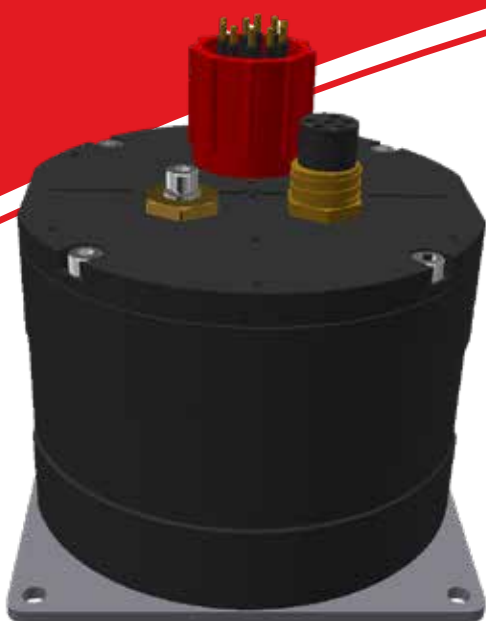# MOTUS Wave Height Sensor 6729

The MOTUS Wave Height Sensor is an accurate wave height sensor that processes wave data and configures to present parameters and non-directional wave spectrum directly. The sensor can be connected to an Aanderaa SmartGuard using the CAN Bus based AiCaP protocol, or it can be connected to most third-party dataloggers through the RS-232 interface.
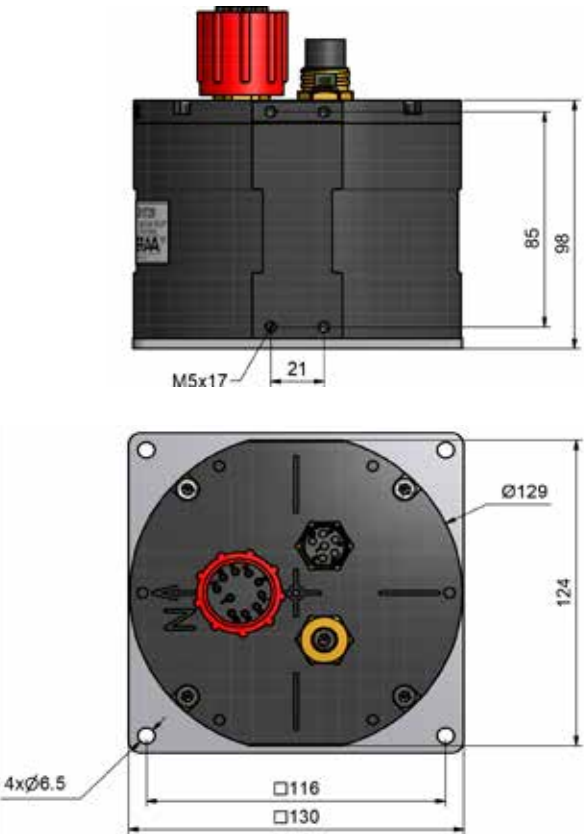
Key features:

- Configurable transfer function to compensate for buoy response.
- Compensation algorithm for installation outside of buoy center.
- Built-in solid state 9-axis accelerometer/gyroscope/magnetometer.
- A compact field friendly low power multi-parameter wave sensor.
- Wide range of parameters are calculated inside the sensor, configurable output.
- Direct readout of engineering data.
- Customer configurable separation frequency between wind and swell waves.
- Extremely rugged and watertight. Handles 30 meter knockdown.
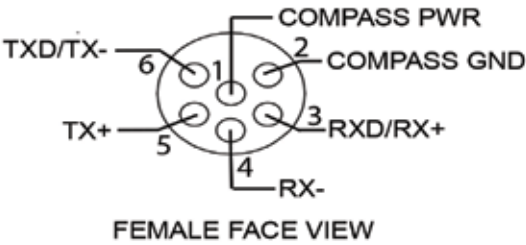- Options to upgrade sensor to wave direction parameters.

Applications:
Oceanographic research, Ports & Harbours, Offshore / Oil & Gas, Aquaculture / fisheries, Environmental management, Infrastructure design / Survey companies, Offshore wind.
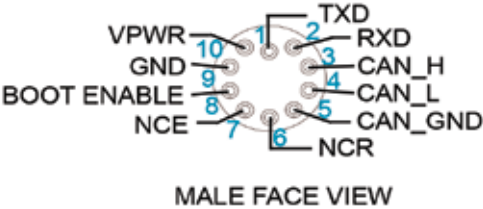
Specifications MOTUS WAVE HEIGHT SENSOR

Technical Details

Wave Height:	
Range:	30m
Resolution:	< 0.001m
Accuracy:	< ±0.05m or 1% of reading[1]
Wave Period:	
Range:	1.42 - 33s
Resolution:	< 0.05s
Accuracy :	< 1% [1]
Integration Time:	5 - 60 minutes
Wave Calculation Update Rate:	2 minutes
Sampling Frequency:	
IMU output rate:	100Hz
Interfaces:	AiCaP, RS-232
Power:	
Supply voltage:	6-30 Vdc
Power Consumption:	125mW @ 12V
Environmental:	
Depth rating:	30m
Operating Temperature:	-40 to +70°C
Dimensions:	130x130x110mm
Weight including bracket:	1.23kg
Materials:	POM, Stainless steel 316, Brass
Frequency Based Parameters:	
Significant Wave Height:	H_{mo}
Wave Height Swell/Wind:	H_{mo}
Peak Wave Period:	T_p
Mean Wave Period:	T_{m02}
Long Crestedness Parameter:	T
Wave Energy Spectrum:	$E(f)$
Time Based Parameters:	
Significant Wave Height:	$H_{1/3}$, $H_{1/10}$
Mean Wave Period:	T_z, $T_{1/3}$, $T_{1/10}$
Maximum Wave Height:	H_{max}
Wave Period:	T_{max}
Wave Height Max Crest:	C_{max}
Wave Height Max Trough:	Tr_{max}
Heave Timeseries (vertical):	$H(t)$

[1] Accuracy achieved under temperature from -5 to +40°C
[2] Rms 5-60 min.

The above specifications are for the stand-alone sensor only, not the installation it is utilized with.

Specifications subject to change without prior notice.

PIN CONFIGURATION WET-CON MCBH6F
EXTERNAL COMPASS INPUT*

FEMALE FACE VIEW

PIN CONFIGURATION WET-CON MCBH10M
AiCaP / RS-232

MALE FACE VIEW

✷ Only in use with Wave license enabled

Aanderaa.com/motus-stand-alone