

SC4002ALM-6

Universal Input Dual Setpoint Trip Amplifier



The SC4002ALM-6 trip-amplifier can accept a wide range of inputs including 4-20mA, thermocouple, RTD and voltage types. The unit can have up to two relay outputs and each can operate as a high or low trip. The unit also produces an isolated high level output.

The relay outputs are single pole change-over relays with mains voltage rating. Each trip can be configured so that the alarm condition can be above or below the setpoint. The relays can be energised or de-energised in the alarm condition, satisfying fail-safe and non-fail safe applications. In addition the alarm LED's can be selected to light when the relay is either on or off.

The input stage is isolated from the output and power supply and the inputs can be user-reconfigured for several different ranges if specified at point of order. In addition there is an optional isolated transmitter supply of 24Vdc, suitable for exciting most standard transmitters.

In addition numerous functions can be selected using the built-in menus including latching functions, delay on or delay off and an alarm delay on power up.

If you require any other special function please contact us on the number below.

The power supply is a wide ranging 16-30Vdc supply

- Wide Range of User Configurable Inputs
- Configurable Trip Action and Fail-safe Mode
- Isolated Re-Transmission
- Isolated Input Stage and Isolated Transmitter Supply
- LED display of Input, Setpoints and Configuration

Inputs

DC Current and Voltage

0-20mA, 4-20mA, 0-10mA into 15Ω / 30Ω

0-1V, 0-10V, 1-5V into 100kΩ / 1MΩ

Min and Max Full Scale Ranges:

DC Current 0 to 1mA 0 to 5A

DC Voltage 0 to 100mV 0 to 300V

Note: For input voltages greater than 60Vdc a Divider unit must be specified.

Thermocouples

Types E,J,K,N,R,S,T & B linearised or non-linearised

Ranges Wide range of inputs

Auto cold junction compensation.

Upscale or downscale t/c burnout options.

Resistance Thermometers

2, 3 or 4 wire PT100 or PT1000, linearised (or not)

Ranges Wide range of inputs (Up or downscale b/o)

Outputs

Mains Rated Relays

3A resistive at 240V ac

DC Current and Voltage

0-20mA, 4-20mA, 0-10mA into 750Ω

0-1V, 0-10V, 1-5V into a minimum 2kΩ

Technical Specifications

| Parameter | Min | Typ | Max | Comments |
|---------------------------------------|----------------|------|----------------------|--------------------------------------------|
| Supply Voltage | 16V | 24V | 30V | |
| Supply Current (mA) | 24 | | 110 | 24Vdc supply, max if both relays energised |
| Volt Drop (mA input) | | 3V | | At 20mA Input on 0-20mA range |
| Input Impedance (Volt) | | 1MΩ | | |
| Input Impedance (mA) | | 15Ω | | |
| Temp Coefficient | | | ±100ppm/°C | |
| Relay Response Time | | 10ms | | |
| Operating Ambient | 0°C | | 55°C | |
| Relative Humidity | 0% | | 90% | |
| Isolation Voltage ^{see note} | 1kV | | | |
| Surge Voltage | 2.5kV for 50μS | | Transient of 10kV/μS | |

Notes

Setpoints are configured on the LED display on the front panel.

H/H,H/L, L/H, LL, fail-safe, non-fail safe and hysteresis options are set using the display.

Figures based on 24Vdc supply @ 20°C ambient

Installation Data

| | |
|----------------------|---------------------------------|
| Mounting | DIN Rail TS35 |
| Orientation | Any |
| Connections | Screw Clamp with pressure plate |
| Conductor Size | 0.5-4.0mm |
| Insulation Stripping | 12mm |
| Weight | Approx 140g |

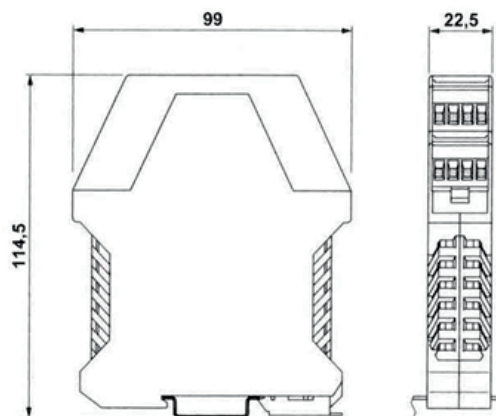
Ordering Information

Part No.: SC4002ALM-6

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ISO9001 CERTIFIED

SC4002ALM-6 2017



| Term. | Connection |
|-------|-----------------------------------------|
| 3 | Tx Supply +ve, RTD 4 th Wire |
| 5 | Input mA, V, T/C, RTD +ve |
| 4 | Input mA, V, T/C, RTD -ve |
| 6 | RTD 3 rd Wire |
| 10 | Output -ve |
| 12 | Output +ve |
| | 18 Relay 1 N/C |
| | 19 Relay 1 N/O |
| | 20 Relay 1 Common |
| 1 | Power Input -ve |
| 2 | Power Input +ve |
| | 15 Relay 2 N/C |
| | 16 Relay 2 N/O |
| | 17 Relay 2 Common |



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