

ADT131MX Process Trip Amplifier

- Suitable for 0/4-20mA process inputs, where 24Vdc Loop Excitation is required for field transmitter/sensor
- Supply voltage opts: 24Vdc / 48Vdc / 115Vac / 230Vac
- Amelec standard 10 year warranty
- Suitable for SIL 1, SIL 2 or SIL 3 rated (IEC 61508-2) safety instrumented system (SIS) loop applications
- Non-Smart/ Non-uProcessor based, Type A instrument

APPLICATION

Any 3-wire process input loop application that 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 (3 Wire)

TB1(+V), 24Vdc @ up to 55mA
TB2 (Sig) 4 – 20mA
TB3 (0V),

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 condition)

PERFORMANCE

Trip settability: better than $\pm 1\%$
Trip repeatability: better than $\pm 0.1\%$
Response time: Typically < 100mS (0-100% step change)
Dead band: Nom 1% span hysteresis as std
Power consumption: <3VA
Input open circuit response: Downscale drive as std.

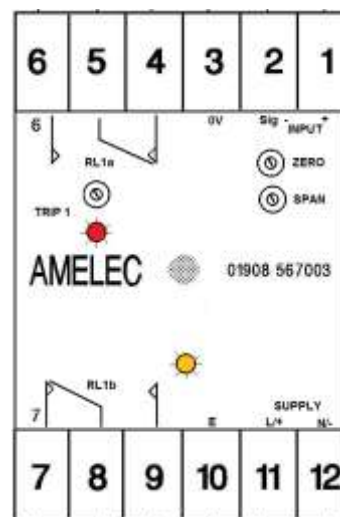
PROTECTION

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%

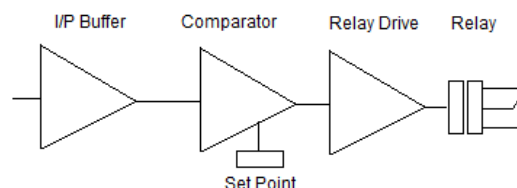
TERMINATION

24V +	1
Signal	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)
(‘K’ option to the highest Generic Industrial levels)

MOUNTING / DIMENSIONS

Enclosure: 50w x 75h x 110d mm
Mounting: Din Rail (TS35) / Surface (by Corner Fixing holes)
Weight < 300g

ADD ON / OPTIONS

DI: LCD display for local monitoring
J : Input injection jack socket
P: Test point (Trip set point monitoring)
K: RFI protection to EN 61000-4-3:2006/A2:2010
L: Latching Relay, with local or remote Reset option
X: Input open circuit response Upscale drive
X: Any other Non-standard customising requirement.