

2.1.1 S81-PU001 Power Supply Set

This is a power supply set to be fitted on a base plate. It consists of a maximum of 4 x 25 Watt power supply units, PU-A0005-1 model, plus one PU-A0004-1 battery charger module able to supply a 2 or 4 ampere adjustable battery charge current. Power supply units are connected in parallel, up to a maximum of four units amounting to a total of 16 amperes. Under normal operating conditions, a simplified test is carried out every 30 seconds in order to check the proper presence of the batteries. A full test, instead, is carried out every hour in order to check electrical connections and battery efficiency. During battery trickle charge, battery voltage is compensated automatically according to the temperature. In case of mains voltage failure, batteries are automatically switched to the load without any interruptions. Should the full charge stage exceed 24 hours, the power supply unit will signal a battery fault. In case of primary power supply failure, the system will shut batteries down when the on-load voltage is lower than 18VDC in order to avoid damaging the batteries. The set features three open collector outputs for replicating the various types of faults to the alarm control panel, along with a RS232 port for the connection to a supervisory system.



Figure 2.1 S81-PU001 Power Supply Set

Technical Features

- Input voltage: 110-240V~ (-15% - 10%)
- Free-air operating temperature: -5 °C - 50 °C
- Relative humidity: 93% non-condensing
- Protection class: IP20
- Nominal output voltage: 25VDC
- Max. output current: 4A/8A/16A
- Protections: Line fuse T6.3A H 250V (5x20)
- Battery voltage: 26.2 to 28.7 VDC, compensated automatically
- VBAT Ripple: < 100mV pK-pK at maximum current
- Resistance to mains voltage dips: >=20mS at maximum current (with PU-A0005)
- Maximum battery current: 4A
- Protections: Over-voltage, short circuit and battery reverse polarity
- Reference standards: EN54-4
- EC reference standards: EN50081-2 & EN50082-2 (industrial environment)
- Safety: EN60950 (CEI-74-2)

Technical features of the S81-PU001 power supply set according to the different configurations:

Features	S81-PU001-1	S81-PU001-2	S81-PU001-4
Number of PU-A0005-1 power supply units	1	2	4
Power supply voltage	110-240V~	110-240V~	110-240V~
Rated frequency	50-60Hz	50-60Hz	50-60Hz
Max. input current at 110V~	1.6A	3.3A	6.4A
Max. input current at 240V~	0.79 A	1.8 A	3.2A
Nominal output voltage	25VDC \pm 2%	25VDC \pm 2%	25VDC \pm 2%
Max. residual ripple	266mV	704mV	704mV
Minimum output voltage ¹	18.9VDC	18.9VDC	18.9VDC
Max. output current ²	4A	8A	16A
Maximum battery resistance ³	1.5	1.5	1.5
Max. battery current	2A	4A	4A
Maximum battery capacity	26A/h	26A/h	65A/h

1 Full load output voltage with low batteries in case of main voltage failure

2 Current for the loads plus the current required by the control panel.

3 Internal resistance of the batteries and relevant circuits (Cables, terminals, fuses, etc.)