

# KPSI 351

- SDI-12 Small Bore Submersible Level Transducer
- $\pm 0.01$  ft H<sub>2</sub>O, reading  $\leq 10$ ft (3m) H<sub>2</sub>O
- $\pm 0.10\%$  reading,  $> 10$ ft (3m) H<sub>2</sub>O
- Optional Lifetime Lightning Protection
- Two year warranty



The **KPSI 351** submersible hydrostatic level transducer is specifically designed for small bore applications and to meet the rigorous environments encountered in ground water level measurements. Incorporating a highly stable media-isolated sensor, the KPSI 351 features SDI-12 serial-digital interface. SDI-12 is a standard for interfacing data recorders with microprocessor-based sensors, especially in the environmental monitoring field.

The KPSI 351 is intended for applications with requirements that include battery-powered operation with minimal current drain, low system cost, and use of a single recorder with multiple sensors “daisy-chained” on one cable. It will accommodate cable lengths between sensors and recorder up to 200 feet. The removable cable option allows easy substitution of transducers and cables. New removable nose cap and ¼” 18 NPT fitting options extend product applications.

## APPLICATIONS

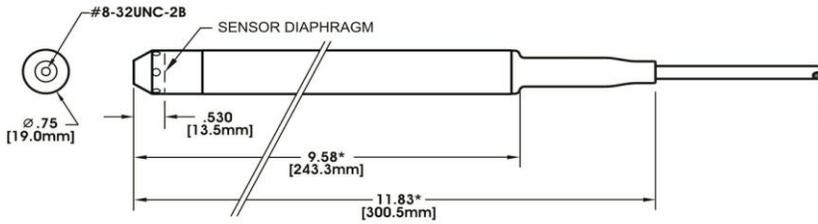
- Groundwater Monitoring
- Down Hole
- Surface Water Monitoring
- Tailrace and Forebay Monitoring
- Oceanographic Research

## FEATURES

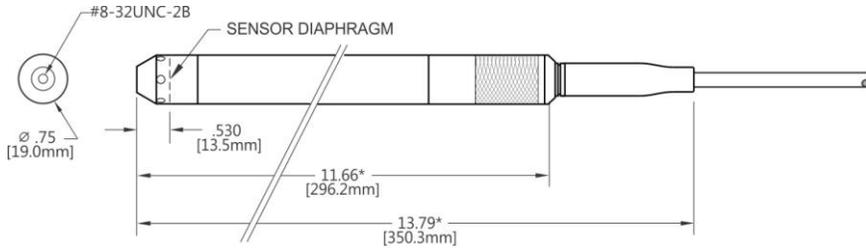
- Removable cable option
- Custom Polyurethane or ETFE Cable Lengths
- Optional PVC jacketed steel armored cable
- Welded 316SS or Titanium
- Custom Level Ranges up to 50 ft (15m) H<sub>2</sub>O
- Multiple Nose Cap or NPT Fitting Options
- Shipped with Long-Life Vent Filter

# KPSI 351

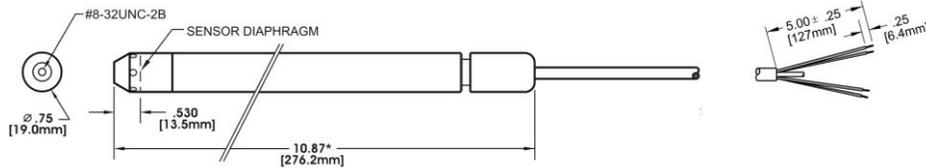
## dimensions



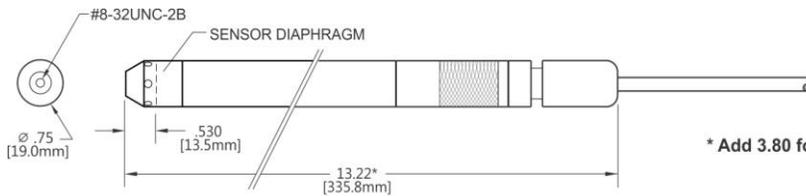
\* Add 3.80 for lightning protection.



Molded Cable Seal Configuration for Polyurethane cable



\* Add 3.80 for lightning protection.



Gland Seal Configuration for ETFE cable

\* Add 3.80 for lightning protection.



## electrical termination and removable cable options

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

MODEL	REMOVABLE CABLE
8 5 9	
↓ ↓ ↓	
	<b>MATERIAL</b>
	S Stainless Steel
	T Titanium
	↓
	<b>OUTPUT</b>
	C SDI-12
	D RS 485 w/SDI-12 protocol
	↓
	<b>ELECTRICAL CONNECTION</b>
	0 Molded cable seal
	A Gland cable seal
	R Removable cable
	↓
	<b>CABLE TYPE</b>
	1 Polyurethane
	2 ETFE
	4 Armored polyurethane
	↓
	<b>CABLE LENGTH</b>
	# # # (in feet)
8 5 9	

## performance specifications

Parameter	Comment	
<b>LEVEL RANGES</b>		
Full Scale Level Ranges (intermediate level ranges are available)	10 thru 50 ft (3 thru 15 m) H <sub>2</sub> O	Vented Gage Reference
Proof Pressure	1.5 x FS	
Burst Pressure	2.0 x FS	
<b>STATIC PERFORMANCE (Combined Errors Due to Nonlinearity, Hysteresis, Nonrepeatability, and Thermal Effects over the Compensated Temperature Range)</b>		
Level	±0.01 ft H <sub>2</sub> O ±0.10% reading	for reading ≤ 10 ft (3m) H <sub>2</sub> O for reading > 10 ft (3m) H <sub>2</sub> O
Temperature	±0.5°C	
Excitation	±0.5 VDC	8 to 28 volts
Resolution	±0.0001% FS	
<b>MEASUREMENT RESOLUTION</b>		
Level	±0.0001%FS	
Temperature	±0.001°C	
Excitation	±0.1 VDC	
<b>ENVIRONMENTAL</b>		
Wetted Materials	316 SS or Titanium; POM; polyurethane or FKM	
Compensated Temp Range	0 to 50°C	
Operating Temp Range	-20 to 60 °C	when attached to polyurethane cable
Protection Rating	IP 68, NEMA 6P	
<b>ELECTRICAL</b>		
Excitation	6-28V – VDC output	
Input Current	8 mA max 1.0 mA	average current during data acquisition quiescent
Interface	SDI-12, version 1.3 RS-485	SDI-12 protocol
<b>CERTIFICATIONS</b>		
	CE compliant	EN 61326-1:2001 and 61326-2-3:2006
<b>PHYSICAL</b>		
Approximate Weight	0.75 lbs (340 g) transducer 0.05 lbs/ft (79 g/m) cable	
Cable Jacket Material	Polyurethane (standard) ETFE (optional) Armored polyurethane (optional)	PVC jacketed steel armored polyurethane
Cable Pull Strength	200 lbs (90 kg)	
Cable Number of Conductors	4	
Cable Conductor Size	22 AWG	
Cable Seal	Molded Polyurethane FKM Gland	for polyurethane cable for ETFE cable
<b>LIGHTNING PROTECTION (power supply needs to be limited to 150mA to avoid lock up of the gas tube after a suppression event)</b>		
Life Expectancy	>1,000 Operations	
Peak Clamping Voltage	36 Volts	
Response Time	<10 nsecs	
Shunts	20,000 Amperes	

