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**Ethernet Switch
Ha-VIS eCon 2000**

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



General Description

Features

The Ethernet Switches of the product family Ha-VIS eCon 2000 are suitable for 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 16 network devices (according to type) over Twisted Pair cables.

Through its flat mounting and the clearly laid out integrated LEDs on each port, the Ha-VIS eCon2000 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 Ha-VIS eCon2000 Ethernet Switches can be mounted on or dismantled from standard 35 mm top-hat rails without tools.

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

For Ethernet Switch Ha-VIS eCon 2050-AA only:

- complete designed for Gigabit Ethernet
- Jumbo Frames up to 9728 Bytes
- 4 K MAC addresses

Advantages

Application fields

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

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

Technical characteristics Ha-VIS eCon 2030-A, 2040-A, 2050-A / Ha-VIS eCon 2160-A
Ethernet interface RJ45

Number of ports	3x / 4x / 5x / 16x 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	RJ45 (Twisted Pair)
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, Star or mixed

	Ha-VIS eCon 2030-A, 2040-A, 2050-A	Ha-VIS eCon 2160-A
Power supply		
Input voltage	24 V DC (12 ... 30 V DC)	24 V DC (12 ... 48 V DC) redundant
Termination	3-pole pluggable screw contact (24 V; 0; FE)	5-pole pluggable screw contact (PRW1 + / PWR1 - / PWR2 + / PWR2 - / FE)
Diagnostics (via LED)	Power supply - Green	
Design features		
Housing material	Aluminium, anodised	
Dimensions (W x H x D)	46.5 x 105 x 25.5 mm (without connectors)	120 x 105 x 25.5 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. 0.2 kg	approx. 0.4 kg

Environmental conditions

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

Technical characteristics eCon Ha-VIS 2050-AA

Ethernet interface RJ45

Number of ports	5x 10/100/1000Base-T(X)
Cable types according to IEEE 802.3	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10, 100 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)	<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, Star or mixed

Power supply

Input voltage	24 V DC (12 ... 48 V DC) - redundant
Termination	5-pole pluggable screw contact (PRW1 + / PWR1 - / PWR2 + / PWR2 - / FE)
Diagnostics (via LED)	Power supply (PWR1; PWR2) - Green

Design features

Housing material	Aluminium, anodised
Dimensions (W x H x D)	70 x 105 x 25.5 mm (without connectors)
Degree of protection acc. to DIN 60529	IP 30
Mounting	35 mm top-hat rail acc. to EN 60715
Weight	approx. 0.4 kg

Environmental conditions

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



Ethernet Switch Ha-VIS eCon 2030-A

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

Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination 3x 10/100Base-T(X) / RJ45 (Twisted Pair)

Input voltage / Termination 24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)

Permissible range (min/max) 9.6 V ... 36 V DC

Input current 100 mA (at 24 V DC)

Housing material Aluminium, anodised

Dimensions (W x H x D) 46.5 x 105 x 25.5 mm (without connectors)

Weight approx. 0.2 kg

Operating temperature -10 °C ... +70 °C

Approvals UL 508; UL 60 950-1; DNV

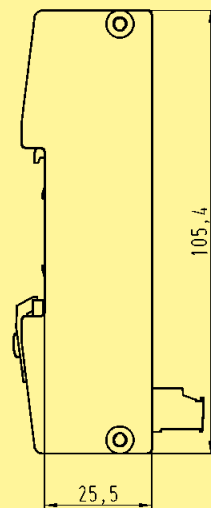
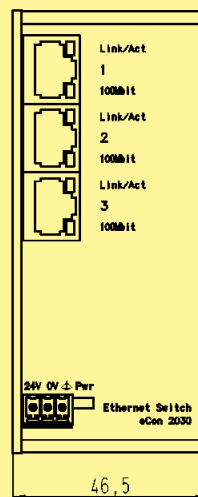
MTBF 1 020 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 2030-A

Ethernet Switch
with 3 RJ45 ports

20 76 103 3000



Ethernet Switch Ha-VIS eCon 2040-A

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



Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination 4x 10/100Base-T(X) / RJ45 (Twisted Pair)

Input voltage / Termination 24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)

Permissible range (min/max) 9.6 V ... 36 V DC

Input current 100 mA (at 24 V DC)

Housing material Aluminium, anodised

Dimensions (W x H x D) 46.5 x 105 x 25.5 mm (without connectors)

Weight approx. 0.2 kg

Operating temperature -10 °C ... +70 °C

Approvals UL 508; UL 60 950-1; DNV

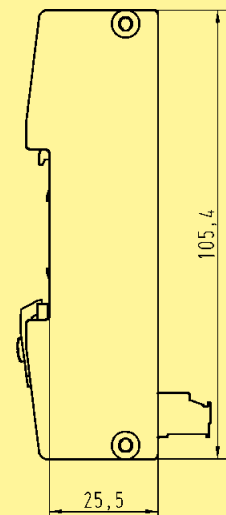
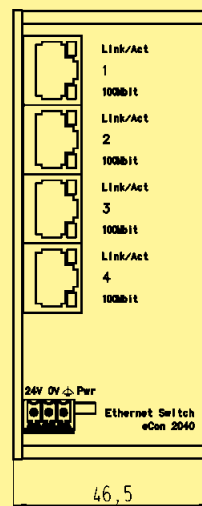
MTBF 1 020 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 2040-A

Ethernet Switch
with 4 RJ45 ports

20 76 104 3000





Ethernet Switch Ha-VIS eCon 2050-A

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

Unmanaged	IP 30	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) / RJ45 (Twisted Pair)

Input voltage / Termination 24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)

Permissible range (min/max) 9.6 V ... 36 V DC

Input current 100 mA (at 24 V DC)

Housing material Aluminium, anodised

Dimensions (W x H x D) 46.5 x 105 x 25.5 mm (without connectors)

Weight approx. 0.2 kg

Operating temperature -10 °C ... +70 °C

Approvals UL 508; UL 60 950-1; DNV

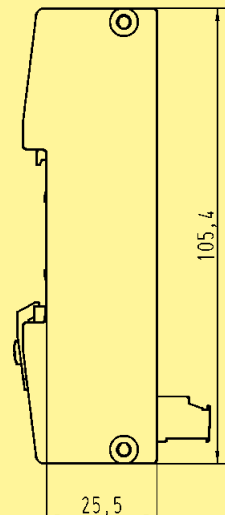
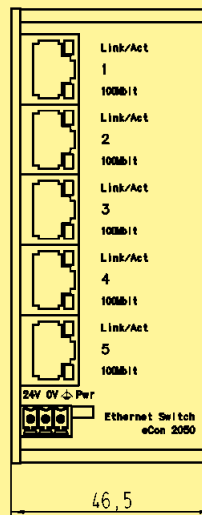
MTBF 1 020 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 2050-A

