

# Installation Instructions for the TruStability® Board Mount Pressure Sensors

## HSC Series—High Accuracy, Compensated/Amplified

±1.6 mbar to ±10 bar | ±160 Pa to ±1 MPa | ±0.5 inH<sub>2</sub>O to ±150 psi

Digital or Analog Output

## SSC Series—Standard Accuracy, Compensated/Amplified

±1.6 mbar to ±10 bar | ±160 Pa to ±1 MPa | ±0.5 inH<sub>2</sub>O to ±150 psi

Digital or Analog Output

### GENERAL INFORMATION

Honeywell's TruStability® High Accuracy Silicon Ceramic (HSC) Series and Standard Accuracy Silicon Ceramic (SSC) Series are piezoresistive silicon pressure sensors offering a digital or analog output for reading pressure over the specified full scale pressure span and temperature range.

These sensors measure absolute, gage, or differential pressures. The absolute versions have an internal vacuum reference and an output value proportional to absolute pressure. Gage versions are referenced to atmospheric pressure and provide an output proportional to pressure variations from atmosphere. Differential versions allow measurement of pressure between the two pressure ports.

The HSC Series is calibrated over the temperature range of 0 °C to 50 °C [32 °F to 122 °F] while the SSC Series is calibrated over the temperature range of -20 °C to 85 °C [-4 °F to 185 °F].

The TruStability® pressure sensors are intended for use with non-corrosive, non-ionic gases, such as air and other dry gases. An available option extends the performance of these sensors to non-corrosive, non-ionic liquids for pressure ranges above 40 mbar | 4 kPa | 20 inH<sub>2</sub>O.

### CLEANING

#### CAUTION

##### IMPROPER CLEANING

Avoid cleaning the sensor; however, if it must be cleaned ensure cleaning fluids, such as appropriate alcohols or fluorinated solvents, are used based on the type of contaminants to be removed. Do not immerse the sensor. **Failure to comply with these instructions may result in product damage.**

#### CAUTION

##### PRODUCT DAMAGE FOR SENSORS WITH LIQUID MEDIA OPTION (ONLY AVAILABLE 60 MBAR | 6 KPA | 1 PSI AND ABOVE)

- Ensure liquid media is applied to Port 1 only; Port 2 is not compatible with liquids.
- Ensure liquid media contains no particulates. All TruStability® sensors are dead-ended devices. Particulates can accumulate inside the sensor, causing damage or affecting sensor output.
- Recommend that the sensor be positioned with Port 1 facing downwards; any particulates in the system are less likely to enter and settle within the pressure sensor if it is in this position.
- Ensure liquid media does not create a residue when dried; build-up inside the sensor may affect sensor output. Rinsing of a dead-ended sensor is difficult and has limited effectiveness for removing residue.
- Ensure liquid media are compatible with wetted materials. Noncompatible liquid media will degrade sensor performance and may lead to sensor failure.

**Failure to comply with these instructions may result in product damage.**

**Table 1. Absolute Maximum Ratings<sup>1</sup>**

| Characteristic                                        | Min.                         | Max.     | Unit    |
|-------------------------------------------------------|------------------------------|----------|---------|
| Supply voltage ( $V_{\text{supply}}$ ) <sup>2</sup> : | -3.0                         | 6.0      | Vdc     |
| Storage temperature                                   | -40 [-40]                    | 85 [185] | °C [°F] |
| Soldering time and temperature:                       |                              |          |         |
| lead solder temperature (SIP, DIP)                    | 4 s max. at 250 °C [482 °F]  |          |         |
| peak reflow temperature (SMT)                         | 15 s max. at 250 °C [482 °F] |          |         |

<sup>1</sup> Absolute maximum ratings are the extreme limits the device will withstand without damage.

<sup>2</sup> Incorrect application of supply voltage or ground to the wrong pin may cause electrical failure.

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**Table 2. Environmental Specifications**

| Characteristic                                                                                                                  | Parameter                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Humidity:<br>gases only (See “Options N and D” in Figures 5 and 6.)<br>liquid media (See “Options T and V” in Figures 5 and 6.) | 0% to 95% RH, non-condensing<br>100% condensing or direct liquid media on Port 1                   |
| Vibration                                                                                                                       | MIL-STD-202G Method 204D, Condition B (15 g, 10 Hz to 2 Hz)                                        |
| Shock                                                                                                                           | MIL-STD-202G, Method 213B, Condition C (100 g, 6 ms duration)                                      |
| Life <sup>1</sup>                                                                                                               | 1 million pressure cycles minimum                                                                  |
| Solder reflow                                                                                                                   | J-STD-020-D.1 Moisture Sensitivity Level 1<br>(unlimited shelf life when stored at ≤30 °C/85 % RH) |

<sup>1</sup>Life may vary depending on specific application in which sensor is utilized.

**Table 3. Wetted Materials<sup>1</sup>**

| Component             | Port 1 (Pressure Port)          | Port 2 (Reference Port)    |
|-----------------------|---------------------------------|----------------------------|
| Ports and covers      | high temperature polyamide      | high temperature polyamide |
| Substrate             | alumina ceramic                 | alumina ceramic            |
| Adhesives             | epoxy, silicone                 | epoxy, silicone            |
| Electronic components | ceramic, silicon, glass, solder | silicon, glass, gold       |

<sup>1</sup>Contact Honeywell Customer Service for detailed material information.

**Table 4. HSC Series and SSC Series Analog Operating Specifications**

| Characteristic                                                                                                                                                                                                    | Min.                        | Typ.                     | Max.                        | Unit                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|-----------------------------|------------------------|
| Supply voltage ( $V_{\text{supply}}$ ) <sup>1, 2, 3</sup> :<br>pressure ranges ≥60 mbar   6 kPa   1 psi:<br>3.3 Vdc<br>5.0 Vdc<br>pressure ranges ≤40 mbar   4 kPa   20 inH <sub>2</sub> O:<br>3.3 Vdc<br>5.0 Vdc | 3.0<br>4.75<br>3.27<br>4.95 | 3.3<br>5.0<br>3.3<br>5.0 | 3.6<br>5.25<br>3.33<br>5.05 | Vdc                    |
| Supply current:<br>3.3 Vdc<br>5.0 Vdc                                                                                                                                                                             | —<br>—                      | 2.1<br>2.7               | 2.8<br>3.5                  | mA                     |
| Operating temperature range <sup>4</sup> :<br>HSC<br>SSC                                                                                                                                                          | -20 [-4]<br>-40 [-40]       | —<br>—                   | 85 [185]<br>85 [185]        | °C [°F]                |
| Compensated temperature range <sup>5</sup> :<br>HSC<br>SSC                                                                                                                                                        | 0 [-32]<br>-20 [-4]         | —<br>—                   | 50 [122]<br>85 [185]        | °C [°F]                |
| Startup time (power up to data ready)                                                                                                                                                                             | —                           | —                        | 5                           | ms                     |
| Response time                                                                                                                                                                                                     | —                           | 1                        | —                           | ms                     |
| Clipping limit:<br>upper<br>lower                                                                                                                                                                                 | —<br>2.5                    | —<br>—                   | 97.5<br>—                   | %Vsupply               |
| Accuracy <sup>6</sup>                                                                                                                                                                                             | —                           | —                        | ±0.25                       | %FSS BFSL <sup>8</sup> |
| Output resolution                                                                                                                                                                                                 | 0.03                        | —                        | —                           | %FSS                   |
| Orientation sensitivity ( $\pm 1$ g) <sup>7, 9</sup> :<br>pressure ranges ≤40 mbar   4 kPa   20 inH <sub>2</sub> O:<br>pressure ranges ≤2.5 mbar   250 Pa   1 inH <sub>2</sub> O:                                 | —<br>—                      | ±0.1<br>±0.2             | —<br>—                      | %FSS                   |

<sup>1</sup>Sensors are either 3.3 Vdc or 5.0 Vdc based on the catalog listing selected.

