

Tri-Axis MEMS Gyroscope

O 030 375 001 XXX

These sensors provide three axes angular rate measurements in a single robust package. The sensors filter the data and output the measurement via three linear 0 - 5 V outputs.

These units have been designed to provide high performance operation results under harsh operating conditions.

There are three main models available:

- 1 metre flying lead cable
- 6 pin Deutsch Connector
- 9 pin Deutsch Connector (internal Pt1000)

EXAMPLE APPLICATIONS

- Chassis rotation monitoring

ELECTRICAL

- Supply Voltage: 8 - 16 V_{DC}
- Supply Current: 25 mA Max.

MEASUREMENT SPECIFICATIONS

- Angular Rate Range*: $\pm 75\text{ }^\circ/\text{s}$
 $\pm 150\text{ }^\circ/\text{s}$
 $\pm 300\text{ }^\circ/\text{s}$
 $\pm 900\text{ }^\circ/\text{s}$
- Scale Factor: $\pm 75\text{ }^\circ/\text{s}$ = 24 mV/ $^\circ/\text{s}$
 $\pm 150\text{ }^\circ/\text{s}$ = 12 mV/ $^\circ/\text{s}$
 $\pm 300\text{ }^\circ/\text{s}$ = 6 mV/ $^\circ/\text{s}$
 $\pm 900\text{ }^\circ/\text{s}$ = 2 mV/ $^\circ/\text{s}$
- Clockwise rotation about the axis, identified in the drawing and on housing, will increase the output voltage
- Filter: 8-pole, 60 Hz[†], Butterworth
- Bias over temp.: $\pm 3\text{ }^\circ/\text{s}$ up to 85 °C, $\pm 5\text{ }^\circ/\text{s}$ thereafter
- Scale factor variation over temp.: $\pm 1.5\%$
- Scale factor non-linearity: 0.15 % Max.
- Angular Random Walk: 0.28 $^\circ/\sqrt{\text{hr}}$
- Zero Angular Voltage (per axis): 2.50 V $\pm 0.075\text{ V}$
- Internal Temperature Sensor: Pt1000 temperature output connection available



CABLE AND CONNECTION

- 26 AWG, Typical 1000 mm[‡], unscreened, DR25 jacket.
- Integrated cable boss for strain relief to the sensor body

SIGNAL	WIRE COLOUR	CONNECTOR PIN (no Pt1000)	CONNECTOR PIN (with Pt1000)
Supply +	Red	1	1
Supply -	Blue	2	2
Signal Ground	Green	4	4
X Axis Signal	White	5	7
Y Axis Signal	Yellow	6	8
Z Axis Signal	Orange	3	3
Pt1000	(Violet)	-	5
Pt1000	(Grey)	-	6
NC	-	-	9

MECHANICAL

- Weight: <70 g
- Aluminium body, hard anodised and dyed black

ENVIRONMENTAL

- Maximum Humidity: 100 %
- Operating Temp.: -20 °C to 105 °C
- Vibration: 40 Hz to 2 kHz, 20 g, any axis
- Shock: 50 g, any axis
- Sensor is resistant to standard motorsport fluids

* Only configurable during production (Combinations of different angular rate ranges, per axis, can be requested)

