

KM Series Silicon-On-Sapphire, High-Accuracy Pressure Transducers

FOR AUTOMOTIVE, INDUSTRIAL, FOOD AND CHEMICAL PROCESSING,
WASTE TREATMENT AND OTHER APPLICATIONS



PRESSURE TRANSDUCER

AMETEK KM Series Silicon-on-Sapphire (SOS) High-Accuracy Pressure Transducers offer high-accuracy over a wide temperature range. This is achieved through digital correction of the output signal within the unit's electronics. Each unit is individually calibrated for optimal performance.

Utilizing Silicon-on-Sapphire sensing technology results in excellent long-term stability of <math><0.2\%</math> of Full Scale. SOS technology also gives the KM Series a major advantage over non-SOS bonded silicon sensors. The silicon Wheatstone bridge formed during the manufacturing of the KM Series transducers is free from any residual stresses that may add to hysteresis and non-repeatability errors, which decrease long-term stability. There are no bonding agents between the sensing element and sapphire substrate that may age and cause instability.

The KM Series pressure transducers feature an on-board microprocessor that automatically compensates for non-linearity and thermal sensor errors. It also provides an output with a very high-accuracy of better than $\pm 0.5\%$ over the complete operating temperature range from -40°C to 121°C .



FEATURES AND BENEFITS

- $\pm 0.2\%$ static accuracy
- $\pm 0.5\%$ absolute accuracy including all errors
- Digitally correct output
- Excellent long-term stability $<0.2\%$ FS
- Rugged stainless steel and titanium construction
- High over pressure limit
- Low hysteresis
- Compact lightweight design
- High dielectric strength
- All welded construction

AMETEK[®]

**POWER
INSTRUMENTS**

Experience the Power[™]

SPECIFICATIONS FUNCTIONAL

Standard Pressure Ranges (PSI Unit)

KT SERIES

0-15 (KML)	0-300
0-20 (KML)	0-500
0-30 (KML)	0-1,500
0-50 (KML)	0-2,000
0-100	0-3,000
0-150	0-5,000
0-200	0-10,000

Service

- Gas, liquid or vapor

Output

- 0-5, 1-6, 1-10, 1-11 VDC

Overpressure

- 2 x FS or 20,000 psi, or whichever is less

Burst Pressure

- 4 x FS for 15-5,000 psi
- 2 x FS for 10,000-30,000 psi

Temperature Limits Operating Range

- -64° to +250°F (-55° to +121°C)

Compensated Range

- -64° to + 180°F (-55° to +82°C)

- Other temperature ranges available, consult factory.

PERFORMANCE

Static Accuracy

- ±0.2% (includes non-linearity, hysteresis, and repeatability)
- Consult factory for other options

Absolute Accuracy

- ±0.5% (includes all errors over the compensated temperature range)

Shock

- 20 Gs 1/2 sine wave for 11 msec.

Vibration

- 10 Gs pk to pk
- Sinusoidal, 2-2000Hz

Natural Frequency

- 35 kHz diaphragm only

Excitation

- 10 to 40 VDC

Insulation Resistance

- ≥100M ohms minimum at 500 VDC, 68°F, 80% RH

Dielectric Withstand Voltage

- 750 VDC

Current Drain

- 10 mA maximum

Response Time

- 3.5 msec. to reach 63% of full scale output

APPROVALS

CE Mark

PHYSICAL MATERIALS

Materials

- Titanium alloy

Pressure Fittings

- Refer to ordering information for standard fittings and other available options.

Pressure Cavity Volume

- 0.1 cubic inch nominal volume

Weight

- 4.0 oz. maximum

ELECTRICAL TERMINATIONS

Connector

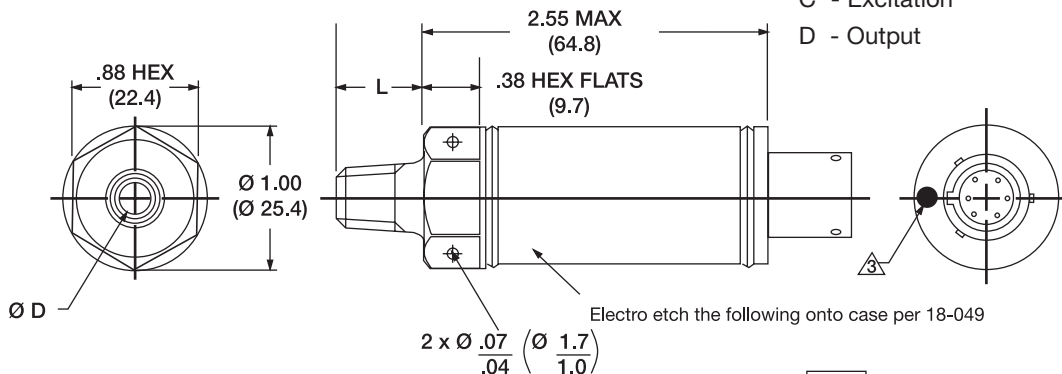
- 4-pin MS3113 H8-4P
- Consult factory for other options

Calibration

Transmitters are factory calibrated from zero to the maximum range unless specified otherwise at time of order entry.

PIN Configurations

- A + Excitation
- B + Output
- C - Excitation
- D - Output



3 All gage units are filter vented as shown, not applicable for sealed gage units.

IN (MM)



For customer support call:

AMETEK POWER INSTRUMENTS
1644 Whittier Avenue
Costa Mesa, CA 92627
Tel: 949.642.2400
Fax: 949.642.9490
power.sales@ametek.com

HEADQUARTERS
AMETEK Power Instruments
50 Fordham Road
Wilmington, MA 01887
Tel: 978.988.4903
Fax: 978.988.4990
power.sales@ametek.com

EUROPEAN HEADQUARTERS
Unit 20, Ridgeway
Donibristle Industrial Estate
Dalgety Bay, Dunfermline, KY119JN
Scotland U.K.
Tel: 44.1383.825630
Fax: 44.1383.825715
power.sales@ametek.com

ASIA PACIFIC HEADQUARTERS
10 Ang Mo Kio Street 65
#05-12 Techpoint
Singapore 569059
Tel: 65.6484.2388
Fax: 65.6481.6588



ISO 9001 Certified