

## Quartz Servo Accelerometer INN-203

The INN-203 tactical-grade servo accelerometer is used for both, in commercial and military strap-down and platform inertial navigation systems for aircraft, marine, land and other applications.

- Tactical / navigational performance  
200 µg Bias Repeatability, 5 µg resolution
- High stability under temperature changes
- Form-Fit-Function signal compatible to the de-facto standard of quartz servo accelerometers
- Standard German export control, no ITAR
- Analog output
- Compact design
- Inertial Navigation and gyro-compassing Systems for industrial and defence applications (sea, land, air, space)

Excellent performance of this accelerometer is achieved owing to proven quartz flexure technology, and integrated Bias and Scale Factor temperature models. In addition to acceleration, the INN-203

accelerometer also provides temperature measurement for bias and scale factor modeling and Built-In Test (IBIT) capability.

Implementation of the latest advances in sensor and manufacturing as well as calibration technology enable us to provide sensor performance and reliability being required for demanding navigation and stabilization applications.



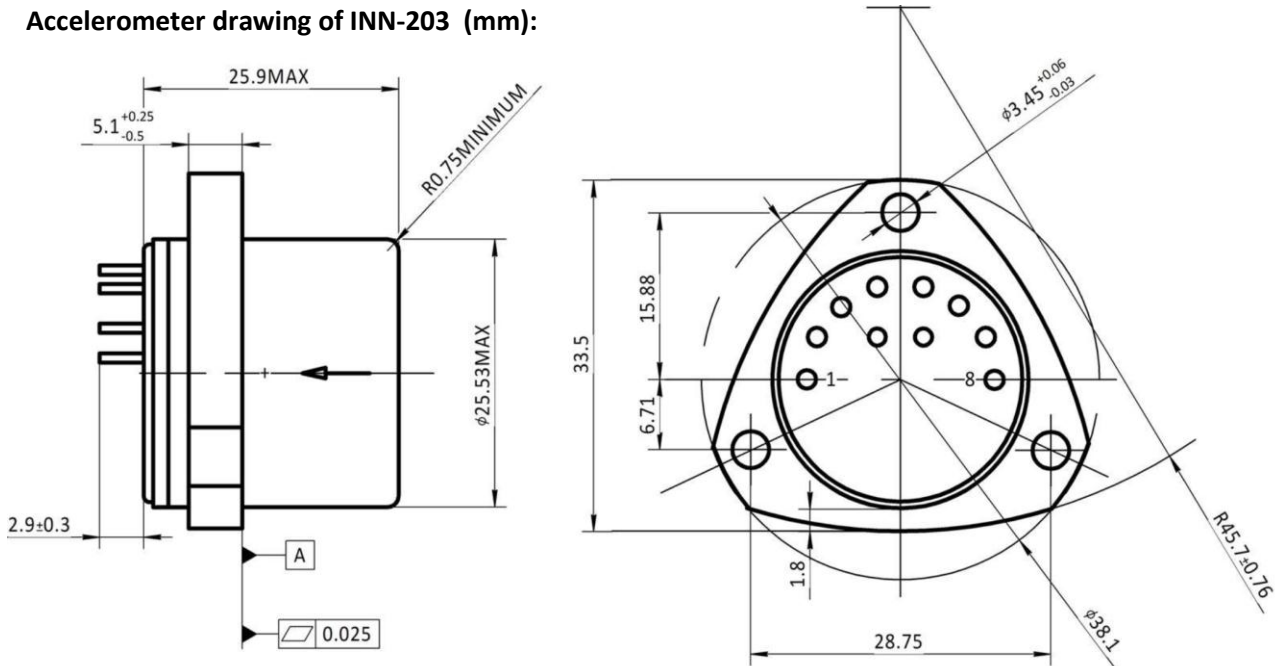
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The sensor is not covered by ITAR and is handled under the standard Germany export control laws for dual use goods. Typical delivery time to users located in Germany, EU or EU001 covered countries is within 3 - 4 weeks.

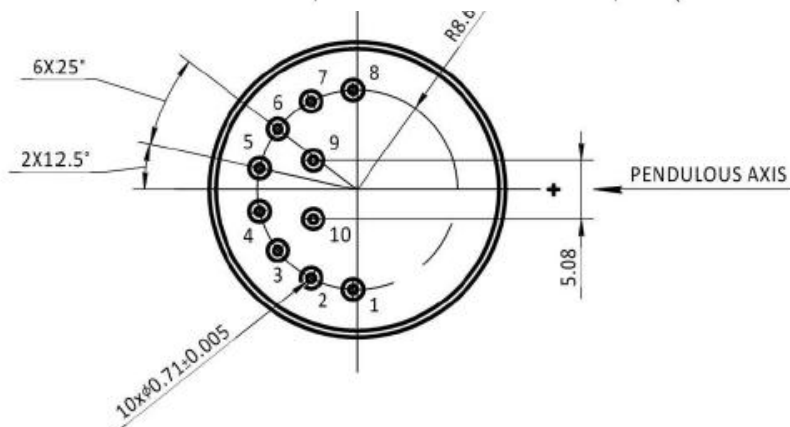
### Technical Data of INN-203:

Parameters	Units	Values
Input Range	g	±50
Bias (un-modeled)	mg	< 20
One Year Repeatability	µg	< 200
Temperature Sensitivity	µg/K	< 300
Scale Factor	mA/g	1.0 ... 1.4
One Year Repeatability	ppm	< 200
Temperature Sensitivity	ppm/K	< 200
Axis Misalignment (un-modeled)	µrad	< 2000
One Year Repeatability	µrad	< 100
Non-linearity	µg/g <sup>2</sup>	< 100
Operating Temperature	°C	-55 ... +85°C
Vibration	g, Hz	8 g @ 20 ... 2000 Hz
Shock (11 ms, half sinus)	g	70
Resolution	µg	< 5
Bandwidth	Hz	0 ... 800
Quiet Current per Supply Rail	mA	< 16
Power @ ±15 VDC	mW	< 480
Input Voltage	VDC	±12 ... ±18
Bias temperature model		optional
SF temperature model		optional
Size	mm	∅ 38 x 26
Weight	g	< 80
Case Material		Stainless Steel

**Accelerometer drawing of INN-203 (mm):**



**Connector PIN description:**



PIN	Signal
1	Moment loop / Signal Out (Lx1) (Serves as Accelerometer Output; 1.1 ... 1.4 mA/g)
2	Moment loop / Current Torque (Lx2) (Only for manufacturer's testing purposes and non-connecting for user)
3	Negative Power: -12V ... -18V (-15V recommended)
4	Positive Power: +12V ... +18V (+15V recommended)
5	N/C
6	Temperature Sensor Output (1 μA/K)
7	Voltage Self Test
8	Ground / Signal and Power Return (for devices with P/N 00500-19001-0002, i.e. for pin-out version being compatible to QA2000™)
9	-9 V Ref. voltage output (high impedance)
10	+9 V Ref. voltage output (high impedance)

INN-203: iMAR P/N 00500-19002-0002 (pin-out compatible to QA2000)  
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