

Honeywell

THE POWER OF **CONNECTED**

MPR Series



MicroPressure Board Mount Pressure Sensors

Micropower, Higher Accuracy, Compensated

MicroPressure Board Mount Pressure Sensors, MPR Series

The MicroPressure MPR Series sensors from Honeywell show that big things can come in small packages. Although only 5 mm x 5 mm, the MPR offers multiple options and features that could fit a variety of applications. Available in an assortment of pressure ranges and output types, the calibrated and compensated MPR also features a digital output. This means that you get a system that is not only more reliable but also one that drives down costs by eliminating conversion of analog signals. Often suitable for small, portable applications, the MPR offers different configurations to let you choose the right sensor, with the right performance, at the right price, for your application needs.

SPECIFICATIONS	
Characteristic	Parameter
Supply current, active mode	1.7 mA
Operating temperature range	-40°C to 85°C [-40°F to 185°F]
Compensated temperature range	0°C to 50°C [32°F to 122°F]
Startup time (power up to data ready)	3 ms
Power consumption	<10 mW typ.
Data rate	200 SPS min.
Pull up on MISO, SCLK, CS_ADC, CS_EE, MOSI	1 kOhm
Total Error Band (after autozero)	±1.25 %FSS BFSL
Accuracy	±0.50 %FSS BFSL
Resolution	13.5 bits
Vibration	15 g, 10 Hz to 2 Hz
Shock	100 g, 6 ms duration

Features

- ±40 mbar to ±2.5 bar / ±4 kPa to ±250 kPa / ±0.6 psi to ±30 psi
- 5 mm x 5 mm [0.20 in x 0.20 in] package footprint
- Calibrated and compensated
- IoT (Internet of Things) ready interface
- Low power consumption (<10 mW typ.), energy efficient
- Stainless steel port
- Gel option
- Media compatibility
- Meets IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1
- REACH & RoHS

Applications

- Fluid/liquid media system management
- Gas/air pressure measurement
- Liquid level sensing
- Filter monitors

FIGURE 1. PRODUCT NOMENCLATURE FOR APPLICATIONS ABOVE 250,000 UNITS PER YEAR

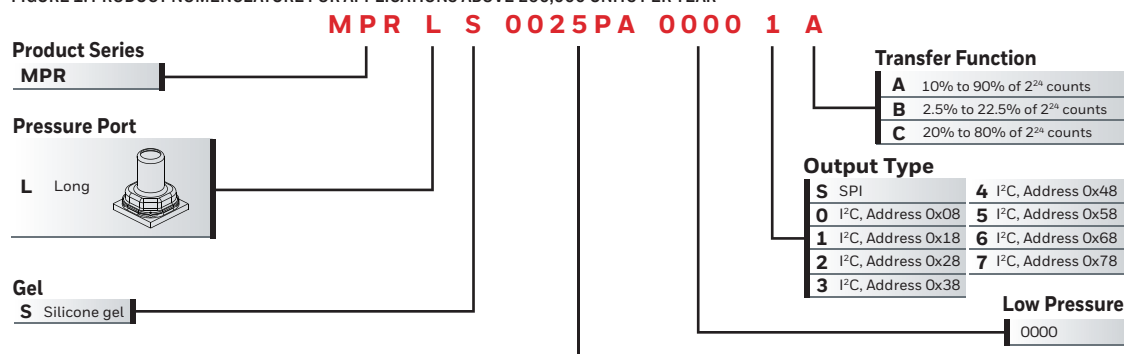
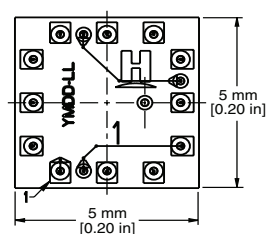


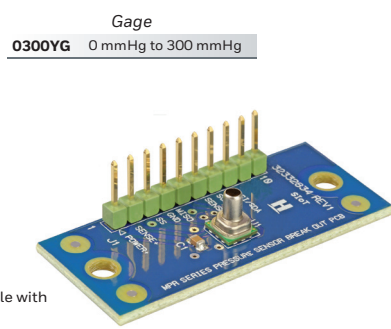
FIGURE 2. PAD FUNCTIONS



PAD	FUNCTION
1	SS
2	MOSI/SDA
3	SCL/SCLK
4	VO+
5	NC
6	VO-
7	MISO
8	EOC
9	RES
10	VSS
11	NC
12	VD

Pressure Range, Unit and Reference		
Absolute	Absolute	Absolute
0001BA 0 bar to 1 bar	0100KA 0 kPa to 100 kPa	0015PA 0 psi to 15 psi
01.6BA 0 bar to 1.6 bar	0160KA 0 kPa to 160 kPa	0025PA 0 psi to 25 psi
02.5BA 0 bar to 2.5 bar	0250KA 0 kPa to 250 kPa	0030PA 0 psi to 30 psi
Gage	Gage	Gage
0060MG 0 mbar to 60 mbar	0006KG 0 kPa to 6 kPa	0001PG 0 psi to 1 psi
0100MG 0 mbar to 100 mbar	0010KG 0 kPa to 10 kPa	0005PG 0 psi to 5 psi
0160MG 0 mbar to 160 mbar	0016KG 0 kPa to 16 kPa	0015PG 0 psi to 15 psi
0250MG 0 mbar to 250 mbar	0025KG 0 kPa to 25 kPa	0030PG 0 psi to 30 psi
0400MG 0 bar to 400 mbar	0040KG 0 kPa to 40 kPa	
0600MG 0 bar to 600 mbar	0060KG 0 kPa to 60 kPa	
0001BG 0 bar to 1 bar	0100KG 0 kPa to 100 kPa	N inH ₂ O
01.6BG 0 bar to 1.6 bar	0160KG 0 kPa to 160 kPa	G MPa
02.5BG 0 bar to 2.5 bar	0250KG 0 kPa to 250 kPa	H HPa
		C cmH ₂ O

Other calibration units may be specified.



MPR Series Sensor Mounted on a Breakout Board

Breakout boards, designed for use with the Honeywell SEK002 Sensor Evaluation Kit, are available with the sensor already mounted. Order using the catalog listings in the table below.

Catalog Listing	Description
MPRLS0025PA00001AB	Breakout board with 0 psi to 25 psi absolute sensor, long port, with gel, I ² C = 0x18, transfer function A
MPRLS0015PA0000SAB	Breakout board with 0 psi to 15 psi absolute sensor, long port, with gel, SPI, transfer function A
MPRLS0001PG0000SAB	Breakout board with 0 psi to 1 psi gage sensor, long port, with gel, SPI, transfer function A
MPRLS0300YG00001BB	Breakout board with 0 mmHg to 300 mmHg gage sensor, long port, with gel, I ² C = 0x18, transfer function B

⚠ WARNING
PERSONAL INJURY
DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.
Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING
MISUSE OF DOCUMENTATION
• The information presented in this document is for reference only. Do not use this document as a product installation guide.
• Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.
Failure to comply with these instructions could result in death or serious injury.

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