<sup>2</sup>Ratiometricity of the sensor (the ability of the device output to scale to the supply voltage) is achieved within the specified operating voltage.

<sup>3</sup>The sensor is not reverse polarity protected. Incorrect application of supply voltage or ground to the wrong pin may cause electrical failure.

<sup>4</sup>Operating temperature range: The temperature range over which the sensor will produce an output proportional to pressure.

<sup>5</sup>Compensated temperature range: The temperature range over which the sensor will produce an output proportional to pressure within the specified performance limits.

<sup>6</sup>Accuracy: The maximum deviation in output from a Best Fit Straight Line (BFSL) fitted to the output measured over the pressure range at 25 °C [77 °F]. Includes all errors due to pressure non-linearity, pressure hysteresis, and non-repeatability.

<sup>7</sup>Orientation sensitivity: The maximum change in offset of the sensor due to a change in position or orientation relative to Earth's gravitational field.

<sup>8</sup>Full Scale Span (FSS): The algebraic difference between the output signal measured at the maximum (Pmax.) and minimum (Pmin.) limits of the pressure range. (See Figures 5 and 6 for ranges.)

<sup>9</sup>Insignificant for pressure ranges above 40 mbar | 4 kPa | 20 inH<sub>2</sub>O.

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**Table 5. HSC Series and SSC Series Digital Operating Specifications**

| Characteristic                                                                                                                                                                                                               | Min.                        | Typ.                     | Max.                        | Unit                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|-----------------------------|------------------------|
| Supply voltage ( $V_{\text{supply}}$ ) <sup>1, 2, 3:</sup><br>pressure ranges $\geq 60$ mbar   6 kPa   1 psi:<br>3.3 Vdc<br>5.0 Vdc<br>pressure ranges $\leq 40$ mbar   4 kPa   20 inH <sub>2</sub> O:<br>3.3 Vdc<br>5.0 Vdc | 3.0<br>4.75<br>3.27<br>4.95 | 3.3<br>5.0<br>3.3<br>5.0 | 3.6<br>5.25<br>3.33<br>5.05 | Vdc                    |
| Supply current:<br>3.3 Vdc<br>5.0 Vdc                                                                                                                                                                                        | —<br>—                      | 3.1<br>3.7               | 3.9<br>4.6                  | mA                     |
| Operating temperature range <sup>4:</sup><br>HSC<br>SSC                                                                                                                                                                      | -20 [-4]<br>-40 [-40]       | —<br>—                   | 85 [185]<br>85 [185]        | °C [°F]                |
| Compensated temperature range <sup>5:</sup><br>HSC<br>SSC                                                                                                                                                                    | 0 [-32]<br>-20 [-4]         | —<br>—                   | 50 [122]<br>85 [185]        | °C [°F]                |
| Startup time (power up to data ready)                                                                                                                                                                                        | —                           | —                        | 3                           | ms                     |
| Response time                                                                                                                                                                                                                | —                           | 0.46                     | —                           | ms                     |
| SPI/I <sup>2</sup> C voltage level:<br>low<br>high                                                                                                                                                                           | —<br>80                     | —<br>—                   | 20<br>—                     | %Vsupply               |
| Pull up on SDA/MISO, SCL/SCLK, SS                                                                                                                                                                                            | 1                           | —                        | —                           | kOhm                   |
| Accuracy <sup>6</sup>                                                                                                                                                                                                        | —                           | —                        | $\pm 0.25$                  | %FSS BFSL <sup>8</sup> |
| Output resolution                                                                                                                                                                                                            | 12                          | —                        | —                           | bits                   |
| Orientation sensitivity ( $\pm 1$ g) <sup>7, 9</sup><br>pressure ranges $\leq 40$ mbar   4 kPa   20 inH <sub>2</sub> O:<br>pressure ranges $\leq 2.5$ mbar   250 Pa   1 inH <sub>2</sub> O:                                  | —<br>—                      | $\pm 0.1$<br>$\pm 0.2$   | —<br>—                      | %FSS                   |

<sup>1</sup>Sensors are either 3.3 Vdc or 5.0 Vdc based on the catalog listing selected.

<sup>2</sup>Ratiometricity of the sensor (the ability of the device output to scale to the supply voltage) is achieved within the specified operating voltage.

<sup>3</sup>The sensor is not reverse polarity protected. Incorrect application of supply voltage or ground to the wrong pin may cause electrical failure.

<sup>4</sup>Operating temperature range: The temperature range over which the sensor will produce an output proportional to pressure.

<sup>5</sup>Compensated temperature range: The temperature range over which the sensor will produce an output proportional to pressure within the specified performance limits.

<sup>6</sup>Accuracy: The maximum deviation in output from a Best Fit Straight Line (BFSL) fitted to the output measured over the pressure range at 25 °C [77 °F]. Includes all errors due to pressure non-linearity, pressure hysteresis, and non-repeatability.

<sup>7</sup>Orientation sensitivity: The maximum change in offset of the sensor due to a change in position or orientation relative to Earth's gravitational field.

<sup>8</sup>Full Scale Span (FSS): The algebraic difference between the output signal measured at the maximum (Pmax.) and minimum (Pmin.) limits of the pressure range. (See Figures 5 and 6 for ranges.)

