

**TWINCLINO
DUAL-AXIS
INCLINATION
SENSOR
PRODUCT SHEETS**

Twinclino: Dual-axis inclination sensor designed to withstand harsh operating conditions



TWINCLINO DUAL-AXIS INCLINATION SENSOR SPECIFICATIONS

GENERAL

	METRIC	IMPERIAL
Main dimensions	See detailed drawings	
Material housing	die-cast coated aluminum	
Weight in air	2.5 kg	5.5 lbs
IP protection	IP 66	
Operational temperature range	-20°C - +50 °C	-4 °F - +122 °F

ELECTRICAL – CURRENT DATA OUTPUT

	METRIC	IMPERIAL	
Measuring range	± 10°	± 30°	± 80°
Resolution	< 0.001°	< 0.003°	< 0.01°
Standardized sensitivity	0.8 mA/°	0.266 mA/°	0.1 mA/°
Linearity error	< 0.02°	< 0.06°	< 0.16°
Temperature drift of sensitivity	< 0.01 %FS / K	< 0.01 %FS / K	< 0.01 %FS / K
Temperature drift of zero point	< 10 ⁻³ degrees / K	< 10 ⁻³ degrees / K	< 10 ⁻³ degrees / K
Transverse sensitivity	< 0.5% at 45° tilt	< 0.5% at 45° tilt	< 0.5% at 45° tilt
Supply voltage	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Current consumption	< 30 mA	< 30 mA	< 30 mA
Data output	4 - 20 mA	4 - 20 mA	4 - 20 mA
Settling time	0.3 s	0.3 s	0.3 s
Zero degree output signal	12 mA	12 mA	12 mA

ELECTRICAL – VOLTAGE DATA OUTPUT

	METRIC	IMPERIAL	
Measuring range	± 10°	± 30°	± 80°
Resolution	< 0.001°	< 0.003°	< 0.01°
Standardized sensitivity	200 mV/°	66.67 mV/°	25 mV/°
Linearity error	< 0.02°	< 0.06°	< 0.16°
Temperature drift of sensitivity	< 0.01%FS / K	< 0.01%FS / K	< 0.01%FS / K
Temperature drift of zero point	< 10 ⁻³ degrees / K	< 10 ⁻³ degrees / K	< 10 ⁻³ degrees / K
Transverse sensitivity	< 0.5% at 45° tilt	< 0.5% at 45° tilt	< 0.5% at 45° tilt
Supply voltage	9 - 30 VDC	9 - 30 VDC	9 - 30 VDC
Current consumption	< 10 mA	< 10 mA	< 10 mA
Data output	0 - 5 V	0 - 5 V	0 - 5 V
Settling time	0.3 s	0.3 s	0.3 s
Zero degree output signal	2.5 V	2.5 V	2.5 V

SELECTION & OPTION LIST

For Twinclino the following configuration items must be determined:

- **Measurement range.** The sensor can be supplied with three different measurement ranges: $\pm 10^\circ$, $\pm 30^\circ$, and $\pm 80^\circ$. In order to maximize accuracy, the smallest possible range should be chosen.
- **Data output format.** The Twinclino sensor can be supplied with either a 4 – 20 mA or a 0 – 5 V data output format.

The following features are optional:

A Cable assembly

The sensor can be supplied with custom-made cabling in a variety of lengths, allowable loads, and connector types.

TYPICAL APPLICATIONS

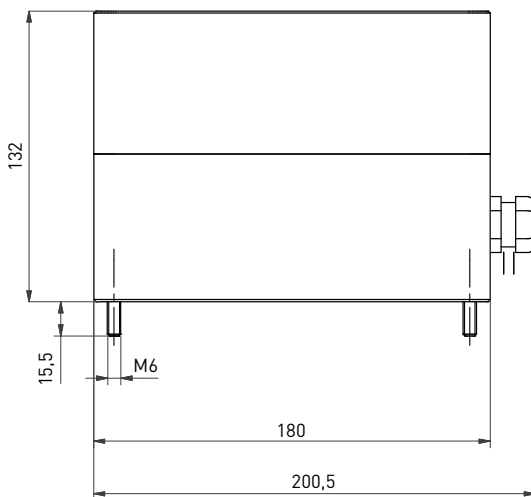
The Twinclino precision dual-axis inclinometer was specifically designed for harsh dredging and offshore conditions. Typical applications include:

- Vessel and pontoon roll and pitch measurement
- Crane roll and pitch measurement

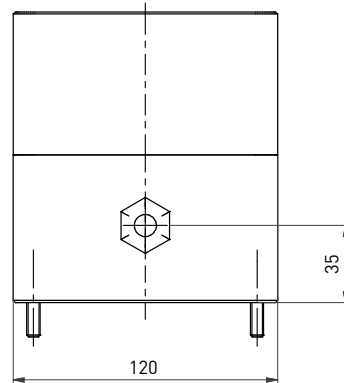


DIMENSIONS

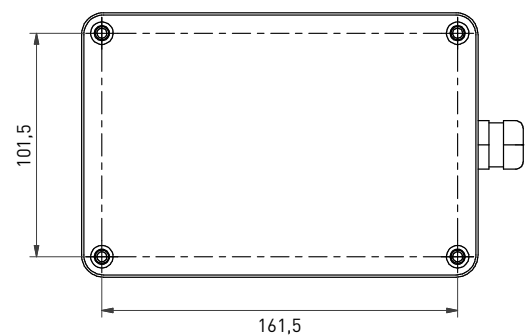
SIDE VIEW



FRONT VIEW



BOTTOM VIEW



3D CAD files in STEP format are available on www.seatools.com

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