



PoE Switch 4p M

PoE switch with battery backup

350-205

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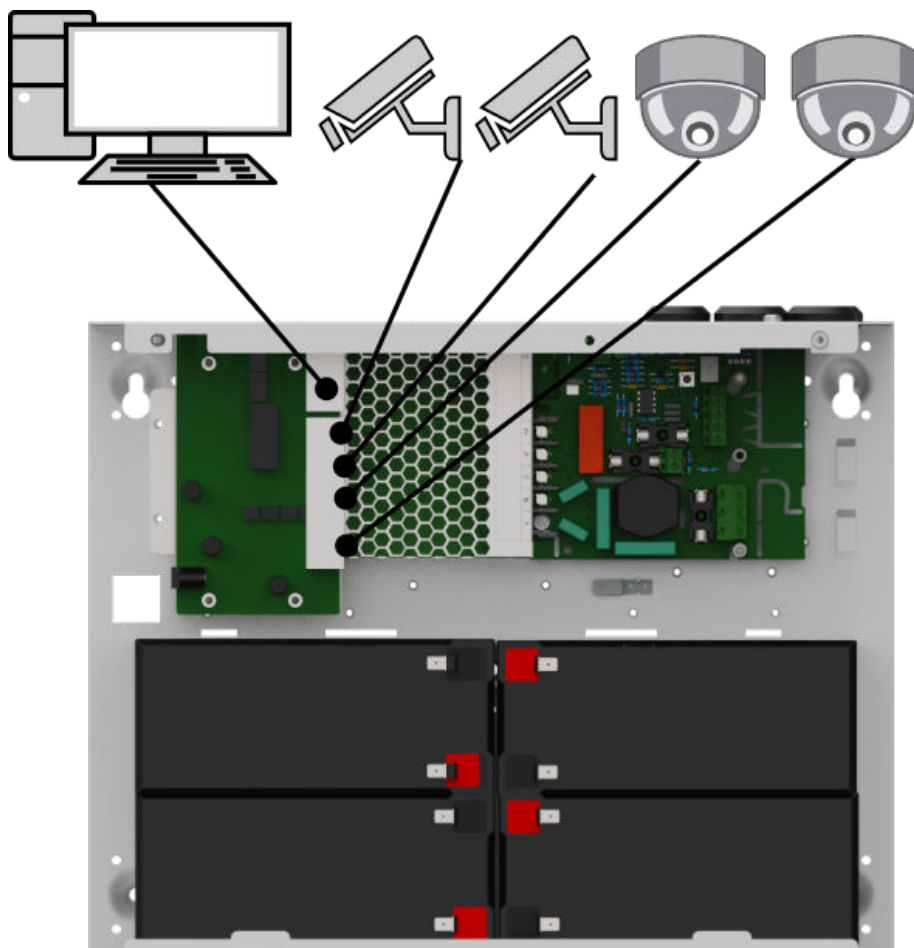


1. ABOUT POE FROM MILLETEKNIK

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. Through its function as a battery backup, the PoE device can continue to be powered in the event of a power failure.

PoE switch 4p M, PoE switch 4p FLX S+ and PoE switch 4p FLX M+ are for security systems where a, reliable power supply with battery backup and PoE function is needed. Our PoE have something we call "controlled charging", which is a safety function that means that batteries are not charged with more than 0.5 A. By controlling the charging of batteries, the lifespan of batteries is significantly extended.

2. HOW POE POWERS DEVICES CONNECTED TO THE POWER SUPPLY



PoE can power, for example, surveillance cameras.

Connect external devices to be powered via PoE in ports 1-4.

Connect other devices that do not need to be operated with PoE in LAN1-2.





