

The background of the cover is a photograph of a female scientist in a white lab coat, safety glasses, and a white hairnet. She is looking down at a piece of industrial machinery with blue pipes and black components. The scene is brightly lit, suggesting a clean industrial or laboratory environment. A dark teal diagonal shape with a white geometric pattern is overlaid on the left side of the image, containing the title and subtitle text.

8XH Series Solution Guide

Empowering Precision in
Harsh Industrial Environments



The Challenge

Industrial OEMs face increasing pressure to deliver higher system accuracy, lower power consumption, and faster time-to-market—without field calibration. In Electronic Volume Correctors (EVCs) and Mass Flow Controllers (MFCs), even minor pressure or temperature drift can lead to significant measurement errors and compliance risks.

The 8XH Advantage: Full TE Technology Inside

TE's 8XH (High Accuracy Integrated Dual Output Capsule) platform combines MEMS and ASIC in a single, factory-calibrated module to solve these challenges:

- › **Eliminate Field Calibration:**
±0.3% Span total error band (TEB) out of the box ensures system-level precision.
- › **Real-Time P+T Compensation:**
Simultaneous 24-bit pressure and temperature data enable accurate gas volume correction in EVCs.
- › **Direct Digital Integration:**
I²C output feeds seamlessly into MCUs for wireless or IoT-enabled transmitters.
- › **Harsh Media Compatibility:**
316L SS withstands corrosive process gases and aggressive chemicals.
- › **Long-Term Reliability:**
±0.1% Span/year TYP. stability reduces maintenance and warranty costs.

Applications

- **Electronic Volume Correctors (EVC)**
High-accuracy P+T signals for gas metering.
- **Industrial Transducer OEM / IIoT Devices**
Direct digital I²C feed for wireless systems.
- **Mass Flow Controllers & Pressure Gauges**
±0.1% span accuracy for process control.
- **Pressure Calibrators**
Reliable reference for calibration labs.

Key Features

Accuracy



±0.1% Span pressure,
±0.3% Span TEB (-20 °C to +85 °C).

Output



Offered with digital I²C or
analog options.

Resolution



24-bit digital output,
conversion time < 2 ms.

Robust Design



316L stainless steel
for harsh media.

Pressure Range



5 psi to 1500 psi
(gage, vacuum gage, absolute).

Low Power



< 3 mA for
battery-powered applications.

Competitive Advantage

- **TEB:** ±0.3% Span vs competitors' ±0.5 ~ 2.5% Span.
- **Integration:** Enable pressure & temperature read-out in single digital output capsule.
- **Cost Efficiency:** Lower MEMS and ASIC cost with TE proprietary technology.

Packaging Options



13 mm Weldable
85H



13 mm O-RING
85FH



16 mm O-RING
86H



19 mm O-RING
82H

Target Industries

- Industrial Gas Metering
- Process Automation
- Analytical Instruments
- Semiconductor Equipment

Ready to integrate precision sensing into your system?

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