Altronix® SMP5PM - Supervised Power Supply/Charger

Overview:

SMP5PM is a supervised power supply/charger that converts a low voltage AC input, into a 12VDC or 24VDC selectable output, with 4 amp of continuous supply current (see specifications).

Specifications:

Input:

• 24VAC or 28VAC
(See Voltage Output/Transformer Selection Table).

Output:

• 12VDC or 24VDC selectable output.
• 4 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 0.3 amp.

Battery Backup *(cont'd)*:

• Zero voltage drop when switching over to battery backup.

Supervision:

• AC fail supervision (form "C" contacts).
• Low battery supervision (form "C" contacts).

Indicators:

• AC input and DC output LED indicators.

Board Dimensions *(W x L x H approximate)*:

7" x 4.05" x 1.35" (177.8mm x 102.87mm x 34.29mm)

Voltage Output/Transformer Selection Table:

Output VDC	Switch Position	Max. Load DC	Transformer Requirements
12VDC	SW1 Closed	4 amp	24VAC or 28VAC / 100VA (T2428100)
24VDC	SW1 Open	4 amp	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 or 45VDC.

Installation Instructions:

The SMP5PM should be installed in accordance with the National Electrical Code and all applicable Local Regulations.

1. Mount SMP5PM board in the desired location/enclosure.
2. Set SMP5PM to the desired DC output voltage via SW1 *(Voltage Output/Transformer Selection Table)*.
3. Connect proper transformer to the terminals marked [AC] *(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).
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 signaling notification devices to AC Fail & Low battery supervisory relay outputs marked [NC, C, NO].

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 standby 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 16VAC or higher with 85VA power rating or higher. For 24VDC output use 28VAC with 140VA power rating or higher. Caution: Do not apply voltages above 28VAC (28VAC is maximum input rating
+ DC –	12VDC/24VDC @ 4 amp continuous output.
AC FAIL NC, C, NO	Used to notify loss of AC power, e.g. connect to audible device or alarm NC, C, NO panel. Relay normally energized when AC power is present. Contact rating 1 amp @ 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 1 amp @ 120VAC / 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 0.3 amp.

Maximum input voltage not to exceed 28VAC