Ethernet Switch
with 5 RJ45 ports

20 76 105 3000



Ethernet Switch Ha-VIS eCon 2160-A

16-port Ethernet Switch for flat mounting onto top-hat mounting rail in control cabinets



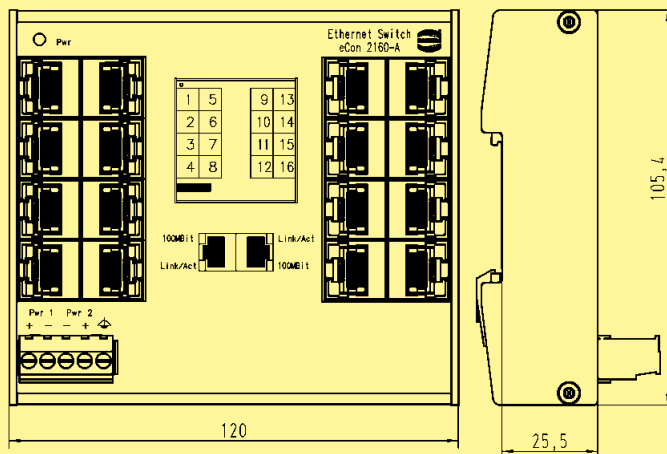
Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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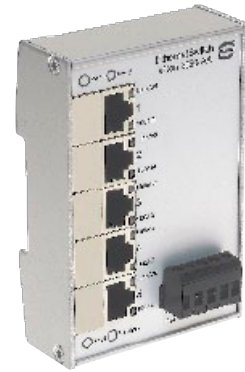
Number of ports, Copper / Termination	16x 10/100Base-T(X) / RJ45 (Twisted Pair)
Input voltage / Termination	24 V DC / 5-pole pluggable screw contact, redundant (PRW1 + / PWR1 - / PWR2 + / PWR2 - / FE)
Permissible range (min/max)	9.6 V ... 60 V DC
Input current	220 mA (at 24 V DC)
Housing material	Aluminium, anodised
Dimensions (W x H x D)	120 x 105 x 25.5 mm (without connectors)
Weight	approx. 0.4 kg
Operating temperature	-10 °C ... +70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 2160-A
Ethernet Switch
with 16 RJ45 ports

20 76 116 3000





Ethernet Switch Ha-VIS eCon 2050-AA

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

Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination 5x 10/100/1000Base-T(X) / RJ45 (Twisted Pair)

Input voltage / Termination 24 V DC / 5-pole screw terminal, pluggable, redundant power supply (PRW1 + / PWR1 - / PWR2 + / PWR2 - / FE)

Permissible range (min/max) 9.6 V ... 60 V DC

Input current 250 mA (at 24 V DC)

Housing material Aluminium, anodised

Dimensions (W x H x D) 70 x 105 x 25.5 mm (without connectors)

Weight approx. 0.4 kg

Operating temperature -40 °C ... +70 °C

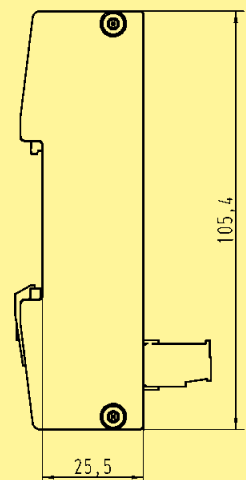
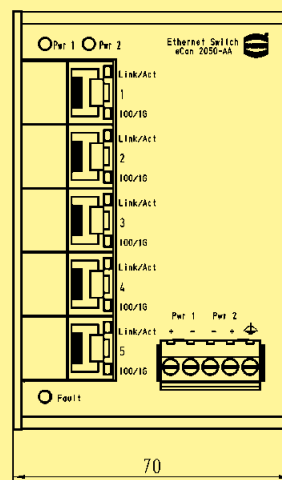
Approvals cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 2050-AA

Gigabit Ethernet Switch with 5 RJ45 ports

20 76 105 3001





**Ethernet Switch
Ha-VIS eCon 3000**

Ethernet Switches, unmanaged,
for installation in control cabinets

eCon 3000

General Description

Features

The Fast Ethernet Switches of the product family Ha-VIS eCon 3000 are suitable for industrial applications and support 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 Twisted Pair cables and fibre-optic cables (Multi- and Singlemode).

The Ha-VIS 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.

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

Advantages

Application fields

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

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

Technical characteristics

Ethernet interface RJ45

Number of ports	6x / 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	RJ45 (Twisted Pair)
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, Star or mixed

Power supply

Input voltage	24 V DC (12 ... 30 V DC)
Termination	3-pole pluggable screw contact (24 V; 0; FE)
Diagnostics (via LED)	Power supply - Green

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 60529	IP 30 / IP 20 (only eCon 3000-AE)
Mounting	35 mm top-hat rail acc. to EN 60715
Weight	approx. 0.6 kg

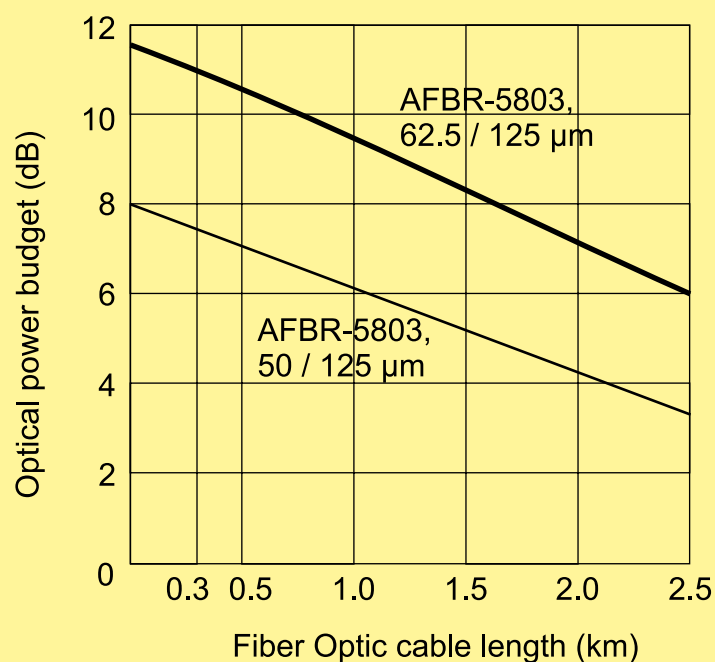
Environmental conditions

Operating temperature	-10 °C ... +70 °C
Storage temperature	-40 °C ... +85 °C
Relative humidity	10 % ... 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	<ul style="list-style-type: none"> • Multimode fibre, 1300 nm; 50 / 125 μm or 62.5 / 125 μm • Singlemode fibre, 1300 nm; 9 μm (for AF versions only)
Data rate	100 Mbit/s
Maximum cable length	<ul style="list-style-type: none"> • 2000 m (Multimode) • 15 km (Singlemode)
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, Star or mixed



