Cichocki DESIGN

PRODUCT DATASHEET · REV A

AC-PSH-04

4th Generation Subsea Proximity Sensor



Reliable subsea position and presence sensor for ROV tooling, winches, valve packs and offshore systems.

3000 m
depth rating (302 bar)

100%
hyperbarically tested, with certificate

25 mm
sensing distance, supplied magnet

8–30 V
DC supply, PNP or NPN, NO or NC

KEY BENEFITS

- Simple through-hole installation
- No moving parts at sensing face
- 100% hyperbarically tested
- Low maintenance design
- Cost-effective subsea position sensing

DESCRIPTION

AC-PSH-04 was developed as a cost-effective alternative to traditional subsea proximity sensors, while maintaining 100% hyperbaric testing and 3000 m qualification.

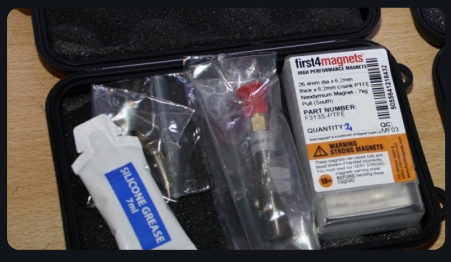
A magnet on the moving part switches the sensor through a solid 316L face. The electronics sit in a sealed one-atmosphere housing, secured with RTV, behind an industrial PNP/NPN output stage protected against reverse polarity, short circuit and surge. Cable assemblies are made to customer length.

KEY FEATURES

- **Solid 316L sensing face** – 3.5 mm wall, passivated
- **PNP or NPN, NO or NC** – factory configured
- **Rugged protection** – reverse polarity, short circuit, IEC 61000-4-5 surge
- **Wide supply 8–30 VDC** – 12 V and 24 V systems
- **Corrosion-proof magnet** – NdFeB fully encapsulated in PTFE
- **SubConn Micro connector** – 3-pin, 316 stainless

TYPICAL APPLICATIONS

- ROV manipulators & tooling
- Torque tools & hot stabs
- Subsea winches & LARS
- Valve & actuator position
- Subsea control systems
- Trenchers & subsea machinery



Typical AC-PSH series delivery kit shown.

DELIVERED READY TO INSTALL

Each unit is supplied with a serial-numbered hyperbaric pressure test certificate.

Protective hard case with the sensor, PTFE-encapsulated actuator magnet with A4 screw, 2× M20 nuts and silicone grease for the connector.

Developed from multiple generations of subsea proximity sensors and field-proven applications in ROV and offshore systems.

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SPECIFICATIONS

AC-PSH-04

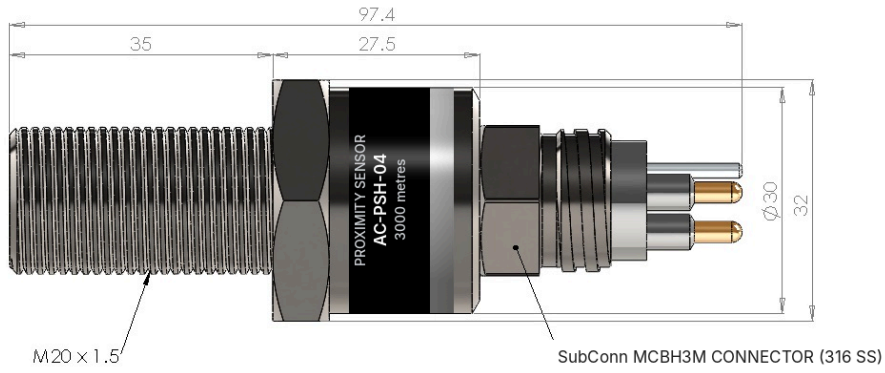
ELECTRICAL

Sensing method	Hall effect, unipolar, magnet actuated
Sensing distance	25 mm axial, with supplied magnet
Supply voltage	8 – 30 VDC (24 VDC nominal)
Supply current	< 10 mA (output off, no load)
Output	PNP or NPN switch, NO or NC
Output current	150 mA max. continuous
Short-circuit protection	Current limit ~250 mA, auto-recovery, thermal shutdown
Reverse polarity	Protected on all three wires
Surge / transients	IEC 61000-4-5 ±1.2 kV; TVS on supply and output; 65 V abs. max
Switching frequency	Max. 100 Hz

MECHANICAL

Depth rating	**3000 m (302 bar)**
Proof test	Every unit hyperbarically tested, serial-numbered certificate
Housing	316L stainless steel (1.4404), passivated
Sensing face	Solid 316L, 3.5 mm wall
Connector	SubConn Micro Circular MCBH3M, 316 SS
Mounting	Through-hole M20×1.5, 2× M20 nuts supplied
Dimensions	Ø32 × 97.4 mm (incl. connector)
Weight	Approx. 330 g in air
Temperature	Operating −4 to +60 °C · Storage −40 to +60 °C
Actuator magnet	NdFeB, PTFE encapsulated, Ø26.4 × 6.2 mm, countersunk, 7 kg pull (supplied)

DIMENSIONS (mm)



PINOUT



1	+ Supply (8–30 VDC)	black
2	Signal output	white
3	0 V / GND	green

Wire colours refer to the standard SubConn Micro 3-way cable. Face view of the male bulkhead is indicative; refer to the SubConn drawing for exact contact positions.

ORDERING INFORMATION

AC-PSH-04-P-NO	PNP, normally open
AC-PSH-04-P-NC	PNP, normally closed
AC-PSH-04-N-NO	NPN, normally open
AC-PSH-04-N-NC	NPN, normally closed
AC-PSH-CBL-xx	Mating cable (SubConn MCIL3F), length xx m
AC-PSH-MAG	Spare PTFE-encapsulated magnet

NO: output active when the magnet is at the sensing face. Supplied in a protective hard case: sensor with connector dust cap, PTFE magnet Ø26.4 × 6.2 mm (7 kg pull) with A4 screw, 2× M20 nuts, silicone grease, test certificate.