

Technical Data for EPC and EPCD-Series OEM Pressure Controllers

1 PSI full-scale through 500 PSI full-scale single- and dual-valve controllers for absolute and gauge pressure

Standard specifications shown. Consult Alicat for available options.



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| SENSOR AND CONTROL PERFORMANCE | |
|---|--|
| Pressure accuracy at calibration conditions | ± 0.125% of full scale |
| Bidirectional option | No additional uncertainties |
| Repeatability (2σ) ¹ | ± 0.08% of full scale |
| Steady state control range | 0.01 – 100% of full scale |
| Available pressure ranges | Absolute: 15 – 500 PSIA Gauge: 1 – 500 PSIG |
| Temperature sensitivity | Zero shift: 0.02% full scale per °C from tare temperature ² Span shift: 0.02% full scale per °C from calibration temperature |
| Fluid temperature range | –10 – 60°C |
| Valve function | Normally closed |
| Sensor response time | < 1 ms |
| Typical control response time | As fast as 30 ms, flow rate and valve size dependent, user-adjustable |
| Typical indication response time | < 10 ms |
| Typical warm-up time | < 1 s |

¹ Stated accuracy is after tare under equilibrium conditions; includes repeatability and linearity.

² Tare is not available on absolute pressure devices.

| MECHANICAL | |
|----------------------------------|--|
| Gas compatibility | Compatible with dry, non-corrosive gases |
| Process connections | EPC and EPCD inlet and outlet: 1/8" NPT female EPCD exhaust: M5×0.8 female |
| Wetted materials | ≤ 100 PSI models: 300 and 430FR stainless steel, hard-anodized aluminum, FKM, alumina ceramic, glass, gold, heat-cured epoxy, heat-cured silicone rubber, brass, nickel plated brass 360 HT, polyamide, silicon > 100 PSI models: 316L, 300 and 430FR stainless steel, hard-anodized aluminum, FKM, brass, nickel plated brass 360 HT |
| Sensor burst pressure | ≤ 100 PSI models: 3× full scale range > 100 PSI models: 1.5× full scale range |
| Humidity range | 0 – 95%, non-condensing |
| Ingress protection | None (default), IP66/ 67 (optional) |
| Mounting orientation sensitivity | None |
| Mounting holes | 2× through holes accepting #4 cap head screws and 2× 4-40 UNC threaded, Ⓡ 0.200" [5.08 mm] |

| POWER AND COMMUNICATION | |
|----------------------------------|--|
| Digital input and output options | RS-232 Serial and Modbus RTU (default), RS-485 Serial and Modbus RTU (optional) IO-Link (optional) |
| Digital data update rate | 60 Hz at 19200 baud |
| Analog input and output options | 0 – 5 Vdc, 1 – 5 Vdc, 0 – 10 Vdc, 4 – 20 mA |
| Analog data update rate | 1 kHz |
| Analog signal accuracy | ± 0.1% of full scale additional uncertainty |
| Electrical connections | Standard models: 6-pin Molex® Micro-Fit® IP66 / 67 models: 6-pin M8 connector IO-Link models: 5-pin M12 connector |
| Power requirements | 24 Vdc, 290 mA (default) 12 Vdc, 290 mA (optional) |

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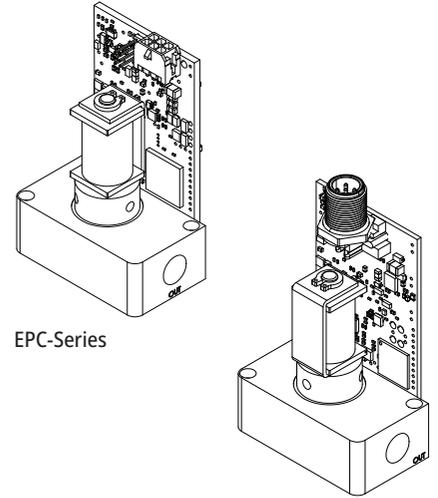
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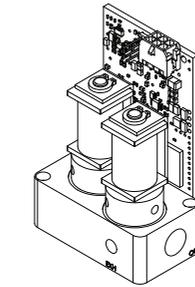
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Representative Examples

