MERIT SENSOR™

DATA SHEET

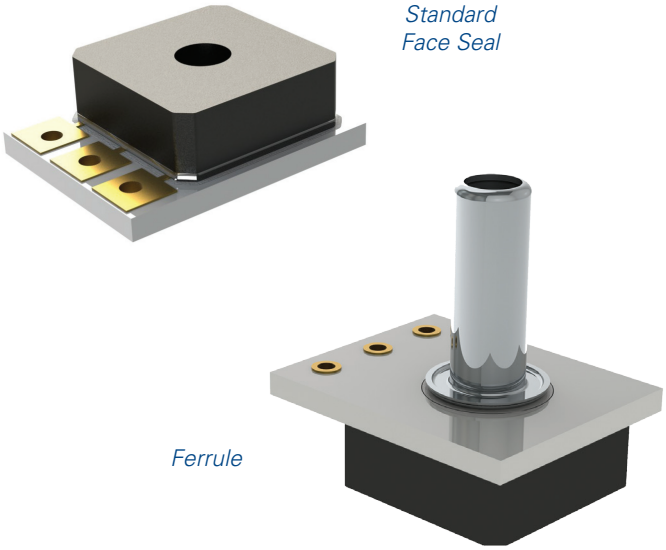
Fully Compensated TR Series

The TR Series pressure transducer is a rugged, direct-media pressure monitoring solution designed for today's toughest pressure sensing environments.

The TR Series pressure transducer is a fully compensated, amplified output pressure sensor package combining Merit Sensor's Sentium process harsh media MEMS piezoresistive die with state-of-the-art pressure sensor ASIC signal management.

The TR Series "plug and play" design isolates onboard electronics from system media through an inert eutectic alloy solder bond of the MEMS pressure element to a ceramic PCB substrate. Direct media pressure sensing translates into excellent system design flexibility leading to lower cost and ease of manufacture.

The TR Series is designed for air, liquid and gas harsh media compatibility over a broad temperature range from -40°C (-40°F) to 150°C (300°F) with a total error band of less than 1.0%.* The design includes a 4.7kohm circuit protection pull-up resistor, operates on a single 5.0VDC supply, and requires no external components for proper operation. Both gage and absolute pressure reference designs up to 500 psi (35.5 bar) operating range are available.



RoHS Compliant

TYPICAL APPLICATIONS

- Industrial
  - HVAC system monitoring
  - Industrial automation
  - Process monitoring
  - Air-conditioning (refrigerant systems)
  - Portable measurement and analysis instrumentation
  - Water level and pressure monitoring
- Automotive
  - Transmission fluid pressure
  - Fuel system pressure
  - Oil system pressure
  - EGR system pressure
  - Exhaust gas pressure
  - Fuel Rail system pressure
- Medical
  - Diagnostics and analysis equipment

TR Series Part Number Configurator

TR1-XXXXX-X0X

Full-Scale Pressure
- 0015 = 15 psi
- 0030 = 30 psi
- 0100 = 100 psi
- 0300 = 300 psi
- 0500 = 500 psi

Pressure Type
- A = Absolute
- G = Gage

Calibration
- 1 = Standard 2.5% Cal.
- 2 = 1% Accuracy* Cal.

Port
- 0 = Standard Face Seal
- 1 = Ferrule

*1% accuracy is available for 100-500 psi models

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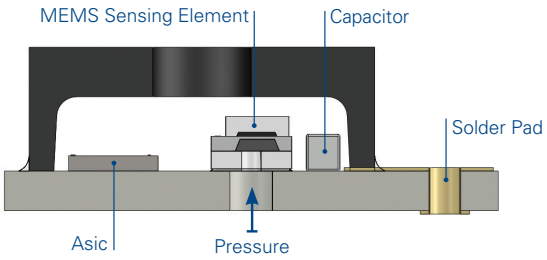
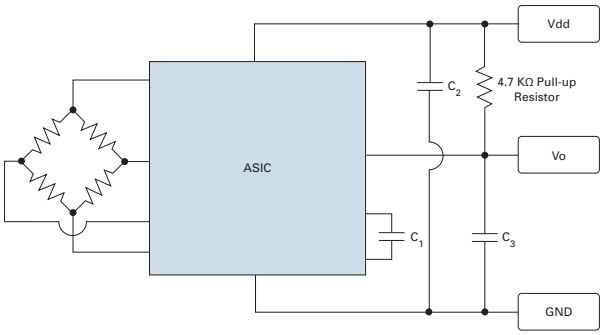
Features	Min.	Typ.	Max.	Unit	Notes
Electrical					
Supply Voltage (Vdd)	4.5	5	5.5	Volts	
Supply Current			10	mA	
Output Current			2.5	mA	
Short Circuit Current	-25		25	mA	
Reverse Polarity Protection	-33			Volts	Device will cease operation during supply voltage fault.
Overvoltage Protection			33	Volts	Device will cease operation during supply voltage fault.
ESD	>4			kV	Human body model1.5kOhm/100pF.
Performance					
Output Range (Vout)	10		90	%Vdd	
Output Clamping Limit (Vout)	8		92	%Vdd	
Resolution		0.03		%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 to150°C. 1% accuracy is only available for parts > 100psi.
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	%FS	
Repeatability			0.25	%FS	
Environmental					
Operating Temperature	-40		150	°C	
Storage Temperature	-55		150	°C	
Weight		1.08		Grams	