3. COMPONENT OVERVIEW POE M

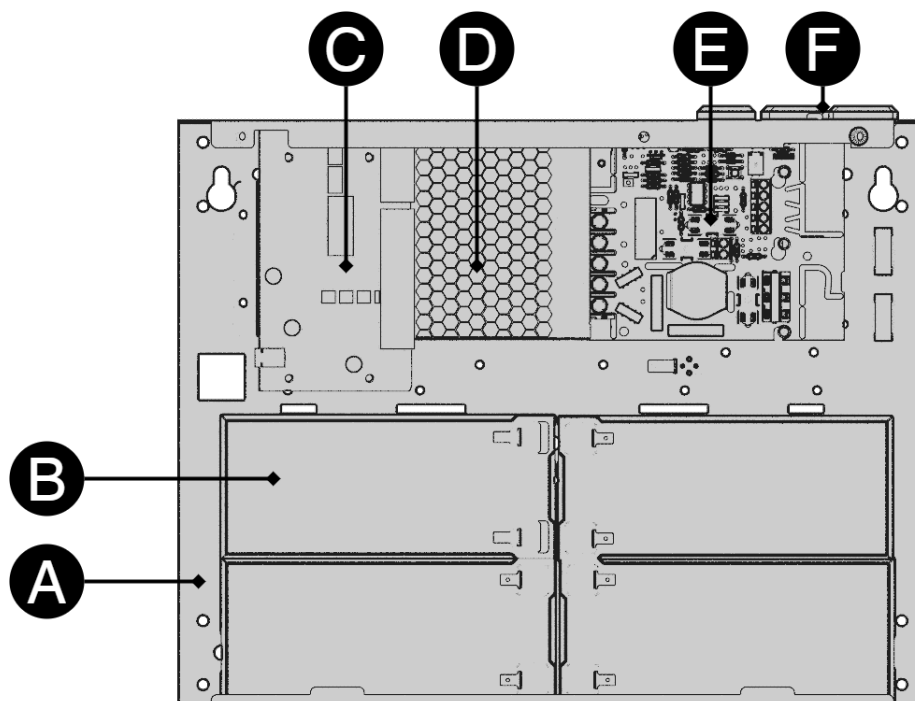


Table 1. Component overview

Symbol	Explanation
A	Casing in powder-coated sheet metal.
B	Space for batteries.
C	PoE switch.
D	Power supply unit.
E	Motherboard.
F	Cable entries.

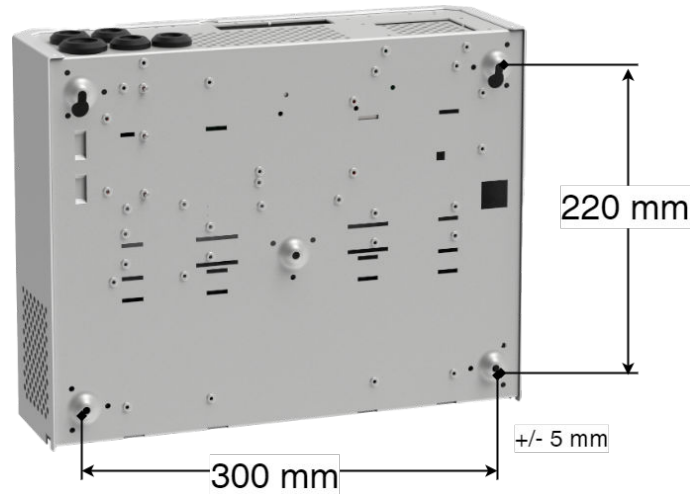
4. WALL MOUNTING

Use four screws suitable for the wall to set up the cabinet.

The distance between the screw head and the wall should be 1.5–2 mm.

Preferably leave a 100 mm air gap around the unit.



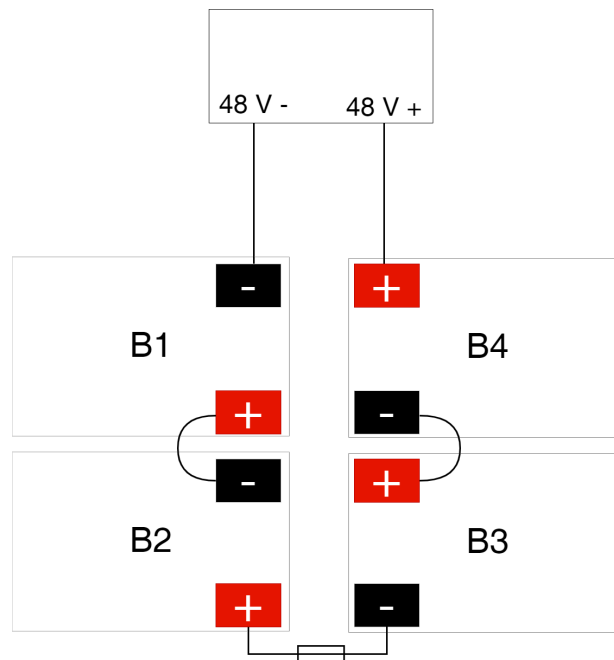


5. CONNECTION OF BATTERIES

Battery wiring is mounted on the circuit board upon delivery. Pictures below only show how to connect wiring.

