

Voltage Converter 48V-24V 2A

Ground fault detector module

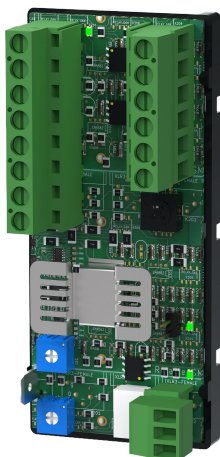
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1. ABOUT



Voltage converter 48V-24 2A is an optional card with two completely current-limited outputs. The card has controllable outputs.



2. MOUNTING IN BATTERY BACKUP

The card is delivered mounted in it's plastic casing, for easy installation.

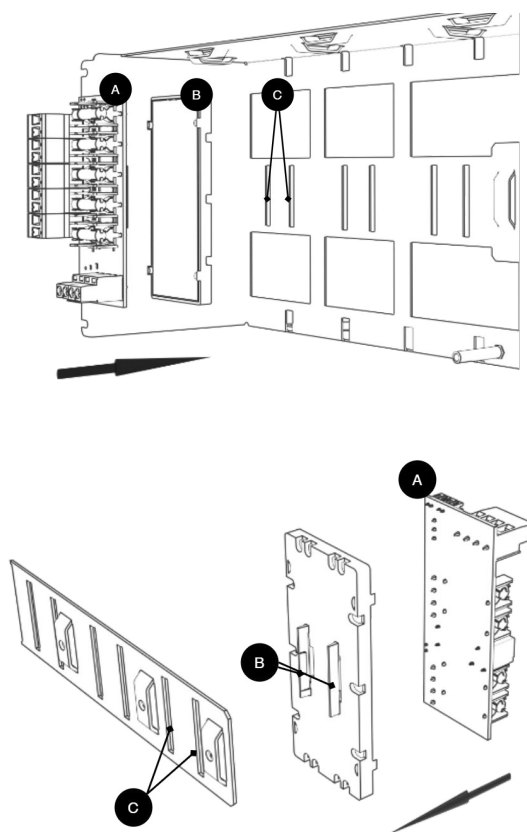
If the card has come loose, snap it back into the plastic casing.

Mount the card on any card slot in the enclosure, leave space for cables.



IMPORTANT

Install the board before screwing on wiring or commissioning.

