

# ULS



#### **DESCRIPTION**

The ultrasonic level sensor provides a continuous level measurement from 5" (12 cm) up to 78" (200 cm). It has both a 4 -20 mA analog output and 4 digital outputs. With no moving parts, the ULS level is highly reliable for dirty and sticky environments. This all-metal enclousure allows for a easily adjustabe sensor that is also rugged.

#### **FEATURES**

- No moving parts
- Rugged all-metal enclosure
- Continuous non contact measurement
  - Slosh/filtering option

#### **APPLICATIONS**

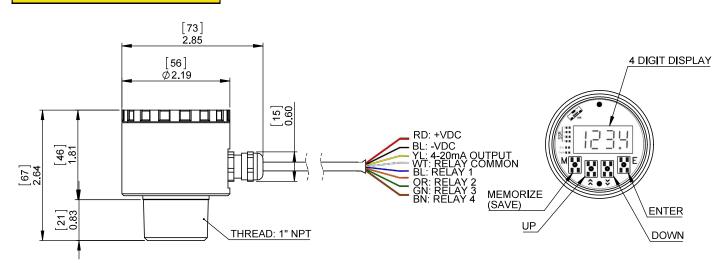
- Water tanks
- Hydraulic units

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| Specifications               |  |  |  |  |  |
|------------------------------|--|--|--|--|--|
| Range                        | 78" (200 cm) from sensor surface at 32°F (22°C)                    |  |  |  |  |
| Accuracy                     | 0.5% max distance (perpendicular to surface)*                      |  |  |  |  |
| Dead Zone                    | 5" (12 cm) from sensor face  |  |  |  |  |
| Beam Angle                   | 12° ± 2°   |  |  |  |  |
| Ultrasonic Frequency         | 112 kHz  |  |  |  |  |
| User Interface               | Field Adjustable (push buttons and display) or Windows (mirco USB) |  |  |  |  |
| Memory                       | Non-volitile   |  |  |  |  |
| Supply Voltage               | 10 - 36 VDC (100mA maximum)  |  |  |  |  |
| Analog Output                | 4-20mA **  |  |  |  |  |
| Contact Type                 | (4) Normally Open SPST relays (0.4A) and 4-20 mA                   |  |  |  |  |
| Contact Hysteresis           | Adjustable, 0 to 100%  |  |  |  |  |
| Ambient Temperature          | 14°F to 140°F (-10°C to 60°C)                                      |  |  |  |  |
| Enclosure Materials / Rating | IP65 Powder Coated Aluminum  |  |  |  |  |
| Exposed Materials            | Epoxy, Stainless steel, Aluminum                                   |  |  |  |  |
| Cable Type                   | 8-conductor shielded cable   |  |  |  |  |
| Process Connection           | 1" NPT Stainless Steel   |  |  |  |  |
| Optional Accessory           | 2" NPT PVC fitting. Recommended for optimal sensor performance     |  |  |  |  |
|                              |  |  |  |  |  |

<sup>\*</sup> in stable homogeneous standard environment (affected by temperature gradients, vapors, supply voltage)

<sup>\*\*</sup> conversion error rate 0.2%

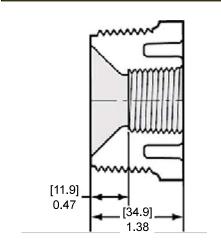


**Dimensions** 



| Wiring Code |                |  |  |  |  |
|-------------|----------------|--|--|--|--|
| CONTACT     | FLYING LEADS   |  |  |  |  |
| RED         | +VDC           |  |  |  |  |
| BLACK       | -VDC           |  |  |  |  |
| YELLOW      | 4-20 mA Output |  |  |  |  |
| WHITE       | Relay Common   |  |  |  |  |
| BLUE        | Relay 1        |  |  |  |  |
| ORANGE      | Relay 2        |  |  |  |  |
| GREEN       | Relay 3        |  |  |  |  |
| BROWN       | Relay 4        |  |  |  |  |

## TM3216 Bushing Dimensions



### **Ordering Information**

Field Adjustable ULS - R - 16M - 78

- 1 Output Type:
  - A Analog Output
  - **R** 4 Relay Output
  - **D** Analog and 4 Relay Output
- **16M** 1" NPT thread
- 3 Cable Length:
  - **78** 78 inches (2 meter cable)
  - **275 -** 275 inches (7 meter cable)
- 1 Accessories (Recommended optional separate item)

TM3216 - 2" NPT PVC isolating bushing. Recommended for optimal performance