

## Warrick® Sensor Fittings and Probes

Warrick Liquid Level Sensors are available in single- and multi-probe models and with a variety of fittings. The versatility of the Warrick design makes these sensors ideal for a diverse range of applications.

Examples include:

- Food and Beverage
- Pharmaceuticals
- Caustics and Acids
- Boilers and Steam Generators
- Sumps
- Ponds
- Reservoirs
- Sewage and Wastewater

### Probe Styles

- Metal Rods
- Wire Suspended
- Corrosion Resistant
- Sanitary



### Fitting Styles

- 3/8" to 3" Threaded Mount
- Bracket Mount
- Flange Mount
- External Mount
- Sanitary Mount
- Condulet Mount



### Sensor Selection Chart

| SERIES                        |                        | 3E   | 3N   | 3F   | 3G   | 3C   | 3K   | 3J   | 3L   | 3M   | 3MT  | 3S   | 3R   | 3T   | 3B   | 3H   | 3W   | 3Y   |
|-------------------------------|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Page Number                   |                        | E-20 | E-20 | E-19 | E-19 | E-23 | E-23 | E-18 | E-18 | E-25 | E-25 | E-24 | E-21 | E-21 | E-20 | E-18 | E-22 | E-22 |
| Body Options                  | Flange                 |      |      | •    | •    |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                               | Pipe Thread            | •    |      |      | •    |      |      | •    |      |      |      |      |      |      |      |      |      |      |
|                               | Flat Mount             |      | •    |      | •    |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                               | Side Chamber           |      |      |      |      | •    | •    |      |      |      |      |      |      |      |      |      |      |      |
|                               | Non-Contact Electrodes |      |      |      |      |      |      |      |      |      |      | •    |      |      |      |      |      |      |
|                               | Food Grade Connection  |      |      |      |      |      |      |      |      | •    | •    |      |      |      |      |      |      |      |
|                               | Bracket Mount          |      |      |      |      |      |      |      |      |      |      | •    |      |      |      |      |      |      |
| Fitting Body Material Options | Brass                  | •    | •    | •    |      | •    |      | •    |      |      |      |      |      |      |      |      |      |      |
|                               | PVC                    |      | •    | •    | •    |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                               | 1018 Carbon Steel      |      |      | •    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                               | Stainless Steel        | •    |      | •    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                               | Forged Steel           |      |      | •    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                               | Nylon                  |      |      |      |      |      |      |      |      | •    | •    |      |      |      |      |      |      |      |
|                               | Cast Iron              | •    |      |      |      | •    | •    | •    |      |      |      | •    |      |      |      |      |      |      |
| Housing Material              | Coated Aluminum        | •    | •    | •    |      | •    | •    | •    |      |      |      | •    |      |      |      |      |      |      |
|                               | Polycarbonate          |      |      |      | •    |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Number of Probes              | 1 to 3                 |      | •    |      |      |      |      | •    |      |      |      |      |      |      |      |      |      |      |
|                               | 1 to 4                 |      |      |      |      | •    | •    |      |      | •    | •    |      |      |      |      |      |      |      |
|                               | 1 to 7                 | •    |      | •    | •    |      |      |      |      |      |      | •    |      |      |      |      |      |      |
| Electrodes                    | Electrode Only         |      |      |      |      |      |      |      | •    |      |      |      | •    | •    | •    | •    | •    | •    |

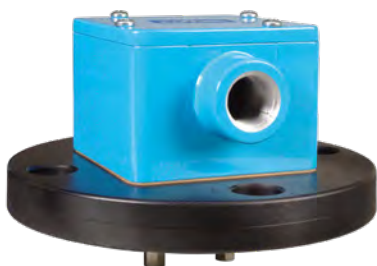
# Designed for OEM

- ▶ Compact
- ▶ One-Piece Probe/Body Construction
- ▶ Quick Install & Connect
- ▶ Order Sized to Your Spec

These Warrick fitting are designed for OEM use. They are shipped ready for quick installation. Integrated probes eliminate pre-assembly tasks, and avoid potential vibration-induced loosening when installed with power tools. Choose from single- or multi-electrode probe series. Gems supplies these series with probes pre-cut to lengths you specify.

