



Fully Compensated TVC Series

The TVC Series is a fully compensated harsh-media, pressure-sensor package designed to handle today’s toughest pressure-sensing environments with temperatures between -40°C and 150°C.

The unique pressure port isolates onboard electronics, and the three wetted materials—silicon, glass, and ceramic—enable the TVC Series to withstand a variety of harsh media, such as fuel. The only thing needed to operate the TVC Series is a single 5.0VDC supply—no external components required.



FEATURES

- Pressure Range** 15 to 300 psi / 1 to 21 bar / 100 to 2,000KPa
- Temperature Range** -40°C to 150°C
- Type** Absolute or gage
- Packaging** Tape and reel

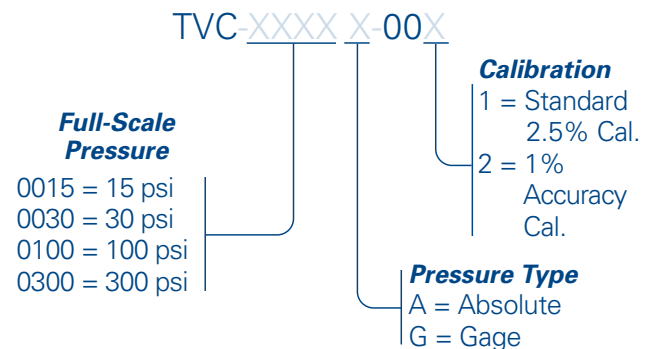
APPLICATIONS

Industrial: The TVC Series is used to monitor HVAC systems, water levels, water pressure, and processes. It is also used for air-conditioning and other refrigerant systems, portable-measurement and analysis instrumentation, and industrial automation.

Automotive: The TVC Series is used to monitor the pressure of transmission fluid, fuel systems, oil systems, EGR systems, exhaust gas, etc.

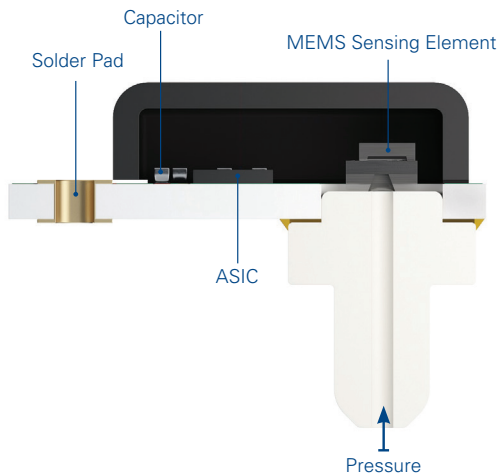
Medical: The TVC Series is used in equipment for diagnosis and analysis.

TVC Series Part Number Configurator



SPECIFICATIONS

| Features | Min. | Typ. | Max. | Unit | Notes |
|------------------------------|------|-------|------|-------|---|
| Electrical | | | | | |
| Supply Voltage (Vs) | 4.5 | 5 | 5.5 | Volts | |
| Supply Current | | | 10 | mA | |
| Output Current | | | 2.5 | mA | |
| Short Circuit Current | -25 | | 25 | mA | |
| Reverse Polarity Protection | -33 | | | Volts | Device will cease operation during supply voltage fault. |
| Overvoltage Protection | | | 33 | Volts | Device will cease operation during supply voltage fault. |
| ESD | >4 | | | kV | Human body model 1.5kOhm/100pF. |
| Performance | | | | | |
| Output Range (Vout) | 10 | | 90 | %Vs | |
| Output Clipping Limit (Vout) | 5 | | 95 | %Vs | |
| Resolution | | | 0.02 | %FS | >12 bit DAC |
| Accuracy | | | | | Accuracy includes all error for hysteresis and linearity over the entire operating temperature range. It does not include lifetime drift. -40°C to 150°C. |
| Standard | -2.5 | 0 | 2.5 | %FS | |
| High Performance | -1.0 | 0 | 1.0 | %FS | |
| Static Proof Pressure | | 2X FS | | PSIA | |
| Burst Pressure | | 3X FS | | PSIA | |
| Lifetime Drift | -0.5 | | 0.5 | %FS | 1000 HRS. @ 150°C |
| Environmental | | | | | |
| Operating Temperature | -40 | | 150 | °C | |
| Storage Temperature | -55 | | 150 | °C | |
| Weight | | 1.034 | | Grams | |

