

POE TECHNICAL SPECIFICATIONS

PoE Switch 4p FLX M+



PoE switch with 16 PoE ports.

Technical specifications

These technical specifications are subject to change without notice.

Name, article number and e-number

Name	Article number	E-number (SV)
PoE Switch 16p FLX M+	FM01N10224P01016PM	-

More information

About PoE from Milleteknik

The series is designed to power PoE devices such as access systems, surveillance cameras and other equipment that can be operated with Power over Ethernet.

PoE M-switch 4p FLX M+, PoE M-switch 8p FLX M+ and PoE M-Switch 16p FLX M+ meet 802.3at type2 class 4. The PoE switch is managed, i.e. it is possible to control the switch via its software interface. The products have something we call "controlled charging", which is a safety function that means that batteries are not charged with more than 4.5 A. By controlling the charging of batteries, the lifespan of batteries is significantly extended. The product has 24 V battery voltage which is boosted up to 48 V to power the PoE switch. This allows the device to be used to drive other applications such as door locks, etc on the one load output. It is important to accurately calculate the load so that the unit's specifications are not exceeded. Battery box can be connected for extended backup drive time.

Power over Ethernet from Milleteknik

- PoE for security applications.
- Proven, reliable technology.
- For fixed installation.
- Swedish made.
- Software controlled PoE switch

Areas of use

- Power supply for camera surveillance and other applications that can be powered by PoE.
- Security applications powered by PoE that need backup power in the event of a power outage.

Alarm

The device alarms for:

Mains failure alarm, low battery voltage, disconnected batteries / battery short circuit, overvoltage or undervoltage or charger error, low system voltage, load fuse has blown / battery fuse has blown.

Fixed installation

The product is intended for fixed installation. The battery backup must be installed by a qualified installer.

REGULATIONS AND CERTIFICATIONS

Requirements that the product meets

EMC:	EMC Directive 2014 / 30EU
Electricity:	Low voltage directive: 2014/35 / EU
PoE:	IEEE 802.3af, IEEE 802.3at/30.8 W Note that 802.3at type2 is not supported, as the PoE card lacks a handshake function for type 2. IEEE 802.3af, IEEE 802.3at/30.8 W up to Type2, Class 4.
CE:	CE directive according to: 765/2008



EXPECTED OPERATING TIME IN THE EVENT OF A POWER FAILURE (WITH NEW BATTERIES)

PoE	Bat-tery	Power 15.4 W	Power 30.8 W	Power 62 W	Power 90 W	Power 100 W	Power 120 W	Power 180W	Power 240 W
[sv] PoE M-switch 8p/16p FLX M+ (24 V)	2 st 20 Ah	29,5 h	14 h 30 min.	7 h		3 h 40 min.	2 h 50 min.	1 h 40 min.	1 h 10 min.

CIRCUIT BOARDS - TECHNICAL DATA

Technical data: CEO 3

CEO3 V 2.5

Info	Explanation
Article title	CEO3
Product description	CEO 3 is the next generation circuit board for simpler battery backups. Advanced functions that were not previously possible in simpler battery backups are now available as standard. CEO 3 is a reliable heart in simpler battery backups with fewer components than before, which reduces the environmental impact.
Measure	120 x 55 mm x 52 mm
Own consumption	32 mA
Fuse on output	F1: T2.5A, mains fuse. F6: T5A, load fuse +, P2:1. F7: T16A, battery fuse.
Outputs	One cargo outlet, fused.
Insurance	Load output: + secured.
Alarm via	Triggered load securing, potential-free shifting. Conclusion CO / NO. PRO1: Via alarm terminal J13 (NC-CO). PRO2: Via alarm terminal J13 (NC-CO). PRO2 v3: Via J11 and J12 to motherboard on to the parent system. PRO 3: Via J11 and J12 to motherboard on to the parent system.
Protection against:	Deep discharge, short circuit, overload and overvoltage.

Indications

Indicator diode	Green	Orange	RED
(2) / D2	OK	Low battery voltage / fuse fault.	Low battery voltage with broken fuse on output.
(4) / D11	-	Overvoltage.	Batteries incorrectly connected.