| Series                                                                           | 3J                                                                                                                                                                                                                                                                                                                                                                                        | 3H                                                                                                                                                                                                                                                       | 3L                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                  |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                        |                                                                                                                                                                                                                                                                        |
| Probe Quantity                                                                   | 1, 2 or 3                                                                                                                                                                                                                                                                                                                                                                                 | 1                                                                                                                                                                                                                                                        | 1                                                                                                                                                                                                                                                                                                                                                          |
| Mounting Size                                                                    | 1" NPT                                                                                                                                                                                                                                                                                                                                                                                    | 3/8" NPT or 5/8" NF/NFE                                                                                                                                                                                                                                  | 1/8" NPT                                                                                                                                                                                                                                                                                                                                                   |
| Materials                                                                        |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                            |
| Body                                                                             | Case iron or red brass                                                                                                                                                                                                                                                                                                                                                                    | 316 stainless steel                                                                                                                                                                                                                                      | 316 stainless steel                                                                                                                                                                                                                                                                                                                                        |
| Terminal Housing                                                                 | Diecast aluminum, epoxy coated (optional)                                                                                                                                                                                                                                                                                                                                                 | —                                                                                                                                                                                                                                                        | —                                                                                                                                                                                                                                                                                                                                                          |
| Probe                                                                            | 316 stainless steel                                                                                                                                                                                                                                                                                                                                                                       | 316 stainless steel                                                                                                                                                                                                                                      | 316 stainless steel                                                                                                                                                                                                                                                                                                                                        |
| Insulation                                                                       | Teflon®                                                                                                                                                                                                                                                                                                                                                                                   | Teflon®                                                                                                                                                                                                                                                  | Teflon®                                                                                                                                                                                                                                                                                                                                                    |
| Probe Diameter                                                                   | 3/16"                                                                                                                                                                                                                                                                                                                                                                                     | 1/4"                                                                                                                                                                                                                                                     | 3/16"                                                                                                                                                                                                                                                                                                                                                      |
| Pressure/Temperature                                                             | 0 psig @ 500°F                                                                                                                                                                                                                                                                                                                                                                            | 250 psig @ 406°F                                                                                                                                                                                                                                         | 150 psig @ 365°F                                                                                                                                                                                                                                                                                                                                           |
| Approvals                                                                        | —                                                                                                                                                                                                                                                                                                                                                                                         | U.L. File #MP2489, Vol. 1 Sec. 1; CSA                                                                                                                                                                                                                    | U.L. File #MP2489                                                                                                                                                                                                                                                                                                                                          |
| Use the <b>Bold</b> characters from the chart below to construct a product code. | <p>Series <b>3J</b></p> <p>Number of Probes <b>1</b> – One <b>2</b> – Two <b>3</b> – Three</p> <p>Body Material<sup>1</sup> <b>B</b> – Cast Iron <b>C</b> – Red Brass</p> <p>Housing <b>0</b> – None <b>1</b> – Optional Housing</p> <p>Length of Probes<sup>2</sup> <b>A</b> – All probes 10-1/4" <b>C</b> – For lengths less than 10-1/4" indicate length as inches in decimal form</p> | <p>Series <b>3H</b></p> <p>Thread <b>1</b> – 3/8" – 18 NPT <b>2</b> – 5/8" – 18 UNF <b>3</b> – 5/8" – 24 UNEF</p> <p>Sleeve<sup>1</sup> <b>B</b> – Teflon® 3/4" Long</p> <p>Length (Feet)<sup>2</sup> <b>1</b> – One <b>2</b> – Two <b>3</b> – Three</p> | <p>Series <b>3L</b></p> <p>Connection Size <b>1</b> – 1/8" NPT</p> <p>Insulator Length <b>D</b> – Teflon® 1-1/4"</p> <p>Length in Inches<sup>1, 2</sup> <b>02</b> – Two <b>06</b> – Six <b>10</b> – Ten <b>03</b> – Three <b>07</b> – Seven <b>11</b> – Eleven <b>04</b> – Four <b>08</b> – Eight <b>12</b> – Twelve <b>05</b> – Five <b>09</b> – Nine</p> |
| Notes                                                                            | <p>1. Probes are stainless steel.</p> <p>2. 10-1/4" maximum</p>                                                                                                                                                                                                                                                                                                                           | <p>1. Longer Teflon® sleeves are available. Contact factory or your representative</p> <p>2. Custom probe and insulation lengths are available. Contact your representative.</p>                                                                         | <p>1. 12" maximum</p> <p>2. Indicate fractional inches in decimal form (01.75 = 1-3/4")</p>                                                                                                                                                                                                                                                                |

