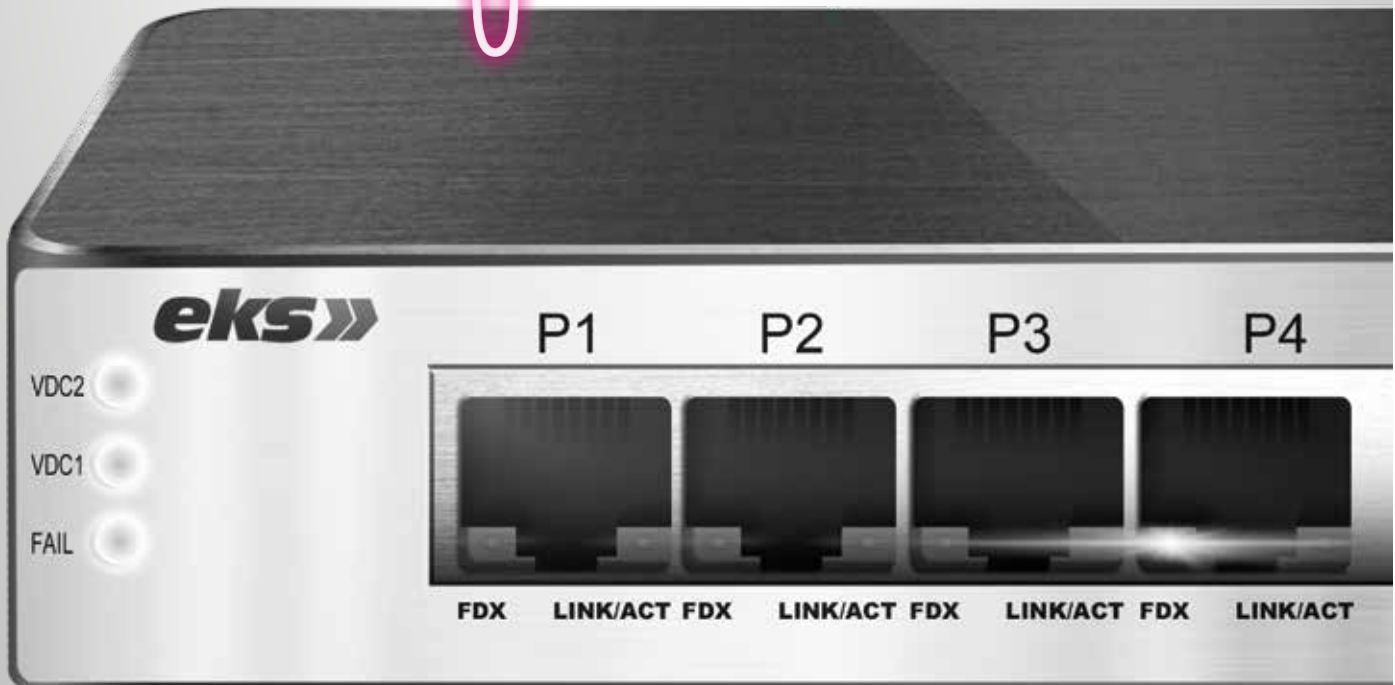


PORTFOLIO
ENGLISH

BYPASS

ETHERNET

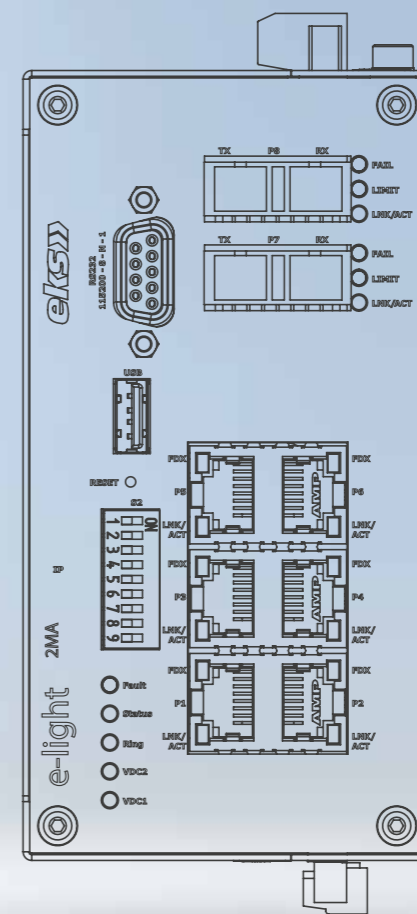
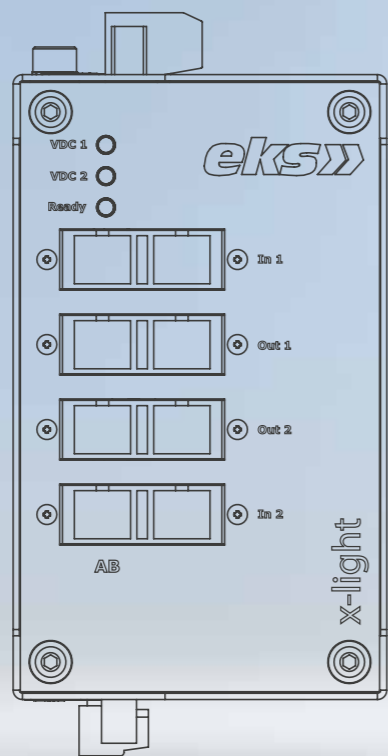




INTELLIGENT SOLUTIONS – engineered by eks

We are experts in industrial communication and we develop and produce high-performance electronic systems and modular devices that transmit data via fiber optics. Apart from that we offer customized engineering services on the „Best in class principle“.

As an independent, owner-managed family company, we have been standing for important customer needs such as performance, efficiency and security of investment for more than 80 years. Doing so we trust in our long-term expertise. At our headquarter in Germany we have been producing fiber optic systems since 1986 and not least because of that, we can call ourselves pioneers of modern communication.



