

Installation Guide eFlow102NBV - Power Supply/Charger

Overview:

The eFlow102NBV power supply/charger converts a 220VAC (working range 198VAC - 256VAC), 50/60Hz input to a 12VDC @ 10A output.

Specifications:

Input Rating:

- Nominal 220VAC (working range 198VAC - 256VAC), 50/60Hz, 2.1A.

Output:

- 12VDC output.
- 10A continuous supply current.
- Aux. output rated @ 1A (unswitched).
- Overvoltage protection.
- Filtered and electronically regulated outputs.

Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 1.54A.
- Automatic switch over to stand-by battery when AC fails. Transfer to stand-by battery power is instantaneous with no interruption.

Fire Alarm Disconnect:

- Supervised Fire Alarm disconnect (latching or non-latching) 10K EOL resistor. Operates on a normally open (NO) or normally closed (NC) trigger.

Supervision:

- AC fail supervision (form "C" contacts).
- Battery fail & presence supervision (form "C" contacts).
- Low power shutdown. Shuts down DC output terminals if battery voltage drops below 80% of nominal. Prevents deep battery discharge.

Visual Indicators:

- Green AC Power LED indicates 220VAC present.
- AC input and DC output LED indicators.

Additional Features:

- Short circuit and overload protection.

Board Dimensions (approximate L x W x H):

7.5" x 4.6" x 1.75" (190.5 mm x 116.84 mm x 44.45 mm)

Stand-by Specifications:

Battery	Burg. Applications 4 hr. Stand-by/ 15 min. Alarm	Fire Applications 24 hr. Stand-by/ 5 min. Alarm	Access Control Applications Stand-by
7AH	0.4A/10A	N/A	5 Mins./10A
12AH	1A/10A	0.3A/10A	15 Mins./10A
40AH	6A/10A	1.2A/10A	Over 2 Hours/10A
65AH	6A/10A	1.5A/10A	Over 4 Hours/10A

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/NFPA 72/ANSI, the Canadian Electrical Code and with all local codes and authorities having jurisdiction. Product is intended for indoor use only.

- Mount the eFlow102NBV in desired location/enclosure.
- Connect unswitched AC power (220VAC 50/60Hz) to terminals marked [L, G, N] (Fig. 1a, pg. 3). Use 14 AWG or larger for all power connections. Secure green wire lead to earth ground.

Keep power-limited wiring separate from non power-limited wiring (220VAC 50/60Hz Input, Battery Wires). Minimum 0.25" spacing must be provided.

CAUTION: Do not touch exposed metal parts. Shut branch circuit power before installing or servicing equipment. There are no user serviceable parts inside. Refer installation and servicing to qualified service personnel.

- Measure output voltage before connecting devices. This helps avoiding potential damage.
- Connect devices to be powered to terminals marked [- DC +] (Fig. 1h, pg. 3).
For auxiliary device connection this output will not be affected by Low Power Disconnect or Fire Alarm Interface. Connect device to terminals marked [+ AUX -] (Fig. 1f, pg. 3).
- For Access Control applications batteries are optional. When batteries are not used, a loss of AC will result in the loss of output voltage. When the use of stand-by batteries is desired, they must be lead acid or gel type. Connect battery to terminals marked [- BAT +] (Fig. 1g, pg. 3). Use one (1) 12VDC battery. Use batteries - Casil CL1270 (12V/7AH), CL12120 (12V/12AH), CL12400 (12V/40AH), CL12650 (12V/65AH) batteries or UL recognized BAZR2 batteries of an appropriate rating.

6. Connect appropriate signaling notification devices to AC FAIL & BAT FAIL (*Fig. 1b, pg. 3*) supervisory relay outputs.
7. To delay AC reporting for 2 hrs. set SW2 to appropriate dip switch position [AC Delay] (*Fig. 1c, pg. 3*).
8. To enable or disable Fire Alarm Disconnect set SW2 to appropriate dip switch position [Shutdown] (*Fig. 1c, pg. 3*).
9. A short or NO or NC input triggers FACP [Trigger EOL Shutdown] (*Fig. 1d, pg. 3*).
10. Place a jumper for non-latching FACP. A momentary short on these terminals resets FACP latching [Trigger EOL Shutdown] (*Fig. 1e, pg. 3*).

Wiring:

Use 18 AWG or larger for all low voltage power connections.

Note: Take care to keep power-limited circuits separate from non power-limited wiring (220VAC, Battery)

Maintenance:

Unit should be tested at least once a year for the proper operation as follows:

Output Voltage Test: Under normal load conditions, the DC output voltage should be checked for proper voltage level.

Battery Test: Under normal load conditions check that the battery is fully charged, check specified voltage (12VDC @ 13.2) both at battery terminal and at the board terminals marked [- BAT +] to ensure there is no break in the battery connection wires.

Note: Maximum charging current under discharges is 1.54A.

Note: Expected battery life is 5 years; however, it is recommended changing batteries in 4 years or less if needed.

