

# MEAS KPSI 705



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



## DESCRIPTION

The MEAS KPSI 705 is a submersible hydrostatic level transducer specifically designed to meet the adverse environments encountered in wastewater applications. This suitably-sized transducer features a wide sensing area comprised of a PTFE coated elastomeric diaphragm for reliable operation in highly viscous or slurry environments.

All MEAS KPSI Transducers utilize a highly accurate pressure sensor assembly. The assembly is integrated with supporting electronics in a durable waterproof housing constructed of 316 stainless steel or titanium. The attached polyurethane or Tefzel® electrical cable is custom manufactured to MEAS specifications 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 environment.

## FEATURES

- Custom Polyurethane or ETFE Cable Lengths
- Welded 316SS or Titanium
- Custom Level Ranges up to 115 ft (35m) H<sub>2</sub>O
- PTFE Coated Elastomeric Diaphragm
- Optional Lifetime Lightning Protection

## APPLICATIONS

- Lift Stations
- Wastewater
- Slurry Tanks
- Pump Control

## SPECIFICATIONS

Parameter		Comment
<b>LEVEL RANGES</b>		
Full Scale Level Ranges (intermediate level ranges are available)	6 thru 115 ft H <sub>2</sub> O (2 thru 35 m H <sub>2</sub> O) 10 thru 115 ft H <sub>2</sub> O (3 thru 35 m H <sub>2</sub> O)	Vented Gage Reference Sealed Gage Reference
Proof Pressure	1.5 x FS	
Burst Pressure	2.0 x FS	
<b>STATIC PERFORMANCE</b>		
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	

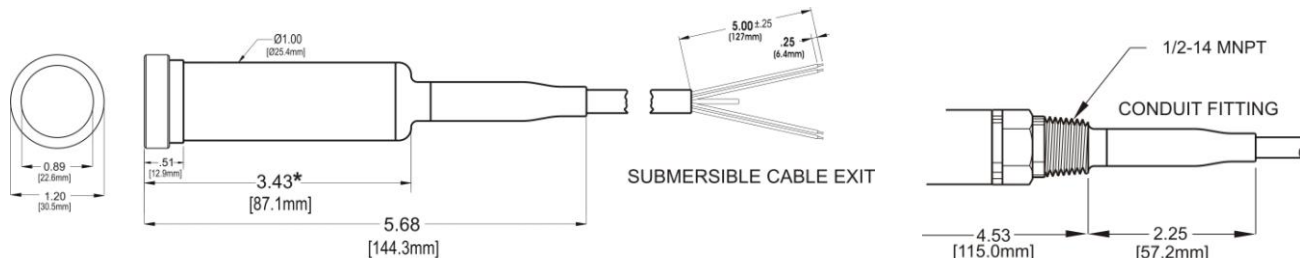
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## SPECIFICATIONS

<b>ENVIRONMENTAL</b>		
Wetted Materials	316 SS or Titanium; POM; polyurethane, PTFE or FKM	
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) H <sub>2</sub> O prorated for level ranges ≤23' (7m) H <sub>2</sub> O
Operating Temp Range	-20 to 60 °C	when attached to polyurethane cable
Protection Rating	IP 68, NEMA 6P	
<b>ELECTRICAL</b>		
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	
Zero Offset	Rezero after installation for optimum accuracy. Span is not affected (see application note on website)	
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	
<b>CERTIFICATIONS</b>		
	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)
<b>PHYSICAL</b>		
Approximate Weight	0.5 lbs (227 g) transducer	
	0.05 lbs/ft (79 g/m) cable	
Cable Jacket Material	Polyurethane (standard) ETFE (optional)	
Cable Pull Strength	200 lbs (90 kg)	
Cable Number of Conductors	4	
Cable Conductor Size	22 AWG	
Cable Seal	Molded Polyurethane	for polyurethane cable
	FKM Gland	for ETFE cable
<b>TEMPERATURE OUTPUT OPTION (not intrinsically safety approved)</b>		
Temperature Range	-20 to 60°C	available for 4-20mA output versions only
Output Signal	4-20mA	
Temperature Measurement Accuracy	±4°C	
<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	

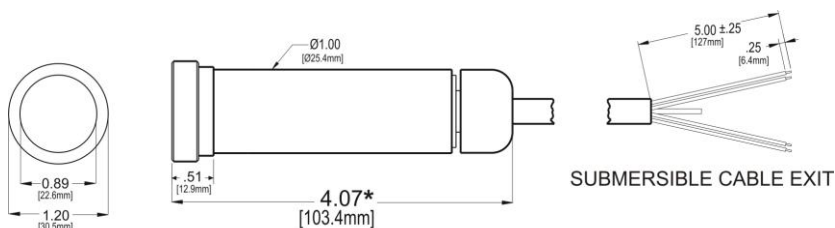
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## DIMENSIONS



\*ADD 1.95" FOR LIGHTNING PROTECTION OPTION

### Molded Cable Seal Configuration for Polyurethane Cable



\*ADD 1.95" FOR LIGHTNING PROTECTION OPTION

### Gland Cable Seal Configuration for ETFE 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

