

INCL-027

Submersible Double Axis Inclinometer



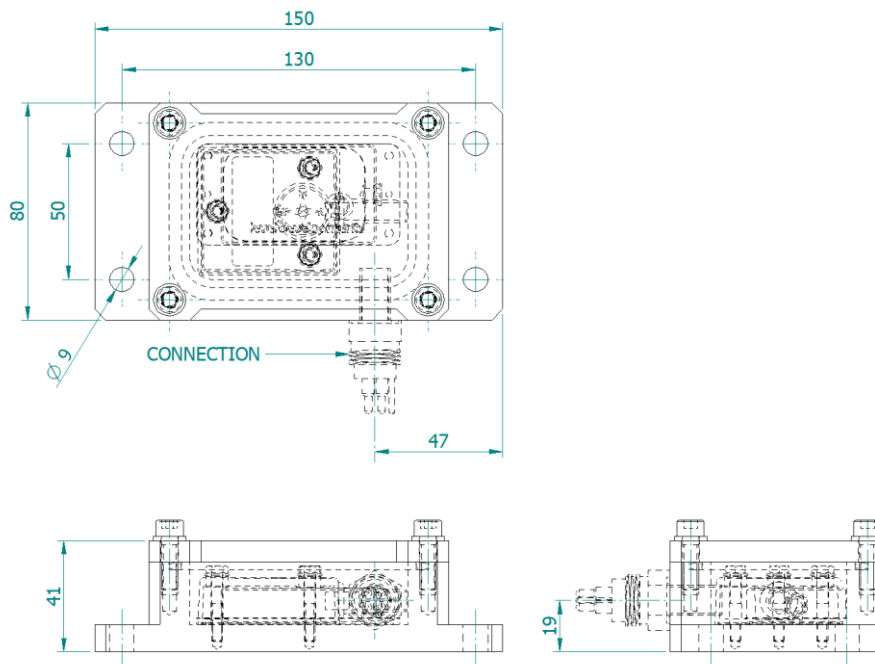
Highlights

- Compact submersible inclinometer for harsh and abrasive environments
- Designed for inclination measurement of subsea structures
- Depth rate 500msw
- Corrosion resistant AISI 316L stainless steel housing
- Provided with a mounting hole pattern
- Adjustable 2-axis inclinometer
- Available as ± 10 , ± 20 , ± 40 , ± 60 and $\pm 80^\circ$ transmitter (special ranges available on request)
- Also available with various communication interfaces (Analog Current 4-20 mA + RS232, Analog Voltage 0-10 V + RS232, CANopen)
- Fitted with a (MC)BHx stainless steel standard micro 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 316 L	- Operating temperature	-20..+70 °C
- Dry weight	Approx. 2,5 kg	- Depth rate bulkhead types	500 msw
- Dimensions	See below	- Depth rate socket type	100 msw
- Material	AISI 316 L	- Operating temperature	-20..+70 °C



Sensor	I10	I20	I40	I60	I80
Current / RS232 output types:					
- Number of axis	2	2	2	2	2
- Max. angle range	-10..+10 °	-20..+20 °	-40..+40 °	-60..+60 °	-80..+80 °
- Supply voltage	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC
- Current consumption	<50 mA	<50 mA	<50 mA	<50 mA	<50 mA
- Output	4-20 mA	4-20 mA	4-20 mA	4-20 mA	4-20 mA
- Linearity error	+/-0.02%	+/-0.02%	+/-0.02%	+/-0.02%	0.02%
- Resolution	0.01 °	0.01 °	0.01 °	0.01 °	0.01 °
- Thermal zero shift	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K
- Absolute Accuracy	+/-0.1 °	+/-0.1 °	+/-0.1 °	+/-0.1 °	+/-0.1 °
- Time constant	125 msec	125 msec	125 msec	125 msec	125 msec
- Operating temperature	-40..+85 °C	-40..+85 °C	-40..+85 °C	-40..+85 °C	-40..+85 °C

Specifications (2)

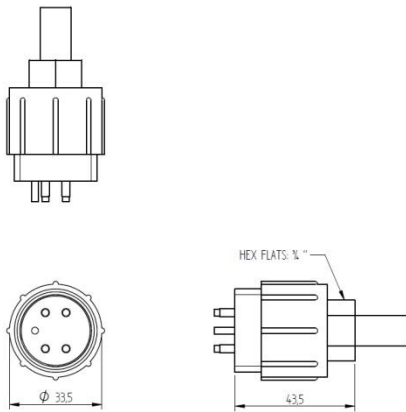
Sensor						
Sensor	U10	U20	U40	U60	U80	
Voltage + RS232 output types:						
- Number of axis	2	2	2	2	2	
- Max. angle range	-10..+10 °	-20..+20 °	-40..+40 °	-60..+60 °	-80..+80 °	
- Supply voltage	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC	
- Current consumption	<50 mA	<50 mA	<50 mA	<50 mA	<50 mA	
- Output	0 – 10 V	0 – 10 V	0 – 10 V	0 – 10 V	0 – 10 V	
- Linearity error	+/-0.02%	+/-0.02%	+/-0.02%	+/-0.02%	0.02%	
- Resolution	0.01 °	0.01 °	0.01 °	0.01 °	0.01 °	
- Thermal zero shift	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	
- Absolute Accuracy	+/-0.1 °	+/-0.1 °	+/-0.1 °	+/-0.1 °	+/-0.1 °	
- Time constant	125 msec	125 msec	125 msec	125 msec	125 msec	
- Operating temperature	-40..+85 °C	-40..+85 °C	-40..+85 °C	-40..+85 °C	-40..+85 °C	