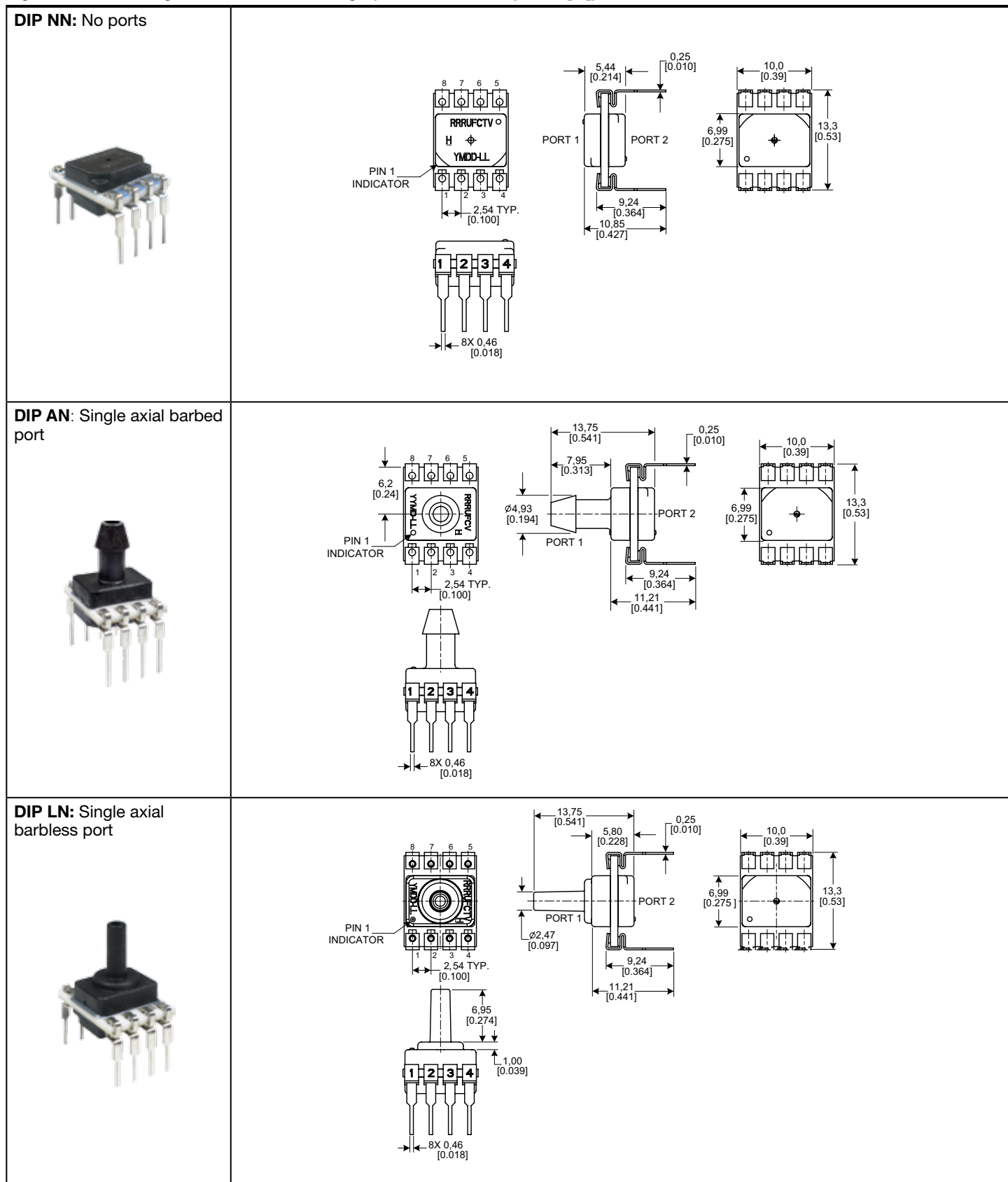
<sup>9</sup>Insignificant for pressure ranges above 40 mbar | 4 kPa | 20 inH<sub>2</sub>O.

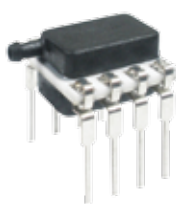
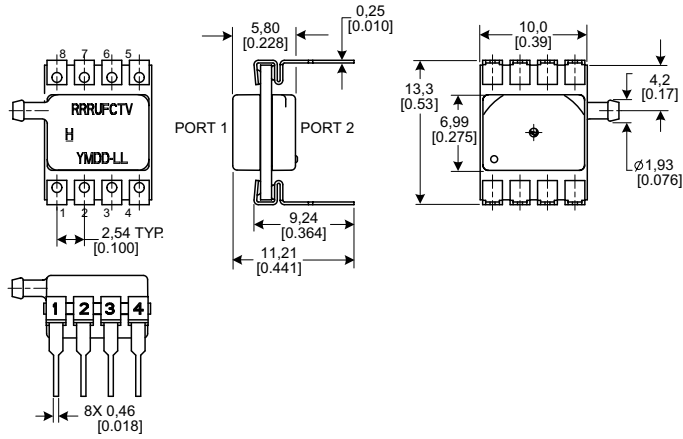
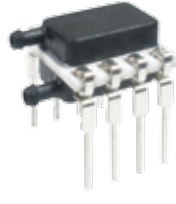
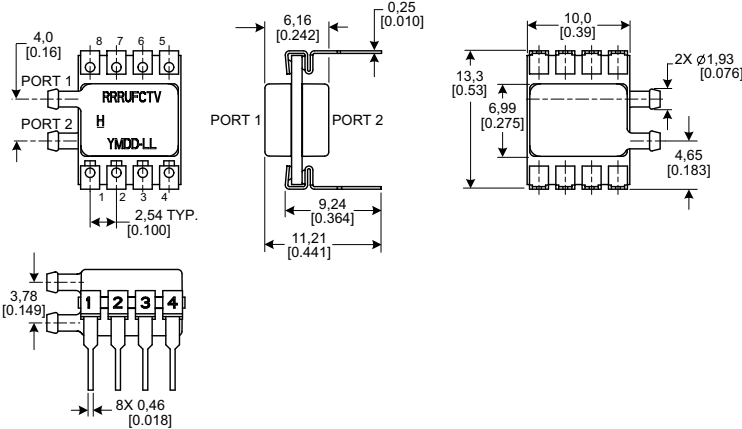
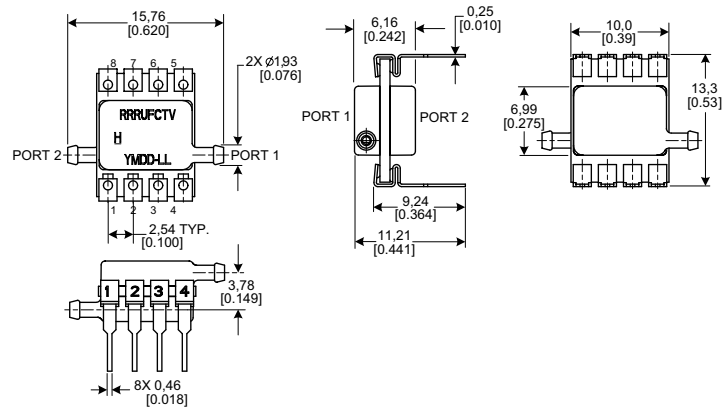
# HSC Series—High Accuracy, Compensated/Amplified

## SSC Series—Standard Accuracy, Compensated/Amplified

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Figure 1. DIP Package Dimensional Drawings (For reference only: mm [in])



|                                                                                                                                                    |                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <p><b>DIP RN:</b> Single radial barbed port</p>                   |    |
| <p><b>DIP RR:</b> Dual radial barbed ports, same side</p>       |   |
| <p><b>DIP DR:</b> Dual radial barbed ports, opposite sides</p>  |  |

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Figure 1. DIP Package Dimensional Drawings (continued)

