PRODUCT SHEET / TECHNICAL DATA

ECO S

ECO S The unit must be wall-mounted.

Technical specifications

These technical specifications are subject to change without notice.

Name, article number and e-number

Name	Article number	E-number (SV)
ECO 24V 3A S	SM01C10124P030	5213516
ECO 12V 5A S	SM01C10112P050	5213650

About

The ECO series are reliable and smaller battery backups for use with access control systems, locking systems and smoke hatches. The battery backups have controlled charging *.

* Controlled charging prevents batteries from being overcharged, which significantly extends their service life.

- For AGM batteries.
- Can be tested with only batteries connected.
- Has controlled charging for better operating economy.

Areas of use

Most used in:

Alarm

The device alarms for:

Undervoltage/low battery voltage.

Fixed installation

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

Test before installation of 230 V

"Cold start" means that the battery backup can be commissioned with only the batteries connected without the battery backup being connected to 230 V. This is practical if the installer is not a qualified electrician but still wants to be able to test the system.

REGULATIONS AND CERTIFICATIONS

Requirements that the product meets

EMC:	EMC Directive 2014 / 30EU
Electricity:	Low voltage directive: 2014/35 / EU
CE:	CE directive according to: 765/2008

CE

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

Expected operating time in the event of a power failure (applies to new batteries):

System voltage	Number of batteries	Battery type	Load: 0.1 A	Load: 0.3 A	Load: 0.6 A	Load: 1 A	Load: 1.5 A	Load: 2 A
12 V	1 psc	2.3 Ah	12 h	4 min	2 h	1 h	40 min	20 min
12 V	1 pcs	7.2 Ah	42 h	19 h	10 h	5 h	3 h	2 h
24 V	2 pcs	2.3 Ah	12 h	4 h	2 h	1 h	40 min	20 min
24 V	2 pcs	4.5 Ah	24 h	8 h	4 h	2 h	1.5 h	40 min

CIRCUIT BOARDS - TECHNICAL DATA

Technical data: CEO 3

CEO3-ECO

Info	Explanation
Article name	CEO3-ECO
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 manufactured with fewer components than before, which reduces the environmental impact.
Measure	120 x 55 mm x 52 mm
Own consumption	50 mA
Fuses	See table: Fuses.
Outputs	Output: two load outputs.
Insurance	Load output: + secured.
Max load	Maximum load is 10 A per load output (T2A is mounted from the factory) and the card's total load must not exceed 16 A.
Alarm outputs	Alarm outputs: Sum alarm in case of fuse fault, see indication below. Alarm on potential-free relay contact.
Alarm	Undervoltage, lights up red in the event of a power failure until the battery voltage drops below the alarm limit.
Alarm via	Triggered load securing, potential-free shifting, CO / NO.
Indication	Display showing operating status, alarms and faults. Operating indication: one indication diode per load output +/-. Solid green light = normal operation.

CONTROL ALARM LIMIT WITH JU2

CONTROL ALARM LIMIT
Alarm for low battery voltage in battery operation can be controlled.

By jumpering JU2, the limit for when the unit should give an alarm can be lowered.

Alarms are given when the battery voltage in battery drops below the limit.

Alarm limits

Alarm limit at low battery voltage	12 V	24 V
JU2 with jumper*	10.2 V	24.0 V
JU2 without jumper *	13.2 V	26.5 V
*The unit is delivered with jumper on JU2		

FUSES

Unit	Fuse	Type	Explanation
All units	F1	T2,5A	Mains fuse
ECO 24V 3A S.	F2, F6	T3A	Load fuse +
ECO 12V 5A S.	F2, F6	T5A	Load fuse +
All units	F7	T16A	Battery fuse

FUSE REPLACEMENT WARNING (A)
There is a risk of damage if the fuse is changed to a larger one than what the unit is delivered with. The function of the fuse is to protect the connected load and cables against damage and fire. It is not possible to change the fuse to a larger one to increase the power output.

POWER SUPPLY

Power supply - Technical Data LRS-75-12

In:
ECO 12V 5A S

Info	Explanation
Output voltage	13.6 V
Output current	0 A - 6 A
Output voltage, ripple	120 mVp-p
Overvoltage	13.8 V - 16.2 V
Voltage recharge, ripple / current limitation	Less than 0.6 Vp-p
Efficiency	84.5%
Current limitation	110% - 180%
Constant voltage	+/- 1.0%
Regulatory accuracy	+ / - 0.5%
Input current (230 V)	1,2 A
Mains voltage frequency	47 Hz- 63 Hz
Mains voltage	85 V AC - 264 V AC
Brand effect	25,2 W
Temperature range	-30°C - +70°C
Humidity range	20% - 90% RH non-condensed

Info	Explanation
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.	

Power supply - Technical Data LRS-75-24

In:
ECO 24V 3A S

Info	Explanation
Output voltage	27.3 V
Output current	0 - 3.2 A
Output voltage, ripple	150 mVp-p
Overvoltage	28.8 V - 33.6 V
Voltage recharge, ripple / current limitation	Less than 0.6 Vp-p
Efficiency	90%
Current limitation	110% - 150%
Constant voltage	+/- 1.0%
Regulatory accuracy	* / - 0.5%
Input current (230 V)	0,85 A
Mains voltage frequency	47 Hz- 63 Hz
Mains voltage	85 V AC - 264 V AC
Brand effect	76.8 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 S

Info	Explanation
Name	S
Enclosure class	IP 20
Measure	Height: 230 mm, width: 216 mm, depth: 85 mm.
Height units	-
Mounting	Wall
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	3
Batteries that fit	1 pc 12 V 2.3 Ah or 2 pcs 12 V 2.3 Ah or 2 pcs 12 V, 4.5 Ah.
Place for fan	No

LINK TO THE LATEST INFORMATION

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

ECO

All information is published with the reservation of possible errors.

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) occour 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

Designed and produced by Milleteknik AB

BATTERIES - RECOMMENDED, NOT INCLUDED

Batteries are not included they are sold separately

Batteries are sold separately.

2.3 Ah, 12 V AGM battery

Battery type	V	Ah
Maintenance-free AGM, lead-acid battery.	12 V	2.3 Ah

6+ Design life * battery

Article number	E-number	Article name	Terminal	Measure. Height width depth	Weight per piece	Make
MT113-12V02-01	5230578	UPLUS 12V 2.3Ah 6+ Design Life battery	Flat pin 4.8 mm	60x178x35 mm	1.0 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 (+6 Design lLife) of 6+ years usually need to be replaced after 2-3 years.

4.5 Ah 12 V AGM battery

Battery type	V	Ah
Maintenance-free AGM, lead-acid battery.	12 V	4.5 Ah

6+ Design life * battery

Article number	E-number	Article name	Terminal	Measure. Height width depth	Weight per piece	Make
MT113-12V04-01	5230577	UPLUS 12V 4.5Ah 6+ Design Life battery	Flat pin 4.8 mm	107x90x70 mm	1.5 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 (+6 Design lLife) of 6+ years usually need to be replaced after 2-3 years.

7.2 Ah, 12 V AGM battery

Fits in	Number of batteries

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

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.