



SIGNAL CONVERTER

(RATE OF CHANGE MONITOR)
Type 107-18

Features

- **Current or voltage inputs**
- **Wide range of output types**
- **Monitors increases and decreases in the rate of change of process variable**
- **Screw fixing or DIN rail mounting**



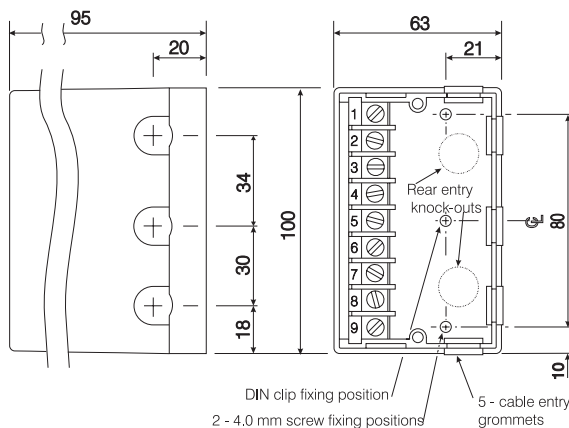
The 107-18 provides an output signal with a magnitude proportional to the rate of change of the input signal.

The output signal can be configured to indicate decreases as well as increases in the rate of change of the process variable.

TYPICAL APPLICATION

Chemical processes can be exothermic or endothermic and often need good control of the temperature of the reactants. A temperature controller will normally be used to maintain the reaction at the desired temperature. However, a single control loop may not be adequate, or some means may be required to test or supplement it to ensure thermal stability or safety. Monitoring the *rate of change* of temperature or pressure could be the answer.

DIMENSIONS



Information Required When Ordering

- Specify type 107-18
- Input signal (see specification overleaf)
- Output signal (see specification overleaf)
- Value of output signal at zero rate of change (e.g. if the output signal is set at mid-scale for no change in the input signal, the unit will be able to indicate decreases as well as increases in the rate of change of the process variable)
- Rate of change (see specification overleaf)
- Supply voltage and frequency

SPECIFICATION

GENERAL NOTE

The 107-18 can be manufactured for other input and output ranges. Please contact our sales department for details.

INPUTS

mA Ranges	<i>Input impedance (ohms)</i>
0-10mA	390
0-20mA	200
4-20mA	240

Voltage Ranges

0-5v / 1-5v into greater than 100 k ohms

OUTPUTS

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

RATE OF CHANGE (for full scale output)

Minimum: 5% of input/minute
Maximum: 500% of input /minute

ERROR (in rate for full scale output)

5% maximum

OUTPUT RIPPLE

≤ 0.1% (peak to peak) of FSD

LOAD RESISTANCE EFFECT

≤ 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: ± 0.03% span/ °C
Span: ± 0.03% span/ °C

TEMPERATURE RANGE

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

SUPPLY VOLTAGE REJECTION

Output change <0.01% span/ % supply change.

POWER SUPPLY

A LED indicates when the power supply is connected.
Standard AC: 110, 220 or 240V ±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)

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



WARNING: these details are provided for pre-sales information only. Installation must be carried out in accordance with the User Guide

Supply

1 Line } AC
2 Neutral } Mains
3 Earth } Supply

Positive (+)	} DC Supply Option
Negative (-)	
Earth	

Output

4 Output (-)
5 Output (+)
6 reserved

Inputs

7 Input signal (+)
8 Input signal (-)
9 reserved

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

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