

Model CIP

Ultra Sanitary Process Transmitter



These CIP (Clean-In-Place) sanitary process transmitters are manufactured in stainless steel and offer a variety of flanges, electrical connections, and operating temperatures designed to

meet the environmental demands found in the applications listed below in potential applications.

FEATURES

- 10 psig/a to 600 psig/a range
- Track temperature changes, 93 °C/minute [200 °F/minute]
- 4 mA to 20 mA output
- 500 s pressure response time
- Secondary containment exceeds 1500 psi
- Accuracy to 0.1 %
- Intrinsically safe available (2N option only)⁹
- CE approved¹⁰

A
3
Complies to
standard

Model CIP

PERFORMANCE SPECIFICATIONS

| Characteristic | Measure |
|--------------------------------------|--|
| Pressure ranges | 38,1 mm [1.5 in] flange, 10 psi to 600 psi; 51 mm [2 in] flange, 10 psi to 500 psi; 63,5 mm [2.5 in] flange, 10 psi to 400 psi; 76 mm [3 in] flange, 10 psi to 250 psi |
| Max. flange pressure | 600 psi with 13MHHS clamp at 22 °C [72 °F], 38,1 mm [1.5 in] |
| Response time (comb. mech. & elect.) | 500 ms |
| Resolution | Infinite |
| Orientation sensitivity | 0.03 psi/G |

ENVIRONMENTAL SPECIFICATIONS

| Characteristic | Measure |
|---------------------------------------|---|
| Process temperature ^{2,3} | -29 °C to 127 °C [-20 °F to 260 °F] |
| Sensor temperature ⁴ | -1 °C to 82 °C [30 °F to 180 °F] |
| Temperature effect, zero ⁵ | 1 % full scale/38 °C [100 °F] (2 % full scale/38 °C [100 °F] for 1 psi) |
| Temperature effect, span ⁵ | 1 % full scale/38 °C [100 °F] (2 % full scale/38 °C [100 °F] for 1 psi) |

ELECTRICAL SPECIFICATIONS

| Characteristic | Measure |
|-----------------------------|---|
| Supply voltage | 13 Vdc to 32 Vdc |
| Electrical connection (std) | 1/2-14 NPT conduit exit with 1,5 m [5 ft] cable |
| Load impedance (max.) | 950 ohm @ 32 Vdc |
| Zero balance | 4 mA ± 0.16 mA |
| Output (std) | 4 mA to 20 mA, two-wire |

MECHANICAL SPECIFICATIONS

| Characteristic | Measure |
|-----------------------|------------------------------------|
| Media | Steam, ethylene oxide, liquid, gas |
| Wetted parts material | 316-L stainless, Hastelloy C-276 |
| Fill material | NEOBEE M-20 |
| Weight (nominal) | 454 g [16 oz] |
| Case material | 316-L stainless |
| Sanitary standard | 3-A, #74-03 |
| Over pressure | 4X to max. flange pressure |

RANGE CODES

| Range Code | Available ranges |
|------------|------------------|
| AV | 10 psi |
| BJ | 15 psi |
| BL | 25 psi |
| BN | 50 psi |
| BR | 100 psi |
| CL | 200 psi |
| CN | 250 psi |
| CQ | 400 psi |
| CR | 500 psi |
| CS | 600 psi |

OPTION CODES

| Range Code | Many range/option combinations are available in our quick-ship and fast-track manufacture programs. Please see http://sensing.honeywell.com/TMsensor-ship for updated listings. |
|--|--|
| Pressure ranges | 10, 15, 25, 50, 100, 200, 250, 400, 500, 600 psi |
| Temperature compensation | -1 °C to 82 °C [30 °F to 180 °F] 1i. -54 °C to 121 °C [-65 °F to 250 °F] |
| Internal amplifiers | 2n(2N). Intrinsically safe amp 4 mA to 20 mA, two-wire current |
| Internal amplifier enhancements | Special filtering |
| Pressure ports | Tri-clover |
| Electrical termination | 6j. 1/2-14 NPT conduit fitting with 1,5 m [5 ft] of four conductor PVC cable 6a. Bendix PTIH-10-6P or equivalent 6 pin 6m. DIN 436508 6n. DIN 40050 |
| Shunt calibration | 3d. Remote buffered shunt calibration |
| Special calibration | Compound, vacuum, barometric Bar |
| Wetted diaphragm | 10c. Hastelloy C-276 |
| Bridge resistance | 12b. 5000 ohm (foil) (max. 121 °C [250 °F]) |
| Zero and span adjustments | 14b. Top access to pots |

