GESELLSCHAFT FUER INERTIALE MESS-,
AUTOMATISIERUNGS- UND REGELSYSTEME MBH
WWW.IMAR-NAVIGATION.DE

iTGC-F / iVRU-F

Triaxial Sensor Cube with Fiber Optical Gyros

For several years iMAR has been producing highly precise inertial measurement systems, featuring fiber-optical gyros, mechanical gyros or ring laser gyros in strap-down technique. Due to an intensive data processing by powerful process computers and the use of well-selected sensors these systems achieve outstanding results concerning bandwidth and shock resistance as well as a highly flexible systems configuration.

With iTGC a product family is provided for dynamically motion analysis that covers applications which require a medium accuracy with analog output and a simple using without any internal micro-processor. iTGC-F is a triaxial gyro cube with three orthogonal mounted rugged fiber optical gyroscopes with direct analog output.

As an option a digital version is available to transmit the data via CAN or RS232 or HDLC to a host computer (iVRU-F). The systems are also available with integrated accelerometers (iVRU-FC, iVRU-FQ).

Technical Data:

	iTGC-F	**iVRU-F**
Data:	angular rates x/y/z, accelerations x/y/z	rates, accel., RPY angles
Range:	± 200 °/s (*) @ ± 10 V	± 200 deg/s (*)
Bias (const temp):	< 0.005 °/s / 200 µV	< 0.003 °/s
Bias (OTR)	< 0.05 °/s / 2000 µV	< 0.01 °/s
Resolution:	< 0.002 °/s / 50 µV	< 0.001 °/s
Linearity error:	< 2 % (uncompensated, ± 200 deg/s) < 1 % (uncompensated, ± 100 deg/s) < 0.2 % (external polynomial correction)	< 0.2 % (fully compensated)
Output:	+/- 5 V or +/- 10 V (factory set)	digital (option: 6 x analog)
Size:	approx. 80x80x108 mm	approx. 120x120x135 mm
Power:	10...34 V DC, < 7 W	10...34 V DC, 8 W
Weight:	approx. 850 grams	approx. 1500 grams
g-sensitivity:	none	
Noise (0-200 Hz):	< 8 °/h/$\sqrt{Hz}$ (< 50 µV/$\sqrt{Hz}$)	
Bandwidth:	0...200 Hz (optional ...50/100/200/300 Hz)	
Temperature, Shock:	-40...+71 °C (case temperature), 90 g, 6 ms	

(*) = other on request (10...1500 °/s)

Please do not hesitate to contact us for further information.

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