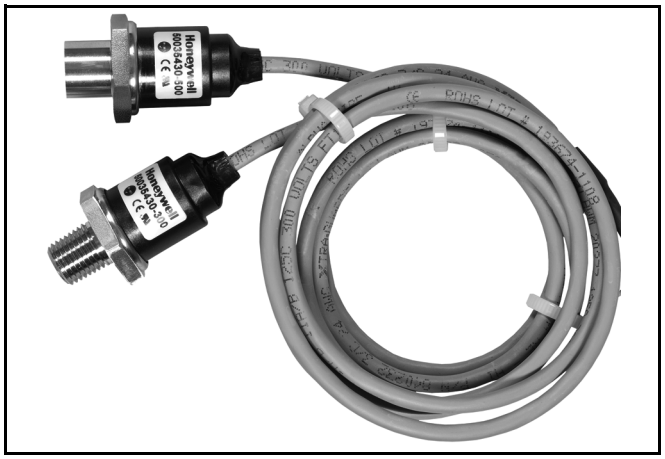
Honeywell

MLH Series
Gauge Pressure Sensors

PRODUCT DATA



DESCRIPTION

The MLH Series is a two-wire 4-20mA gauge pressure sensor. This digitally compensated sensor offers an unparalleled value and performance combination, making it the ideal pressure sensing solution for demanding applications. The MLH series is available in pressure ranges up to 1000 psi.

FEATURES

- **Available in 50, 150, 300, 500 and 1000 psi.**
- **All metal wetted parts for use in a wide variety of fluid applications.**
- **Suitable for use with refrigerants.**
- **No internal elastomeric seals mean no o-ring compatibility issues.**
- **3 meter cable standard.**
- **Reverse polarity and overvoltage protection—protects against reversed excitation.**
- **Less than 2 ms response time provides accurate, high speed measurement.**
- **Select models available with 1/4-in. SAE female Schrader connection with valve depressor.**
- **Exceeds CE heavy industrial EMC for use in areas of high RFI/EMI.**

Models:

Old Part Number	New Part Number	Pressure Range	Pressure Connection
50035430-050/U	MLH050PSCDJ1235	0-50 psig	1/4"-18 NPT
50035430-150/U	MLH150PSCDJ1236	0-150 psig	1/4"-18 NPT
50035430-300/U	MLH300PSCDJ1237	0-300 psig	1/4"-18 NPT
50035430-500/U	MLH500PSCDJ1240	0-500 psig	1/4" SAE female Schrader
50035430-01K/U	MLH01KPSCDJ1241	0-1000 psig	1/4" SAE female Schrader

62-0296-03

SPECIFICATIONS

(All specifications are measured at 25°C (77°F) and at rated excitation unless otherwise specified.)

Operating, storage and compensated temperature range:
-40° C to 125° C (-40° F to 257° F)

Proof Pressure:
3X Working Pressure Range (50-500 psi)
2X Working Pressure Range (1000 psi)

Burst Pressure:
10X Working Pressure Range

Dimensions:
See Fig. 1 and 2.

Housing Material:
Black plastic — Amodel AS-4133 HS - PPA

Material in contact with media:
Stainless steel 304L and Haynes 214 alloy

Excitation:
9.5Vdc to 30Vdc

Signal Output:
4mA to 20ma

Zero Output:
4.0mA

Full Scale Span (FSS):
16mA (4 to 20mA)

Supply rejection ratio:
90db

Termination:
Cable (3 meter)
Red Lead (Excitation)
White Lead (Output Signal)

Shock:
50 g peak [5 ms], 100 g peak [11 ms]

Vibration:
MIL- STD- 810C. Figure 514.2-5, Curve AK, Table 514.2-V, Random Vibration Test [overall g rms = 20.7 min.]

