



## 20-ALM

### LOOP POWERED TRIP AMPLIFIER

- High or Low Alarm Option
- Low Voltage Drop
- Setpoints Available on Front Panel as 0.4 to 2V Signal (4 to 20mA)
- LED Indication of Alarm
- Unique Low Cost Solution



#### Description

The 20-ALM is a 4-20mA direct current loop powered trip amplifier. The device derives its power from the input signal and therefore requires no external power supply.

The output of the 20-ALM is a single pole, normally open, solid state relay which can be configured to close either above or below the adjustable setpoint. The switched output can be connected to any potential within 1kV of the transmitter supply, while transients of 2.5kV can be withstood.

The relay is designed to switch AC or DC.

The trip amplifier is typically used to activate a warning or control system override when a sensor output goes above or below a pre-set limit. Alternatively, the unit can be used for simple on/off control, having a built in switching hysteresis.

The device is housed in an ultra-compact DIN rail mounted enclosure, only 18mm wide.

For further technical information and ordering details please see overleaf.

#### General Specifications

##### Recommended Operating Conditions

Input Current	4-20mA
Relay Contact Voltage	110Vac
Relay Current (max)	130mA @ 110Vac / 24Vdc
Output Resistance	24 Ω (on) 110Vac Type

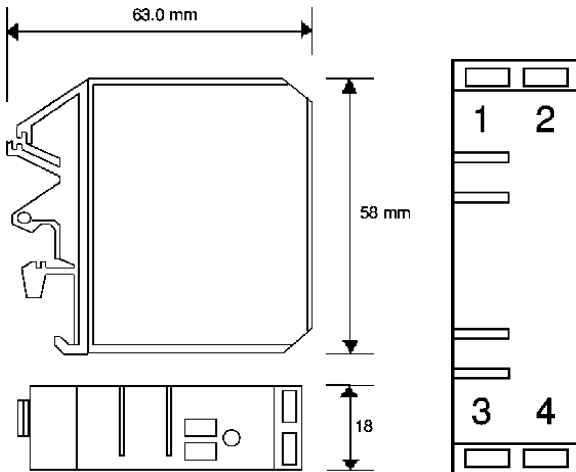
##### Environmental Conditions

Storage Temperature	-40 - 70 °C
Operating Ambient	0 - 55 °C
Relative Humidity	0 - 90 % RH



## Performance Characteristics

Parameter	Min	Typ	Max	Comments
Supply Voltage		Loop Power		
Supply Current	4mA		20mA	
Full Scale Volt Drop		3.4V	3.5V	At 20mA Input
Relay Current			130mA	Rated at 110Vac
Output Resistance 'ON'			24Ω	110Vac Relay Type
Setpoint Hysteresis		50μA		Other values available
Trip Point Accuracy			±0.25%	
Temp Coefficient		±100ppm/°C		
Trip Point Drift		±100ppm/°C		
Relay Time Response		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	Setpoint is adjusted by 20 turn potentiometers on the front panel. Setpoint can be checked by measuring the 0.4 to 2V (4 to 20mA) voltage on the front panel terminals. High or Low Alarm is selectable using internal link. Closed output contact is indicated by a red LED on the front panel.			



### Installation Data

<b>Mounting</b>	DIN Rail TS32/35
<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 45g

### Connection Details

1. Relay Output -ve
2. Relay Output +ve
3. Input Channel +ve
4. Input Channel -ve

### Ordering Information

Please supply:

<b>Part Number:</b>	20-ALM
<b>Trip Action 1:</b>	High / Low
<b>Relay Voltage Rating:</b>	110Vac / 24Vdc
<b>Further Notes:</b>	