

# ELMDENE

Protecting People & Property

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## 13.8Vdc SWITCH MODE POWER SUPPLIES

WITH STAND-BY BATTERY CHARGING, FAULT MONITORING, REMOTE  
FAULT SIGNALLING AND OPTIONAL FUSED OUTPUTS\*

## Models:

### G1380xBM-y-s

Where 'x' is max load current and 'y' is output module  
type and 's' is enclosure type

## FEATURES

High efficiency cost effective power supply range 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 a universal mains voltage input. Standby battery recharging is achieved within 24h for an 18Ah battery. Maximum battery life is assured using deep discharge protection to prevent premature battery failure when operating in standby mode for extended periods. Two sets of volt free contacts are provided to signal (i) loss of mains and (ii) battery and loss of output faults. An optional integrated output module allows multiple circuits to be individually fused\*.

- Continuous full rated current to load
- Lid and removal from wall tamper detection
- 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
- Reverse battery connection protection
- 18Ah Standby battery recharged to 80% within 24 hours
- Full electronic short circuit and overload protection on load output under mains operation
- Mains transient protection circuit
- Green Mains present LED
- Red Fault LED
- Volt free contact signalling mains failure
- Volt free contact signalling output and battery faults
- Individually Fused Outputs\*

\*Dependent on model

## SPECIFICATION

### INPUT SPECIFICATION

Voltage (rated)	100-240Vac
Voltage (operating)	90-264Vac
Frequency	50-60Hz
Max Current	See Model Specification Table
Mains Input Fuse	See Model Specification Table
Max standby Power	See Model Specification Table

### OUTPUT SPECIFICATION

Voltage	13.5 – 14.2Vdc (13.8Vdc nominal) on mains power 10.0 – 12.3Vdc on battery standby
Max load current	See Model Specification Table
Ripple	150 mV pk-pk max
Load output Fuse	See Model Specification Table below
Overload	Electronic shutdown until overload or short circuit removed (under mains power only)

### STANDBY BATTERY

Battery Type	12V Valve Regulated Lead Acid
Battery Capacity	See below under enclosure size.
Battery Charging Fuse protection	See Model Specification Table

**MECHANICAL**

MODEL	G1380xBM-y-B	G13810BM-y-C	G1380xBM-y-C
ENCLOSURE DIMENSIONS W X H X D (MM) [EXTERNAL]	355 x 330 x 80	330x 275 x 80	330x 275 x 80
BATTERY CAPACITY	1 x NP17 (18Ah)	2 x NP7 (8Ah)	1 x NP17 (18Ah)
WEIGHT (KG)	<b>4,5A</b>	<b>10A</b>	<b>4,5A</b>
(EXCLUDING BATTERY)	4.3	4.3	3.7

**ENVIRONMENTAL**

TEMPERATURE

 -10 TO +40°C (OPERATING) 75% RH NON-CONDENSING  
 -20 TO +80°C (STORAGE)

**SIGNALLING OUTPUTS**
**LOCAL INDICATORS**

 MAINS LED (Green)  
 FAULT LED (Red)\*

 Mains present  
 Flashes (1s period) when: loss of mains, battery disconnected, output fuse fail, battery fuse fail, output short circuit or low output voltage

\*FOR 10A MODEL, ONLY ONE FAULT LED WILL BE VISIBLE VIA FRONT PANEL. EACH MODULE HAS INDEPENDENT FAULT MONITORING AND SIGNALLING.

**GEN Fault (general)**

 0.1A @ 60vdc N/O volt free contact.  
 Open when battery disconnected, output fuse fail, battery fuse fail or output short circuit.

**EPS Fault (mains)**

 0.1A @ 60vdc N/O volt free contact.  
 Open when loss of mains for more than 10s  
 3A @ 125vac N/O volt free contact.

**Lid Tamper**

 Note: Contact open in when lid opened by normal means or unit is removed from mounted surface  
 (TAMPER ACTIVE condition).

