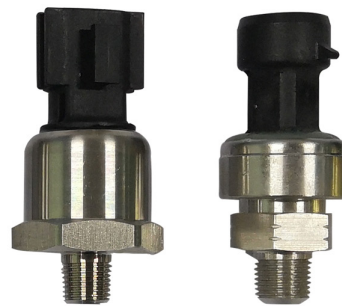


P01 Series Pressure Sensor

The P01 series pressure transducer combines the latest Application Specific Integrated Circuit (ASIC) technology with proven piezoresistive sensors. The measuring bridge is printed directly on one side of the diaphragm by means of Thick-Film technology. The rear part of the diaphragm can be exposed directly to the medium to be measured. The 303SS housing surrounds a pressure transducer designed for general use wherever a rugged, reliable pressure transducer is required.



Features

- Ceramic piezoresistive principle
- Max. measuring range 50 bar
- RoHs Compliance (Lead-Free)

Applications

- Industrial air compressors
- Water supply and drainage systems
- Mechanical and plant engineering

Advantages

- Working temperature range -25°C - 85°C
- Compatible for nearly all aggressive media
- Impact and vibration resistance
- Temperature compensated

Standards

- IEC 60950-1: 2013
- EN 61000-4 Series
- IEC 60068-2: 2005

Absolute maximum ratings

Symbol	Parameter	Min.	Max.	Unit
P_n	Operating pressure range (Gauge)	0	50	bar
P_m	Prove pressure	3 times P_n		
P_B	Burst pressure	5 times P_n		
T_a	Ambient operating temperature	-25	+85	°C
T_m	Working media temperature	-30	+105	°C

Stresses above these ratings may cause permanent damage. Exposure to absolute maximum ratings for extended periods may degrade reliability.

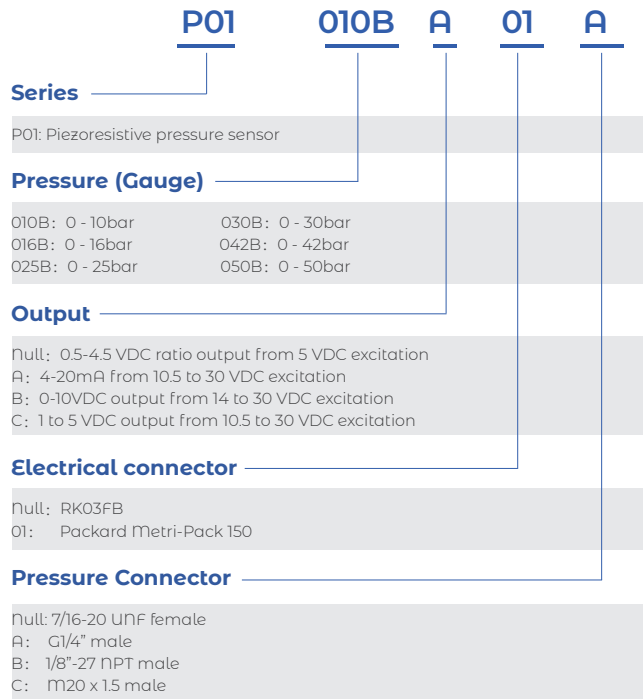
Specifications

Symbol	Parameter	Test condition	Min.	Type	Max.	Unit
P_n	Operating pressure range (Gauge)	P01-010B		10		bar
		P01-016B		16		
		P01-020B		20		
		P01-030B		30		
		P01-042B		42		
		P01-050B		50		
ϵ_L	Linearity, hysteresis and repeatability			0.5	1	%
X	Total error band	@ $P_n, T_a = -25 - 85^\circ\text{C}$			2	%
T_R	Response time			5	10	mS