BYPASS

XL-Optical Bypass Optical Bypass protocol transparent08

ETHERNET

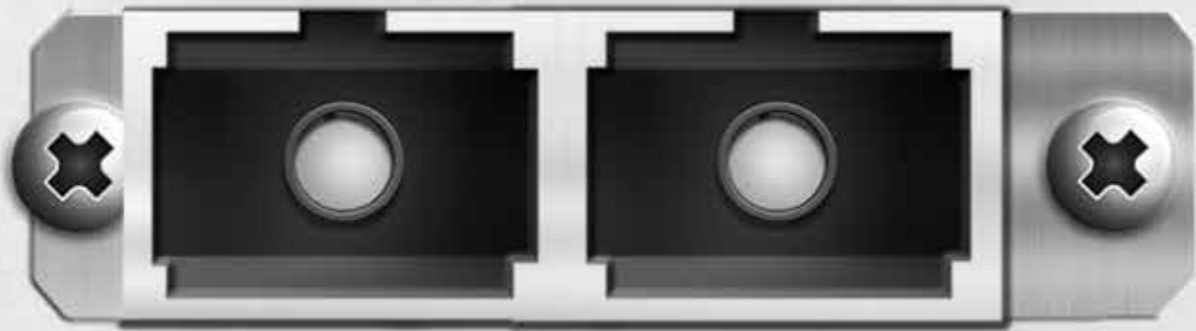
EL100-XS Compact media converter unmanaged 12
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VDC2 ●

Ready ●



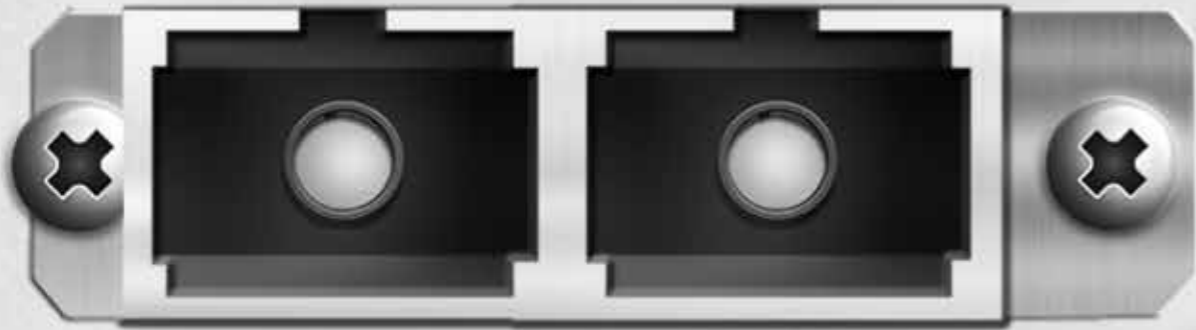
In 1



Out 1



Out 2



In 2

A

B

x-light

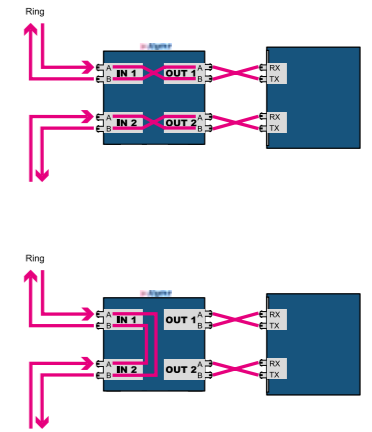
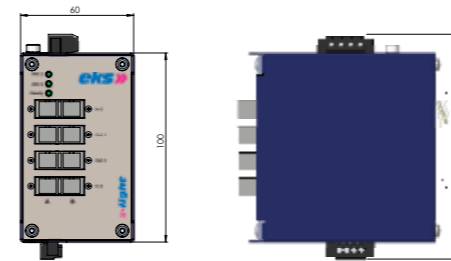


BYPASS

Nowadays, reliable production processes as well as safety and security depend on the availability of data connection. Depending on protocols, topologies and number of active devices, redundancies ensure switching times of only a few milliseconds. But if more than one failure occurs at the same time, an interruption or error is preprogrammed. In order to avoid that we have developed „x-light“, an industrial optical bypass which supports all Ethernet based protocols as well as all fieldbuses and various interfaces such as RS485. Furthermore, x-light can be used with all devices, even from other manufacturers, and it can be used in ring or line structures.



XL-OPTICAL BYPASS



Typ	50/125 MM-ST	50/125 MM-SC	50/125 MM-LC	62,5/125 MM-ST	62,5/125 MM-SC	62,5/125 MM-LC	9/125 SM-ST	9/125 SM-SC	9/125 SM-LC
Article no.	01500 5021	01500 5023	01500 5024	01500 6221	01500 6223	01500 6224	01500 0931	01500 0933	01500 0934
F0 connector	ST	SC	LC	ST	SC	LC	ST	SC	LC
Fiber	Multimode 50/125 µm			Multimode 62.5/125 µm			Singlemode 9/125 µm		
Wavelength	850 nm (±40 nm) 1310 nm (±40 nm)			1310 nm (±40 nm) 1550 nm (±40 nm)					
Insertion loss	≤ 1.4 dB			≤ 1.4 dB			≤ 1.7dB		
Durability switch	10 million								
Switching speed	15 ms max./4 ms typ./4 ms in a temperature range between +5 °C and +70 °C								
Switching type	non latching								
Switch-on delay	5 s, 10 s, 20 s and/or 40 s, switchable by DIP-Switch								
Threshold level	Between 10 V and 64 V switchable by DIP-Switch (1 V, 2 V, 4 V, 8 V, 16 V and/or 32 V)								
RS485 connector	2 x 4-pin power supply / 4 pin failure relay and signal input								
Status-LEDs	Power (green) / error (red) / ready (green)								
Power supply	10-64 VDC								
Power consumption	2.5 Watts								
Failure relay	25 VDC (1 A) / 60 VDC (0.3 A)								
Operating temperature	-40 °C - +70 °C								
EMC	EN61000-6-2/EN55022 Class B + A1 + A2								
Weight	500 g								
Dimensions	60 x 100 x 113 mm (60 x 120 x 113 mm incl. connector)								
Housing	Stainless steel, powder coated								

OPTICAL BYPASS PROTOCOL TRANSPARENT

x-light ensures a safe communication even in case of device failure by optically bypassing the defective node so that a permanent data transmission is guaranteed. x-light is manufacturer and protocol independent so that it perfectly integrates into every network, regardless of the structure (ring or line). x-light is activated once the voltage is lower than the adjusted voltage level. Furthermore, the system can be controlled flexibly via the trigger input, e.g. in case of service or failures.

x-light provides highest availability in multi- or singlemode fiber optic networks. Additional features are a high temperature range, a redundant power supply, a cost effective solution because it needs no additional UPS (uninterrupted power supply) and it reduces service costs.

