



# LOOP-POWERED TRIP AMPLIFIER

Type B12-2W

- *Self powered - no auxiliary supply needed*
- *High / Low alarm selection*
- *Adjustable hysteresis*
- *Multi-turn dial set-point*
- *Wall or DIN rail mounting*



The B12-2W single point trip amplifier provides voltage free contacts which change state when the input signal passes an adjustable reference set-point. No auxiliary supply is required as the trip amp derives all its power from the 4-20mA signal being monitored. Applications for the trip amplifier include detection of high or low alarm conditions and sensing broken signal lines.

## Alarm indication

Two indicators, red and green, are provided on the front panel. Red indicates an alarm condition. User adjustable High-Low alarm selection is provided. When set to HIGH, the red LED is 'on' when the measured signal is higher than the set-point. When set to LOW, the red LED is 'on' when the measured signal is lower than the set-point. The green LED indicates the opposite state to the red LED.

## Set-point

The trip-point is set by a front panel mounted ten-turn dial scaled 0-100% of the measured signal.

## Relay output

Relay contacts provided are one normally closed and one normally open.

## Information required when ordering

- Specify "Type B12-2W"  
*NB Units are supplied as standard with High / Low Alarm Section set to 'HIGH' & Hysteresis set to  $\pm 1\%$  of span*

## Specifications

### Input

4-20mA

### Outputs

Relay with one normally closed and one normally open contact rated 4A @250VAC resistive or 2.5A @ 24VDC resistive.

### Hysteresis

Set during calibration at  $\pm 1\%$  of span. May be user adjusted to a maximum of  $\pm 5\%$  of span.

### High / Low Alarm Selection

Set by internal slide switch.

### Set-point

Front panel mounted ten-turn dial scaled 0 - 100% of the input signal. A locking mechanism prevents accidental movement of the knob setting.

### Calibrated Accuracy

Set at 100% to be within typically  $\pm 0.2\%$  FSD  
Repeatability error less than 0.2% span

### Linearity

Set-point linearity error  $\leq \pm 1\%$

### Interference Rejection

Filtering is incorporated to attenuate R.F. and other industrial noise.

### Temperature Coefficients

Zero:  $\pm 0.02\%$  span / °C, Span:  $\pm 0.02\%$  span / °C

### Environmental

Temperature: operating -10 to +60°C, storage -20 to +70°C  
Humidity: 0 – 95% RH non-condensing

### Isolation

500V RMS, input to output

### Power Supply

None required, power is derived from the input signal. The unit drops approximately 6 volts across its input terminals.

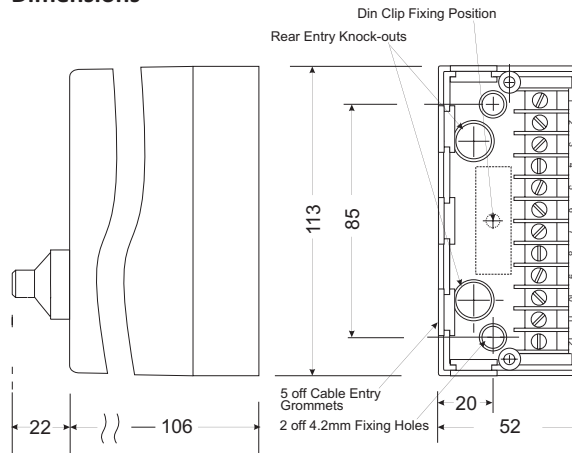
### Safety & EMC

Safety: EN61010-1, Immunity: EN50082-1,  
Emissions: EN50081-1, CE certified

### Mechanical

Weight: approx. 0.3kg  
Enclosure: Fire retardent materials - PPO base, ABS cover  
Screw terminal wire capacity: 2 x 1.5mm<sup>2</sup>

## Dimensions



## Electrical Connections



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

- 1
  - 2 - Input Signal ( + )
  - 3 - Input Signal ( - )
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10 - Earth (*this terminal must be earthed*)
  - 11
  - 12
- Relay contacts are shown with the input signal lower than set point

Continuous development may necessitate changes in these details without notice

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