

AC Frequency to Current Transmitter/Display FTI-1/FTI-1D

Function: Frequency to Current converter which will convert AC Frequencies in the range of 10 Hz to 100 KHz into proportional, linear and highly accurate dc current output signals. The input signal is filtered, shaped and optically coupled to the processing section. The processor's clock is synchronised with the measured frequency pulse stream assuring overall accuracy of both the output and the instruments thermal stability performance. FTI-1 is also equipped with two set-points/relay outputs which can be configured for dead-band measurement, over-speed alarms, etc. The FTI-1D features a 5 digit, seven segment LED display for local indication of the input in the form of RPM, frequency, velocity, etc. The FTI-1 is housed in a polycarbonate plastic enclosure suitable for mounting on DIN rail.

SPECIFICATIONS

Please note that the following are typical standard ranges. We will manufacture instruments to cater for other ranges too, within certain limitations. Please contact our internal sales department for further clarification.

INPUT:

AC Frequency

Between 0 and 100KHz
Minimum span 10Hz

Signal Level

(factory calibrated)
Minimum level: 250 mV
Maximum level: 380 Volt AC

OUTPUT:

DC Current

Between 0 and 20mA
Minimum Span 1mA
Maximum Span 20mA

Over Range Limit

For over range frequency input, output limited to 20.5mA max

Maximum Loop Load

675 ohms

NB If supply – 10% then maximum loop load reduced to 625 ohms

Isolation

2500 Volts DC or peak AC

ALARM RELAYS:

Set-Points

2 x factory calibrated

Outputs

Reed Relays

Contact Ratings

Voltage 200V maximum
Current 0.5A maximum
10 Watts maximum

Trip Delay Time

300mS maximum

SUPPLY:

Power Supply Voltage

User Selectable
115 Volt AC $\pm 10\%$ 50/60 Hz
230 Volt AC $\pm 10\%$ 50/60 Hz

FTI-1D

DISPLAY:

Local Readout

5 digit green LED display

Readout Ranges

5Hz to 99.999KHz

NB

Below 5Hz display shows 0.00
Above 99,999.5KHz display shows 99999 blinking

GENERAL:

Accuracy (Including Linearity)

Better than $\pm 0.05\%$ of span

Temperature Coefficient

$\pm 0.075\%$ of span / $\square 10^\circ\text{C}$

Response Time

140mS typical
300mS maximum

Operating Temperature Range

-10 to $+60^\circ\text{C}$

Storage Temperature Range

-30 to $+85^\circ\text{C}$

Operating/Storage Humidity Range

5 to 95% RH non-condensing

Mounting

Standard 35mm DIN rail

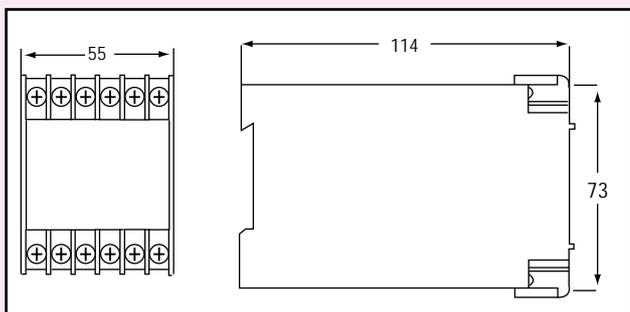
Protection Level

Box to IP40 DIN40050
Terminals to IP20 DIN40050

Weight

450 gms

MECHANICAL DETAILS



TERMINATION DETAILS

Terminal

- 1 Output -ve
- 2 Output +ve
- 3 Unused
- 4 Set-point 2 Contact
- 5 Set-points 1 & 2 Common
- 6 Set-point 1 Contact

Terminal

- 7 Input +ve
- 8 Input 0
- 9 Unused
- 10 230 Volt AC 50/60Hz
- 11 115 Volt AC 50/60Hz
- 12 Neutral

ORDERING DETAILS

- (a) Give identification code, i.e. FTI-1D
- (b) Give details of input frequency range, i.e. 40 to 60Hz
- (c) Give details of output required, i.e. 4 to 20mA
- (d) Specify Set-Point 1 level, i.e. 45Hz

- (e) Specify if contact to close above or below set-point
- (f) Specify Set-Point 2 level, i.e. 55Hz
- (g) Specify if contact to close above or below set-point