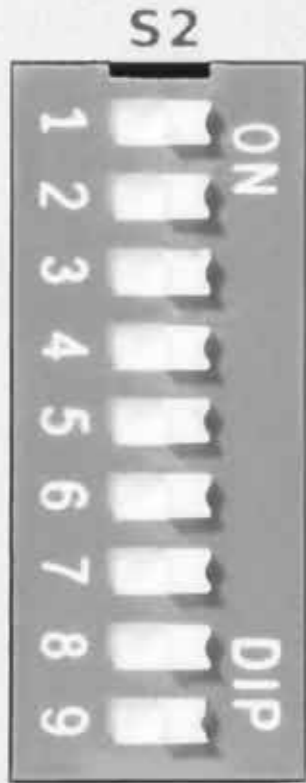
The stainless steel housing offers an extremely high degree of flexibility and safety for all kinds of indoor and outdoor applications. It can either be mounted onto a DIN EN rail or fastened onto the wall.

e-light 2MA

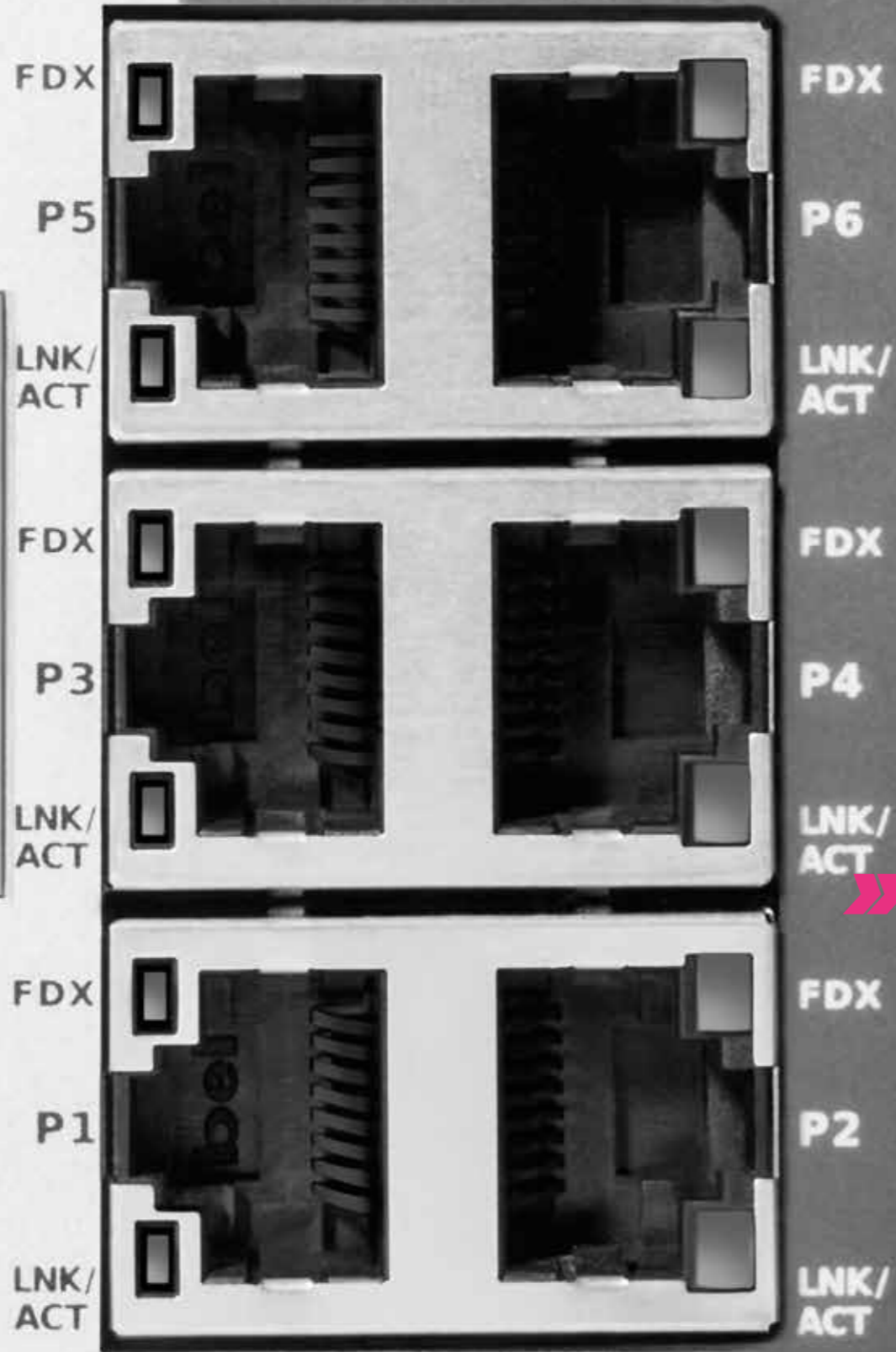
IP



RESET



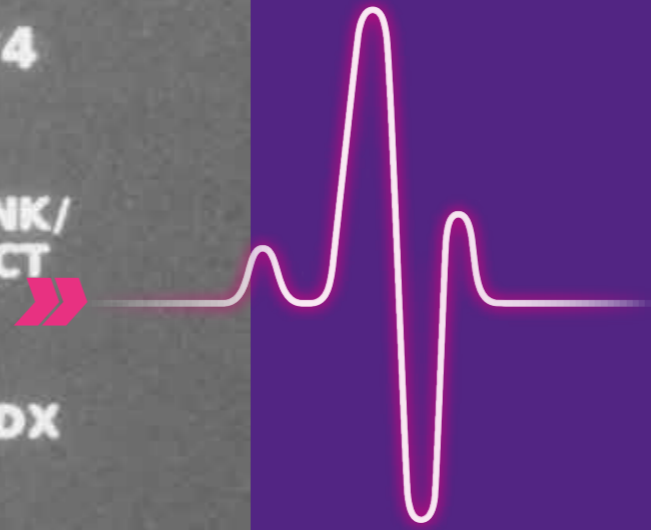
- Fault
- Status
- Ring
- VDC2
- VDC1



ETHERNET

e-light media converters and switches are especially designed for industrial applications. They have got a robust housing, compact design, a wide temperature range and an extended input voltage range.

They can be used with all fiber types such as multimode, singlemode POF and HCS (PCF). Furthermore, they feature BiDi technology and can have various connectors such as SMA, ST, SC, FC-PC as well as E-2000. Apart from that a crimpless version for POF fibers is available. Thus, e-light systems can be used in many indoor and outdoor applications.





EL100-XS

COMPACT MEDIA CONVERTER UNMANAGED

The series EL100-XS contains unmanaged media converters which operate with POF, HCS-, multimode or singlemode fiber optic. Additional features are autonegotiation, MDX/MDIX and extended temperature range.

