

Pressure measurement

Digital pressure sensor for extreme climatic conditions
4-digit LED display, 2 switching outputs, analog output

In brief



Description

The device series **Precont® D40** is particularly suitable due to its special construction for areas with high humidity and condensation formation [cite: 1]. This version is also exceptionally well suited for ambient conditions with a very aggressive and dirty atmosphere [cite: 1].

Unlike conventional devices where atmospheric pressure compensation requires filter systems leading to the cell, this measuring system is **hermetically sealed** [cite: 1].

Applications include the **food industry** (heavy condensate loads on cooled container walls) and environments with high water vapor, dirt, and dust pollution such as the **paper industry** [cite: 1].

A broad range of process connections from threads to hygienic fittings is available [cite: 1]. Output options include 2-wire analog (4...20 mA) and 3-wire (0...10 V), combinable with 2 freely adjustable PNP switching points [cite: 1].

Application Features

- **Hermetically sealed measuring system** for moisture-resistant pressure measurement in aggressive, dirty atmospheres [cite: 1].
- **Capacitive ceramic diaphragm** for maximum overload resistance up to 40x nominal pressure [cite: 1].
- **Stainless steel connection housing** for maximum durability [cite: 1].
- **2 PNP switching outputs** or 2-wire / 3-wire electronics [cite: 1].

Your Benefits

- **High Humidity Resistance:** No operational issues under extreme moisture or condensation [cite: 1].
- **Robust & Maintenance-Free:** Heavy-duty design ensures long-term maintenance-free operation [cite: 1].
- **330° Rotatable Display:** Enclosure/electronics rotatable by 330° for optimal readability in any position [cite: 1].
- **High Chemical Resistance:** Superior resistance against aggressive chemicals, corrosion, and abrasion [cite: 1].
- **Quick Calibration:** Fast zero adjustment via key shortcuts and menu-guided setup on LED display [cite: 1].
- **Password Protection:** Password protection feature prevents unauthorized parameter changes [cite: 1].
- **High Accuracy & Stability:** Top precision with outstanding long-term drift stability [cite: 1].
- **Thermal Shock Resistance:** High immunity to rapid temperature shocks [cite: 1].
- **Flush Diaphragm Options:** Broad selection of hygienic and threaded process connections with flush measuring cells [cite: 1].



Type:
Precont D40



Technical Specifications

Electrical & Supply Data

Supply Voltage	• 4...20 mA w/ display: 16.5...45 V DC (Ex 16.5...30 V) • 4...20 mA w/o display: 12.5...45 V DC (Ex 12.5...30 V) • 0...10 V output: 16.5...45 V DC (Ex 16.5...30 V) [cite: 1]
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Current Consumption	≤ 22 mA (2-wire 4...20 mA PNP idle) ≤ 10 mA (3-wire 0...10 V PNP idle) [cite: 1]
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PNP Switch Output	Function: PNP switching to +Vs Output current: ≤ 250 mA (current-limited, short-circuit proof) [cite: 1]
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Accuracy & Performance

Characteristic Deviation	≤ ±0.1% / ±0.2% FS (0.2bar / 0.4bar / 0.6bar ranges: ±0.35% FS) [cite: 1]
Long-Term Drift	≤ ±0.1% FS / year (non-cumulative) [cite: 1]
Temperature Effect	≤ ±0.30% FS / 10 K (Zero / Span) [cite: 1]
Turn-Down	4:1 [cite: 1]

Materials of Construction

Diaphragm (wetted)	Ceramic AL ₂ O ₃ 99.9% [cite: 1]
Process Connection	Stainless steel 1.4404 / 316L or 1.4571 / 316Ti [cite: 1]
Housing	CrNi steel / PBT / PP / POM (Delrin®) [cite: 1]
Seals (wetted)	FPM (Viton®), EPDM, CR (Neoprene®), FFKM (Kalrez®), NBR [cite: 1]

Operating Conditions

Ambient Temp.	– 40 °C ... +85 °C [cite: 1]
Process Temp.	– 40 °C ... +125 °C [cite: 1]
Pressure Ranges	– 1 bar ... 16 bar [cite: 1]
Ingress Protection	IP65 / IP67 EN/IEC 60529 [cite: 1]

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