KPSI 300DS

- Deep submersible level transducer
- Small bore, 0.75”diameter
- ±0.50% FSO static accuracy
- Two year warranty

The KPSI 300DS submersible hydrostatic level transducer is specifically designed for small bore applications and to meet the rigorous environments encountered in deep water level measurements. This transducer provides repeatable, precision depth measurement under most adverse conditions.

Every 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 para-aramid synthetic fiber 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.

Features

- Custom polyurethane or ETFE cable lengths
- Welded 316SS body construction
- Custom level ranges to 3,000 psi
- 6921 ft. (2109 m) H_2O
- Multiple analog outputs
- Ported nose cap

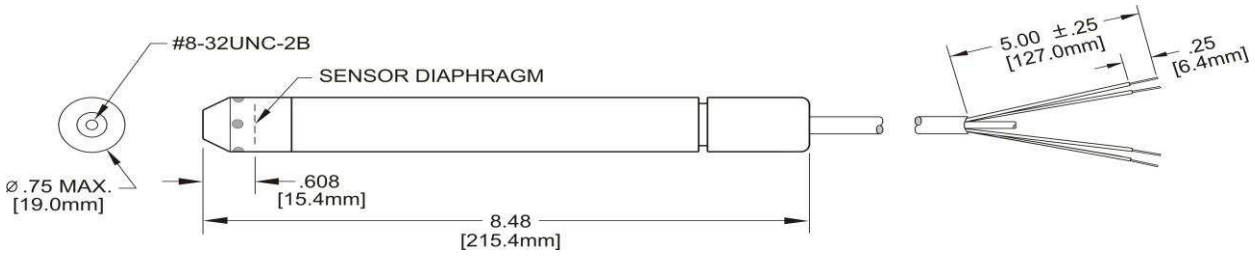
Applications

- Down hole
- Level control
- Pump control

Specifications

PARAMETER		COMMENT
LEVEL RANGES		
Full scale level ranges (Intermediate level ranges are available)	700 thru 6921 ft. H_2O (210 thru 2109 m H_2O)	Sealed 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)	±0.50% FSO	
Resolution	+0.0001% FS	
ENVIRONMENTAL		
Wetted materials	316 SS; POM; FKM; Polyurethane or ETFE	
Compensated temp range	0 to 50ºC	
Thermal error (Maximum allowable deviation from the Best Fit Straight Line due to a change in temperature)	±0.05% FSO/ºC	Worse case over compensated temperature range
Operating temp range	-20 to 60 ºC	When attached to polyurethane cable
Protection rating	IP68, NEMA 6P	
ELECTRICAL		
Excitation	9-28 V – VDC output, 9-28 V – mA output	0-5 V, 0-2.5 V, 0-4 V, 4-20
Input current	20 mA max., 3.5 mA max.	For mA output, For VDC output
Output	4-20 mA, 0-5 VDC, 0-2.5 VDC, 0-4 VDC, 0-10 VDC, 1.5-7.5 VDC	
Zero offset	±0.12 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 61326-1:2013 and 61326-2-3:2013
PHYSICAL		
Approximate weight	0.63 lbs. (285 g) transducer 0.05 lbs./ft. (79 g/m) cable	
Cable jacket material	Polyurethane (Standard), ETFE (Optional)	
Cable pull strength	200 lbs. (90 kg)	Polyurethane
Cable number of conductors	4	
Cable conductor size	22 AWG	
Cable seal	FKM Gland	

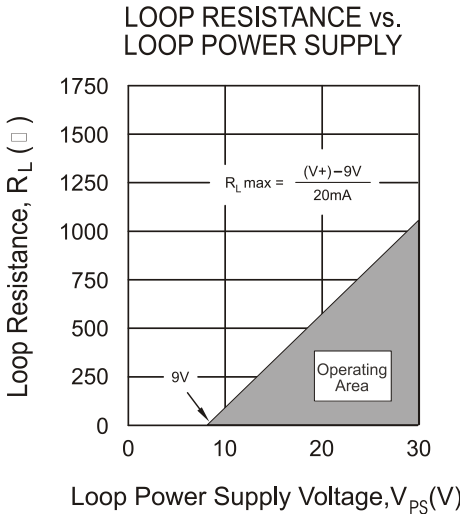
Dimensions



Gland Cable Seal

Electrical Termination

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



Ordering Information

MODEL		SUBMERSIBLE LEVEL TRANSDUCER
3 D S		±0.5% FSO Static Accuracy
↓ ↓ ↓		**MATERIAL**
	S	Stainless Steel
	↓	**REFERENCE FORMAT**
	3	Sealed gage
	↓	**OUTPUT**
	3	0-5 VDC
	F	0-2.5 V
	G	0-4 V
	H	0-10 V
	J	1.5-7.5 V
	4	4-20 mA
	↓	**PRESSURE CONNECTION**
	B	Ported nose cap
	↓	**ELECTRICAL CONNECTION**
	A	Gland cable seal
		Lightning Protection
		A None
		LEVEL RANGE (at MAX output)[1] [2]
		# # # . # # #
		↓ ↓ ↓ ↓ ↓ ↓ ↓
		LEVEL RANGE (at MIN output)[1]
		# # # . # # #
		↓ ↓ ↓ ↓ ↓ ↓ ↓
		No Moisture Protection
		CABLE TYPE
		1 Polyurethane
		2 ETFE
		↓
		CABLE LENGTH
		# # # # (in feet)
		↓ ↓ ↓ ↓ **LABEL[3]**
		A psi
		B ft H_2O
		C m H_2O
		↓

3	D	S	S	3		B	A	A													A						

Notes:

1. The part number requires two pressure 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 pressure range is typically 000.000 unless otherwise required. For reverse output requirements, enter the lower pressure range for the maximum output signal and the upper range for the minimum output. **Example: 50 psi (enter 050.000)**
   For sealed gage reference add local standard atmosphere (14.700 typical). Contact MEAS for assistance. **Example: 150 psi + 14.700 = 164.700 (enter 164.700)**
2. For pressure ranges >=1000 psi should be expressed in the format (xxxx.xx)
3. Units of measure on standard MEAS label. Contact Measurement Specialties if private labeling is required.