Ethernet Media converter
Ha-VIS eCon 3011
Ethernet Media converter, unmanaged,
for installation in control cabinets



General Description	Features
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<p>The Fast Ethernet Media converter Ha-VIS eCon 3011 of the product family Ha-VIS eCon 3000 is suitable for industrial applications and support both Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s). The Media converter enables the conversion from Twisted Pair cables to fiber-optic cables (Multimode and Single-mode).</p> <p>The Ha-VIS eCon 3011 Media converter is configurable via Dip Switch and offers a variety of control functions.</p> <p>The Media converter has two operating modes: In the switch mode, it operates as an unmanaged Ethernet Switch with Store and Forward Switching which supports asynchronous data communication, Auto-crossing and Auto-negotiation. In the converter mode, it works with a data rate of 100 Mbit/s (Full duplex). The latency is very low in this operation mode.</p>	<ul style="list-style-type: none"> • Converter Mode with a very low latency • Store and Forward switch mode • Link Fault Path Through (LFP) • Power over Ethernet (Power Source Equipment) • 9 kByte Jumbo Frames in converter mode • 2 kByte Frames in switch mode
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Advantages	Application fields
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<ul style="list-style-type: none"> • Power over Ethernet (IEEE 802.3af) • Configuration via Dip Switch • Small and robust metal housing • Adapted for mounting onto top-hat mounting rail 35 mm according to EN 60 715 	<ul style="list-style-type: none"> • Industrial automation • Automotive industry • Wind power • Power distribution systems
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Technical characteristics Media converter

Ethernet interface RJ45

Number of ports	1x 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)
Repeater class	Class II (latency 860 ns in converter mode)
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)	<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 • Duplex – Full duplex: Yellow / Half duplex: OFF • PoE (Power Source Equipment) (PSE) – Green
Topology	Line

Power supply

Input voltage	24 V DC (12 ... 30 V DC)
Input voltage, mode PoE	48 V DC (46 ... 57 V DC)
Termination	5-pole pluggable screw contact (PRW1 + / PWR1 - / PWR2 + / PWR2 - / FE)
Diagnostics (via LED)	Power supply - Green

Configuration

via DIP switches:
Mode, Auto-negotiation, Data rate, Duplex TP, Duplex FX, Link monitoring, PoE (PSE)

Design features

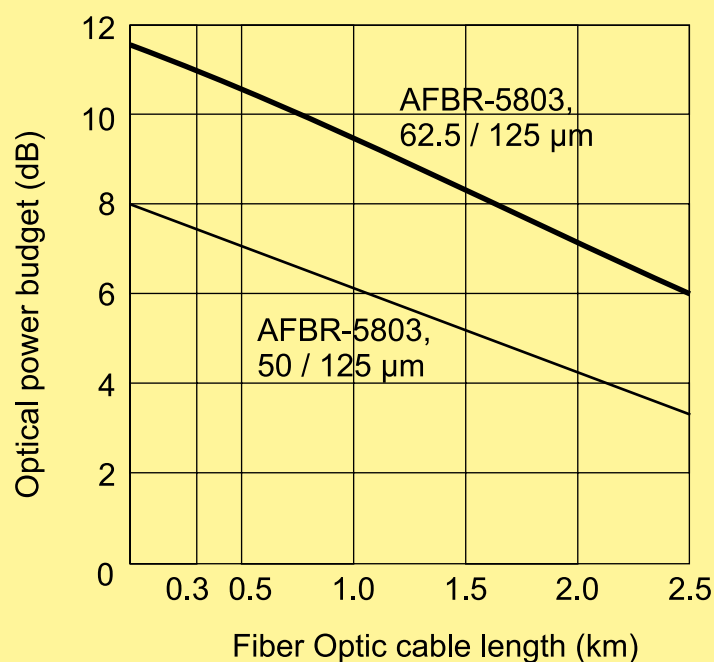
Housing material	Metal (powder coated)
Dimensions (W x H x D)	23 x 130 x 100 mm (without connectors)
Degree of protection acc. to DIN 60 529	IP 30
Mounting	35 mm top-hat rail acc. to EN 60 715
Weight	approx. 0.6 kg

Environmental conditions

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

Technical characteristics Media converter - F.O. termination
Ethernet interface – F.O.

Number of ports	1x 100Base-FX
Cable types according to IEEE 802.3	Multimode fibre, 1300 nm; 50 / 125 μm or 62.5 / 125 μm
Data rate	100 Mbit/s
Link monitoring	Link Fault Pass-Through (LFP)
Maximum cable length	2000 m (Multimode)
Termination	SC-D female
Diagnostics (via LED)	<ul style="list-style-type: none"> • Status Link – Green • Data transfer (Act) – Green flashing • Duplex – Full duplex: Yellow / Half duplex: OFF
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





Ethernet Switch
Ha-VIS eCon 3080-A
 8-port Ethernet Switch for vertical installation in control cabinets

eCon 3000

Unmanaged	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)

Input voltage / Termination 24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)

Permissible range (min/max) 9.6 V ... 36 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 ... +70 °C

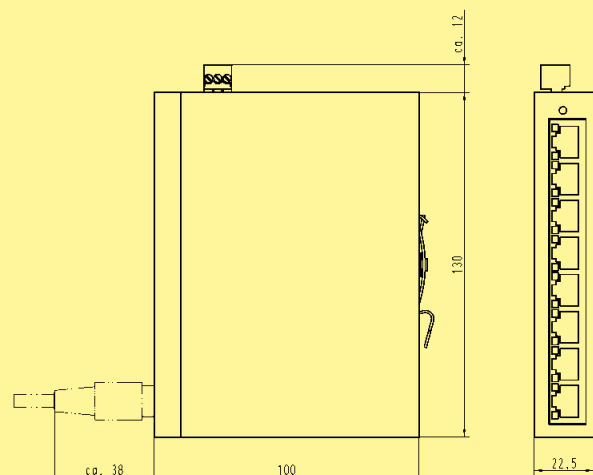
Approvals e1, UL 508; UL 60 950-1; DNV

MTBF 548 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3080-A
 Ethernet Switch
 with 8 RJ45 ports

20 76 108 3000





Ethernet Switch
Ha-VIS eCon 3080-A1
 8-port Ethernet Switch for flat installation in control cabinets

