

Ihr Ansprechpartner in  
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und der Schweiz

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# 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:  $0.0028^{\circ} /s/\sqrt{Hz}$



Excellent Bias Stability:  $5^{\circ} /h$



VELOX™ High Speed Processing



Factory Calibrated:  $-40^{\circ} C$  to  $105^{\circ}$



NON-ITAR

Low Noise. High Performance.



**GLADIATOR**  
TECHNOLOGIES

# DIGS™ 100 Inertial Guidance System

## Performance

Parameter	Gyro	Accel
Range	$\pm 490^\circ /s$	$\pm 14g$
ARW/VRW	$0.0028^\circ /s/\sqrt{Hz}$	$0.075mg/\sqrt{Hz}$
BiasIn-Run	$5^\circ /h$	$1mg$
BiasOverTemp.	$<0.1^\circ /s$	$<1mg$
Resolution	$0.002^\circ /s$	$0.05mg$
GSensitivity	$0.001^\circ /s/g$	$0.4mg/g^2$
ScaleFactorError	$\leq 0.05\%$ (overtemperature)	
Alignment	$<1mrad$	

## Environment

Shock	500g $\frac{1}{2}$ sine 1ms powered on
Vibration	5.74g <sub>RMS</sub> (20Hz to 2kHz)
OperatingTemp	-40° C to +105° C
Non-OperatingTemp	-55° C to +125° C

## Interface — with VELOX™ Processing

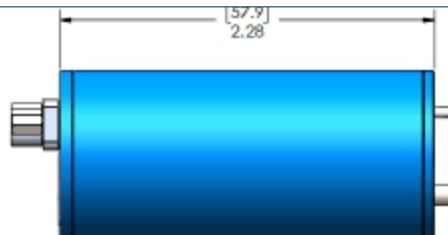
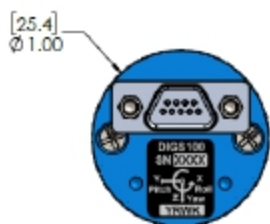
DataRate	100Hz or 200Hz (AHRS)
ExternalSync	Up to 1kHz (User Selectable)
StartUpTime	$<0.3s$
DataFormat	16/24/32-Bit
DataInterface	RS-422/RS-485
Bandwidth	250Hz
Software	Development Kit Available

## Electrical

InputVoltage	+3.8V to +5.5V Max. Input (single sided)
PowerConsumption	250mW Typical / 305mW Maximum

## Mechanical

Mass	$\leq 43$ grams
Size	$33$ Metric: 2.54 dia x 5.79 = 29.32 cm US: 1.00 dia x 2.28 = 1.79 in



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