KPSI 342

- Submersible level transducer
- Small bore, 0.75”diameter
- ±0.25% TEB static accuracy
- Withstands Temperatures to 85°C
- ASIC Technology – Digital accuracy with analog output
- Two year warranty

Features

- Operating Temperature Range to 85°C
- Custom polyurethane or ETFE cable lengths
- Welded 316SS or Titanium Body
- Custom level ranges up to 692 ft. (211 m) H_2O
- 4-20 mA analog output
- Ported nose cap
- Optional lifetime lightning protection
- Long life vent filter

Applications

- Surface water monitoring
- Tailrace and forebay monitoring
- Groundwater monitoring
- Oceanographic research
- Down hole
- Hydraulic Fracturing

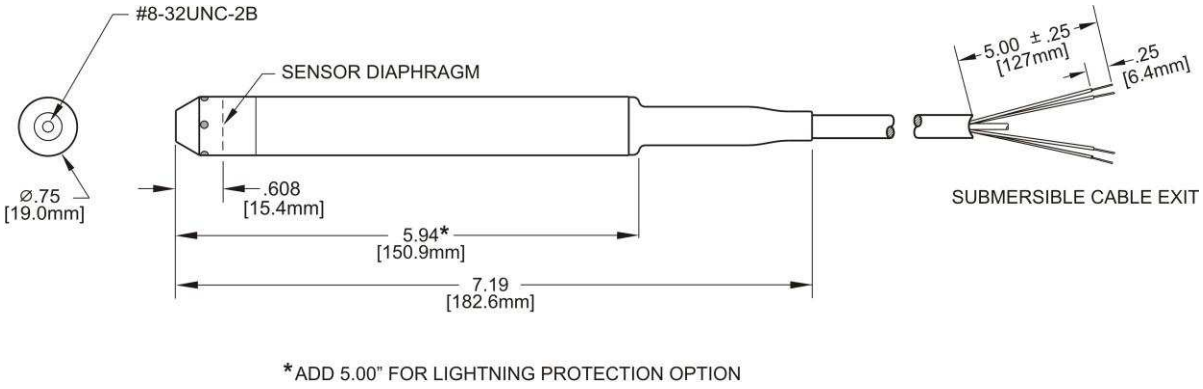
The KPSI 342 is a small bore submersible hydrostatic level transducer that combines sensor competencies with the latest in Application Specific Integrated Circuit (ASIC) technology. Implementation of the ASIC provides unmatched sensor temperature compensation over the entire operating range of the pressure sensor. The Total Error Band specification (±0.25% FS) over the complete operating temperature range (-20 to 85ºC) eliminates the user having to combine multiple performance specifications to understand the total accuracy of the transducer.

Every KPSI Transducer utilizes a highly accurate pressure sensor assembly specifically designed for hostile fluids and gases. The assembly is integrated with supporting electronics in a durable waterproof housing constructed of 316 stainless steel or titanium. The attached electrical cable is custom manufactured and includes para-aramid synthetic fiber members to prevent errors due to cable elongation, and a unique water block feature that self-seals in the event of accidental cuts to the cable. Each vented reference transducer is shipped with our SuperDry Vent Filter that prevents moisture from entering the vent tube for at least one year without maintenance, even in the most humid environments.

Specifications

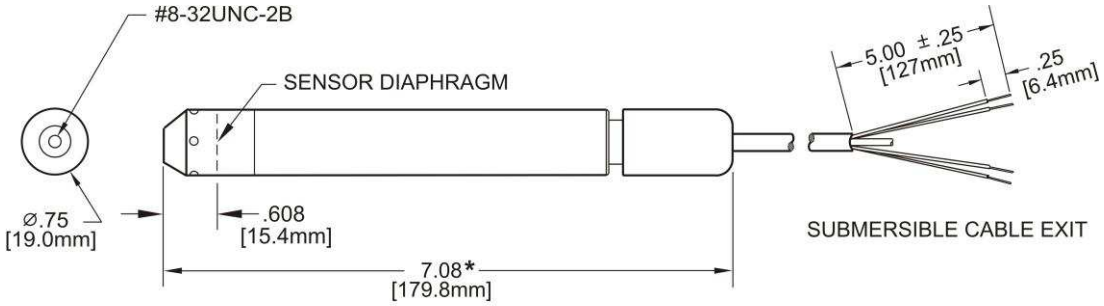
PARAMETER		COMMENT
LEVEL RANGES		
Full scale level ranges (Intermediate level ranges are available)	10 thru 692 ft. H_2O, (3 thru 211 m H_2O)	Vented gage reference
	35 thru 692 ft. H_2O, (10 thru 211 m H_2O)	Sealed or absolute gage reference
Proof pressure	1.5 x FS	
Burst pressure	2.0 x FS	
PERFORMANCE		
Accuracy (Combined errors due to nonlinearity, hysteresis, non-repeatability, and thermal effects over the compensated temperature range)	±0.25% TEB	Prorated for level ranges <=23' (7m) H_2O when operating > 60°C
Resolution	+0.0001% FS	
ENVIRONMENTAL		
Wetted materials	316 SS or Titanium; FKM; Polyurethane or ETFE	
Compensated temp range	-20 to 85ºC	
Operating temp range	-20 to 85ºC	When attached to polyurethane cable
Protection rating	IP 68, NEMA 6P	
ELECTRICAL		
Excitation	9-30 VDC	mA output
Input current	20 mA max.	
Output	4-20 mA	
Zero offset	±0.12 mA	
Output impedance	See loop diagram for mA output	
Insulation resistance	100 mega ohm at 50 VDC	
Circuit Protection	Polarity, surge/shorted output	
CERTIFICATIONS		
	CE compliant	EN 61326-1:2013 and 61326-2-3:2013
PHYSICAL		
Approximate weight	0.50 lbs. (224 g) transducer 0.05 lbs./ft. (79 g/m) cable	
Cable jacket material	Polyurethane (Standard) ETFE (Optional)	
Cable pull strength	200 lbs. (90 kg)	Polyurethane
Cable number of conductors	4	
Cable conductor size	22 AWG	
Cable seal	Molded polyurethane FKM gland	For polyurethane cable For ETFE cable
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 5.00" FOR LIGHTNING PROTECTION OPTION

