

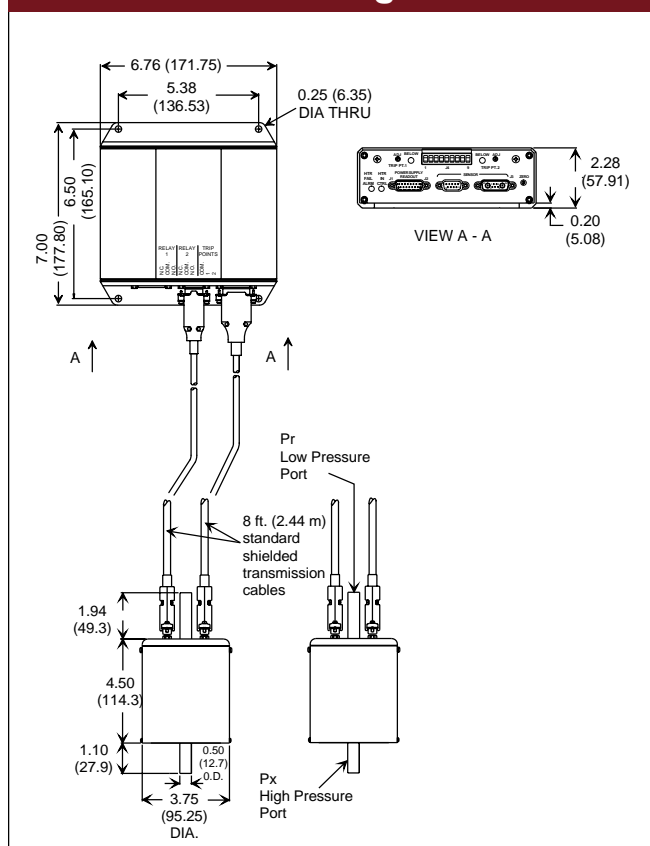


Baratron® High Temperature Pressure Transducer Type 619C Differential

Features and Benefits

- ☐ High temperature differential transducer controlled at 100°, 125°, or 150°C with integral heaters
- ☐ Measures total pressure independent of gas composition
- ☐ 0-10 VDC and 2-wire 4-20 mA outputs linear with pressure
- ☐ Four-decade measurement capability from 10^{-4} to 1 Torr, 10^{-3} to 10 Torr, 10^{-2} to 100 Torr, 10^{-1} to 1000 Torr
- ☐ Two trip point control relays for control system interfacing
- ☐ Heater status lights and relay outputs
- ☐ Fully backed by a two-year warranty
- ☐ CE Mark Compliant — meets requirements for European Common Union

Dimensional Drawing



Note: Unless otherwise specified, dimensions are nominal values in inches (mm referenced).

¹ Optional cables available up to 30 feet.

Description

The MKS Baratron® Type 619C Pressure Transducer is intended for critical high temperature differential pressure measurements, such as in curing ovens in the manufacture of composite materials, from as low as 10^{-4} Torr to 1000 mmHg (0 to 35 inHg). This unit is designed to handle a wide range of corrosive and dirty environments on the Px side of the sensor. Three operating temperatures — 100°, 125°, or 150°C — are selectable upon order and factory calibrated to tight operating specifications. Standard input requirements are ± 15 VDC at 1.5 Amps current (100° to 150°C) with 0 to ± 10 VDC and 4-20 mA as standard output values.

The Type 619C employs two control relay outputs that can be readily interfaced with alarms, valve actuators, computers, or process controllers. Heater status lights and relay outputs are also provided to indicate when the sensor is at or below operating temperature. The sensor and electronics are contained in separate housings and are connected by a standard 8-foot cable¹ allowing the electronics to be conveniently mounted in any location.

Specifications

Full Scale Ranges	1, 2, 10, 100, 1000 Torr (mmHg) <i>(For higher ranges, consult factory.)</i>
Resolution	1×10^{-4} F.S.
Accuracy	0.5% of Reading, \pm temperature coefficients (including non-linearity, hysteresis, and non-repeatability)
Temperature Coefficients	
Zero	For 1 and 2 Torr ranges: 0.02% of F.S./°C (200 ppm) , For 10 – 1000 Torr ranges: 0.0075% of F.S./°C (75 ppm)
Span	0.04% of Rdg./°C (400 ppm)
Ambient Operating Temperature	Sensor and cable: 15° to 70°C, Signal conditioner: 0° to 50°C
Volume	Px side: 7.0 cc Pr side: 24.4 cc
Overpressure Limit	Px side: 45 psid Pr side: 125% of F.S. or 20 psid, whichever is greater
Line Pressure	100 psig (max.)
Materials Exposed to Gases	Px side: Inconel® Pr side: Inconel, Ceramic, Palladium, Stainless Steel, Glass
Input Power Required	± 15 VDC @ 1.5 Amps (max.)
Output Signal	Pressure: 0 to +10 VDC, 4-20 mA (2-wire @ 12 to 45 VDC into < 250 W load) Heater status: Relay energized when sensor is at temperature; de-energized when sensor is below temperature
Trip Point Control Relays	2, each separately adjustable from 0.1 to 100% of F.S., SPDT contacts rated at 1 Amp @ 30 VDC or 0.5 Amp @ 50 VAC resistive. For CE compliance, voltages cannot equal or exceed either 50 VAC or 75 VDC.
Electromagnetic Compatibility	Fully CE compliant to EMC Directive 89/336/EEC when used with an overall metal braided shielded cable, properly grounded at both ends
Product Safety	Fully CE compliant to Low Voltage Directive 72/23/EEC
Fittings	Standard: ½" (12.7 mm) tubulation; Optional: 8 VCR® female, NW 16 KF, 2" Tri Clover

Specifications are subject to change without notice.

Baratron® is a registered trademark of MKS Instruments, Inc., Andover, MA.

Inconel® is a registered trademark of Inco Alloys International Inc., Huntington, WV.

VCR® is a registered trademark of Swagelok Marketing Co., Solon, OH.

Ordering Information

Type 619C High Temperature Pressure Transducer

model number example

619C 01T A F L C

Type Number	619C					
Pressure Range Full Scale (mmHg)						
1	01T					
2	02T					
10	11T					
100	12T					
1000	13T					
Fittings						
½" diameter tubulation	A					
8 VCR female	B					
NW 16 KF	D					
2" Tri Clover	N					
Accuracy						
0.5% of Reading	F					
Temperature						
100°C	L					
125°C	M					
150°C	H					
Power/Signal Cables						
3 ft. (0.91 m)	A					
5 ft. (1.5 m)	B					
8 ft. (2.4 m)	C					
12 ft. (3.7 m)	D					
20 ft. (7.6 m)	E					
30 ft. (9.1 m)	F					