

ADT131M Process Trip Amplifier

- Suitable for 0/4-20mA process inputs, where 24Vdc Loop Excitation is required for field transmitter/sensor
- Supply voltage: 24Vdc / 48Vdc / 115Vac / 230Vac
- Amelec standard 10 year warranty
- Suitable for SIL 1 & SIL 2 (IEC 61508-2) safety system loop applications, in 1oo1 architecture (HFT: 0)

APPLICATION

Any application where the process input loop requires 24Vdc excitation to function, and the loop is required to be monitored in order to raise an alarm if the input rises or falls through the trip set point.

TECHNICAL SPECIFICATION

FUNCTION

Low Trip: Relay De-energised Below the set point
High Trip: Relay De-energised Above the set point
(Either High or Low can be specified at time of orders)

INPUT

TB1(+)/2, Active Input: Two wire 4 – 20mA, 24Vdc @22mA
TB2 (+)/3, Passive input: 4 – 20mA
(Selected by way of Termination)

RELAY OUTPUT

1 x DPCO contacts, rated at 250VAC, 2A, 100VA resistive.
(Relay Energised healthy, De-energised in Trip condition)

CONTROLS

Zero / Span: 15-turn blindset potentiometers to set internal input reference (Factory set).
Trip 1: 15-turn blindset potentiometer to set trip point in the range of 0 to 110% calibrated input span.

INDICATOR

Power **ON**: LED, Amber.
Relay status: LED, **Red** (*Extinguished* in Trip state as std)

PERFORMANCE

Trip settability: better than $\pm 1\%$
Trip repeatability: better than $\pm 0.1\%$
Response time: Typically < 100mS as std
Deadband: Fixed *nom* 1% hysteresis as std
Power consumption: <3VA
Input open circuit response: Downscale as std

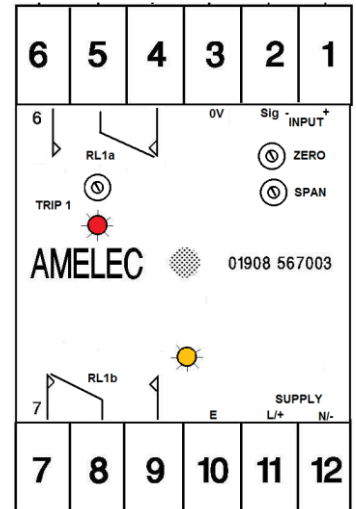
PROTECTION

Isolation 1000V RMS* Input/Contacts/Supply/Earth
*(500Vdc when 'K' option is specified)
Internal Fuse.
Failsafe Relay on loss of power
Input over range up to typically 300%.

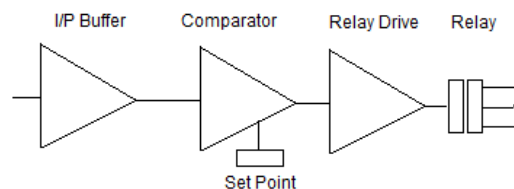
TERMINATION

24V +	1
Sig -	2
0V	3
RL1a-NC	4
RL1a-COM	5
RL1a-NO	6
RL1b-NC	7
RL1b-COM	8
RL1b-NO	9
Earth	10
Live / +	11
Neutral / -	12

FRONT VIEW



FUNCTION BLOCK DIAGRAM



ENVIRONMENTAL CONDITIONS

Storage temperature: -40 to +70 °C
Operating Ambient: -15 to +55 °C
Relative Humidity: 5 to 95% RH (Non-Condensing)
EMC: 2014/30/EU, EN 61326-1:2013 (Controlled EM)

MOUNTING / DIMENSIONS

Enclosure: 50w x 75h x 110d mm ('K' option encl. = 182d mm)
Mounting: Din rail / Surface (optional Panel Mount)
Weight < 300g

ADD ON / OPTIONS

DI: LCD or LED Display option for local monitoring
J: Input injection jack socket
P: Test point (Trip set point monitoring)
K: EMC - Generic Industrial / RFI Protection to EN61000-4-3
L: Latching Relay, with local or remote Reset option
X: Input open circuit response Upscale drive, or Non-standard Power supply range.