[†] Other cut-off frequencies available on request

[‡] Other lengths available on request

Get in touch

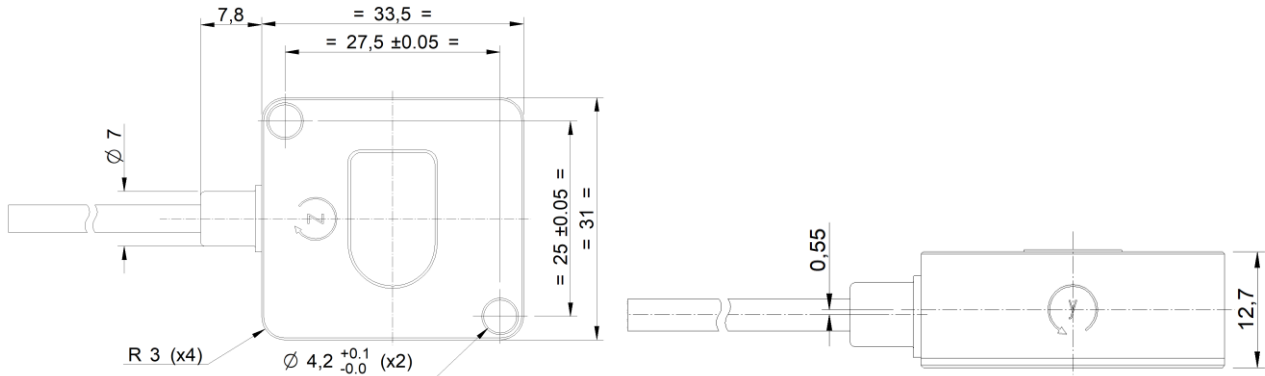
Email: sales@motionapplied.com

Website: www.motionapplied.com

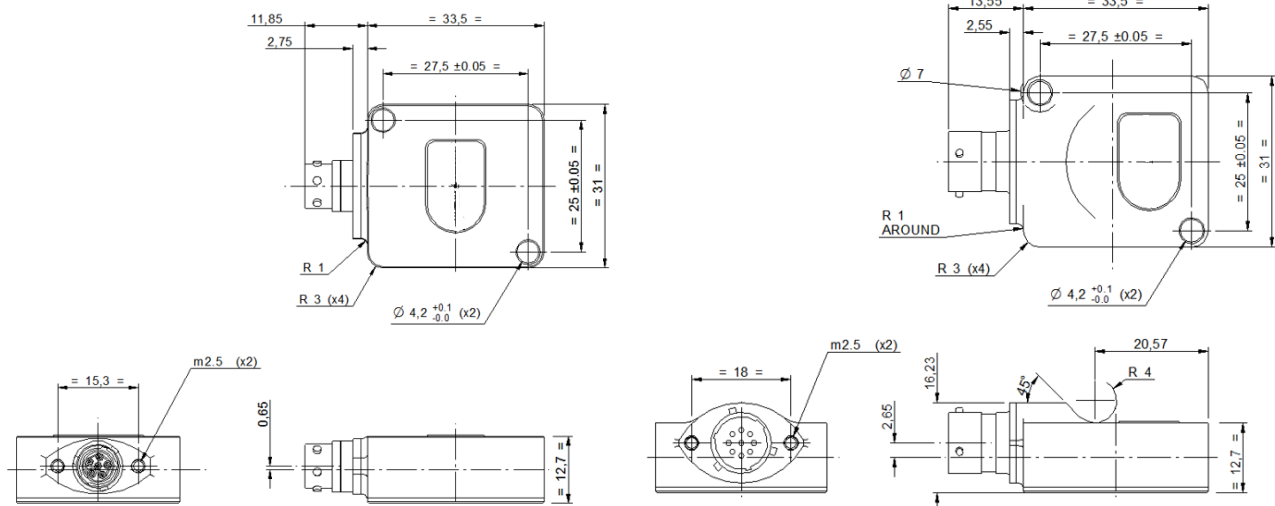
PRODUCT SUMMARY | SCR 7434 | REV 02 | LAST UPDATE: 12/02/26

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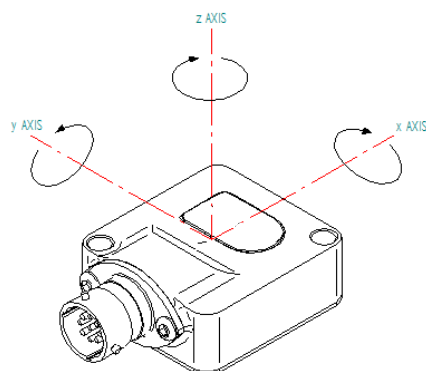


Flying Lead Version (no Pt1000)



6-way Deutsch Connector Version (no Pt1000)

Pt1000 Variant, with 9-way Deutsch Connector



The rotations shown above will cause an increasing output voltage

Get in touch

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