SMP3PM
SMP5PM
Supervised Power Supply/Charger

Overview:

Altronix SMP3PM and SMP5PM supervised power supply/chargers convert a low voltage AC input into a 12VDC or 24VDC selectable output (see specifications). These general purpose power supplies have a wide range of applications for access control, security and CCTV system accessories that require additional power.

Specifications:

Input:
- 16VAC to 28VAC *(see Voltage Output/Transformer Selection Table)*.

Output:
- 12VDC or 24VDC selectable output.
- See *Voltage Output/Transformer Selection Table* for supply current.
- 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.
- Maximum charge current: 300mA.
- Automatic switch over to stand-by battery when AC fails.
- Zero voltage drop when switching over to battery backup.

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

Board Dimensions (W x L x H approx.)**:**
5.25" x 3" x 2" (133.4mm x 76.2mm x 50.8mm).

Voltage Output/Transformer Selection Table:

Board	Output VDC	Switch Position	Max. Load DC	Transformer Requirements
SMP3PM	12VDC	SW1 ON	2.5A	16VAC / 40VA (TP1640), 24VAC or 28VAC / 100VA (T2428100)
	24VDC	SW1 OFF		24VAC or 28VAC / 100VA (T2428100)
SMP5PM	12VDC	SW1 ON	4A	24VAC or 28VAC / 100VA (T2428100)
	24VDC	SW1 OFF		24VAC or 28VAC / 175VA (T2428175)

Note: Transformers with higher VA ratings may be used for all output voltages above as long as you do not exceed 28VAC.

Stand-by Specifications:

Output	4 hr. of Stand-by and 5 Minutes of Alarm
12VDC / 7AH Battery	Stand-by = 1.25A Alarm = 1.25A
24VDC / 7AH Battery	

Installation Instructions:

SMP3PM/SMP5PM should be installed in accordance with the National Electrical Code and all applicable Local Regulations. Product is intended for indoor use only

1. Mount SMP3PM/SMP5PM board in the desired location/enclosure (mounting hardware included).
2. Set SMP3PM/SMP5PM to the desired DC output voltage via SW1 *(Voltage Output/Transformer Selection Table)*.
3. Connect proper transformer to the terminals marked [XFRM INPUT] *(Voltage Output/Transformer Selection Table)*.
   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).
   Keep power-limited wiring separate from non power-limited wiring (Trnasformer 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 on board. Refer installation and servicing to qualified service personnel.
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 standby batteries is desired, they must be lead acid or gel type. Connect battery to the terminals marked [+ BAT –] on the board (battery leads are 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 signaling notification devices to AC Fail & Low battery supervisory relay outputs marked [NC, C, NO].

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 *(Voltage Output/Transformer Selection Table).*

Battery Test: Under normal load conditions, check that the battery is fully charged, check specified voltage 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 discharge is 300mA.

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

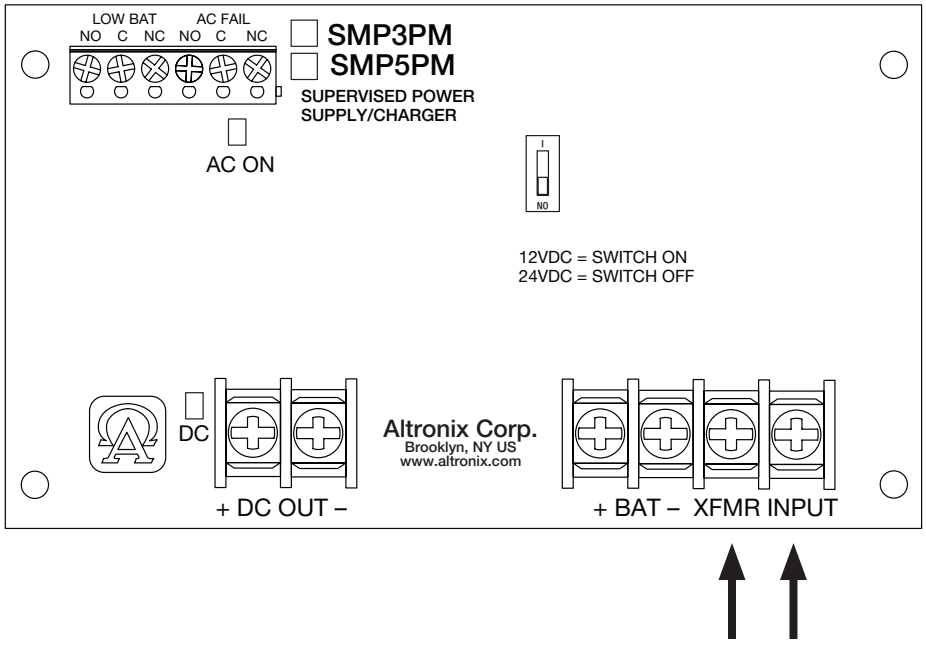
LED Diagnostics:

Red (DC)	Green (AC)	Power Supply Status
ON	ON	Normal operating condition
ON	OFF	Loss of AC. Standby battery is supplying power.
OFF	ON	No DC output.
Off	Off	Loss of AC. Discharged or no standby battery. No DC output.

Terminal Identification:

Terminal Legend	Function/Description
XFRM INPUT	Low voltage AC input *(see Voltage Output/Transformer Selection Table).* **Caution:** Do not apply voltages above 28VAC (28VAC is maximum input rating).
+ DC –	12VDC/24VDC output *(see Voltage Output/Transformer Selection Table).*
AC FAIL NC, C, NO	Used to notify loss of AC power, e.g. connect to audible device or alarm panel. NC, C, NO Relay normally energized when AC power is present. Contact rating 1A @ 120VAC / 28VDC.
Low Battery NC, C, NO	Used to indicate low battery condition, e.g. connect to alarm panel. NC, NO, C Relay normally energized when DC power is present. Contact rating 1A @ 120VAC / 28VDC. Low battery threshold: 12VDC output threshold set @ approximately 10.5VDC, 24VDC output threshold set @ approximately 21VDC.
+ BAT –	Standby battery connections. Maximum charge rate 300mA.

Fig. 1



Maximum input voltage not to exceed 28VAC

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