



## KPSI 380

- ◆ SDI-12 Submersible Temperature Transducer
- ◆ Accuracy of  $\leq 0.1^{\circ}\text{C}$
- ◆ Nickel RTD
- ◆ Highly Stable
- ◆ Optional Lightning Protection Available

### Features

- ◆ Custom Polyurethane Cable Lengths
- ◆ Welded 316SS Body Construction
- ◆ Optional Lifetime Lightning Protection

### Applications

- ◆ Stream Gauging
- ◆ Surface Water Monitoring
- ◆ Aquifer Characterization and Groundwater Monitoring
- ◆ Storm Water
- ◆ Dam Operations
- ◆ Thermo Electric Water Discharge
- ◆ Aquaculture and Egg Hatcheries

### Specifications

The KPSI 380 submersible temperature transducer represents the leading edge of temperature sensing technology available today. Incorporating a highly stable media-isolated sensor, the KPSI 380 features a SDI-12 or RS-485 Communication Interface option. SDI-12 is a standard for interfacing data recorders with microprocessor-based sensors, especially in the environmental monitoring field. It is an excellent solution for applications that require minimal current drain. This Nickel RTD, highly stable temperature transducer consists of a welded 316 Stainless Steel body construction with custom polyurethane cable lengths and optional lifetime lightning protection. The KPSI 380 calibration is traceable to the National Institute of Standards and Technology (NIST).

PARAMETER	COMMENT	
<b>MEASUREMENT ACCURACY</b>		
Temperature	$\pm 0.1^{\circ}\text{C}$	Programmable non-volatile calibration coefficients
Response Time	2 min	(63.2%) for $25^{\circ}\text{C}$ submersion step at 1m/s flow
Stability	$\pm 0.05^{\circ}\text{C}$	Per 12 months
Supply Voltage	$\pm 0.5$ VDC	
<b>MEASUREMENT RESOLUTION</b>		
Temperature	$\pm 0.01^{\circ}\text{C}$	
Supply Voltage	$\pm 0.1$ VDC	
<b>ENVIRONMENTAL</b>		
Wetted Materials	316 SS; POM; polyurethane	
Calibrated Temp Range	-5 to $45^{\circ}\text{C}$	
Operating Temp Range	-20 to $60^{\circ}\text{C}$	
<b>ELECTRICAL</b>		
Supply Voltage	6-28 VDC	10 second power-on boot-up delay
Current Draw	10 mA	Average current during measurement
	1.5 mA	Quiescent
Communication Interface	SDI-12 or RS-485	Protocol compliant to SDI-12 version 1.3

**CERTIFICATIONS**

CE	EN 61326-1:2013 & EN 61326-2-3:2013
IP-68, NEMA6P	

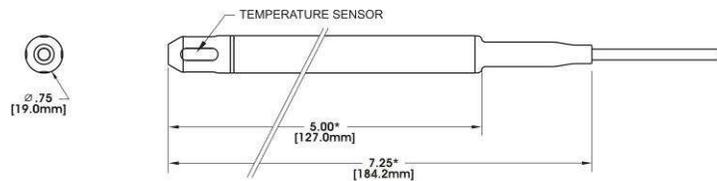
**PHYSICAL**

Approximate Weight	0.75 lbs. (340 g) transducer 0.05 lbs./ft. (79 g/m) cable
Cable Jacket Material	Polyurethane (standard)
Cable Pull Strength	200 lbs. (90 kg)
Cable Number of Conductors	4
Cable Conductor Size	22 AWG
Cable Seal	Molded Polyurethane

**LIGHTNING PROTECTION** (power supply needs to be limited to 150mA 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
Shunts	20,000 Amperes

**Dimensions**



**Molded Cable Seal Configuration for Polyurethane Cable**

**Ordering Information**

MODEL	SUBMERSIBLE TEMPERATURE TRANSDUCER
3 8 0	SDI-12
↓ ↓ ↓	<b>MATERIAL</b>
	S Stainless Steel
	↓ <b>OUTPUT</b>
	C SDI-12
	D RS-485, SDI-12 protocol
	↓ <b>NOSEPIECE</b>
	H Slotted nose cap
	↓ <b>ELECTRICAL CONNECTION</b>
	0 Molded cable seal
	↓ <b>LIGHTNING PROTECTION</b>
	A None
	B Full Lightning Protection (only available with OUTPUT option C: SDI-12)
	↓ <b>CABLE TYPE</b>
	1 Polyurethane
	↓ <b>CABLE LENGTH</b>
	# # # # (in feet)
3 8 0 S H 0 1	

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