Unmanaged	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)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)
Permissible range (min/max)	9.6 V ... 36 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 ... +70 °C
Approvals	<input checked="" type="checkbox"/> e1, UL 508; UL 60 950-1; DNV
MTBF	548 000 h

Identification	Part number	Drawing	Dimensions in mm
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<p>Ha-VIS eCon 3080-A1 Ethernet Switch with 8 RJ45 ports</p>	<p>20 76 108 3001</p>		
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Ethernet Switch Ha-VIS eCon 3080-A2

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



eCon 3000

Unmanaged	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)

Input voltage / Termination 24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)

Permissible range (min/max) 9.6 V ... 36 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 ... +70 °C

Approvals UL 508

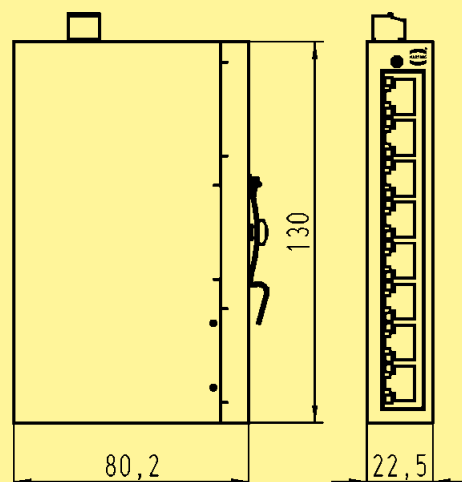
MTBF 548 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3080-A2

Ethernet Switch
with 8 RJ45 ports

20 76 108 3002



Ethernet Switch Ha-VIS eCon 3080-A4

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



Unmanaged	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)

Input voltage / Termination 24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)

Permissible range (min/max) 12 V ... 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 ... +70 °C

Approvals UL 508; DNV

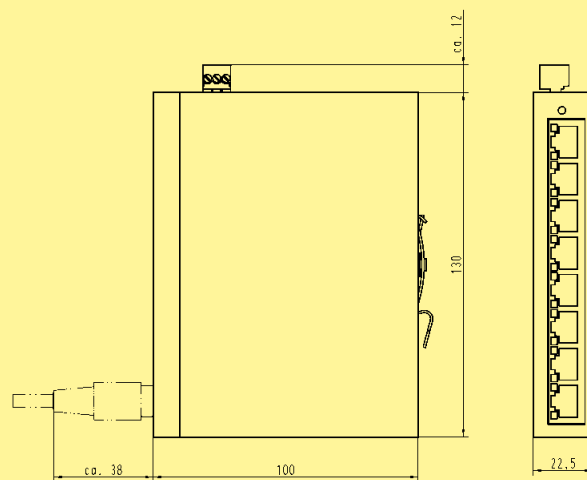
MTBF 540 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3080-A4

Ethernet Switch
with 8 RJ45 ports

20 76 108 3004





eCon 3000

Ethernet Switch Ha-VIS 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 <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	6x 10/100Base-T(X) / 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; 0; FE)
Permissible range (min/max)	9.6 V ... 60 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 ... +70 °C
Approvals	UL 508
MTBF	825 000 h

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

Ethernet Switch Ha-VIS eCon 3062-AD

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



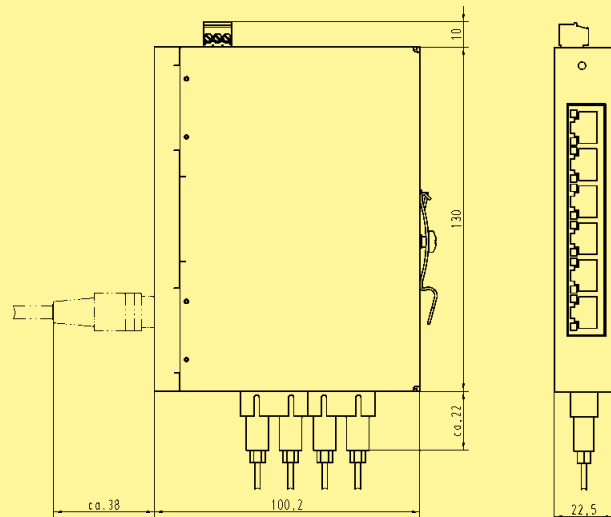
Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	6x 10/100Base-T(X) / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)
Permissible range (min/max)	9.6 V ... 60 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 ... +70 °C
Approvals	UL 508; UL 60 950-1
MTBF	825 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3062-AD
Ethernet Switch with
6 RJ45 ports
2 F.O. ports

20 76 108 3100



Ethernet Switch Ha-VIS eCon 3062-AD2

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



eCon 3000

Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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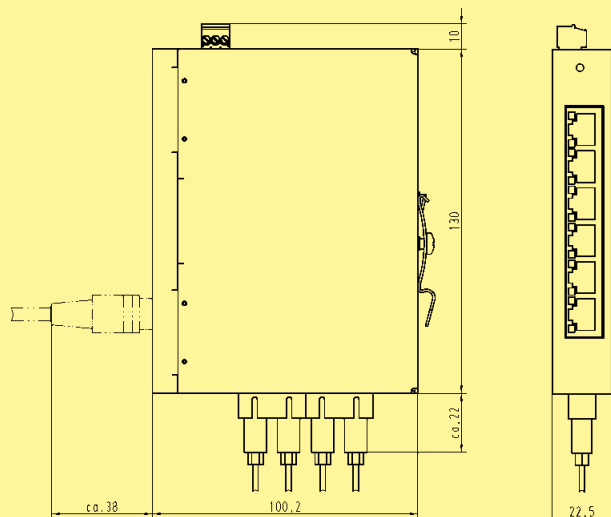
Number of ports, Copper / Termination	6x 10/100Base-T(X) / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)
Permissible range (min/max)	9.6 V ... 60 V DC
Input current	approx. 240 mA (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 ... +70 °C
Approvals	UL 508

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3062-AD2

Ethernet Switch with
6 RJ45 ports
2 F.O. ports

20 76 108 3102



Ethernet Switch Ha-VIS eCon 3062-AF

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



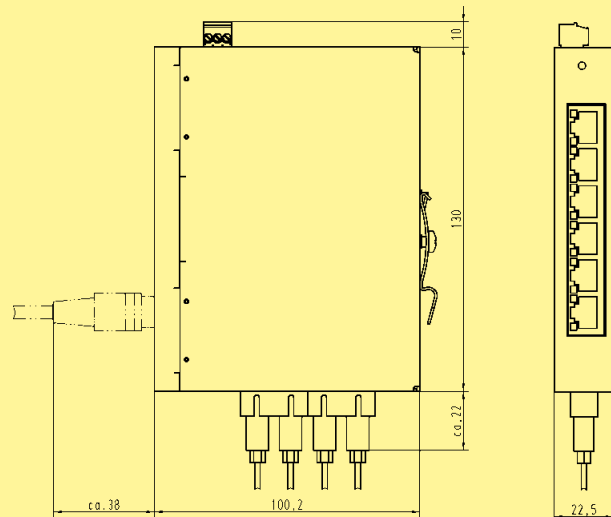
Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	6x 10/100Base-T(X) / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / SC-D female (Singlemode)
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)
Permissible range (min/max)	9.6 V ... 60 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 ... +70 °C
Approvals	UL 508