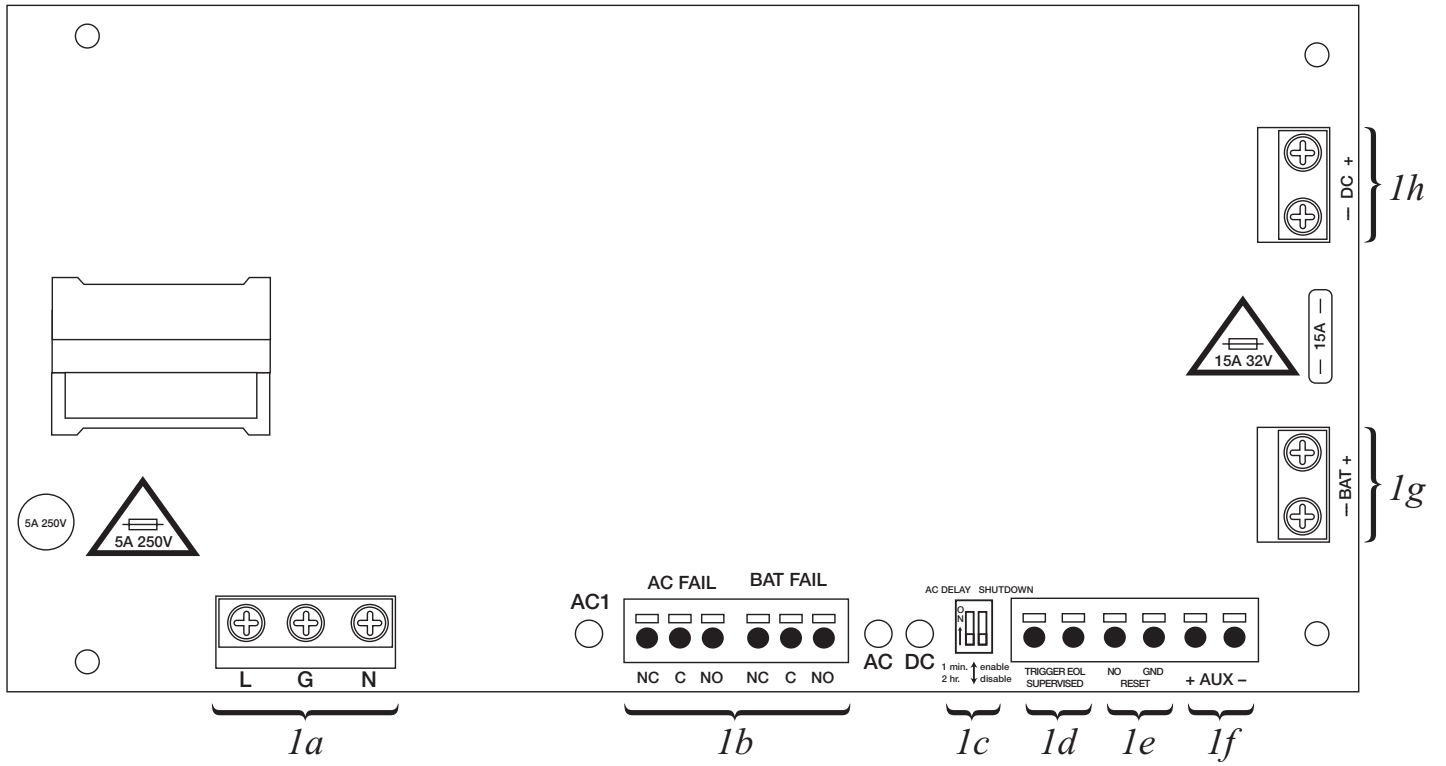
LED Diagnostics:

Green (DC)	Green (AC/AC1)	Power Supply Status
ON	ON	Normal operating condition.
ON	OFF	Loss of AC. Stand-by battery supplying power.
OFF	ON	No DC output.
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.

Terminal Identification:

Terminal Legend	Function/Description
L, G, N	Connect 220VAC 50/60Hz to these terminals: L to hot, N to neutral, G to ground (<i>Fig. 1a, pg. 3</i>).
- DC +	12VDC @ 10A continuous output (<i>Fig. 1h, pg. 3</i>).
Trigger EOL Supervised	Fire Alarm Interface trigger input from a short or FACP. Trigger inputs can be normally open, normally closed from an FACP output circuit (Power-Limited input) (<i>Fig. 1d, pg. 3</i>).
NO, GND RESET	FACP interface latching or non-latching (Power-Limited) (<i>Fig. 1c, pg. 3</i>).
+ AUX -	Auxiliary Power-Limited output rated @ 1A (unswitched) (Power-Limited output) (<i>Fig. 1f, pg. 3</i>).
AC Fail NC, C, NO	Indicates loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Contact rating 1A @ 30VDC (Power-Limited) (<i>Fig. 1b, pg. 3</i>).
Bat Fail NC, C, NO	Indicates low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1A @ 30VDC. A removed battery is reported within 5 minutes. Battery reconnection is reported within 1 minute (Power-Limited) (<i>Fig. 1b, pg. 3</i>).
- BAT +	Stand-by battery connections. Maximum charge current 1.54A (non power-limited) (<i>Fig. 1g, pg. 3</i>).

Fig. 1 - eFlow102NBV configuration



Notes:

Altronix is not responsible for any typographical errors.

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