernet Switches are designed for an effective, industrial and individual use.

The configuraton via SD card or via the Multifunction button enables an easy and fast commisioning in the field.

Comprehensive possibilities of configuration and diagnostic are provided easy via web interface or standardized via SNMP.

The Ethernet Switches of the Ha-VIS mCon 3000 Next Generation family can be used as PROFINET IO devices.

Features

- Full managed Ethernet Switch acc. to IEEE 802.3
- Up to 10 ports, managed, non-blocking
- Store and Forward Switching Mode
- Gigabit Uplink ports, RJ45 and SFP modules
- Auto-crossing, Auto-negotiation, Auto-polarity
- Temperature range -40 °C ... +70 °C
- PROFINET IO device
- Multifunction button for fast commisioning
- SD card slot for storage of the configuration
- Management functions see page 9

Advantages

- Small, robust metal housing
- External SD card for storage of the configuration
- Individual pre-configuration via Multifunction button
- Fast removable Ethernet data links via SFP „Hot-Swap“
- Optimised DIN rail fitting
- EMC, temperature range and mechanical stability meet the highest demands

Application fields

- Industrial automation
- Automotive industry
- Wind power, Solar Power
- Maritime

Technical characteristics

Ethernet interface RJ45

Number of ports

Ha-VIS mCon 3080-A	8x 10/100Base-T(X)
Ha-VIS mCon 3102-AASFP	8x 10/100Base-T(X) 2x 10/100/1000Base-T(X) (Combo ports with SFP slot)

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

RJ45 (Twisted Pair)

Diagnostics (via LED)

- 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

Ring, Line, Star or mixed

Ethernet Interface SFP (mini-GBIC) Fibre Optic and copper

Number of ports

Ha-VIS mCon 3102-AASFP	2x 100/1000Base (Combo ports with SFP slot)
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Data rate

100 Mbit/s, 1000 Mbit/s

Termination

SFP modules according to MSA (Multi Source Agreement) (see catalogue „HARTING Smart Network Infrastructure - Intelligent Network Solutions“)

Diagnostics

Digital Diagnostics Monitoring (DDM) according to SFF-8472 (available with software release 2.4 or higher)

Diagnostics (via LED)

- Status Link – Green
- Data transfer (Act) – Green flashing

Power supply

Nominal input voltage

24 V $\overline{\text{---}}$

Termination

5-pole screw terminal, pluggable for redundant power supply

Switch

Diagnostics (via LED)

- Device operates without failures – Green
- Power supply in the admissible range – Green
- Low voltage – Red
- Diagnostics failure – Red
- PROFINET failure / diagnosis – Red/Green flashing

Configuration

Slot for SD cards (back side)	<ul style="list-style-type: none"> • Saving and loading of configuration files • Licence management for MRP
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Multifunction button	Individual pre-configuration of software functions
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Technical characteristics

Design features

Housing material	Aluminium, anodized
Dimensions (W x H x D)	44 x 130 x 100 mm (without connectors)
Degree of protection acc. to DIN 60529	IP 30
Mounting	<ul style="list-style-type: none"> • 35 mm top-hat rail acc. to EN 60715 • Panel mounting, vertical assembly

Environmental conditions

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

Management software

Full managed via web interface and SNMP
Range of functions and detailed description see page 6

Mechanical solidness

Shock	IEC 60 068-2-27 <ul style="list-style-type: none"> • 15 g • 11 ms duration • Shock form: Half sine-wave
Vibration	EN 60 068-2-6
Rail-standard	EN 50 155, Class 1

EMC Interference immunity (EN 61 000-6-2, EN 50 121-3-2)

		<i>Industrial</i>	<i>Railway</i>	<i>Maritime</i>
Electrostatic discharge (ESD)	EN 61 000-4-2	Criterion B	Criterion B	Criterion B
Electromagnetic field	EN 61 000-4-3	Criterion A	Criterion A	Criterion A
Fast transients (Burst)	EN 61 000-4-4	Criterion B	Criterion A	Criterion B
Impulse voltages (Surge)	EN 61 000-4-5	Criterion B	Criterion B	Criterion B
Conducted emissions	EN 61 000-4-6	Criterion A	Criterion A	Criterion A
Rail applications	EN 50 121-3-2			

EMC interference (EN 61 000-6-4, EN 55 022, EN 50 121-3-2)

Scope of delivery	<ul style="list-style-type: none"> • Ethernet Switch • User manual • Assembly manual • CD • Terminal block
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Ethernet Switch Ha-VIS mCon 3080-A

8-port Ethernet Switch, full managed
for mounting onto top-hat mounting rail in control cabinets

Managed	IP 30	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 (Twisted Pair)
Nominal input voltage range	24 V $\overline{=}$
Permissible range (min/max)	9.6 V ... 60 V $\overline{=}$
Termination	5-pole screw terminal, pluggable redundant power supply
Input current	approx. 130 mA (at 24 V $\overline{=}$)
Housing material	Aluminium, anodized
Dimensions (W x H x D)	44 x 130 x 100 mm (without connectors)
Weight	approx. 0.450 kg
Operating temperature	-40 °C ... +70 °C
MTBF	678.372 h
Approvals (in preparation)	UL 508 (Safety); UL 60 950-1 (Safety); DNV
Management	fully Managed via Web interface and SNMP Functions see page 9

mCon 3000

Identification	Part number	Drawing	Dimensions in mm
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<p>Ha-VIS mCon 3080-A Ethernet Switch, full managed 8 RJ45 ports including Set for assembly on standard rail</p>	<p>20 76 108 4000</p>		
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Ethernet Switch Ha-VIS mCon 3102-AASFP

10-port Ethernet Switch with 2 ports Gigabit Ethernet, full managed for mounting onto top-hat mounting rail in control cabinets

Managed	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
Number of ports, Copper / Termination	8x 10/100Base-T(X) / RJ45 (Twisted Pair) 2x 10/100/1000Base-T(X) / RJ45 (Twisted Pair)		
Number of slots SFP / Termination	2x 100/1000Base / Combo ports		
Nominal input voltage range	24 V $\overline{---}$		
Permissible range (min/max)	9.6 V ... 60 V $\overline{---}$		
Termination	5-pole screw terminal, pluggable redundant power supply		
Input current	approx. 250 mA (at 24 V $\overline{---}$)		
Housing material	Aluminium, eloxiert		
Dimensions (W x H x D)	44 x 130 x 100 mm (incl. cap, without connectors)		
Weight	approx. 0.485 kg		
Operating temperature	-40 °C ... +70 °C		
MTBF	597.974 h		
Approvals (in preparation)	UL 508 (Safety); UL 60 950-1 (Safety); DNV		
Management	fully Managed via Web interface and SNMP Functions see page 9		

Identification	Part number	Drawing	Dimensions in mm
Ha-VIS mCon 3102-AASFP Ethernet Switch, full managed 8 ports Fast Ethernet RJ45 2 ports Gigabit Ethernet (combo SFP) including Set for assembly on standard rail	20 76 112 4300		