SMP10PM
Supervised Power Supply/Charger

Overview:

The SMP10PM is a supervised power supply that converts a low voltage AC input into 12VDC or 24VDC output with a 10 amp continuous supply current.

Specifications:

Input:
- Input 28VAC.
  (Voltage Output/Transformer Selection Table).

Output:
- 12VDC or 24VDC selectable output.
- 10 amp supply current.
- Filtered and electronically regulated outputs.
- Short circuit and thermal overload protection.

Battery Backup:
- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 0.7 amp.
- Zero voltage drop when switching over to battery backup.

Supervision:
- AC fail supervision (form "C" contacts).
- Battery presence and low battery supervision (form "C" contacts).

Indicators:
- AC input and DC output LED indicators.

Board Dimensions *(W x L x H approximate)*:
7.045" x 4.266" x 2.127"
(178.95mm x 109.36mm x 54.05mm).

Voltage Output/Transformer Selection Table:

Output VDC	Switch Position	Transformer
12VDC @ 10 amp	SW1 - Closed	24VAC or 28VAC / 175VA (Altronix model T2428175)
24VDC @ 6 amp	SW1 - Open	24VAC or 28VAC / 175VA (Altronix model T2428175)
24VDC @ 10 amp	SW1 - Open	24VAC or 28VAC / 300VA (Altronix model T2428300)

Installation Instructions:

The SMP10PM should be installed in accordance with The National Electrical Code and all applicable Local Regulations.

1. Mount the SMP10PM in the desired location/enclosure.
2. Set the SMP10PM to the desired DC output voltage by setting the switches *(Fig. 1a, pg. 2)* to the appropriate positions *(Voltage Output/Transformer Selection Table)*.
3. Connect proper transformer to the terminals marked [AC] *(refer to Voltage Output/Transformer Selection Table).* Use 18 AWG or larger for all power connections (Battery, DC output).
   Keep power-limited wiring separate from non power-limited wiring (115VAC / 60Hz Input, Battery Wires). Minimum 0.25" spacing must be provided.
4. Measure output voltage before connecting devices. This helps avoiding potential damage.
5. Connect devices to be powered to the terminals marked [+ DC -].
6. When the use of stand-by batteries is desired, they must be lead acid or gel type. Connect battery to the terminals marked [+ BAT -] on the board (battery leads included). Use two (2) 12VDC batteries connected in series for 24VDC operation.
   Note: When batteries are not used, a loss of AC will result in the loss of output voltage.
7. Connect appropriate trouble reporting devices to AC Fail & Low battery supervisory relay outputs marked [NC, C, NO]. Use 22 AWG to 18 AWG for AC Fail / Low Battery reporting. AC Failure will report in 5 minutes. For a 6 hour delay on reporting cut resistor R1.

LED Diagnostics:

Red (DC)	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
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output

Terminal Identification:

Terminal Legend	Function/Description
AC/AC	Low voltage AC input *(Voltage Output/Transformer Selection Table).* For 12VDC output use 28VAC or higher with 175VA power rating or higher. For 24VDC output use 28VAC with 175VA power rating or higher. Caution: Do not apply voltages above 28VAC (28VAC is maximum input rating).
+ DC –	12VDC / 24VDC @ 10 amp continuous output.
AC FAIL NC, C, NO	Indicate loss of AC power, (e.g. connect to audible device or alarm panel). AC report delay is approx. 1 min. Relay normally energized when AC power is present. Contact rating 1amp @ 120VAC / 28VDC.
Low Battery NC, C, NO	Indicate low battery or battery presence condition, (e.g. connect to audible device or alarm panel). Battery presence delay is approx. 3 mins. Circuit will restore 5 secs. after battery is detected. Relay normally energized during proper battery operation. Contact rating 1 amp @ 120VAC / 28VDC. Low battery threshold: 12VDC output threshold set @ approximately 10.5VDC, 24VDC output threshold set @ approximately 21VDC. Battery Presence: 12 or 24VDC battery presence threshold is approximately 4VDC.Battery presence is automatically tested about every 5 mins. If battery is determined absent, the unit will automatically test for presence about every 5 secs.
+ BAT –	Stand-by battery connections. Maximum charge rate 0.7 amp.

Fig. 1

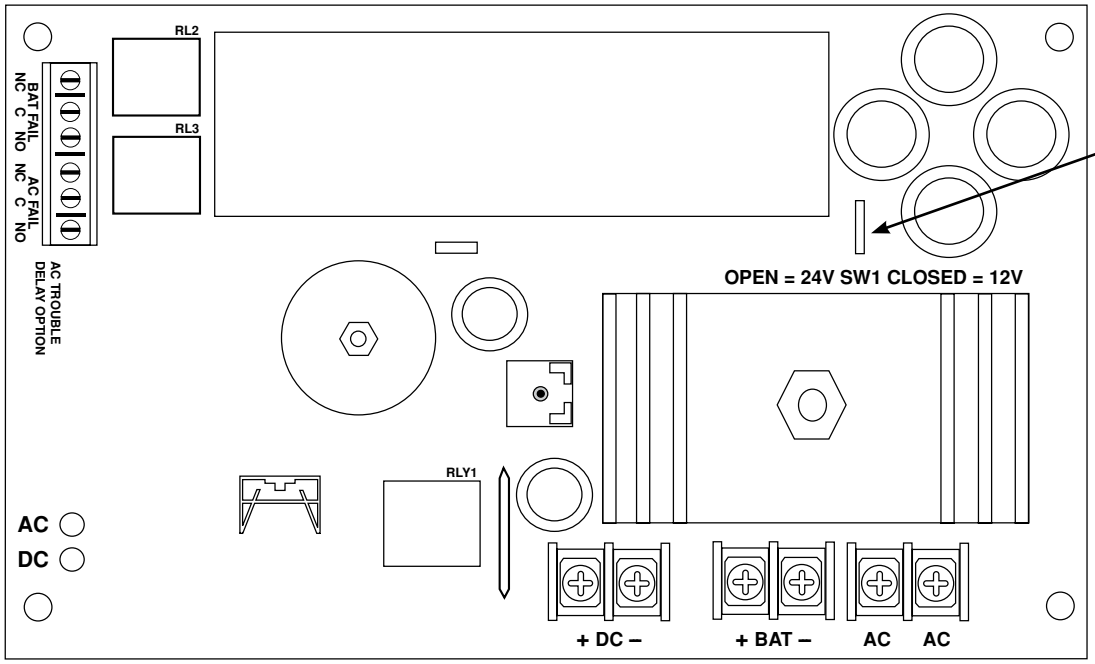
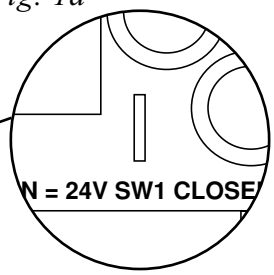


Fig. 1a



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