

ASIC BASED SMALL BORE

# KPSI 342

# submersible level transducer



## FEATURES

- ASIC TECHNOLOGY
- $\pm 0.25\%$  FS TOTAL ERROR BAND OVER COMPLETE OPERATING RANGE
- SMALL BORE, 0.75" DIAMETER
- CUSTOM LEVEL RANGES TO 230FT (70M) H2O
- CUSTOM POLYURETHANE OR ETFE CABLE LENGTHS
- ANALOG OUTPUTS OF 4-20 MA OR 0-5 VDC
- WELDED 316SS OR TITANIUM
- OPTIONAL LIFETIME LIGHTNING PROTECTION

- TWO YEAR WARRANTY
- SHIPPED WITH LONG LIFE VENT FILTER

## APPLICATIONS

- SURFACE WATER MONITORING
- TAILRACE AND FOREBAY MONITORING

- OCEANOGRAPHIC RESEARCH
- GROUNDWATER MONITORING
- DOWN HOLE

# KPSI 342

## specifications information

### FULL SCALE LEVEL RANGES

*Intermediate Level Ranges Are Available.*

- Vented gage reference.....10 thru 230 ft (3 thru 70 m) H2O
- Sealed gage or absolute reference.....35 thru 230 ft (10 thru 70 m) H2O
- Proof Pressure.....1.5 X FS
- Burst Pressure.....2.0 X FS

### STATIC PERFORMANCE

*Combined Errors Due To Non-Linearity, Hysteresis, Repeatability, And Thermal Effects Over The Compensated Temperature Range, Teb Is Based On Averaging Multiple Readings*

- Total Error Band..... $\pm 0.25\%$ FS TEB from BFSL
- Resolution..... $\pm 0.0001\%$ FS

### ENVIRONMENTAL

- Wetted Materials.....316 SS or titanium; Delrin®; polyurethane or Viton®. Delrin® and Viton® are registered trademarks of DuPont.
- Compensated Temp Range.....-20 to 60°C
- Operating Temp Range.....-20 to 60 °C when using polyurethane cable
- Protection Rating .....IP 68, NEMA 6P

### ELECTRICAL

- Excitation.....9-30 VDC for mA and VDC output
- Input Current....20 mA max, for mA output; 3.5 mA max, for VDC output
- Output.....4-20 mA, 0-5 VDC
- Zero Offset..... $\pm 0.12$  mA for mA output; < 0.1 VDC for VDC output

- Output Impedance.....See Loop Resistance diagram for mA output, 510 ohm for VDC output
- Insulation Resistance.....100 mega ohm at 50 VDC
- Circuit Protection.....Polarity, surge/shorted output
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- Circuit Protection.....Polarity, surge/shorted output

### CERTIFICATIONS

CE compliant to EN 61326-1:2001 and EN 61326-2-3:2006

### PHYSICAL

- Approximate Weight.....0.50 lbs (224 g) transducer, 0.05 lbs/ft (79 g/m) cable
- Cable Jacket Material.....Polyurethane (standard), Tefzel®, Teflon® and Kevlar® are registered trademarks of DuPont. ETFE (optional), ETFE is a fluoropolymer (Teflon® derivative) material, Tefzel® or equivalent
- Cable Pull Strength.....200 lbs (90 kg)
- Cable Number of Conductors.....4
- Cable Conductor Size.....22 AWG
- Cable Seal.....Molded Polyurethane for polyurethane cable, Viton® Gland for ETFE cable

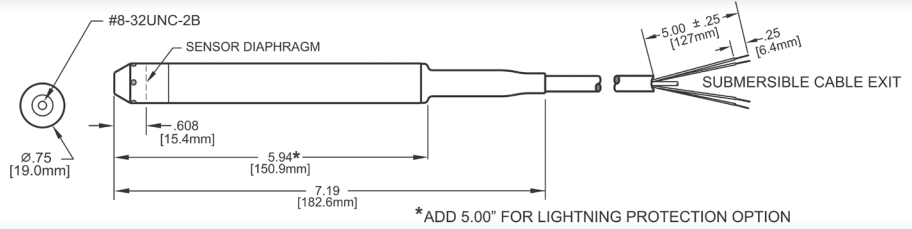
### LIGHTNING PROTECTION (OPTIONAL)