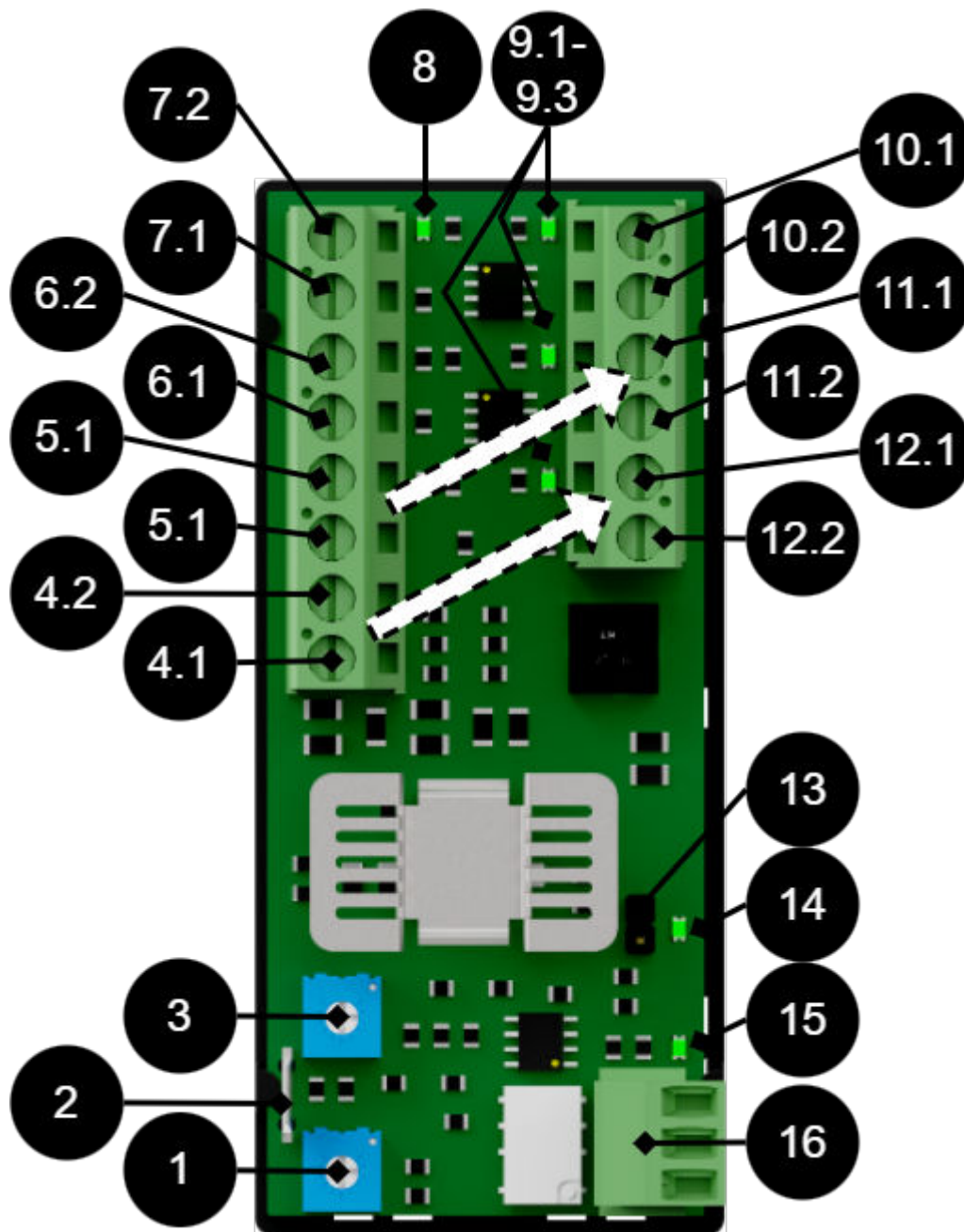


Letter	Explanation	Comment
A	Optional card	Optional card comes mounted on plastic housing from factory. Has it come loose? Snap it back on before mounting the card.
B	Plastic casing	The plastic casing has hooks for attaching slots in the plate.
C	Place for plastic casing	Slits in sheet metal to snap the plastic bracket.





3. PCB DESCRIPTION



No	Explanation	No	Explanation
1	Not used.		
2	Ground pin.		
3	Not used.		
4.1	Controllable output, + high (48V). Control load output:	12.2	Load output +
4.2	Controllable output, - low (0 V). Control load output:	12.1	load output -
5.1	Controllable output, + high (48V). Control load output:	11.2	Load output +
5.1	Controllable output, - low (0 V). Control load output:	11.2	load output -
6.1, 7.1	- (minus) V in from motherboard.		



No	Explanation	No	Explanation
6.2, 7.2	+ (plus) V in from motherboard.		
8	Indicator diode lights up green when voltage is connected.		
9.1-9.3	Indicator diode lights up green when there is voltage out.		
10.1	Load access - (not controllable).		
10.2	Load access + (not controllable).		
13	Jumper for controlling voltage on the board. Unbridged = 24 V, bridged = 48 V.		
14, 15	Indicator diode lights up yellow in the event of an ground fault.		
16	Alarm output, NC/CO/NO		

4. CONNECTING THE BOARD TO THE MOTHERBOARD IN BATTERY BACKUP

Table 1. Connection to battery backups with PRO1 motherboard

Load and alarm	PRO1 - Motherboard in battery backup	Voltage Converter 48V-24V 2A	Comment
Alarm	J15	J8	Use the supplied cable
Load	Load output 1	IN +/-	Use cable, max 2.5 mm ² , not included.

Table 2. Connection to battery backups with PRO2 v3 motherboard

Load and alarm	PRO2 v3 - Motherboard in battery backup	Voltage Converter 48V-24V 2A	Comment
Alarm	J7	J8	Use the supplied cable
Load	Load output 1	IN +/-	Use cable, max 2.5 mm ² , not included.