## Top Mounting Fixtures – General Purpose

| Series                                         | 3F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------|--------------------------|--------------------------------------|---|---|--------|----------|-----------------------|-----|---|----|----------|-----------------------|---|-------|----|----------|-----------------------|-----|---|--------|----------|---------------|--|
|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Mounting Connection                            | Flange — 4.5" to 7.5" Dia.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NPT, Flange, Bracket (Plate)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Probe Quantity                                 | 1 thru 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1 thru 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Description                                    | Designed for general purpose service, Series 3F flanged, pressure-tight fittings can handle up to 7 probes. They mate with standard pipe flanges coupled to the top of the vessel. Available in a variety of materials.                                                                                                                                                                                                                                                                                                                                      | Series 3G fittings are designed for general purpose use, and are made of PVC to withstand corrosive conditions. The flanged assemblies are sized to accommodate up to 7 probes and to mate with standard flanges on the tops of vessels.                                                                                                                                                                                                                                                                                   |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Materials                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Terminal Housing                               | Die-cast aluminum, epoxy coated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Polycarbonate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Body                                           | Forged steel, red brass, 316 S.S., 1018 C.S, PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Probe Insulation                               | Teflon®                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Teflon®                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Pressure/Temperature                           | 125 psig @ 323°F (cast iron)<br>225 psig @ 150°F (brass)<br>230 psig @ 100°F (316 S.S.)<br>275 psig @ 100°F (1018 C.S.)<br>PVC – not rated                                                                                                                                                                                                                                                                                                                                                                                                                   | 0 psig @ 150°F (PVC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Approvals                                      | CSA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Dimensions                                     | <table><tr><th>No. of Probes</th><th>Nominal Pipe Flange Size</th><th>Diameter of Flange</th><th>Conduit Boss Thread Size</th><th>Terminal Housing Size (W" x D" x H")</th></tr><tr><td>1</td><td>1</td><td>4-1/2"</td><td>1/2" NPT</td><td>2-1/4 x 2-1/4 x 2-1/4</td></tr><tr><td>2-3</td><td>2</td><td>6"</td><td>1/2" NPT</td><td>3-1/4 x 3-1/4 x 2-3/8</td></tr><tr><td>4</td><td>2-1/2</td><td>7"</td><td>1/2" NPT</td><td>3-1/4 x 3-1/4 x 2-3/8</td></tr><tr><td>5-7</td><td>3</td><td>7-1/2"</td><td>3/4" NPT</td><td>4 x 4 x 2-1/2</td></tr></table> | No. of Probes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nominal Pipe Flange Size | Diameter of Flange                   | Conduit Boss Thread Size | Terminal Housing Size (W" x D" x H") | 1 | 1 | 4-1/2" | 1/2" NPT | 2-1/4 x 2-1/4 x 2-1/4 | 2-3 | 2 | 6" | 1/2" NPT | 3-1/4 x 3-1/4 x 2-3/8 | 4 | 2-1/2 | 7" | 1/2" NPT | 3-1/4 x 3-1/4 x 2-3/8 | 5-7 | 3 | 7-1/2" | 3/4" NPT | 4 x 4 x 2-1/2 |  |
| No. of Probes                                  | Nominal Pipe Flange Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Diameter of Flange                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Conduit Boss Thread Size | Terminal Housing Size (W" x D" x H") |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| 1                                              | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4-1/2"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1/2" NPT                 | 2-1/4 x 2-1/4 x 2-1/4                |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| 2-3                                            | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1/2" NPT                 | 3-1/4 x 3-1/4 x 2-3/8                |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| 4                                              | 2-1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 7"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1/2" NPT                 | 3-1/4 x 3-1/4 x 2-3/8                |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| 5-7                                            | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7-1/2"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3/4" NPT                 | 4 x 4 x 2-1/2                        |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| How to Order                                   | <p>Use the <b>Bold</b> characters from the chart at right to construct a product code.</p> <p>Electrode Probes are ordered separately.</p> <p>Series <b>3F</b>      <b>X</b>      <b>X</b></p> <p>Number of Probes <b>1 thru 7</b></p> <p>Body Material <b>A</b> – Forged Steel (Raised Face)<br/><b>B</b> – Red Brass (Flat Face)<br/><b>C</b> – 316 S.S. (Raised Face)<br/><b>D</b> – 1018 C.S. (Raised Face)<br/><b>E</b> – PVC (Flat Face)</p>                                                                                                           | <p>Series <b>3G</b>      <b>X</b>      <b>X</b>      <b>X</b></p> <p>Number of Probes <b>1 thru 7</b></p> <p>Base Size and Style <b>A</b> – 2" Flange (6" O.D.)<sup>3</sup>      <b>E</b> – 2" NPT<sup>3</sup><br/><b>B</b> – 3" Flange (7-1/2" O.D.)      <b>H</b> – 3" NPT<br/><b>C</b> – 3-1/4" x 6" x 3/4" PVC Plate</p> <p>Probe Type <b>1</b> – 316 S.S. Inserts for Use with 1/4" Rod Extensions<sup>4</sup><br/><b>2</b> – Tapered Probe Assembly<sup>5</sup><br/><b>3</b> – Wire-Suspended Probes<sup>6</sup></p> |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |
| Compatible Electrode Probes (order separately) | 3R, 3W <sup>1</sup> , 3Y <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3R, 3T, 3W <sup>1</sup> , 3Y <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                                      |                          |                                      |   |   |        |          |                       |     |   |    |          |                       |   |       |    |          |                       |     |   |        |          |               |  |

**Notes:**

- Requires 3Z1B Adapter and 3Z1A Wire.
- Requires 3Z1B Adapter.
- Maximum 4 probes.
- Order 3R rods separately. See page E-21.
- Order 3T rods separately. See page E-21.
- Order 3W/3Y probes separately. See page E-22.

