PRODUCT SHEET

EN54-4 Certified / SBF110:8 Approved battery backup

Figure 1. EN54 FLX M

The battery backup can be mounted on a wall or in a 19" rack.

Product Identification

Table 1. Product designation, part number, email number and certificate number.

Product designation	Article number	E-number (SE)
EN54 24V 10A FLX M	FM01P20024P100-EN54	52 135 52

Technical description

EN54 power supplies fire alarms with 24 V DC. The rectifier in the power supply converts 230 V AC down to 24 V DC and powers all important parts of the fire alarm system. EN54 power supply is certified for use in safety installations that must comply with EN54-4 and/or be approved for SBF 110:8.

Batteries, for example, drive the access system further when the power grid goes down.

Table 2. Quick Facts

Quick Facts	
Supply voltage (V)	230V AC, +/- 10%, 47Hz- 63Hz
Voltage out (V)	27.3 V DC, (24 V DC) Also applicable in battery operation.
Current output (A), max load current output.	10A
Batteries[a.]	2 x 20 Ah

[a.] Recommended. If batteries are included, it is indicated, otherwise batteries are ordered separately

Areas of application

Table 3. Areas of application

Areas of application	Yes	No
Fire alarm	✓	
EN54-4 approved fire alarm systems.	✓	
SBF 110:8, SBSC approved fire alarm system.	✓	
PowerWatch compatible	✓	

Electrical data

Table 4. Electrical data

Electrical data	
Supply voltage	230V AC, +/- 10%, 47Hz- 63Hz
Charge current	Max 10A
Efficiency[a.]	87%

Electrical data	
Standby consumption	5.54 W
Voltage out	27.3 V DC, (24 V DC) Also applicable in battery operation.
Current (A)[b.]	10A

[a.] At rated load.

[b.] Power outlet/load is specified as max, normal current output should be 80% of max.

Table 5. Fuses

Fuses	
Mains fuse	2.5 A
Load fuses	10A
Battery fuse	16 A (on motherboard) and 30 A (fuse between batteries)

Table 6. Printed circuit boards and Internal power consumption

Circuit Boards	Internal power consumption (during battery operation)	Other. info
PRO2 and PRO2v3	< 210 mA	Less than 210 mA, 100 mA without power surge with all relays on external alarm board drawn in normal mode.

Load outputs

Table 7. Load outputs

Load outputs	
Number of load outputs	! 2[a.]

[a.] Load outputs share on the total maximum load. The value does not apply per output

Table 8. Total maximum load and recommended load.

Model	Recommended total load (80%)[a.]
10A	8A

[a.] Typically, 70-80% of the maximum load is recommended in continuous operation, depending on the thermal margins of the product.

Alarm and protection

Table 9. Number of relay on which alarm can be given

Number of Relays	Alarm on switching relay?[a.]
1	✓[b.]

[a.] Relay, alternating potential-free contacts.Ending CO/NO.

[b.] Relay, alternating potential-free contacts. Ending CO/NO.

Table 10. Alarm over communication and on LED on motherboard PRO2v3

Alarms	Alarm via communication	Indication[a.]
Network outage	✓	✓
Fuse failure	✓	✓
Sabotage Breakers	✓	✓
Fan failure	✓	
Charger failure, overvoltage	✓	✓
Charger failure, undervoltage	✓	✓
Cell failure or not connected battery	✓	✓
Low system voltage[b.].	✓	✓
Low battery voltage or network outage	✓	✓
Over-temperature	✓	
Sub-temperature	✓	

Alarms	Alarm via communication	Indication[a.]
Short battery life remaining	✓	
Aged battery	✓	✓
Overcurrent 80%, daily average	✓	
Overcurrent 100%, minute average	✓	
Over current 175%, second average	✓	

[a.] Indication diode on main board and LED on door.

[b.] System voltage in mains operation is below

Table 11. Alarm and protection

Alarm and protection	Yes	No
Battery charge protection/controlled charging[a.]	✓ Batteries are charged with a maximum of 0.5 A.[b.]	
Deep discharge protection, see Battery [2][c.]	✓	
Overload Protection/Surge Protection	✓	
Over-temperature protection	✓	
Short circuit protection	✓	

[a.] Controlled charging protects and extends battery life.

[b.] Factory setting. Adjustable in PowerWatch

[c.] When the deep discharge protection is activated, the device turns off and the LED goes out.

Communication and Indications

Table 12. Communication and Indications

Communication and Indications	Yes	No	Other. info.
Communication	✓		
Alarm to subcentral	✓		
PowerWatch[a.]	✓		
Indicators/LEDs	✓		LED displays information and alarms on circuit boards and on the outside of the housing.

[a.] PowerWatch consists of a cable and software, it is ordered separately.

The PowerWatch is available as an option for the product.

