

## 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 rated (EN 61508-2) safety instrumented system (SIS) loop applications (1oo1/HFT:0)
- RFI Protection to EN 61000-4-3:2006/A2:2010

### APPLICATION

Any application where a process input is required to be monitored and raise an alarm if the input signal rises or falls through the trip set point.

### TECHNICAL SPECIFICATION

#### FUNCTION

Trip = Input < Set point (Low trip)

Trip = Input > Set point (High Trip)

Either High or 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 $\Omega$ )

Typical input: 4–20mA (Passive port, impedance 20 $\Omega$ )

#### RELAYS OUTPUTS

Set of D.P.C.O contacts, rated at 250VAC, 2A, 100VA resistive. Fail Safe Relays De-energise on Trip & 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 -10% to 110% calibrated input span, viewable on front Display.

#### 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 show the 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:  $\leq \pm 0.1\%$  span

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

Restricted Trip Set Point adjustments available on request

Response time: Typically <100mS

Deadband: *nom* 1% as std (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.

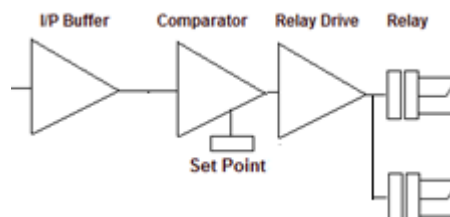
### TERMINATION

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  $\leq$  10V/m,

80MHz-1GHz/5.6GHz  $\leq$  30V/m, 889MHz/1.75GHz  $\leq$  40V/m

### MOUNTING / DIMENSIONS

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**

**X:** Plug-in Terminal connectors & Non standard Power supply options are also available on request