

Submersible Level Transducers



SERIES 612

SUBMERSIBLE LEVEL TRANSDUCERS

NOSHOK Series 612 Submersible Level Transducers were designed to provide a previously unequalled level of performance. Utilizing diffused semiconductor and thin film technologies, Series 612 transducers are accurate, shock resistant and extremely stable over long periods of time. Reverse polarity protection, short circuit protection and lightning protection have been installed as standard features.

Advanced manufacturing techniques combined with technologically advanced standard features allow NOSHOK to offer a level of performance previously found on transducers costing hundreds of dollars more.

A final electrical output and calibration inspection is performed on all NOSHOK transducers prior to shipment to ensure 100% “out of the box” reliability.

FEATURES

- Advanced diffused semiconductor and sputtered thin film sensor for maximum stability
- High accuracy and long term stability
- Ranges from 0 inH₂O to 50 inH₂O through 0 psi to 500 psi
- Corrosion resistant stainless steel construction
- Nosecone standard
- Optional 6 VDC input .5 to 2.5 output for field applications

APPLICATIONS

- Irrigation
- Food and beverage
- Waste water
- Water distribution
- Level and depth
- Bore hole
- Offshore
- R&D

SPECIFICATIONS

Output signals	4 mA to 20 mA, 2-wire; 0 Vdc to 5 Vdc and 0 Vdc to 10 Vdc, 3-wire; 0.5 Vdc to 2.5 Vdc, 3-wire
Pressure ranges	0 inH ₂ O to 50 inH ₂ O through 0 psig to 500 psig
Proof pressure	2 times range
Burst pressure	4 times range
Accuracy	± 0.25 % Full Scale (best fit straight line) Includes the combined effects of linearity, hysteresis and repeatability ± .125 % Full Scale (optional)
Repeatability	≤ ± 0.05 % Full Scale
Hysteresis	≤ ± 0.1 % Full Scale
Stability	≤ ± 0.2 % Full Scale for 1 year, non accumulating
Load limitations	≤ (VPower-10)/0.020 Amp-(0.043 Ω x length of cable in feet) Voltage output ≥ 100,000 Ω
Wetted materials	Housing: 316 stainless steel Cap: Polyamide, 316 stainless steel with weighted nose cone Cable: Polyurethane, Teflon available on special versions
Power supply	10 Vdc to 30 Vdc for current output 14 Vdc to 30 Vdc for voltage output 6 Vdc for 0.5 Vdc to 2.5 Vdc output
Temperature ranges	Compensated 32 °F to 122 °F/0 °C to 50 °C Effect ± 0.01 %/°F for zero and span Storage -22 °F to 175 °F/-30 °C to 80 °C Medium -14 °F to 175 °F/-10 °C to 80 °C
Response time	≤ 1 ms (between 10 % to 90 % Full Scale)
Durability	>100,000,000 Full Scale cycles
Environmental protection	NEMA 6P, IP68
Electromagnetic rating	CE compliant to EMC norm EN61326: 1997/A1: 1998 RFI, EMI and ESD protection
Electrical protection	Reverse polarity protection, short circuit and lightning protection
Shock	Less than ± 0.05 % Full Scale effect for 100 g's @ 20 ms on any axis
Vibration	Less than ± 0.01 % Full Scale effect for 15 g's @ 0 Hz to 2000 Hz on any axis
Weight	Approximately 7 oz. with standard nosecone – cable extra