CROSS SECTION

PACKAGING AND SHIPPING

ELECTRICAL

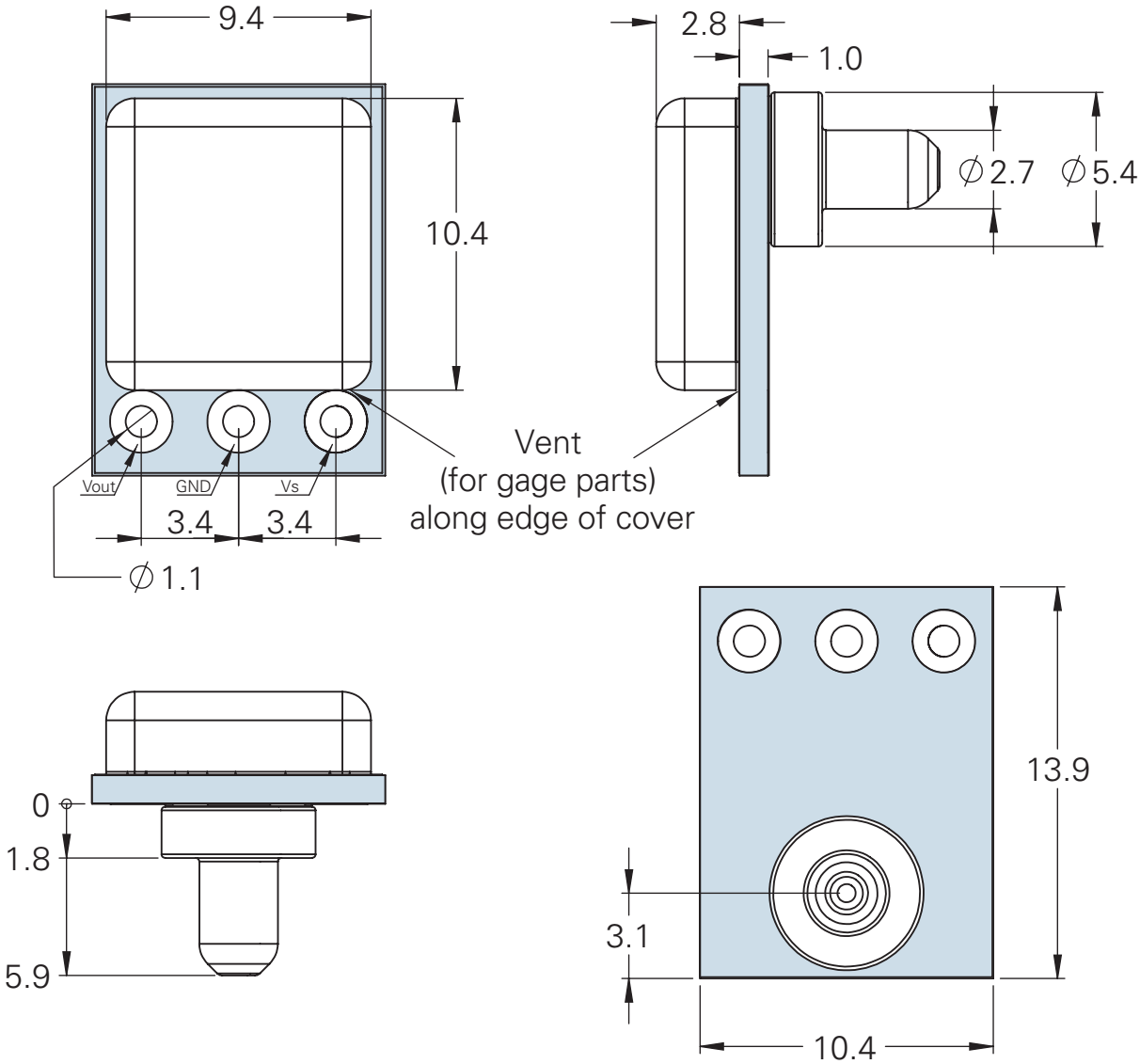
Note: Power supply decoupling and output filtering included



Fully Compensated TVC Series

DIMENSIONS FOR STANDARD OPTIONS (in millimeters)

Dimensions for reference only.
Engineering drawings (with tolerance) available upon order.





Merit Sensor owns and operates a MEMS wafer fab, which enables the production of customized piezoresistive pressure sensors for medical, industrial, and automotive applications. We help you get to market quickly with creative and flexible solutions and provide prompt, personal, and professional customer support.

