

INCL-022

Submersible Inclinometer



Product highlights

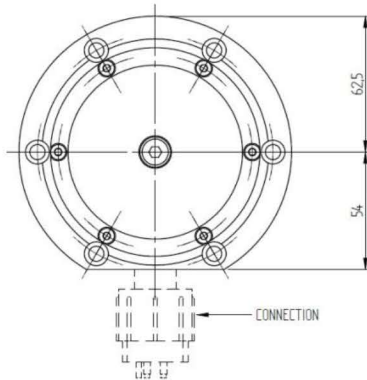
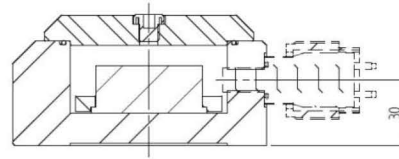
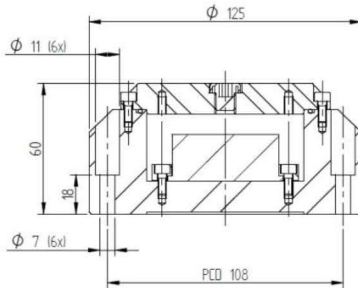
- Compact submersible inclinometer for harsh and abrasive environments.
- Designed for inclination measurement of suction tubes, booms and other (dredging) construction parts.
- Depth rate 1000msw.
- Corrosion resistant AISI 316 L stainless steel housing.
- Provided with a mounting hole pattern.
- Adjustable inclinometer.
- Available as ± 10 , ± 30 and ± 80 ° transmitter with 0...5 V or 4...20 mA output (special range on request).
- Also available in 360 ° digital version with RS485 serial output.
- Fitted with a BH4MSS stainless steel standard bulkhead connector.
- Optionally available with all stainless steel cable gland with integrated hose socket, standard metal shell, standard bulkhead or micro bulkhead connector.

Specifications (1)

The specifications are type specific. Type, angular range and address are specified on the *configuration certificate*.

Housing

- | | | | |
|--------------|--------------|-----------------------------|-------------|
| - Material | AISI 316 L | - Operating temperature | -20..+85 °C |
| - Dry weight | Approx. 3 kg | - Depth rate bulkhead types | 1000 msw |
| - Dimensions | See below | - Depth rate socket type | 100 msw |





Specifications (2)

Sensor

<i>Current output types:</i>	<u>I10</u>	<u>I30</u>	<u>I80</u>
- Max. angle range	-10..+10 °	-30..+30 °	-80..+80 °
- Supply voltage	10-30 VDC	10-30 VDC	10-30 VDC
- Current consumption	<25 mA	<25 mA	<25 mA
- Output	4-20 mA	4-20 mA	4-20 mA
- Linearity error	<0.02 °	<0.06 °	<0.16 °
- Resolution	0.005 °	0.005 °	0.01 °
- Cross-axis sensitivity	<1 % (max. 45°)	<1 % (max. 45°)	<1 % (max. 45°)
- Thermal zero shift	<+/-0.001 °/K	<+/-0.001 °/K	<+/-0.001 °/K
- Thermal sensitivity shift	<+/-0.01 %FS/K	<+/-0.01 %FS/K	<+/-0.01 %FS/K
- Time constant	0.3 s	0.3 s	0.3 s
- Operating temperature	-40..+85 °C	-40..+85 °C	-40..+85 °C
- Connections	2	2	2

<i>Voltage output types:</i>	<u>U10</u>	<u>U30</u>	<u>U80</u>
- Max. angle range	-10..+10 °	-30..+30 °	-80..+80 °
- Supply voltage	9-30 VDC	9-30 VDC	9-30 VDC
- Current consumption	10 mA	10 mA	10 mA
- Sensitivity	200 mV/°	66,67 mV/°	25 mV/°
- Bias	2.5 V	2.5 V	2.5 V
- Linearity error	<0.02 °	<0.06 °	<0.16 °
- Resolution	0.005 °	0.005 °	0.01 °
- Cross-axis sensitivity	<1 % (max. 45°)	<1 % (max. 45°)	<1 % (max. 45°)
- Thermal zero shift	<+/-0.001 °/K	<+/-0.001 °/K	<+/-0.001 °/K
- Thermal sensitivity shift	<+/-0.01 %FS/K	<+/-0.01 %FS/K	<+/-0.01 %FS/K
- Time constant	0.3 s	0.3 s	0.3 s
- Operating temperature	-40..+85 °C	-40..+85 °C	-40..+85 °C
- Connections	4	4	4