Battery

Table 13. Technical data - Batteries

Battery	
Ref. Batteries[a.]	2 x 20 Ah
Battery type	Maintenance-free AGM (lead-acid) batteries
Deep discharge protection	Activates when the system voltage drops below about 20 V DC.
Other sizes of batteries that can be used	Other batteries may not be used if certificates are to be maintained.

[a.] If batteries are included, it is indicated, otherwise batteries are ordered separately.

Enclosure and Mechanics

Table 14. Enclosure and Mechanics

Enclosure and Mechanics	
Type	Universal enclosure for wall and rack
IP class	IP32
Material	Powder coated sheet metal.
Colour	Black
Height units	5
Cable grommets	4 pcs
Knockout hole	1 pc. on the back
Lock	✓ 2 keys included
Fan in enclosure	✓

Assembly, installation and eligibility requirements

Table 15. Fitting

Fitting	Yes	No
19" rack.	✓	
Wall.	✓	

Table 16. Installation

Installation	Yes	No
Fixed installation.	✓	

Dimensions, weight and packaging information

Table 17. Dimensions

Dimensions, (WxHxD).	Dimensions with packaging[a.]
224 x 437 x 212 mm	260 x 480 x 250 mm

[a.] Dimensions (WxHxD) of product and packaging may differ, this is because the product may be oriented differently in the package.

Table 18. Weight

Net weight	Weight with packaging
8.4 kg	9.2 kg

Table 19. Packaging

Packaging	
Packaging	Cardboard and impact protection in cardboard.
Quantity in pack	1 pc.
Packaging Type (GS1 T0137)	BX box.
Conditions EUR pallet	EUR pallets may not be stacked during transport or storage. Stacking may result in damage to product and packaging
Transport environment	The product must be protected from condensation and direct precipitation during transportation.
Transport temperature (without battery)	−30 °C to +70 °C
Storage environment	Dry indoor environment, protected from condensation. Relative humidity: max 95%, non-condensing
Storage temperature without batteries	−20 °C to +60 °C

Contact

Table 20. Contact

Department	
Switchboard	031-340 02 30
Support and technical issues	support@milleteknik.se
Sales	sales@milleteknik.se
WWW	www.milleteknik.se
Address	Ögärdesvägen 8B, 433 30 Partille

About this information

All information is published subject to possible errors. Information is updated without prior notice.

Publication date 2026-07-13

COMPLIANCE AND REGULATORY COMPLIANCE

Delivery time, warranty and terms

Table 21. Delivery time, warranty and terms

Delivery time, warranty and terms	
Warranty period[a.]	The product has a five (5) year warranty against manufacturing defects.
Special warranty conditions	The battery backup should be used in conjunction with UPLUS 10+ Design Life batteries. The fan should be cleaned annually and replaced if necessary. The average load shall not exceed 80% of the rated capacity of the power supply. Ambient temperature shall not exceed 32°C. Batteries and wear parts are not covered by warranty. See also general terms and conditions.
General Terms and Conditions	ALEM09 with exceptions, see: www.milleteknik.se/conditions/
Support	Telephone support and email support during the warranty period are free of charge. For spare parts that are not covered by warranty, there is a charge
Delivery and stock	
Delivery time[b.]	5 working days. Or as per agreement. Delivery from factory, transportation time is added.

[a.] If the device is purchased through a wholesaler or other supplier, other warranty conditions may apply.

[b.] In the case of larger orders, delivery time increases, acc. to agreement.

Operation and maintenance

Table 22. Operation

Operation	Data	Other. info
Environment	Indoor environmental class 1.	
Operating temperature (recommended)	+15°C to +25°C	For the best battery life. Higher temperatures significantly shorten the life of the batteries.
Operating temperature (permissible)[a.]	+5°C to +40°C	Class 1 according to EN 50131-6/ EN 60839-11
Load, power supply	80%	Average load shall not exceed 80% of the rated capacity of the power supply.
Ventilation, free distance around the enclosure.	100 mm	Ventilation openings must not be blocked or covered.

[a.] Specifies the permissible ambient temperature range in which the product can operate without damage. See also table on battery life.

Table 23. Maintenance

Yes	No	Interval	Other. info
✓		Annually	The fan should be cleaned annually. Battery terminal voltage must be measured. Ensure that the average load does not exceed 80% of the rated capacity of the power supply.

Certifications and approvals

Table 24. Approved according to

Complies with	Directives
Emissions	EN61000-6-:2001 EN 55022:1998: -A 1:2000, A 2:2003 Class B, EN61000-3-2:2001, EN 55032 (replaces EN 55022)
Immunity	EN61000-6-2:2005, EN61000-4-2, -3, 4, -5, -6, -11 SS-EN 50130-4:2011 Edition 2, EN50131-6
C.E.	CE marking according to Regulation (EC) No 765/2008
RoHS	RoHS Directive 2011/65/EU, including amendment (EU) 2015/863
EMC	EMC Directive 2014/30/EU
Electric (LVD)	Low Voltage Directive 2014/35/EU

Table 25. EN54

Approved according to standard	Yes	No

SBSC APPROVED PRODUCT

Table 26. Certificates and certificate numbers

Certificate number, report number	Designation in test report
6P07698-2	-

HOW DO CERTIFICATES APPLY IF OPTIONAL IS INSTALLED IN THE DEVICE?

