# 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

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

## ORDERING INFORMATION

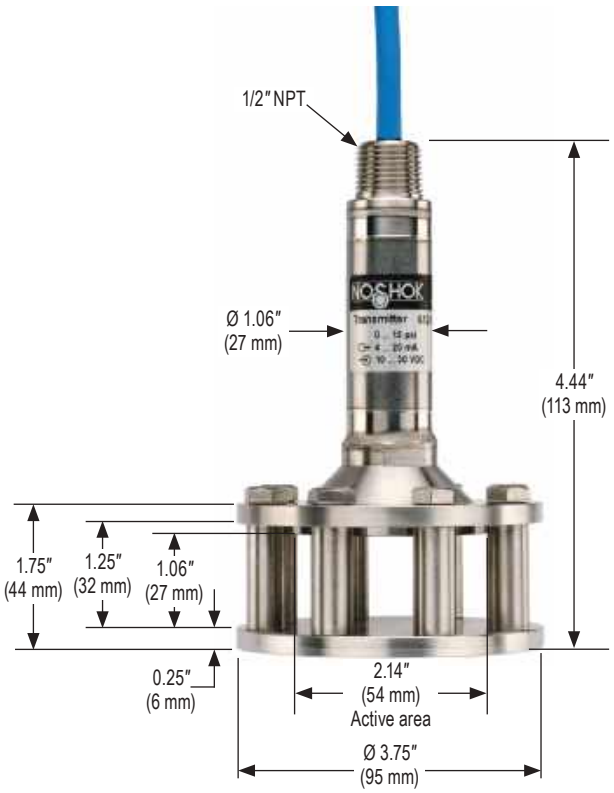
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **SERIES** | **613** | | | | | | |
| **PRESSURE RANGES** | **5** | 0 psi to 5 psi (11.55 ft/$H_2O$) | **20** | 0 psi to 20 psi (46.20 ft/$H_2O$) | **75** | 0 psi to 75 psi (173.25 ft/$H_2O$) | **300** 0 psi to 300 psi (693 ft/$H_2O$) |
| | **10** | 0 psi to 10 psi (23.10 ft/$H_2O$) | **30** | 0 psi to 30 psi (69.30 ft/$H_2O$) | **100** | 0 psi to 100 psi (231.00 ft/$H_2O$) | |
| | **15** | 0 psi to 15 psi (34.65 ft/$H_2O$) | **50** | 0 psi to 50 psi (115.50 ft/$H_2O$) | **150** | 0 psi to 150 psi (346.50 ft/$H_2O$) | |
| **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<br>**NOTE: XX = length of cable in feet.** | | | **38-XX** | Optional FEP cable | |
| **OPTIONS** | **CBC** | Cable Clamp | **FE** | Filter Element | **LP** | Lightning Protection * | **PT1** PT100 RTD * |
| | **DC** | Desiccant Cartridge | **JB** | Cable Junction Box | **LR** | Lifting Ring | |

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

* Only available with PUR cable

**EXAMPLE** **613 – 5 – 1 – 1 – 50' – LR**

**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






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 | | |
|---|---|---|
| Vmin | = | [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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