

# MicroTilt



The CDL MicroTilt is a tiny, dynamic, pitch and roll sensor for use in a huge variety of applications. Measuring only 55mm x 37mm x 26mm OEM (matchbox size) the unit can provide highly dynamic pitch and roll readings at a frequency up to 50Hz.

The tiny size is possible by utilising MEMS (Micro-Electro-Mechanical Systems) sensors. MEMS is the integration of mechanical elements, sensors, actuators, and electronics on a common silicon substrate through the utilization of microfabrication technology.

At an output rate of 50Hz the sensor returns an accuracy better than 0.5 degrees over the range of +/- 30 degrees. A range of oversampling settings allows the selection of output rates down to 1Hz, where the accuracy is better than 0.2 degrees.

A topside software package provides graphic and numeric indication of the pitch and roll readings and allows the selection of a variety of data output formats.

Internal DIP switches allow the selection of various options within the device.

A surface version and two subsea versions (3,000m and 6,000m) are available. The unit can also be supplied as an OEM part for inclusion in your equipment.



## Features:

- Very lightweight
- Very low power
- Very small size
- Highly dynamic
- Surface version
- Subsea Version
- 0.2-0.5° acc @ +/-30°
- 2Hz-50Hz output

## Product Specification:

### Unit Performance:

Range	+/- 64 Degrees
Resolution	0.01 Degrees
Accuracy	0.5° accuracy to +/- 30° at maximum update rate (approx 50 updates per second) 0.2° accuracy to +/- 30° with oversampling (approx 2 updates per second)
Sample rates:	1Hz to 50Hz

### Telemetry Interface :

Baud rate:	9600 - 115200 baud
Data bits :	8
Stop bits :	1
Parity: :	None

### Depth Rating:

Standard Subsea	3,000 metres	(9,845 ft)
Special Subsea	6,000 metres	(19,690 ft)

### Power requirements:

Power input	7-24Vdc (Specify when ordering)
Current Consumption	<10mA@12Vtypical)

### Weights and Dimensions:

3000 metre subsea	50mm x 50 mm base, (2.0" x 2.0" base) 40mm high (1.58" high) 67mm high inc penetrator (2.64" inc penetrator) 500 grams (1.1 lb)
OEM	39mm dia x 16 high (1.5" dia x 5/8" high) 80 grams (2.8 oz)


### Mounting Details:

4 M3 mount holes 39mm square pitch or 32mm square pitch.

### Environment:

Temperature range operating :	-30 to +55°C
Temperature range storage :	-55 to +65°C

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