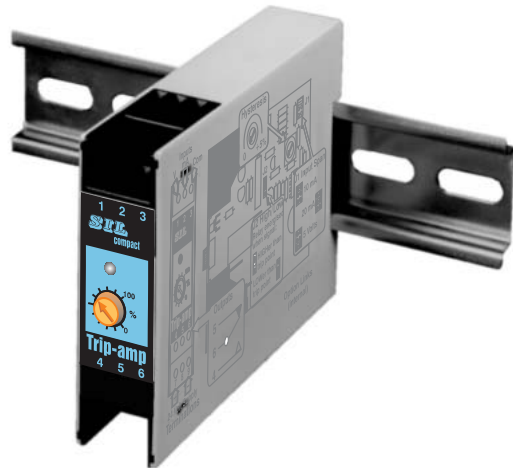




# TRIP AMPLIFIER

## COMPACT SERIES Type COM-2

- \* **Narrow profile - greater packing density**
- \* **Field programmable input ranges covering all common process signals**
- \* **24V DC powered**
- \* **Simple installation**
- \* **Dual colour LED indication of power on and trip state**



### FUNCTION

This instrument provides a voltage-free contact which changes state when the applied signal passes an adjustable reference point

### TYPICAL APPLICATIONS

- Detection of high or low alarm conditions
- Sensing broken signal lines e.g. in 4-20mA loops
- pH control by using output relay to control a dosing pump with the input signal from a pH monitor

### Ordering Information

- Quote 'Type COM-2'
- Input Signal
- High or Low type trip

## SPECIFICATION

### GENERAL NOTE

The standard unit has field programmable inputs and outputs which are detailed below. The Compact Trip-Amp can be manufactured for other ranges, please contact our sales department for details.

### INPUTS

Field programmable inputs which accept true or raised zero signals within the following ranges:

- 0 - 10 mA 100 ohms input impedance
- 0 - 20 mA 100 ohms input impedance
- 0 - 5 Volts into 300 k ohms input impedance

### OUTPUT

Relay with single pole change-over contact.  
Contact rating: 5A @ 250V AC resistive  
2.5A DC resistive

### HYSTERESIS

Adjustable 0 to +5%

### SET POINT

Set by single turn (270°) front panel mounted control.

### REPEATABILITY

The switching point will repeat within  $\pm 0.1\%$  of span

### ISOLATION

The trip amplifier has 3 port isolation of input signal, power supply and relay contacts.

### SUPPLY VOLTAGE REJECTION

Span change < 0.01 % span / % supply change

### TEMPERATURE RANGE

Operating:  $-10^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$   
Storage:  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

### TEMPERATURE COEFFICIENTS

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

### POWER SUPPLY

24 V DC -10% + 20% 1W (supplied as standard)  
(Optional 12 V DC -10% + 20% 1W available)  
This unit is protected by a thermal self-resetting fuse.  
Power on indication is provided by a LED indicator.

## MECHANICAL DETAILS

### WEIGHT

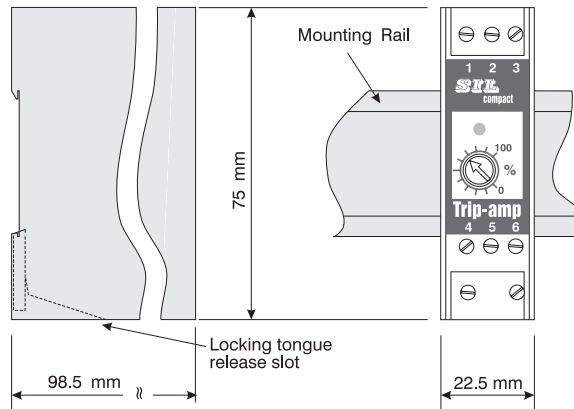
Approximately 110g

### ENCLOSURE

Protection: Enclosure - IP40  
Terminals - IP20

Material: Enclosure - Polycarbonate (30% GFR),  
Colour - light grey  
Terminal Housing Polycarbonate  
Colour - Black

Terminals: To suit wire with cross section 2.5mm<sup>2</sup>  
max.



### INSTALLATION

The unit is designed to be clipped to a mounting rail (BS5584:1978, DIN46277-3, EN50 022).

Screw terminations are provided on the front of the unit. The unit may be removed from the rail by inserting a small bladed screwdriver into the release slot under the unit. Applying gentle upward pressure to the handle of the screwdriver will release the locking tongue and enable the unit to be pushed up and away from the mounting rail.

### FIELD PROGRAMMABLE OPTIONS

Options are selected by internal programming links. The terminal housings, the front of the unit and the PCB form an integral assembly which may be unclipped and slid out of the enclosure for access to option links. To remove the assembly, separate the enclosure sides from the terminal housings to release the four snap fastenings. Then hold the sides further apart to lift the four slots in the sides clear of the lugs on the terminal housings. The PCB assembly can then be withdrawn.

(Hint! inserting a piece of thin card to hold-off one side enables the PCB assembly to be grasped whilst easing apart the other side).

**Set-point** All inputs are treated as true zero signals. The trip-point setting, therefore, must relate to the signal value for the required trip-point expressed as a percentage of a true zero based span (i.e. as given by the J1 link setting).

**example:** Input signal is 4-20mA; trip required at 12mA.  
Dial setting =  $12 / 20 \times 100\%$   
= 60%

**J1** selects the input signal SPAN value.

**J2** selects High / Low trip action. When set to 'HIGH' the relay is energised when the input signal is higher than the input signal.

### ELECTRICAL CONNECTIONS

#### Inputs

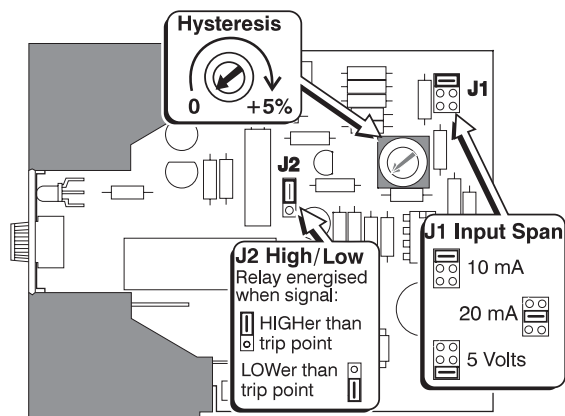
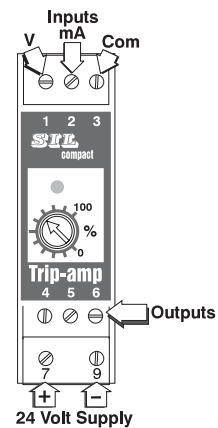
- 1 - Voltage input
- 2 - mA input
- 3 - Input common

#### Outputs

- 4 - Relay normally open
- 5 - Relay normally closed
- 6 - Relay common

#### Supply

- 7 - Supply positive (+)
- 8 - no connection
- 9 - Supply negative (-)



Continuous development may necessitate changes to these details without notice.

# SIL

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