Performance

Parameter	Specification
Response Time	<2 ms
Accuracy[1]	
<100 psi	±0.50% FSS
≥100 psi	±0.25% FSS
Total error band[2]	
<300 psig (-40°C to 125°C [-40°F to 257°F])	±3% FSS
≥300 psig (>65°C to 125°C [>149°F to 257°F])	±2% FSS

[1] Includes pressure non-linearity (BFSL), pressure hysteresis, and non-repeatability. Thermal errors are not included.

[2] Includes zero error, span error, thermal effect on zero, thermal effect on span, thermal hysteresis, pressure-non-linearity, pressure hysteresis, and non-repeatability.

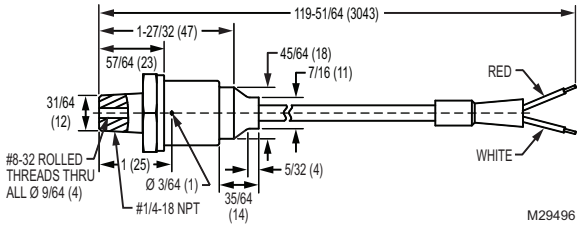


Fig. 1. MLH050PSCDJ1235/MLH150PSCDJ1236/ MLH300PSCDJ1237 dimensions in in. (mm).

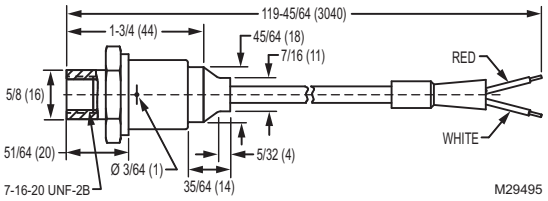


Fig. 2. MLH01KPSCDJ1241/MLH500PSCDJ1240 dimensions in in. (mm).

⚠ 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.

General Information

All gauge sensors are vented to the atmosphere through a case vent hole that is protected with a vapor inhibiting material.

Pressure Overloads

⚠ CAUTION

Product Damage

Do not exceed the pressure overload rating.
Failure to comply with these instructions may result in reduced life or electrical failure.

The MLH series pressure sensors will withstand high overloads; however, if the proof rating is exceeded, the life of the sensor may be reduced and electrical failure may occur. Both static and dynamic overloads must be considered, particularly in hydraulic system applications. Hydraulic pressure fluctuations can have very high and very fast peak pressures, as in a water hammer effect.

An oscilloscope is recommended for determining if high-pressure transients exist in a system. If system pressure pulses are expected, choose a sensor with a pressure rating high enough to allow continuous operation at the highest expected pressure spikes.

A pressure “snubber” may be used to reduce the peak pressure applied to the sensor. Snubbers may be obtained from the Mott Corp., Farmington, CT, USA (860) 747-6333. Catalog #4100-1/8-SS is recommended.

Media Compatibility

CAUTION

Product damage

Use non-abrasive, chemically compatible media to prevent damage to diaphragm or port materials.

Failure to comply with these instructions may result in product failure.

The MLH series pressure port and diaphragm is an assembly of Haynes 214 alloy (or equivalent) and 304 stainless steel.

INSTALLATION

CAUTION

Product Damage

Use a hex wrench for installation. Never apply torque to the connector housing or the body of the sensor.

Do not subject the sensor to high temperatures from soldering, brazing, or welding of the system plumbing or operating environments above the specified maximum temperature.

Failure to comply with these instructions may result in product damage.

A pigtail siphon should be installed to protect the sensor element from damage that can occur from direct exposure to high temperature steam.

Electromagnetic Energy/Noise

CAUTION

Product damage/erratic operation

Do not use in areas where electromagnetic energy may affect sensor operation.

Failure to comply with these instructions may result in improper operation and/or product failure.

The MLH series has been rated for high immunity to electrical noise; however, care should be taken when used around high voltage sources that emit high levels of radiated electromagnetic energy like variable frequency motor drives, solenoids, radio transmitters and engine ignition systems. The use of shielded cable and grounding of pressure port is also recommended.

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