



SERIES 627

HAZARDOUS LOCATION LIQUID LEVEL TRANSMITTERS

The NOSHOK Series 627 level transmitter combines the reliability and long life of diffused semiconductor and sputtered thin film strain gage sensors with safe electronics for outstanding performance and value. These transmitters were designed for applications that require liquid level measurement in hazardous environments. All wetted parts are made of stainless steel welded with no internal O-rings, gaskets or seals.

These transmitters are available with a stainless steel nosecone, a stainless steel weighted nosecone or NPT adapter and ranges to suit most applications. All units undergo extensive testing during the manufacturing process to ensure that the highest performance is achieved in the demanding environments found in today's applications. Series 627 transmitters are Factory Mutual and Canadian Standards Association approved.

FEATURES

- Accuracy to $\pm 0.125\%$ Full Scale (BFSL)
- Advanced diffused semiconductor and sputtered thin film sensor for maximum stability
- Welded 316 stainless steel pressure chamber

APPLICATIONS

- Water and wastewater
- Chemical tanks
- Methane wells
- Marine applications

NOSHOK Model 627 transmitters are approved for use in hazardous location applications as follows:

Intrinsically Safe, entity approval for Class I, II and III, Division 1, Groups A, B, C, D, E, F and G; and Class I, Zone 0 Aex ia IIC
 Dust Ignition-proof for Class II and III, Division 1, Groups E, F and G
 Non incandive for Class I, Division 2, Groups A, B, C and D
 FMRC 3600, 3610, 3611, 3810 (including supplement #1), ISA-S12.0. 01, IEC 60529 (including amendment #1)

SPECIFICATIONS

Output signal	4 mA to 20 mA, 2-wire
Accuracy	$\pm 0.25\%$ Full Scale (BFSL); Optional $\pm 0.125\%$ Full Scale (BFSL); (Includes the effects of non-linearity, hysteresis, non-repeatability, zero point and full scale errors)
Hysteresis	$\leq \pm 0.1\%$ Full Scale
Repeatability	$\leq \pm 0.05\%$ Full Scale
Stability	$\leq \pm 0.2\%$ Full Scale for 1 year, non-accumulating
Pressure ranges	Standard ranges from 0 inH ₂ O to 50 inH ₂ O through 0 psig to 350 psig
Proof pressure	2 times range
Burst pressure	3 times range
Power supply	10 Vdc to 30 Vdc unregulated
Load limitations	$\leq (V_{Power}-10)/0.020 \text{ Amp}-(0.043 \Omega \times \text{length of cable in feet})$
Wetted materials	Housing, diaphragm and cap: 316 stainless steel 17-4PH stainless steel diaphragm for 0 psig to 350 psig Cable: Fluorinated Ethylene Propylene for 0 to 50 inH ₂ O through 0 psi to 150 psi Polyurethane with Polyolefin shrink tubing for 0 psi to 200 psi through 0 psi to 350 psi
Response time	$\leq 1 \text{ ms}$ (between 10 % and 90 % Full Scale)
Durability	>100,000,000 Full Scale cycles
Temperature ranges	Compensated 32 °F to 122 °F (0 °C to 50 °C) Zero effect is $\pm 0.011\%$ Full Scale/°F within compensated range Span effect is $\pm 0.011\%$ Full Scale/°F within compensated range Ambient 15 °F to 122 °F (-10 °C to 50 °C); Media 15 °F to 175 °F (-10 °C to 60 °C); Storage -30 °F to 175 °F (-34 °C to 60 °C)
Environmental rating	IP68, NEMA 6P continuously submersible
Electromagnetic rating	Meets EMC norm EN61326: 1997/A1 1998 RFI, EMI and ESD protected
Electrical rating	Reverse polarity, over-voltage and short circuit protected
Hazardous approvals	Factory Mutual and Canadian Standards Association approved
Weight	Approximately 7 oz. with standard nosecone - cable extra

ORDERING INFORMATION

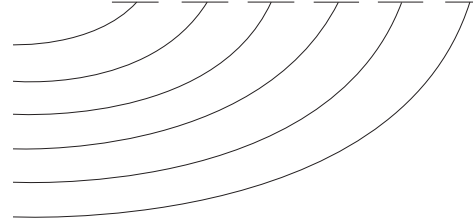
SERIES 627 FM and CSA approved liquid level transmitter						
PRESSURE RANGES	0 inH ₂ O to 50 inH ₂ O	50IN	0 psig to 5 psig (11.5 ftH ₂ O)	5	0 psig to 100 psig (230.7 ftH ₂ O)	100
	0 inH ₂ O to 100 inH ₂ O	100IN	0 psig to 10 psig (23.1 ftH ₂ O)	10	0 psig to 160 psig (369.1 ftH ₂ O)	160
	0 inH ₂ O to 150 inH ₂ O	150IN	0 psig to 15 psig (34.6 ftH ₂ O)	15	0 psig to 200 psig (461.3 ftH ₂ O)	200
	0 inH ₂ O to 250 inH ₂ O	250IN	0 psig to 25 psig (57.7 ftH ₂ O)	25	0 psig to 300 psig (692.3 ftH ₂ O)	300
	0 inH ₂ O to 400 inH ₂ O	400IN	0 psig to 30 psig (69.2 ftH ₂ O)	30	0 psig to 350 psig (807.3 ftH ₂ O)	350
			0 psig to 60 psig (138.4 ftH ₂ O)	60		
psig = Gauge Pressure inH ₂ O = Inches of water ftH ₂ O = feet of water Other ranges available on special request						
ACCURACY	1 ±0.25 % Full Scale (BFSL)					
	2 ±0.125 % Full Scale (BFSL) on ≥ 4 psi only					
OUTPUT SIGNALS	1 4 mA to 20 mA, 2-wire					
PROCESS CONNECTIONS	N Stainless steel nosecone		W Stainless steel weighted nosecone (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	-XX Standard Polyurethane cable					
	-38-XX Optional FEP cable					
	NOTE: XX = length of cable in feet					

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

EXAMPLE

Series627
 Pressure Range0 psig to 350 psig
 Accuracy±0.25 % Full Scale
 Output Signal4 mA to 20 mA
 Process ConnectionNosecone
 Electrical Connection300 foot cable, polyurethane

627 - 350 - 1 - 1 - N - 300



Optional Accessories

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

Outline Dimensions



2-WIRE WIRING

+ Supply	Brown
+ Output	Green

Weighted nosecone



NPT adapter