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INTERNAL AMPLIFIERS

| Amplifier specifications | Intrinsically safe amp: Option 2n(2N) ^{***} |
|---|--|
| Output signal | 4 mA to 20 mA |
| Input power (voltage) | 9 Vdc to 32 Vdc3 |
| Input power (current) | 4 mA to 20 mA |
| Frequency response | 2000 Hz |
| Power supply rejection | 60 dB |
| Operating temperature | -29 °C to 85 °C [-20 °F to 185 °F] |
| Reverse voltage protection | Yes |
| Short circuit protection | Yes |
| Wiring code: connector | A (+) Supply B No connection C No connection D (+) Output E Case ground F No connection |
| Wiring code: cable (std) ^{6,7} | R (+) Supply BI (+) Output W Case ground |

^{***} See Honeywell's Web site for the most up-to-date information regarding intrinsically safe approvals, ref. #008-0547-00.^{***} See Honeywell's Web site for the most up-to-date information regarding Intrinsically safe approvals. Ref #008-0547-00.

WIRING CODES

| Cable | Two-wire current, 4 mA to 20 mA |
|-------|---------------------------------|
| Red | (+) Supply |
| Black | (+) Output (4 mA to 20 mA) |
| White | Case ground |

Flanges

| Code | Size | Flange |
|------|------------------|------------|
| 16b* | 38,1 mm [1.5 in] | Tri-clover |
| 16c | 51 mm [2 in] | Tri-clover |
| 16d | 63,5 mm [2.5 in] | Tri-clover |
| 16e | 76 mm [3 in] | Tri-clover |

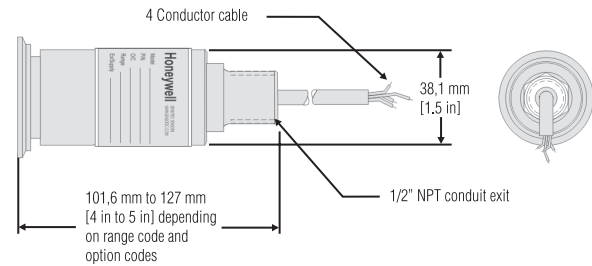
* Does not comply to 3A standards



SPECIAL REQUIREMENTS (CONSULT FACTORY)

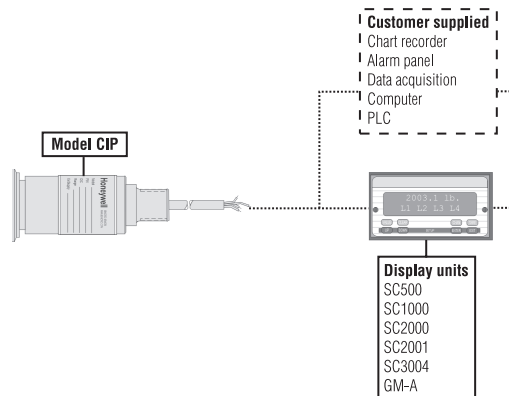
Have a special requirement? New case pressure, different cable lengths, electrical connectors, or materials? Consult our factory by calling +1 614-850-5000 (800-848-6564). Customization is key to our test and measurement business. Special outputs, wiring codes, and calibrations are all standard to us.

MOUNTING DIMENSIONS AND CHARACTERISTICS



For reference only

TYPICAL SYSTEM DIAGRAM



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NOTES

1. Accuracies stated are expected for best fit straight line for all errors, including linearity, hysteresis and non-repeatability.
2. Higher ranges may be available for special applications. Consult factory.
3. Specifications may vary with flange size and pressure range. Consult factory.
4. -1 °C to 54 °C [30 °F to 130 °F] for 1 psi range (only applicable for CP100, CP101, CP200, and CP201).
5. Temperature profile for heated vessels:

| Process temperature | Sensor temperature |
|---------------------|--------------------|
| 127 °C [260 °F] | 82 °C [180 °F] |
| 93 °C [200 °F] | 63 °C [145 °F] |
| 66 °C [150 °F] | 49 °C [120 °F] |
| 38 °C [100 °F] | 32 °C [90 °F] |
| 24 °C [75 °F] | 24 °C [75 °F] |
| 10 °C [50 °F] | 18 °C [65 °F] |
| -18 °C [0 °F] | 4 °C [40 °F] |
| -29 °C [-20 °F] | -1 °C [30 °F] |

6. G=Green; B=Blue; W=White; Bl=Black; Br=Brown; Y=Yellow; R=Red; O=Orange. Color specifying cable and number or letter specifying connector.
7. No mating connector necessary with cable option.
8. For zero and span adjustment by instrumentation tech. Electrical termination is DIN 43650 Hirschmann plug; environmental class IP65 (NEMA 4). Conduit attachment by PG 9 thread on plug.
9. Range dependent; consult factory.
10. Termination dependent; consult factory.

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