

Applications

- ◆ Groundwater Monitoring
- ◆ Down Hole
- ◆ Surface Water Monitoring
- ◆ Tailrace and Forebay Monitoring
- ◆ Oceanographic Research

Features

- ◆ Custom Polyurethane or ETFE Cable Lengths
- ◆ Welded 316SS or Titanium
- ◆ Custom Level Ranges up to 230 ft. (70m) H₂O
- ◆ Shipped with Long-Life Vent Filter
- * Removable Cable Options including PVC jacketed steel armored cable

KPSI 500

- SDI-12 Submersible Level Transducer
- ◆ ±0.05% FS Total Error Band
- Optional Lifetime Lightning Protection
- Two year warranty
- 1" Diameter

The KPSI 500 submersible hydrostatic level transducer represents the leading edge of level sensing technology available today. Incorporating a highly stable media-isolated sensor, the KPSI 500 features SDI-12 and RS-485 serial-digital interface standards. SDI-12 is a commonly used standard for interfacing data recorders with microprocessor-based sensors, in the environmental monitoring field. The KPSI 500 is an excellent solution for applications with requirements that require minimal current drain. It will accommodate cable lengths between sensor and recorder up to 1000 feet.



Tel:+086-750-6655202

Specifications

PARAMETER		COMMENT			
LEVEL RANGES					
Full Scale Level Ranges (intermediate level ranges are available)	10 thru 230 ft. (3 thru 70m) H ₂ 0	Vented Gage Reference			
Proof Pressure	1.5 x FS				
Burst Pressure	2.0 x FS				
STATIC PERFORMANCE (Combine	ed Errors Due to Nonlinearity, Hysteresis, Non-repeatabili	ty, and Thermal Effects over the Compensated Temperature Range)			
Level	±0.05% FS TEB ±0.10% FS TEB	For level ranges > 10 ft. (3m) H ₂ O For level ranges <= 10 ft. (3m) H ₂ O			
Temperature	+0.5ºC				
Excitation	±0.5 VDC	8 to 28 volts			
Resolution	+0.0001% FS				
MEASUREMENT RESOLUTION					
Level	±0.0001%FS				
Temperature	±0.001°C				
Excitation	±0.1 VDC				
ENVIRONMENTAL	10.1 VDO				
Wetted Materials					
Compensated Temp Range	polyurethane or ETFE 0 to 50°C				
Operating Temp Range	-20 to 60 °C	When attached to polyurethane cable			
Protection Rating	IP 68, NEMA 6P	Whom attached to polyarethane dable			
ELECTRICAL	II OO, NEWA OI				
Excitation	6-28V – VDC output				
Input Current	8 mA max	Average current during data acquisition			
input Guirent	1.0 mA	Quiescent			
Interface	SDI-12, version 1.3 RS-485	SDI-12 protocol			
CERTIFICATIONS					
	CE compliant	EN 61326-1:2013 and 61326-2-3:2013			
PHYSICAL					
Approximate Weight	0.75 lbs. (340 g) transducer 0.05 lbs./ft. (79 g/m) cable				
Cable Jacket Material	Polyurethane ETFE Armored polyurethane (optional 859 accessory)	PVC Jacketed steel armored polyurethane			
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	r supply needs to be limited to 150mA to avoid loc	1 1111			
Life Expectancy	>1,000 Operations	, , , , , , , , , , , , , , , , , , , ,			
Peak Clamping Voltage	36 Volts				
Response Time	<10 nsecs				
Shunts	20,000 Amperes				
Oriento	20,000 / linporos				

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Dimensions φ1.00 — [25.4mm] 3.55 [90.2mm] .57 [14.5mm] 1/2-14 MNPT W/OVERMOLD SEAL OPEN FACED OR PIEZOMETER NOSE CAP φ1.00 — [25.4mm] 0 [20.8mm] PORTED NOSE CAP Ф.188 [4.8mm] (4 PLACES) [115.1mm] REMOVABLE CABLE W/OVERMOLD SEAL φ1.00 — [25.4mm] SENSOR DIAPHRAGM ___.57 [14.5mm] 7.00 *__ [177.8mm] 3.50 [88.9mm] φ1.00 — [25.4mm] MOLDED CABLE SEAL *ADD 3.30 FOR LIGHTNING PROTECTION OPTION 1.62— [41.1mm] 1/4-18 MNPT NOSE CAP GLAND SEAL φ1.00 — [25.4mm] 1.83 — [46.5mm] 1.93 [49.0mm] 1/2-14 MNPT NOSE CAP GLAND SEAL W/1/2-14 MNPT

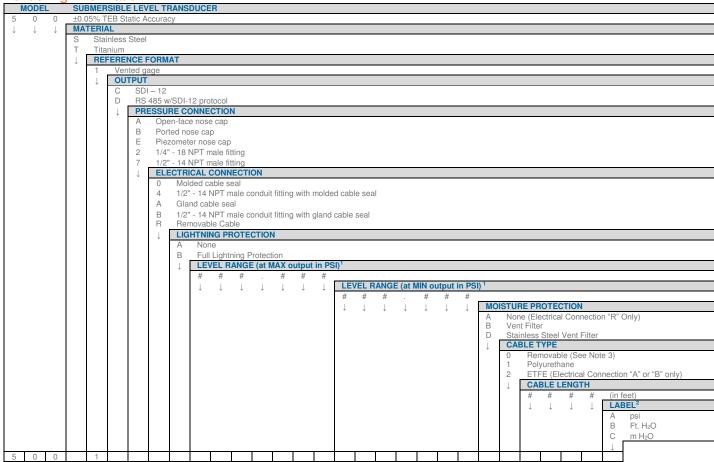
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Electrical Termination and Removable Cable Options

ELECTRICAL TERMINATION								
22AWG CONDUCTORS IN A SHIELDED CABLE WITH VENT TUBE								
	RED	+ SUPPLY						
SDI-12	BLACK	- SUPPLY						
	WHITE	SIGNAL						
	RED	+ SUPPLY						
RS-485	BLACK	- SUPPLY						
NS-463	WHITE	RS485-A						
	GREEN	RS485-B						
ALL	DRAIN WIRE	SHIELD						

	MOD	DEL REMOVABLE CABLE									
8	5	9									
↓	\downarrow	\downarrow	MA	MATERIAL							
			S	Stainless Steel							
			Т	Titanium							
			1	OUTPUT							
			·	С	SDI-	12					
				D	D RS 485 w/SDI-12 protocol						
				1	ELECTRICAL CONNECTION						
					0	Molded cable seal					
					Α	Gland cable seal					
					\downarrow	CABLE TYPE					
						1 Polyurethane					
						2 ETFE (Connection A Only)					
						4 Armored (Connection O Only; 200 Feet Max)					
						1	CABLE LENGTH				
	Ì						#	#	#	(in feet)	
8	5	9									

Ordering Information



Notes:

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. H₂O (2.3073 = psi)** // m **H₂O (0.703265 = psi) Examples:** 10 ft. H₂O (2.3073 = 4.334 psi (Enter 004.334 in the part number), 10 m 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)

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

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- Removable / Armored Cable must utilize Electrical Connection R only. Removable / Armored cable must be ordered as separate 859 Removable Cable Assembly Part Number (see guide on page 3).