Table 27. Do certificates apply if optional is installed outside the device?

Product Series	Certification	Do certificates apply if optional is installed in the device?
EN54[a.]	EN 54-4 (Fire)	No

[a.] In order for certificates to be maintained, batteries of the same brand must be used as in certification, (UPLUS).

EN54-4 CLARIFICATION

External connection: Certification for EN 54-4 is not affected by accessories or equipment that are mounted outside the unit and then connected to its input/outputs.

Internal Fitting: In devices certified according to EN 54-4, no options may be physically mounted inside the enclosure if certificates are to be valid.

Optional Requirements: Please note that all options used with certified products must be manufactured by Milleteknik. Options from other manufacturers are not allowed

Environmental data

Table 28. Environmental data

Environmental data	J/N	Informaţie	Other. info.
Building Product Declaration (BPD)	✓	Yes, see iBvd at www.milleteknik.se.	-

Environmental data	J/N	Informaţie	Other. info.
REACH Information Obligation (EC) No 1907/2006	✓	Yes, see the DoC at www.milleteknik.se The product complies with REACH Regulation (EC) No 1907/2006.	If empty, the product is not covered.
SVHC substances, CAS/EC	✓	Yes, lead, 7439-92-1/231-100-4	For text, see iBvd at www.milleteknik.se. If blank, substance is missing.
Subject to the RoHS Directive, (EU) 2015/863)	✓	Yes, see the DoC at www.milleteknik.se	
WEEE 2012/19/EU	✓	The product contains electrical components or wiring and is covered by the WEEE Directive (2012/19/EU).	If empty, the product is not covered. End-of-life products must be returned to a recycling centre
Battery Regulation (EU) 2023/1542	✗		
SCIP No 2008/98/EC	✓	Yes, registered under the EU Waste Directive where applicable, (2008/98/EC).	If empty, no SCIP number is needed.
Conflict minerals (EU) 2017/821	✗/ ✗/ ✗/ ✗/✓	No=Gold, Tungsten, Tantalum, Cobalt. Yes=Tin	Tin in solders in printed circuit boards purchased through a Swedish supplier.
Contains nanomaterials: EC 1272/2008	✗	The product does not contain nanomaterials.	
Ecodesign 2009/125/EC	Milleteknik's products are intended for professional use and are therefore not directly covered by the Ecodesign Regulation (EU 2019/1782). As some components may be covered, we nevertheless disclose relevant information[a.], where applicable, to provide our customers with confidence in their choice.		
Machine Directive 2006/42/EC	The product is part of electrical systems, is subject to the relevant electrical and safety directives and is not a machine according to the Machinery Directive (2006/42/EC). Will be replaced by Machinery Regulation (EU) 2023/1230, which will apply in 2027.		
Environmental data	J/N	Informaţie	Other. info.
The product is designed and constructed for a long service life, which reduces the environmental impact. The life of the product (except wearing parts) depends on, among other things, environmental factors, mainly ambient temperature, unforeseen load on components such as lightning strikes, external impact, handling errors, etc. Products are recycled, simply because they are modular, by being left at the nearest recycling station or sent back to the manufacturer.[b.] Contact your distributor for more information.			

[a.] Standby consumption and power.

[b.] Costs incurred in connection with recycling are not reimbursed.

CE

Manufacturer and country of origin

Table 29. Manufacturer and country of origin

Manufacturer[a.]	Milleteknik AB
Customs State. Nos.	85044095[b.]
Country of origin	Sweden

[a.] Manufacturer is the trademark indicated on the product, regardless of what is stated in this product sheet.

[b.] Verify with the Customs Ombud/Customs Service for export/import; alternative classification 85044055 may become applicable if the product is assessed as a battery charger.

APPENDIX

Backup operating time on batteries

The reserve operating time in battery operation depends on how large a load is connected to the power supply. If the load varies, as with frequent opening of door locks, the time that batteries can continue to power the security system decreases. To get an estimate of reserve operating times see: www.milleteknik.se/Manualer/FaQ/Reservdrifttider/

About certifications and options

HOW DO CERTIFICATES APPLY IF OPTIONAL IS INSTALLED IN THE DEVICE?

Battery backups from Milleteknik can be divided into three categories:

1. Devices that are not third-party certified to use burglar alarm or fire alarm systems.
2. Devices that are third-party certified for use in burglar alarm systems (SSF 110:8).
3. Devices certified for use in fire alarm systems (EN54).

