

ADT132DI Process Trip Amplifier with LED Display

- Non-Smart / Non-uProcessor based, Type A instrument
- Supply Voltage: 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 available

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

Low Trip = Input \leq Set Point
 High Trip = Input \geq Set Point
 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 S.P.C.O contacts for each trip point, rated at 250VAC, 3A, 100VA resistive. Relays De-energise on Trip & Fail Safe on loss of power as standard (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 & 2: 15-turn potentiometers, to set each trip point within the range of -10% 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 0-100.0 (%) or in any Engineering units within the range of: -9999 to +19999 to suit the applications.

PERFORMANCE

Trip settability: $< \pm 0.1\%$
 Trip repeatability: $< \pm 0.1\%$
 Restricted Trip Set Point adjustments available on request
 Response time: Typically $< 100\text{mS}$ (0-100% input step change)
 Dead band: Typically 1%, (other Hysteresis bands are available)
 Supply consumption: $< 2\text{VA}$

PROTECTION

Isolation: 1000V RMS* Input/Contacts/Contacts/Supply/Earth
 *(500Vdc when 'K' option RFI Protection is specified)
 Internal Fuse.
 Failsafe Relays on loss of power as std.
 Input over range: up to 300%
 Input O/C response: Downscale drive as std.

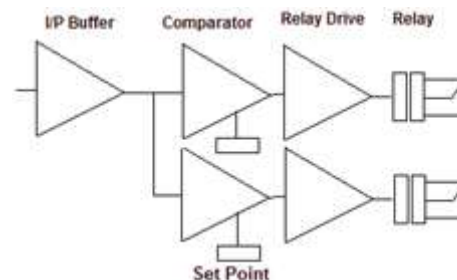
TERMINATION

I/P +	1
I/P -	2
Scn	3
RL1-NC	4
RL1-COM	5
RL1-NO	6
RL2-NC	7
RL2-COM	8
RL2-NO	9
Earth	10
Supply / +	11
Supply / -	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 145d mm ('K' option = 182d mm)
 Mounting: Din Rail (TS35) as std / Surface by seismic
 Keyhole plate or Front of Panel mounting options also available on request.
 (Surface mounting plate Dims: 50w x 130h mm)
 Weight: $< 300\text{g}$

ADD ON / OPTIONS

K: EMC/EMI/RFI protection to highest Generic industrial level
T: Special **Time Response or Delays** 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

'K' Option RF IMMUNITY TO:

20MHz-3GHz/5.25GHz $\leq 10\text{V/m}$,
 80MHz-1GHz/5.6GHz $\leq 30\text{V/m}$, 889MHz/1.75GHz $\leq 40\text{V/m}$