



Group IIC, Zone 0 / Ex ia IIC T4 Ga

Pressure Calibrator PC-507-IS - Intrinsically Safe

- The PC-507-IS is a pressure gauge for usage in hazardous areas. It is Intrinsically Safe. Certified for Group IIC, Zone 0 / Ex ia IIC T4 Ga (hydrogen and acetylene group).
- Up to four pressure sensors.
- Ranges from 250 mmH₂O to 10,000 psi gage or absolute pressure, including vacuum and differential between any pair of sensors.
- Accuracy of 0.025 % of full scale reading.
- Measures pressure, mA and volts and generates mA and volts. Provides a 24 Vdc power supply for 2-wire transmitters, and contact input for pressure switch verification.
- Includes input for optional temperature probe.
- Real-time data acquisition capability when connected to a computer.

The Pressure Calibrator PC-507 now has version approved for use in hazardous areas. The PC-507-IS is intrinsically safe. Can be operated in Group IIC Zone 0 which is the most demanding about the need for protection against electric sparks, it is the group of hydrogen and acetylene.

Layout of the front membrane is notably different from the PC-507, in order to characterize unequivocally the Intrinsically Safe version.

Communication with computer is established via RS-232/485 serial communication port. When used together with ISOPLAN® calibration software, it takes advantage of the documenting calibration concept which automatizes the calibration process, allowing data storage and sharing between calibrator and computer, improving efficiency in handling information, preparing report, issuing certificates, storage and registration of process instruments and sensors for an overall coverage of the quality procedure requirements, specially those related to ISO 9000.

Order Code

PC - 507 - IS - - - - - - - - - -

Number of Inputs
 1 - one sensor
 2 - two sensors
 3 - three sensors
 4 - four sensors

RANGE	Input 1	RESOLUTION	ACCURACY	REMARKS
0 - 0 - 250 mmH ₂ O	0.001	± 0.05 % FS*	Gage pressure	
1 - 0 - 1 psi	0.0001	± 0.05 % FS	Used with air or	
2 - 0 - 5 psi	0.0001	± 0.025 % FS	inert gases	
3 - 0 - 15 psi	0.0001	± 0.025 % FS	Gage or absolute	
4 - 0 - 30 psi	0.0001	± 0.025 % FS	pressure.	
5 - 0 - 100 psi	0.001	± 0.025 % FS	Used with fluids	
6 - 0 - 250 psi	0.001	± 0.025 % FS	(gases or liquids)	
7 - 0 - 500 psi	0.01	± 0.025 % FS	compatible with	
8 - 0 - 1,000 psi	0.01	± 0.025 % FS	316L stainless	
9 - 0 - 3,000 psi	0.01	± 0.025 % FS	steel	
10 - 0 - 5,000 psi	0.1	± 0.025 % FS		
11 - 0 - 10,000 psi	0.1	± 0.05 % FS		
12 - others, upon request				

Pressure Type Input 1
 A - Absolute (Only for ranges 3 to 8)
 G - Gage
 V - Vacuum (Only for range 3)
 C - Compound** (Only for ranges 3 to 8)
 D - Differential (Only for ranges 0 to 2)

RANGE Input 2*** (Only for version with two sensors or more) _____

Pressure Type Input 2*** _____

RANGE Input 3*** (Only for version with three sensors or more) _____

Pressure Type Input 3*** _____

RANGE Input 4*** (Only for version with four sensors) _____

Pressure Type Input 4*** _____

(*) FS= Full Scale (**) From -15 psi to the full scale of range (***) Same code as Input 1

Code example: PC-507-IS-4-2-G-3-V-5-G-8-A, defines a four sensors calibrator, which input 1 range from 0 to 5 psi (gage pressure), input 2 from 0 to 15 psi (vacuum), input 3 from 0 to 100 psi (gage pressure) and input 4 from 0 to 1,000 psi (absolute pressure). Input 1 used with air or inert gases and inputs 2, 3 and 4 are used with fluids compatible with 316 L stainless steel.

Electrical Specifications

Input ranges	Resolution	Accuracy	Remarks
volt 0 to 11 V	0.0001 V	± 0.02 % FS	R _{input} > 1 MΩ
11 to 30 V	0.0001 V	± 0.02 % FS	
mA 0 to 24.5 mA	0.0001 mA	± 0.02 % FS	R _{input} < 65 Ω
Output ranges	Resolution	Accuracy	Remarks
volt 0 to 11 V	0.0001 V	± 0.02 % FS	R _{output} < 0.3 Ω
mA 0 to 22 mA	0.0001 mA	± 0.02 % FS	R _{maximum} = 450 Ω
Two-wire transmitter (XTR) 4 to 22 mA	0.0001 mA	± 0.02 % FS	V _{maximum} = 30 V
Probe range	Resolution	Accuracy	Remarks
Pt-100 -200 °C to 850 °C / -328 °F to 562 °F	0.01 °C / 0.01 °F	± 0.1 °C / ± 0.2 °F	IEC-60751

FS = Full Scale

Accuracy values are valid within one year and temperature range from 20 to 26 °C. Outside these limits add 0.005 % FS / °C, taking 23 °C as the reference temperature.

Engineering Units: psi, atm, kgf/cm², inH₂O, mH₂O, cmH₂O, mmH₂O, inHg, cmHg, mmHg, bar, mbar, Pa, kPa and torr.

Operating Ambient: 0 to 40 °C ambient temperature and 90 % maximum relative humidity

Pneumatic Connection: 1/4" NPTF (1/8" NPTF only for the range 0 - 10,000 psi)

Overpressure: up to twice the value of full scale pressure (to sensors up to 5,000 psi).

Serial Communication: Modbus® RTU Protocol (RS-232/RS-485)

Dimensions: 115 mm x 144 mm x 72 mm (HxWxD).

Weight: 1.5 kg approx.

Warranty: 1 year, except for rechargeable battery.

Included Items: leather carrying case, test leads, manual and battery charger.

Optional Accessories:

Temperature Sensor: 1/5 DIN-R Probe - Order Code: 04.06.0001-21; 1/5 DIN-A Probe - Order Code: 04.06.0007-21;

1/5 DIN-A-L Probe - Order Code: 04.06.0002-21;

Communication Interface - Order Code: 06.02.0001-00.