Custom options available. Consult factory.

| <b>3E</b>                                                                                                                                                                                                                                 |               | <b>3N</b>                                                                                                                                                                                                                      |                          | <b>3B</b>                                                                                                                                                                                                                                                                                                          |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                                                                                                                                          |               |                                                                                                                                               |                          |                                                                                                                                                                                                                                 |  |
| 1" to 3" NPT                                                                                                                                                                                                                              |               | #10 Machine Screws from Underside                                                                                                                                                                                              |                          | 3/8" - 18NPT, 5/8" - 18UNF, 5/8" - 24UNEF                                                                                                                                                                                                                                                                          |  |
| 1 thru 7                                                                                                                                                                                                                                  |               | 1 thru 3                                                                                                                                                                                                                       |                          | 1                                                                                                                                                                                                                                                                                                                  |  |
| Series 3E fittings are cast metal, pressure-tight assemblies capable of handling 1-7 probes. Attachment to vessels is accomplished with external pipe threading. 3E Fittings require the use of 3R rigid or 3W wire suspended electrodes. |               | Series 3N fittings accommodate 1-3 probes operating at atmospheric pressure. The assembly mounts on a flat surface atop open tanks or closed vessels. 3N Fittings require the use of 3R rigid or 3W wire suspended electrodes. |                          | Series 3B fittings are compact pressure tight assemblies that hold a single electrode probe for use in water and chemicals. These fittings incorporate a 1/4-20 female thread that must be combined with a Series 3R (rigid rod electrode) or Series 3W/3Y (wire suspended electrode) to make a complete assembly. |  |
| Die-cast aluminum, epoxy coated                                                                                                                                                                                                           |               | Die-cast aluminum, epoxy coated                                                                                                                                                                                                |                          | —                                                                                                                                                                                                                                                                                                                  |  |
| Cast iron, red brass, 316 stainless steel                                                                                                                                                                                                 |               | PVC, red brass, 316 stainless steel                                                                                                                                                                                            |                          | 316 stainless steel                                                                                                                                                                                                                                                                                                |  |
| Teflon®                                                                                                                                                                                                                                   |               | Teflon®                                                                                                                                                                                                                        |                          | Teflon®                                                                                                                                                                                                                                                                                                            |  |
| 125 psig @ 353°F (cast iron)<br>250 psig @ 406°F (brass, 316 S.S.)                                                                                                                                                                        |               | 0 psig @ 150°F (PVC)<br>0 psig @ 500°F (brass, 316 S.S.)                                                                                                                                                                       |                          | 250 psig @ 406°F<br>500 psig @ 75°F                                                                                                                                                                                                                                                                                |  |
| U.L. File #MP2489, Vol. 1 Sec. 1; CSA                                                                                                                                                                                                     |               | CSA File #LR11644                                                                                                                                                                                                              |                          | U.L. File #MP2489, Vol. 1 Sec. 1; CSA                                                                                                                                                                                                                                                                              |  |
|                                                                                                                                                                                                                                           | No. of Probes | Attachment to Vessel                                                                                                                                                                                                           | Conduit Boss Thread Size | Terminal Housing Size (W" x D" x H")                                                                                                                                                                                                                                                                               |  |
| <b>3E</b>                                                                                                                                                                                                                                 | 1             | 1" NPT                                                                                                                                                                                                                         | 1/2" NPT                 | 2-1/4 x 2-1/4 x 2-1/4                                                                                                                                                                                                                                                                                              |  |
|                                                                                                                                                                                                                                           | 2-3           | 2" NPT                                                                                                                                                                                                                         | 1/2" NPT                 | 3-1/4 x 3-1/4 x 2-3/8                                                                                                                                                                                                                                                                                              |  |
|                                                                                                                                                                                                                                           | 4             | 2-1/2" NPT                                                                                                                                                                                                                     | 1/2" NPT                 | 3-1/4 x 3-1/4 x 2-3/8                                                                                                                                                                                                                                                                                              |  |
|                                                                                                                                                                                                                                           | 5-7           | 3" NPT                                                                                                                                                                                                                         | 3/4" NPT                 | 4 x 4 x 2-1/2                                                                                                                                                                                                                                                                                                      |  |
| <b>3N</b>                                                                                                                                                                                                                                 | 1-3           | 2-1/4" square flat pad, 1-1/2" dia. hole in top of vessel secured with #10 machine screws at the corners of a 1-1/2" square                                                                                                    | 1/2" NPT                 | 2-1/4 x 2-1/4 x 2-1/4                                                                                                                                                                                                                                                                                              |  |
| Series <b>3E</b><br>Number of Probes <b>1 thru 7</b><br>Body Material<br><b>A</b> – Cast Iron<br><b>B</b> – Red Brass<br><b>C</b> – 316 Stainless Steel                                                                                   |               | Series <b>3N</b><br>Number of Probes <b>1 thru 3</b><br>Body Material<br><b>A</b> – PVC<br><b>B</b> – Red Brass<br><b>C</b> – 316 Stainless Steel                                                                              |                          | Series <b>3B</b><br>Thread<br><b>1</b> – 3/8" - 18 NPT<br><b>2</b> – 5/8" - 18 UNF<br><b>3</b> – 5/8" - 24 UNEF<br>Metal Parts<br><b>B</b> – 316 Stainless Steel                                                                                                                                                   |  |
| 3R, 3W <sup>1</sup>                                                                                                                                                                                                                       |               | 3R, 3W <sup>1</sup>                                                                                                                                                                                                            |                          | 3R solid rod (up to 4')<br>3W <sup>1</sup> or 3Y <sup>2</sup> (greater than 4')                                                                                                                                                                                                                                    |  |

Custom options available. Consult factory.