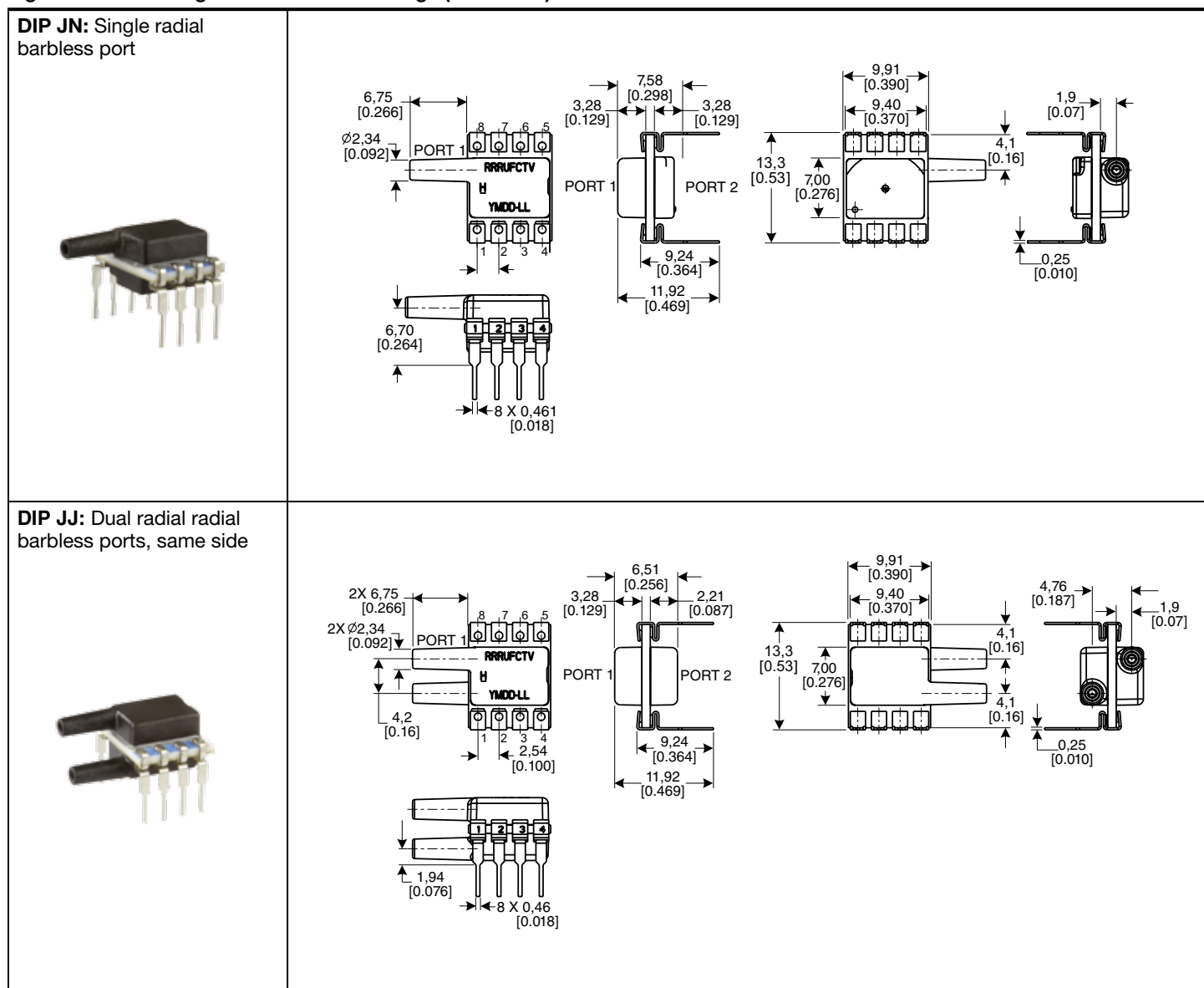
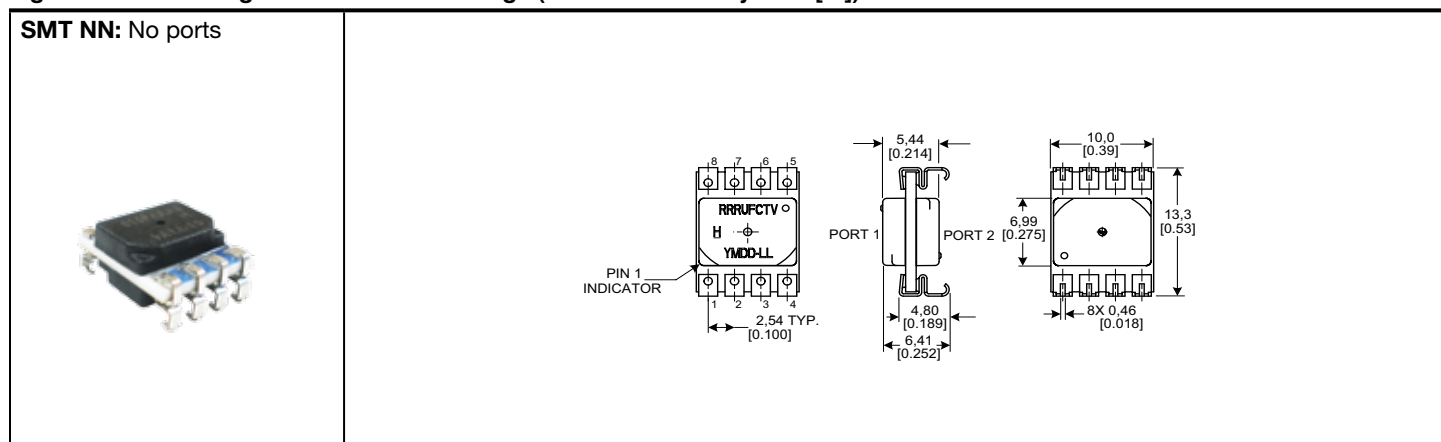


Figure 2. SMT Package Dimensional Drawings (For reference only: mm [in])

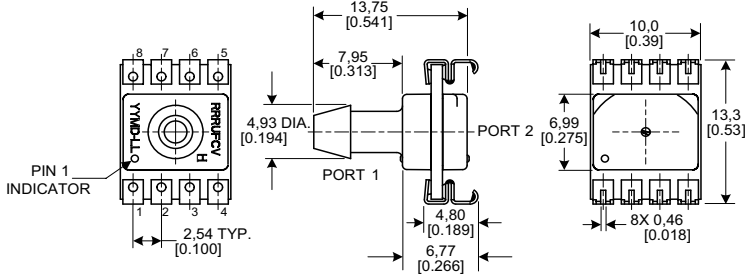
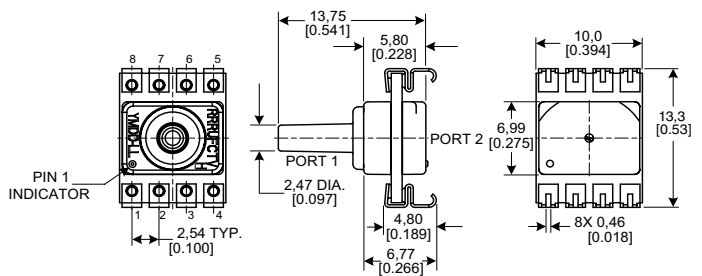
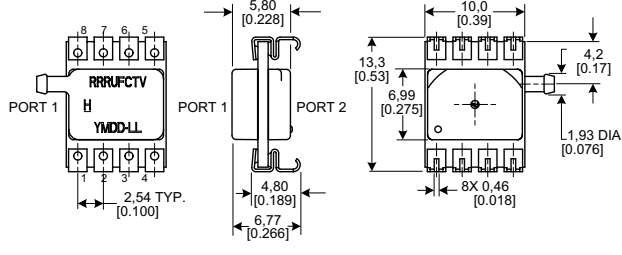


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Figure 2. SMT Package Dimensional Drawings (continued)

