4002ALM-6

Universal Input Dual Setpoint Trip Amplifier

- 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

CE

Description

The 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 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 IMO.

The power supply is a wide ranging 16-30VDC supply.

Inputs

The input types and ranges included below are our standard ones only. Contact IMO for others

4002ALM-6 for 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.

4002ALM-6 for Thermocouples

Types: E, J, K, N, R, S, T & B linearised or non-linearised
Ranges: WWide range of inputs
Auto cold junction compensation
Upscale or downscale t/c burnout options

4002ALM-6 for Resistane 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 & Voltage

0-20mA, 4-20mA, 0-10mA into 750Ω
0-1V, 0-10V, 1-5V into a minimum 2kΩ

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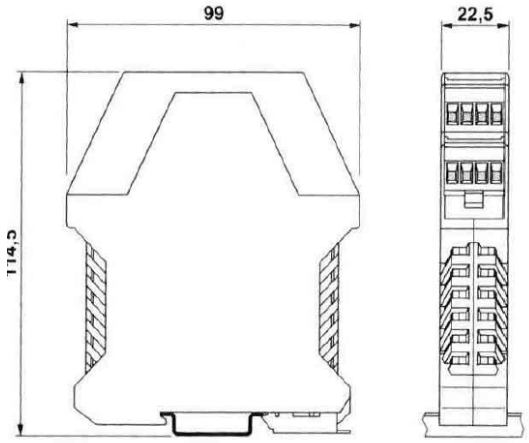
Technical Specifications

Parameter	Min	Typ	Max	Comments
Supply Voltage	16V	24V	30V	Options: 24VDC
Supply Current	24mA		110mA	24V Supply (Max if both relays energised)
Input Impedance (Volt)		1MΩ		
Input Impedance (mA)		15Ω		
Volt Drop (mA input)		3V		At 20mA input on 0-20mA range
Temp Coefficient			±100ppm/°C	
Relay Response Time		10ms		
Operating Ambient	0°C		55°C	
Relative Humidity	0%		90%	
Isolation Voltage	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, LI, fail-safe, non-fail-safe and hysteresis options are set using the display. The process input level is shown on the 4 digit LED 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

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	**18**	Relay 1 N/C
12	Output +ve	**19**	Relay 1 N/O
		20	Relay 1 Common
1	Power Input -ve	**15**	Relay 2 Common
2	Power Input +ve	**16**	Relay 2 N/C
		17	Relay 2 N/O

Ordering Information

Part Number	4002ALM-6
Input Type	eg. mA, Volt, T/C, RTD
Input Range	eg. 4-20, 0-10, 0-500 C
Trip Action 1	eg. RLY1 > SP1 > LED1
Trip Action 2	eg. RLY2 > SP2 > LED2
Power Supply	eg. 24VDC, 240VAC