

# Cage-Protected Submersible



## 613 SERIES

- Ranges from 0 psi to 5 psi through 0 psi to 300 psi
- Current & voltage outputs available
- 316 Stainless Steel and polyurethane wetted parts

### APPLICATIONS

- Lift stations
- Sewage
- Slurry tanks
- Storm canals
- Water & wastewater
- Wet wells

### SPECIFICATIONS

<b>Output signals</b>	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
<b>Pressure ranges</b>	0 psi to 5 psi through 0 psi to 300 psi
<b>Accuracy</b>	± 0.25% full scale (BFSL); optional ± 0.125% full scale (BFSL); (includes the effects of non-linearity, hysteresis, non-repeatability, zero point and full scale errors)
<b>Stability</b>	≤ ± 0.2% full scale for 1 year, non-accumulating
<b>Response time</b>	≤ 1 ms (between 10% and 90% full scale)
<b>Service life</b>	> 100,000,000 full scale cycles
<b>Temperature measurement</b>	Optional PT100, 4-wire per IEC 60751
<b>Temperature ranges</b>	Compensated 32 °F to 122 °F/0 °C to 50 °C Effect ± 0.01%/ °F for zero and span Media 14 °F to 122 °F / -10 °C to 50 °C Storage -22 °F to 175 °F/ -30 °C to 80 °C
<b>Power requirement*</b>	10 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire, 0 Vdc to 5 Vdc, 3-wire) 5 Vdc to 30 Vdc (0.5 Vdc to 2.5 Vdc, 3-wire) 14 Vdc to 30 Vdc (0 Vdc to 10 Vdc, 3-wire)
<b>Load limitations</b>	≤ (VPower-10)/0.020 Amp for 4 mA to 20 mA ≥ 10,000 Ω for 0 Vdc to 10 Vdc, 3-wire ≥ 5,000 Ω for 0 Vdc to 5 Vdc, 3-wire
<b>Proof pressure</b>	2 times range
<b>Burst pressure</b>	4 times range
<b>Measuring element</b>	Cage seal: All 316 Stainless Steel Cable: Polyurethane, optional FEP
<b>Connection</b>	316 Stainless Steel
<b>Housing material</b>	316 Stainless Steel
<b>Environmental rating</b>	IP68
<b>Electromagnetic rating</b>	Built to suppress RFI, EMI and ESD protection
<b>Electrical protection</b>	Reverse polarity protection, short circuit and optional lightning protection per EN 6100-4-5; 1.5J
<b>Shock</b>	100 g's according to IEC 60068-2-27
<b>Vibration</b>	15 g's according to IEC 60068-2-6
<b>Weight</b>	Approximately 3.2 lb. - cable extra

\* 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](http://www.P65Warnings.ca.gov)

ORDERING INFORMATION						
SERIES	613					
PRESSURE RANGES	5	0 psi to 5 psi (11.55 ft/H <sub>2</sub> O)		20	0 psi to 20 psi (46.20 ft/H <sub>2</sub> O)	
	10	0 psi to 10 psi (23.10 ft/H <sub>2</sub> O)		30	0 psi to 30 psi (69.30 ft/H <sub>2</sub> O)	
	15	0 psi to 15 psi (34.65 ft/H <sub>2</sub> O)		50	0 psi to 50 psi (115.50 ft/H <sub>2</sub> O)	
ACCURACIES	1	±0.25% full scale (BFSL)			2	±0.125% full scale (BFSL)
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
ELECTRICAL CONNECTIONS	XX	Standard polyurethane (PUR) cable			38-XX	Optional FEP cable
	NOTE: XX = length of cable in feet.					
OPTIONS	CBC	Cable Clamp	FE	Filter Element	LP	Lightning Protection *
	DC	Desiccant Cartridge	JB	Cable Junction Box	LR	Lifting Ring
					PT1	PT100 RTD *

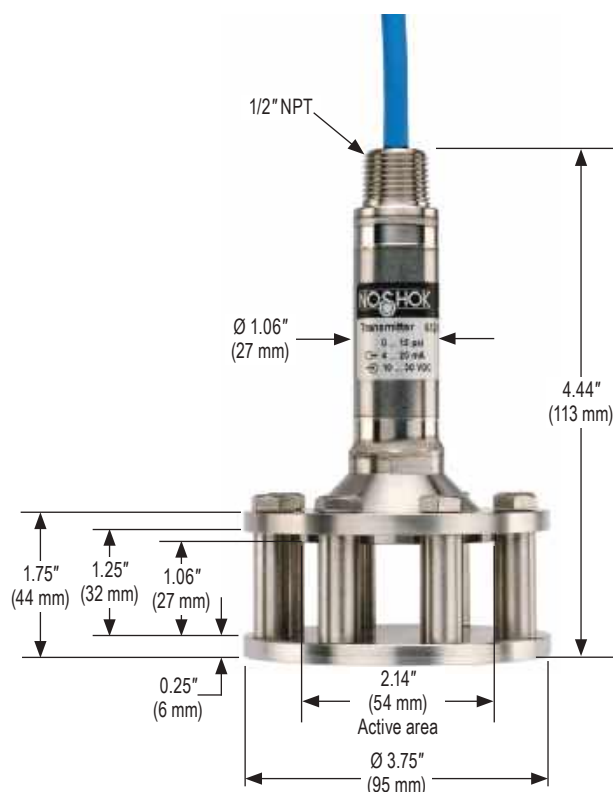
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

\* Only available with PUR cable

## EXAMPLE

Series .....613 Series  
 Pressure range .....0 psi to 5 psi  
 Accuracy .....±0.25% full scale (BFSL)  
 Output signal .....4 mA to 20 mA, 2-wire  
 Electrical connection .....50' of submersible polyurethane cable  
 Option .....Lifting Ring

613 - 5 - 1 - 1 - 50' - LR



Optional Cable Clamp



Optional Cable Junction Box



Optional Desiccant Cartridge



Optional Filter Element



Optional Lifting Ring

613 Series Wiring	4 mA to 20 mA		
CONNECTION TYPE (CODE)	V+	V-	CASE GROUND
PUR Cable	Brown	Green	Gray
FEP Cable	Brown	White	Blue

613 Series Wiring	0-5 Vdc, 0-10 Vdc, 0.5 to 2.5 Vdc			
CONNECTION TYPE (CODE)	V+	COMMON	OUTPUT	CASE GROUND
PUR Cable	Brown	Green	White	Gray
FEP Cable	Brown	Green	White	Gray

Load Limitations 4 mA to 20 mA output	
V <sub>min</sub>	= [10V + (.020 x RL)] - RC
RL	= RS + RW
RL	= Loop resistance (Ω)
RS	= Sensor resistance (Ω)
RW	= Wire resistance (Ω)
RC	= 0.0435 $\frac{\Omega}{ft}$ x cable length (ft.)

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