Molded Cable Seal Configuration for Polyurethane Cable

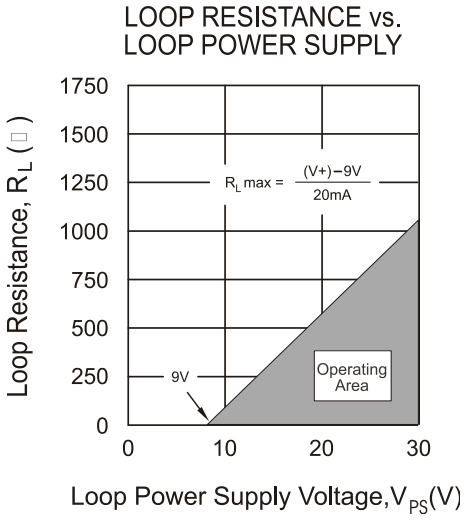


*ADD 5.00" FOR LIGHTNING PROTECTION OPTION

Gland Cable Seal Configuration for ETFE Cable

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	SUBMERSIBLE LEVEL TRANSDUCER
3 4 2	±0.25% FS Total Error Band
↓ ↓ ↓	**MATERIAL**
	S Stainless Steel
	T Titanium
	↓ **REFERENCE FORMAT**
	1 Vented gage
	3 Sealed gage
	4 Absolute
	↓ **OUTPUT**
	4 4-20 mA
	↓ **PRESSURE CONNECTION**
	B Ported nose cap
	↓ **ELECTRICAL CONNECTION**
	0 Molded cable seal
	A Gland cable seal
	↓ **LIGHTNING PROTECTION**
	A None
	B Full Lightning Protection
	↓ **LEVEL RANGE (at MAX output)**[1]
	# # # . # # #
	↓ ↓ ↓ ↓ ↓ ↓ ↓
	LEVEL RANGE (at MIN output)[1]
	# # # . # # #
	↓ ↓ ↓ ↓ ↓ ↓ ↓
	MOISTURE PROTECTION
	A None (sealed/absolute only)
	B Vent Filter
	D Stainless Steel Vent Filter
	↓ **CABLE TYPE**
	1 Polyurethane
	2 ETFE (Electrical Connection "A" Only)
	↓ **CABLE LENGTH**
	x x x x (in feet)
	↓ ↓ ↓ ↓ **LABEL**[2]
	A psi
	B ft H_2O
	C m H_2O
	↓

3	4	2			4	B												.										

Notes:

1 The part number requires two level 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 level range is typically 000.000 unless otherwise required. For reverse output requirements, enter the lower level range for the maximum output signal and the upper range for the minimum output. Use the following conversion factors: **Ft. H_2O / 2.3073 = psi // m H_2O / 0.703265 = psi**
Examples: 10 ft. H_2O / 2.3073 = 4.334 psi (Enter 004.334 in the part number), 10 m H_2O / 0.703265 = 14.219 psi (Enter 014.219 in the part number)
For sealed gage reference add local atmosphere when converting to psi. Contact PSI for assistance.
Example:10 ft. H_2O / 2.3073 +14.7 = 19.034 psi (Enter 019.034 in the part number)

2 Units of measure on standard MEAS label. Contact Measurement Specialties if private labeling is required.

NORTH AMERICA
Measurement Specialties, Inc.,
a TE Connectivity company
Tel : 1-800-522-6752
Email: customercare.hmpt@te.com

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Measurement Specialties (Europe), Ltd.,
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Tel : +33 (0) 800-440-5100
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Measurement Specialties (China), Ltd.,
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