## Series 3R/3T General Purpose Probes

- ▶ Metallic Rods
- ▶ Available in Many Materials for Various Requirements
- ▶ Adaptable for Various Fittings

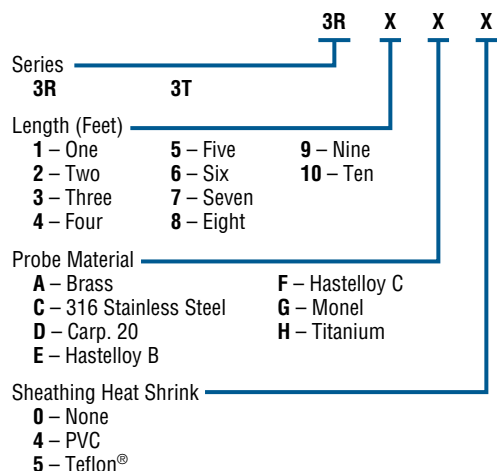
For general purpose use, Series 3R probes are metallic rods with threaded ends that screw into a fitting that extends vertically down into the liquid. Available in a variety of materials for different applications. 3T tapered rods are also available.

### Specifications

|                             |                                                                    |
|-----------------------------|--------------------------------------------------------------------|
| <b>Style</b>                |                                                                    |
| <b>Series 3R</b>            | 1/4" (.64 cm) threaded rod                                         |
| <b>Series 3T</b>            | 1/4" (.64 cm) tapered rod                                          |
| <b>Material</b>             | Brass, Hastelloy C, Monel, 316 stainless steel, titanium, Carp. 20 |
| <b>Sheathing (optional)</b> | PVC heat shrink 200°F (93°C), Teflon® heat shrink 350°F (177°C)    |

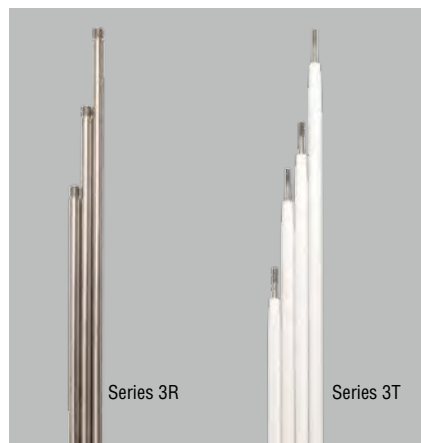
### How to Order

Use the **Bold** characters from the chart below to construct a product code.



Contact your representative for custom lengths.

Note: Long lengths can be coupled to facilitate shipping and installation. Consult factory.

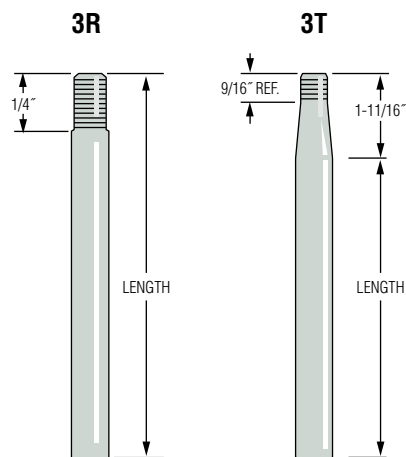


### Applications

3R: For use with Series 3E, 3F, 3G, 3B fittings

3T: For use with Series 3G and other custom configurations

### Dimensions



## Series 3W – Wire Suspended Probes

- ▶ Metallic Bars
- ▶ Plastic Shield Protected
- ▶ Adaptable to Many Fittings
- ▶ Field Assembled

Series 3W probes, consisting of metallic bars within a protective plastic shield, are designed to be suspended in liquid with PVC-insulated wires. They are ideal for applications where rigid electrode rods are impractical or cumbersome, such as:

- Deep Wells
- Pump Control
- Waste Water
- Deep Tanks

7/8" (2.22 cm) diameter x 3-3/4" (9.52 cm) length. 3Z1A wire and 3Z1B adaptor kit required for use with 3E, 3F and 3N fittings.

### How to Order

Select a 3W electrode, a 3Z1B adaptor and a length of 3Z1A suspension wire to form a complete suspended probe.

#### 1. 3W Electrodes

| Probe Material      | Part Number |
|---------------------|-------------|
| Brass               | 3W1         |
| 316 Stainless Steel | 3W2         |

#### 2. 3Z1B Adaptor Kit

For use with 3E, 3F and 3N fittings.  
**Part Number: 3Z1B**

#### 3. 3Z1A Suspension Wire

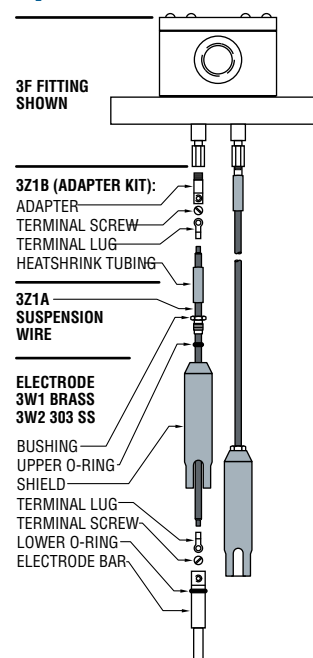
Order in standard or custom length.

