

MEAS KPSI 750



- Non-Fouling Submersible Level Transducer
- Non-Clogging 2.75" PTFE Coated Elastomeric Diaphragm
- $\pm 0.25\%$ FSO Static Accuracy
- Custom Built in Two Days
- Two Year Warranty



DESCRIPTION

The MEAS KPSI 750 submersible hydrostatic level transducer is specifically designed to meet the rigorous environments encountered in a slurry or highly viscous application. It provides precision depth measurement under most hostile conditions.

All MEAS KPSI Transducers utilize a highly accurate pressure sensor assembly specifically designed for hostile fluids and gases. The assembly is integrated with supporting electronics in a durable waterproof housing constructed of 316 stainless steel. The attached electrical cable is custom manufactured and includes Kevlar® members to prevent errors due to cable elongation, and a unique water block feature that self-seals in the event of accidental cuts to the cable. Each transducer is shipped with our latest SuperDry™ Vent Filter that prevents moisture from entering the vent tube for at least one year without maintenance, even in the most humid environments.

FEATURES

- Custom Polyurethane or ETFE Cable Lengths
- Welded 316SS or Titanium
- Custom Level Ranges up to 115 ft (35m) H₂O
- Integral Diaphragm Protector
- Optional Lifetime Lightning Protection

APPLICATIONS

- Lift Stations
- Wastewater
- Slurry Tanks
- Pump Control

SPECIFICATIONS

Parameter		Comment
LEVEL RANGES		
Full Scale Level Ranges (intermediate level ranges are available)	10 thru 115 ft H ₂ O (3 thru 35 m H ₂ O)	Vented Gage Reference
Proof Pressure	1.5 x FS	
Burst Pressure	2.0 x FS	
STATIC PERFORMANCE		
Static Accuracy (combined effects of non-linearity, hysteresis and repeatability, best fit straight line method)	$\pm 0.25\%$ FSO	BFSL method
Resolution	+0.0001% FS	

