sm.1404016

# **TR-27**

CERTIFIED ACCORDING TO ATEX 94/9/CE DIRECTIVE **CERTIFIED IECEX** CERTIFIED SIL 2 ACCORDING TO EN/IEC 61508

#### **FUNCTION**

The integrated transmitter TR-27 measures the absolute vibrations of any rotating machine support and it is able to interface directly in 2 wires technique (current loop 4 ÷ 20 mA) to an acquisition system (PLC or DCS).

The transmitter is certified for application in classified area as:

E II 1 G Ex ia IIC T6, T5, T4 Ga (ATEX)

Ex ia IIC T6, T5, T4 Ga (IECEx)

The transmitter is certificate SIL 2 for functional safety



The transmitter, secured directly on machinery, generates an electric signal (4÷20 mA) which is proportional respectively to vibration

velocity or acceleration. The transmitter is made of an AISI 316L steel body with machine connection thread; the connection to the acquisition system is effected by means of an integral cable.

It is available both a standard version (PVC shielded cable and nickel-plated brass cable gland) and a special version for aggressive environment (EFTE shielded armoured cable and AISI 316L steel cable gland).

NOTE: The transmitter is available in different configuration versions and does not need any set-up or maintenance.

Measuring field

• Ex II 1 G Ex ia IIC T6, T5, T4 Ga (ATEX)

• Ex ia IIC T6, T5, T4 Ga (IECEx)

Version

• 5÷10 N-m

· Certification

TECHNICAL CHARACTERISTICS		
Composition	AISI 316L stainless steel integrated transmitter body	
Power supply	<ul> <li>24 Vdc (10 ÷ 35 Vdc) current loop 4 ÷ 20 mA (2 wires)</li> <li>Maximum load – see Figure 1</li> </ul>	
External connections	<ul> <li>Standard: PVC shielded cable with nickel-plated brass cable gland</li> <li>Special: EFTE shielded and armoured cable, with AlSI 316L steel cable gland</li> </ul>	
Environmental	<ul> <li>Transmitter - 60°C ÷ + 120°C</li> <li>IP 68 (submersible depth 70 mt)</li> <li>Standard cable: - 20°C ÷ + 80°C</li> <li>Special cable: - 60°C ÷ + 150°C - resistance UV</li> </ul>	
Measure type	Omnidirectional seismic (absolute vibration)	
Dynamic field	• ± 18 g	
Transverse sensitivity	• < 5 %	
Linearity	• ± 2% - 75 Hz	
Dynamic performances	<ul> <li>±3% / 10Hz-1kHz - see Figure 2</li> <li>-3db / 1,5Hz - 2kHz</li> </ul>	
Insulation	• ≥10 <sup>8</sup> Ω between signal and case	
Application axis	• Any	
Standard machine connection thread	<ul> <li>M8x1,25</li> <li>1/4"-18NPT</li> <li>1/4"-28UNF</li> <li>M6x1</li> </ul>	
Maintenance	No maintenance is needed	

Bipolar shielded cable, conductors typical section 2x1mm<sup>2</sup>

· Cable length

· Machine connection thread





Certification available

**Electrical connections** 

Mounting torque



Parameters to be defined when ordering





## **TR-27**

Figure 1 Maximum load on current loop

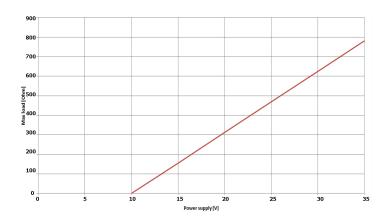
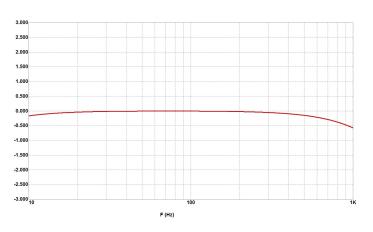


Figure 2 Frequency response [db]



### **ORDER INFORMATION**

B C D TR - 27 / 🗌 / 🔲 / 🔲 / 🔲

#### A: MEASURING FIELD

0 ÷ 10 mm/s RMS
0 ÷ 20 mm/s RMS
0 ÷ 50 mm/s RMS
0 ÷ 100 mm/s RMS
0 ÷ 1 g RMS
0 ÷ 5 g RMS
0 ÷ 10 g RMS
0 ÷ 25,4 mm/s (0 ÷ 1 in/s) RMS
0 ÷ 12,7 mm/s (0 ÷ 0,5 in/s) RMS
special to be defined

#### **B: MACHINE CONNECTION THREAD**

0	M8x1,25	
1	1/4'' - 18NPT	
2	1/4'' - 28UNF	
3	M6x1 (only for non certificate version)	

#### C: VERSION

XX

0	Standard (only for non certificate version)
1	Special
D:	CABLE LENGTH

length in meters

#### E: CERTIFICATIONS

0	standard
8	Ex II 1 G Ex ia IIC T6, T5, T4 Ga (ATEX) (only for special version)
В	Ex ia IIC T6, T5, T4 Ga (IECEx) (only for special version)

#### PURCHASE ORDER EXAMPLE:

#### TR - 27 / 1 / 0 / 1 / 05 / 8

1= Measuring field 0÷20 mm/S RMS 0= Machine connection thread M8x1,25

1= Special version

05= Cable length 5 meters

8= ATEX certification

