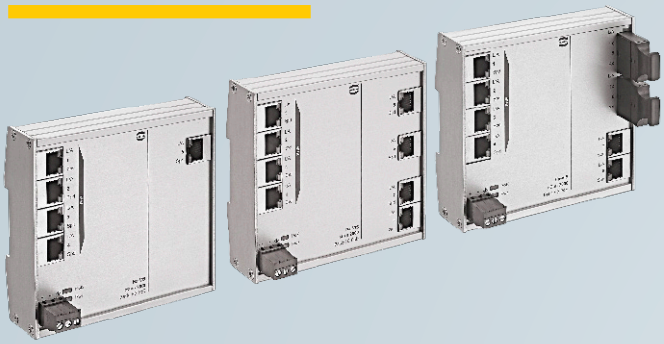
Ha-VIS eCon 2000
Fast Ethernet Basic
PoE / PoE+



5 to 8 Ethernet ports RJ45, SC and PoE / PoE+
Unmanaged Plug & Play Ethernet switches for DIN rail assembly in control cabinets
Commercial Temp.: 0 °C ... +55 °C / Industrial Temp.: -40 °C ... +70 °C

Flat | +70 -40 | Energy Efficient Ethernet | PoE+

- Energy supply of up to 4 terminal devices via PoE+ (137 watts) according to IEEE 802.3at
- Fast Ethernet Non-Blocking Switch architecture according to IEEE 802.3
- Variants with industrial temperature range of -40°C ... +70 °C
- Surge protection and reverse polarity protection
- Minimum energy consumption due to Energy-Efficient Ethernet

Target markets

Machinery & Robotics	Automation technology	Industrial network infrastructures
Wind Energy Solar Energy	Transportation	Shipbuilding

General description

The Ha-VIS eCon 2000 Fast Ethernet PoE family of unmanaged Ethernet switches is equipped with up to 8 Fast Ethernet ports and allow for cost-efficient and quick expansion and/or reconstruction of network infrastructures. The switches work as power sourcing equipment (PSE) and are capable of simultaneously providing the full PoE output of 34.2 watts on up to four ports. Owing to the extremely flat design, these switches can be accommodated in installations where space is restricted towards the cable connection at the front. The selection includes various combinations of variants with RJ45 and fibre optic ports. Automatic detection of the transmission rate (auto-negotiation) and of the wiring of the twisted pair data cable (autopolarity and auto-MDI(X)) allow for simple plug & play. All variants are available with the temperature ranges "Industrial" and "Commercial".

Technical characteristics

Switch Features

Enclosures width	**120 mm**
Number of ports	5, 7, 8
Switching technology	Store and Forward
Supported standards	IEEE 802.3
Frame Size	1552 bytes
MAC table size	1k entries
Packet buffer size	448 kbit
Non-blocking	Yes
Quality of service	Yes
Energy-Efficient Ethernet	Yes
PROFINET compatible	Yes
EthernetIP compatible	Yes

Voltage supply

Nominal voltage	48 VDC ⎓	54 VDC ⎓
Permissible voltage range	44 VDC ... 57 VDC ⎓	50 VDC ... 57 VDC ⎓
Surge protection	Yes	
Reverse polarity proof	Yes	
Starting current	6.40 A	7.20 A
Overcurrent protection at input	Yes (4 A)	
Max. power consumption without PoE	1.2 W ... 3.36 W	
Cross-section / Wire gauge	0.08 mm² ... 2.5 mm² (28 AWG ... 12 AWG)	
Connection type	3-pole, pluggable screwed contact	
Pinout	+ / - / ⏚	
Supply circuit (acc. to 60950)	SELV (circuit breaker 10 A)	

Ethernet Ports 10BASE-Te / 100BASE-TX EEE

Connection type	RJ45
Auto-negotiation	Yes
Auto-polarity	Yes
Auto-MDI(X)	Yes
Transfer conditions	Twisted Pair
Transfer speed	10 / 100 Mbit/s
Transfer length	100 m (twisted pair, Cat 5)

Ethernet Ports 100BASE-FX

Type of fibre	**Multimode (MM)**	**Singlemode (SM)**
Connection type	SC Duplex	
Transfer conditions	FO	
Wavelength	1310 nm	
Transfer speed	100 Mbit/s	
Transfer length	2 km	15 km
Output power	-19 dBm ... -14 dBm	-15 dBm ... -8 dBm
Input sensitivity	≤ -32 dBm	≤ -34 dBm

Ambient conditions

Commercial temperature range	0 °C ... +55 °C
Industrial temperature range	-40 °C ... +70 °C
Storage temperature range	-40 °C ... +85 °C
Relative humidity (operation)	0 % ... 95 % (not-condensing)
Relative humidity (storage and transport)	0 % ... 95 % (not-condensing)
Air pressure (operation)	2000 m (795 hPa)

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PoE	PoE	PoE+
Number of PoE ports	4	
Standard	IEEE 802.3af / IEEE 802.3at	
PoE type	PSE	
Supported mode	Alternative A	
Supply voltage PSE	48 VDC ⎓	54 VDC ⎓
Max. current consumption PSE	1380 mA	2380 mA
Max. current	375 mA	638 mA
Maximum output power PSE	15.4 W per port 61.6 W total	34.2 W per port 136.8 W total
Supported cabling	See 802.3at, section 33.1.4	
PoE pinout	Alternative A, MDI-X (1/2 = V-, 3/6 = V+)	