How do certificates apply if optional Milleteknik is fitted in the device?

Table 30. Which product ranges and options and accessories are certified?

Product Series	Marking	Regulatory fr… w…
ECO, NEO, PoE, Options and accessories.	No certification marking	-
NOVA[a.]	SBSC APPROVED PRODUCT	SSF 1014, Issue 6,
EN54[b.]	SBSC APPROVED PRODUCT	SSF 1014, Issue 6, Alarm Class 4, EN 54-4:1997 / AC:1999 and EN 54-4:1997 / A2:2006.
Batteries	No certification marking	

[a.]The unit meets the requirements for installation in facilities that must be SSF 1014 approved. SSF 1014 certificate is only valid when certified together with the parent system. For SSF 1014 certificate to be valid, only one (1) load exit may

[b.]The MX series is EN54 certified in the EU country. Certifkat is not published on SBSC

HOW DO CERTIFICATES APPLY IF OPTIONAL IS INSTALLED IN THE DEVICE?

Table 31. Do certificates apply if optional is installed outside the device?

Product Series	Certification	Do certificates apply if optional is installed in the device?
EN54[a.]	EN 54-4 (Fire)	No

[a.]In order for certificates to be maintained, batteries of the same brand must be used as in certification, (UPLUS).

EN54-4 CLARIFICATION

External connection: Certification for EN 54-4 is not affected by accessories or equipment that are mounted outside the unit and then connected to its input/outputs.

Internal Fitting: In devices certified according to EN 54-4, no options may be physically mounted inside the enclosure if certificates are to be valid.

Optional Requirements: Please note that all options used with certified products must be manufactured by Milleteknik. Options from other manufacturers are not allowed

PowerWatch

PowerWatch Ready

Table 32. PowerWatch Ordering Information

Product designation	Item No.	E-number (SE)
PowerWatch	A-OT0000UPG02P2V3P3	52 137 06

Table 33. Alarms that can be set in PowerWatch

Alarms that can be set in PowerWatch
Charger failure, overvoltage
Charger failure, undervoltage
Fan failure, (in case of externally connected fan)
Fuse failure on load
Low battery voltage, in battery operation
Power outage, delay 10 seconds
Unconnected battery
Unit not calibrated

Eligibility requirements, installation

Eligibility requirements vary between countries. The table summarizes national requirements for fixed installation and connection of equipment with a plug socket, respectively.

Options on the secondary side of the product, such as 12 V, 24 V or 48 V DC, are connected according to the respective instructions. Work on the network connection of the product shall be carried out in accordance with national eligibility requirements

Table 34. Eligibility requirements by country. Applies only to the installation of this product in a fixed network connection

Permission Requirements for Installation	Fixed installation (230 V)	Plug	Other. info
Sweden	✓	✗	Fixed installation may be performed by technicians but shall be under the responsibility of a qualified installer. (Electrical Safety Act, SS 436 40 00) Plug may be connected without authorization.
Norway	✓	✓	Requirements for qualified electricians also for equipment with a plug socket in fixed installations. (NEK 400, DSB
Finland	✓	✗	Plug may be connected without authorization. (Tukes, SFS 6000
Denmark	✓	✗	Plug may be connected without authorization. (Safety Board
Germany	✓	✗	All fixed installations require a qualified electrician according to VDE 0100. Plug sockets may be connected without authorization, but only by person with basic electrical knowledge (“Elektrotechnisch unterwiesene Person”)

Reference table: environmental classes according to EN 50130-5 (referred to in EN 50131-6)

Table 35. Reference table: environmental classes according to EN 50130-5 (referred to in EN 50131-6)

Class	Type	Temperature range
Environmental Class 1	Heated indoors (type office/residence).	+5°C to +40°C
Environmental Class 2	Generally indoors (type warehouses/stairwells, not temperature controlled).	-10°C to +40°C
Environmental class 3	Protected outdoors.	-25°C to +50°C
Environmental class 4	Generally outdoors.	-25°C to +60°C

Reference table: manufacturer's stated service life and recommended battery replacement

Table 36. Reference table: manufacturer's stated service life and recommended battery replacement

Battery Type (Design Life)[a.]	Battery replacement time in normal operation, +20°C.	Replacement during hot operation, +30°C	Replacement during hot operation, +40°C
3 - 5 years	2 - 3 years	1 - 1.5 years	0.5 - 0.75 years
6 - 9 years	5 - 6 years	2.5 - 3 years	1.2 - 1.5 years
10 - 12 years	6 - 7 years	3 - 3.5 years	1.5 - 1.75 years
15 + years	10 - 12 years	5 - 6 years	2.5 - 3 years

[a.] Valid in case of completely unused battery stored under optimal conditions.

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Publication date 2026-07-13