The flat design of the stainless steel housing offers an extremely high degree of flexibility and safety for all kinds of indoor and outdoor applications. EL100-XS can either be mounted onto a DIN EN rail or fastened onto the wall. A clip is already included in the scope of delivery. EL100-XS is suitable wherever there is little space, e.g. in small distribution boxes.

Apart from that there is a version for the installation in PCs – a perfect alternative for network interface cards with fiber optic connectors. This card allows connecting fiber optics without any modification in the operation system. Since many PCs do not have a separate network interface card anymore, but network jacks on the mainboard, e-light PC is a low cost solution even if no PCI slot is available any more. A cable (included in the scope of delivery) can be used to power the device from the power supply of the PC so that you only have to connect the network interface card of the PC and the media converter with a network cable.



Typ	P-ST	H-ST	MM-ST	MM-SC	MM-SC/BIDI	SM-ST	SM-SC	SM-E2	SM-SC/BIDI
Article no. EL100-XS	0420001 08EV10-00	0420001 11EV10-00	0420001 31EV10-00	0420001 33EV10-00	0420001 36EV10-00 37EV10-00	0420001 51EV10-00	0420001 53EV10-00	0420001 55EV10-00	0420001 56EV10-00 77EV10-00
Article no. EL 100-PC				0420001 33EV10-05			0420001 53EV10-05		
FO connector	ST	ST	ST	SC	SC	ST	SC	E-2000	SC
Fiber type	POF 980/1000 µm	HCS 200/230 µm		Multimode 62.5 (50)/125 µm			Singlemode 9/125 µm		
Optical budget	12 dB	8 dB		12 dB			16 dB		
FO range	50 m (180 dB/km)	200 m (180 dB/km)		5 km (1 dB/km)			30 km, others up to 100 km on request (0.3 dB/km)		
Wavelength	650 nm	850 nm		1310 nm 1550 nm			1310 nm		1310 nm 1550 nm
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet								
Modified Cut Through	Cut Through modified, others on request								
10/100 Base TX-Port	1 x RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 5)								
Status-LEDs	LINK / ACT je Port								
Power supply	12–24 VDC								
Power consumption	2.5 Watts, 100 mA (24 V)								
Operating temperature	–40 °C – +70 °C (Multimode and Singlemode with ST or SC) / –20 °C – +55 °C (all others)								
EMC	EN61000-6-2/EN55022 Class B + A1 + A2								
Weight	200 g								
Dimensions	25 x 62 x 80 mm								
Housing	Stainless steel, powder coated								
Accessories	Power Supply: 22201440, Dual-Mount-Kit: 065129								



EL1000-XS-GP

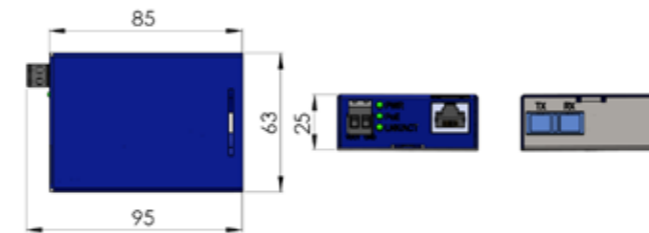
COMPACT
MEDIA CONVERTER

GIGABIT / POE

UNMANAGED

The media converters of the e-light XS-G and GP series have a very small housing (HxWxD 25 x 63 x 85 mm) and are characterized by features such as Auto-Negotiation and Auto MDI/MDIX or an extended temperature range.

The series comprises 1TX/1FX GigaBit or PoE media converters. The flat design of the stainless steel housing offers an extremely high degree of flexibility and safety for all kinds of indoor and outdoor applications. EL100-XS-G and GP can be mounted onto a DIN EN rail. A clip is already included in the scope of delivery. EL100-XS-G and GP are suitable wherever there is little space, e.g. in small distribution boxes.



e-lightXS-GP back view

Typ	1TX / 1FX		1TX / 1FX
Art.-No. EL1000 XS-G	04200 10 33 EV10-00		04200 10 53 EV10-00
Art.-No. EL1000 XS-GP	04202 10 33 EV10-10		04202 10 53 EV10-00
FO connector	SC		SC
Fiber type	Multimode 62,5 (50)/125µm		Singlemode 9/125µm
Optical budget	12 dB		16 dB
FO range	5 km (1 dB/km)		30 km (0,3 dB/km), others on request
Wavelength	650 nm	850 nm	1310 nm
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 802.3Z Gigabit Ethernet / IEEE 802.3ab 1000Base-T Gigabit Ethernet		
Modified Cut Through	Modified Cut Through, others on request		
10/100 Base TX-Port	1 x RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 5)		
Status-LEDs	LINK / ACT per port		
Power supply	54 VDC		
Storage temperature	-40 °C – +85 °C		
Operating temperature	-40 °C – +60 °C		
EMC	EN61000-6-2 / EN55022 Class A		
Weight	210g		
Dimensions (H x W x D)	25 x 63 x 85 mm		
Housing	Stainless steel, powder coated		



EL100-S

COMPACT
MEDIA CONVERTER

UNMANAGED
IP65

e-light S consists of a compact Ethernet media converter including M50 screwing and pre-assembled fiber optic cables with singlemode or multimode fibers, which are available in customized versions. The solution can be mounted to cabinet doors or machine housings with a wall thickness of up to 4 mm and simply commissioned by using the plug-and-play principle.

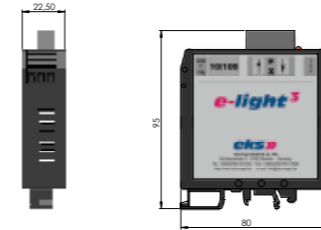
Since the socket for the fiber optic cable, which as well as the connector and the M50 screwing, complies with the IP65 protection degree rating, shows to the outside, the pre-assembled cables can be easily connected. This allows the e-light S – unlike traditional media converters – a flexible connection of machines and mobile applications.