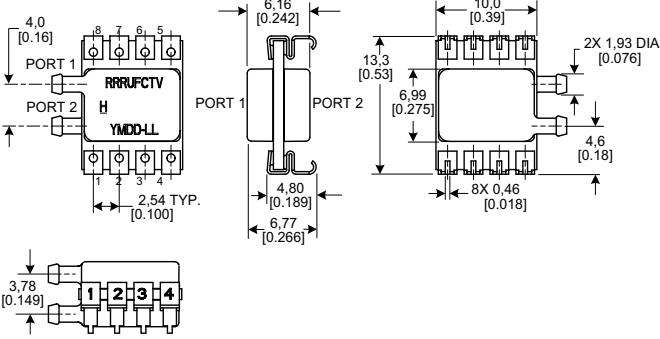
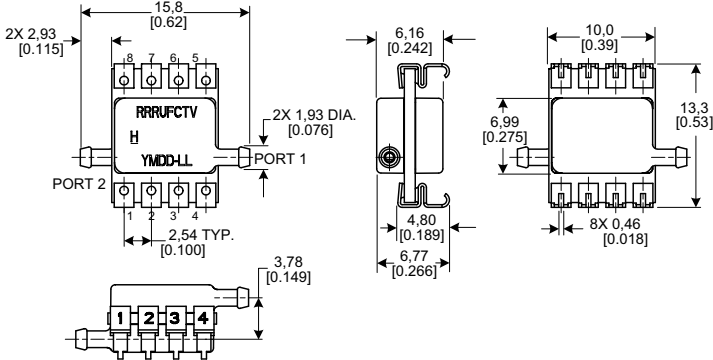
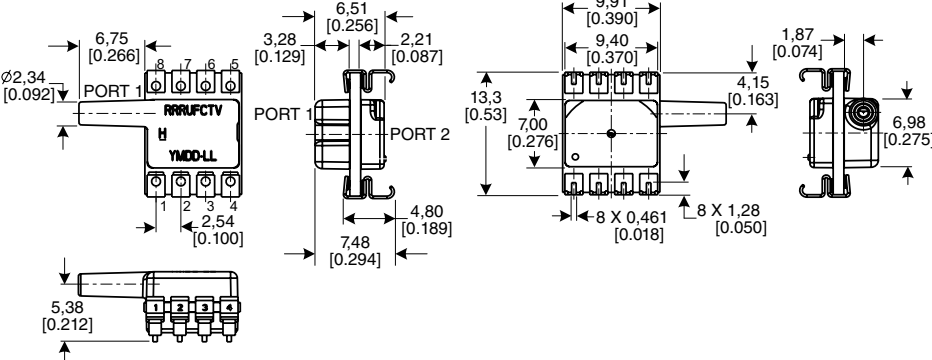
|                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>SMT AN:</b> Single axial barbed port</p>      |  <p>Top view dimensions: 8 pins (1-8), 2.54 TYP. [0.100], PIN 1 INDICATOR, 4.93 DIA. [0.194], 7.95 [0.313], 13.75 [0.541].</p> <p>Side view dimensions: PORT 1, PORT 2, 4.80 [0.189], 6.77 [0.266], 13.75 [0.541], 7.95 [0.313].</p> <p>Bottom view dimensions: 10.0 [0.39], 6.99 [0.275], 13.3 [0.53], 8X 0.46 [0.018].</p>              |
| <p><b>SMT LN:</b> Single axial barbless port</p>  |  <p>Top view dimensions: 8 pins (1-8), 2.54 TYP. [0.100], PIN 1 INDICATOR, 2.47 DIA. [0.097], 5.80 [0.228], 13.75 [0.541].</p> <p>Side view dimensions: PORT 1, PORT 2, 4.80 [0.189], 6.77 [0.266], 13.75 [0.541], 5.80 [0.228].</p> <p>Bottom view dimensions: 10.0 [0.394], 6.99 [0.275], 13.3 [0.53], 8X 0.46 [0.018].</p>            |
| <p><b>SMT RN:</b> Single radial barbed port</p>   |  <p>Top view dimensions: 8 pins (1-8), 2.54 TYP. [0.100], PORT 1, PORT 2, 5.80 [0.228], 13.75 [0.541].</p> <p>Side view dimensions: PORT 1, PORT 2, 4.80 [0.189], 6.77 [0.266], 13.75 [0.541], 5.80 [0.228].</p> <p>Bottom view dimensions: 10.0 [0.39], 6.99 [0.275], 13.3 [0.53], 8X 0.46 [0.018], 4.2 [0.17], 1.93 DIA. [0.076].</p> |

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Figure 2. SMT Package Dimensional Drawings (continued)

|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>SMT RR:</b> Dual radial barbed ports, same side</p>         |  <p>Top view dimensions: 4.0 [0.16] (PORT 1), 4.0 [0.16] (PORT 2), 2.54 TYP. [0.100] (pins 1-4), 2.54 TYP. [0.100] (pins 5-8), 10.0 [0.39] (pin pitch), 13.3 [0.53] (height), 6.99 [0.275] (height), 4.6 [0.18] (height), 2X 1.93 DIA. [0.076] (ports), 8X 0.46 [0.018] (pins).</p> <p>Side view dimensions: 6.16 [0.242] (height), 4.80 [0.189] (height), 6.77 [0.266] (height).</p> <p>Bottom view dimensions: 3.78 [0.149] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height).</p>                                                                                                                                                    |
| <p><b>SMT DR:</b> Dual radial barbed ports, opposite sides</p>  |  <p>Top view dimensions: 15.8 [0.62] (width), 2X 2.93 [0.115] (ports), 2.54 TYP. [0.100] (pins 1-4), 2.54 TYP. [0.100] (pins 5-8), 10.0 [0.39] (pin pitch), 13.3 [0.53] (height), 6.99 [0.275] (height), 4.6 [0.18] (height), 2X 1.93 DIA. [0.076] (ports), 8X 0.46 [0.018] (pins).</p> <p>Side view dimensions: 6.16 [0.242] (height), 4.80 [0.189] (height), 6.77 [0.266] (height).</p> <p>Bottom view dimensions: 3.78 [0.149] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height).</p>                                                                                                                                               |
| <p><b>SMT JN:</b> Single radial barbless port</p>               |  <p>Top view dimensions: 6.75 [0.266] (PORT 1), 3.28 [0.129] (PORT 2), 2.21 [0.087] (PORT 3), 2.54 TYP. [0.100] (pins 1-4), 2.54 TYP. [0.100] (pins 5-8), 9.91 [0.390] (pin pitch), 9.40 [0.370] (pin pitch), 13.3 [0.53] (height), 7.00 [0.276] (height), 4.15 [0.163] (height), 1.87 [0.074] (height), 6.98 [0.275] (height), 8 X 0.461 [0.018] (pins), 8 X 1.28 [0.050] (pins).</p> <p>Side view dimensions: 6.51 [0.256] (height), 3.28 [0.129] (height), 2.21 [0.087] (height), 4.80 [0.189] (height), 7.48 [0.294] (height).</p> <p>Bottom view dimensions: 5.38 [0.212] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height), 1.27 [0.050] (height).</p> |

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Figure 2. SMT Package Dimensional Drawings (continued)

