

ADT139DI Process Deviation Trip Amplifier with Display

- Suitable for SIL 1, SIL 2 or SIL 3 rated (EN 61508-2) Safety instrumented system (SIS) loop applications
- Non-Smart / Non-uProcessor, Type A instrument
- Supply voltage options: 115Vac $\pm 20\%$
240Vac $\pm 20\%$
24Vdc $\pm 10\%$
48Vdc $\pm 10\%$
- RFI Protection to EN 61000-4-3:2006/A2:2010 available ('K' option)
- AMELEC Standard 10 Year Warranty

Technical Specifications

Input

Any current or voltage drive that can be terminated in a PI network to produce a 400mV span. Inputs share a common 0V reference, so should be isolated from each other at source.

Output

Each Trip Relay output is a set of S.P.C.O contacts, rated at 250VAC, 3A, 100VA resistive.

TRIP 1 = A>B, TRIP 2 = B>A, with 1-50% span Deviation set points adjustable via 15-turn blindset potentiometers, Relay status indicators: Red LED's ON Energised / healthy, Extinguished in Trip / De-energised state

Digital Display

Continuous indication of the differential between input signals signal on the front fascia 3½ digit Liquid Crystal Display.

(Up to 4½ digit Red LED Display option also available)

Front Fascia Read buttons or Toggle switch shows the trip set points within the calibrated display range, scaled as either 0-100.0 % or in Engineering units to suit the application.

Performance

Isolation: 1000V RMS* Input(s)/Contacts/Contacts/Supply/Earth *(500Vdc if RFI protection option 'K' is specified)

Trip settability: $\pm 0.1\%$

Trip repeatability: $\pm 0.1\%$

Trip deadband: 1% std, (Adjustable 1-20% span available)

Response time: <100ms

(Fixed or Adjustable time Delay into Trip 'T' option available)

Fail Safe Relays: De-energise on Trip & Loss of Power supply)

Input O/C Response: Downscale drive as std

'K' option RF Immunity: 20MHz-3GHz/5.25GHz $\leq 10\text{V/m}$,
(80MHz-1GHz/5.6GHz $\leq 30\text{V/m}$, 889MHz/1.75GHz $\leq 40\text{V/m}$)

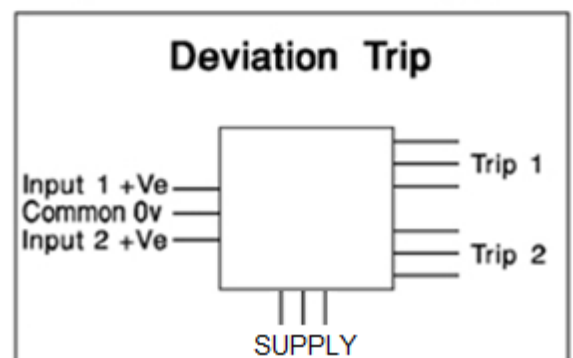
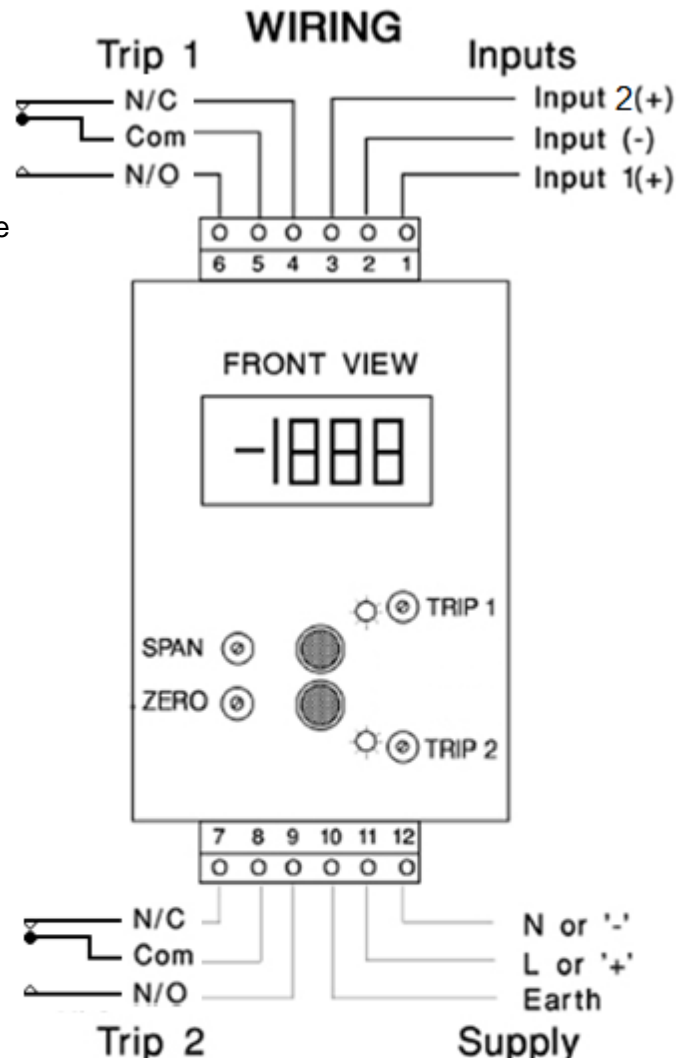
Environmental Conditions

Storage Temperature: -40 to 70°C

Operating Ambient: -15 to 55°C

Relative Humidity: 5 – 95% RH (Non-Condensing)

EMC: 2014/30/EU, EN 61326-1:2013 (Controlled EM)



Mounting/Dimensions

Enclosure: 50w x 75h x 145d mm

Din Rail (TS35) or Surface Seismic Keyhole plate or Front of Panel mounting options may be specified. ('K' opt enclosure = 182d mm, Rear Keyhole plate Dims= 50w x 130h mm)

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