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3062-AF
Ethernet Switch with
6 RJ45 ports
2 F.O. ports

20 76 108 3103



Ethernet Switch Ha-VIS eCon 3061-AE

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



eCon 3000

Unmanaged	IP 20	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	6x 10/100Base-T(X) / 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; 0; FE)
Permissible range (min/max)	9.6 V ... 60 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 ... +70 °C
Approvals	UL 508
MTBF	825 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3061-AE Ethernet Switch with 6 RJ45 ports 1 F.O. port	20 76 107 3200		
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Ethernet Switch Ha-VIS eCon 3062-AE

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



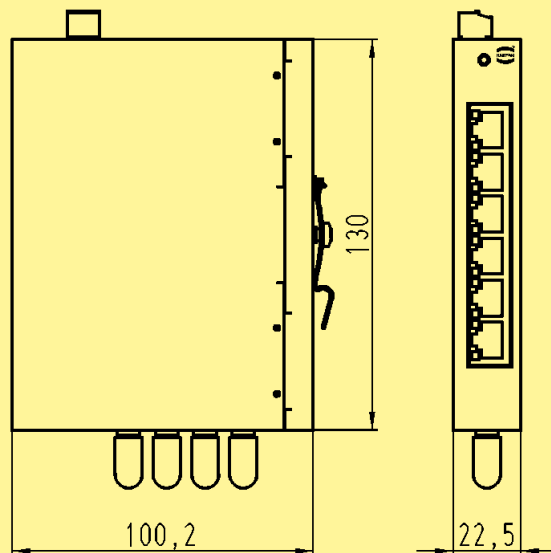
Unmanaged	IP 20	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	6x 10/100Base-T(X) / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	2x 100Base-FX / ST female
Input voltage / Termination	24 V DC / 3-pole pluggable screw contact (24 V; 0; FE)
Permissible range (min/max)	9,6 V ... 60 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 ... +70 °C
Approvals	UL 508
MTBF	825 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3062-AE
Ethernet Switch with
6 RJ45 ports
2 F.O. ports

20 76 108 3200





Ethernet Media converter Ha-VIS eCon 3011-AD

2-port Ethernet Media converter for vertical installation
in control cabinets including 1 F.O. port (SC, MM)

eCon 3000

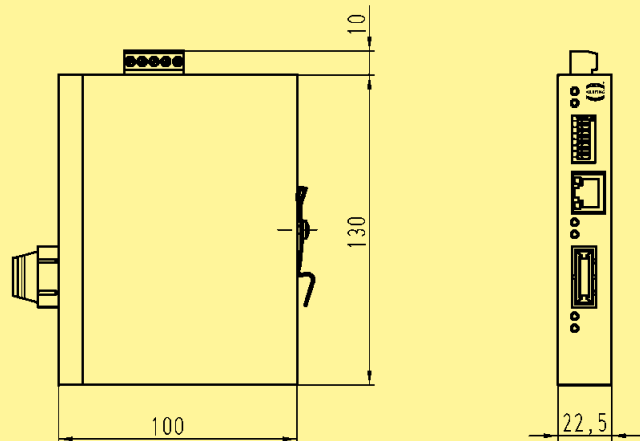
Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	1x 10/100Base-T(X) / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100Base-FX / SC-D female
Input voltage / Termination	24 V DC / 5-pole pluggable screw contact, redundancy (PRW1 + / PWR1 - / PWR2 + / PWR2 - / FE)
Permissible range (min/max)	12 V ... 30 V DC
Input voltage mode PoE	48 V DC when using as PSE
Permissible range (min/max)	46 V ... 57 V DC
Input current	approx. 100 mA (at 24 V DC) approx. 100 ... 400 mA (at 48 V DC with PoE)
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 ... +70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3011-AD
Ethernet Media converter with
1 RJ45 port
1 F.O. port

20 76 102 3100



Ethernet Media converter Ha-VIS eCon 3011-ASFP

2-port Ethernet Media converter for vertical installation
in control cabinets including 1 F.O. port (SFP)



Unmanaged	IP 30	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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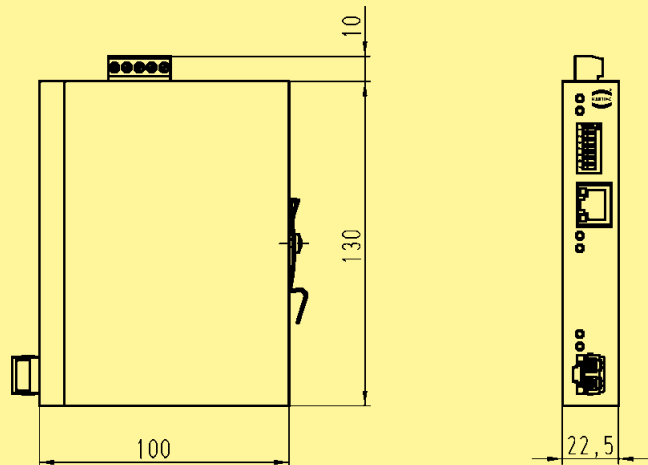
Number of ports, Copper / Termination	1x 10/100Base-T(X) / RJ45 (Twisted Pair)
Number of ports, F.O. / Termination	1x 100 Mbit/s SFP module slot
Input voltage / Termination	24 V DC / 5-pole pluggable screw contact, redundant (PRW1 + / PWR1 - / PWR2 + / PWR2 - / FE)
Permissible range (min/max)	12 V ... 30 V DC
Input voltage mode PoE	48 V DC when using as PSE
Permissible range (min/max)	46 V ... 57 V DC
Input current	approx. 100 mA (at 24 V DC) approx. 100 ... 400 mA (at 48 V DC with PoE)
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 ... +70 °C
Approvals	cUL (in preparation)

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 3011-ASFP
Ethernet Media converter with
1 RJ45 port
1 port SFP module slot

20 76 102 3101

SFP modules on request





Accessories
SFP modules

General Description

SFPs (**S**mall **F**orm-factor **P**luggable) are small standardized modules for network connections.

