DIGS™100

Inertial Guidance System

The DIGS™100 Inertial Guidance System is Gladiator Technologies' six-axis MEMS AHRS designed specifically for downhole orientation and directional guidance applications. Its small size enables its use in tight drilling and utility spaces, outputting pitch, roll, and yaw angles.

- Low Noise: 0.0028°/s/√Hz
- Excellent Bias Stability: 5°/h
- VELOX™ High Speed Processing
- Factory Calibrated: -50°C to 105°C
- NON-ITAR

Low Noise. High Performance.

MMV GLADIATOR TECHNOLOGIES

DIGS™100 Inertial Guidance System

Performance

Parameter	Gyro	Accel
Range	± 490°/s	± 15 g's
ARW / VRW	0.0028°/s/√Hz	0.075 mg/√Hz
Bias In-Run	5°/h	45 ug
Bias Over Temp.	< 0.1°/s	< 1 mg
Resolution	0.002°/s	0.05 mg
G Sensitivity	< 0.01°/sec/g	< 1 mg/g^2
Scale Factor Error	≤ 0.05% (over temperature)	
Alignment	< 1 mrad	

Environment

Shock	500 g ½ sine 1 ms powered on
Vibration	5.74 $_{gRMS}$ (50 Hz to 2 kHz)
Operating Temp	-50°C to +105°C
Non-Operating Temp	-55°C to +125°C

Interface — with VELOX™ Processing

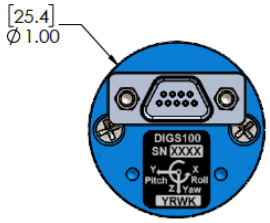
Data Rate	100 Hz or 200 Hz (AHRS)
External Sync	Up to 1 kHz (User Selectable)
Start Up Time	< 0.3 s
Data Format	16/24/32 - Bit
Data Interface	RS-422/RS-485
Bandwidth	250 Hz
Software	Development Kit Available

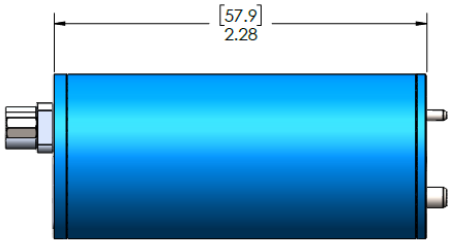
Electrical

Input Voltage	+3.8 V to +5.5 V Max. Input (single sided)
Power Consumption	255 mW Typical / 305 mW Maximum

Mechanical

Mass	≤ 43 grams
Size	Metric: 2.54 dia x 5.79 = 29.3 cm^3 US: 1.00 dia x 2.28 = 1.79 in^3





www.gladiatortechnologies.com/digs100

All performance parameters 1σ
Specification subject to change without notice
Rev. 07.29.20

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