

ADT131DIK Process Trip Amplifier with LED Display

- Non-Smart / Non-uProcessor based, Type A instrument
- Supply voltages: 115Vac $\pm 20\%$, 24V or 48Vdc $\pm 10\%$
- Amelec standard 10 year warranty
- Suitable for SIL 1, SIL 2 & SIL 3 rated (IEC 61508-2) safety instrumented system (SIS) loop applications
- RFI Protection to EN 61000-4-3:2006/A2:2010

APPLICATION

Any application where a process input is required to be monitored and raise alarms if the input rises or falls through the set points.

TECHNICAL SPECIFICATION

FUNCTION

Trip = Input < Set point (Low trip)

Trip = Input > Set point (High Trip)

Any combination of High/Low trip action can be specified.

INPUT

DC current / voltage can be specified in the range of:

Current up to 100mA max (Passive port)

Voltage up to 150Vdc max (impedance 1M Ω)

Typical input: 4–20mA (Passive port, impedance 20 Ω)

RELAYS OUTPUTS

Set of D.P.C.O contacts for each trip point, rated at 250VAC, 2A, 100VA resistive. Relays De-energise on Trip & Fail Safe on loss of power as std

(Energise on Trip & non fail safe options also available)

CONTROLS

Zero / Span: 15 turn potentiometers to set internal input calibration reference (Factory set).

Trip 1: 15-turn potentiometer, to set trip point within the range of -0% to 110% calibrated input span

INDICATOR

Power ON: LED, Amber.

Relay status: LED, Red (Extinguished in Trip De-energised state)

Indication of the input signal on up to 4.5 digit Red LED Display on Front fascia, with Toggle switch to select/show each Trip Set Point within the calibrated display range.

Display scaled as either Percentage or any Engineering units within the range of: -9999 to +19999 to suit the applications.

PERFORMANCE

Trip settability: $\leq \pm 1\%$

Trip repeatability: $\leq \pm 0.1\%$

Restricted Trip Set Point adjustments available on request

Response time: Typically <100ms

Dead band: Typically 1% (other Hysteresis bands are available)

Supply consumption: <2VA

PROTECTION

Isolation: 500Vdc. Input/Contacts/Contacts/Supply/Earth

Internal Fuse.

Failsafe Relays on loss of power

Input over range: up to 300%

Input O/C response: Downscale drive as std.

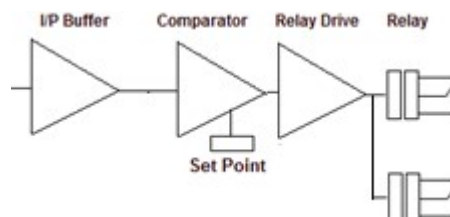
TERMINATION

I/P +	1
I/P -	2
Scn	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 (Generic Industrial)

RF IMMUNITY

20MHz-3GHz/5.25GHz ≤ 10 V/m,

80MHz-1GHz/5.6GHz ≤ 30 V/m, 889MHz/1.75GHz ≤ 40 V/m

MOUNTING / DIMENSION

Enclosure: 50w x 75h x 182d mm

Mounting: Din Rail (TS35) as std / Surface by seismic Keyhole plate or Front of Panel mounting options also available on request.

(Front panel Bezel Dims: 57w x 96h,

Surface mounting Keyhole plate Dims: 50w x 130h mm)

Weight: < 300g

ADD ON / OPTIONS

J: Input injection jack socket

T: Special **Time Response or Delay** into Trip

X: Open Circuit input response **Upscale drive**

M: 24Vdc @ 22mA two-wire input loop **Excitation**

Plug-in Terminal connectors & Non standard Power supply options also available on request