| Length (Feet)                                 | Part Number |
|-----------------------------------------------|-------------|
| 500                                           | 3Z1A-500    |
| 1000                                          | 3Z1A-1000   |
| 5000                                          | 3Z1A-5000   |
| Custom                                        | 3Z1A-XX     |
| Specify in one foot increments up to 5000 ft. |             |



Series 3W

### Components Detail



## Series 3Y – Corrosion Resistant Probes

- ▶ Metallic Bars
- ▶ Corrosion Resistant
- ▶ Available in Many Materials for Various Requirements
- ▶ Adaptable for Various Fittings

Series 3Y wire suspended probes consist of metallic bars within a protective plastic shield, designed to be suspended in liquid. Series 3Y suspension wires are PVC or Teflon® insulated for use in corrosive liquid applications. 7/8" (2.22 cm) diameter x 3-1/2" (8.90 cm) length.

### Specifications

|                        |                                            |
|------------------------|--------------------------------------------|
| <b>Style</b>           | Wire suspended                             |
| <b>Tip Material</b>    | Carp. 20, Hastelloy C, 316 stainless steel |
| <b>Shield Material</b> | PVC 150°F (66°C), Teflon®                  |

### How to Order

Use the **Bold** characters from the chart below to construct a product code.

|                    |                                |                         |          |          |
|--------------------|--------------------------------|-------------------------|----------|----------|
| Series             | <b>3Y</b>                      | <b>X</b>                | <b>X</b> | <b>X</b> |
| Shield Material    | <b>1</b> – PVC                 | <b>3</b> – Teflon®      |          |          |
| Probe Tip Material | <b>C</b> – 316 Stainless Steel | <b>F</b> – Hastelloy C  |          |          |
|                    | <b>D</b> – Carp. 20            |                         |          |          |
| Length of Wire     | <b>1</b> – 10 feet             | <b>3</b> – 30 feet etc. |          |          |
|                    | <b>2</b> – 20 feet             |                         |          |          |

Note: 3Z1B Connector is used to connect suspension wire with 3B, 3E, 3F, 3G or 3N fitting.



Series 3Y

### Applications

- General Purpose
- Wire Suspended Probes
- Corrosive Liquids, Chemicals

## Series 3C – Short External Mount Side Chamber

## Series 3K – Long External Mount Side Chamber

- ▶ Side Mounting
- ▶ Gauge Tappings
- ▶ Pressure Tight
- ▶ CSA Approved
- ▶ Tricock Tappings
- ▶ 1-4 Probes
- ▶ Cast Iron and Brass
- ▶ U.L. Recognized

Series 3C side chamber fittings are cast iron or brass, pressure-tight chambers containing up to 4 probes from 1-1/2" to 6" in length. Pipe tappings provide connection to the side of boilers and pressure vessels to equalize the level in the chamber with the level in the vessel.

Series 3K fittings contain up to 4 probes and accommodate probes from 1-3/4" to 13" in length. Additional tappings are available for tricocks and gauges.



### Specifications

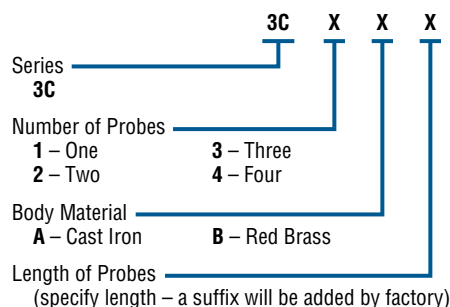
|                             |                                                         |
|-----------------------------|---------------------------------------------------------|
| <b>Probes</b>               | 1 thru 4, with 316 Stainless Steel/Teflon® wetted parts |
| <b>Body Material</b>        |                                                         |
| <b>Series 3C</b>            | Cast iron, red brass                                    |
| <b>Series 3K</b>            | Cast iron                                               |
| <b>Pressure/Temperature</b> | 250 psig (17.2 bar) @ 406°F (200°C) (saturated steam)   |
| <b>Probe Length</b>         |                                                         |
| <b>Series 3C</b>            | 1-1/2" to 6" (3.81 cm to 15.24 cm)                      |
| <b>Series 3K</b>            | 1-3/4" to 13" (4.45 cm to 33.02 cm)                     |
| <b>Approvals</b>            | U.L. File # MP2489, Vol. 1, Sec. 2; CSA                 |

### Applications

- Boilers
- Hydropneumatic Tanks
- Steam Generators
- Pressure Vessels
- Pump Operation
- Low Water / High Water Alarm

### How to Order Series 3C

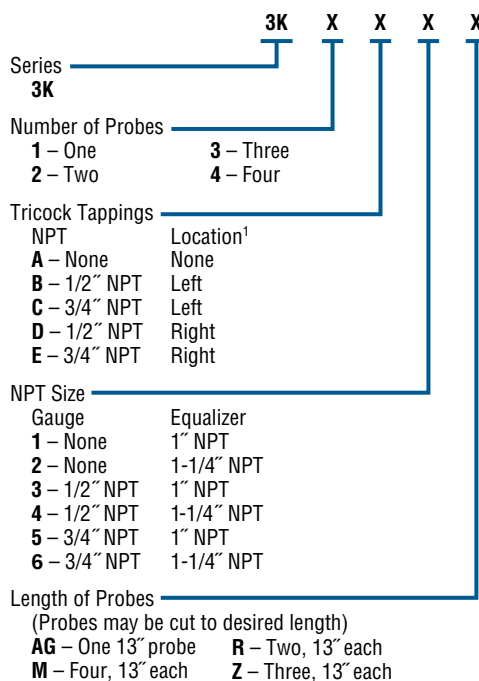
Use the **Bold** characters from the chart below to construct a product code.