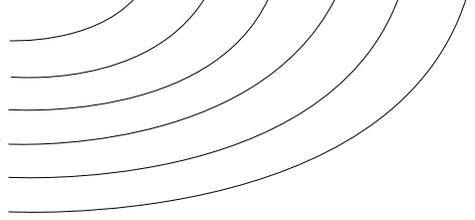
ORDERING INFORMATION								
SERIES 612								
PRESSURE RANGES	0 inH ₂ O to 50 inH ₂ O	50 IN	0 psig to 2 psig (4.6 ftH ₂ O)	2	0 psig to 20 psig (46.2 ftH ₂ O)	20	0 psig to 150 psig (346.3 ftH ₂ O)	150
	0 inH ₂ O to 100 inH ₂ O	100 IN	0 psig to 3 psig (6.9 ftH ₂ O)	3	0 psig to 25 psig (57.7 ftH ₂ O)	25	0 psig to 200 psig (461.3 ftH ₂ O)	200
	0 inH ₂ O to 150 inH ₂ O	150 IN	0 psig to 5 psig (11.5 ftH ₂ O)	5	0 psig to 30 psig (69.2 ftH ₂ O)	30	0 psig to 300 psig (692.5 ftH ₂ O)	300
	0 inH ₂ O to 200 inH ₂ O	200 IN	0 psig to 10 psig (23.1 ftH ₂ O)	10	0 psig to 60 psig (138.5 ftH ₂ O)	60	0 psig to 350 psig (807.9 ftH ₂ O)	350
	0 inH ₂ O to 400 inH ₂ O	400 IN	0 psig to 15 psig (34.6 ftH ₂ O)	15	0 psig to 100 psig (230.8 ftH ₂ O)	100	0 psig to 500 psig (1154.2 ftH ₂ O)	500
	psig = Gauge Pressure Other ranges available on special request							
ACCURACY	1	± 0.25 % Full Scale		2	± 0.125 % Full Scale			
OUTPUT SIGNALS	1	4 mA to 20 mA, 2-wire		5	0 Vdc to 10 Vdc, 3-wire			
	2	0 Vdc to 5 Vdc, 3-wire		11	0.5 Vdc to 2.5 Vdc, 3-wire			
PROCESS CONNECTIONS	N	Nose cone		W	Nose cone w/added weight (1.1 lbs.)			
	T	NPT adapter, 1/2" NPT male outer thread with 1/4" NPT female inner thread attached to transmitter process connection with straight thread and O-ring seal						
ELECTRICAL CONNECTIONS	Submersible cable (specify length in feet)							

Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

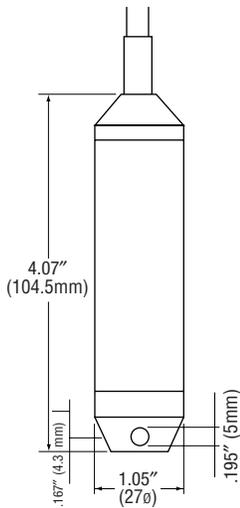
EXAMPLE

Series 612
Pressure Range 0 psig to 5 psig
Accuracy ± 0.25 %
Output Signal 4 mA to 20 mA, 2-Wire
Process Connection Nosecone
Electrical Connection Submersible Cable

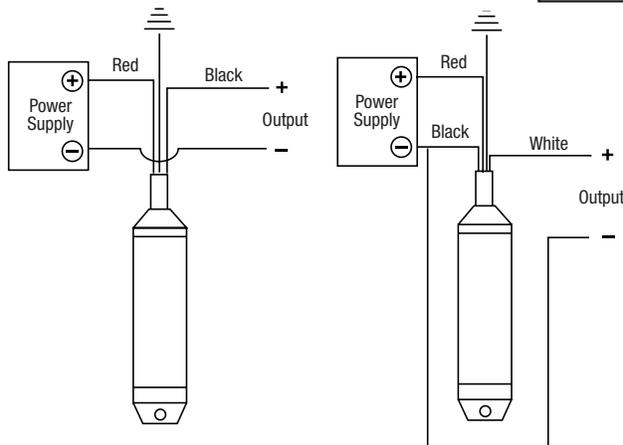
612 5 1 1 N 50'



Dimensions



Wiring Diagrams and Electrical Connections



2-WIRE WIRING DIAGRAM

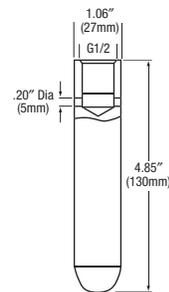
Series 612	4 mA to 20 mA 2-Wire
+ Supply	Red
+ Output	Black

3-WIRE WIRING DIAGRAM

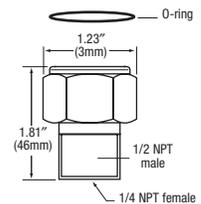
Series 612	Voltage Output
+ Supply	Red
Common	Black
+ Output	White

Optional Accessories

Moisture filter	612-Filter-Element
Desiccant Cartridge	612-Desiccant Cartridge
Cable Clamp	612-Cable Clamp



Weighted nosecone



NPT adapter