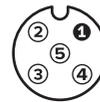
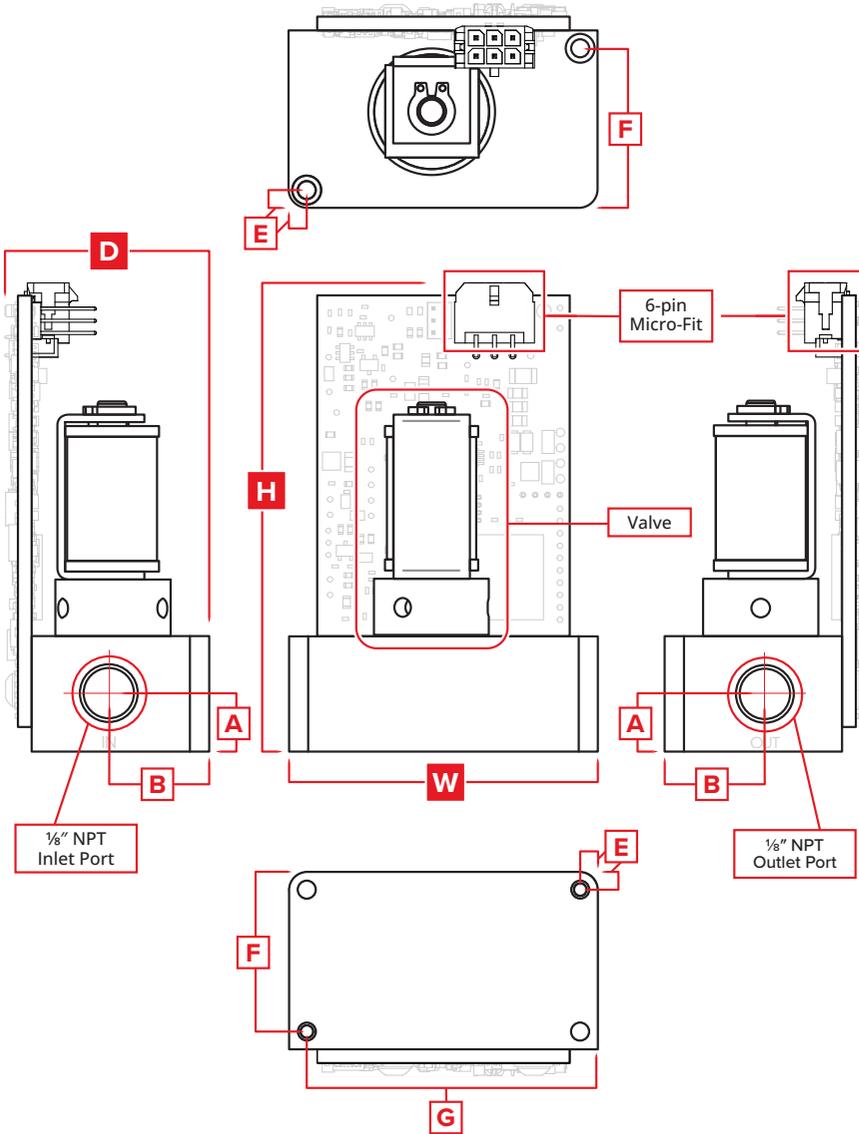


EPC-Series

EPC-Series with IO-Link



EPCD-Series



| IO Link M12-Pinout | |
|--------------------|-------|
| 1 | L+ |
| 2 | MFG 1 |
| 3 | L- |
| 4 | C/Q |
| 5 | MFG 2 |

| 6-Pin Micro-Fit Pinout | |
|------------------------|-----------------------|
| 1 | Power in |
| 2 | Analog output |
| 3 | Ground |
| 4 | RS-232TX or RS-485(+) |
| 5 | RS-232RX or RS-485(-) |
| 6 | Analog setpoint input |

| Model | DIMENSIONS ³ | | | | | | | | | WEIGHT ⁴ |
|---------------------------------------|-------------------------|---------|---------------------|--------|---------|---------|--------|---------|---------|---------------------|
| | Width ⁵ | Depth | Height ⁶ | A | B | C | E | F | G | |
| EPC (all ranges), EPCD (≤ 100 PSI) | 2.00" | 1.32" | 3.04" | 0.38" | 0.65" | 1.48" | 0.12" | 1.04" | 1.89" | 6.2 oz |
| | 50.8 mm | 33.6 mm | 77.2 mm | 9.5 mm | 16.5 mm | 37.5 mm | 2.9 mm | 26.3 mm | 47.9 mm | 175.8 g |

³ Port type, port locations, and other body dimensions may be customized. Contact Alicat for more information.

⁴ Maximum product weights shown. Total device weight may vary depending on actual model configuration. Contact Alicat for more information.

⁵ Add 0.63" [16.0 mm] to width for pressure ranges >100 PSI.

⁶ Add 0.45" [11.4 mm] to height for IO-Link connector.