- Notes:
1. Contact your representative for more details on this fitting.
  2. The 3C attaches to a vessel by two 1" NPT tappings, one 1" NPT blowdown port and one 3/4" NPT side port.

### How to Order Series 3K

Use the **Bold** characters from the chart below to construct a product code.



- Note:
1. Viewer facing gauge glass

# Series 3S Multi-Wire Suspended Fittings

- ▶ Probe Isolation
- ▶ Long Length

The 3S series electrode fitting is designed to provide isolation of electrodes from liquids containing solids, grease, soaps, sludge, rags, paper and other debris commonly found in wastewater and sewage pumping applications.

Isolation is accomplished by enclosing wire suspended electrodes within a 1-1/2" galvanized pipe assembly with a neoprene flexible bulb installed on the lower end of the pipe. The bulb and pipe assemblies contain 3-1/2 quarts clean water with one ounce of sodium bicarbonate (baking soda).

When mounted in a sump, the pipe and bulb assembly is acted on by the hydrostatic pressure exerted by the liquid outside the bulb. Assuming the density of the liquid outside is equal to water, the height of the water inside the bulb will equal the height outside.

## Specifications

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| <b>Probes</b>                    | 1 thru 7                                              |
| <b>Materials of Construction</b> | Cast iron, galvanized pipe, stainless steel, neoprene |
| <b>Type of Connection</b>        | 3" flange (7-1/2" O.D.), or bracket                   |
| <b>Terminal Housing</b>          | Die-cast aluminum, epoxy coated                       |
| <b>Pressure</b>                  | Atmosphere                                            |
| <b>Temperature</b>               | -40°F to +212°F (-40°C to +100°F)                     |

## How to Order

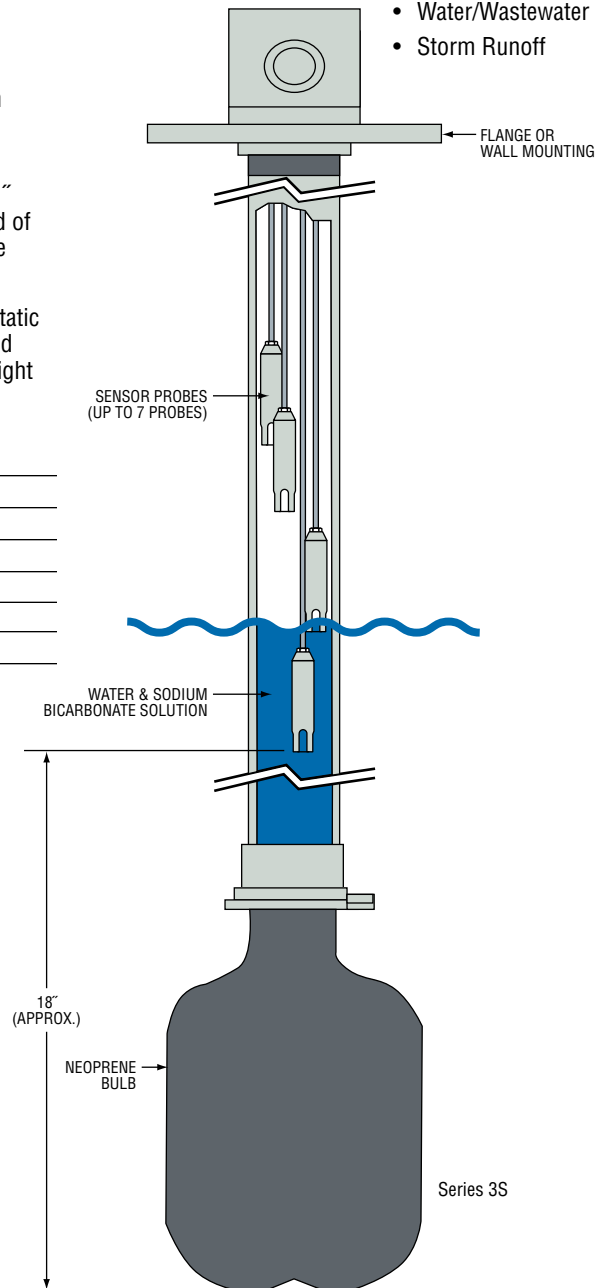
Use the **Bold** characters from the chart below to construct a product code.

