AcraSensor

Diaphragm Sensing Unit

450 SERIES

- Flush mounting sanitary design
- Pneumatic output, or electronic (4 mA to 20 mA) output when paired with KING-GAGE 860 Series Sensor Control or 868 Series D/P Purge Control
- Field replaceable sensor diaphragm
- Stable output during CIP cycles
- FDA-approved silicone rubber O-ring seal forms a crevice-free, positive compression seal between the diaphragm probe and mounting shell
- Flush weld mountings are available with product contact surfaces of 316L Stainless Steel
- Diaphragm Sensing Unit meets the requirements of 3-A

APPLICATIONS

- Food & beverage
- Chemical processing
- Power generation
- Pharmaceutical
- Water & wastewater
- Pulp & paper
- Marine

SPECIFICATIONS	
Sensitivity	Less than .001 psi (±.02 inH_2O .508 mm water)
Repeatability	Better than ±.002 psi (± .05 inH_2O/ 1.27 mm water)
Accuracy	±.007 psi (±0.2 inH_2O/ .508 mm water)
Temperature range	30 ° F to 300 ° F (0 °C to 149 °C)
Pressure range	Sensor is a 1:1 pneumatic force balance diaphragm capable of repeating hydrostatic pressure as an equivalent pneumatic output. Functional pressure limit is 130 psi (or 3598 inches @ 1.00 specific gravity) determined by supply pressure (35–150 psi) less 20 psi.
Maximum depth measurement	1937 inH_2O (49.0 m water)
Wetted materials	Silicone rubber O-ring (meets the requirements of 3-A) Titanium diaphragm, commercially pure (meets the requirements of 3-A 74-07). Optional diaphragm materials: Silicone rubber Fittings/adapter wetted surfaces are typically 316L Stainless Steel (as supplied by KING-GAGE).
Air Consumption	Total air consumption of sensor package (including sensor control) is less than 10 CFH or 0.16 scfm.
D/P sensor control combined accuracy*	0 psid to 5 psid transmitter/control ±0.34% full scale 0 psid to 10 psid transmitter/control ±0.27% full scale 0 psid to 15 psid transmitter/control ±0.24% full scale 0 psid to 30 psid transmitter/control ±0.22% full scale 0 psid to 50 psid transmitter/control ±0.21% full scale
Voltage supply requirements	14 Vdc tp 40 Vdc (unregulated) to power signal loop using 868 D/P Sensor Control.
Compressed air supply requirements	35 psig to 150 psig (2.4–10.3 bar); clean, dry air (or inert gas)

* Combined accuracy refers to the primary accuracy of the sensor in combination with the secondary accuracy of the D/P transmitter.

⚠ **WARNING:** This product can expose you to chemicals including Lead and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

ORDERING INFORMATION

SERIES	**450**					
MOUNTING APPLICATIONS	**1**	Short mount (single wall, non-insulated tank) *	**2**	Standard mount (insulated wall up to 4.5" / 114 mm; or adapter for non-KING-GAGE "short" shell) **	**3**	Long mount (insulated wall up to 6.75" / 171 mm; or adapter for non-KING-GAGE "standard" shell) ***
OUTPUT / CONNECTIONS	**0**	Pneumatic (pressure) 1/4" tube Swagelok	**3**	Electronic (4-20 mA), 1/4" tube Swagelok		
	1	Pneumatic (pressure) 1/4" tube Polyflo	**4**	Electronic (4-20 mA) 1/4" tube Polyflo		
PRESSURE RANGES	**02**	0-2 psid / 0-0.14 bar	**15**	0-15 psid / 0-1.03 bar	**38**	Pneumatic, includes SafeGard option (25-650" range)
	05	038-5 psid / 0-0.3 bar	**30**	0-30 psid / 0-2.06 bar	**48**	Pneumatic, includes SafeGard option (650-1750" range)
	10	0-10 psid / 0-0.69 bar	**50**	0-50 psid / 0-3.44 bar	**58**	Pneumatic, none

NOTE: AcraSensor packages listed include diaphragm sensing unit, 860 Series Sensor Control or 868 Series D/P Purge Control, Swagelok or PolyFlo fittings, and bundled 3-tube airline cable

* Use with weld-in shell 1777-2 or to fit 2" sanitary clamp fitting adapter

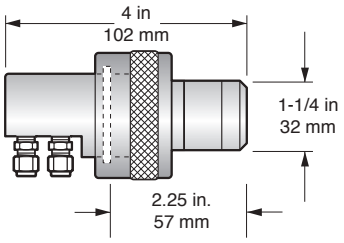
** Use with weld-in shell 1777 or to fit adapter for non-KING-GAGE "short" shell

*** Use with weld-in shell 1777-3 or to fit adapter for non-KING-GAGE "standard" shell

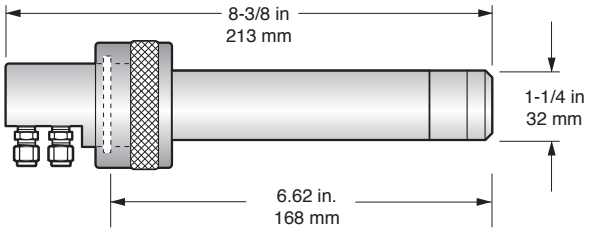
EXAMPLE

450 2 – 3 – 05

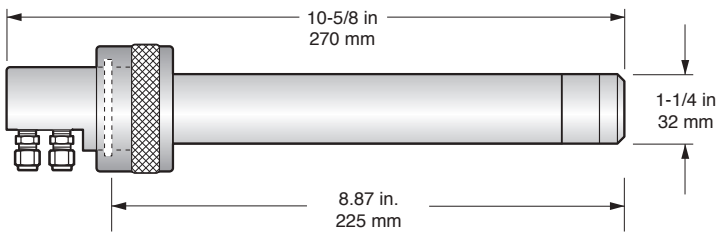
Series ..... 450 Series
Mounting application ..... Standard mount
Output/Connection ..... Electronic (4-20 mA), 1/4" tube Swagelok
Pressure range ..... 038-5 psid / 0-0.3 bar



Short Mount AcraSensor



Standard Mount AcraSensor



Long Mount AcraSensor