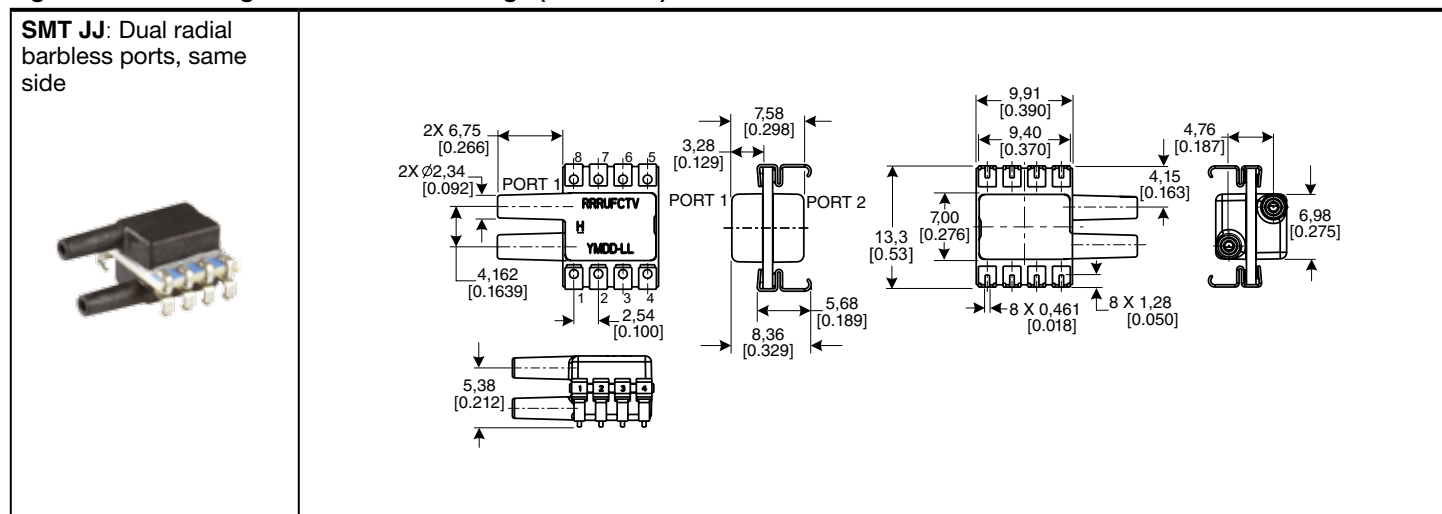
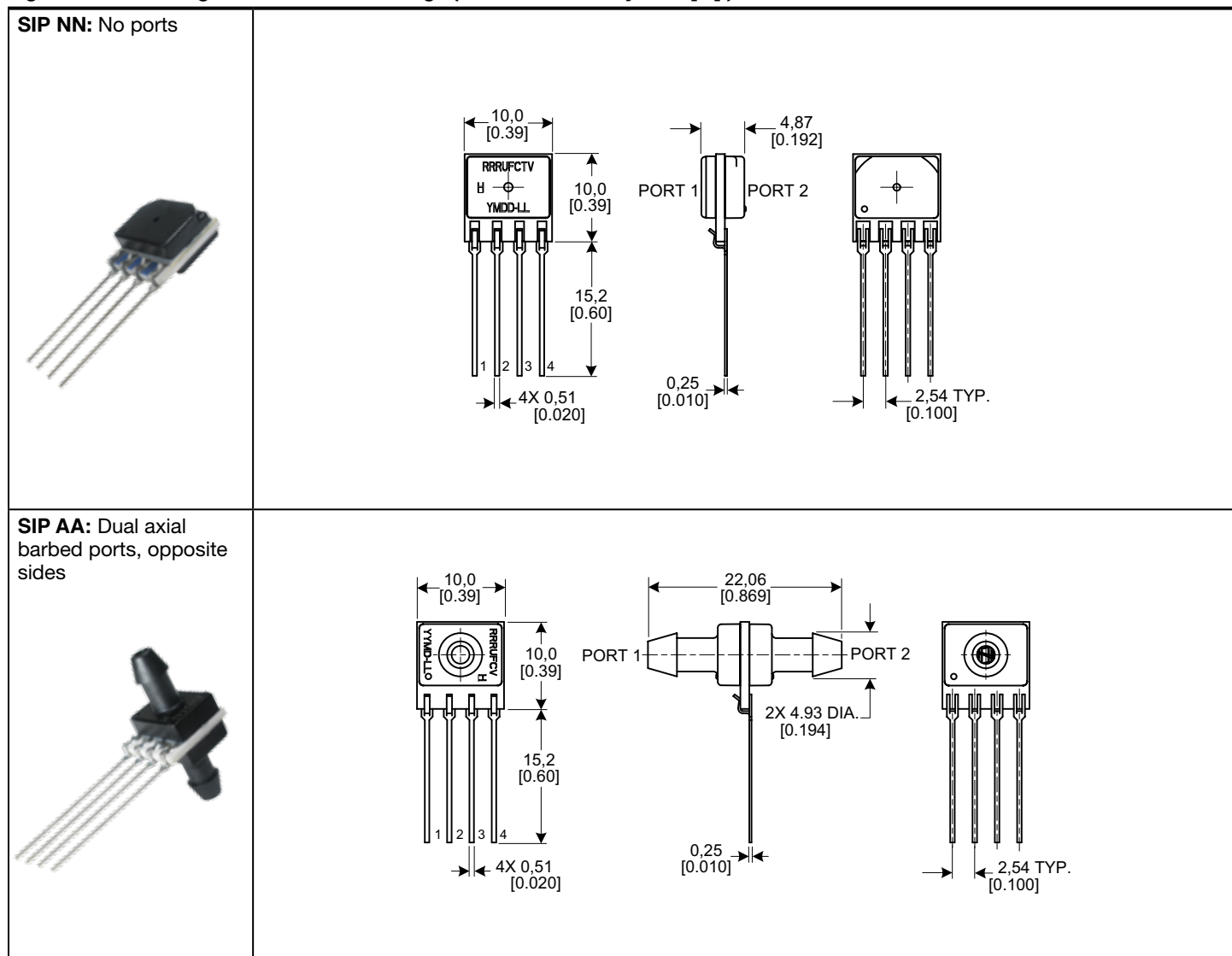


Figure 3. SIP Package Dimensional Drawings (For reference only: mm [in].)