|                             |                                                           |                               |                  |           |          |
|-----------------------------|-----------------------------------------------------------|-------------------------------|------------------|-----------|----------|
| Series                      | <b>3S</b>                                                 | <b>X</b>                      | <b>X</b>         | <b>XX</b> | <b>X</b> |
| Number of Probes            | <b>1</b> – One                                            | <b>4</b> – Four               | <b>7</b> – Seven |           |          |
|                             | <b>2</b> – Two                                            | <b>5</b> – Five               |                  |           |          |
|                             | <b>3</b> – Three                                          | <b>6</b> – Six                |                  |           |          |
| Mounting Method             | <b>A</b> – Flange                                         | <b>B</b> – Wall mount bracket |                  |           |          |
| Length of Longest Probe     |                                                           |                               |                  |           |          |
| (Enter dimension in inches) |                                                           |                               |                  |           |          |
| Pipe                        | <b>blank</b> – Standard 1-1/2" galvanized pipe (included) |                               |                  |           |          |
|                             | <b>A</b> – No pipe (customer supplied pipe)               |                               |                  |           |          |

Note:  
Overall length is approximately 18" more than distance to longest electrode.  
Probe is adjusted by customer in the field.

## Applications

- Sewage
- Water/Wastewater
- Storm Runoff



## Series 3M – Food Grade Fitting

## Series 3MT – Food Grade Fitting

- ▶ Easy Removal for Cleaning
- ▶ CSA Approved
- ▶ FDA Approved Materials

Designed for use in food, beverage and pharmaceutical applications where cleanliness is vital. Two-piece Series 3M assemblies can handle up to 4 probes. FDA-approved materials. Engineered for fast removal of fitting to facilitate cleaning and sterilization.

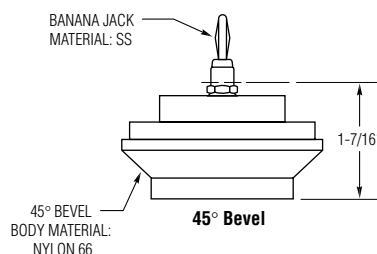
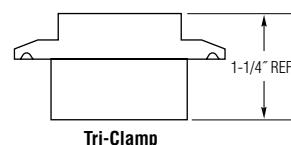
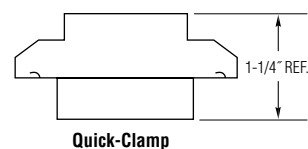
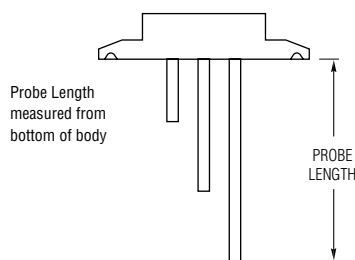
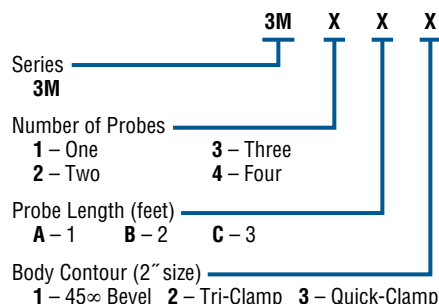
Series 3MT fittings are similar to 3M fittings, except they also feature Teflon®-covered probes with polished tips to meet the most demanding application requirements.

### Specifications

|                             |                                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Probes</b>               | 1 thru 4                                                                                                       |
| <b>Body Contour</b>         | 45° bevel, Tri-Clamp, Quick Clamp                                                                              |
| <b>Body Material</b>        | Type 66 Nylon                                                                                                  |
| <b>Probe Material</b>       |                                                                                                                |
| <b>Series 3M</b>            | 316 stainless steel, cut to length by user                                                                     |
| <b>Series 3MT</b>           | Teflon®-covered 316 stainless steel probes.<br>Tip polished to RA <25 microns max. spec. (factory set lengths) |
| <b>Pressure/Temperature</b> | 150 psig (10.3 bar) @ 150°F (65°C)                                                                             |
| <b>Approvals</b>            | FDA-approved materials; CSA                                                                                    |

### How to Order Series 3M

Use the **Bold** characters from the chart below to construct a product code.



### How to Order Series 3MT

**3MT components must be ordered separately.**

#### Step 1. Upper Assembly\*:

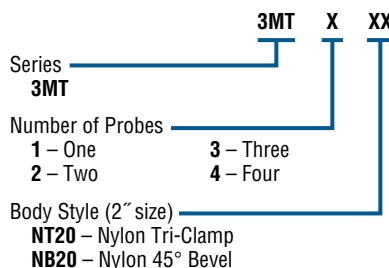
Select one part number.

- 7790575** – 1 Probe  
**7790577** – 2 Probes  
**7790581** – 3 Probes  
**7790584** – 4 Probes

\*10' lead length standard.

#### Step 2. Lower Assembly:

Complete part number based on Upper Assembly selected and Body Style.



#### Step 3. Probe Lengths\*:

Select a length for each probe to be used; maximum four.

- Probe 1    3MTPRL \_\_\_\_ (inches)  
Probe 2    3MTPRL \_\_\_\_ (inches)  
Probe 3    3MTPRL \_\_\_\_ (inches)  
Probe 4    3MTPRL \_\_\_\_ (inches)

\*Probe length must be specified in whole inches, 06" to 36". Length is not field adjustable.