

Model Specification Table

Model	400/1/12V/N	400/2/12V/N	400/3,3L/12V/N	400/4/12V/N	400/5/12V/N
Output Current	1A	2A	3A	4A	5A
Battery Charge Current	0.5A	0.5A	0.5A	0.5A	0.5A
Mains LED	✓	✓	✓	✓	✓
Fault LED	✓	✓	✓	✗	✗
Max Mains Input Current (at 90Vac)	0.8A	1.0A	1.2A	1.8A	2.0A
Mains Input Fuse	T2.0A	T2.0A	T2.0A	T3.15A	T3.15A
Output Fuse **	F1.0A	F2.0A	F3.15A	F4.0A	F5.0A
Tamper Rating	0.05A, 24Vdc	0.05A, 24Vdc	0.05A, 24Vdc	3A, 125Vdc	0.05A, 24Vdc

**Module Fuse

Mechanical

Model	400/1,2,3/12V/N	400/3L/12V/N	400/4,5/12V/N
Enclosure Dimensions, W x H x D (mm) External	230 x 200 x 80	355 x 330 x 80	330 x 275 x 80
Battery Capacity	1 x NP7 (8Ah)	1 x NP17 (18Ah)	1 x NP17 (18Ah)
Weight (kg), Excluding battery	2.0	3.9	3.7

Operating Instructions

This unit is intended for use by Service Personnel only - There are NO USER SERVICEABLE parts inside. The green Mains LED will be illuminated whilst the mains supply is present. In the event of a fault condition, the red Fault LED will be illuminated (model dependent).

Maintenance

There is no regular maintenance required of the PSU other than periodic testing and replacement of the standby battery. **Reference should be made to the battery manufacturer's documentation to determine typical/expected battery life with a view to periodic replacement of the battery.**

If the output of the PSU fails the cause of the failure should be investigated e.g. short circuit load. The fault should be rectified before restoring power to the PSU. The fuses may need to be replaced. Ensure the correct fuse rating and type is used.

CAUTION

**Risk of explosion if battery is replaced by an incorrect type.
Dispose of used batteries according to the battery manufacturer's instructions
and all local and national regulations..**

The packaging supplied with this product may be recycled. Please dispose of packaging accordingly.
Specifications subject to change without notice.



Instruction Insert: 400-N Series 12V Switch Mode Power Supplies

Part Numbers	Description	Voltage Range
303-030	400/1/12V/N 1 Amp Switch Mode Power Supplies	12Vdc
303-031	400/2/12V/N 2 Amp Switch Mode Power Supplies	12Vdc
303-032	400/3/12V/N 3 Amp Switch Mode Power Supplies	12Vdc
303-033	400/3L/12V/N 3 Amp Switch Mode Power Supplies	12Vdc
303-034	400/4/12V/N 4 Amp Switch Mode Power Supplies	12Vdc
303-035	400/5/12V/N 5 Amp Switch Mode Power Supplies With Optional Fused Outputs	12Vdc

For any technical queries please contact:
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Features

High efficiency cost effective power supply ideal for use in Intruder, Access Control and General Security applications. Featuring a regulated 13.8Vdc output supplying continuous full rated current to load and up to an additional 0.5A for charging a standby battery. The universal mains input voltage enables the power supply to be used across a wide geographical area. The highly efficient switch mode design ensures low operating costs, generates less heat and with a small physical size increases the room available for additional PCBs or cables. The modular construction simplifies maintenance. An optional integrated output module allows multiple circuits to be individually fused*.

- Continuous full rated current to load
 - Additional 0.5A to charge standby battery
 - Universal mains input voltage 90-264Vac
 - High efficiency electronics for reduced running costs and lower operating temperatures
 - Installer safe design with all high voltage electronics fully shrouded
 - Modular construction for ease of maintenance and installation
 - Full electronic short circuit and overload protection on load output under mains operation
 - Mains transient protection circuit
 - Lid opening tamper detection
 - Green Mains present LED
 - Red Fault LED*
 - Individually Fused Outputs*
- * Dependent upon model

Compliance

This power supply unit meets the essential requirements of the following European Directives:
Low Voltage 2006/95/EC EMC 2004/108/EC WEEE 2002/96/EC RoHS 2002/95/EC

Full datasheet available DS108

Doc No: 125-076 Issue No: 001

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RoHS ✓



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Input Specification

Voltage (rated)	100-240Vac
Voltage (operating)	90-264Vac
Frequency	50-60Hz
Max standby Power	0.5W (No load and No battery connected)

