

Gyro 3 Axis



Designed to provide high performance operation under harsh operating conditions, the tri-axis gyro accurately measures angular motion in a compact, lightweight, robust package.

In Detail

Application

- Precision chassis development.

Electrical

- Supply voltage 8 to 16V unregulated
- Reverse Polarity protection
- Supply current 140mA @ 12V
- Start-up supply current 225mA (0-500ms)
- Full scalerate $\pm 300^\circ/\text{s}^1$ or $\pm 75^\circ/\text{s}^1$
- Output scale factor:

$$300^\circ/\text{s} = 6.67\text{mV}/^\circ/\text{s nominal}$$

$$75^\circ/\text{s} = 26.67\text{mV}/^\circ/\text{s nominal}$$

- Scale factor variation $\pm 0.75\%$
- Scale factor variation over operating temperature range $\pm 1.5\%$
- Scale factor rate non-linearity $\pm 0.2\%$ FS
- Offset at zero angular velocity 2.50V nominal

- Offset variation $\pm 20\text{mV}$ ($300^\circ/\text{s} = \pm 3^\circ/\text{s}$ & $75^\circ/\text{s} = 0.75^\circ/\text{s}$)
- Offset variation over temperature range $\pm 30\text{mV}$ ($300^\circ/\text{s} = \pm 4.5^\circ/\text{s}$ & $75^\circ/\text{s} = 1.1^\circ/\text{s}$)
- 8 pole 60Hz Butterworth filter^{2/3}
- Noise $< 175 \mu\text{V}/\sqrt{\text{Hz}}$
- Output impedance 50 Ohms
- PT1000 temperature output

Clockwise rotation about the axis identified in the drawing, will increase the output voltage, as shown in the outline drawing.

¹ Combinations of both scale rates can be requested.

² Two pole filter available upon request³.

³ -3dB point adjustable up to 90Hz.

Cable and Connection Definition

26 AWG un-screened cable

Cable length is shown on the order details but any length is available on request

Various automotive and military standard connectors are available

Connections:

Red wire	Pin 1	Supply
White wire	Pin 2	Signal A
Yellow wire	Pin 3	Signal B
Orange wire	Pin 4	Signal C
Green wire	Pin 5	Power Ground
Blue wire	Pin 6	Signal Ground

Mechanical

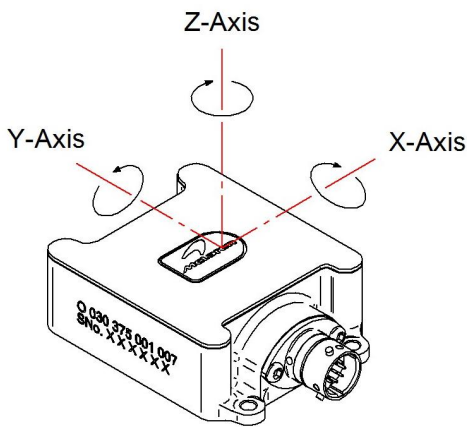
- Weight less than TBAg (including cable)

Environmental

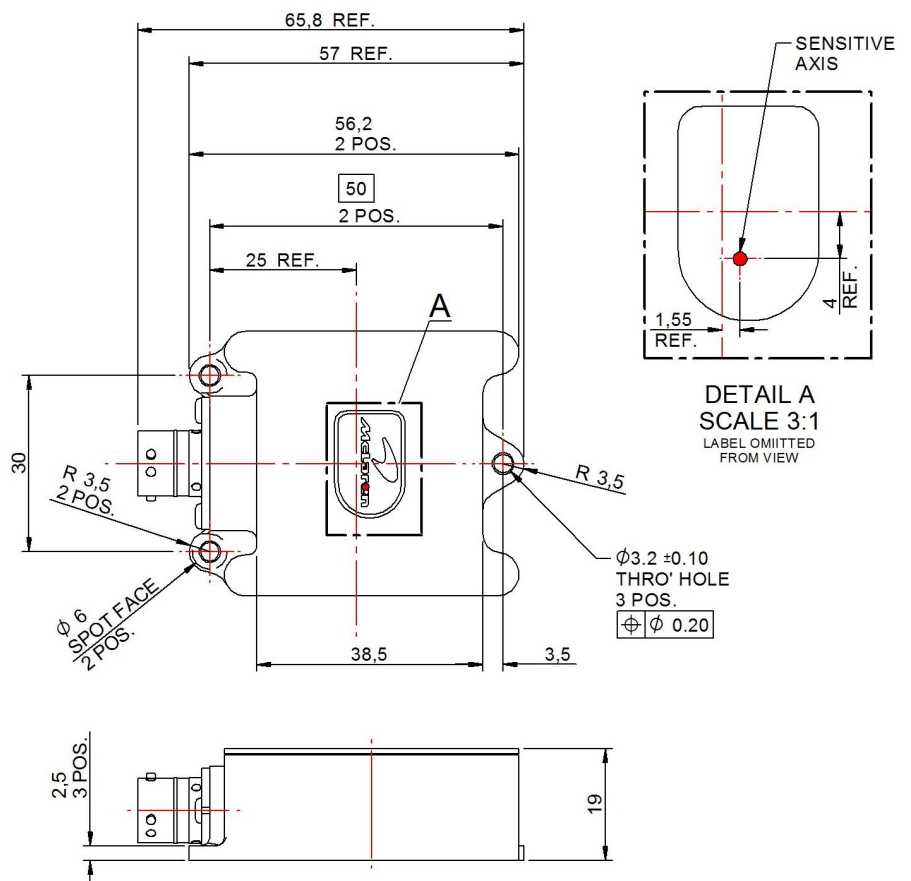
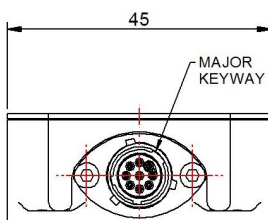
- Vibration 20Hz to 2kHz @ 8.5g rms
- Shock ½ sine approx, 95g, 1ms
- Resistant to standard motorsport fluids
- Maximum humidity 100%
- Operating temperature 0 to +105°C
- Aluminium alloy body and lid, hard anodised and dyed black
- DR25 jacketed cable

Images/Diagrams

3 Axis Gyro



THE ROTATIONS SHOWN ABOVE WILL PROVIDE AN INCREASING OUTPUT VOLTAGE.



Ordercodes

Description	Ordercode
3-Axis Gyro ($\hat{A}\pm 300\hat{A}^\circ/s$)	O 030 375 001 007
3 Axis Gyro ($\hat{A}\pm 75\hat{A}^\circ/s$)	O 030 375 001 008