



SIGNAL ISOLATOR

Dual Output
Type C16-3

Features

- Universal AC/DC powered (85 - 260 VAC, 24 - 200 VDC)
- Dual isolated outputs with span and zero adjustment
- Performs signal conditioner / converter functions
- Each output may be mA or voltage
- User configurable input ranges
- User configurable output ranges: V, mA sink or source
- Removable terminals
- Five year warranty



The C16-3 dual output signal isolator provides cost-effective current loop or voltage signal splitter and retransmitter solutions where a single measurement is required to be by two independent systems or devices. Other uses include where a transducer output is to be monitored by two devices with dissimilar input types, e.g. one 4-20mA - the other 0-10V. The input, outputs and power supply are electrically isolated from each other - 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.
- Enabling one measurement to be sent to two independent systems or devices.

Standard units

Standard units are supplied as follows:

Input = 4-20mA,

Output 1 = 4-20mA

Output 2 = 4-20mA

Order code: **C16-3**

Pre-configured units

- Specify type **C16-3 /9** followed by:-
- Input signal
- Output signal 1
- Output signal 2

SPECIFICATIONS

Input

Inputs are switch selectable
0-10 mA into 100 ohms
0-20 mA into 50 ohms
4-20 mA into 50 ohms
0-5v into greater than 200 k ohms
1-5v into greater than 200 k ohms
0-10V into greater than 200 k ohms
2-10V into greater than 200 k ohms
N.B. Inputs other than those listed can be provided on a factory set i.e. non-user adjustable basis.

Outputs

Each output is individually switch selectable
0-10 mA into 2000 ohms max.
0-20 mA into 1000 ohms max.
4-20 mA into 1000 ohms max.
0-5v into 500 ohms minimum
1-5v into 500 ohms minimum
0-10V into 500 ohms minimum
Current sink 4-20mA @ 50 volts max.
N.B. Outputs other than those listed can be provided on a factory set i.e. non-user adjustable basis.

Isolation

The input and outputs 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.

Calibrated Accuracy

Error $\leq \pm 0.2\%$ FSD at 100% when factory calibrated.
NB Error introduced by User output range changes, typically 1% but may be corrected by span control.

Linearity 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

Response Time

1 sec as standard.

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°C

Storage: -20°C to +70°C

Power Supply

85 - 260 VAC 50/60Hz; 24 - 200 VDC (3W nominal)

Weight

Approx. 0.5kg

Safety & EMC

Safety: EN61010-1

Immunity: EN50082-1

Emissions: EN50081-1

CE certified



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

STROUD INSTRUMENTS LTD.

36-40 Slad Road, Stroud, Glos. GL5 1QW, England

Telephone: (01453) 765433

Fax No: (01453) 764256

www.sil.co.uk