1. Place the batteries in the cabinet with the battery terminals facing outwards, against the cabinet door.
 2. Connect the battery cable. Red cable on plus and black cable on minus.
- If possible, disconnect mains voltage when replacing the battery.

Figure 1. Wiring diagram for batteries in battery backup



Connect the terminals correctly so that you do not damage the equipment.





6. COMMISSIONING - HOW TO START THE UNIT

The unit works normally when the indicator LED on the outside of the cabinet door lights up with a solid green light. See front panel for other status indications.

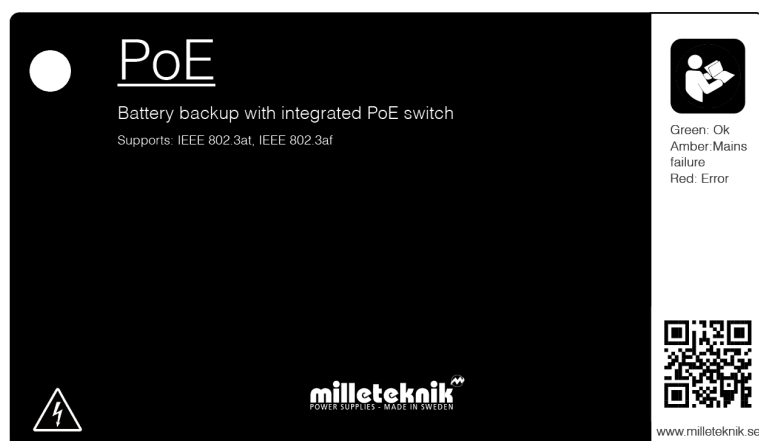
It may take up to 72 hours before the batteries are fully charged.

7. STATUS INDICATIONS

Solid green light: normal operation.

Solid yellow glow: Low battery voltage.

Solid red light: Low battery when the load output fuse is blown.



8. MAINTENANCE

The system with the exception of batteries is maintenance-free when installed in an indoor environment.

8.1. battery change

- If possible, disconnect mains (voltage) when replacing the battery.
- Disconnect battery cables. Note how battery cables are mounted before removing them.
- Remove battery fuse between batteries.
- Insert and fasten the new batteries.
- Connect the battery cables in the same way as before.
- Connect battery fuse between batteries.
- Switch on mains voltage. The indicator LED may not be green (up to 72 hours), until the batteries are charged.
- Test the system by briefly disconnecting the mains voltage, (= the load is driven by the batteries), and then switch on the mains voltage again.





9. FAQ - POE

10. ECO PRODUCT SHEET

10.1. PoE product images / technical data

Figure 2. PoE Switch 4p M



PoE switch with 4 PoE ports.

10.1.1. Name, article number and e-number

Name	Item number	E-number (swe)
PoE switch 4p M	ME01C10048P02504PU	5171951

10.1.2. 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. Through its function as a battery backup, the PoE device can continue to be powered in the event of a power failure.

PoE switch 4p M, PoE switch 4p FLX S+ and PoE switch 4p FLX M+ are for security systems where a, reliable power supply with battery backup and PoE function is needed. Our PoE have something we call "controlled charging", which is a safety function that means that batteries are not charged with more than 0.5 A. By controlling the charging of batteries, the lifespan of batteries is significantly extended.

10.1.3. Power over Ethernet from Milleteknik

- PoE for security applications with the need for power supply with backup power.
- Proven, reliable technology.
- For fixed installation.
- Swedish made.



10.1.4. Areas of use

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

10.1.5. Fixed installation

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

10.1.6. Battery types

The ECO series can be used with AGM batteries. Do not mix types of batteries, brand or used and new batteries.