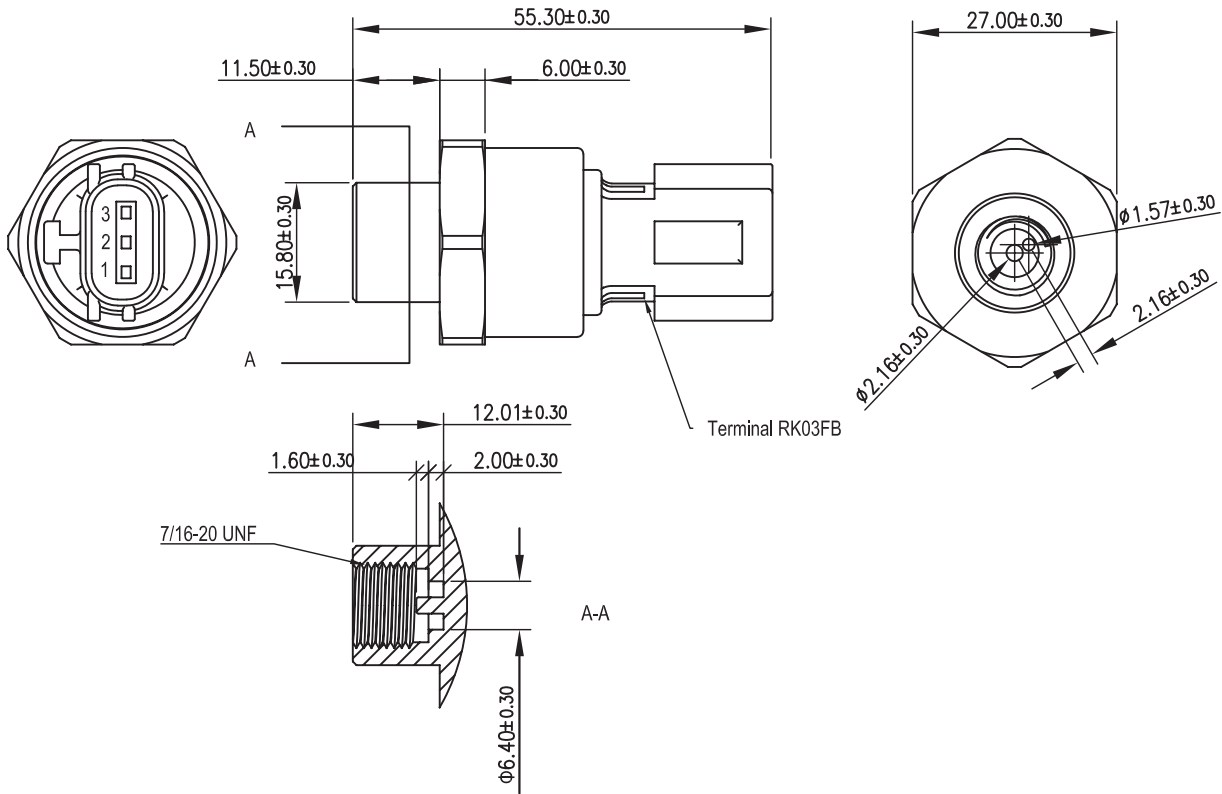
General characteristics

Symbol	Parameter	Value	Unit	Comment
m-HSE	Housing material	SS304		
m-SR	Seal ring material	HNBR		
m-WM	Wetted Materials	Al ₂ O ₃		Ceramic
IP	Sealing grade	IP65 - IP67		Depend on connector
F_m	Mounting torque	≤ 35	Nm	±10%
VIBR	Random vibration	1	mm	10 - 55 Hz, XYZ 3 axis
SHORT	Short circuit protected	Yes		
m	Mass	50	grams	

Name guide description



Dimension (mm)



Pin	Symbol
1	V_{DD}
2	$-V_{OUT}$
3	GND

Safety and Environment



The product is to be installed by manufacturer trained personnel or competent person trained in accordance with manufacturer installation instructions.

With respect to applicable standards IEC 61010-1/ EN 61010-1 *safety requirements for electrical equipment for measurement, control and laboratory use part 1 general requirements*, the product should be used in limited energy secondary circuits.



Risk of electrical shock

Certain parts of the module can carry hazardous voltage during the operation process of the product because hazardous live voltage of primary conductor, power supply occurs, injury and/or serious damage will be caused if this warning is ignored.

Conducting parts must be inaccessible after installation of the product. Additional protection including shield or protective housing could be used according to IEC 60664 Insulation coordination for equipment within low-voltage supply systems.

Disconnection of the main supply will protect against possible injury and serious damage.



ESD protection

Damage from an ESD event will occur if the personnel is not well grounded when handling.

Important notice

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