Small Diameter Submersible CE

NOSHOK



Shown with optional NPT conduit and optional FEP cable

611 SERIES

- Hydrostatic level measurement for use in applications including bore holes and wells with small diameters (outer diameter 0.87")
- Low power output signals for battery-powered applications, and optional temperature output available
- 5:1 turndown using optional HART® signal
- 316L Stainless Steel, PVDF and polyurethane wetted parts
- CE compliant to suppress RFI, EMI and ESD

APPLICATIONS

- Well head measurement
- Groundwater monitoring
- Level measurement in open bodies of water
- Sewage lift and pumping stations
- Settling ponds and rainwater basins

SPECIFICATIONS

Output signals	4 mA to 20 mA, 2-wire 4 mA to 20 mA + HART®, 2-wire 4 mA to 20 mA x 2 (pressure and temperature)* 0.1 Vdc to 2.5 Vdc, 3-wire 0.1 Vdc to 2.5 Vdc x 2 (pressure and temperature)*
Pressure ranges**	0 inH_2O to 50 inH_2O through 0 psig to 100 psig
Accuracy	± 1.0% of span (± 0.5% of span optional) Includes non-linearity, hysteresis, zero offset and end value deviation per IEC 61298-2 Accuracy after turndown via HART®, ≤ ±1.25% of scaled span (0.75% optional) Temperature sensor 14 °F to 176 °F (-10 °C to 80 °C): ≤ ± 3.3 °F
Stability	≤ ± 0.1% of span per year
Switch on time	Output signals without HART®: ≤150 ms Output signals with HART®: ≤250 ms
Settling time	Output signals without HART®: ≤100 ms Output signals with HART®: ≤250 ms
Durability	> 100,000,000 full scale cycles
Temperature ranges	Compensated 32 °F to 176 °F (0 °C to 80 °C) Effect ± 0.01%/ °F for zero and span Standard Media 14 °F to 122°F (-10 °C to 50 °C) Optional Media -40 °F to 176 °F (-40 °C to 80 °C) Storage -40 °F to 176 °F (-40 °C to 80 °C)
Power requirement***	4mA to 20 mA: 8 Vdc to 36 Vdc 4 mA to 20 mA and HART®: 12-36 Vdc 0.1 to 2.5 Vdc: 3.6 - 36 Vdc
Load limitations	4 mA to 20 mA: ≤ (Vpower - 8 V) / 0.022 A 4 mA to 20 mA and HART®: ≤ (Vpower - 9.6 V) / 0.022 A
Proof pressure	5 times range
Measuring element	Cap: PVDF Sensor: 316 stainless steel, optional Hastelloy C-276 Cable: Polyurethane, optional FEP
Connection	316 stainless steel
Housing material	316 stainless steel, 318 LN optional
Environmental rating	IP68
Electromagnetic rating	CE compliant to EMC norm EN 61326 RFI, EMI and ESD protection
Electrical protection	Reverse polarity protection, short circuit and resistance to overvoltage :DC 40V and increased overvoltage for lightning protection. Normal discharge current ≥10 kA, Rise time 8/20 µs
Max. submersion depth	325 ft./100 meters
Vibration	4 g's according to IEC 60068-2-6
Weight	Approximately 10.6 oz. with standard nosecone - cable .5 lb per 10 ft.

* Temperature measurement is based on the media temperature range
** Other ranges and measuring units available including bar, mbar, MPa, kPa, and m$H_2$0
*** Unregulated

⚠ **WARNING:** This product can expose you to chemicals including Lead and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

ORDERING INFORMATION

SERIES	**611**			**611H**	318LN/Hastelloy C-276		
PRESSURE RANGES	**50 inH$_2$O**	0 inH$_2$O to 50 inH$_2$O	**5**	0 psig to 5 psig (11.5 ftH$_2$O)	**50**	0 psig to 50 psig (115 ftH$_2$O)	**100A**	0 psia to 100 psia
	100 inH$_2$O	0 inH$_2$O to 100 inH$_2$O	**10**	0 psig to 10 psig (23.1 ftH$_2$O)	**100**	0 psig to 100 psig (230.8 ftH$_2$O)		
	150 inH$_2$O	0 inH$_2$O to 150 inH$_2$O	**15**	0 psig to 15 psig (34.6 ftH$_2$O)	**25A**	0 psia to 25 psia		
	250 inH$_2$O	0 inH$_2$O to 250 inH$_2$O	**25**	0 psig to 25 psig (57.7 ftH$_2$O)	**50A**	0 psia to 50 psia		
	psig = gauge pressure	psia = absolute pressure	Other ranges and measuring units available on request					
ACCURACIES	**1**	±1.0 of span			**2**	±0.5% of span		
OUTPUT SIGNALS	**1**	4 mA to 20 mA, 2-wire			**48**	0.1 Vdc to 2.5 Vdc, 3 wire**		
	43	4 mA to 20 mA, 2-wire and HART® signal			**49**	0.1 Vdc to 2.5 Vdc x 2 (pressure and temperature) *, **		
	47	4 mA to 20 mA x 2 (pressure and temperature)*						
PROCESS CONNECTIONS	**N**	Nosecone			**W**	Weighted nosecone		
ELECTRICAL CONNECTIONS	**XX**	Standard polyurethane (PUR) cable			**62-XX**	Polyurethane (PUR) cable with 1/2" NPT conduit connection		
	38-XX	Optional FEP cable			**63-XX**	FEP cable with 1/2" NPT conduit connection		
		NOTE: XX = length of cable in feet						
OPTIONS	**CBC**	Cable Clamp	**LP**	Lightning Protection	**JB**	Cable Junction Box (NEMA 4X)	**HT**	Increased media temperature (-40 °F to 176 °F)

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

* Temperature measurement is based on the media temperature range
** Low power is optimized for battery operation

EXAMPLE

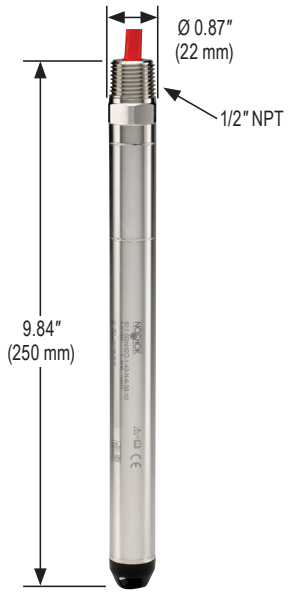
611 – 5 – 1 – 1 – N – 50

Series ..... 611 Series
Pressure range ..... 0 psig to 5 psig
Accuracy ..... ±1.0 of span
Output signal ..... 4 mA to 20 mA, 2-wire
Process connection ..... Nosecone
Electrical connection ..... 50 feet of submersible polyurethane cable

WIRING CODE SCHEMATICS

	Wiring	Cable
4 mA to 20 mA & 4 mA to 20 mA,2-wire and Hart signal®	V+	Brown
	V-	Blue
	Case Ground	Grey
4 mA to 20 mA x 2 (pressure and temperature)	V+(pressure sensor)	Brown
	V- (pressure sensor)	Blue
	V+ (temperature sensor)	Green
	V- (temperature sensor)	White
	Case Ground	Grey
0.1 Vdc to 2.5 Vdc, 3 wire	V+	Brown
	Common	Blue
	Output	Black
	Case Ground	Grey
0.1 Vdc to 2.5 Vdc x 2 (pressure and temperature)	V+	Brown
	V-	Bue
	Output (pressure sensor)	Black
	Output (temperature sensor)	Green
	Case Ground	Grey

With protective cap



Protective Cap Thread M18 x 1