

single-channel or dual-channel vibration monitor

FUNCTION

T1-EA equipment monitors continuously the vibrations of rotating machines supplying analogical output and alarm contacts when a preset limit has been exceeded.

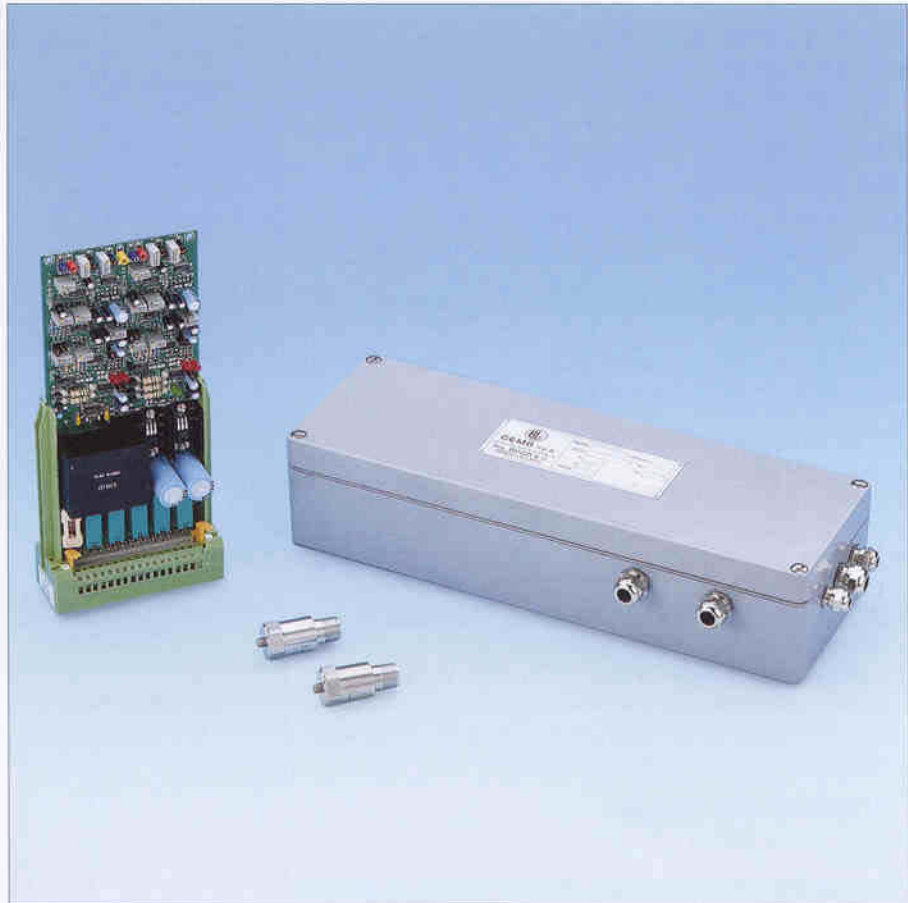
It is able to carry out double monitoring: of bearings condition by setting the alarm level in acceleration and of vibration machine condition by setting the alarm level in vibration velocity.

The installation of this equipment makes it possible to prevent bad damage to the machines and to programme necessary maintenance interventions.

Therefore the system is fundamental for safeguarding machinery and the state of bearings.

TYPICAL APPLICATIONS

Monitoring of absolute vibrations and of the state of the bearings of fans, pumps, motors, spindles, turbines, compressors, etc.



MAIN CHARACTERISTICS

The T1-EA system comes in single-channel and dual-channel versions and is fitted into a card-holder or into an IP65 box; it is therefore very flexible and suitable for industrial use or inside an electric panel. It is also possible to select the monitoring range and the vibration monitoring method in velocity or acceleration, so that with one instrument only it is possible to monitor simultaneously both the state of the bearings and the vibration level, reducing the number of probes installed, the sturdiness of the equipment and simplifying the cabling and limiting the costs of the whole installation.

For the setting of the alarm levels, consult the CEMB no. 24 technical booklet: "Machinery monitoring and supervisory instrumentation" which refers to the most up-to-date international standards: ISO, VDI, API.

