



MEAS KPSI 30

- Non-Submersible Pressure Transducer
- $\pm 0.10\%$ FSO Static Accuracy
- Multiple NPT Pressure Connections
- Two Year Warranty

Features

- Custom Cable Lengths
- Welded 316SS or Titanium Body
- Custom Pressure Ranges up to 500 psi
- Analog Outputs of 4-20 mA or VDC
- Optional Lifetime Lightning Protection

Applications

- Tank Level
- Pump Control
- Bubbler Systems
- Compressors

The KPSI 30 is a non-submersible pressure transducer specifically designed for demanding industrial applications where the primary criteria are reliability and economy. These units provide repeatable, precision measurements under the most hostile conditions. Capable of measuring vacuum to pressure as high as 500 psi (2070 kPa), these transducers can meet most any industrial pressure measurement requirement and are available with an overmolded cable exit option for splash down applications (IP 67).

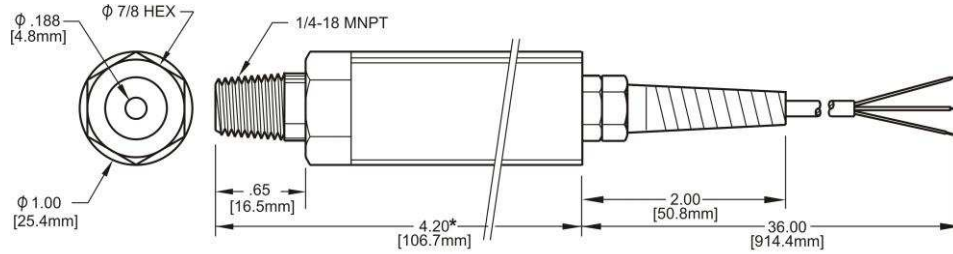
All KPSI Transducers utilize a highly accurate pressure sensor assembly specifically designed for hostile fluids and gases. The assembly is integrated with supporting electronics in a durable housing constructed of 316SS or Titanium. A wide variety of electrical and pressure connections are available to accommodate most any system interface.

Specifications

| PARAMETER | COMMENT | |
|---|-------------------------------------|-------------------------|
| PRESSURE RANGES | | |
| Full Scale Pressure Ranges (intermediate pressure ranges are available) | 2 thru 300 psi (14 thru 2070 kPa) | Vented Gage Reference |
| | 15 thru 500 psi (103 thru 3450 kPa) | Sealed Gage Reference |
| | 15 thru 500 psi (103 thru 3450 kPa) | Absolute Gage Reference |
| Proof Pressure | 1.5 x FS | |
| Burst Pressure | 2.0 x FS | |
| STATIC PERFORMANCE | | |
| Static Accuracy (combined effects of non-linearity, hysteresis and repeatability, best fit straight line method) | $\pm 0.10\%$ FSO | BFSL method |
| Resolution | +0.0001% FS | |

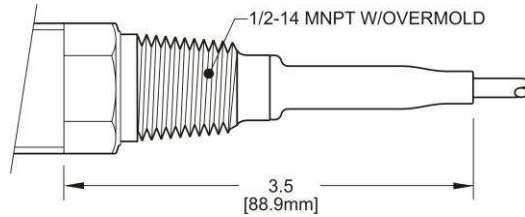
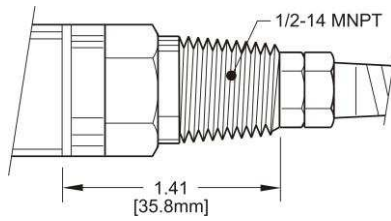
| ENVIRONMENTAL | | |
|--|---|--|
| Wetted Materials | 316 SS or Titanium; FKM; Polyurethane or ETFE | |
| Compensated Temp Range | 0 to 50°C | |
| Thermal Error (maximum allowable deviation from the Best Fit Straight Line due to a change in temperature) | ±0.05% FSO/°C ±0.1% FSO/°C | Worse case over compensated temperature range for ranges < 5 psi (34 kPa) |
| Operating Temp Range | -20 to 60 °C | |
| Protection Rating | IP 67 | When the overmold option (0) is ordered |
| ELECTRICAL | | |
| Excitation | 9-28V – VDC output 9-28V – mA output 15-28V – VDC output 10-28V – VDC output | 0-5V, 0-2.5V, 0-4V 4-20 0-10V 1.5-7.5V |
| Input Current | 20 mA max, 3.5 mA max | For mA output, for VDC output |
| Output | 4-20mA, 0-5 VDC, 0-2.5VDC, 0-4VDC, 0-10VDC, 1.5-7.5VDC | For ranges > 100 psi (690 kPa) only 4-20mA output is available |
| Zero Offset | ±0.12 mA for mA output < 0.25 VDC for VDC output | |
| Output Impedance | See loop diagram for mA output 20 ohm for VDC output | |
| Insulation Resistance | 100 mega ohm at 50 VDC | |
| Circuit Protection | Polarity, surge/shorted output | |
| CERTIFICATIONS | | |
| | CE compliant | EN 61326-1:2001 and 61326-2-3:2006 |
| | UL, CUL and FM | Class I, II, III, Div 1, Groups A,B,C,D,E,F&G |
| | WEEE/RoHS | Waste from Electrical and Electronic Equipment (WEEE) and Restrictions on the use of Hazardous Substances (RoHS) |
| PHYSICAL | | |
| Approximate Weight | 0.44 lbs. (198 g) transducer 0.05 lbs./ft. (79 g/m) cable | |
| TEMPERATURE OUTPUT OPTION (not intrinsically safety approved) | | |
| Temperature Range | -20 to 60°C | Available for 4-20mA output versions only |
| Output Signal | 4-20mA | |
| Temperature Measurement Accuracy | ±4°C | |
| LIGHTNING PROTECTION (power supply needs to be limited to 150mA to avoid lock up of the gas tube after a suppression event) | | |
| Life Expectancy | >1,000 Operations | |
| Peak Clamping Voltage | 36 Volts | |
| Response Time | <10 nsecs | |
| Shunts | 20,000 Amperes | |