Alarm limits

Alarm limit at low battery voltage	48 V
(5) / JU2 with jumper	50.5 V
(5) / JU 2 without jumper	48 V
The unit is delivered without a jumper on (8) / JU2	

sum alarm

sum alarm	
(8) P2: 3	NO
(8) P2: 4	CO
(8) P2: 5	NC

Technical data: PoE card

Product	Number of PoE / LAN ports	Max power per port	PoE, continuous power	Ethernet type	Network ports	Interface	Functions	Type, injector and switch
PoE Switch 16p FLX M+	16/2	30.8W @ 54.6V DC	320W	Fast Ethernet Mbit PoE switch	10 / 100 PoE	1000Base-T RJ-45	Auto-negotiation, Auto-uplink (auto MDI/MDI-X)	Managed. Software interface to control switch is available.

POWER SUPPLY

Power supply - Technical Data RSP-320-48

Info	Explanation
Output voltage	54.6 V
Output current	0 A - 6.7 A
Output voltage, ripple	240 mVp-p
Overvoltage	58.4 V - 68 V
Voltage recharge, ripple / current limitation	Less than 1.2 Vp-p
Efficiency	90%
Current limitation	105% - 135%
Constant voltage	+/- 0.5%
Regulatory accuracy	+/- 1.0%
Input current	2 A
Mains voltage frequency	47 Hz- 63 Hz
Mains voltage	124 V AC - 370 V AC
Brand effect	321.6 W
Temperature range	-30°C - +70°C
Humidity range	20% - 90% RH non-condensed
The power supply is adapted and calibrated with the battery / hardware of the battery backup. Only power and calibrated power supplies may be used. Contact support when changing power supplies. Use of power supplies coming from another source may cause damage not covered by the warranty. Warranty is canceled if power supplies (from a source other than support / designated by support) that are not correctly calibrated are used.	

TECHNICAL DATA ENCLOSURES

Enclosures - Technical Data FLX M

Info	Explanation
Name	FLX M
Enclosure class	IP 32
Measure	Height: 224 mm, width 438 mm, depth 212 mm
Height units	5 HE
Mounting	Wall or 19 "rack
Ambient temperature	+ 5 ° C - + 40 ° C. For best battery life: + 15 ° C to + 25 ° C.
Environment	Environmental class 1, indoors. 20% ~ 90% relative humidity
Material	Powder coated sheet
Color	Black
Cable entries, number	4
Batteries that fit	2 pieces 12 V, 20 Ah. 2 pieces 12 V, 14 Ah. (PoE M-switch 16p FLX M+)

LINK TO THE LATEST INFORMATION

Products and software are subject to updates, you will always find the latest information on our website.

[PoE](#)

WARRANTY, SUPPORT, COUNTRY OF MANUFACTURE AND COUNTRY OF ORIGIN

Warranty

The product has a two-year warranty, from the date of purchase (unless otherwise agreed). Support during the warranty period can be reached at support@milleteknik.se or telephone, +46 31-34 00 230. Compensation for travel and / or working hours in connection with locating faults, installing repaired or replaced goods is not included in the warranty. Contact Milleteknik for more information. Milleteknik provides support during the product's lifetime, however, no later than 10 years after the date of purchase. Switching to an equivalent product may occur if Milleteknik deems that repair is not possible. Support costs may (at Milleteknik's discretion) occur after the warranty period has expired.

Support

Do you need help with installation or connections? Our support phone is available: Monday-Thursday 08: 00-16: 00 and Fridays 08: 00-15: 00. Telephone support is closed between 11: 30-13: 15.

You can also send e-mail, we respond, on weekdays, usually in 24 hours.

Phone: +46 31-340 02 30

SPARE PARTS

Support handles questions about spare parts, see contact information above.

Country of manufacture

Country of manufacture / country of origin is Sweden. For more information, contact your seller.

Designed and produced by: Milleteknik AB

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BATTERIES - RECOMMENDED, NOT INCLUDED

Batteries are not included they are sold separately

Batteries are sold separately.

14 Ah, 12 V AGM battery

Fits in	Number of batteries	
Battery type	V	Ah
Maintenance-free AGM, lead-acid battery.	12 V	14 Ah

10+ Design life * battery

Article number	E-number	Article name	Terminal	Measure. Height width depth	Weight per piece	Make
MT113-12V14-01	5230537	UPLUS 12V 14Ah 10+ Design Life battery	Flat pin 6.3 mm	151x98x101 mm	4.2 kg	UPLUS

* Design Life is the durability this year for unused battery. Environmental factors such as heat and load affect service life. Batteries that have a durability (+10 Design Life) of 10+ years usually need to be replaced after 4-5 years.