

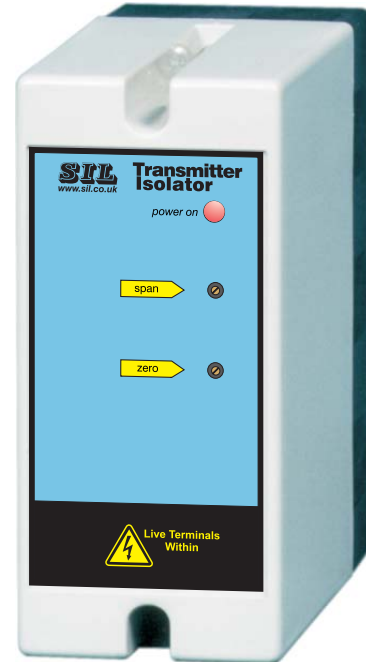


SIGNAL ISOLATOR

Field configurable with transmitter supply

TYPE B12-Txi

- Total isolation for two and three wire transmitters
- Field configurable input & output ranges
- 24 V transmitter / loop supply
- Signal conversion
- Current sink or source
- Universal 85-260 VAC powered
- Wall or DIN rail mounting

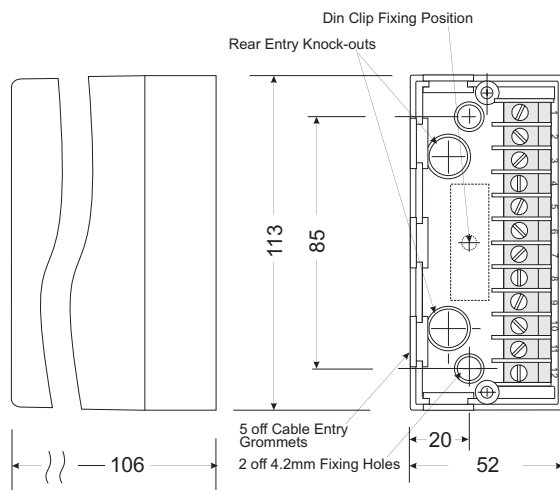


This instrument provides cost-effective signal booster or signal converter functions. The input, outputs and power supply are electrically isolated from each other making these units ideal for preventing or solving erratic measurements due to earth loops

TYPICAL APPLICATIONS

- Overcoming problems where a common mode voltage exists between the input and output.
- Solving current loop loading problems.
- Isolating and converting dangerous voltages to safe levels.
- Converting voltage signals to current or current signals to voltage.
- Interfacing field sensors, transducers and transmitters with indicators, PLCs, and other process control instrumentation.
- Powering and isolating field mounted sensors.

DIMENSIONS



Information required when ordering

Standard units

Standard units are supplied with the following settings:
Input: 4-20mA. Output 4-20mA

Order Code: B12-Txi

Units pre-configured

Order code: B12-Txi /9

followed by:-

- Input signal
- Output signal

SPECIFICATION

INPUTS (field programmable)

B12 Isolators are supplied with a facility that maintains an input signal current loop when the instrument is unplugged from its base section.

0-10 mA into 100 ohms
0-20 mA into 100 ohms
4-20 mA into 100 ohms
0-1V into greater than 200 k ohms
0-5V into greater than 200 k ohms
1-5V into greater than 200 k ohms

N.B. Inputs other than those listed can be catered for.

OUTPUTS (field programmable)

0-10 mA into 2000 ohms max.
0-20 mA into 1000 ohms max.
4-20 mA into 1000 ohms max.
0-10V into 500 ohms minimum
2-10V into 500 ohms minimum
Current sink 4-20mA @ 30 volts max.

N.B. Outputs other than those listed can be provided.

INPUT/OUTPUT SELECTION

Options are selected using internal switches and jumper links.

TRANSMITTER POWER SUPPLY

24 VDC with current limit of 24mA

ISOLATION

The input and output are isolated from each other and from the power supply.

Maximum Voltage 250V RMS or 400V DC
Resistance between input, output(s) or power supply $\geq 50 \times 10^6$ ohms measured at 1000V DC.

ACCURACY

$\pm 0.1\%$ FSD at 100% when factory calibrated

LINEARITY ERROR

$\leq \pm 0.1\%$ FSD

SUPPRESSION / ELEVATION ERROR

$\leq \pm 0.1\%$ FSD

OUTPUT RIPPLE

$\leq 0.2\%$ RMS of FSD

LOAD RESISTANCE EFFECT

$\leq 0.001\%$ of span / 100 ohm change

STABILITY

Over 24 hours $\pm 0.1\%$ FSD

Over 1 year $\pm 0.25\%$ FSD

INTERFERENCE REJECTION

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

SERIES MODE AC REJECTION RATIO

For 50/60Hz series mode signals with p.t.p. amplitude \leq input; rejection ratio greater than 40dB.

RESPONSE TIME

1 sec as standard.

COMMON MODE REJECTION

$<0.2\%$ error for 250V RMS 50/60 Hz, or 400V DC, common mode signals.

INPUT OVERRANGE PROTECTION

Voltage Inputs: 250 volts RMS or DC

Current Inputs: 50mA

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 $+70^\circ\text{C}$

POWER SUPPLY

Accepts 85 Vac to 265 Vac, 50/60Hz 3VA

Protected by a 250mA internal fusible resistor

WEIGHT

Approx. 0.5kg

SAFETY & EMC

Safety: EN61010-1 Immunity: EN50082-1

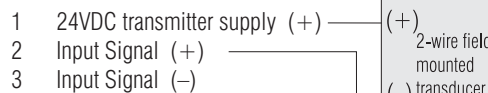
Emissions: EN50081-1 CE certified

ELECTRICAL CONNECTIONS



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

Inputs



Output Connections

Voltage or Current sink	Current
8 Output (+)	7 Output (+)
9 Output (-)	8 Output (-)

NB All output types are not available concurrently; one only available as programmed.

Supply

- 10 Earth
- 11 Neutral
- 12 Line



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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