These modules are a specification for a new generation of modular optical transceivers. The devices are constructed as connecting plugs for extremely quick network connections.

The SFPs are available in a variety of models, depending on the cable type (multi-mode or single-mode), the wave length (850 nm, 1300 nm, 1550 nm or CWDM), data rate or range. Copper-based SFP are also available.

Features

SFP modules

- Highly flexible
- Easily swapped out in event of malfunction
- Hot swappable
- Variants:

	SM fibre	MM fibre
100 Mbit/s	X	X
1000 Mbit/s	X	X

Advantages

- SFP used as connecting plug for extremely quick network connections
- Standardized modules for network connections

Application fields

- Railway applications
- Industrial automation
- Automotive industry
- Wind power

Accessories SFP modules



SFP:

Type	SFP Fast Ethernet Transceiver 155 Mbit/s MM	SFP Fast Ethernet Transceiver 155 Mbit/s SM	SFP Gigabit Ethernet Transceiver 1.25 Gbit/s MM	SFP Gigabit Ethernet Transceiver 1.25 Gbit/s SM
Wave length	1310 nm	1310 nm	850 nm	1310 nm
Mode	Multimode	Singlemode	Multimode	Singlemode
Fiber	50 / 125 μm or 62.5 / 125 μm	9 / 125 μm	50 / 125 μm or 62.5 / 125 μm	9 / 125 μm
Max. cable length*	2 km	15 km	550 m (50 / 125) 275 m (62.5 / 125)	10 km
Connector	LC connector duplex	LC connector duplex	LC connector duplex	LC connector duplex
Optical budget	min. 8.2 dB	min. 8.2 dB	min. 9 dB	min. 9 dB
Data rate	155 Mbit/s	155 Mbit/s	1250 Mbit/s	1250 Mbit/s

* Typical cable length depending on attenuation of each specific application.

Identification	Part number	Drawing	Dimensions in mm
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SFP modules

SFP Fast Ethernet Transceiver 155 Mbit/s MM	20 76 000 0300	
SFP Fast Ethernet Transceiver 155 Mbit/s SM	20 76 020 0300	
SFP Gigabit Ethernet Transceiver 1.25 Gbit/s MM	20 76 010 0300	
SFP Gigabit Ethernet Transceiver 1.25 Gbit/s SM	20 76 030 0300	

other types on request

**Ethernet Switch
Ha-VIS eCon 4000**

Ethernet Switches, unmanaged,
for flat wall mounting



General Description	Features
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The Fast Ethernet Switches of the product family Ha-VIS eCon 4000 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 8 network devices over Twisted Pair cables.

The robust M12 interface shows its advantages especially in applications at risk of vibrations.

The Ha-VIS eCon 4000 Ethernet Switch product family, with its integrated LEDs, 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.

- Ethernet Switch according to IEEE 802.3
- Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s)
- Auto-crossing
- Auto-negotiation
- Auto-polarity
- Store and Forward Switching Mode, non blocking
- Diagnostic LEDs (Link status, Data, Power)
- Mounting onto wall, optionally onto top-hat mounting rail
- PoE support (Ha-VIS eCon 4080-BPoE1)

Advantages	Application fields
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- Robust metal housing and flat housing style
- EMC, temperature range and mechanical stability meet the highest demands
- Wide range for power supply input
- Additional type test according to EN 50 155 and EN 50 121-3-2

- Railway applications
- Industrial automation
- Automotive industry
- Wind power

Technical characteristics

Ethernet interface

Number of ports	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
Maximum cable length	100 m (Twisted Pair; with Category 5 cable acc. to DIN EN 50 173-1)
Termination	M12. D-coding
Diagnostics (via LED, per port) Link	<ul style="list-style-type: none"> • Status Link – ON • Data transfer (Act) – flashing • Data transfer rate (Speed) – 100 Mbit/s: Yellow / 10 Mbit/s: Green
PoE (Ha-VIS eCon 4080-BPoE1)	<ul style="list-style-type: none"> • no PoE device – OFF • PoE device connected – Green • PoE device with failure – Red
Topology	Line, Star or mixed

Power supply

Input voltage	24 / 48 V DC (12 ... 60 V DC)
Termination	M12 A-coding, male, for redundant power supply
Diagnostics (via LED)	Power supply

for Ha-VIS eCon 4080-BPoE1 only:

Input voltage		
Ha-VIS eCon 4080-BPoE1 mode PoE	48 V DC (46 ... 55 V DC)	
mode non PoE	24 / 48 V DC (12 ... 55 V DC)	
Diagnostics (via LED)	Pwr X9 (switch)	Power supply – Green
	Pwr PoE (mode PoE)	> 46 V DC – Green
	State	< 46 V DC – Red

Design features

Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 166 x 50 mm
Degree of protection acc. to DIN 60529	IP 40 / IP 30 (Ha-VIS eCon 4080-BPoE1 only)
Mounting	Wall mounting, flat
Weight	approx. 0.85 kg

Environmental conditions

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

Ethernet Switch
Ha-VIS eCon 4080-B1
 8-port Ethernet Switch for flat installation



Unmanaged	IP 40	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 / M12 A-coding, male, for redundant power supply

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

Input current approx. 150 mA (at 24 V DC)

Housing material Metal (powder coated)

Dimensions (W x H x D) 130 x 166 x 50 mm

Weight approx. 0.85 kg

Operating temperature -40 °C ... +70 °C

Approvals e1

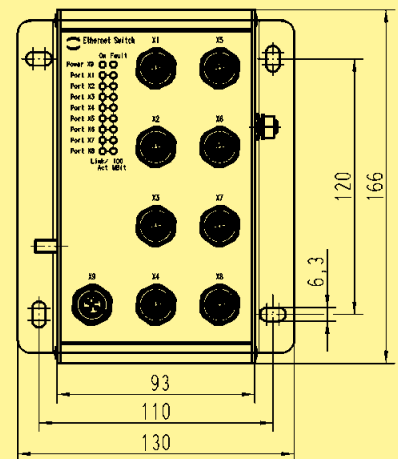
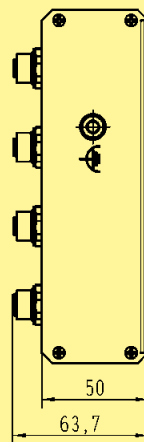
MTBF 1 544 000 h

eCon 4000

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 4080-B1
 Ethernet Switch
 with 8 ports M12 D-coding
 for wall mounting

20 77 208 3001





Ethernet Switch
Ha-VIS eCon 4080-B3
 8-port Ethernet Switch (110 V DC) for flat installation

