

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.



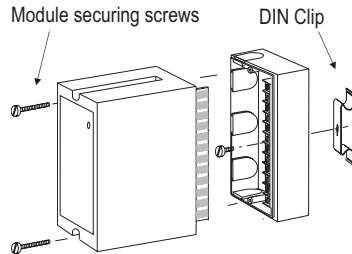
Ensure that signal and relay connections are isolated from hazardous voltages before installing, maintaining or gaining access for making user adjustments.

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.



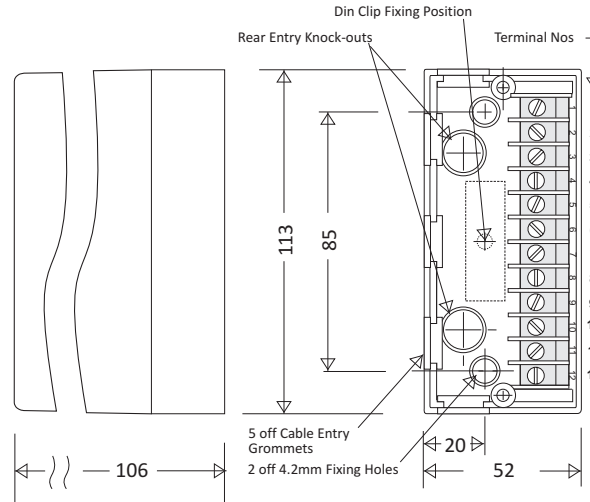
Removal / refitting of plug-in module

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

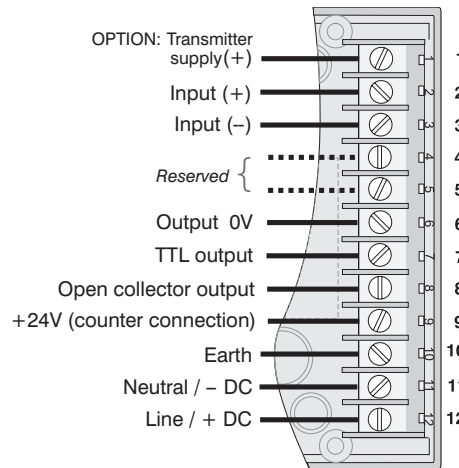


Wiring and connections

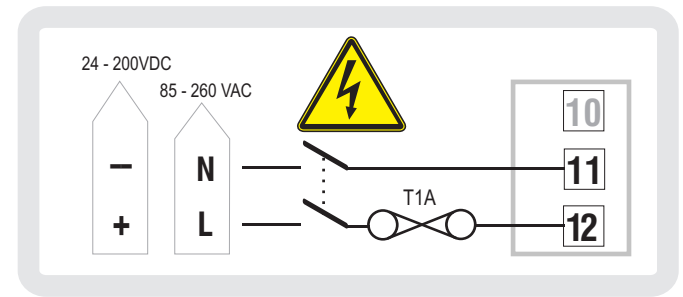
- Segregate signal wiring from other wiring.
- Use screened cable for signal wiring with the screen earthed at one end only.
- All connections should be made using ferrules. Screw terminals are provided - wire capacity $2 \times 1.5\text{mm}^2$ (approx. 16 AWG).
- This instrument is equipped with a universal power supply and may be operated from either of the following supply ranges:
DC supplies: 24 VDC to 200 VDC or AC supplies: 85 VAC to 260VAC
- Power supply wiring to the instrument should be protected by a 1A time-delay fuse and double pole switch - see below. The switch should be clearly marked as the isolating switch for the instrument.

Terminal assignments

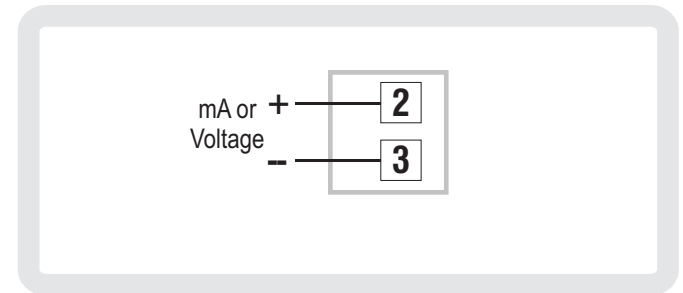
For further details see the following connection details.



Supply



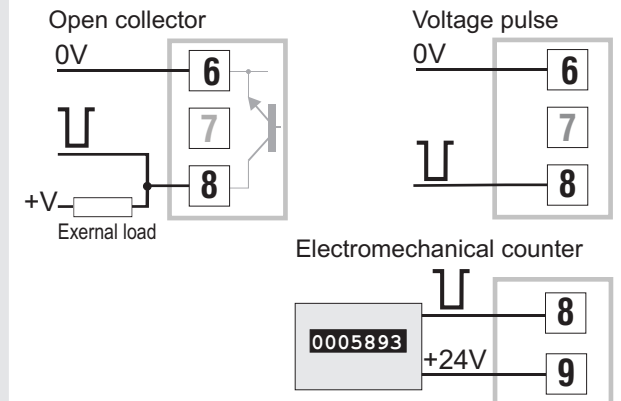
Input



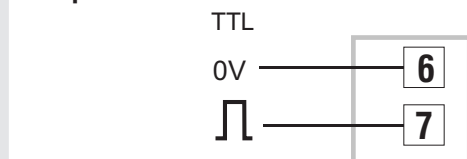
Outputs

Output 1

For the type fitted see data label on enclosure.



Output 2



Specifications

Inputs *(factory configured)*

Input impedances shown in brackets.

Current: 0-10 mA (100R), 0-20 mA (50R), 4-20 mA (62R)

Voltage: 0-1V, 0-5V, 0-10V (>200k) *(Other inputs available to order)*

Input overrange protection

Self resetting 100mA fuse

Outputs

Output 1: *(factory configured options)*

- a) Optically isolated open collector
- b) for electromechanical counter - 24V 60ms
(NB external counter impedance must be 80R)
- c) Voltage pulse (up to 24V)

Output 2: TTL *(always available as a second output)*

Output pulse rate

Calibrated as required between the following full scale limits:-

Minimum: 0.001 pulses /s, Maximum: 10000 pulses /s

Calibrated accuracy

Set at 100% to be within $\pm 0.1\%$ FSD

Linearity error

$\pm 0.1\%$ FSD.

Output pulse width

As standard, the pulse width is approximately 65ms. For pulse rates > 7.7Hz, the output waveform reverts to equal mark-space.

Zero (low-level) cut-off

0 — 10% *(set to 5% FSD unless otherwise requested).*

Temperature coefficients

Zero: $\pm 0.02\%$ span/ $^{\circ}\text{C}$, Span: $\pm 0.02\%$ span/ $^{\circ}\text{C}$

Environmental

Temperature range: operating -10 to +50 deg C
storage -20 to +70 deg C

Humidity: 0-95% RH non-condensing

Stability

Over 24 hours $\pm 0.05\%$ FSD; Over 1 year $\pm 0.1\%$ FSD

Isolation

Input and outputs are isolated from the power supply. The outputs are isolated from the input but not from each other. Maximum voltage 250V RMS or 400V DC. Resistance 50×10^6 ohms measured at 1000 V DC.

Mechanical

Weight: approx. 0.5kg

Enclosure: Fire retardant materials - PPO base, ABS cover

Screw terminal wire capacity: $2 \times 1.5\text{mm}^2$

SIL[®]

Analogue to Frequency Converter

Type B12-5

Installation Guide



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