Safety information

It is important that this guide is read and fully understood before attempting installation or commissioning of the instrument. Instructions appearing in this document, and current safety legislation, must be observed to ensure personal safety and to prevent damage to the instrument or equipment connected to it.

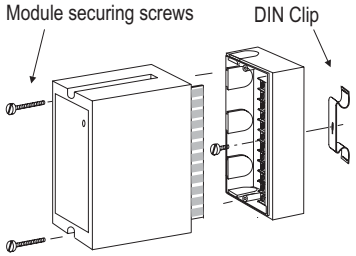
- ☐ The instrument should be installed, commissioned and operated only by suitably qualified and authorised personnel.
- ☐ The specifications for the instrument must not be exceeded. If the instrument is used in a manner not specified, the protection provided by the instrument may be compromised.
- ☐ This instrument is designed to be installed in an enclosure that provides adequate protection from hazardous voltages and electric shock.
- ☐ This instrument has no user servicable parts and should be returned to Stroud Instruments Ltd. if problems with the unit are experienced.

Ensure that signal and relay connections are isolated from hazardous voltages before installing, maintaining or gaining access for making user adjustments.

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

Location

- ☐ The instrument is designed for installation in a clean, dry environment, fixed to a flat surface, or clipped to a TS35 / TS35D DIN rail using clip supplied.
- ☐ Do not install near to switch gear, motor controllers or other sources of strong magnetic fields.



- ☐ Avoid exposure to direct sunlight and ensure the ambient temperature inside the enclosure that the unit is mounted in will not exceed our specification.

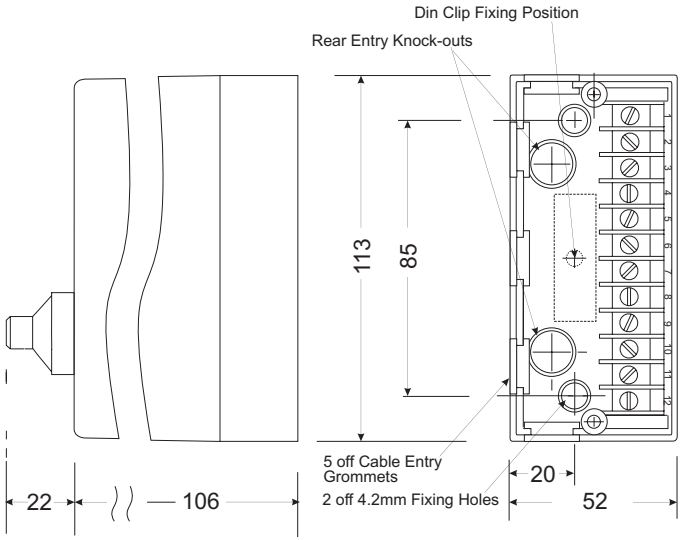
Removal / refitting of plug-in module

To gain access to fixing points, terminals and User adjustments:

(I) Remove the plug-in module securing screws.
(ii) Gently pull away the plug-in module from the base section.
(iii) To refit the module, align the module edge connectors with the socket in the base and carefully press home.

NB To avoid damage to the plug-in module, do not overtighten the securing screws.

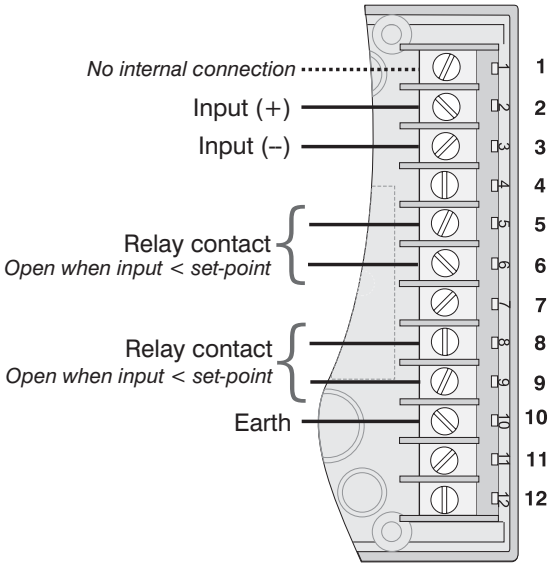
Dimensions and fixing positions



Wiring and connections

- ☐ Segregate signal wiring from other wiring.
- ☐ Use screened cable for signal wiring with the screen earthed at one end only.
- ☐ All connections should be made using ferrules.

Screw terminals are provided - wire capacity 2 x 1.5mm^2 (approx. 16 AWG).



User adjusments

Access to internal settings

see 'Safety information.

(i) Remove plug-in module as described in 'Removal / refitting of plug-in module'.
(ii) The plate with the terminal connections label can now be removed by easing apart the longer sides of the module to release the interlocking tongue and groove.
(iii) Slide out the printed board.

Note: *the printed circuit board will remain attached to the front panel control and care must be taken not to apply any strain to the interconnecting wiring.*

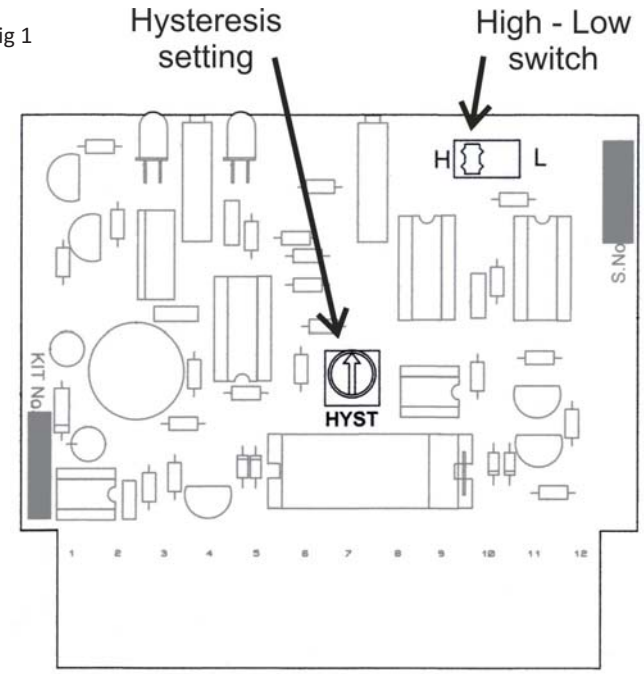
High - Low selection

The High - Low settings determine whether the output relay energises when the input signal falls below the trip point (LOW setting) or when it rises above the trip point (HIGH setting) - see Fig 1 for location.

Hysteresis adjustment

Hysteresis or dead-band prevents relay 'chatter' when the input signal varies by small amounts around the trip-point. Hysteresis is factory set at ± 1% of span. This may be adjusted, using the potentiometer provided, up to ± 5% of span - see Fig 1 for location.

Fig 1



Re-assembly

(i) Replace the printed circuit board ensuring that it is located in the slots under the LED indicator windows.

(ii) Replace the bottom plate by first engaging the side with the two tongues into the slots in the case and then press the plate home to engage the side with the single tongue.

(iii) Plug the reassembled module into the base section and secure with the two captive screws - t*o prevent damage to the case do not overtighten*.

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 ± 1% of span. May be user adjusted to a maximum of ± 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 ± 0.2% FSD
Repeatability error less than 0.2% span

Linearity
Set-point linearity error ≤ ± 1%

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

Temperature Coefficients
Zero: ± 0.02% span / °C, Span: ± 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^2

SIL®

LOOP-POWERED TRIP AMPLIFIER

Type B12-2W

Installation Guide

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