Typ	Multimode	Singlemode
Article no. EL100-S	042050135EV10-00	042050155EV10-00
F0 connector	Outdoor connector revos E-2000 Multimode	Outdoor connector revos E-2000 Singlemode
Fiber type	Multimode 62.5 (50) /125 µm	Singlemode 9/125 µm
Optical budget	13 dB	23 dB
F0 range	5 km (1 dB/km)	15 km (0.3 dB/km)
Wavelength	1300 nm	1310 nm
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet	
Modified Cut Through	Cut Through modified, others on request	
10/100 Base TX-Port	1 x RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 5)	
Status-LEDs	LINK / ACT je Port	
Power supply	12-48 VDC	
Power consumption	2.5 Watts, 100 mA (24 V)	
Operating temperature	-10 °C – +50 °C	
EMC	EN61000-6-2/EN55022 Class B + A1 + A2	
Weight	350 g	
Dimensions	100 x 60 x 60 mm	
Housing	Aluminium/zinc die cast	
Mounting	mounting in housing walls with up to 4 mm thickness	
Protection class	M50 recess with IP65 sealing robust revos E-2000 Bulkhead with protection lid and IP65	
Cable	Pre-assembled cable on request	



EL100-3U/EL100-3UP



Typ	P-ST	H-ST	MM-ST	MM-SC	MM-SC/BIDI	SM-ST	SM-SC	SM-E2	SM-SC/BIDI
Article no. EL100-3U	0450001 01E	0450001 11E	0450001 31E	0450001 33E	0450001 36E-BIDI A 37E-BIDI B	0450001 51E	0450001 53E	0450001 55E	0420001 56E-BIDI A 77E-BIDI B
Typ	P-ST	H-ST	MM-ST	MM-SC	MM-SC/BIDI	SM-ST	SM-SC	SM-E2	SM-SC/BIDI
Article no. EL100-3UP	0460001 01E	0460001 11E	0460001 31E	0460001 33E	0460001 36E-BIDI A 37E-BIDI B	0460001 51E	0460001 53E	0460001 55E	0460001 56E-BIDI A 77E-BIDI B
FO connector	ST	ST	ST	SC	SC	ST	SC	E-2000	SC
Fiber type	POF 980/1000 µm	HCS 200/230 µm	Multimode 62.5 (50)/125 µm			Singlemode 9/125 µm			
Optical budget	12 dB	8 dB	12 dB			16 dB			
FO range	50 m (180 dB/km)	200 m (180 dB/km)	5 km (1 dB/km)			30 km, others up to 100 km on request (0.3 dB/km)			
Wavelength	650 nm	850 nm	1310 nm		1310 nm 1550 nm	1310 nm			1310 nm 1550 nm
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet								
Modified Cut Through	Cut Through modified, others on request								
10/100 Base TX-Port	1 x RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 5)								
Status-LEDs	TX per Port/PoE-Status (EL100-3UP only)								
Power supply	12-65 VDC for EL100-3U 44-57 VDC for EL100-3UP with PoE 50-57 VDC for EL100-3UP with PoE+								
Power consumption	2.4 Watts, 100 mA (24 V) for EL100-3U 2.4 Watts, 50 mA (48 V) for EL100-3UP with PoE								
Operating temperature	-10 °C – +55 °C								
EMC	EN61000-6-2/EN55022 Class B + A1 + A2								
Weight	150 g								
Dimensions	82 x 93 x 22.5 mm								
Housing	Polyamide, black								

COMPACT MEDIA CONVERTER

The EL100-3U and EL100-3UP (with PoE-function) media converters have an extra small housing with a dimension of 82 x 93 x 22.5 mm. Its features are Auto-Negotiation and Auto MDX/MDIX.

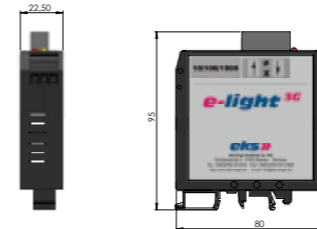
UNMANAGED POE

The flat design of the housing offers an extremely high degree of flexibility for all kinds of indoor and outdoor applications. EL100-3U / EL100-3UP is suitable wherever there is little space, e.g. in small distribution boxes.

The EL100-3U / EL100-3UP standard mode is Converter Mode, if all ports work with 100 MBit/s. Otherwise the mode is Cut-Through. Optionally, the device is also available with Store & Forward mode or with Pass-Through mode if a small latency is needed.



EL1000-3G



Typ	1TX 1FX	1TX 1FX	1TX 1FX
Article no. EL1000-3G	045000 1033EV10-00	045000 1053EV10-00	045000 1055EV10-00
F0 connector	SC	SC	E-2000
Fiber type	Multimode 62.5 (50)/125 µm	Singlemode 9/125 µm	
Optical budget	7.5 dB	11.5 dB	
F0 range	550 m (1 dB/km)	10 km, others up to 100 km on request (0.3 dB/km)	
Wavelength	850 nm	1310 nm	
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000 Base-T / IEEE 802.3z 1000Base-FX		
Switching Modus	Store and Forward		
10/100 Base TX-Port	1 x RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 6)		
Status-LEDs	LINK / ACT je Port		
Power supply	12-65 VDC		
Power consumption	2.4 Watts, 100 mA (24 V)		
Operating temperature	-10 °C – +55 °C		
EMC	EN61000-6-2/EN55022 Class B + A1 + A2		
Weight	150 g		
Dimensions	82 x 93 x 22.50 mm		
Housing	Polyamide, black		

COMPACT MEDIA CONVERTER

The EL1000-3G media converters have an extra small housing with a dimension of 82 x 93 x 22.5 mm. Its features are Auto-Negotiation and Auto MDX/MDIX.

UNMANAGED GIGABIT

The flat design of the housing offers an extremely high degree of flexibility for all kinds of indoor and outdoor applications. EL1000-3G is suitable wherever there is little space, e.g. in small distribution boxes.

The EL1000-3G standard mode is Store & Forward.



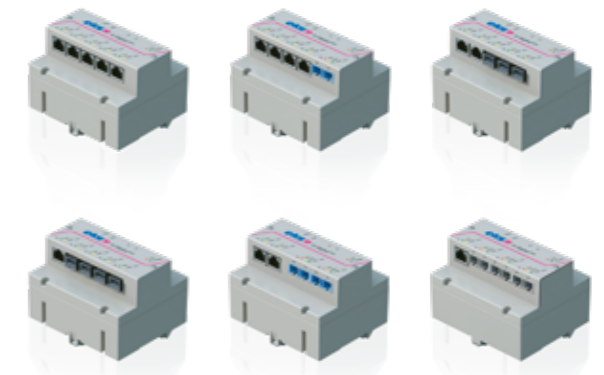
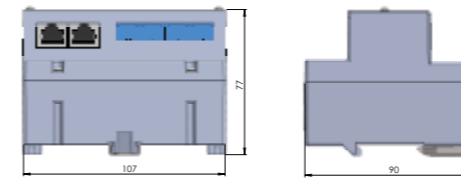
EL100-REG

5-PORT SWITCH

UNMANAGED

The product series e-light REG consists of industrial basic switches that support Fast Ethernet. Their housing is build according to DIN 43880 and thus they can flexibly be mounted in either switch cabinets or distribution boards.