Sensor						
Sensor	C10	C20	C40	C60	C80	
CANopen output types:						
- Number of axis	2	2	2	2	2	
- Max. angle range	-10..+10 °	-20..+20 °	-40..+40 °	-60..+60 °	-80..+80 °	
- Supply voltage	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC	
- Current consumption	<65 mA	<65 mA	<65 mA	<65 mA	<65 mA	
- Output	CANopen	CANopen	CANopen	CANopen	CANopen	
- Linearity error	+/-0.02%	+/-0.02%	+/-0.02%	+/-0.02%	0.02%	
- Resolution	0.01 °	0.01 °	0.01 °	0.01 °	0.01 °	
- Thermal zero shift	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	+/-0.004 °/K	
- Absolute Accuracy	+/-0.1 °	+/-0.1 °	+/-0.1 °	+/-0.1 °	+/-0.1 °	
- Time constant	150 msec	150 msec	150 msec	150 msec	150 msec	
- Operating temperature	-40..+85 °C	-40..+85 °C	-40..+85 °C	-40..+85 °C	-40..+85 °C	

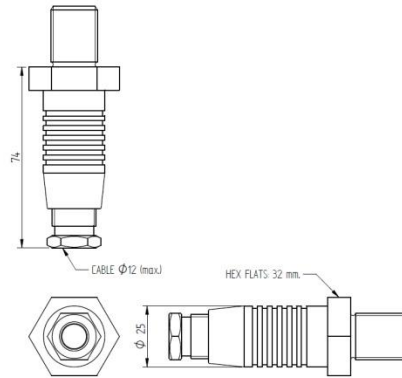
Specifications (3)

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

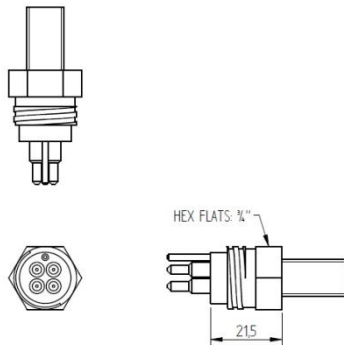
INCL-027-BHxMSS (x ≤ 5)



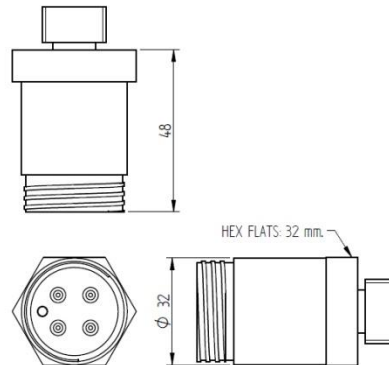
INCL-027-SOCK



INCL-027-MCBHxMSS (x ≤ 8)



INCL-027-BCRxM (x ≤ 4)



Type code definition

Type code	Specification	-	Sensor	-	Interface	-	Connection
INCL-027	Submersible Double Axis Inclinometer						
Sensor	Analog, current output / RS232 Max. range: $\pm 10^\circ$ Max. range: $\pm 20^\circ$ Max. range: $\pm 40^\circ$ Max. range: $\pm 60^\circ$ Max. range: $\pm 80^\circ$ Set range Connections: 4	-	I10 I20 I40 I60 I80	-	4...20mA		
	Analog, voltage output / RS232 Max. range: $\pm 10^\circ$ Max. range: $\pm 20^\circ$ Max. range: $\pm 40^\circ$ Max. range: $\pm 60^\circ$ Max. range: $\pm 80^\circ$ Set range Connections: 4	-	U10 U20 U40 U60 U80	-	0...10 V		
	CANopen Max. range: $\pm 10^\circ$ Max. range: $\pm 20^\circ$ Max. range: $\pm 40^\circ$ Max. range: $\pm 60^\circ$ Max. range: $\pm 80^\circ$ Set range Connections: 5	-	C10 C20 C40 C60 C80		CANopen		
Conn.	bulkhead, x (≤ 10) pin (male), stainless steel			-			BHxMSS
	Standard 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-027	-	I80	-	4...20mA		MCBH4MSS