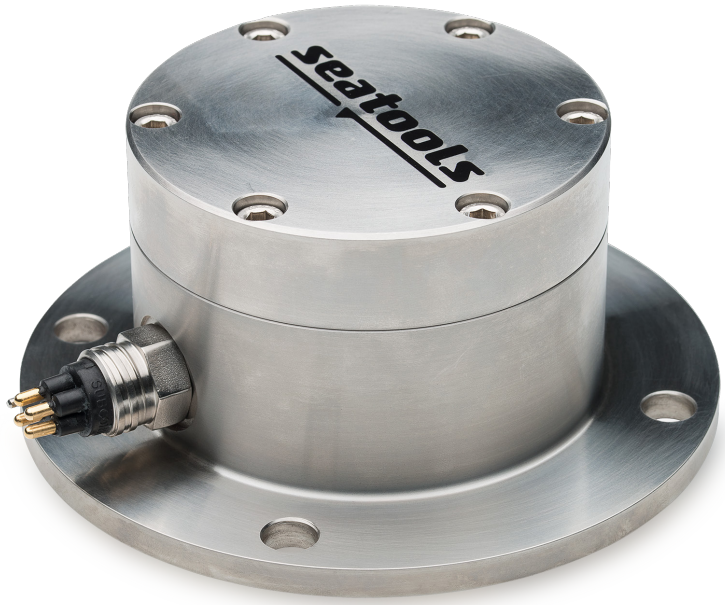
SINCLINO 100
SUBSEA INCLINATION SENSOR
PRODUCT SHEETS

Sinclino 100: Single-axis subsea inclination sensor designed to withstand harsh operating conditions



UNDERWATER SPECIALISTS

SELECTION & OPTION LIST

For every Sinclino 100 the following configuration items must be determined:

- **Measurement range.** The sensor can be supplied with four different measurement ranges: ±10º, ±30º, ±80º, and 360º. In order to maximize accuracy, the smallest possible range should be selected.
- **Data output format.** The Twinclino can be supplied with either a 4 – 20 mA or a 0 – 5 V data output format.

The following features are optional:

A Mounting materials

Through a welded connection, a stainless steel welding plate including cable support clamp enables straight-forward installation of the sensor on whatever desired surface.

B Connector type

By default, the sensor is supplied with a Subconn® Micro connector. Other connector types are available on request.

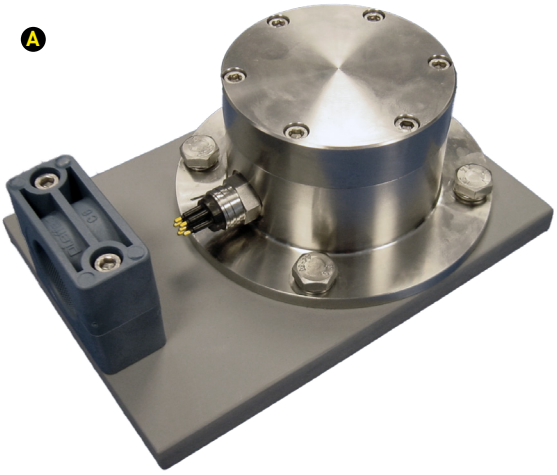
C Cable assembly

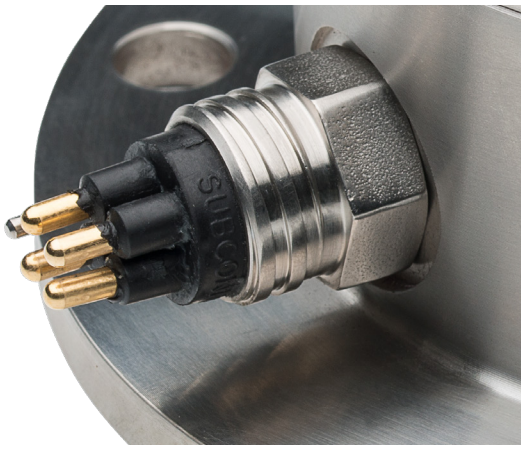
The sensor can be supplied with custom-made cabling in a variety of lengths, allowable loads, and connector types.

D Read-out unit

In case the sensor data is not interfaced with a dredging monitoring and control system, a dedicated read-out unit can be provided. The read-out unit can either come in the form of a built-in unit or stand-alone desk unit.