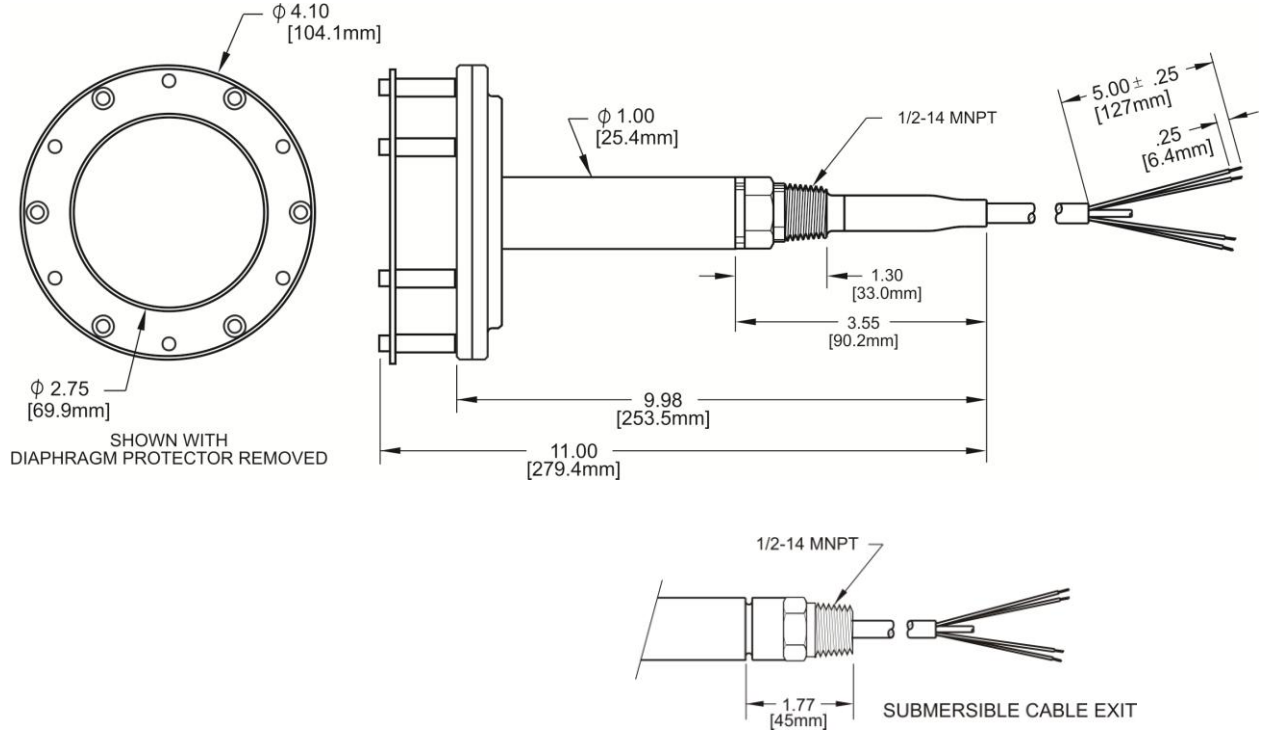
MEAS KPSI 750

SPECIFICATIONS

ENVIRONMENTAL		
Wetted Materials	316 SS or Titanium; Delrin®; polyurethane, PTFE or Viton®	Delrin® and Viton® are registered trademarks of DuPont.
Compensated Temp Range	0 to 50°C	
Thermal Error (maximum allowable deviation from the Best Fit Straight Line due to a change in temperature)	±0.10% FSO/°C	worst case for level ranges > 23' (7m) H2O prorated for level ranges ≤ 23' (7m) H2O
Operating Temp 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	4-20mA, 0-5 VDC, 0-2.5VDC, 0-4VDC, 0-10VDC, 1.5-7.5VDC	for ranges < 5 ft (1.5m) H2O, only 4-20mA output is available
Zero Offset	±0.25 mA for mA output < 0.25 VDC for VDC output	
Output Impedance	See loop diagram for mA output 20 ohm for VDC output	
Insulation Resistance	100 mega ohm at 50 VDC	
Circuit Protection	Polarity, surge/shorted output	
CERTIFICATIONS		
	CE compliant	EN 61326-1:2001 and 61326-2-3:2006
	UL, CUL and FM	Class I, II, III, Div 1, Groups A,B,C,D,E,F&G
	WEEE/RoHS	Waste from Electrical and Electronic Equipment (WEEE) and Restrictions on the use of Hazardous Substances (RoHS)
PHYSICAL		
Approximate Weight	3.5 lbs (1588 g) transducer 0.05 lbs/ft (79 g/m) cable	
Cable Jacket Material	Polyurethane (standard) ETFE (optional)	ETFE is a fluoropolymer (PTFE derivative) material, Tefzel® or equivalent. Tefzel® and Kevlar® are registered trademarks of DuPont.
Cable Pull Strength	200 lbs (90 kg)	
Cable Number of Conductors	4	
Cable Conductor Size	22 AWG	
Cable Seal	Molded Polyurethane Viton® Gland	for polyurethane cable 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	4-20mA	
Temperature Measurement Accuracy	±4°C	
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	

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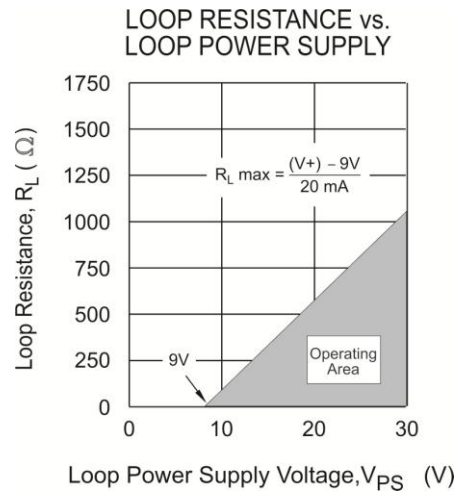
DIMENSIONS



Molded Cable Seal Configuration for Polyurethane Cable

ELECTRICAL TERMINATION / LOOP RESISTANCE / CERTIFICATIONS

ELECTRICAL TERMINATION		
22AWG CONDUCTORS IN A SHIELDED CABLE WITH VENT TUBE		
4-20 mA	RED	+ EXCITATION
	BLACK	- EXCITATION
0-5 VDC	RED	+ EXCITATION
	BLACK	- EXCITATION
	WHITE	+ SIGNAL
ALL	DRAIN WIRE	SHIELD



MEAS KPSI 750

ORDERING INFORMATION

MODEL		SUBMERSIBLE LEVEL TRANSDUCER	
7	5	0	±0.25% FSO Static Accuracy
↓	↓	↓	
MATERIAL			
S Stainless Steel			
REFERENCE FORMAT			
1 Vented gage			
OUTPUT			
3 0-5 VDC			
F 0-2.5 V			
G 0-4 V			
H 0-10 V			
J 1.5-7.5V			
4 4-20mA			
6 4-20mA temperature measurement option			
PRESSURE CONNECTION			
D Diaphragm protector			
ELECTRICAL CONNECTION			
4 1/2" - 14 NPT male conduit fitting with molded cable seal			
B 1/2" - 14 NPT male conduit fitting with gland cable seal			
LIGHTNING PROTECTION			
A None			
B Full Lightning Protection			
LEVEL RANGE (at MAX output)¹			
#	#	#	#
↓	↓	↓	↓
LEVEL RANGE (at MIN output)¹			
#	#	#	#
↓	↓	↓	↓
MOISTURE PROTECTION			
B Vent Filter			
C Aneroid Bellows			
CABLE TYPE			
↓			
1 Polyurethane			
2 ETFE			
CABLE LENGTH			
#	#	#	#
↓	↓	↓	↓
			(in feet)
			LABEL²
			A psi
			B ft H ₂ O
			C m H ₂ O
↓			
7	5	0	S 1 D

Notes:

1 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
 10m H₂O / 0.703265 = 14.219 psi

(enter 004.334 in the part number)
 (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)

2 Units of measure on standard PSI label. Contact PSI if private labeling is required.

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