T1-D/2

Dual channel vibration monitoring unit

OPERATION

The T1-D/2 equipment is designed to meet needs to monitor vibrations on rotating machinery working under continuous or heavy duty conditions. Hence it also allows correct scheduling of maintenance thereby avoiding serious failures. Model T1-D/2 can control two measuring points with optimization to cater for overall dimensions, installation methods, and to costs of an instrumentation for protecting any machine whatsover provided with 2 support members (fans, pumps, motors, compressors, turbines, centrifuges, etc.).

MAIN FEATURES

Model T1.D/2 consists of one signal processing module handling the signals generated by two transducers installed on the machine supports. The easy use and great flexibility in presetting the measuring parameters represent the main characteristic of the system.

The processing module, which can be fitted on a DIN guide EN 50022 inside a control panel, features a series of settings which can be made by the customer for selecting optimum measuring parameters, delay time for the alarms, scale range, etc. The module is implemented with SMD technology to compact size and improve reliability.

TECHNICAL FEATURES

Composition

- One processing module fitted with special card holder for mounting on DIN guide, complete with terminal board (size 45 x 115 x 220 mm)
- two velocity transducers

Standard transducers (choose from:)

- T1-40 (10 to 1000 Hz in all directions)
- T1-40V / -38V (10 to 2000 Hz vertical)
- T1-40BF / -38BF (30 to 2000 Hz horizontal)
- T1-38 (15 to 2000 Hz in all directions)

Power supplies

- 110/220 VAC - 50/60 Hz - 7.5 VA
- 24 VDC - 8 W

External connections

- through terminal board (see enclosed wiring diagram)

Analog outputs (measurements)

- two analog current or voltage outputs for channel A and channel B

Digital outputs

- two SPDT contacts for 1st alarm level regarding channel A and channel B
- two SPDT contacts for 2nd alarm level regarding channel A and channel B
- one SPDT contact for self-diagnositics common to channel A and channel B

Contact characteristics

- max voltage 300 Vdc, 250 VAC
- max current 5A

INTEGRATED EQUIPMENT

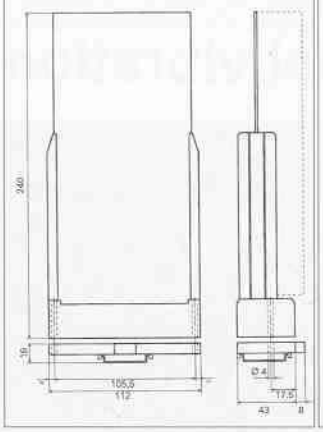
Settings which can be made by the customer

- Supply voltage 110 or 220 VAC
- Selection of measuring parameter (displacement or velocity)
- Measuring range (one of 3 ranges to be specified when ordering)
- Time delay for alarms (1 s or 10 s)
- Latching or non latching alarms

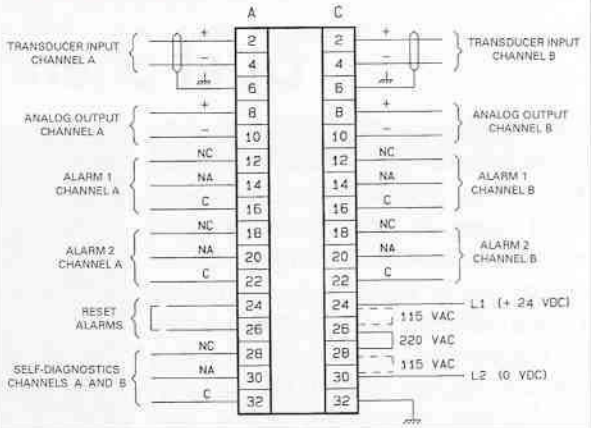
Settings which can be specified when placing the order

- AC or DC power supply
- Type of output signals
- Measuring range
- Alarm 1 relays (channel A and B), normally energized or de- energized
- Alarm 2 relays (channel A and B), normally energized or de- energized
- Or voting alarm 1 relays for channels A and B
- Or voting alarm 2 relays for channels A and B
- Temperature range: -10° C to +65° C

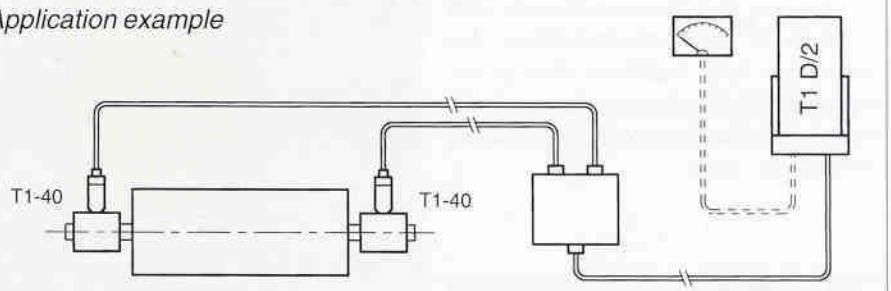
OVERALL DIMENSIONS



TERMINAL BOARD



Application example



ORDERING DATA

A B C D E F G H

T1- D/2 / □ / □ / □ / □ / □ / □ / □ / □

A : Power supply

0	110/220 V - 50/60 Hz
1	24 VDC

B : Output signals

0	4 to 20 mA
1	0 to 10 V
2	0 to 20 mA
3	special to be defined

C : Entity measured

0	RMS velocity
1	displacement p-p

D : Measuring range

0	0 to 10 mm/s; 0 to 20 mm/s; 0 to 50 mm/s
1	0 to 100 µm; 0 to 200 µm; 0 to 500 µm
2	special to be defined

E : Alarm 1 relays

0	normally de-energized
1	normally energized

F : Alarm 2 relays

0	normally de-energized
1	normally energized

G : Alarm 1 relays

0	independent for channels A and B
1	or voting for channels A and B

H : Alarm 2 relays

0	independent for channels A and B
1	or voting for channels A and B

Example of an order :

T1-D/2 / 1 / 2 / 0 / 0 / 0 / 0 / 1 / 1

H : or voting relays, alarm 2, channels A and B;
G : or voting relays, alarm 1, channels A and B;
F : alarm 2 relays, normally de-energized;
E : alarm 1 relays, normally de-enerigzed;
D : measuring range 0 to 10, 0 to 20, 0 to 50 mm/s;
C : RMS velocity measuring;
B : output signals 0 to 20 mA;
A : power supply 24 VDC;

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