



SIGNAL CONVERTERS

Type 107-1
(for Resistance / RTD inputs)

Features

- ★ **2/3 wire resistance or RTD temperature sensor inputs**
- ★ **Wide range of output types**
- ★ **Screw fixing or DIN rail mounting**



FUNCTION

This versatile range of units convert signals from resistance type transducers and RTD temperature sensors into standard process signals.

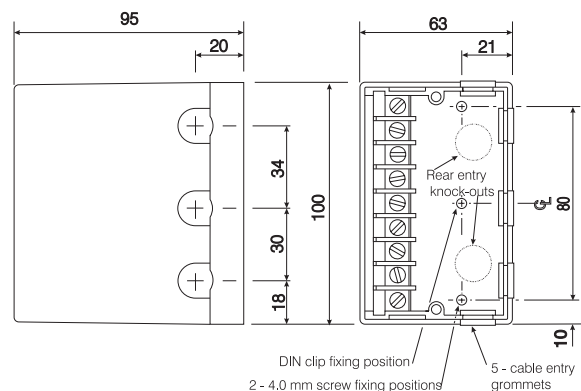
The unit is configured during manufacture to suit the required input and output signals. Output zero and span controls, accessible from the front of the unit, can be provided on request and are supplied as standard for 2-wire and 3-wire resistance type inputs.

The 107-1 can be configured for two or three-wire resistance transducers, variable resistors, potentiometers and resistance temperature detectors (RTD's). For RTD's, a three-wire system compensates for errors due to input transducer connecting lead resistance. A constant current is provided to power external resistance inputs.

Information Required When Ordering

- Specify type 107-1
- Input signal (see specification overleaf)
- Output signal (see specification overleaf)
- Whether accessible Span & Zero Controls are required (standard for resistance inputs)
- Supply voltage and frequency
- Whether a DIN Rail Mounting clip is required

DIMENSIONS



SPECIFICATION

INPUTS

Resistance

Minimum change 50 ohms, Maximum 10k ohms

Resistance Thermometers

PT100 or PT130 (100 or 130 ohms at 0°C)
Minimum Span 40°C, Maximum Span 500°C
(NB no compensation for RTD non-linearity)

OUTPUTS

The 107-1 can be manufactured for other output ranges. Please contact sales department for details.

0-10 mA into 2000 (5000) ohms max.	} figures in brackets are options
0-20 mA into 1000 (2500) ohms max.	
4-20 mA into 1000 (2500) ohms max.	
0-5v into 500 ohms min.	
1-5v into 500 ohms min.	
Current Sink 4- 20 mA @ 50 Volts max.	

CALIBRATED ACCURACY

Output set at 100% to be within $\pm 0.1\%$ FSD

LINEARITY ERROR

$\leq \pm 0.1\%$ FSD

LOAD RESISTANCE EFFECT

$\leq 0.001\%$ of span/100 ohm change.

ISOLATION

The input and output are not isolated from each other, but are isolated from the power supply.

TEMPERATURE COEFFICIENTS

Zero: $\pm 0.02\%$ span/ deg C
Span: $\pm 0.02\%$ span/ deg C

SUPPLY VOLTAGE REJECTION

Output change $<0.01\%$ span/ % supply change.

ENVIRONMENTAL

Temperature range:

operating -10 to +50 deg C
storage -20 to +70 deg C

Humidity: 0-95% RH non-condensing

POWER SUPPLY

A LED indicates when the power supply is connected.

Standard AC: 110, 220 or 240V $\pm 10\%$ 50/60Hz; 5VA
Fuse (internal) 100mA quick-blow (20 x 5mm)

Optional DC: 12, 24 or 48V -10% to + 20%; 3.5W
Fuse (internal) 250mA anti-surge (20 x 5mm)

TRANSDUCER EXCITATION SUPPLY

NB only available on resistance type inputs.

Constant current, typically 5mA, set during manufacture to suit input resistance change

ENCLOSURE DETAILS

Base: Phenol (black)

Cover: Polystyrol (light grey)

Protection: IP40

SAFETY & EMC

Safety: EN61010-1 Immunity: EN50082-1

Emissions: EN50081-1 CE certified.

WEIGHT

Approximately 0.5 kg

ELECTRICAL CONNECTIONS

Terminal

1— Line	} AC Mains Supply	Positive (+) Negative (-) Earth	} DC Supply Option
2— Neutral			
3— Earth			
4— Output signal (-)			
5— Output signal (+)			
6— no internal connection			
7— Input signal (+)			
8— Input signal (-)			
9— Constant current output (+)			

Please Note: Options are not available unless specified at time of order.

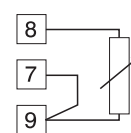


THIS UNIT CAN BE MAINS POWERED, AND ALL INPUTS TO IT MUST BE ISOLATED FROM DANGEROUS VOLTAGES BEFORE THE FRONT COVER IS REMOVED. LIVE TERMINALS WILL BE EXPOSED.

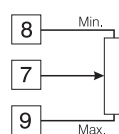
Continuous development may necessitate changes in these details without notice

Input connections

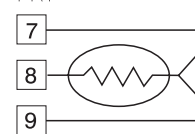
Variable Resistor



Potentiometer



PRT



SIL

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