Dimensions



*ADD 1.95" FOR LIGHTNING PROTECTION OPTION

Strain-relieved PVC Cable

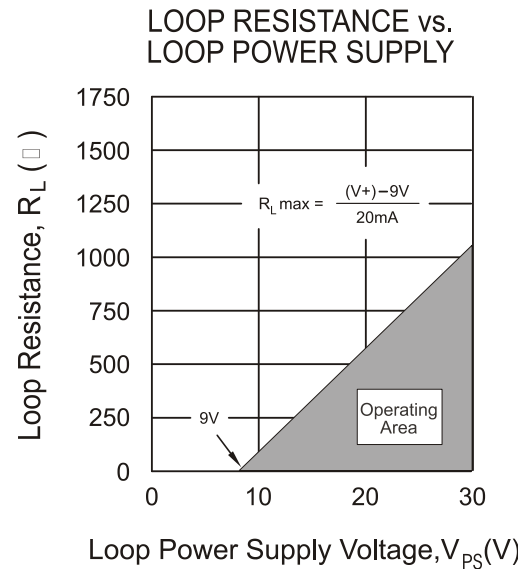


Strain relieved with 1/2" Conduit Fitting

Molded Cable Seal with 1/2" Conduit Fitting

Electrical Termination

| ELECTRICAL TERMINATION | | |
|---|-----------------------|--|
| 22AWG CONDUCTORS IN A SHIELDED CABLE WITH VENT TUBE | | |
| 4-20 mA | RED BLACK | + EXCITATION - EXCITATION |
| 0-5 VDC | RED BLACK WHITE | + EXCITATION - EXCITATION + SIGNAL |
| ALL | DRAIN WIRE | SHIELD |



Ordering Information

| | |
|---------------|--|
| MODEL | INDUSTRIAL PRESSURE TRANSDUCER |
| 3 0 | ±0.10% FSO Static Accuracy |
| ↓ ↓ | MATERIAL |
| S | Stainless Steel |
| T | Titanium |
| ↓ | REFERENCE PRESSURE FORMAT |
| 1 | Vented gage |
| 3 | Sealed gage |
| 4 | Absolute |
| ↓ | OUTPUT |
| 3 | 0-5 VDC |
| F | 0-2.5 VDC |
| G | 0-4 VDC |
| H | 0-10 VDC |
| J | 1.5-7.5 VDC |
| 4 | 4-20 mA |
| 6 | 4-20 mA, temp. measurement option, -20 to 60°C (not IS approved) |
| ↓ | PRESSURE CONNECTION |
| 1 | 1/4" - 18 NPT female fitting |
| 2 | 1/4" - 18 NPT male fitting |
| 7 | 1/2" - 14 NPT male fitting |
| ↓ | ELECTRICAL CONNECTION |
| 1 | Strain-relieved cable with flying leads |
| 4 | Strain relieved with 1/2" - 14 NPT male conduit fitting |
| 0 | Molded Cable Seal with 1/2" -14 NPT male conduit fitting (300 PSI MAX) |
| A | Gland Seal |
| B | Gland Seal with 1/2" -14 NPT male conduit fitting |
| ↓ | LIGHTNING PROTECTION |
| A | None |
| B | Full Lightning Protection |
| ↓ | PRESSURE RANGE (at MAX output)^{1,2} |
| # # # . # # # | PRESSURE RANGE (at MIN output)¹ |
| ↓ ↓ ↓ ↓ ↓ ↓ ↓ | # # # . # # # |
| | MOISTURE PROTECTION |
| A | None - (Sealed/Absolute Only) |
| B | Vent Filter |
| D | Stainless Steel Vent Filter |
| ↓ | CABLE TYPE |
| 1 | Polyurethane (Connection 0, A, or B Only) |
| 2 | ETFE (Electrical connection A or B Only) |
| 3 | PVC Jacket - (Electrical Connection 1 or 4 Only) |
| ↓ | CABLE LENGTH |
| # # # # | (in feet) |
| ↓ ↓ ↓ ↓ | LABEL³ |
| | A psi |
| | B kPa |
| | C mbar |
| ↓ | |

- Notes:**
- The part number requires two pressure range limits, corresponding to the maximum and minimum analog outputs of the transducer, to be specified in pounds per square inch (psi) to three decimal places. The lower pressure range is typically 000.000 unless otherwise required. For reverse output requirements, enter the lower pressure range for the maximum output signal and the upper range for the minimum output. **Example: 50 psi (enter 050.000)**
For sealed gage reference add local standard atmosphere (14.700 typical). Contact MEAS for assistance. **Example: 150 psi + 14.700 = 164.700 (enter 164.700)**
 - For pressure ranges >=1000 psi should be expressed in the format (xxxx.xx)
 - Units of measure on standard MEAS label. Contact Measurement Specialties if private labeling is required.

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