

## ADT182DI (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

Each Trip output has a set of changeover contacts, rated at 250VAC, 2A, 100VA (resistive). Red LED indication of each Relay status;  
ON Energised/ Extinguish 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 buttons to show the trip set points 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 points within the scale)

#### Isolation

1000V RMS\* Input/Contacts/Contacts/Supply/Earth  
\*(500Vdc when 'K' option RFI protection is specified)

#### Performance

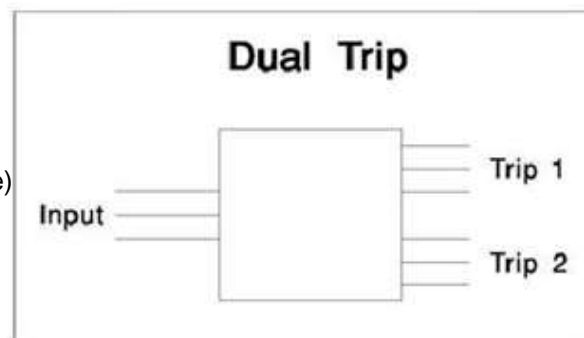
Deadband: 1% standard (variable 1-20% span 'V' option available)  
Trip settability:  $\pm 0.1\%$   
Trip repeatability:  $\pm 0.1\%$   
Response time: <100mS  
(Fixed or Variable Time delay into Trip available, 'T' option)  
Input O/C response: Downscale drive (Upscale drive 'X' option available)  
Fail Safe: Relays De-energise 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  $\leq 10\text{V/m}$ ,  
(80MHz-1GHz/5.6GHz  $\leq 30\text{V/m}$ , 889MHz/1.75GHz  $\leq 40\text{V/m}$ ).

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

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