

## KPSI 380



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



### DESCRIPTION

The MEAS KPSI 380 submersible temperature transducer represents the leading edge of temperature sensing technology available today. Incorporating a highly stable media-isolated sensor, the MEAS KPSI 380 features a SDI-12 serial-digital interface. SDI-12 is a standard for interfacing data recorders with microprocessor-based sensors, especially in the environmental monitoring field. It 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. The MEAS KPSI 380 calibration is traceable to the National Institute of Standards and Technology (NIST).

### 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

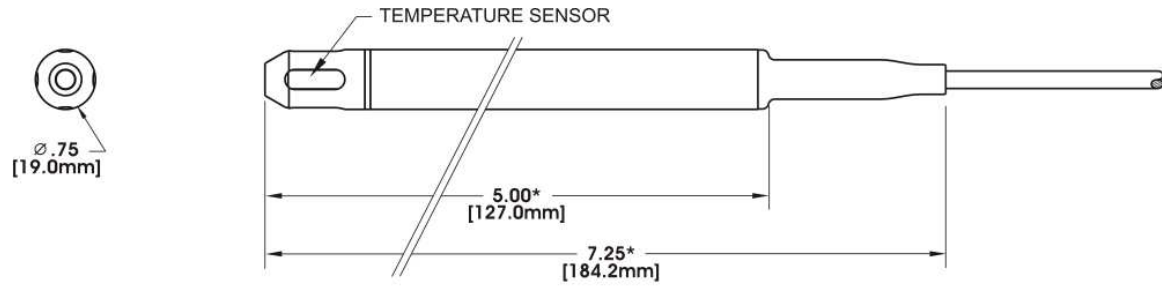
# KPSI 380

## SPECIFICATIONS

PARAMETER		COMMENT
<b>MEASUREMENT ACCURACY</b>		
Temperature	±0.1°C	Programmable non-volatile calibration coefficients (63.2%) for 25°C submersion step at 1m/s flow
Response Time	2 min	
Stability	±0.05°C	per 12 months
Supply Voltage	±0.5 VDC	
<b>MEASUREMENT RESOLUTION</b>		
Temperature	±0.01°C	
Supply Voltage	±0.1 VDC	
<b>ENVIRONMENTAL</b>		
Wetted Materials	316 SS; Delrin®; polyurethane	Delrin® is a registered trademark of DuPont.
Calibrated Temp Range	-5 to 45°C	
Operating Temp Range	-20 to 60 °C	
<b>ELECTRICAL</b>		
Supply Voltage	6-28 VDC	10 second power-on boot-up delay
Current Draw	10 mA	average current during measurement quiescent
	1.5 mA	
Communication Interface	SDI-12 or RS-485	protocol compliant to SDI-12 version 1.3
<b>CERTIFICATIONS</b>		
CE		EN 61000-4-2 [-3, -4, -5, -6, -8], CISPR11
IP-68, NEMA6P		
<b>PHYSICAL</b>		
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	
<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	

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## DIMENSIONS



\*Add 3.80" for lightning protection option

Molded Cable Seal Configuration for Polyurethane Cable

## ORDER 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	X	X	X	X

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