

## ADT181DI (BI)(M)(V)(X)(K)(T) Frequency Trip Amplifier with Display

- Suitable for SIL 1 & SIL 2 rated safety instrumented system (SIS) loop applications (EN 61508-2), as 1oo1 architecture (HFT:0)
- Supply voltage options: 115Vac or 230Vac  $\pm 20\%$   
24Vdc or 48Vdc  $\pm 10\%$
- Non-Smart/Non-uProcessor based, Type A instrument
- RFI Protection to EN 61000-4-3:2006/A2:2010 available ('K' option)  
AMELEC Standard 10 year warranty

### Technical Specifications

#### Input

Any regular pulse or repetitive waveform, including: Namur, Sine, Square or Sawtooth.

Minimum 25Hz calibrated span (maximum 40KHz input)

Input level may be anywhere between 50mV-200V pk-pk

Voltage pulses up to 200V or Volt free contacts (wetted with 10V @3mA)

Current from 100uA

AC/NPN/PNP/TTL/OPEN COLLECTOR/RELAY inputs may be specified

Up to 24Vdc @22mA I/P loop/sensor Excitation available ('M' option)

#### Outputs

Trip output has a set of D.P.C.O. contacts, rated at 250VAC, 2A, 100VA (resistive). Red LED indication of Relay status;

**ON** Energised/ **Extinguished** in Trip De-energised state as standard.

(Red/Green 'BI'-colour LED indicators optional)

Display: Input Frequency on a 3½ digit Liquid Crystal Display (LCD) as standard, with front fascia Read button to show the trip set point within the calibrated scale. Calibration Range: -1999 to +1999

(Up to 4½ digit **Red LED Display** option is available on request, with Front fascia Toggle switch to show the trip set point within the scale)

#### Isolation

1000V RMS\* Input/Contacts/Contacts/Supply/Earth

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

#### Performance

Deadband: 1% standard (variable 1-20% span 'V' option available)

Trip settability:  $\pm 0.1\%$

Trip repeatability:  $\pm 0.1\%$

Response time: <200mS (10-90% span step change)

(Fixed or Variable Time delay into Trip available, 'T' option)

Input O/C response: Downscale drive (Upscale drive 'X' option available)

Fail Safe: Relay De-energises on Trip & for Loss of Power as standard

#### Environmental Conditions

Storage Temperature: -40 to +70°C

Operating Ambient: -15 to +55°C

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

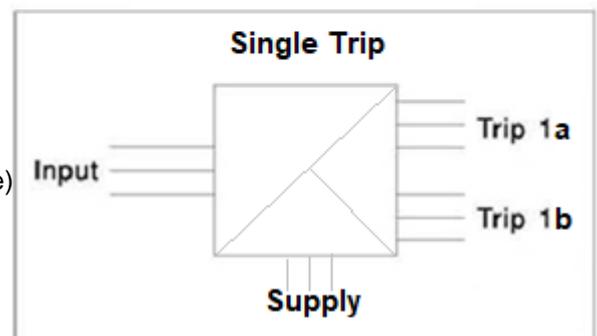
EMC: 2014/30/EU, EN 61326-1:2013 (Controlled EM)

('K' option to highest Generic Industrial levels)

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

#### Customer Termination

Fixed screw terminals as standard (Plug-in terminals optional)



#### Mounting/Dimensions

Enclosure: 50w x 75h x 145d mm ('K' option = 182d mm)  
Din Rail (TS35) Mounting as standard.

Surface/Seismic Keyhole mounting plate (50w x 130h mm) and Front of Panel mounting options also available.

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