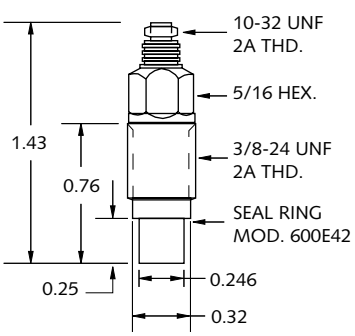
KISTLER
measure. analyze. innovate.

Quartz Pressure Sensors

Type 607C...

High Pressure Sensors

The time-tested Model 607C… series is 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
- 100000 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 has 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, for continuous duty in ultra-high pressure pumps, compressors, high evaluation studies, and ballistics measurements to 100,000 psi.

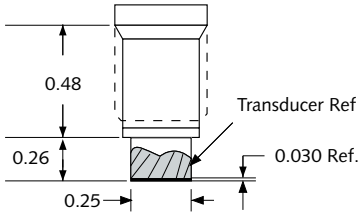
CE Compliant Information

Because high impedance, charge mode accelerometers 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.

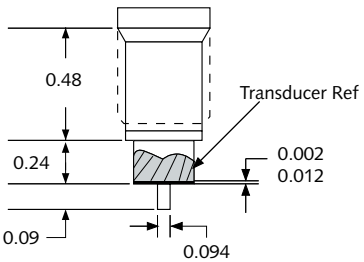
Mounting

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.

Flush Mounting



Recess Mounting



KISTLER
measure. analyze. innovate.

Technical Data

Type		Unit	607C1/607C2	607C3/607C4
Pressure Range		psi	70,000	100,000
Maximum Pressure		psi	125,000	125,000
Resolution, noise		psi rms	1	1
Sensitivity, nom.		pC/psi	-0.12	-0.12
Resonant Frequency, nom.		kHz	250	250
Insulation Resistance (at room Temperature)		Ω	10^{13}	10^{13}
Hysteresis	607C1 / 607C3	%	2	2
	607C2 / 607C4	%	1	1
Linearity	607C1 / 607C3	%	±2	±2
	607C2 / 607C4	%	±1	±1
Rise Time, 10 … 90%		µsec	1.5	1.5
Temperature Sensitivity Shift		%/°F	0.01	0.01
Capacitance, nom.		pF	6	6
Environmental:				
Vibration Sensitivity, axial		psi/g	0.02	0.02
Vibration Sensitivity, transverse		psi/g	0.01	0.01
Vibration limit		g	1000	1000
Shock, 1 ms pulse width		g	15000	15000
Temperature Range		°F	-320 … 500	-320 … 500
Temperature Sensitivity Shift		%/°F	0.01	0.01
Intermittent Gas Temperature on Diaphragm		°F	3000	3000
Mechanical:				
Weight, approximate		grams	12	12
Housing Case		material	Maraging Steel	Maraging Steel
Sensing Element		type	Quartz	Quartz
Mounting Torque	600E42 seal (Cu) 600A10 seal (SS)	lbf-ft lbf-ft	15 20	15 20

1 g = 9.80665 m/s², 1 inch = 25.4 mm, 1 gram = 0.03527 oz, 1 lbf-in = 0.1129 Nm

Accessories Included	Type
• Copper seal ring, 0.02 inch thick	600E42
• Stainless steel seal ring, 0.01 inch thick	600A10

Optional Accessories	Type
• Low noise sensor cable	1631C…
• Output cable, BNC pos. to BNC pos.	1511
• Charge amplifier series	51…

Ordering Key

607C□

Measuring Range	
70000 psi, ±2 linearity	1
70000 psi, ±1 linearity	2
100000 psi, ±2 linearity	3
100000 psi, ±1 linearity	4

607C_000-480a-01.06