Table 3. Connection to battery backups with PRO3 motherboard

Load and alarm	PRO3 - Motherboard in battery backup	Voltage Converter 48V-24V 2A	Comment
Alarm	J10	J8	Use the supplied cable
Load	Load output 1	IN +/-	Use cable, max 2.5 mm ² , not included.

5. CONNECTION OF LOAD ON THE CARD



CAUTION

Connect load before commissioning battery backup.

1. Connect load wiring. LOAD (10.1,10.2) is prioritized load output. LOAD 1 (11.1, 11.2) and LOAD 2 (12.1, 12.2) are controllable outputs.
2. Alarm is connected to 16 - NC/CO/NO
3. If the card is to be used for ground fault monitoring: Connect ground cable to ground pin on the board and ground in battery backup. If the card is not to be used for earth fault monitoring, this step can be skipped.
4. Enable battery backup. See manual for battery backup.



CAUTION

Maximum load is 2 A per load output, and the card's total load must not exceed 2.5 A.

6. PRODUCT SHEET - POWER SUPPLY / BATTERY BACKUP

6.1. Product sheet - power supply from Milleteknik

6.1.1. Product image



6.1.2. Name, article number and e-number

Table 4. Name, article number and email number

Name	Item number	E-number (sv)
Voltage Converter 48V-24V 2A	A-VC004802A01LM01	-

6.1.3. Designation

Optional board for voltage conversion from 48 V to 24 V. Max 2 A load.

6.1.4. Area of use

The product converts 48 V to 24 V.

6.1.5. Technical description

The card provides 2 A continuously, 3 A in peak (short-term). 10 V - 60 V.

6.1.6. Voltage, current and power

Voltage in:

Voltage out:

Power outlet:



6.1.7. Outputs

Three load outputs, two of which are controllable.

6.1.8. Fuses

is current limited, which is why additional load protection is not needed.

6.1.9. Indications and communication

LED on card lights up when incoming supply is connected and output is connected.

6.1.10. Enclosure

The product lacks an enclosure and is mounted in an existing enclosure.

Table 5. Dimensions, with and without packaging.

Dimensions, height x width x depth	Dimensions with packaging.
30 x 40 x 89 mm.	120 x 215 x 165 mm.

Table 6. Height units, fan and IP class.

HE	Built-in fan	IP class
The product lacks an enclosure		

6.1.11. Weight

Table 7. Weight.

Name	Net weight	Weight incl. packaging
Voltage converter 48V-24V 2A	0.2 kg	0.4 kg

6.1.12. Installation requirements

The product must be installed in a compatible product from Milletechnik.

6.1.13. The accessories fits in

Table 8. Number of cards that fit in the power supply.

Product series	Enclosure size	Number of cards that can fit ^a .
ECO	M	2
ECO, NEO, NOVA	FLX S	2
EN54, NEO, NOVA	FLX M	3
NEO, NOVA	FLX L	3
19 rack module holders	4U	8

^aThe number of cards/accessories that can fit is the total number that can fit in the housing. Electronic and mechanical limitations may exist.





6.1.14. Requirements that the product meets

Table 9. The product meets the following requirements.

EMC:	EMC Directive 2014 / 30EU
Electricity:	Low voltage directive: 2014/35 / EU
CE:	CE directive according to: 765/2008
Environment	REACH Regulation: Directive 1907/2006, WEEE Regulation: Directive 20021961E, RoHS Regulation: Directive 2015/863



6.1.15. Guarantee

The product has a two-year warranty against manufacturing defects. Batteries and wearing parts are not covered by warranty.

6.1.16. Manufacturing, lifespan, environmental impact and recycling

Manufactured by Milleteknik in Partille, Sweden.

The product is designed for a long service life, which reduces the environmental impact. End-of-life products are handed over to the nearest recycling centre.

6.1.17. Link to the latest information

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

[Accessories & options](#)

6.1.18. About this information

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

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