OLS120D2
Dual Output Off-Line Power Supply/Charger

Overview:

OLS120D2 power supply/charger converts a 115VAC, 50/60Hz or 230VAC, 50/60Hz input to a 12VDC/24VDC output and a 12VDC fixed output *(see specifications)*. This unit has a wide range of applications for access control and security system accessories that require additional power.

Specifications:

Input:
- Universal input 115VAC, 50/60Hz, 0.95A or 230VAC, 50/60Hz, 0.6A.
- Input fuse rated @ 5A/250V.

Output:
- Output options:
  - **DC1:** 12VDC or 24VDC @ 3A.
    DC2: 12VDC @ 1A.
  Note: If DC2 is not used, DC1 rating is 12VDC or 24VDC rated @ 4A max.
- Filtered and electronically regulated output.
- Short circuit and thermal overload protection.

Supervision:
- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).

Battery Backup:
- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.
- Maximum charge current 0.7A.

Visual Indicators:
- AC input and DC output LED indicators.

Features:
- Power ON/OFF switch (interrupts mains) *(Fig. 1c, pg. 2)*.
- Includes battery leads.

Board Dimensions (W x L x H)**:**
4.5" x 7.25" x 1.75" (114.3mm x 184.1mm x 44.5mm).

Installation Instructions:

OLS120D2 should be installed in accordance with The National Electrical Code and all applicable Local Regulations.

1. Mount the OLS120D2 in the desired location/enclosure.
2. Slide [Power ON/OFF] switch to the OFF position *(Fig. 1c, pg. 2)*.
3. Set the DC1 output voltage via clip switch - open for 24VDC operation or closed for 12VDC operation *(Fig. 1a and 1b, pg. 2)*. DC2 output voltage is fixed at 12VDC operation.
   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.
4. Connect AC power to the terminals marked [L & N], connect ground to the terminal marked [G].
   Use 18 AWG or larger for all power connections (Battery, DC output).
   Use 22 AWG to 18 AWG for power-limited circuits (AC Fail/Low Battery reporting).
5. Slide [Power ON/OFF] switch to the ON position *(Fig. 1c, pg. 2)*.
6. Measure output voltage across both out terminals marked [– DC1 +, – DC2 +] before connecting devices. This helps avoiding potential damage.
7. Slide [Power ON/OFF] switch to the OFF position *(Fig. 1c, pg. 2)*.
8. Connect 12VDC or 24VDC (depending on clip switch setting) device to be powered to the terminals marked [– DC1 +]. Connect 12VDC device to be powered to the terminals marked [– DC2 +] *(Fig. 1, pg. 2)*.
9. When use of stand-by batteries is desired, they must be lead acid or gel type.
   Connect battery/batteries to the terminals marked [– BAT +] *(Fig. 1, pg. 2)*.
   12VDC operation only: Use one (1) 12VDC battery for 12VDC backup.
   24VDC and 12VDC simultaneous operation: Use two (2) 12VDC batteries connected in series for 24VDC backup.
10. When batteries are not used, a loss of AC will result in the loss of output voltage.
11. Connect appropriate signaling notification devices to AC Fail & Low battery supervisory relay outputs marked [NC, C, NO].
12. Slide [Power ON/OFF] switch to the ON position *(Fig. 1c, pg. 2)*.

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 @ 13.7 or 24VDC @ 27.4) both at the battery terminal and at the board terminals marked [– BAT +] to ensure that there is no break in the battery connection wires.

Note: Maximum charging current under discharges is 0.7A.

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

LED Diagnostics:

Red (DC1)	Green (AC)	Power Supply Status
ON	ON	Normal operating condition.
ON	OFF	Loss of AC. Stand-by battery supplying power.
OFF	ON	No DC output. Short circuit or thermal overload condition.
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.

Terminal Identification:

Terminal Legend	Function/Description
L, G, N	Connect 115VAC/230VAC to these terminals: L to Hot, N to Neutral, G to ground.
– DC1 +	**DC1:** 12VDC or 24VDC @ 3A and **DC2:** 12VDC @ 1A **Note:** If DC2 is not used, DC1 rating is 12VDC or 24VDC rated @ 4A max.
– DC2 +	12VDC @ 1A.
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 @ 115VAC / 28VDC
Low Battery NC, C, NO	Indicates low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1A @ 115VAC / 28VDC. Low battery threshold: 12VDC output threshold set @ approximately 10.5VDC, 24VDC output threshold set @ approximately 21VDC.
– BAT +	Stand-by battery connections. Maximum charge rate 0.7A.

Fig. 1

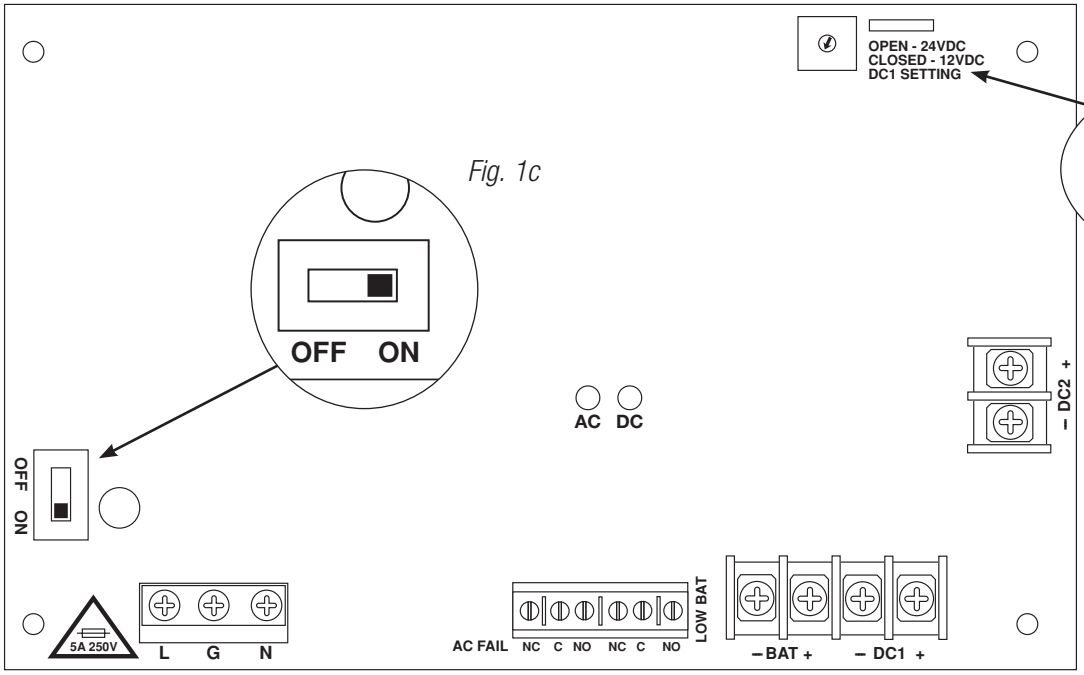

Fig. 1a

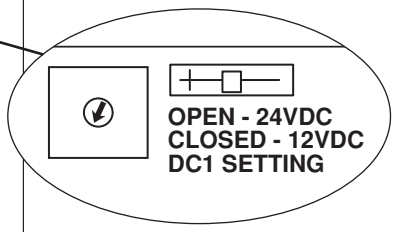

Fig. 1b **Switch Detail**

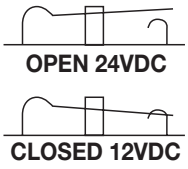

Fig. 1c

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