The interface can be used for singlemode, multimode, HCS or POF fibers and distances of up to 30 km can be reached. Further features are Auto-Negotiation, MDI/MDI-X and a wide temperature range. The redundant power supply has got 12 to 60 VDC. Its status as well as the network status can be seen from the LEDs on the front panel.



Typ	5TX	1TX 4FX	2TX 3FX	5FX	4TX 1FX	2TX 2FX	4TX 1FX	2TX 2FX
Article no. EL100-REG	0490501 000000 EV00-00	0490101 08080808 EV00-00	0490101 08080808 EV00-00	049000108 08080808- EV-00-00	0490401 000033 EV00-00	0490201 003333 EV00-00	0490401 000053 EV00-00	0490201 005353 EV00-00
FO connector	-	Optolock	Optolock	Optolock	SC	SC	SC	SC
Fiber type	-	POF 980/1000 µm		Multimode 62.5 (50)/125 µm		Singlemode 9/125 µm		
Optical budget	-	12 dB		12 dB		16 dB		
FO range	-	50 m (180 dB/km)		5 km (1 dB/km)		30 km, others on request (0.3 dB/km)		
Wavelength	-	650 nm		1310 nm		1310 nm		
No. of FX-ports	-	4	3	5	1	2	1	2
No. of TX-ports	5	1	2	0	4	2	4	2
TX-Port	1 x RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 6)							
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet							
Status-LEDs	Power (green/red) / EV00-00 full duplex (green) / receiving data (yellow) / FiberView (red/yellow/green)							
Power supply	12-60 VDC							
Fehler-Relais	60 VAC (1 A) / 60 VDC (1 A)							
Power consumption	5.3 Watts, 220 mA (24 V)							
Potential separation	500 VDC							
Operating temperature	-40 °C - +55 °C							
EMC	EN61000-6-2/EN55022 Class A							
Weight	300 g							
Dimensions	77 x 107 x 90 mm							
Modules	6							
Housing	Polyamide (PA 6/6.6)							

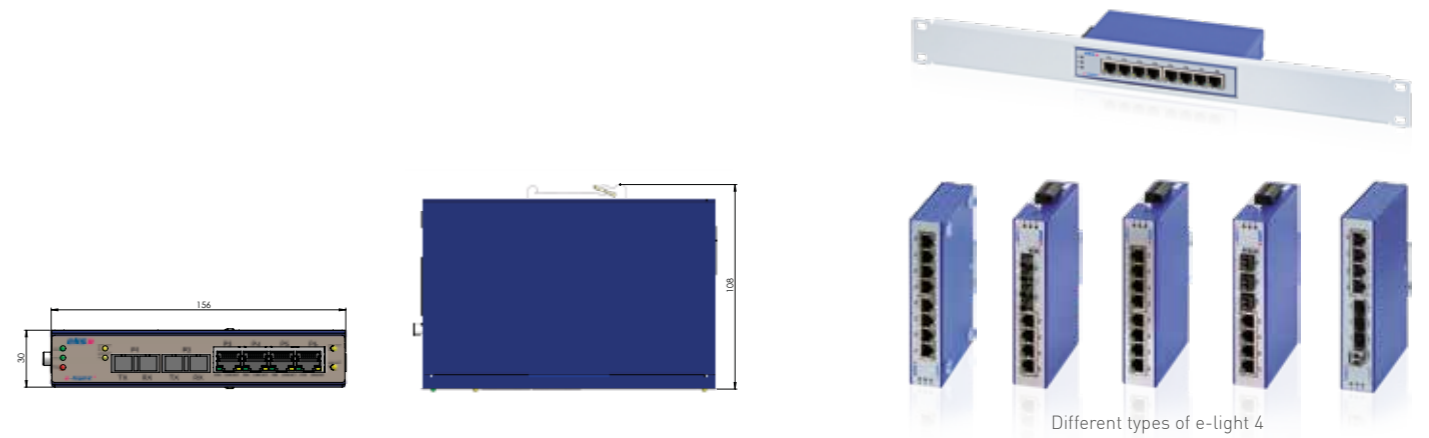


EL100-4U

8-PORT SWITCH
UNMANAGED

The EL100-4U series "Essential Line" comprises five industrial basic switches for Fast Ethernet. Since they are only 3 cm in width they do not need much space. In case of extremely flat installation space the DIN rail clip can be fixed at the side. Apart from that, they can be used in 19" racks by using an additional cover at the front.

The following switches are available: 8 TX, 8TX/2FX, 4TX/2FX, 4TX/1FX, 4TX/3FX and 4TX/4FX. They can be used with singlemode, multimode, HCS and POF fibers. All switches are suitable for distances of up to 30 km. Other features are auto negotiation, MDX/MDIX and an extended temperature range. The redundant power supply is 12 to 60 VDC and its status – as well as the network status – can be seen from the LEDs on the front panel.



