

PRODUCT SHEET - POWER SUPPLY FROM MILLETEKNIK

SSF1014 certified battery backup with communication

Figure 1. NOVA FLX M



NOVA FLX M can be mounted on a wall or in a 19" rack.

Name, article number and e-number

Table 1. Name, article number and email number.

Name	Article number	E-number
NOVA 24V 15A FLX M	FM01P23024P150-SSF	52 136 39

Technical description

NOVA powers access control systems, alarm systems or other security products in a property powered by 12 V or 24 V DC. The rectifier in the power supply converts 230 V AC down to 12 V DC or 24 V DC. NOVA 24 V power supply is certified for use in security installations that must comply with SSF 1014, all the way from alarm class 1 up to alarm

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

Table 2. Quick Facts

Quick Facts	Data
Supply voltage (V)	230 V AC - 240 V AC, 47 Hz-63 Hz.
Voltage out (V)	27.3 V DC, (24 V).
Current output (A), max load current output.	15 A.
Batteries ^a	2 x 20 Ah

^aRecommended. If batteries are included, it is indicated, otherwise batteries are ordered separately

Areas of application

Areas of application	Yes	No
Access system (door reader, magnetic lock, electric terminal plate, etc)	✓	
PowerWatch compatible	✓	
Burglar alarm	✓	

Areas of application	Yes	No
SSF certified access systems. Alarm class 1-4	✓	
Communication to subcentral.	✓	

Electronics

Table 3. [sv] Elektriska data

[sv] Elektriska data	[sv] Data
[sv] Matningsspänning	[sv] 230 V AC - 240 V AC, 47 Hz- 63 Hz.
[sv] Laddström	[sv] Max 10 A.
[sv] Verkningsgrad ^a	[sv] 89%
[sv] Standbyförbrukning	[sv] 5,54 W
[sv] Spänning ut ^b	[sv] 27,3 V DC, (24 V).
[sv] Ström (A) ^c	[sv] 15 A.

^aVid nominell last.

^bGäller även i batteridrift.

^cStrömuttag/last anges som max, normalt strömuttag skall vara 80% av max.

Table 4. Electrical data

Electrical data	Data
Mains fuse	4 A.
Load fuses	15 A.
Battery fuse	16 A and 30 A.

Table 5. 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 6. Load outputs

Load outputs	Data
Number of load outputs	2

Table 7. Total maximum load and recommended load.

Model	Total Max Load	Recommended total load (80%) ^a
15A	15A	12A

^aTypically, 70-80% of the maximum load is recommended in continuous operation, depending on the thermal margins of the product.

Alarm and protection

Table 8. Number of relay on which alarm can be given

Number of Relays	Alarm on switching relay? ^a
1	✓

^aRelay, alternating potential-free contacts.Ending CO/NO.

Table 9. [sv] Larm

[sv] Larm	[sv] Ja	[sv] Nej
[sv] Nättavbrottslarm	✓	
[sv] Laddarfel, över-/underspänning	✓	

[sv] Larm	[sv] Ja	[sv] Nej
[sv] Låg batterispänning	✓	
[sv] Låg systemspänning	✓	
[sv] Sabotage, larm från brytare.	✓	
[sv] Säkringsfel	✓	
[sv] Åldrat batteri	✓	

Table 10. Alarm and protection

Alarm and protection	Yes	No
Short circuit protection	✓	
Deep discharge protection, see Battery [2] ^a .	✓	
Overload Protection/Surge Protection	✓	
Over-temperature protection	✓	
Battery charge protection/controlled charging ^b .	4.5A.	

^aWhen the deep discharge protection is activated, the device turns off and the LED goes out.

^bControlled charging protects and extends battery life.

Communication and Indications

Table 11. Communication and Indications

Communication and Indications	Yes	No	Other. info.
Communication	✓		
RS-485	✓		-
Alarm to subcentral	✓		
PowerWatch ^a .	✓		
Indicators/LEDs	✓		LED displays information and alarms on circuit boards and on the outside of the housing.

^aPowerWatch consists of a cable and software, it is ordered separately.

Table 12. Alarm over communication and on LED

Alarm over communication	Yes	No	Indication ^a .
Mains 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 (<24.0 V DC) or power failure.	✓		✓
Over-temperature	✓		-
Sub-temperature	✓		-
Sub-temperature	✓		-
Short battery life remaining	✓		-
Aged battery	✓		✓
Overcurrent 100%, minute average	✓		-
Overcurrent 80%, daily average	✓		-
Over current 175%, second average	✓		-

^aIndication diode on main board and LED on door

^bSystem voltage in mains operation is below 24.0 V.

