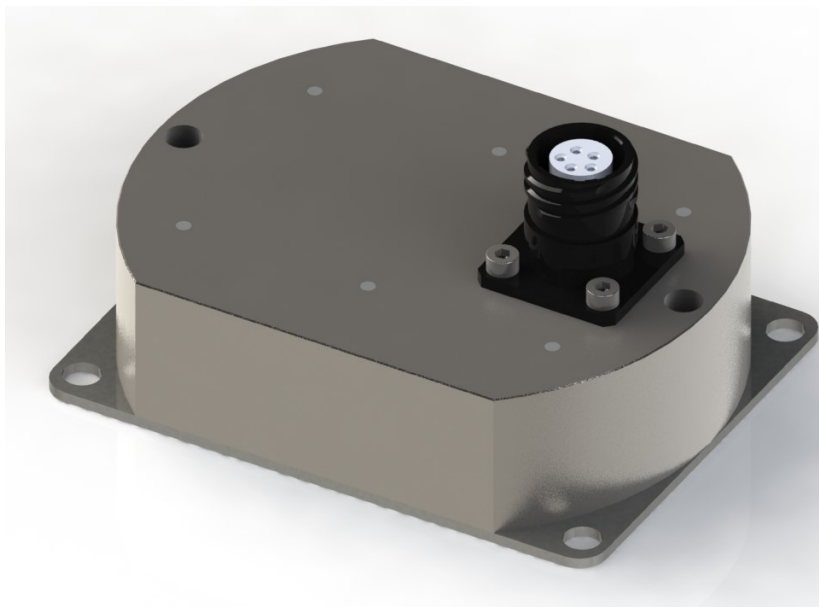


ACCELEROMETRIC SYSTEM ES280



DESCRIPTION

Accelerometric system ES280 is made up of a digital triaxial sensor with measuring range of $\pm 2,5$ g (for accelerations on X, Y and Z axis) and of $\pm 90^\circ$ (for inclination on X and Y axis).

It is a very accurate system (± 20 mg) and it has a resolution of $\pm 0,076$ mg/digit. This guarantees a correct functioning even in difficult environments, characterized by high noises. Its stainless steel case allows the sensor to be protected (IP68) from weather.

Accelerometer can be supplied with 24 Vdc, but it accepts a power supply between 12 and 28 Vdc. It has a completely digital interface with the possibility of RS485 (Modbus protocol) output.

ES280 sensors are characterized by high resistance to vibrations and a good price/performance ratio. This allows the sensor to be used both in static and dynamic applications.

The acquisition command allows to record up to 11 seconds of accelerometric data (1 second before the command and 10 seconds after). The transducer is able to record average accelerations on 100 acquired samples. For each acquisition data are available until they have been read.

It is possible to detect acceleration peaks and, as option, inclination peaks.

Sensor gives the possibility to send commands to acquire acceleration and inclination offset or to record measures without offset.

Accelerometric system can be used for structural control and monitoring on towers, trellis, bridges, buildings and in all suspended structures.

TECHNICAL CHARACTERISTICS

Measuring range:

Acceleration: $\pm 2,5$ g

Inclination: $\pm 90^\circ$

Power supply: 24 Vdc (accepted from 12 V a 28 Vdc nominal)

Environmental protection: IP68

Operating temperature: from -25°C to $+70^\circ\text{C}$

Resolution: ± 0.076 mg/digit

Noise: $45 \mu\text{g}/\sqrt{\text{Hz}}$

Non-linearity (Bsl): 2% FS max

Zero-g level offset accuracy: ± 20 mg (ideal signal deviation of 0g)

Output data rate: up to 100 Hz, (possible up to 1.1 kHz)

Temperature effect:

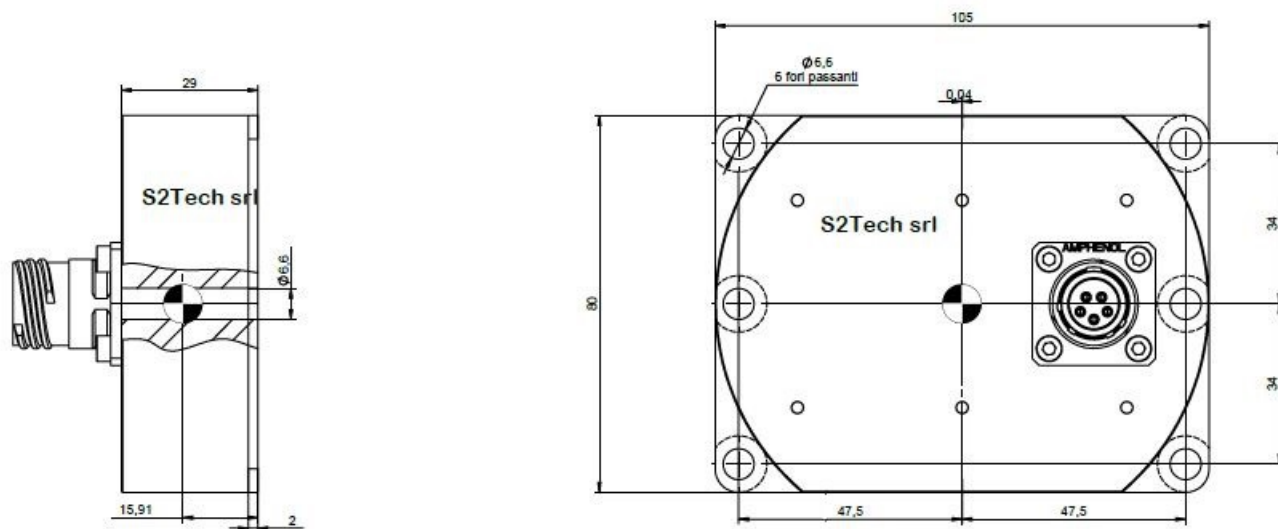
on sensitivity: $\pm 0,7\%/^\circ\text{C}$ (typical)

within 0°C : $\pm 0,4$ mg/ $^\circ\text{C}$ (typical)

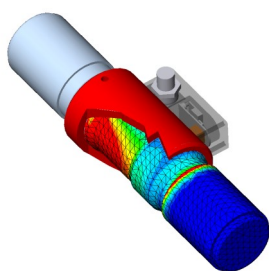
Shock max: 10000 g (for 2 msec)

Digital output: RS485/Modbus or CANopen

OVERALL DIMENSIONS



DEVELOPMENT AND MANUFACTURING OF CUSTOM PRODUCTS



S2Tech technical department, with 30 years of experience acquired with DS Europe, can develop products accordingly to customers technical specifications with the following tools

- 3D mechanical design CAD software stations
- Finite element analysis **FEA** software stations
- Digital and analog electronic development accordingly to EMC (=CE) stricter industrial marking regulations
- Software and embedded firmware development accordingly to most popular industrial bus system (CANopen, Modbus, PROFIBUS)
- Fast prototyping

S2Tech develops new products or modifies existing ones, in order to realize the fittest and more convenient product.