Different types of e-light 4

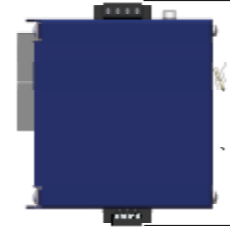
Typ	5TX	8TX	4TX 1FX	4TX 2FX	4TX 3FX	4TX 4FX	8TX 2FX	4TX 1FX	4TX 2FX	4TX 3FX	4TX 4FX	8TX 2FX
Article no. EL100-4U with SC	0500501 000000 EV00-00	0500801 000000 EV00-00	0500401 000033 EV00-00	0500401 003333 EV00-00	0500401 333333 EV00-00	0500401 33333333 EV00-00	0500801 003333 EV00-00	0500401 000053 EV00-00	0500401 005353 EV00-00	0500401 535353 EV00-00	0500401 53535353 EV00-00	0500801 005353 EV00-00
Article no. EL100-4U with ST	-	-	0500401 000031 EV00-00	0500401 003131 EV00-00	0500401 313131 EV00-00	0500401 31313131 EV00-00	0500801 003131 EV00-00	0500401 000051 EV00-00	0500401 005151 EV00-00	0500401 515151 EV00-00	0500401 51515151 EV00-00	0500801 005151 EV00-00
Article no. EL100-4U with E-2000	-	-	0500401 000035 EV00-00	0500401 003535 EV00-00	0500401 353535 EV00-00	0500401 35353535 EV00-00	0500801 003535 EV00-00	0500401 000055 EV00-00	0500401 005555 EV00-00	0500401 555555 EV00-00	0500401 55555555 EV00-00	0500801 005555 EV00-00
Article no. EL100-4U with SFP	-	-	-	-	-	0500401 99999999 EV00-00	-	-	-	-	-	0500401 99999999 EV00-00
Fiber type	-	-	Multimode 62.5 (50)/125 µm					Singlemode 9/125 µm				
Optical budget	-	-	12 dB					16 dB				
FO range	-	-	5 km (1 dB/km)					30 km, others up to 100 km on request (0.3 dB/km)				
Wavelength	-	-	1310 nm					1310 nm				
No. of FX-ports	-	-	1	2	3	4	2	1	2	3	4	2
No. of TX-ports	5	8	4	4	4	4	8	4	4	4	4	8
TX-Port	RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 6)											
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet											
Status-LEDs	Power supply (green) / error (red) / Port LEDs (yellow/green)											
Power supply	12-60 VDC, others on request											
Failure relay	25 VDC (1 A) / 60 VDC (0.3 A)											
Power consumption	5 Watts, 200 mA (24 V)											
Potential separation	500 VDC											
Operating temperature	-40 °C – +70 °C (Multimode and Singlemode with ST or SC) / -20 °C – +55 °C (all others)											
EMC	EN61000-6-2/EN55022 Class B + A1 + A2											
Weight	500 g											
Dimensions	155 x 30 x 110 mm / 5TX: 130 x 25 x 105 mm											
Housing	Steel, powder coated											



EL100-X

4-PORT SWITCH UNMANAGED

The series EL100-X contains unmanaged 4-Port-switches for 10/100 MBit/s with optionally up to four RJ45-Ethernet-Ports and up to two optical ports which operate with POF, HCS-, multimode or singlemode fiber optic. Additional features are Auto-Negotiation, MDX/MDIX, redundant power supply and extended temperature range. LEDs and potential-free contacts (optional) of a fault detector relay are able to signal defective states.



e-light 2TX/2FX

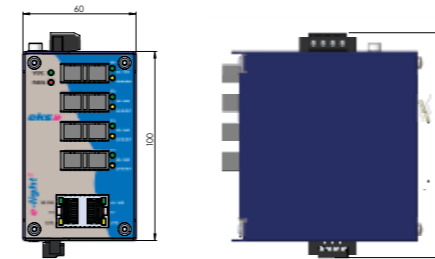
Typ	4TX	3TX 1FX	2TX 2FX	3TX 1FX BIDIA	3TX 1FX BIDIB	2TX 2FX BIDI	3TX 1FX	2TX 2FX	3TX 1FX BIDIA	3TX 1FX BIDIB	2TX 2FX BIDI
Article no. EL100-X with SC	0480001 0000	0480001 0033	0480001 3333	0480001 0036	0480001 0037	0480001 3637	0480001 0053-L	0480001 5353-L	0480001 0056-L	0480001 0077-L	0480001 5677-L
Article no. EL100-X with ST	-	0480001 0031	0480001 3131	-	-	-	0480001 0051-L	0480001 5151-L	-	-	-
Article no. EL100-X with E-2000	-	0480001 0035	0480001 3535	-	-	-	0480001 0055-L	0480001 5555-L	-	-	-
Fiber type	-	Multimode 62.5 (50)/125 µm					Singlemode 9/125 µm				
Optical budget	-	12 dB					16 dB				
FO range	-	5 km (1 dB/km)					30 km, others up to 100 km on request (0.3 dB/km)				
Wavelength	-	1310 nm			1310 nm 1550 nm		1310 nm			1310 nm 1550 nm	
No. of FX-ports	0	1	2	1	1	2	1	2	1	1	2
No. of TX-ports	4	3	2	3	3	2	3	2	3	3	2
TX-Port	RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 6)										
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet										
Status-LEDs	Power (green) / failure (red) / Port LEDs (yellow/green)										
Power supply	12-30 VDC, others on request										
Failure relay (optional)	25 VDC (1 A) / 60 VDC (0.3 A)										
Power consumption	5 Watts, 200 mA (24 V)										
Potential separation	500 VDC										
Operating temperature	-40 °C - +70 °C (Multimode and Singlemode with ST or SC) / -20 °C - +55 °C (all others)										
EMC	EN61000-6-2/EN55022 Class B + A1 + A2										
Weight	570 g										
Dimensions	60 x 100 x 113 mm (60 x 120 x 113 mm incl. connector)										
Housing	Stainless steel, powder coated										



EL100-2U

6/7/8-PORT SWITCH UNMANAGED

The series EL100-2U contains unmanaged 6/7/8-Port-switches for 10/100 MBit/s with optionally up to eight RJ45-Ethernet-Ports and up to three optical ports which operate with POF, HCS-, multimode or singlemode fiber optic. Additional features are Auto-Negotiation, MDX/MDIX, redundant power supply and extended temperature range. LEDs are able to signal defective states.

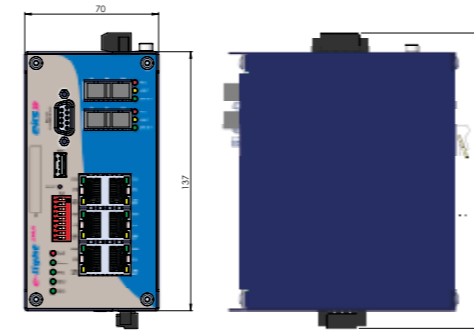


Different types of EL100-2U

Typ	8TX	6TX 1FX	6TX 2FX	4TX 3FX	2TX 4FX	6TX 2FX BIDI	6TX 1FX	6TX 2FX	4TX 3FX	2TX 4FX	6TX 2FX BIDI
Article no. EL100-2U with SC	0400001 000000	0400001 000033	0400001 00003333	0400001 333333	0400001 33333333	0400001 003637	0400001 000053	0400001 005353	0400001 535353	0400001 53535353	0400001 005677
Article no. EL100-2U with ST	-	0400001 000031	0400001 003131	0400001 313131	0400001 31313131	-	0400001 000051	0400001 005151	0400001 515151	0400001 51515151	-
Article no. EL100-2U with E-2000	-	0400001 000035	0400001 003535	0400001 353535	0400001 35353535	-	0400001 000055	0400001 005555	0400001 555555	0400001 55555555	-
Fiber type	-	Multimode 62.5 (50)/125 µm					Singlemode 9/125 µm				
Optical budget	-	12 dB					16 dB				
FO range	-	5 km (1 dB/km)					30 km, others up to 100 km on request (0.3 dB/km)				
Wavelength	-	1310 nm			1310 nm 1550 nm		1310 nm			1310 nm 1550 nm	
No. of FX-ports	0	1	2	3	4	2	1	2	3	4	2
No. of TX-ports	8	6	6	4	2	6	6	6	4	2	6
TX-Port	RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 6)										
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet										
Status-LEDs	Power (green) / failure (red) / Port LEDs (yellow/green)										
Power supply	12-30 VDC, others on request										
Failure relay (optional)	25 VDC (1 A) / 60 VDC (0.3 A)										
Power consumption	5 Watts, 200 mA (24 V)										
Potential separation	500 VDC										
Operating temperature	-40 °C – +70 °C (Multimode and Singlemode with ST or SC) / -20 °C – +55 °C (all others)										
EMC	EN61000-6-2/EN55022 Class B + A1 + A2										
Weight	570 g										
Dimensions	60 x 100 x 113 mm (60 x 120 x 113 mm incl. connector)										
Housing	Stainless steel, powder coated										