<i>Serial output type:</i>	<u>S360</u>
- Angle range	360 °
- Supply voltage	9-15 VDC
- Current consumption	+/-40 mA
- Output	RS485
- Error	Typ. +/-0.25 °
- Resolution	0.01 °
- Time constant	0.3 s (programmable)
- Operating temperature	-40..+85 °C
- Connections	4

Specifications (3)

Connection

- Waterblock
- Cable outer diameter
- Hose inner diameter
- Dimensions

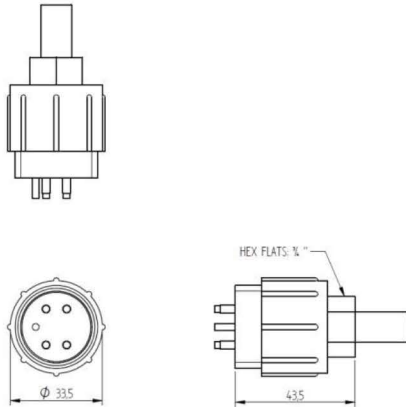
SOCK

- No
- < 12 mm
- 25 mm
- See below

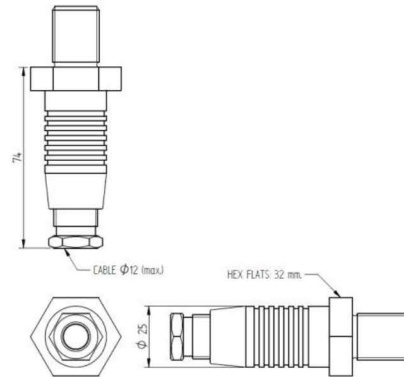
Bulkheads

- Yes
- N.A.
- N.A.

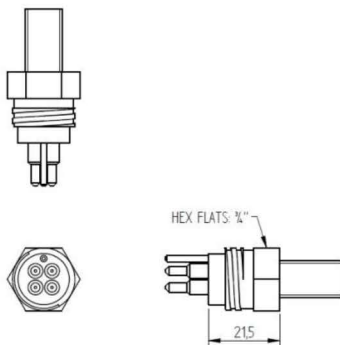
INCL-022-BHxMSS (x ≤ 5)



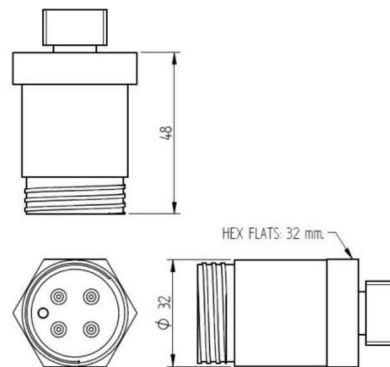
INCL-022-SOCK



INCL-022-MCBHxMSS (x ≤ 8)



INCL-022-BCRxM (x ≤ 4)



Type code definition

Type code	Specification	-	Sensor	-	Range	-	Interface	-	Connection
INCL-022	Submersible inclinometer, compact, IP68 < 120 m								
Sensor	Analog, current output Max. range: $\pm 10^\circ$, res. < 0.001° Max. range: $\pm 30^\circ$, res. < 0.003° Max. range: $\pm 80^\circ$, res. < 0.01° Set range Connections: 2	-	I10 I30 I80	-	xx...yy°	-	4...20 mA		
	Analog, voltage output Max. range: $\pm 10^\circ$, res. < 0.001° Max. range: $\pm 30^\circ$, res. < 0.003° Max. range: $\pm 80^\circ$, res. < 0.01° Set range Connections: 4	-	U10 U30 U80	-	xx...yy°	-	0...5 V		
	Digital, serial output Range: 360° , res. < 0.01° Interface: RS485 Connections: 4	-	S360	-	0...360°	-	RS485		
Conn.	Standard bulkhead, x (≤ 10) pin (male), stainless steel							-	BHxMSS
	Micro bulkhead, x pin (male), stainless steel							-	MCBHxMSS
	Standard metal shell bulkhead, x (≤ 4) pin (male), stainless steel							-	BCR200xM
	Cable gland + hose socket, stainless steel							-	SOCK
Example	INCL-022	-	I80	-	-30...+90°	-	4...20 mA	-	BH4M