

## ADT181 Frequency Trip Amplifier with single set point

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

### Technical Specifications

#### Input

Any regular pulse or repetitive waveform, including: Namur, Sine, Square or Sawtooth. Minimum 25Hz calibrated span (30KHz input max) 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 available)

#### Relay Output

DPCO contacts, rated at 250VAC, 2A, 100VA resistive, Relay Energised healthy, De-energised in Trip condition as standard. Either high or low Trip function may be specified; Low Trip: Relay De-energised Below the set point High Trip: Relay De-energised Above the set point

#### Controls

Zero / Span: 15 turn blindset potentiometers to set internal input reference (Factory set). Trip 1: 15-turn blindset potentiometer to set trip point Cut-off: 15-turn blindset potentiometer to set adjustable input threshold/signal detection level, if required or when specified.

#### Indicators

Power ON: LED, Amber. Relay Status: LED, Red (*Extinguished* in Trip state as standard)

#### Isolation

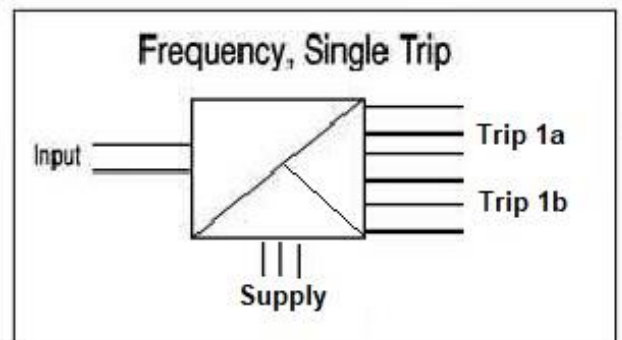
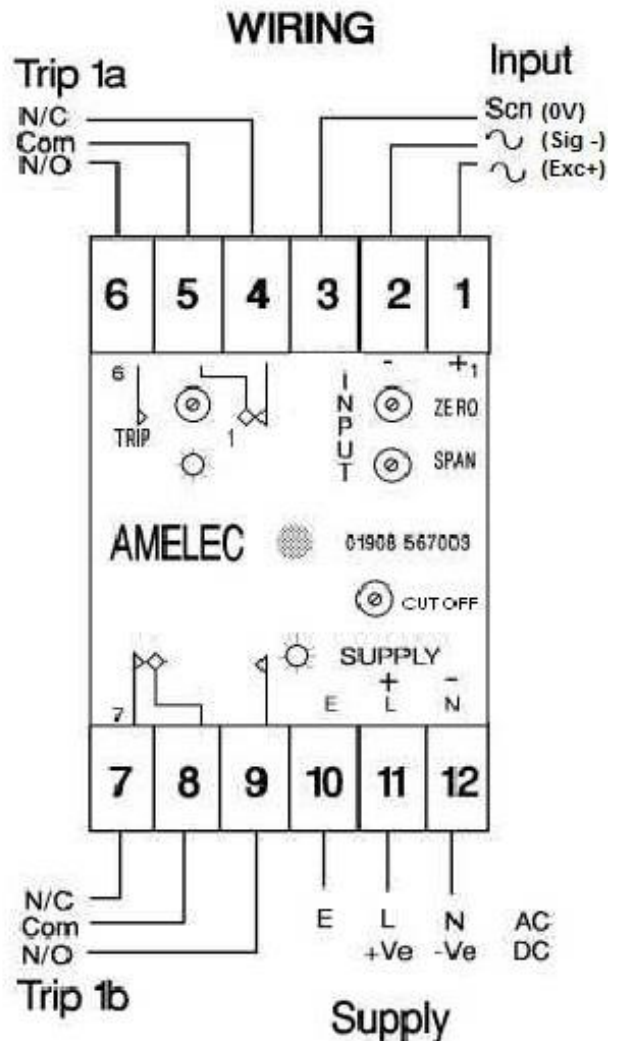
1000V RMS\* Input/Contacts/Supply/Earth  
\*(500Vdc when option 'K' RFI protection is specified)

#### Performance

Trip settability:  $\pm 1\%$   
Trip repeatability:  $\pm 0.1\%$   
Response time: <400mS (0-100% input step change)  
Deadband: 1% span Hysteresis as standard.  
(Variable hysteresis 0.5%-20% available - 'V' option)

#### 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)



#### Dimensions

50w x 75h x 110d mm  
(\*'DI' option enclosure = 145d mm, 'K' option = 182d mm)

#### Mounting

Din Rail (TS35) **or** Surface by corner fixing holes as standard.

Tel: 01908-567003 Email: [sales@amelec-uk.com](mailto:sales@amelec-uk.com) Visit: [www.amelec-uk.com](http://www.amelec-uk.com) Fax: 01908-566735

AMELEC Instruments, Cochran Close, Crownhill, Milton Keynes, MK8 0AJ