Status and diagnostic displays

Power („Pwr“) ⏻ lights up green	Supply voltage is applied
Link/Activity („L/A“) off	No link
Link/Activity („L/A“) lights up green	Link is active
Link/Activity („L/A“) flashes green	Link is active and data is transferred
Link speed („Spd“) off	10 Mbit/s
Link speed („Spd“) lights up yellow	100 Mbit/s
PoE status off	PoE is inactive / low voltage
PoE status lights up green	Voltage in PoE range
PoE status lights up blue	Voltage in PoE+ range
PoE-Status lights up red	Error

Enclosures

Enclosures width	**120 mm**
Dimensions H x W x D (without pluggable screw contact and holding bracket)	113.5 mm x 120 mm x 27.3 mm
Weight	364 g ... 420 g
Type of installation	35 mm DIN rail acc. to EN 60 715
Material enclosures	Anodised aluminium
Protection degree (with plugged screw contact)	IP30
Protection class	III

Approvals
CE, FCC CFR 47 Part 15, cUL US 508 listed, DNV GL, LR, NK, ABB IIT
ECE - Approval mark (E1): see table technical characteristics

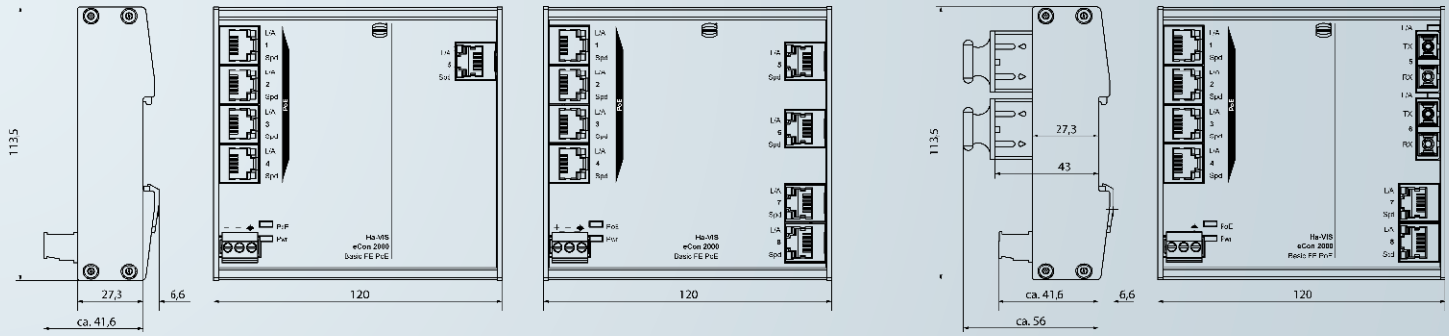
EMC and environmental conditions
EMC Interference immunity (EN 61000-6-1, 61 000-6-2 55024)
Electrostatic discharge (ESD) EN 61 000-4-2
Electromagnetic field EN 61 000-4-3
Rapid transients (burst) EN 61 000-4-4
Surge voltages EN 61 000-4-5
Conducted interference voltages EN 61 000-4-6

EMC Interference emission (EN 61000-6-4, EN 55 032, FCC CFR 47 Part 15)

Mechanical stability (EN 60721-3)
IEC 60068-2-6 Vibration
IEC 60068-2-6 Vibration resonance search
IEC 60068-2-27 Shock test

Included in delivery
- Pluggable screw contact for voltage supply
- Assembly instruction

Drawings



Technical characteristics / order information

Ports / order information

RJ45	SFP	SC	Enclosures width	Current consumption@ 54 VDC with PoE	MTBF in Mio. h	Commercial Temp.: 0 °C ... +55 °C		Industrial Temp.: -40 °C ... +70 °C	
						Switch	Part no.	Switch	Part no.
5	-	-	120 mm	2.39 A	0.84	Ha-VIS eCon 2050B-A-P	24 02 005 0030[1]	Ha-VIS eCon 2050BT-A-P	24 02 005 0020[1]
6	-	1x MM (2 km)	120 mm	2.42 A	0.78	Ha-VIS eCon 2061B-AD-P	24 02 006 1130	Ha-VIS eCon 2061BT-AD-P	24 02 006 1120
6	-	1x SM (15 km)	120 mm	2.41 A	0.79	Ha-VIS eCon 2061B-AF-P	24 02 006 1230	Ha-VIS eCon 2061BT-AF-P	24 02 006 1220
6	-	2x MM (2 km)	120 mm	2.43 A	0.76	Ha-VIS eCon 2062B-AD-P	24 02 006 2130	Ha-VIS eCon 2062BT-AD-P	24 02 006 2120
6	-	2x SM (15 km)	120 mm	2.42 A	0.78	Ha-VIS eCon 2062B-AF-P	24 02 006 2230	Ha-VIS eCon 2062BT-AF-P	24 02 006 2220
8	-	-	120 mm	2.39 A	0.73	Ha-VIS eCon 2080B-A-P	24 02 008 0030[1]	Ha-VIS eCon 2080BT-A-P	24 02 008 0020[1]

[1] E1 Approval

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