10.2. Regulations and certifications

10.2.1. Requirements that the product meets

EMC:	EMC Directive 2014 / 30EU
Electricity:	Low voltage directive: 2014/35 / EU EN 60950-1
PoE:	IEEE 802.3af, IEEE 802.3at/30,8 W
CE:	CE directive according to: 765/2008
Emission:	EN61000-6-: 2001 EN55022: 1998: -A1: 2000, A2: 2003 Class B, EN61000-3-2: 2001 EN55022 (CISPR22), GB9254 Class B, EN55014, EN61000-3-2Class A(75% Load),EN61000-3-3
Environment	REACH Regulation: Directive 1907/2006, WEEE Regulation: Directive 20021961E, RoHS Regulation: Directive 2015/863

10.3. Expected operating time in the event of a power failure (with new batteries)

PoE	Battery	Power 15.4 W	Power 30.8 W	Power 62 W	Power 100 W	Power 120 W	Power 180W	Power 240 W
PoE switch 4p M (48 V)	4 pcs 7.2 Ah	18 h 30 min.	8 h 30 min.	3 h 45 min.	2 h	1 h 45 min.	-	-





10.4. Circuit boards - Technical data

10.4.1. Technical data: CEO 3

Table 2. 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: F5A, 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.

Table 3. 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.

Table 4. 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	

Table 5. sum alarm

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



10.4.2. Technical data: PoE card

Product	Number of PoE / LAN ports	Max power per port	PoE budget	Ethernet type	Network ports	Interface	Functions	Type, injector and switch
PoE switch 4p M	4/2	30,8 @ 54,6 V DC	125 W	Fast Ethernet Mbit PoE switch	10 / 100 PoE+	1000Base-T RJ-45	Auto-negotiation, Auto-uplink (auto MDI/MDI-X)	Unmanaged. There is no software interface to control the switch.

10.5. Power supply

10.5.1. Power supply - Technical Data LRS-150-48

Info	Explanation
Output voltage	54.6 V
Output current	0 A - 3.3 A
Output voltage, ripple	200 mVp-p
Overvoltage	55.2 V - 64.8 V
Voltage recharge, ripple / current limitation	Less than 0.6 Vp-p
Efficiency	90%
Current limitation	110% - 140%
Constant voltage	+/- 0.5%
Regulatory accuracy	* / - 1.0%
Input current (230 V)	1.7 A
Mains voltage frequency	47 Hz- 63 Hz
Mains voltage	230 V AC - 240 V AC
Brand effect	158.4 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.	

10.6. Technical data enclosures

10.6.1. Enclosures - Technical Data M

Info	Explanation
Name	M
Enclosure class	IP 20
Measure	Height: 242 mm, width: 350 mm, depth: 150 mm.
Height units	-
Mounting	Wall





Info	Explanation
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	White
Cable entries, number	5
Batteries that fit	2 pcs 12 V 7.2 Ah or 2 pcs 12 V 14 Ah. 4 pcs 12 V 7.2 Ah

10.7. Link to the latest information

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

[PoE series](#)

10.8. Warranty, support, country of manufacture and country of origin

10.8.1. 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.

10.8.2. 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.

QUESTIONS ABOUT PRODUCT PERFORMANCE?

Contact sales: 46 31-340 02 30, e-mail: sales@milleteknik.se

10.8.3. Country of manufacture

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

10.8.4. Designed and produced by: Milleteknik AB

Designed and produced by Milleteknik AB



10.9. Batteries - recommended, not included

10.9.1. Batteries are not included they are sold separately

Batteries are sold separately.

10.9.2. 7.2 Ah, 12 V AGM battery

Fits in	Number of batteries
PoE switch 4p M	4

Battery type	V	Ah
Maintenance-free AGM, lead-acid battery.	12 V	7.2 Ah

Table 6. 10+ Design life * battery

Article number	E-number	Article name	Terminal	Measure. Height width depth	Weight per piece	Make
MT113-12V07-01	5230536	UPLUS 12V 7.2Ah 10+ Design Life battery	Flat pin 6.3 mm	151 x 65 x 100 mm.	2.4 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 lLife) of 10+ years usually need to be replaced after 4-5 years.

11. PRODUCT LIFE CYCLE, ENVIRONMENTAL IMPACT AND RECYCLING

The product is designed and constructed for a long service life, which reduces the environmental impact. The product's service life depends on, among other things, environmental factors, mainly ambient temperature, unforeseen load on components such as lightning strikes, external damage, handling errors, and more. Products are recycled by being handed over to the nearest recycling station or sent back to the manufacturer. Contact your distributor for more information. Costs that arise in connection with recycling are not reimbursed.

12. ADDRESS AND CONTACT DETAILS

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