TECHNICAL SPECIFICATIONS

Composition

Single channel version

- 1 equipment with card-holder or in die-cast aluminium box
- 1 accelerometer

dual-channel version

- 1 equipment with card-holder or in die-cast aluminium box
- 2 accelerometers

Standard transducers (to be chosen)

- mod. 327 (1 Hz ÷ 10000 Hz)
- mod. 326 (0.2 Hz ÷ 6000 Hz)

Power requirements

- 110/220 VAC - 50/60 Hz 7,5 Va
- 24 VDC - 8 W

External connections

- via terminal board situated on the card-holder or inside the box (section max. 2.5 mm²)
- there are holes for cables output PG 7 or PG 9 threaded (only for the version in IP65 container)

Analogical outputs

- 1 analogical current or voltage output for each channel

INTEGRATED EQUIPMENT

Digital outputs

- 1 SPDT contact of 1st alarm level for each channel (it may be set on velocity or acceleration)
- 1 SPDT contact of 2nd alarm level for each channel (it may be set on velocity or acceleration)
- 1 SPDT contact for system self-diagnosis

Contact characteristics

- maximum voltage 300 VDC 250 VAC
- maximum current 5A

Presettings to be carried out by the user

- power supply voltage 110 or 220 VAC
- selection of monitoring parameter (velocity or acceleration)
- range of measurement (1 of 3 ranges chosen in order)
- alarm intervention delay (1 sec. or 10 sec.)
- latching or non-latching alarm

Possible presettings on ordering

- single-channel or dual-channel version
- card-holder or IP65 box version
- AC or DC power supply
- type of output signals
- range of measurement
- alarm relay 1 normally energized or de-energized
- alarm relay 2 normally energized or de-energized
- alarm relays 1 or voting of A and B channels (only for dual-channel version)
- alarm relays 2 or voting of A and B channels (only for dual-channel version)

Temperature range

- -10° C - + 65° C

INFORMATION FOR ORDERING

A B C D E F G H I L

T1-EA / / / / / / / / / / / /

A: No. of channels

1	1 channel
2	2 channels

E: Quantity measured

0	RMS speed
1	peak acceleration

H: Alarm relay 2

0	normally deenergized
1	normally energized

B: Type of holder

0	card holder
1	IP 65 container

F: Measurement range

0	0 ÷ 10 mm/s; 0 ÷ 20 mm/s
0	0 ÷ 50 mm/s
1	0 ÷ 1 g; 0 ÷ 2 g; 0 ÷ 5 g
2	0 ÷ 10 g; 0 ÷ 20 g; 0 ÷ 50 g
3	special to be defined

I: Alarm relay 1 (*)

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

C: Power supply

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

G: Alarm relay 1

0	normally deenergized
1	normally energized

L: Alarm relay 2 (*)

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

D: Outputs signals

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

(*) - Only for dual channels

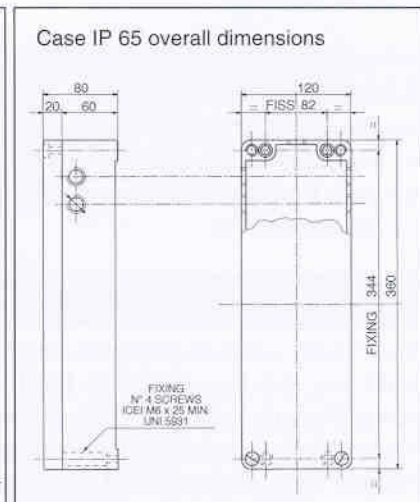
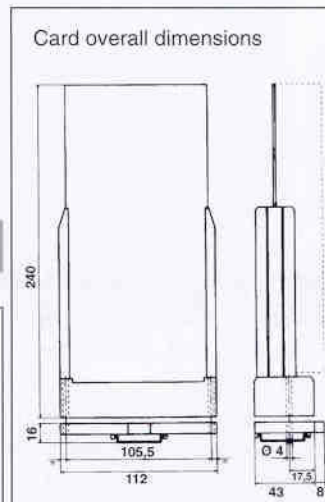
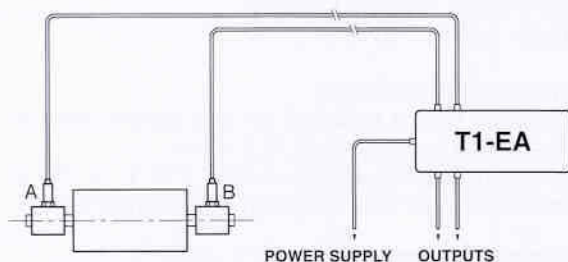
Ordering example

T1-EA

/2/1/0/1/1/1/0/0/0/0

- L: alarm relay 2 independent for channels A and B
- I: alarm relay 1 independent for channels A and B
- H: alarm relay 2 normally released
- G: alarm relay 1 normally released
- F: measurement range 0 ÷ 1 g; 0 ÷ 2 g; 0 ÷ 5 g
- E: peak acceleration monitoring
- D: output signal 0 ÷ 10 V
- C: power supply 110 or 220 VAC
- B: container IP65
- A: 2 channels

Typical application



Terminal board

