

PRODUCT SHEET - POWER SUPPLY FROM MILLETEKNIK

SSF1014 certified battery backup with communication

Figure 1. NOVA FLX L



NOVA FLX L 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 L	FL01P23024P150-SSF	52 136 41

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.

[sv]

[sv]

Table 2. Quick Facts

Quick Facts	
Supply voltage (V)	[sv] 230 V AC - 240 V AC, 47 Hz- 63 Hz
Voltage out (V)	[sv] 27,3 V DC, (24 V) Gäller även i batteridrift.
Current output (A), max load current output.	[sv] 15 A
Batteries ^a	2 x 45 Ah

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

Areas of application

Table 3. [sv] Användningsområden

Areas of application	Yes	No
Access system (door reader, magnetic lock, electric terminal plate, etc)	✓	
PowerWatch compatible	✓	
Burglar alarm	✓	
SSF certified access systems. Alarm class 1-4	✓	
Communication to subcentral.	✓	

Electronics

Table 4. [sv] Elektriska data

[sv] Elektriska 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	[sv] 27,3 V DC, (24 V) Gäller även i batteridrift.
[sv] Ström (A) ^b .	[sv] 15 A

^aVid nominell last.

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

Table 5. Electrical data

Electrical data	
Mains fuse	4 A.
Load fuses	5A. 10 A. 15 A.
Battery fuse	(16 A) and 30 A automatic fuse.

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

Table 8. Total maximum load and recommended load.

Model	Recommended total load (80%) ^a .
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 9. 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 10. [sv] Larm över kommunikation och på LED på moderkort PRO2v3

[sv] Larm	[sv] Larm via kommunikation	[sv] Indikering ^a .
[sv] Nättavbrott	✓	✓
[sv] Säkringsfel	✓	✓
[sv] Sabotagebrytare	✓	✓
[sv] Fläktfel	✓	
[sv] Laddarfel, överspänning	✓	✓
[sv] Laddarfel, underspänning	✓	✓
[sv] Cellfel eller ej anslutet batteri	✓	✓
[sv] Låg systemspänning ^b .	✓	✓

[sv] Larm	[sv] Larm via kommunikation	[sv] Indikering ^a .
[sv] Låg batterispänning (<24,0 V DC) eller nättavbrott	✓	✓
[sv] Övertemperatur	✓	
[sv] Undertemperatur	✓	
[sv] Kort batteritid kvar	✓	
[sv] Åldrat batteri	✓	✓
[sv] Överström 100 %, minutmedelvärde	✓	
[sv] Överström 80 %, dygnsmedelvärde	✓	
[sv] Överström 175 %, sekundmedelvärde	✓	

^aIndikeringsdiod på huvudkort och LED på dörr

^bSystemspänning i nätdrift är under 24,0 V

Table 11. Alarm and protection

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

^aControlled charging protects and extends battery life.

^bWhen 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.

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

Table 13. [sv] Kommunikationsprotokoll

[sv] Gränssnitt	[sv] Ingång / tillval	[sv] Signaltyp / Kommunikationsprincip	[sv] Protokoll
[sv] RS-485 ^a .	[sv] Ingång	[sv] Differentiell signalering	[sv] OSDP
[sv] RS-232	[sv] Tillval	[sv] Seriell kommunikation (TTL-nivå)	[sv] Proprietärt protokoll
[sv] Ethernet	[sv] Tillval	[sv] Paketbaserad (Ethernet)	[sv] TCP/IP
[sv] I ² C	[sv] Tillval	[sv] Tvåtråds-buss	[sv] I ² C

^aFör andra varumärken gäller respektive tillverkares kommunikationsgränssnitt.

Battery

Table 14. Technical data - Batteries

Battery	
Recommended Batteries ^a .	2 x 45 Ah

Battery	
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	2 x 28 Ah 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 15. Enclosure and Mechanics

Enclosure and Mechanics	
Enclosure	
IP class	IP32
Material	Powder coated sheet metal.
Colour	Black
Height units	10
Cable grommets	4 pcs.
Knockout hole	1 pc. on the back.
Lock	✓, 2 pcs. keys included.
Fan in enclosure	✓

Assembly, installation and eligibility requirements

Table 16. Fitting

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

Table 17. Installation

Installation	Yes	No
Fixed installation.	✓	

Dimensions, weight and packaging information

Table 18. Dimensions

Dimensions, (WxHxD).	Dimensions with packaging ^a .
444 x 437 x 212 mm	550 x 500 x 300 mm

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

Table 19. Weight

Net weight	Weight with packaging
13.7 kg	14.8 kg

Table 20. Packaging

Packaging	
Packaging	Cardboard and plastic shock protection.
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

Packaging	
Storage temperature without batteries	-20 °C to +60 °C

Contact

Table 21. 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.

Milleteknik with the associated logo is a trademark of Milleteknik AB.

PowerWatch is a trademark of Milleteknik AB.

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[SV] COMPLIANCE OCH REGELEFTERLEVNAD

Delivery time, warranty and terms

Table 22. Delivery time, warranty and terms

Delivery time, warranty and terms	
Warranty period ^a .	[sv] Produkten har fem (5) års garanti mot tillverkningsfel.
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.