EL100-2MA



Typ	8TX	P-ST	H-ST	MM-ST	MM-SC	MM-SC/BIDI	SM-ST	SM-SC	SM-SC/BIDI
Article no. EL100-2MA 8TX	0441000100 0000 EV10-00	-	-	-	-	-	-	-	-
Article no. EL100-2MA 6TX/2FX	-	on request	on request	0441000100 3131 EV10-00	0441000100 3333 EV10-00	on request	0441000100 5151 EV10-00	0441000100 5353 EV10-00	on request
Article no. EL100-2MA 4TX/4FX	-	on request	on request	0441000100 31313131 EV10-00	0441000100 33333333 EV10-00	on request	0441000100 51515151 EV10-00	0441000100 53535353 EV10-00	on request
FO connector	-	ST	ST	ST	SC	SC	ST	SC	SC
Fiber type	-	POF 980/1000 µm	HCS 200/230 µm	Multimode 62.5 (50)/125 µm		Singlemode 9/125 µm			
Optical budget	-	12 dB	8 dB	12 dB		16 dB			
FO range	-	50 m (180 dB/km)	200 m (180 dB/km)	5 km (1 dB/km)		30 km, others up to 100 km on request (0.3 dB/km)			
Wavelength	-	650 nm	850 nm	1310 nm		1310 nm 1550 nm	1310 nm		1310 nm 1550 nm
TX-Port	1 x RJ45 / Auto-Negotiation / Auto MDI/MDI-X / Supports length up to 100 m (CAT 6)								
IEEE	IEEE 802.3 10Base-T Ethernet / IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet / IEEE802.3x Flow Control and Back-pressure / IEEE802.1d spanning tree / IEEE802.1w rapid spanning tree / IEEE802.1p class of service / IEEE802.1Q VLAN Tag								
Management	SNMP Management / Web-Interface Management								
SNMP MIB	RFC 1213 MIB / RFC 1493 Bridge MIB / RMON RFC 1757 / RFC 2674 VLAN MIB / RFC 1643 Ethernet such as MIB / RFC 1215 Trap MIB / Private MIB for switch information, Ring, port alarm, TFTP firmware update, reset, port mirror, IP security management, IGMP management MIB								
Switching-Technology	Store and Forward								
MAC-Address-tables	2K MAC-Address-tables								
Ring	MRP / 2 Ring ports / ring recovery time: 200 ms or less								
VLAN	Port Based VLAN / Tagged VLAN IEEE 802.1Q								
IGMP	IGMP v1 and query mode with up to 256 groups								
SNTP / SMTP	SNTP for time synchronisation / SMTP server and email for alarms								
Port Mirror	only TX packets or TX and RX packets								
Firmware-Update	TFTP firmware update, TFTP backup and backup								
Rate Control	Ingress and egress with combination possibilities								
DHCP Client	DHCP client function								
Status-LEDs	Power (green) / failure (red) / Port LEDs (yellow/green); FX Ports ring (green) / status (yellow) / fault (red)								
Power supply	12-60 VDC								
Alarm contact	2 failure relays configurable / 25 VDC (1 A) / 60 VDC (0.3 A) each								
Power consumption	8 Watts, 330 mA (24 V)								
Potential separation	500 VDC								
Operating temperature	-40 °C - +55 °C (Multimode and Singlemode with ST or SC) / -20 °C - +55 °C (all others)								
EMC	EN61000-6-2/EN55022 Class A								
Weight	850 g								
Dimensions	157 x 70 x 130 mm								
Housing	Stainless steel, powder coated								

8-PORT SWITCH MANAGED

EL100-2MA is an 8 port switch that features ring function based on the Media Redundancy Protocol (MRP) with a recovery time of less than 200 ms.

They are available with up to 4 flexibly configurable FX-ports and up to 6TX-ports. The Fast Ethernet switches with their industrial design are useable in a wide temperature range of -25 °C to +55 °C and are suitable for both DIN rail mounting and wall fastening.

The EL100-2MA highlights are amongst others: Web Management GUI, Port Mirroring, DHCP Client, IGMP, SNTP, SMTP, port and tagged based VLAN, SNMP, RMON, quality of service as well as an alarm relay output for system events. Additional features are Auto-Negotiation, MDX/MDIX and redundant power supply with an input voltage range from 12 VDC to 60 VDC.

OUR PROMISE:



so easy»»

We would like to make it as simple as possible for you: The cooperation with our customers is characterized by fast response times, direct communication and minimum bureaucracy. Our general agreements are fair and our support prompt. We are open for new developments and react flexibly to your needs.

so clever»»

We deliver efficient solutions from one source - from active and passive components to the corresponding accessories and customized services. Comprehensive testing and simulation saves time and money. Our clear structure for prices and discounts makes business with us transparent.

so safe»»

With F0 technology and exclusive customizing we offer a high degree of security. Since for us security means more than product security. It also covers all subsequent processes.

so quick»»

Our customers benefit from our fast production processes. They are continuously improved and well documented. We also require these standards from our suppliers. This combination of performance and efficiency is the only way we can ensure and maintain short delivery periods.



MAKING LIFE SAFER

Fast networks and technology enrich us every day – in both private and working life. For that, reliable function and permanent availability are indispensable. With the best products for intelligent performance, we ensure every day that data is safely transmitted, infrastructures work faultlessly and that our workplaces remain competitive.

Our innovation capability significantly contribute to making life safer. Day after day. In every single moment.

V. 1.5 Subject to technical alterations. Product design can differ from original design.



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