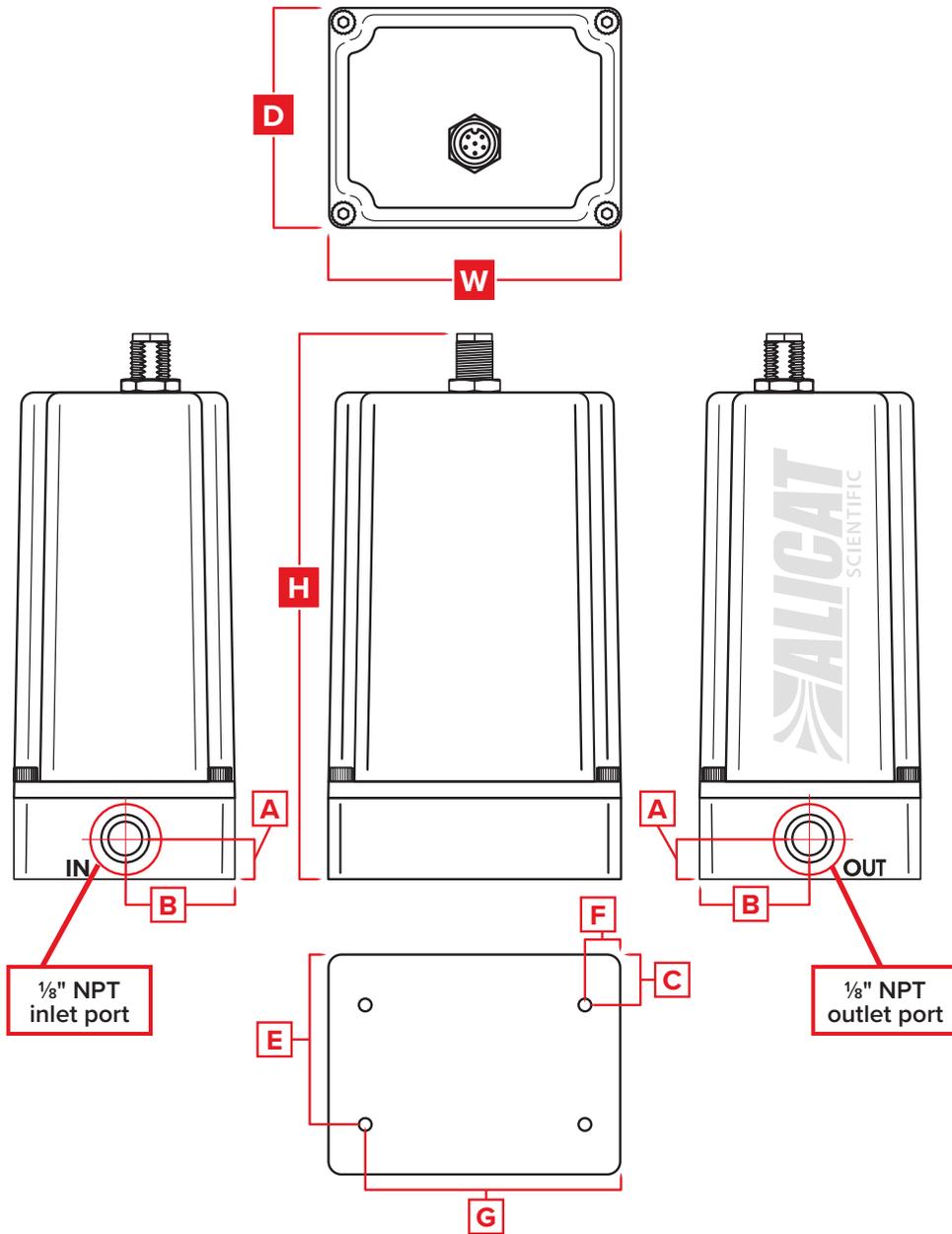
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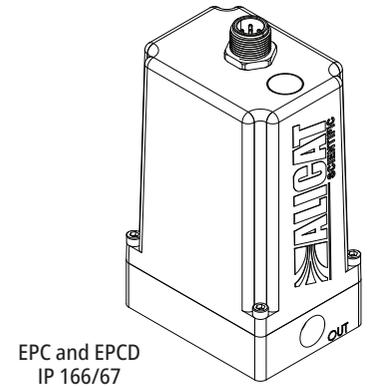
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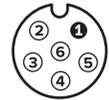
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Representative Example



EPC and EPCD
IP 166/67



M8 Pinout

- 1 Power in
- 2 Analog output
- 3 Ground
- 4 RS-232TX or RS-485(+)
- 5 RS-232RX or RS-485(-)
- 6 Analog setpoint input



IO Link M12-Pinout

- 1 L+
- 2 MFG 1
- 3 L-
- 4 C/Q
- 5 MFG 2

| DIMENSIONS ⁷ | | | | | | | | | | | WEIGHT ⁸ |
|-------------------------|---------|---------|----------|--------|---------|---------|--------|---------|--------|---------|---------------------|
| Model | Width | Depth | Height | A | B | C | E | F | G | I | |
| EPC, EPCD (IP66/67) | 2.25" | 1.70" | 4.20" | 0.31" | 0.85" | 0.78" | 0.39" | 1.31" | 0.28" | 1.98" | 15.0 oz |
| | 57.2 mm | 43.2 mm | 106.8 mm | 8.0 mm | 21.6 mm | 19.7 mm | 9.9 mm | 33.3 mm | 7.0 mm | 50.2 mm | 425.2 g |

⁷ Port type, port locations, and other body dimensions may be customized. Contact Alicat for more information.

⁸ Maximum product weights shown. Total device weight may vary depending on actual model configuration. Contact Alicat for more information.