

DATA SHEET

TMI-Orion Dynamics

DEPTH & AHRS SENSOR



Depth & AHRS sensor module: full scale of 500 or 2000 meters, temperature, pressure and AHRS configurable up to 100 Hz rating.

- ROV or AUV depth sensor,
- Auto depth routine,
- Underwater IMU and AHRS,
- Real time transmitter,
- Depth and attitude logger,
- Accurate survey,
- Rugged and compact,
- Externally or internally powered.

SPECIAL FEATURES

- 2 depth sensors available for 500 and 2000 meters,
- Pitch, roll and compensated compass available to provide a complete AHRS from 9 degrees of freedom,
- Time stamp / Pitch / Roll / Yaw / Heading / Depth / Temperature / Acc / Gyr / Mag / Pressure,
- Configuration of data outputs and data rate,
- Autonomous and integrated logger,
- High quality pressure sensor (piezoresistive),
- RTD temperature sensor,
- Pressure compensation regarding temperature,
- AHRS with magnetic field immunity.

TECHNICAL SPECIFICATIONS

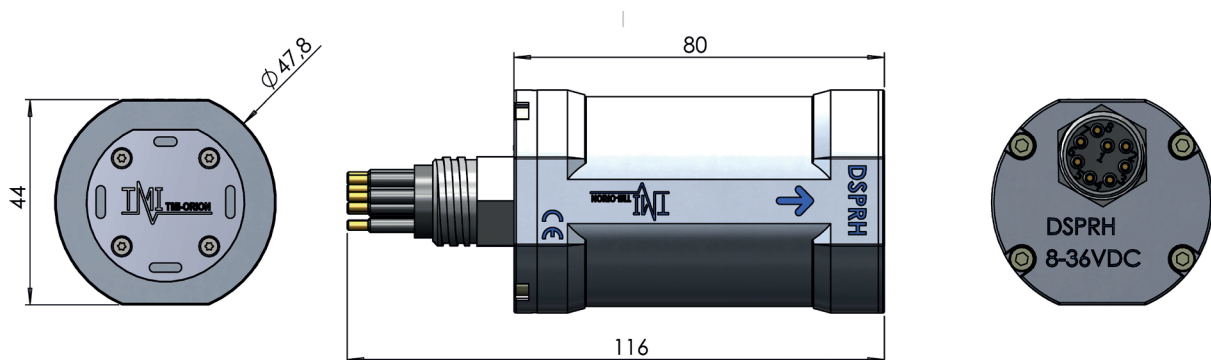
Material of the housing	316L Stainless steel for 500 m depth rate, Titanium for 2000 m depth rate			
Dimensions	Ø 48 mm x L. 80 mm (without the connector)			
Weight	0.5 kg in air			
Operation temperature	-10 °C to +60 °C			
Storage temperature	-20 °C to +60 °C			
AHRS specifications	Roll full scale	±180°	Yaw	0° to 360°
	Pitch full scale	±90°	Heading	0° to 360°
	Resolution	0.1°		
	Accuracy (dynamic)	1° RMS	Accuracy	2° RMS



TECHNICAL SPECIFICATIONS

	Depth 500 m	Depth 2 000 m
Pressure full scale	50 bar	200 bar
Pressure resolution	0.006 mbar (0.1 mm)	0.03 mbar (0.5 mm)
Relative depth accuracy	± 5 mm	± 25 mm
Pressure accuracy	±0.06 % FS	±0.09 % FS
Temperature resolution	0.001 °C	
Temperature uncertainty	±0.05 °C	
Power supply (external)	8-36 VDC / 50 mA at 24 V	
Power supply (battery)	2 x LR6 (3.6 V), user replaceable	
Connector	SubConn MCBH8M (other upon request)	
Data rate	Up to 100 Hz	
Interface	RS-485 data rate 9600 to 576 000 bauds (115 200 by default)	

Dimensions



SOFTWARE

The Depth & AHRS module comes with a configuration software (follow communication protocol).

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