

## SC-4002ALM-6

### UNIVERSAL INPUT DUAL SETPOINT TRIP AMPLIFIER



The SC-4002ALM-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 energized or de-energized 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 Sensata. The power supply is a wide ranging 16-30Vdc supply.

### Features

- 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

### 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

### 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:

<b>DC Current</b>	0 - 1mA	0 - 5A
<b>DC Voltage</b>	0 - 100mV	0 - 300V*

\*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)

## Technical

Parameter	Min	Typ	Max	Comments
<b>Supply Voltage</b>	16V	24V	30V	
<b>Supply Current (mA)</b>	24		110	24Vdc supply, max if both relays energized
<b>Volt Drop (mA input)</b>		3V		At 20mA Input on 0-20mA range
<b>Input Impedance (Volt)</b>		1MΩ		
<b>Input Impedance (mA)</b>		15Ω		
<b>Temp Coefficient</b>			±100ppm/°C	
<b>Relay Response Time</b>		10mS		
<b>Operating Ambient</b>	0°C		55°C	
<b>Relative Humidity</b>	0%		90%	
<b>Isolation Voltage*</b>	1kV			
<b>Surge Voltage</b>	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

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

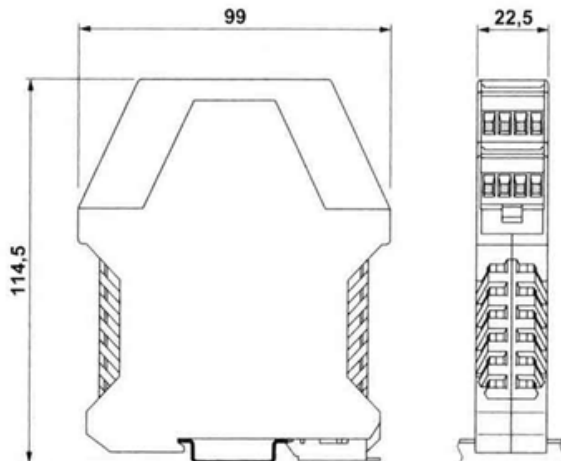
## Connection Details

3. Tx Supply +ve		RTD 4th Wire
5. Input mA	V, T/C	RTD +ve
4. Input mA	V, T/C	RTD -ve
6.		RTD 3rd 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		



## DIMENSIONS

All dimensions are in millimeters.





Please supply

**Part Number** SC-4002ALM-6

Made in the UK

Page 3

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://www.sensata.com) SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

### CONTACT US

+44 (0)1202 897969  
c3w\_sales@sensata.com  
Cynergy3 Components Ltd.  
7 Cobham Road,  
Ferndown Industrial Estate,  
Wimborne, Dorset,  
BH21 7PE, United Kingdom