



RATE LIMITER

TYPES 107-17 /0; 107-17 /1; 107-17 /2

Features

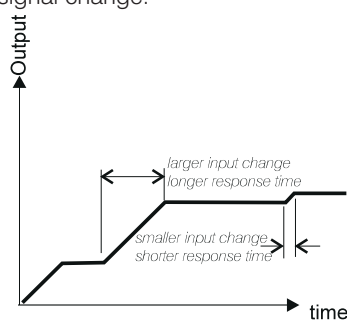
- * Provides controlled rate of change of output
- * Provides signal conversion
- * Wide range of input and output types
- * Screw fixing or DIN rail mounting

FUNCTION

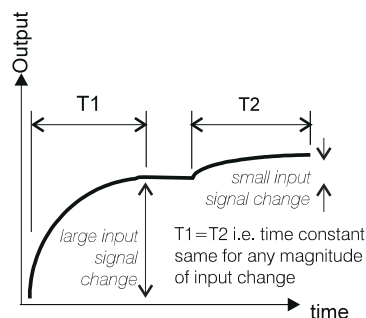
The 107-17 series provides a range of instruments which can be used to control the rate of change of a process signal. The 107-17 has uses in processes requiring signal damping. This unit will also provide conversion of voltage and current signals.

The rate of change is controlled by a ten-turn dial scaled 0-100% of the calibrated maximum time to FSD. The output characteristics of standard versions of the 107-17 are as follows:

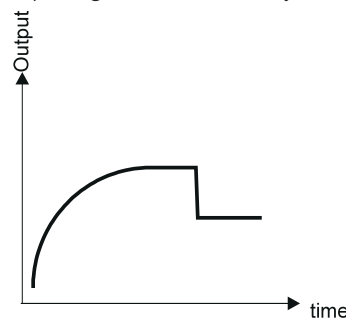
107-17 /1 Rate Limiter: The response curve is a linear ramp with a fixed rate of change. The effect on the output is a response time proportional to the magnitude of input signal change.



107-17 /2 Slow Up/Slow Down Response: The response curve is exponential and the time constant for the output to reach a steady state value is the same for any magnitude of change in input signal.



107-17 /0 Slow Up/Fast Down Response: For rising input signals the response curve is the same as the 107-17 /2. However, with a falling input signal level the output signal follows virtually instantly.



Information Required When Ordering

- Specify type i.e. 107-17 /0; 107-17 /1 or 107-17 /2
- Input signal (see specification overleaf)
- Output signal (see specification overleaf)
- Required maximum time from zero to full scale
- Supply voltage and frequency

SPECIFICATION

GENERAL NOTE

The 107-17 can be manufactured for other ranges. Please contact our sales department with details of your requirements.

INPUTS

mA Ranges	Input impedance (ohms)
0-10mA	100
0-20mA	50
4-20mA	62.5

Voltage Ranges

0-5v / 1-5v into greater than 200 k ohms

OUTPUTS

Figures in brackets are optional outputs available to order.

mA Ranges	Max. Load (ohms)
0-10mA	2000 (4000)
0-20mA	1000 (2000)
4-20mA	1000 (2000)
4-20mA current sink (supply 50V max.)	

Voltage Ranges

Voltage Ranges	Min. Load (ohms)
0-5V / 1-5V	500
0-10V / 2-10V	1000

RESPONSE TIME

Can be manufactured for 0-60 s up to 0-120 s

CALIBRATED ACCURACY

Output set at 100% to be within $\pm 0.2\%$ 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/°C
Span: $\pm 0.02\%$ span/°C

TEMPERATURE RANGE

Operating: -10°C to $+60^{\circ}\text{C}$
Storage: -20°C to $+70^{\circ}\text{C}$

SUPPLY VOLTAGE REJECTION

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

POWER SUPPLY

A LED indicates when the power supply is connected.

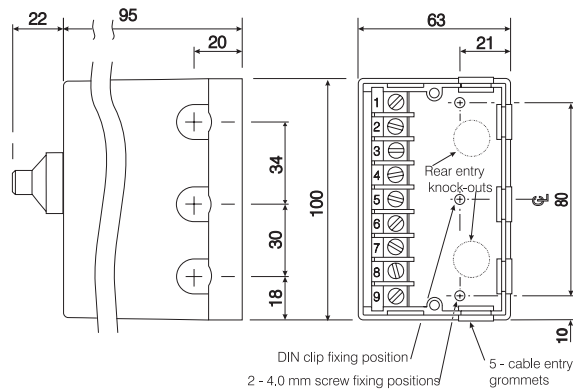
Standard AC: 110, 220 or 240V $\pm 10\%$ 50/60Hz; 5VA
Fuse (internal) 100mA quick-blow (20 x 5mm)

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

WEIGHT

Approximately 0.5 kg

DIMENSIONS



ELECTRICAL CONNECTIONS

Terminal

1	↔ Line	} AC Mains Supply	Positive (+) Negative (-) Earth	} DC Supply Option
2	↔ Neutral			
3	↔ Earth			
4	← Output common (-)			
5	⇒ Output (+)			
6	(reserved)			
7	← Input signal (+)			
8	⇒ Input signal (-)			
9	(reserved)			

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

WARNING



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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