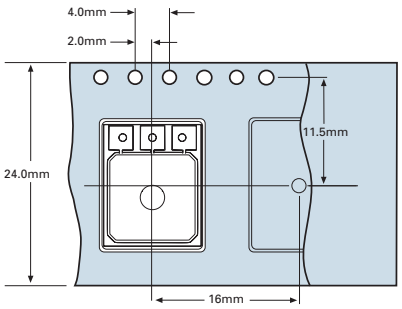
CROSS SECTION



ELECTRICAL



PACKAGING AND SHIPPING



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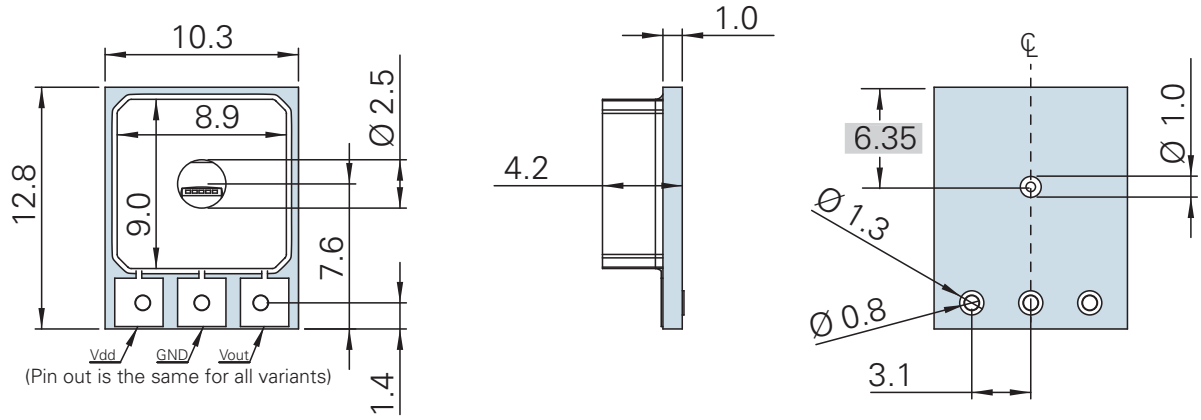
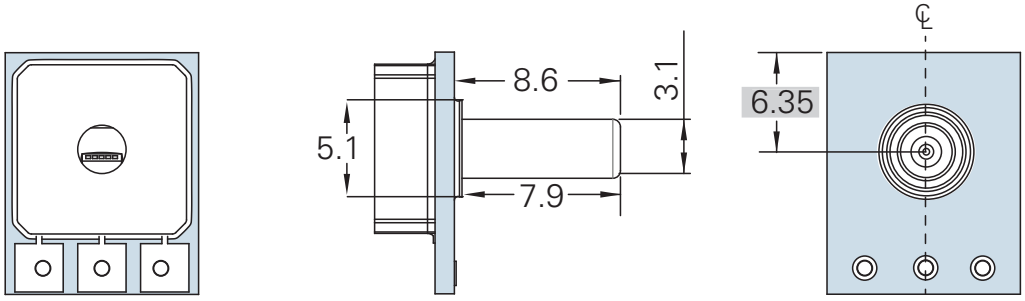
DIMENSIONS FOR STANDARD PACKAGING OPTIONS (in millimeters)

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

Standard Face Seal



Ferrule



Note: Dimensions in a rectangle are basic dimensions

Merit Sensor is based in Salt Lake City, Utah

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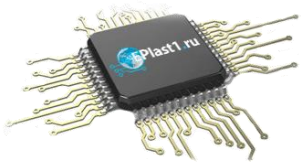
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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