POWER SUPPLIES

Types 107-9/1, 107-9/2 & Rising output Type 107-8

FUNCTION

These modules can be used as general purpose power supplies, and can power 2 wire transmitters, operating on 4-20mA signals.
e.g. the SIL 2 - Wire transmitter, type 114 - 1.

DESCRIPTION

The power supplies are available in 3 versions, each of which has a current limit circuit to protect against overloads.

a) Type 107-9/1.

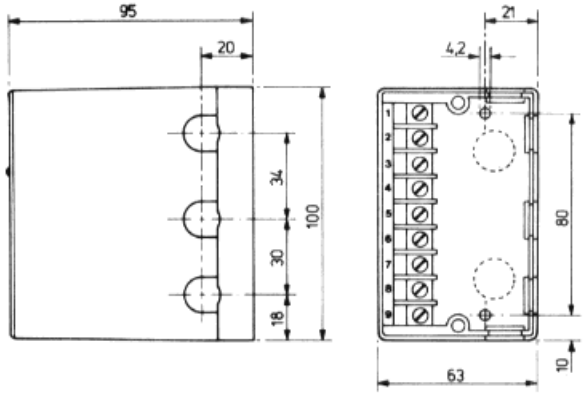
This version has only one output, but is available in several output voltages. This enables the unit to be used in applications where there are long lines, having large resistances.

b) Type 107-9/2.

This version has **two** outputs, each being 24 Volts dc. This enables two individual loops to be powered from one unit, and avoids the problems often encountered when using a common supply. Each output is isolated from the other, the input supply or Earth.

c) Type 107-8

Has a Rising Voltage characteristic. This means that as the current rises in the load, the output voltage also rises. The purpose of this is to enable loads to be driven in series with large resistances, such as long transmission lines, or through protective zener barriers.



The cover is a grey polystyrol moulding, which fits onto the black Base, a phenolic moulding, containing terminals rated at 10 Amps. When the cover is in place, the terminals are fully protected

APPROVAL

It is permitted to connect the output, of ac powered units, to B.T. Lines via a suitable fuse disconnection barrier.

INSTALLATION

The unit is designed to be fitted on any flat surface using two screws. To fix, undo the two screws in the lid. The light grey top section can now be disconnected from the dark base by pulling it away from the socket in the base section. The base may now be screwed down and wired. An alternative method of fixing is to use a special clip (optional) which enables the unit to fit onto a 'Top hat style' DIN rail to B.S.5584:1978, EN 50 022, DIN46277-3.

FUSE REPLACEMENT

The fuse inside the unit may be replaced as follows.

ISOLATE ALL SUPPLIES TO THE UNIT.

Undo the two cover fixing screws, then pull the top section away from the terminal base. The thin plastic plate now visible may be removed by pulling the sides of the cover slightly apart, releasing the interlocking tongue from its groove. The printed circuit board may now be slid out from the cover, and the fuse now visible replaced with the correct type and rating. (See specification).

SPECIFICATION

OUTPUTS *(others can often be provided)*

Type 107-8 *(any one of the following)*
24V @ 4mA rising to 32V @ 20mA.
36V @ 4mA rising to 48V @ 20mA.

Type 107-9 /1 *(any one of the following)*
24 Volts ± 0.2 Volts @ 20mA
36 Volts ± 0.2 Volts @ 20mA
48 Volts ±0.2 Volts @ 20mA

Type 107-9/2
2 off outputs of 24 Volts ± 0.2 Volts @ 20mA

CURRENT LIMITS
Set at approximately 23mA

OUTPUT RIPPLE
≤ 0.1% of Output voltage.

LOAD EFFECT ON OUTPUT *(107-9 range only)*
≤ 0.01% of output voltage / mA load change

STABILITY
Over 24 hours: ± 0.1% V_{out}
Over 1 Year: ± 0.5% V_{out}

ISOLATION
The outputs are isolated from the input power, and, (107-9/2) from each other.

TEMPERATURE COEFFICIENT
± 0.03% V_{out} / °C

INPUT SUPPLY VOLTAGE REJECTION
≤ 0.01% V_{out} / % Supply change.

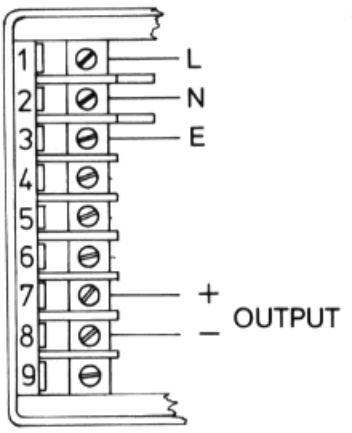
INPUT POWER
Standard:-
AC 110/240V ± 10% 50/60 Hz. 5VA.
Fuse size: 20 x 5 mm.
Fuse rating: 100mA. Quick blow type.
Option:-
DC 12V or 24V -10% + 20% @ 3.5 Watt.
Fuse rating:- 250mA. Anti-surge type.

POWER SUPPLY INDICATOR
A red light emitting diode is illuminated when power is applied to the unit.

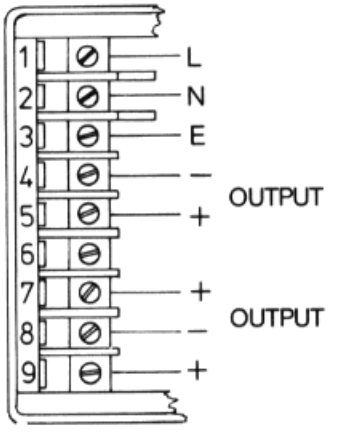
TEMPERATURE RANGE
Operating:- -10 to +60 °C
Storage:- -20 to +70 °C

WEIGHT: Approximately 400g.

TERMINAL CONNECTIONS



Types 107-8, or 107-9/1



Type 107-9/2

WARNING **THIS UNIT CAN BE MAINS POWERED, AND ALL INPUTS TO IT MUST BE ISOLATED FROM DANGEROUS VOLTAGES BEFORE THE FRONT COVER IS REMOVED. BARE TERMINALS WILL BE EXPOSED.**

Continuous development may necessitate changes in these details without notice

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