

## TRANSMITTER

# TRAL-A/V/VMT



### FUNCTION

The TRAL-A/V/VMT transmitter connected to a dedicated transducer (accelerometer, velocity transducer) to measure absolute vibration of any machine support and is capable of directly interfacing with an acquisition system (PLC or DCS) providing an analogue signal (4-20 mA) and two alarm contacts.

### GENERAL DESCRIPTION

The TRAL-A/V/VMT transmitter processes the signal coming from the transducer connected to it and converts it into a proportional analogue signal at the measured magnitude.

It has two relays with alarm contacts to enable you can set the activation threshold as a percentage of the full-scale and the intervening delay for the two LED activation signals.

It can be installed in a secure area and connected by means of certified barriers to intrinsic safety transducers positioned in a classified area.

It comes complete with terminal strips for connection to a power supply, input and output signals and a BNC for connection to an analyser.

TECHNICAL CHARACTERISTICS	TRAL-A/V/VMT
Composition	<ul style="list-style-type: none"> <li>• Transmitter with provision for fastening to a DIN guide</li> <li>• TRAL-A interfaceable with accelerometers with a sensitivity of 100 mV/g (TA-18 – TA-18/S)</li> <li>• TRAL-V interfaceable with velocimeters with a sensitivity of 21.2 mV/mm/s (T1-40 – T1-40V – T1-40BF – T1-38 – T1-38V – T1-38BF)</li> <li>• TRAL-VMT interfaceable with velomitor TV-22 (3.94 mV/mm/s)</li> </ul>
Power supply	<ul style="list-style-type: none"> <li>• 24 VDC nominal (24-35 VDC)</li> </ul>
External connections	<ul style="list-style-type: none"> <li>• Terminal strip for connection to two SPDT relays (screened cable, max. cross-section 2.5mm<sup>2</sup>)</li> <li>• Terminal strip for connection to a PLC/DCS (3-core screened cable, max. cross-section 2.5mm<sup>2</sup>)</li> <li>• Terminal strip for connection to a transducer (2-core screened cable, max. cross-section 2.5mm<sup>2</sup>)</li> <li>• BNC for connection to an analyser</li> </ul>
Operating temperature range	<ul style="list-style-type: none"> <li>• -35°C ÷ +70°C</li> </ul>
Type of measurement	<ul style="list-style-type: none"> <li>• Absolute vibration</li> </ul>
Dynamic performance	<ul style="list-style-type: none"> <li>• 5 ÷ 10.000Hz</li> </ul>
Linearity	<ul style="list-style-type: none"> <li>• ± 2% over the entire measurement range and within the operating temperature limits indicated</li> </ul>
Insulation	<ul style="list-style-type: none"> <li>• ≥ 10<sup>8</sup> Ω between signals and container</li> </ul>
Possible provisions at the time of order	<ul style="list-style-type: none"> <li>• Transducer type</li> <li>• Magnitude measured</li> <li>• Measurement mode</li> <li>• Measurement range</li> <li>• High-pass filter</li> <li>• Low-pass filter</li> <li>• Output type</li> </ul>



# TRAL-A/V/VMT

## ORDER INFORMATION

TRAL -  /  /  /  /  /  /  /

### A: TRANSDUCER TYPE

V	velocimeter
A	accelerometer
VMT	velomitor

### B: MAGNITUDE MEASURED

0	displacement (only for TRAL-V and TRAL-VMT)
1	velocity
2	acceleration (only for TRAL-A)

### C: MEASUREMENT MODE

0	RMS
1	peak
2	peak-peak

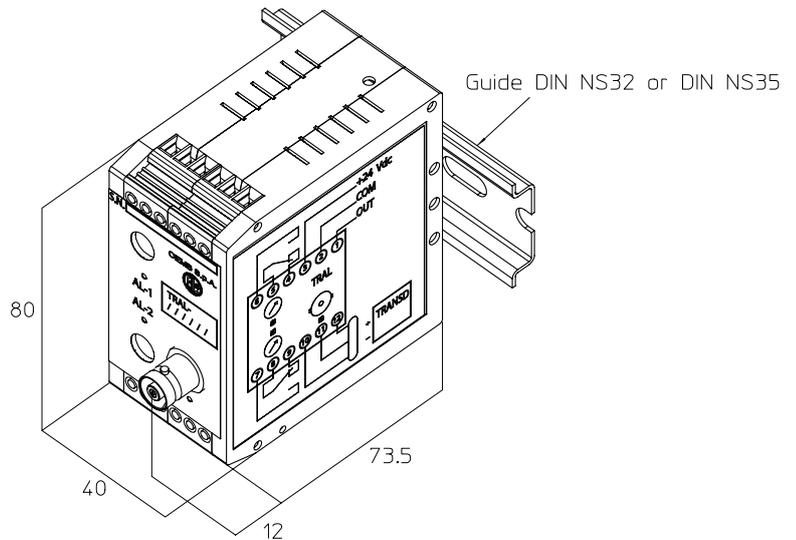
### D: MEASUREMENT RANGE

0	0 ÷ 100 µm	6	0 ÷ 1 g
1	0 ÷ 200 µm	7	0 ÷ 5 g
2	0 ÷ 500 µm	8	0 ÷ 10 g
3	0 ÷ 10 mm/s	9	0 ÷ 20 g
4	0 ÷ 20 mm/s	S	special (to be defined)
5	0 ÷ 50 mm/s		

### E: HIGH-PASS FILTER

0	without filter	4	50 Hz
1	5 Hz	5	100 Hz
2	10 Hz	6	1000 Hz
3	20 Hz	S	special (to be defined)

## Dimensions



### F: LOW-PASS FILTER

0	without filter	4	5000 Hz
1	100 Hz	5	10000 Hz
2	1000 Hz	S	special (to be defined)
3	2500 Hz		

N.B: the low-pass filter frequency must be at least double that of the high-pass filter.

### G: OUTPUT TYPE

0	4 - 20 mA
2	0 - 10 VDC

### ORDER EXAMPLE:

TRAL - A / B / C / D / E / F / G  
A 1 0 3 2 2 3

A= accelerometer transducer  
1= measurement in speed  
0= RMS measurement  
3= 0 ÷ 10 mm/s measurement range  
2= 10 Hz high-pass filter  
2= 1000 Hz low-pass filter  
0= 4 - 20 mA

All the data and characteristics mentioned in this catalogue are by way of example and not binding. CEMB S.p.A. reserves the right to make any changes it sees fit without prior notice.