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Precision Cargo Level Sensor

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Pressure Sensor



- Absolute gauging technique
Sensor completely sealed
- Ceramic or inconel diaphragm
- Housing material resistive to any media (eg. Titanium)
- Semi flush diaphragm and low movement - not affected by sludge or sediments
- Extremely robust and accurate sensors

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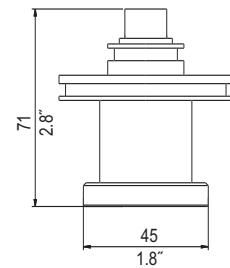
Precision Cargo Level Sensor

Typical applications:

- Precision pressure measurement for cargo level gauging
- Used in combination with CARGOMASTER®
- Secondary system in hybrid solution, in combination with BM 70M Precision level radar

Technical data

Pressure element	Wheatstone bridge
Principle of measurement	Absolute pressure (no vent tube)
Bridge resistance	350 ohms
Diaphragm	Inconel 625
Housing and flange	Incoloy 825
Pressure range (absolute)	0.7...2 bar / 10...30 psi; 0.7...3.5 bar / 10...50 psi; 0.7...5.5 bar / 10...80 psi
Overpressure	5xFRO
Typical system accuracy (pressure)	Better than $\pm(0.03\%$ of Full Range Output $\pm 0.02\%$ of reading)
Sensitivity	3mV/V
Temperature element	Pt 1000
Accuracy	Better than $\pm 0.2^\circ\text{C}$ / $\pm 32^\circ\text{F}$ (Class A)
Operating temperature	$-40\text{...}+125^\circ\text{C}$ / $-40\text{...}+260^\circ\text{F}$
Connection	Bayonet type 6 way shell size 10 or moulded cable, cut to fit
Ex approval	EEx ia IIC T4...T6
Type approvals	All major classification societies



Dimensions in mm and inches

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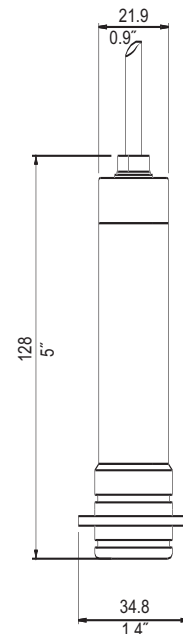
Pressure Sensor

Typical applications:

- Cargo inert gas pressure (IGP)
- Ballast and FW tanks
- Fuel and diesel oil tanks
- Draft measurements
- Cargo manifold pressure

Technical data

Pressure element	Ceramic Capacitive Element
Principle of measurement	Absolute pressure (no vent tube)
Ceramic diaphragm	96% AL ₂ O ₃
Housing	Titanium GR II
Sealing	Filled with PUR
Pressure ranges (absolute)	Overpressure capabilities
0.7...2 bar / 10...30 psi	18 bar / 260 psi
0.7...3.5 bar / 10...50 psi	22 bar / 320 psi
0.7...5 bar / 10...70 psi	25 bar / 360 psi
0...20 bar / 0...290 psi	40 bar / 580 psi (higher range on request)
Burst pressure	150 bar / 2200 psi
Moving distance pressure element	30 μm / 0.001" (not affected by build-up on sensor diaphragm)
Overall accuracy	$\pm 0.25\%$ FRO
Long term stability	$\pm 0.05\%$ FRO
Compensated temperature range	$-20\text{...}+80^\circ\text{C}$ / $-4\text{...}+175^\circ\text{F}$
Operating temperature range	$-40\text{...}+125^\circ\text{C}$ / $-40\text{...}+260^\circ\text{F}$
Supply voltage	18...32 V DC
Signal output	4...20 mA / RS 485 / 1...10 mV
Ex approval	EEx ia IIC T4...T6
Type approvals	All major classification societies



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