

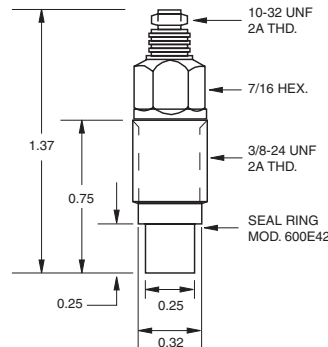
Quartz

Type 607C

High Pressure Sensors

The time-tested Model 607C series are specifically designed for applications involving high pressures and very high instantaneous combustion temperatures. The 607C incorporates a highly flexible and relatively robust diaphragm, eliminating errors due to thermal stresses at the pressure sensing end. A thin layer of ablative coating aids in eliminating these errors.

- High impedance, charge mode
- 100 000 psi measuring range
- 1% Non-linearity
- Conforming to CE



Description

This quartz pressure transducer is ideal for measuring peak firing pressures in ballistic applications. The 607C series pressure transducers have machined diaphragms for specialized applications requiring the versatility of a high pressure range with linearity of 1% or better. Endurance is excellent for this series, making them the ideal selection for continuous duty as experienced in ultra-high pressure pumps, compressors, high evaluation studies, and ballistics measurements up to 100,000 psi.

CE Compliant Information

Because high impedance, charge mode sensors contain no electronics, CE certification to the EMC Directive is not appropriate. When a high impedance accelerometer is used with a CE certified signal conditioner (i.e., charge amplifier...), it is said that this system is CE compliant.

Technical Data

Type	Units	607C1/607C2	607C3/607C4
Measuring Range	psi	0 ... 70 000	0 ... 100 000
Maximum Pressure	psi	100 000	125 000
Threshold	psi	0.2	0.2
Sensitivity nom.	pC/psi	-0.12	-0.12
Natural Frequency nom.	kHz	250	250
Rise Time 10 ... 90%	µs	1.5	1.5
Capacitance	pF	6	6
Non-linearity	% FSO	≤±2 ⁽¹⁾	≤±2 ⁽¹⁾
Acceleration Sensitivity	psi/g	0.02	0.02
Shock max.	g _{pk}	15 000	15 000
Intermittent Gas Temperature	°F	3000	3000
Temperature Coefficient of Sensitivity	%/°F	0.01	0.01
Temperature Range Operating	°F	-320 ... 500	-320 ... 500
Insulation Resistance	Ω	≥10 ¹³	≥10 ¹³

(1) Linearity for the 607C2 and 607C4 = ≤±1 %FSO

continued...

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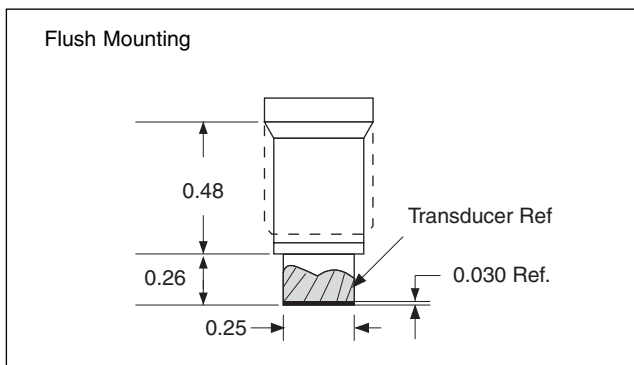
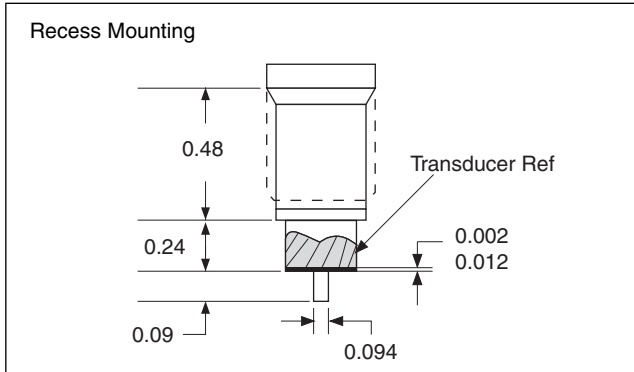
Technical Data

Type	Units	607C1/607C2	607C3/607C4
Construction:			
Sensing Element	type	quartz-compression	quartz-compression
Housing/Diaphragm	material	maraging steel	maraging steel
Sealing -housing/connector	type	welded/epoxy	welded/epoxy
Weight			
	grams	12	12
Mounting Torque:			
600E42	lbf-ft	15	15
600A10	lbf-ft	20	20

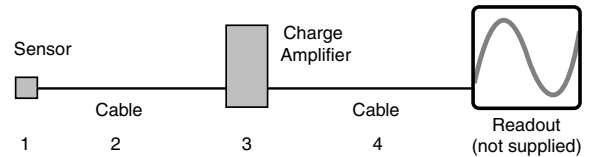
1 psi = 0.06894 ... bar = 6.894 kilopascal, 1 inch = 25.4 mm, 1 gram = 0.03527 oz, 1 lbf-in = 0.1129 Nm

Mounting

In all high pressure and high temperature applications, proper sensor mounting is very important. It is imperative that the sensor seats firmly in the mounting hole and that the installation does not leak under full pressure. Excessive sealing torque should not be used since this will deform the mounting hole or overstrain the sensor.



Ordering Information



sp = specify cable length in meters

- 1 - 607C pressure sensor, specify type
- 2 - 1631Asp low noise sensor cable or 1631Csp premium, low noise sensor cable, 10-32 pos to BNC pos.
- 3 - 5000 charge amplifier series
- 4 - 1511sp output cable, BNC pos. to BNC pos.

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