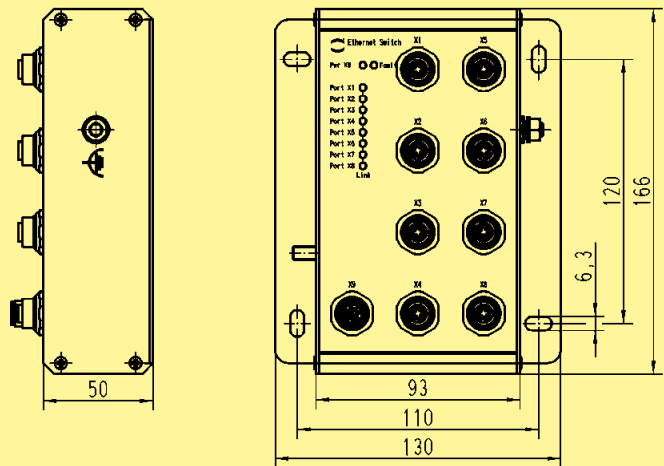
Unmanaged	IP 40	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	8x 10/100Base-T(X) / M12 D-coding
Input voltage / Termination	72 / 110 V DC / M12 A-coding, male, for redundant power supply
Permissible range (min/max)	50.4 V ... 137.5 V DC
Input current	approx. 40 mA (at 110 V DC)
Housing material	Metal (powder coated)
Dimensions (W x H x D)	130 x 166 x 50 mm
Weight	approx. 0.85 kg
Operating temperature	-40 °C ... +70 °C
MTBF	1 183 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 4080-B3
 Ethernet Switch
 with 8 ports M12 D-coding
 for wall mounting

20 77 208 3003





Ethernet Switch
Ha-VIS eCon 4080-BPoE1
 8-port Ethernet Switch with Power over Ethernet

Unmanaged	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) / M12 D-coding
 PoE supports 8 ports

Mode PoE

Input voltage / Termination 48 V DC / M12 A-coding, male
 Permissible range (min/max) 46 V ... 55 V DC
 Input current max. 3.0 A (at 48 V DC, load 350 mA per port)

Mode Non-PoE

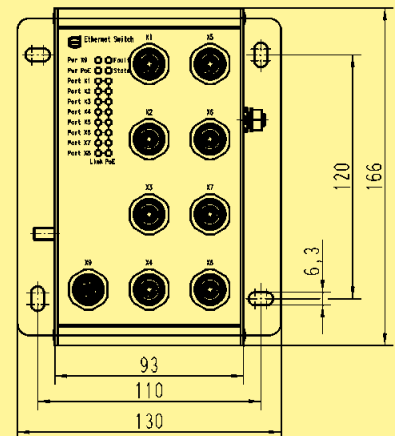
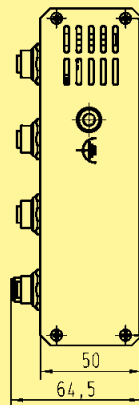
Input voltage / Termination 24 / 48 V DC / M12 A-coding, male, for redundant power supply
 Permissible range (min/max) 12 V ... 55 V DC
 Input current approx. 150 mA (at 24 V DC)

Housing material Metal (powder coated)
 Dimensions (W x H x D) 130 x 166 x 50 mm
 Weight approx. 0.85 kg
 Operating temperature -40 °C ... +70 °C

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 4080-BPoE1
 Ethernet Switch
 with 8 ports M12 D-coding
 for wall mounting

20 77 208 3009





**Ethernet Switch
Ha-VIS eCon 9000**

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

eCon 9000

General Description

Features

The Ethernet Switches of the product family Ha-VIS eCon 9000 are recommended for use in the widest range of industrial applications and support Ethernet (10 Mbit/s) and Fast Ethernet (100 Mbit/s). The product family enables the connection of up to 8 network devices over Twisted Pair cables.

The Ha-VIS 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.

- 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
- Ha-VIS eCon 9070-B:
Power input on the front
no backplane necessary

Advantages

Application fields

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

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

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
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, Star or mixed

Power supply

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

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
Ha-VIS eCon 9070-B**

7-port Ethernet Switch for installation in a 19" rack

Unmanaged

IP 20

PROFINET compatible

EtherNet/IP compatible

Number of ports, Copper / Termination 7x 10/100Base-T(X) / M12 D-coding

Input voltage / Termination 24 / 48 V DC / M12 A-coding

Permissible range (min/max) 8 V ... 60 V DC

Input current approx. 110 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

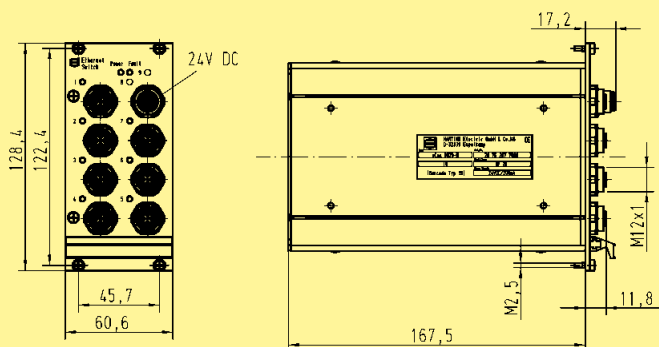
Approvals cUL (in preparation)

eCon 9000

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 9070-B
Ethernet Switch
7 ports, M12 D-coding

20 76 207 7000





Ethernet Switch
Ha-VIS eCon 9080-B1
 8-port Ethernet Switch for installation in a 19" rack

Unmanaged	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. 110 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)

eCon 9000

Identification	Part number	Drawing	Dimensions in mm
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<p>Ha-VIS eCon 9080-B1 Ethernet Switch 8 ports, M12 D-coding</p>	<p>20 76 208 7003</p>		
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**Ethernet Switch
Ha-VIS eCon 7000**

Ethernet Switches, unmanaged, for use in harsh industrial environments

General Description

Features

The Ethernet Switches of the product family Ha-VIS 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 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.