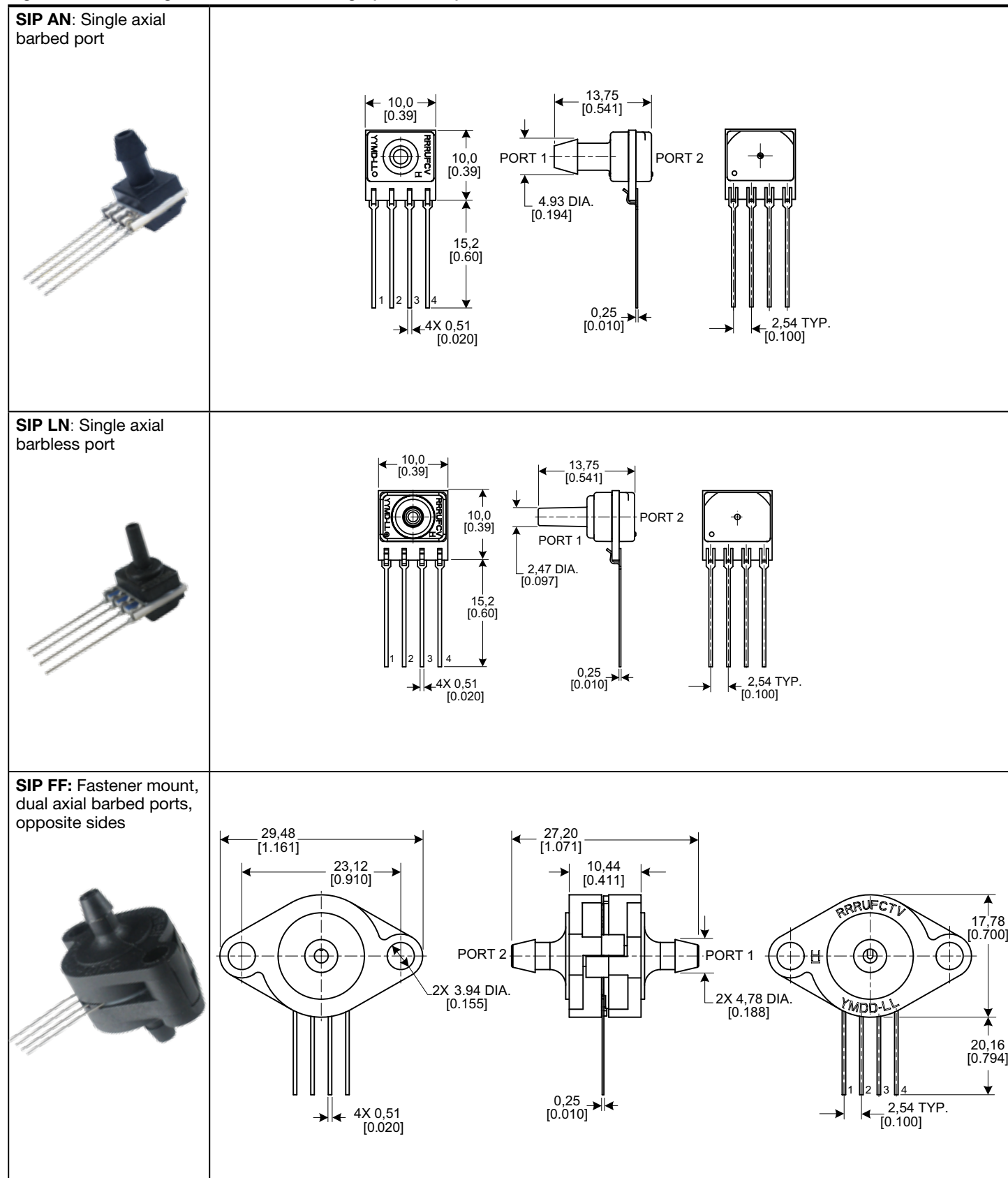


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Figure 3. SIP Package Dimensional Drawings (continued)

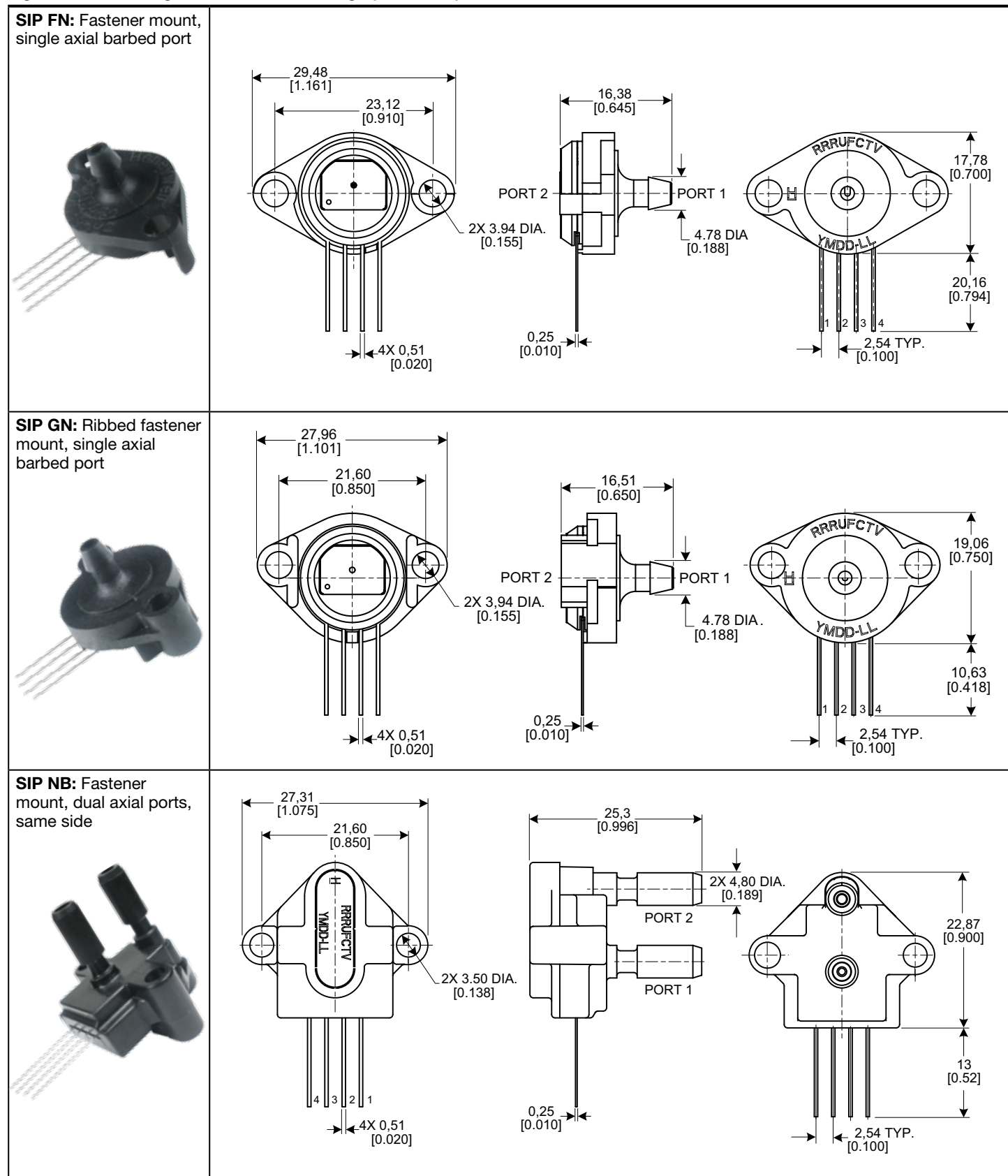


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Figure 3. SIP Package Dimensional Drawings (continued)