Battery

Table 13. Technical data - Batteries

Battery	Data
Recommended 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.

^aIf batteries are included, it is indicated, otherwise batteries are ordered separately.

Enclosure and Mechanics

Table 14. Enclosure and Mechanics

Enclosure and Mechanics	Data
Enclosure	
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 pcs. keys included.
Fan in enclosure	✓

Dimensions, weight and packaging information

Table 15. Dimensions

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

^aDimensions (WxHxD) of product and packaging may differ, this is because the product may be oriented differently in the package.

Table 16. Weight

Net weight	Weight with packaging
8.6 kg	9.4 kg

Table 17. Packaging

Packaging	Info
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

Assembly, installation and eligibility requirements

Table 18. Fitting

Fitting	[sv] Ja	[sv] Nej
19" rack.	✓	
Wall.	✓	

Table 19. Installation

Installation	Yes	No	Other. info
Fixed installation.	✓		-

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/

Operation and maintenance

Table 20. 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 21. 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 22. Approved according to

Complies with	Directives
Emissions	EN61000-6-2:2001 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 (EC) 765/2008
EMC	EMC Directive 2014/30EU

Complies with	Directives
Electric (LVD)	Low Voltage Directive: 2014/35/EU



The unit meets the requirements for installation in systems that must be SSF 1014 approved. SSF 1014 certificate is only valid for certification together with a higher-level system.



IMPORTANT

In order for the SSF 1014 certificate to be valid, only one (1) load output may be used.

Table 23. Certificates and certificate numbers

Certificate number, SBSC	Designation SBSC
Nos. 20-117	NOVA 27 50-FLX S • NOVA 27 100-FLX S • NOVA 27 50-FLX M • NOVA 27 100-FLX M • NOVA 27 150-FLX M • NOVA 27 250-FLX M • NOVA 27 50-FLX L • NOVA 27 50-FLX L • NOVA 27 100-FLX L • NOVA 27 150-FLX L • NOVA 27 250-FLX L • UNISON Facility Cabinet

Environmental data

Table 24. Environmental data

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

Environmental data	J/N	Information	Other info.
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	X		
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	X/ X/ X/ ✓	No=Gold, Tungsten, Tantalum, Cobalt. Yes=Tin	Tin in solders in printed circuit boards purchased through a Swedish supplier.
Contains nanomaterials: EC 1272/2008	X	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.	
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.			

^aStandby consumption and power.

^bCosts incurred in connection with recycling are not reimbursed.



Delivery time, warranty and terms

Table 25. Delivery time, warranty and terms

Delivery time, warranty and terms	Info
Warranty period ^a .	<i>[svj. Produkten har fem (5) års garanti mot tillverkningsfel.</i>
Special warranty conditions	The battery backup should be used in conjunction with UPLUS 10+ Design Life batteries. The fan shall 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.

^aIf the device is purchased through a wholesaler or other supplier, other warranty conditions may apply

^bIn the case of larger orders, delivery time increases, acc. to agreement.

Manufacturer and country of origin

Table 26. Manufacturer and country of origin

Manufacturer and origin	Info
Manufacturer ^a .	Milleteknik AB
Customs State. Nos.	85043180
Country of origin	Sweden

^aManufacturer is the trademark indicated on the product, regardless of what is stated in this product sheet.

Contact

Table 27. Contact

Department	Contact
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.

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PowerWatch is a trademark of Milleteknik AB.

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[SV] BILAGA

[sv] PowerWatch



Table 28. PowerWatch Ordering Information

Name	Item No.	E-number
PowerWatch	A-OT0000UPG02P2V3P3	52 137 06

Table 29. 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

[sv] Behörighetskrav, installation

[sv] Krav på behörighet varierar mellan länder. Tabellen sammanfattar nationella krav för fast installation respektive anslutning av utrustning med stickkontakt.

Table 30. 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	✓	X	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	✓	X	Plug may be connected without authorization. (Tukes, SFS 6000)
Denmark	✓	X	Plug may be connected without authorization. (Safety Board)

Permission Requirements for Installation	Fixed installation (230 V)	Plug	Other. info
Germany	✓	X	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")

[sv] Referenstabell: miljöklasser enligt EN 50130-5 (som hänvisas till i EN 50131-6)

Table 31. 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 of 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

[sv] Referenstabell: tillverkares angivna livslängd och rekommenderat batteribyte

Table 32. 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

^aValid in case of completely unused battery stored under optimal conditions.

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