

iTGAC-ROV

Roll-over Sensor

Triaxial Sensor Cube with Fiber Optical Gyros and Accelerometers

With iTGAC a product family is provided for dynamically motion analysis that covers applications which require a medium accuracy and a simple using. iTGAC-ROV is used as a reference unit for roll-over testing in automotive industry. It contains three orthogonal mounted rugged open loop fiber optical gyroscopes (iOLFOS) and three medium precision accelerometers with analog output. iTGAC-ROV comes with an



calibration certificate (standard: coefficients for polynomial correction at room temperature; option: coeffs over temperature; additional misalignment matrices)

Due to using FOG technology random noise of the analog output is much smaller than known from common vibrating gyros. Furthermore the gyro signal will not be affected by acceleration (no g-dependend drift).

As an option a digital processing unit can be made available to transmit the data via CAN to a host computer.

Typical Technical Data (iTGAC-ROV = iTGAC-FK-400/10 as example):

Range:	± 400 deg/s (100...800 %s on request)	± 10 g (or ± 2 g or ± 25 g)
Bias:	< 100 μ V (const. temp.) < 1000 μ V (OTR)	< 2 mg (0.5 / 10 mg/K)
Resolution:	< 50 μ V	< 0.1 mg
Linearity error:	< 1.5 % (uncompensated) < 0.3 % (polynomial corrected by user)	< 0.4 %
Output:	± 5 V Option: Output scaled to ± 10 V, ± 5 V, 0...5 V	± 5 V
g-sensitivity :	none	
Noise (0-100 Hz):	< 10 deg/h/ $\sqrt{\text{Hz}}$ (< 0.15 deg/ $\sqrt{\text{h}}$)	20 $\mu\text{g}/\sqrt{\text{Hz}}$ (100 $\mu\text{g}/\sqrt{\text{Hz}}$)
Bandwidth:	200 Hz (optional 50...500 Hz)	0...200 Hz
Power:	10...18 V DC or 19...34 V DC	
Output:	25 pin SUB-D (male)	
Temperature:	-30...+60 °C	
Shock:	200 g, 6 ms	
Weight:	900 grams (light weight version on request)	
Size:	ca. 80 x 80 x 108 mm	

Please ask also for our systems with digital output or for determination of attitude and heading (RPY-angles ϕ , θ , ψ) and GPS/INS integration (iDIS, iNAV). Please do not hesitate to contact us for further information.

iMAR GmbH • Im Reihersbruch 3 • D-66386 St. Ingbert / Germany
Phone: +49-(0)-6894-9657-0 • Fax: +49-(0)-6894-9657-22
<http://www.imar-navigation.de> • sales@imar-navigation.de