A





Subconn® Micro 4-pole Male

TYPICAL APPLICATIONS

The Sinclino 100 is specifically designed to perform accurate inclination measurement. The sensor can be installed on equipment operating in harsh subsea environments, including:

- Dredging equipment such as suction tubes and cutter ladders
- Trencher jet knives
- ROVs

SINCLINO 100 SUBSEA INCLINATION SENSOR SPECIFICATIONS

GENERAL

	METRIC	IMPERIAL
Main dimensions	See detailed drawings	
Material housing	Stainless steel 316L	
Weight in air	7.2 kg	15.9 lbs
Maximum working depth	3000 m	9842 ft
Operational temperature range	-20°C - +50 °C	-4 °F - +122 °F

ELECTRICAL – CURRENT DATA OUTPUT

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

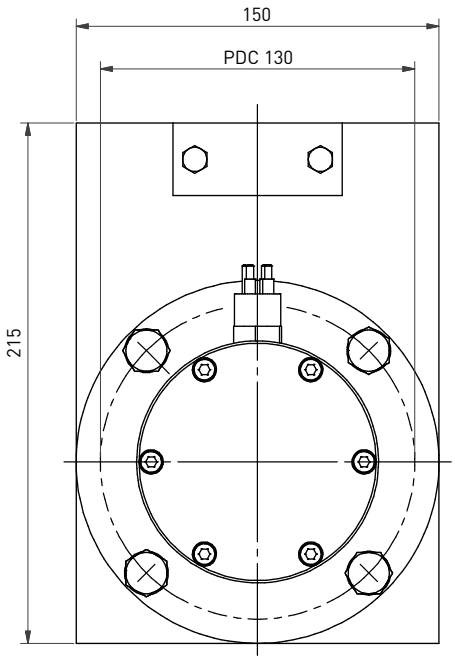
Measuring range	± 10°	± 30°	± 80°
Resolution	< 0.001°	< 0.003°	< 0.01°
Standardized sensitivity	200 mV/°	66.67 mV/°	25 mV/°
Linearity error	< 0.02°	< 0.06°	< 0.16°
Temperature drift of sensitivity	< 0.01%FS / K	< 0.01%FS / K	< 0.01%FS / K
Temperature drift of zero point	< 10^{-3} degrees / K	< 10^{-3} 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

ELECTRICAL – RS485 DATA OUTPUT

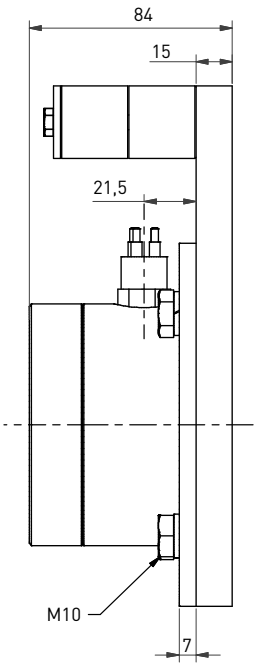
Measuring range	360°	360°	360°
Resolution	0.01°	0.01°	0.01°
Linearity error	0.25°	0.25°	0.25°
Transverse sensitivity	< 0.1° at 45° tilt	< 0.1° at 45° tilt	< 0.1° at 45° tilt
Supply voltage	9 - 15 VDC	9 - 15 VDC	9 - 15 VDC
Current consumption	40 mA	40 mA	40 mA
Data output	RS485	RS485	RS485
Settling time	0.3 s	0.3 s	0.3 s

DIMENSIONS

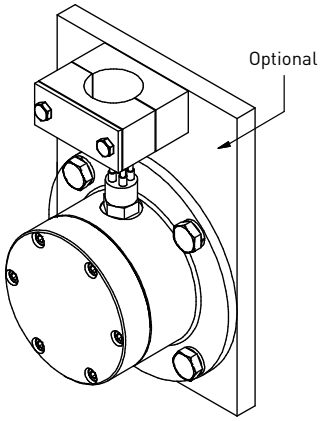
TOP VIEW



SIDE VIEW



3D VIEW



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

RELATED SERVICES

Client advisory

During the selection process, we consult clients to ensure they opt for the right inclination sensor. In our recommendation we take into consideration measurement range, required accuracy, system setup, data communication, mounting possibilities, vibrations, and other factors that are relevant to your case.

Custom-made versions

Next to our standardized series, Seatools offers custom-made subsea inclination sensors that are tailored to your specifications. Please contact our sales department to request a customized inclination sensor.

Subsea monitoring & control systems

Next to the delivery of stand-alone sensors, we can deliver full-fledged subsea monitoring systems, including all related systems such as mechanics, software, electronics, and controls.

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