^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 23. 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 24. 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 25. 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
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 26. 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 27 100-FLX L • NOVA 27 150-FLX L • NOVA 27 250-FLX L • UNISON Facility Cabinet

Environmental data

Table 27. Environmental data

Environmental data	J/N	Informație	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.

Environ-mental da-ta	J/N	Informație	Other. in-fo.
SVHC sub-stances, CAS/EC	✓	Yes, lead, 7439-92-1/231-100-4	For text, see iBvd at www.milleteknik.se . If blank, sub-stance 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 re-turned 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	[sv] Tenn i lödningar i kretskort som köps in via svensk leverantör.
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.	

Environ-mental da-ta	J/N	Informație	Other. in-fo.
		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.



Manufacturer and country of origin

Table 28. Manufacturer and country of origin

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

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

[SV] BILAGA

Power outlet

	Unit without battery box	Unit with 1 battery box	Unit with 2 battery boxes	Unit with 3 battery boxes	Unit with 4 battery boxes
Battery	2 pcs. 45 Ah	4 st 45 Ah	6 st 45 Ah	8 st 45 Ah	10 st 45 Ah
Max battery capacity	45 Ah	90 Ah	135 Ah	180 Ah	225 Ah
According to SSF1014, Alarm Class 1-2	3.6 A	7.3 A	11.1 A	14.8 A	18.6 A
According to SSF1014, Alarm Class 3-4	1.4 A	2.9 A	4.4 A	5.9 A	7.4 A
I _{max} A (max discharge current)	13 A	13 A	13 A	13 A	13 A
I _{max} b (max charging current)	15 A	15 A	15 A	15 A	15 A
I _{min} is always 0 A.					

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/

Permitted average load according to SSF1014 Alarm class 1-4:

Table 29. NOVA 24 V FLX L

Permitted average load according to SSF1014 Alarm class 1-4:	NO-VA 24V 5A FLX L	NO-VA 24V 10A FLX L	NOVA 24V 25A FLX L	MOVA 24V 25A FLX L
FLX M without battery box according to Alarm class 1-2 / 3-4	3.7 A / 1.5 A	3.7 A / 1.5 A	3.6 A / 1.4 A	3.6 A / 1.4 A
Including 1 pc. Battery box FLX M, according to Alarm class 1-2 / 3-4:	-	7.4 A / 3 A	7.3 A / 2.9 A	7.3A / 2.9A

Permitted average load according to SSF1014 Alarm class 1-4:	NO-VA 24V 5A FLX L	NO-VA 24V 10A FLX L	NOVA 24V 25A FLX L	MOVA 24V 25A FLX L
Including 2 pcs. Battery box FLX M, according to Alarm class 1-2 / 3-4:	-	-	11.1 A / 4.4 A	11.1 A / 4.4 A
Including 3 pcs. Battery box FLX M, according to Alarm class 1-2 / 3-4:	-	-	-	14.8A / 5.9A
Including 4 pcs. Battery box FLX M, according to Alarm class 1-2 / 3-4:	-	-	-	18.7A / 7.5A

Charging current for batteries and battery capacity

The unit reads the connected system load and charges the batteries with available residual current from the power supply. The device performs qualified* battery tests and notifies when batteries need to be replaced. The batteries are charged gently to extend their life and protection is available against overcharging.

Table 30. [sv] Laddström

12 V / 24 V	Maximum charging current for batteries
NOVA FLX L	6 A

The battery backup has controlled charging ** (controlled charging) which prevents batteries from being overcharged and extends their service life significantly. The NOVA series must be used with AGM batteries.

Table 31. Battery capacity in 24 V units

24 V	Battery capacity	Maximum battery capacity with 1 battery box	Maximum battery capacity with 2 battery boxes	Maximum battery capacity with 3 battery boxes	Maximum battery capacity with 4 battery boxes
NO-VA FLX L, 24 V	45 Ah (2 pcs 45 Ah)	90 Ah (4 x 45 Ah)	135 Ah (6 x 45 Ah)	180 Ah (8 x 45 Ah)	225 Ah (10 x 45 Ah)

[sv] PowerWatch



Table 32. PowerWatch Ordering Information

Name	Item No.	E-number
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

[sv] Behörighetskrav, installation

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

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")

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

Class	Type	Temperature range
Environmental class 4	Generally outdoors.	-25°C to +60°C

[sv] Referenstabell: tillverkares angivna livslängd och rekommenderat batteri-byte

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

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

Reserve operating times for different alarm classes - overview

Alarm class	Spare operating time in the event of a power failure	Maximum number of hours of battery recharging (80%)
EN54-4	-	24 h
SBF110: 8	30 h + 10 min	24 h
EN50131-6 grades 1-2	12 h	72 h
EN50131-6 grade 3	24 h	24 h
SSF1014 Alarm class 1/2	12 h	72 h
SSF1014 Alarm class 3/4	30 h	24 h

The table shows the requirements for backup operating time and recharging of batteries for different alarm classes.

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