

# KPSI 330 335 SMALL BORE submersible level transducer



## FEATURES

- STATIC ACCURACY TO  $\pm 0.05\%$  FSO
- SMALL BORE, 0.75" DIAMETER
- CUSTOM LEVEL RANGES UP TO 700FT (210M) H2O
- CUSTOM POLYURETHANE OR ETFE CABLE LENGTHS
- MULTIPLE ANALOG OUTPUTS
- WELDED 316SS OR TITANIUM
- OPTIONAL LIFETIME PROTECTION
- TWO YEAR WARRANTY

- SHIPPED WITH LONG LIFE VENT FILTER

## APPLICATIONS

- SURFACE WATER MONITORING
- OCEANOGRAPHIC RESEARCH
- TIDE GAUGING
- WAVE PROFILING
- GROUNDWATER MONITORING
- SOIL REMEDIATION
- SLUG TESTS

# KPSI 330 335 specifications information

## FULL SCALE LEVEL RANGES

*Intermediate Level Ranges Are Available*

Vented gage reference.....	5 thru 700 ft (1.5 thru 210 m) H2O
Sealed and Absolute reference available for 330 only	
Sealed gage reference.....	35 thru 700 ft (10 thru 210 m) H2O
Absolute reference.....	35 thru 700 ft (10 thru 210 m) H2O
Proof Pressure.....	1.5 X FS
Burst Pressure.....	2.0 X FS

## STATIC PERFORMANCE

*Combined Effects Of Non-Linearity, Hysteresis And Repeatability, Best Fit Straight Line Method*

Static Accuracy.....	330: $\pm 0.10\%$ FSO; 335: $\pm 0.05\%$ FSO
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.....0 to 50°C  
*Maximum Allowable Deviation From The Best Fit Straight Line Due To A Change In Temperature*

Thermal Error ..... $\pm 0.05\%$  FSO/ °C worst case over compensated temperature range, for ranges < 12 ft (4 m) H2O, maximum thermal error is  $\pm 0.1\%$  FSO/°C

Protection Rating .....IP 68, NEMA 6P

## ELECTRICAL

Excitation..... • 9-28V - VDC output (0-5V, 0-2.5V, 0-4V)  
 • 9-28V - mA output (4-20) • 15-28V - VDC output (0-10V)  
 • 10-28V - VDC output (1.5-7.5V)

Input Current...20 mA max, for mA output; 3.5 mA max, for VDC output

Output...4-20 mA, for ranges > 230 ft (70 m) H2O, output is 4-20 mA only; 0-5 VDC, 0-2.5VDC, 0-4VDC, 0-10VDC, 1.5-7.5VDC  
 Zero Offset..... $\pm 0.25$  mA for mA output, < 0.25 VDC for VDC output  
 Output Impedance.....See Loop Resistance diagram for mA output, 20 ohm for VDC output  
 Insulation Resistance.....100 mega ohm at 50 V  
 Circuit Protection.....Polarity, surge/shorted output

## CERTIFICATIONS

UL, CUL and FM - Intrinsically safety approved  
 CE compliant to EN 61326-1:2001 and EN 61326-2-3:2006

## PHYSICAL

Approximate Weight.....0.47 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)

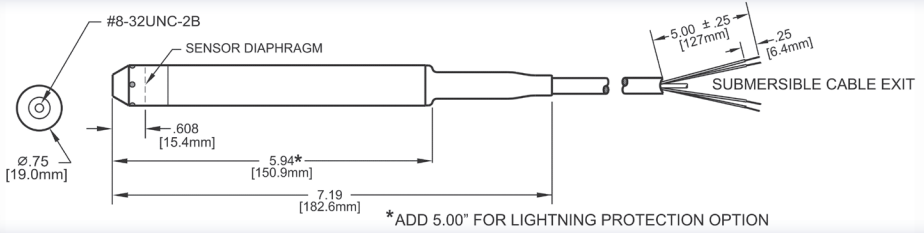
*Power Supply Needs To Be Limited To 150 mA To Avoid Lock Up Of The Gas Tube After A Suppression Event*  
 Life Expectancy.....> 1,000 operations  
 Peak Clamping Voltage.....36 volts  
 Response Time.....<10 nsecs

# KPSI 330 335 technical data

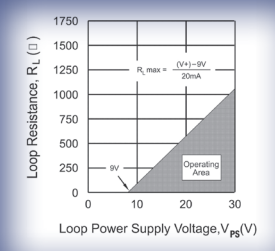
## ELECTRICAL TERMINATION

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

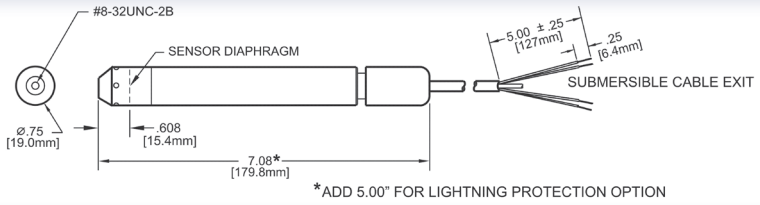
## MOLDED CABLE SEAL CONFIGURATION FOR POLYURETHANE CABLE



## LOOP RESISTANCE VS. POWER SUPPLY



## GLAND CABLE SEAL CONFIGURATION FOR ETFE CABLE



# KPSI 330 335 order information



**MODEL** 330, ±0.10% FSO Static Accuracy; 335, ±0.05% FSO Static Accuracy  
**MATERIAL** 5, Stainless Steel; T, Titanium  
**REFERENCE FORMAT** 1, Vented gage; 3, Sealed gage (except 335) A, Absolute (except 335)  
**OUTPUT** 3, 0-5.0V; F, 0-2.5V; G, 0-4V; H, 0-10V; J, 1.5-7.5V; A, 4-20 mA  
**PRESSURE CONNECTION (NOSECAP)** B, Ported  
**ELECTRICAL CONNECTION** G, 0-4V; H, 0-10V; J, 1.5-7.5V; A, 4-20 mA  
**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 H2O; C, m H2O

EXAMPLE: 335 S 1 F B 0 B 004.334 000.000 B 1 0055 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 H2O / 2.3073 = psi      Examples: 10 ft H2O / 2.3073 = 4.334 psi      (enter 004.334 in the part number)  
 m H2O / 0.703265 = psi      10m H2O / 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 H2O / 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 330 and 335 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.