

## MR3003TR

### Description

The MR3003TR is a product developed specifically for the monitoring of vibration induced by traffic and railways. The MR3003TR is based on the MR3003C, and in addition it features a hardware trigger input and two relay outputs. This allows the user to:

- Trigger at any time, without using the Web User Interface
- Connect external devices to have immediate information/alarms related to vibration levels.

The MR3003TR can be delivered with an internal or an external triaxial velocity sensor MS2003+, or with three external uniaxial velocity sensors MS2003+, solution dedicated to the traffic and railway measurements.

### Data acquisition

#### ITEM

Principle  
Resolution  
Sampling-rate  
Number of channels

#### SPECIFICATION

4th order delta-sigma ADC per channel  
24 bits  
250, 500, 1â??000, 2â??000, 4â??000 sps  
3

### Dimensions

#### ITEM

Housing  
Weight  
Protection degree

#### SPECIFICATION

Aluminum, 120 x 180 x 100 mm  
1.5 kg  
IP 65 (splash-proof)

### Sensor

#### ITEM

Sensor type  
Principle  
Number of axes  
Measuring range full scale  
Frequency range

#### SPECIFICATION

Velocity sensor with linearized frequency response  
A3HV 315/1 (triaxial) (according to DIN 45669)  
Geophone  
3, in different configurations - One internal triaxial sensor - One external triaxial sensor - Three external uniaxial sensors (recommended for traffic/railway surveys)  
 $\hat{\pm}$  100 mm/s  
1 - 350 Hz (linear  $\hat{\pm}$ 10% frequency response)

Case-to-coil motion	4 mm p-p
Dynamic range	> 130 dB
Linearity/Phase	According to DIN 45669 (class 1)
Cross axis sensitivity	According to DIN 45669 (<5%)

## External MS2003+ triaxial

ITEM	SPECIFICATION
Dimensions	122 x 120 x 80 mm
Weight	1.55 kg
Connector	Metallic self-latching push - pull connector
Accessories	Mounting platform with levelling screws - weight: 1.9 kg

## External MS2003+ single axis (horizontal or vertical)

ITEM	SPECIFICATION
Dimensions	80 x 75 x 57 mm
Weight	0.45 kg
Connector	3 m interconnection cable with metallic, self-latching push-pull connector
Accessories	Junction box (input for 3 single axis sensors, output like triaxial sensor) and extension lead

## Trigger input

ITEM	SPECIFICATION
Principle	Digital Hardware trigger

## Mobile connectivity

ITEM	SPECIFICATION
Mobile Network	Internal 4G modem, fallback 3G/2G

## Relay outputs

ITEM	SPECIFICATION
Configuration	2 output configurable relays, No/Nc
Current	2 A, 30 V DC
Alarms for relays	Multiple level triggers (individually settable for each axis)
Alarm range	0.1 % to 100% full scale

## Optional alarm box

ITEM	SPECIFICATION
Input voltage	115-230 V
Maximum input current	5 A
Protection degree	IP 65 (splash-proof)
Specifications	