

KPSI 700 710 720 submersible level transducer



FEATURES

- CUSTOM LEVEL RANGES UP TO 700FT (210M) H₂O
- CUSTOM POLYURETHANE OR ETFE CABLE LENGTHS
- STATIC ACCURACY TO $\pm 0.25\%$ FSO
- MULTIPLE ANALOG OUTPUTS
- WELDED 316SS OR TITANIUM
- OPTIONAL LIFETIME LIGHTNING PROTECTION
- CUSTOM-BUILT IN TWO DAYS

- TWO YEAR WARRANTY
- MULTIPLE NOSE PIECE STYLES
- SHIPPED WITH LONG LIFE VENT FILTER

- LEVEL CONTROL
- SURFACE WATER MONITORING
- LANDFILL LEACHATE
- WELL MONITORING
- GROUNDWATER MONITORING
- SLUG TESTS

APPLICATIONS

- LIFT STATIONS
- PUMP CONTROL

KPSI 700 710 720 specifications information

FULL SCALE LEVEL RANGES

Intermediate Level Ranges Are Available.

Vented gage reference	2.3 thru 700 ft (0.70 thru 210 m) H ₂ O
Sealed gage reference	10 thru 700 ft (3 thru 210 m) H ₂ O
Absolute reference	35 thru 700 ft (10 thru 210 m) H ₂ O
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	• 720: $\pm 0.25\%$ FSO
	• 710: $\pm 0.50\%$ FSO • 700: $\pm 1.00\%$ 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 Temperature 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) H ₂ O, Maximum thermal error is $\pm 0.1\%$ FSO/°C
Operating Temperature Range	-20 To 60°C when attached to polyurethane cable
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, 0-5 VDC, 0-2.5VDC, 0-4VDC, 0-10VDC, 1.5-7.5VDC
	For ranges < 5 ft (1.5 M) H ₂ O, only 4-20 mA output is available

Zero Offset	± 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 VDC
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	0.44 Lbs (198 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

TEMPERATURE OUTPUT OPTION

(not intrinsically safety approved)	
Temperature Range	-20 To 60°C, available for 4-20mA output versions only
Output Signal	4-20 mA
Temperature Measurement Accuracy	$\pm 4^\circ\text{C}$

LIGHTNING PROTECTION

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

34 Research Drive, Hampton, VA 23666 USA, 757-865-1243, Toll Free 800-328-3665, Fax 757-865-8744
E-mail sales@PressureSystems.com • www.PressureSystems.com • online orders www.LevelandPressure.com • iso-9001:2008

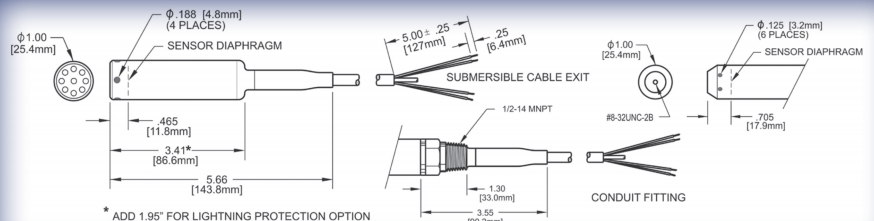
measurement
SPECIALTIES

KPSI 700 710 720 technical data

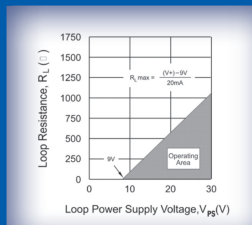
ELECTRICAL TERMINATION

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

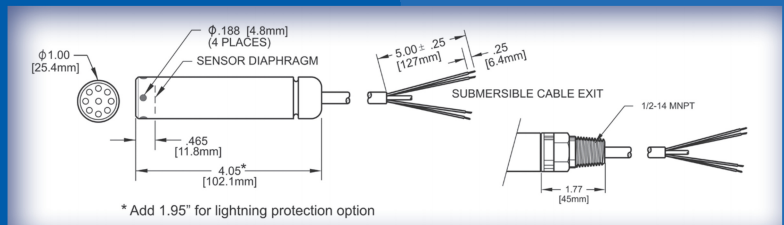
MOLDED CABLE SEAL CONFIGURATION FOR POLYURETHANE CABLE



LOOP RESISTANCE VS. POWER SUPPLY



GLAND CABLE SEAL CONFIGURATION FOR ETFE CABLE



KPSI 700 710 720 order information



MODEL 700, ±1.00% FSO Static Accuracy
710, ±0.50% FSO Static Accuracy
720, ±0.25% FSO Static Accuracy

MATERIAL S, Stainless Steel, T, Titanium

REFERENCE FORMAT

OUTPUT 1, Vented gage, 3, Sealed gage, 4, Absolute

PRESSURE CONNECTION (NOSECAP FITTING) A, Openface nosecap, B, Ported nose cap, E, Piezometer

ELECTRICAL CONNECTION 1, 1/2" - 14 NPT male fitting, 7, 1/2" - 14 NPT male conduit fitting with molded cable seal

LIGHTNING PROTECTION A, None, B, Full Lightning Protection

LEVEL RANGE (at MIN output) 000 * 000

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

CABLE TYPE 1, Polyurethane, 2, ETFE

CABLE LENGTH (in feet) 0055

LABEL2 A, psi, B, ft H₂O, C, m H₂O

EXAMPLE: 720 S 1 4 0 0 A 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:

$$\text{ft H}_2\text{O} / 2.3073 = \text{psi}$$

$$\text{m H}_2\text{O} / 0.703265 = \text{psi}$$

$$\text{Examples: } 10 \text{ ft H}_2\text{O} / 2.3073 = 4.334 \text{ psi}$$

$$10 \text{ m H}_2\text{O} / 0.703265 = 14.219 \text{ psi}$$

$$\text{(enter 004.334 in the part number)}$$

$$\text{(enter 014.219 in the part number)}$$

For sealed gage reference add local atmosphere when converting to psi. Contact PSI for assistance.

$$\text{Example: } 10 \text{ ft H}_2\text{O} / 2.3073 + 14.7 = 19.034 \text{ psi} \quad \text{(enter 019.034 in the part number)}$$

2. Contact PSI if private labeling is required.

Warranty: The Series 700, 710 and 720 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.