Output Specification

Voltage	13.4 - 14.2Vdc (13.8Vdc nominal) on mains power 10.0 - 12.3Vdc on battery standby
Ripple	150 mV pk-pk max
Overload	Electronic shutdown until overload or short circuit removed (under mains power only)

Standby Battery

Battery Type	12V Valve Regulated Lead Acid
Battery Charging Fuse protection	F1.0A 20mm glass

Local Indicators

MAINS LED (Green)	Mains present
FAULT LED (Red)*	Fault present: Output fuse fail or battery fuse fail (requires load and battery to be connected)

* Dependant upon model.

Signalling Outputs

Lid Tamper	N/O Volt free contact (See table for rating). Note. Contact open when lid opened by normal means (TAMPER ACTIVE condition).
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Environment

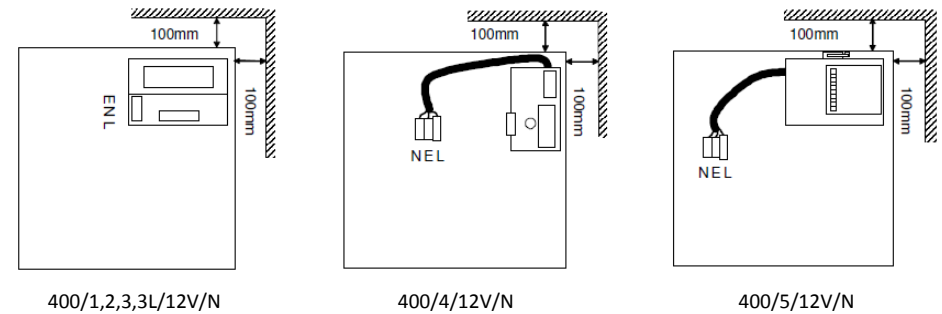
Temperature	-10 to +40°C (operating) 95% RH non-condensing -20 to +80°C (storage)
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Connections

+LOAD	+ve voltage O/P to load equipment
-LOAD	-ve voltage O/P to load equipment
+BATT	Red lead to standby battery
-BATT	Black lead to standby battery
Tamper x 2	Tamper voltfree contact

Installation Instructions

This unit is only suitable for installation as permanently connected equipment. The PSU is *NOT SUITABLE* for external installation. *EQUIPMENT MUST BE EARTHED*. Before installation, ensure that external disconnect device is *OFF*. The PSU should be installed according to all relevant safety regulations applicable to the application.



Mounting

- 1) Mount securely in correct orientation allowing minimum clearance - see diagram.
- 2) Route mains and low voltage output cables via different knockouts and/or cable entry holes.
- 3) Use bushes and cable glands rated to UL94 HB minimum.

Mains Power Up

- 4) Attach correctly rated mains cable (minimum 0.5mm² [3A], 300/500Vac) and fasten using cable ties.
- 5) Apply mains power. Check for 13.8Vdc on load outputs. Check green Mains LED is on.
- 6) Disconnect mains power.

Load Output

- 7) Attach correctly rated load cable and fasten using cable ties. Note polarity.
- 8) Apply mains power. Check green Mains LED is on.
- 9) **NOTE:** Red LED may be illuminated (dependent upon model) to indicate that no battery has been connected. This is normal.
- 10) Verify load is operating correctly.
- 11) Disconnect mains power.

Standby Battery

- 12) Where not integral to PSU PCB, attach supplied battery cables to terminal block and battery.
NOTE: ensure correct polarity of battery connections: **+ve** use **red** lead, **-ve** use **black** lead.
- 13) Apply mains power. Check green Mains LED is on.
- 14) Check there is no fault indication on Red LED (dependent on model).
- 15) Disconnect mains power. Check that the batteries continue to supply voltage and current to the load. The Green LED should be off.
NOTE: Batteries must have sufficient charge to supply the load
- 16) Reconnect mains power. Green LED should be on.
- 17) Remove Load fuse and check red Fault LED is on (dependent on model).
- 18) Replace Load fuse. Check red Fault LED is off (dependent on model).

Tamper

- 19) Check that the tamper spring makes good contact with box lid when closed. Check that the tamper switch is:
 - closed when the lid is closed and the lid screw is fitted
 - open when the lid is open.
- 20) Close cover and secure using fastening screw(s) provided.