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G1380xNU SERIES
13.8VDC SWITCH MODE POWER SUPPLY MODULE

(In part number: "x" is max load current.)

FEATURES

High efficiency cost effective power supply modules ideal for use in Intruder, Access Control and General Security applications. This module features 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 generates less heat and ensures low operating costs. The module has integral mounting flanges and a DIN rail fixing clip.

- 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
- Full electronic short circuit and overload protection on load output under mains operation
- Mains transient protection circuit
- Green Mains present LED
- Red Fault LED
- DIN rail mounting clip

COMPLIANCE

This power supply unit meets the essential requirements of the following European Directives:
Low Voltage 2014/35/EU EMC 2014/30/EU WEEE 2012/19/EU RoHs2 2011/65/EU

INPUT SPECIFICATION

Voltage (rated)	100-240Vac
Voltage (operating)	90-264Vac
Frequency	50-60Hz
Max current	See Model Specification Table overleaf
Mains Input Fuse	See Model Specification Table overleaf
Max standby Power	0.5W (No load and No battery connected)

OUTPUT SPECIFICATION

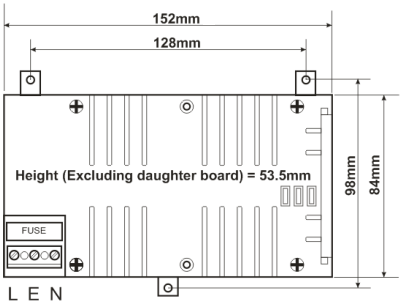
Voltage	13.4 – 14.2Vdc (13.8Vdc nominal) on mains power 10.0 – 12.3Vdc on battery standby
Max load current	See Model Specification Table overleaf
Ripple	150 mV pk-pk max
Load output Fuse	See Model Specification Table overleaf
Overload	Electronic shutdown until overload or short circuit removed (under mains power only)

STANDBY BATTERY

Battery Type	12V Valve Regulated Lead Acid
Average Battery Charge Time	7Ah = 24hours to 80% 17Ah = 58hours to 80%
Battery Charging Fuse protection	F1.0A 20mm glass (G13805NU only)

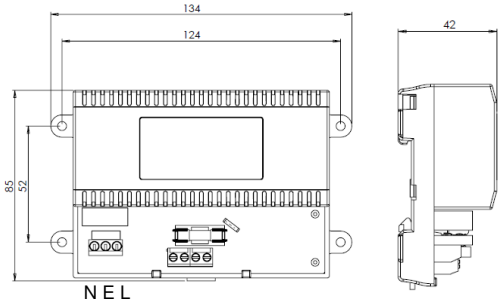
LOCAL INDICATORS

MAINS LED (Green)	Mains present
FAULT LED (Red)	Fault present: Output fuse fail or battery fuse fail (G13805NU only) (requires load and battery to be connected)



G13804NU/5NU

(Daughter board not shown for clarity)



G13801, 2 & 3NU

MECHANICAL

Dimensions	W x L x H (mm) [overall]	See Diagram
Fixing Centres	XX x YY (Hole Dia 4.2mm)	See Diagram
Recommended fixing screw		M4
Weight (kg)		0.22

ENVIRONMENTAL

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

CONNECTIONS

+ O/P	+ve voltage O/P to load equipment	} for G13805NU, O/P numbered 1-4
– O/P	-ve voltage O/P to load equipment	
+ BATT	To standby battery POSITIVE terminal	
– BATT	To standby battery NEGATIVE terminal	

INSTALLATION INSTRUCTIONS

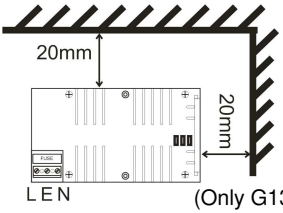
This unit is only suitable for installation as permanently connected equipment. The PSU is *NOT SUITABLE* for external installation*. EQUIPMENT MUST BE EARTHED*. Before installation, ensure that external disconnect device is *OFF*. The PSU should be installed according to all relevant safety regulations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

ENCLOSURE AND MOUNTING

This power supply module has high voltage present and is for use by Service Personnel only. This power supply module MUST be securely mounted within a robust enclosure having suitable means to prevent unintentional access to the module. Suitable notices must be affixed to the outside of the enclosure to warn of high voltages present internally.

Mounting the module

1) Mount securely in correct orientation allowing minimum clearance of 20mm all round – see diagram.



(Only G13805NU shown)

Mains Power Up

2) Attach correctly rated mains cable (minimum 0.5mm^2 [3A], 300/500Vac) and secure in enclosure using cable ties.
3) Apply mains power. Check for 13.8Vdc on load outputs. Check Green Mains LED is on.
4) Disconnect mains power.

Load Output

5) Attach correctly rated load cable and secure in enclosure using cable ties. Note polarity.
6) Apply mains power. Check Green Mains LED is on.
7) **NOTE**: Red LED may be illuminated to indicate that no battery has been connected. This is normal. (G13805NU only)
8) Verify load is operating correctly.
9) Disconnect mains power.

Standby Battery – NOTE: Ensure batteries being fitted to this unit are in good condition

10) Connect battery to terminal block using minimum 32/0.2 (1.0mm^2 CSA) stranded wire.
    NOTE: ensure correct polarity of battery connections.
    Maximum recommended total battery lead length = 500mm
11) Apply mains power. Check Green Mains LED is on.
12) Check there is no fault indication on Red LED.
13) 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
14) Reconnect mains power. Green LED should be on.

15) Remove Load fuse and check red Fault LED is on.
16) Replace Load fuse. Check red Fault LED is off.

OPERATING INSTRUCTIONS

This module 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 SPECIFICATION TABLE

	G13801NU	G13802NU	G13803NU	G13804NU	G13805NU
Output Current	1A	2A	3A	4A NU-4 = 4x1A	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

MAINTENANCE

There is no regular maintenance required of the power supply module 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.***

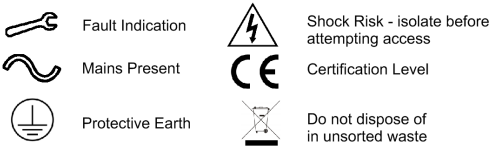
If the output of the power supply module fails the cause of the failure should be investigated e.g. short circuit load. The fault should be rectified before restoring mains power to the module. The fuses may need to be replaced. Ensure the correct fuse rating and type is used.

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.

Explanation of symbols: *(Not all may apply)*



Specifications subject to change without notice

The packaging supplied with this product may be recycled.
Please dispose of packaging accordingly.

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