

ADT141DI (BI)(V)(X)(K) Resistance/Slidewire Trip Amplifier

- Suitable for SIL 1 & SIL 2 rated (EN 61508-2) Safety Instrumented System (SIS) loop applications, as 1oo1 architecture (HFT:0).
- Non-Smart / Non-uProcessor based instrument (Type A)
- Suitable for 2, 3 or 4 wire resistance inputs
- 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

Resistance/ Slidewire/ Thermistor/ Potentiometer input variation ranges up to 12K ohms with a min Span of 10 ohms as std. If the Input is from a slidewire device the end to end resistance should be greater than 100 Ω . Version available for conductive plastic potentiometers & higher input resistance ranges for 3-wire pots or other Special applications ('X' option) (Four-wire input option is also available on request – '4W' option).

Trip Relay Output

A set of D.P.C.O relay contacts, rated 250VAC, 3A,100VA (resistive). Fail Safe Relay: De-energises on Trip & Loss of Power as standard. Red LED indication of each Relay status: On Energised/ healthy, Extinguished in Trip/De-energised state as std. (Red/Green BI-colour indicator LED optional)

Display of the Input on a 3½ digit LCD as standard, Calibration range: -1999 to +1999, scaled 0-100.0 (%) or in Engineering units to suit the application.

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

Front fascia Read button or Toggle switch shows the Trip Set point within the calibrated scale.

Performance

Isolation: 1000V RMS*Input/Contacts/Supply/Earth

*(500Vdc when RFI option 'K' is specified)

Deadband: 1% std (variable 1-20% span optional 'V')

Trip settability: $\pm 0.1\%$

Trip repeatability: $\pm 0.1\%$

Response time: <400mS (0-100% input step change)

Input O/C response: Upscale drive as standard

(O/C Downscale drive option available as Special request, 'X' option)

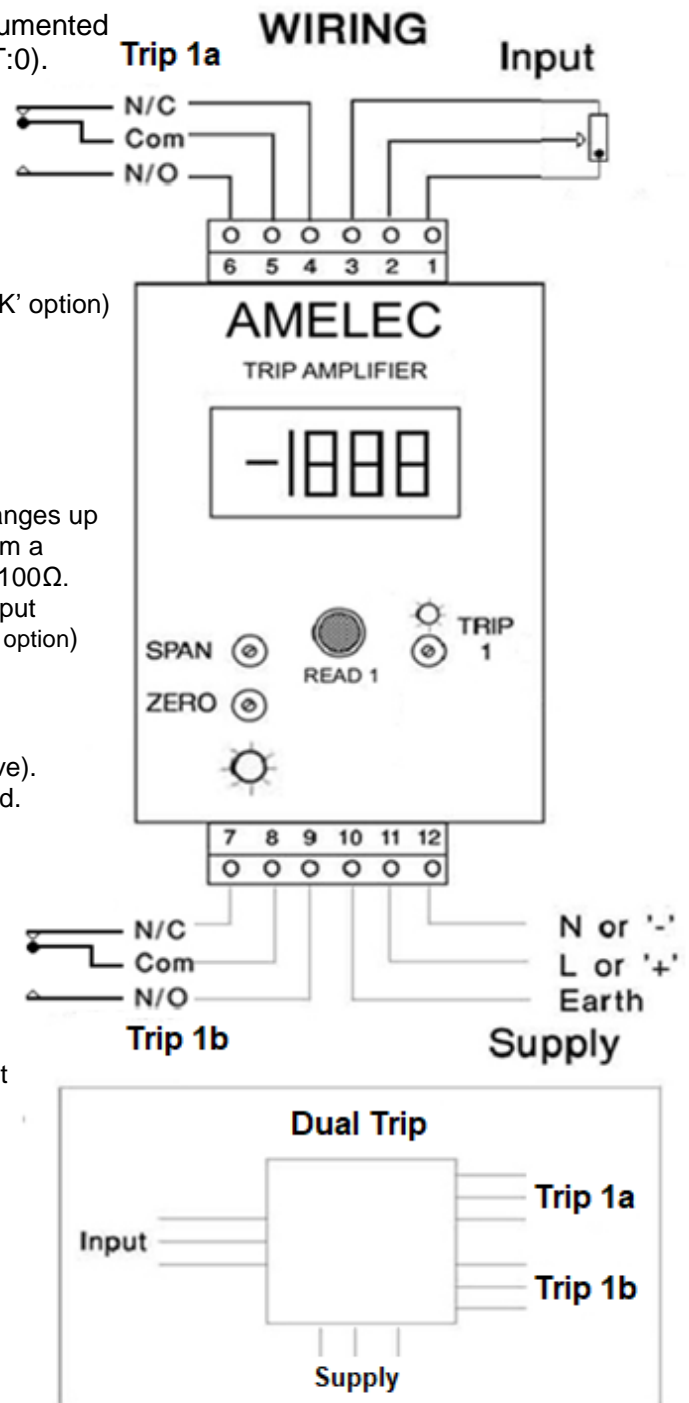
'K' option RF Immunity: 20MHz-3GHz $\leq 10\text{V/m}$

(80MHz-1GHz/5.6GHz $\leq 30\text{V/m}$, 889MHz/1.75GHz $\leq 40\text{V/m}$)

Mounting/Dimensions

Din Rail (TS35) standard, Surface by seismic Keyhole plate or Front of Panel mounting options also available on request. Fixed screw terminals as standard, Plug-in terminals optional.

Enclosure: 50w x 75h x 145d mm ('K' option enclosure = 182d mm)



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)

('K' option to the highest Generic Industrial levels)

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