- 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), Fast Ethernet (100 Mbit/s) and Gigabit Ethernet (1000 Mbit/s)
- Diagnostic LEDs (Link status, Data, Power, Error)

Advantages

Application fields

- 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

- Industrial automation
- Railway applications
- Automotive industry
- Wind power

eCon 7000

Technical characteristics

Ethernet interface

Number of ports	5x / 8x / 10x 10/100Base-T(X)
Ha-VIS eCon 7100-AA:	2x 10/100/1000Base-T(X)
Cable types	Shielded Twisted Pair (STP) or Unshielded Twisted Pair (UTP), Category 5
Data rate	10 Mbit/s, 100 Mbit/s or 1000 Mbit/s (Ha-VIS eCon 7100-AA 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) <ul style="list-style-type: none"> Green terminal device is connected Green flashing data transmission in process • Transfer rate (Speed) <ul style="list-style-type: none"> OFF 10 Mbit/s Yellow 100 Mbit/s Green 1000 Mbit/s (Ha-VIS eCon 7100-AA only)
Topology	Line, 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)
Diagnostic (via LED)	Power supply – Green

Alarm signalling contact (Ha-VIS 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

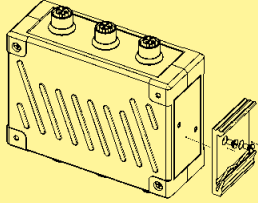
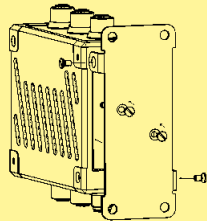
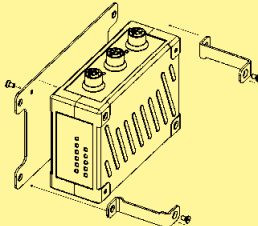
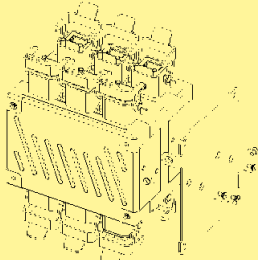
	Ha-VIS eCon 7050	Ha-VIS eCon 7100
Housing material	Zinc die-cast	Zinc die-cast
Dimensions (W x H x D)	45 x 120 x 87 mm	90 x 120 x 87 mm
Degree of protection acc. to DIN 60529	IP 65 / IP 67	IP 65 / IP 67
Mounting	35 mm top-hat rail acc. to EN 60715, Panel mounting, vertical assembly, Panel mounting, flat 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 (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	

eCon 7000

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 Ha-VIS eCon 7100 vertical assembly	20 80 010 0002		

¹⁾ Order insert fixing screw 09 20 000 9918 separately



Ethernet Switch Ha-VIS eCon 7050-A1

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

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 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. 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 ... +70 °C

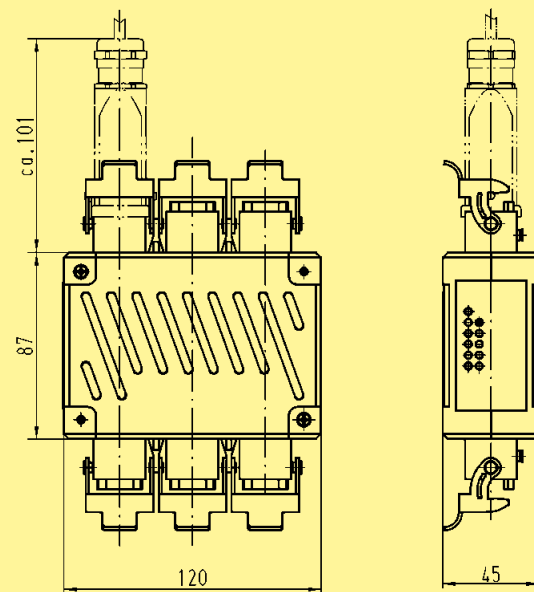
MTBF 1 150 000 h

eCon 7000

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 7050-A1
Ethernet Switch, unmanaged
5 Han® 3 A RJ45 ports

20 70 305 3923



* Order insert fixing screw 09 20 000 9918 separately

Ethernet Switch Ha-VIS eCon 7050-B1

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



Unmanaged

IP 67

PROFINET compatible

EtherNet/IP compatible

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. 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 ... +70 °C

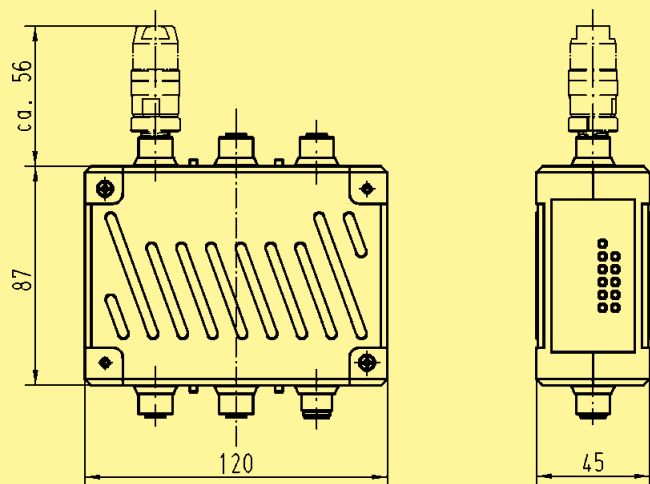
MTBF 1 140 000 h

eCon 7000

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 7050-B1
Ethernet Switch, unmanaged
5 ports, M12 D-coding

20 70 305 3943



Ethernet Switch Ha-VIS eCon 7100-B1

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



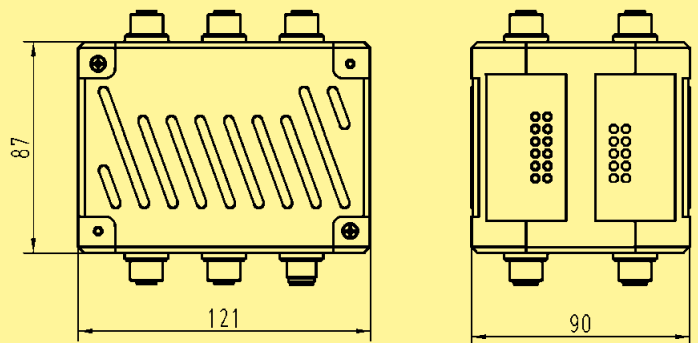
Unmanaged	IP 67	PROFINET compatible <input checked="" type="checkbox"/>	EtherNet/IP compatible <input checked="" type="checkbox"/>
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Number of ports, Copper / Termination	10x 10/100Base-T(X) / M12 D-coding (female)
Input voltage / Termination	24 / 48 V DC / M12 A-coding (male) redundant power supply
Permissible range (min/max)	12 V ... 60 V DC
Input current	approx. 150 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
MTBF	740 000 h

Identification	Part number	Drawing	Dimensions in mm
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Ha-VIS eCon 7100-B1
Ethernet Switch, unmanaged
10 ports, M12 D-coding

20 70 310 3942





**Ethernet Switch
Ha-VIS eCon 7100-AA**

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. 230 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

eCon 7000

Identification	Part number	Drawing	Dimensions in mm
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<p>Ha-VIS eCon 7100-AA Ethernet Switch, unmanaged 10 Han® 3 A RJ45 ports</p>	<p>20 70 310 3924</p>		
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* Order insert fixing screw 09 20 000 9918 separately