**FUSED OUTPUTS (OPTIONAL)**

MODEL	G1380xBM-s	G1380xBM-4-s	G1380xBM-8-s
NO. OF FUSED OUTPUTS	1	4	8
FUSE VALUE	See table overleaf	4 x max load current / 4	8 x max load current / 8

**CONNECTIONS**

 +LOAD 1,2,3,4\*  
 -LOAD 1,2,3,4\*

 EPS Fault  
 GEN Fault

 +BATT  
 -BATT

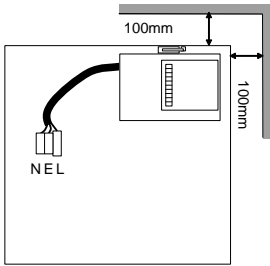
\* Depending upon model

 +ve voltage output to load equipment  
 -ve voltage output to load equipment  
 Voltage free contacts for loss of mains indication  
 Voltage free contacts for general faults (see signalling outputs)  
 +ve (Red lead) connection to standby battery  
 -ve (Black lead) connection to standby battery

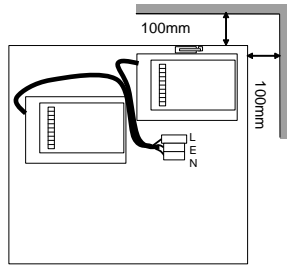
**INSTALLATION INSTRUCTIONS**

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.

## INSTALLATION INSTRUCTIONS (CONTINUED)



G1380xBM-S (4A, 5A)



G13810BM-C (10A)

### 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 0.5mm<sup>2</sup> [3A], 300/500Vac). Fasten with 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. **Note:** The Red LED may illuminate to indicate that no battery has been connected. This is normal.
- 9) Verify load is operating correctly.
- 10) Disconnect mains power.

### STANDBY BATTERY

- 11) Attach supplied battery cables to terminal block and battery.  
**NOTE:** ensure correct polarity of battery connections: **Red** lead to **+ve** and **Black** lead to **-ve**.
- 12) Apply mains power. Check Green Mains LED is ON.
- 13) Check there is no fault indication on Red Fault LED.
- 14) Disconnect mains power. Check that the battery continues to supply voltage and current to the load. Check Green Mains LED is OFF.  
**NOTE:** The batteries must have sufficient charge to supply the load
- 15) Reconnect mains power. Check Green Mains LED is ON.
- 16) Remove Load fuse and check Red Fault LED is ON.
- 17) Replace Load fuse. Check Red Fault LED is OFF.

## 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 flash and the corresponding (EPS or GEN) fault signal contacts will open.

## MODEL SPECIFICATION TABLE

	G13804BM	G13805BM	G138010BM
<b>Max Output Current to load</b>	4A	5A	2 x 5A
<b>Output Fuse*</b> (20mm glass)	F4.0A	F5.0A	2 x F5.0A
<b>Max Mains Input Current</b> (at 90Vac)	1.3A	1.5A	3.0A
<b>Mains Input Fuse</b> (20mm 250Vac HBC)	T2.0A	T2.0A	T3.15A
<b>Battery Fuse Protection</b>	F4.0A	F5.0 A	2 x F5.0A

\* Single o/p models only

## MAINTENANCE

There is no regular maintenance required of the PSU other than periodic testing and replacement of the standby batteries. **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.

## COMPLIANCE

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

EMC 2004/108/EC  
 RoHS 2011/65/EU



## DISPOSAL OF PRODUCT AT END OF LIFE

This product falls within the scope of EU Directives 2002/96/EC Waste Electrical and Electronic Equipment (WEEE) and 2006/66/EC (Battery). At the end of life, the product must be separated from the domestic waste stream and disposed via an appropriate approved WEEE disposal route in accordance with all national and local regulations. Before disposal of the product, any batteries must be removed, and disposed separately via an appropriate approved battery disposal route in accordance with all national and local regulations. Package used batteries safely for onward transport to your supplier, collection point or disposal facility.

**Caution: Risk of fire or explosion if bare battery wires are allowed to touch.**

See Specification for battery type information. The battery is marked with the crossed out wheellie bin symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg).

For more information see: [www.recyclethis.info](http://www.recyclethis.info)

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