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INCL-022

Submersible Single Axis Inclinometer

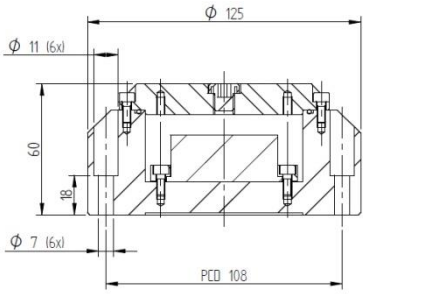
Highlights

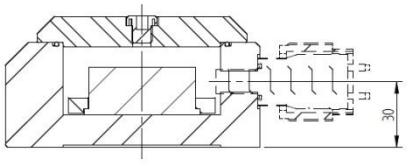
- Compact submersible inclinometer for harsh and abrasive environments.
- Designed for inclination measurement of suction tubes, booms and other (dredging) construction parts.
- Depth rate 1000msw.
- Corrosion resistant AISI 316L stainless steel housing.
- Provided with a mounting hole pattern.
- Adjustable single axis 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 (MC)BHx stainless steel standard bulkhead connector, others on request.
- Optionally available with stainless steel cable gland with integrated hose socket.

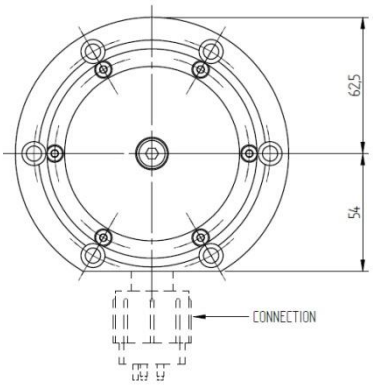
Specifications (1)

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

Mechanical		Environmental	
- Material	AISI 316L	- 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
- Material	AISI 316L	- Operating temperature	-20..+85 °C







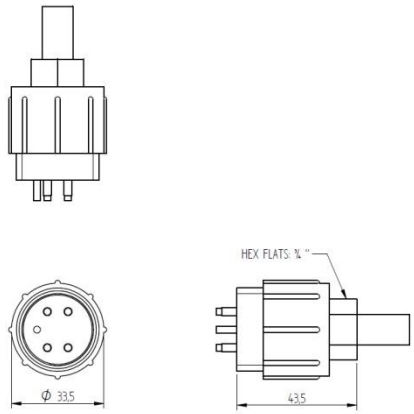
Specifications (2)

Sensor			
Current output types:	I10	I30	I80
- 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
Voltage output types:	U10	U30	U80
- 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
Serial output type:	S360		
- 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		

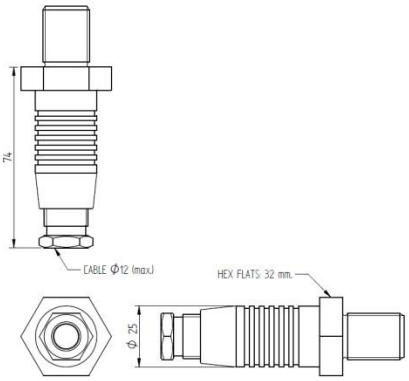
Specifications (3)

Connection	SOCK	Bulkheads
- Waterblock	No	Yes
- Cable outer diameter	< 12 mm	N.A
- Hose inner diameter	25 mm	N.A.
- Dimensions	See below	

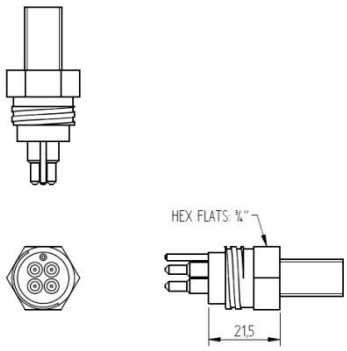
INCL-022-BHxMSS (x ≤ 5)



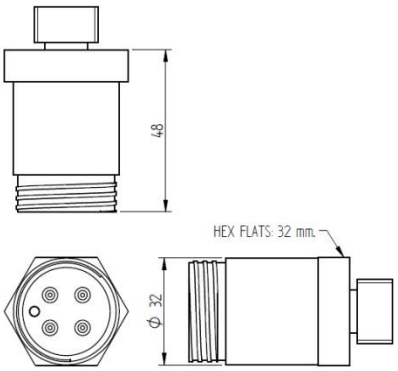
INCL-022-SOCK



INCL-022-MCBHxMSS (x ≤ 8)



INCL-022-BCRxM (x ≤ 4)



Type code definition

Type code	Specification	-	Sensor	-	Range	-	Interface	-	Connection
INCL-022	Submersible Single Axis Inclinometer								
Sensor	Analog, current output Max. range: ±10°, res. < 0.001° Max. range: ±30°, res. < 0.003° Max. range: ±80°, res. < 0.01° Set range Connections: 2	- - -	I10 I30 I80	-	xx...yy°	-	4...20 mA		
	Analog, voltage output Max. range: ±10°, res. < 0.001° Max. range: ±30°, res. < 0.003° Max. range: ±80°, 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