- Power Supply Needs To Be Limited To 150 mA 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

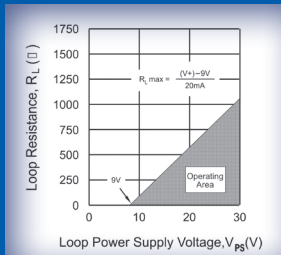
### ELECTRICAL TERMINATION

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

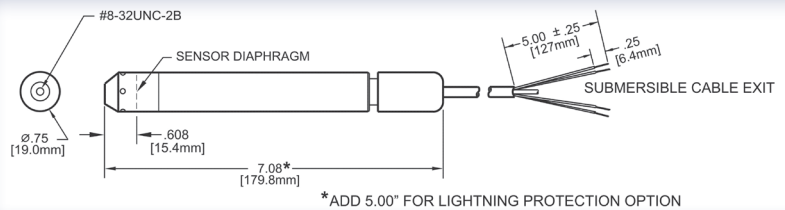
### MOLDED CABLE SEAL CONFIGURATION FOR POLYURETHANE CABLE



### LOOP RESISTANCE VS. POWER SUPPLY



### GLAND CABLE SEAL CONFIGURATION FOR ETFE CABLE



**MODEL** 342, ±0.25% FS Total Error Band

**MATERIAL** S, Stainless Steel T, Titanium

**REFERENCE FORMAT** 1, Vented gage 3, Sealed gage 4, Absolute

**OUTPUT** 3, 0-5 V 4, 4-20 mA

**PRESSURE CONNECTION (NOSECAP)** B, Ported

**ELECTRICAL CONNECTION** 0, Molded cable seal A, Gland cable seal

**LIGHTNING PROTECTION** A, None B, Full Lightning Protection

**LEVEL RANGE (at MIN output)** # # # . # # #

**LEVEL RANGE (at MAX output)** # # # . # # #

**MOISTURE PROTECTION** A, None (sealed/absolute only) B, Vent Filter C, Aneroid Bellows

**CABLE TYPE** 1, Polyurethane 2, ETFE

**CABLE LENGTH (in feet)** # # # #

**LABEL** A, Psi B, ft H<sub>2</sub>O C, m H<sub>2</sub>O

EXAMPLE 3 4 2 S 1 4 B 0 B 0 0 4 . 3 3 4 0 0 0 . 0 0 0 B 1 0 0 5 5 A

1. The part number requires two level range limits, corresponding to maximum and minimum outputs, 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 range for the maximum output and the upper range for the minimum output. Use the following conversion factors:

ft H<sub>2</sub>O / 2.3073 = psi  
m H<sub>2</sub>O / 0.703265 = psi

Examples: 10 ft H<sub>2</sub>O / 2.3073 = 4.334 psi (enter 004.334 in the part number)  
10m H<sub>2</sub>O / 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<sub>2</sub>O / 2.3073 + 14.7 = 19.034 psi (enter 019.034 in the part number)

2. Contact PSI if private labeling is required.

Warranty: The Series 342 product is warranted against defects in material and workmanship for 2 years from date of shipment. Products not subjected to misuse will be repaired or replaced. THE FOREGOING IS IN LIEU OF ANY OTHER EXPRESSED OR IMPLIED WARRANTIES. We reserve the right to make changes to any product herein and assume no liability arising out of applications or **USE OF ANY PRODUCT OR CIRCUIT DESCRIBED. PRODUCTS DESCRIBED IN THIS SPECIFICATION ARE NOT INTENDED FOR LIFE SUPPORT APPLICATIONS.**