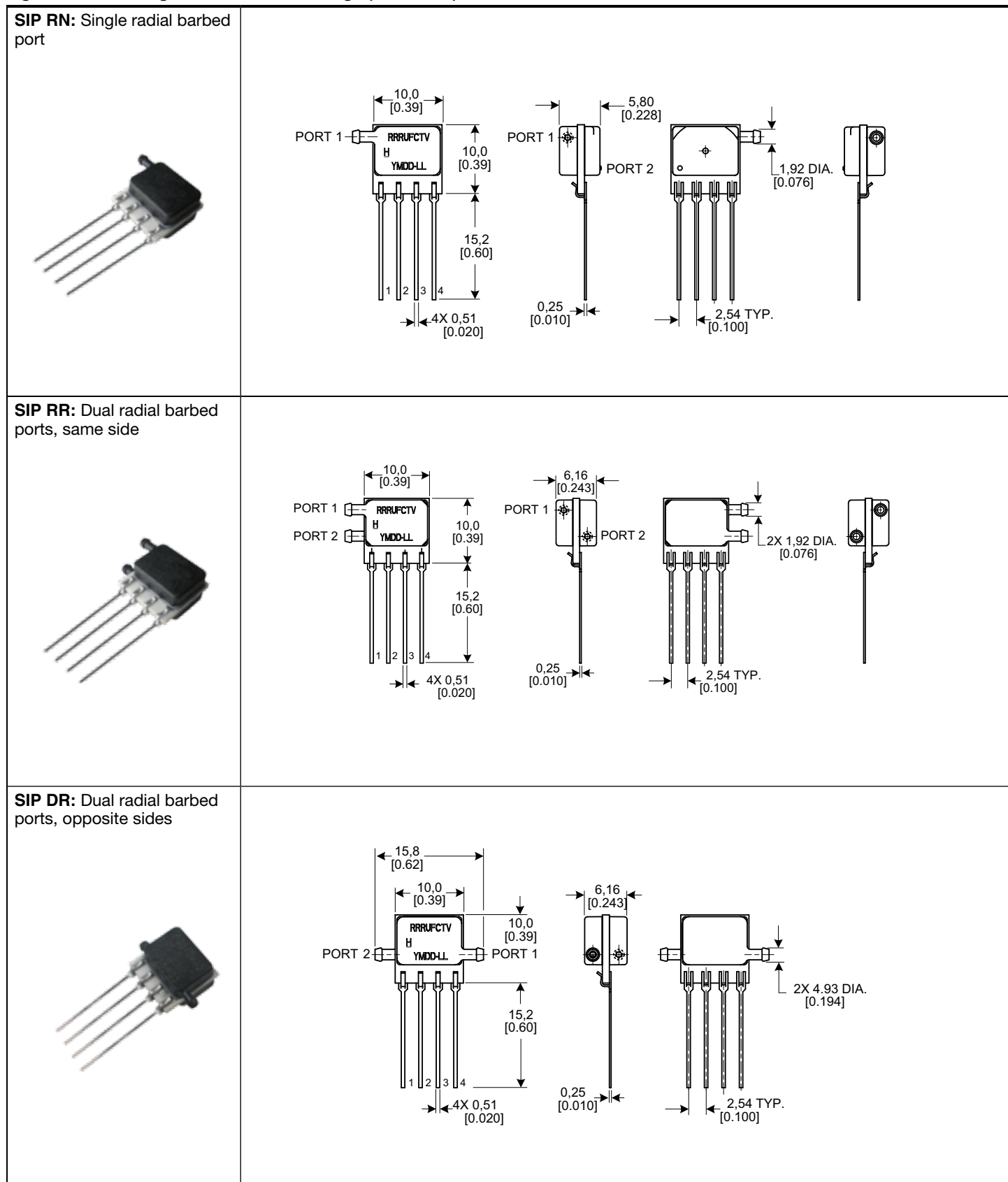


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Figure 3. SIP Package Dimensional Drawings (continued)

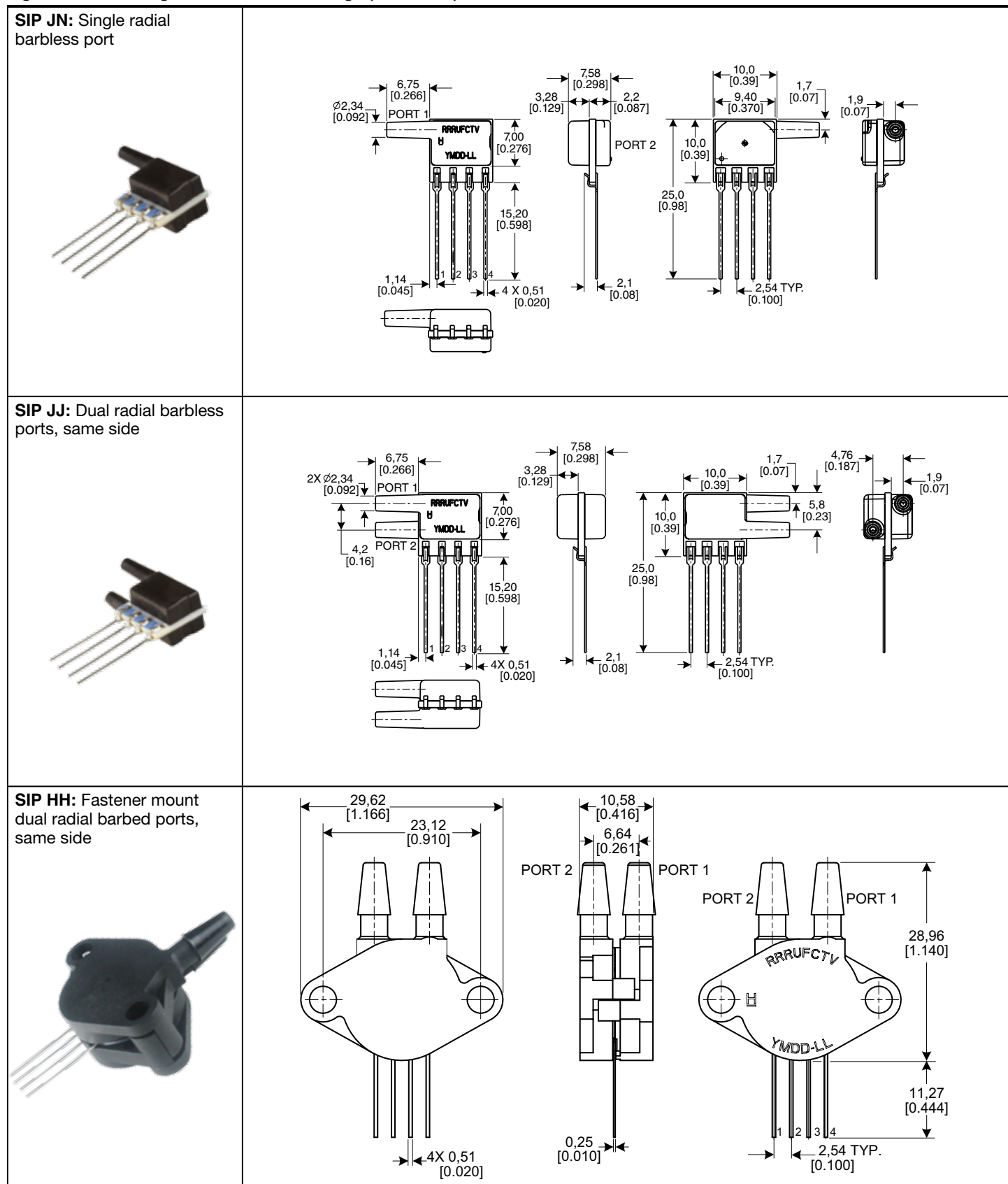


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Figure 3. SIP Package Dimensional Drawings (continued)



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Figure 3. SIP Package Dimensional Drawings (continued)

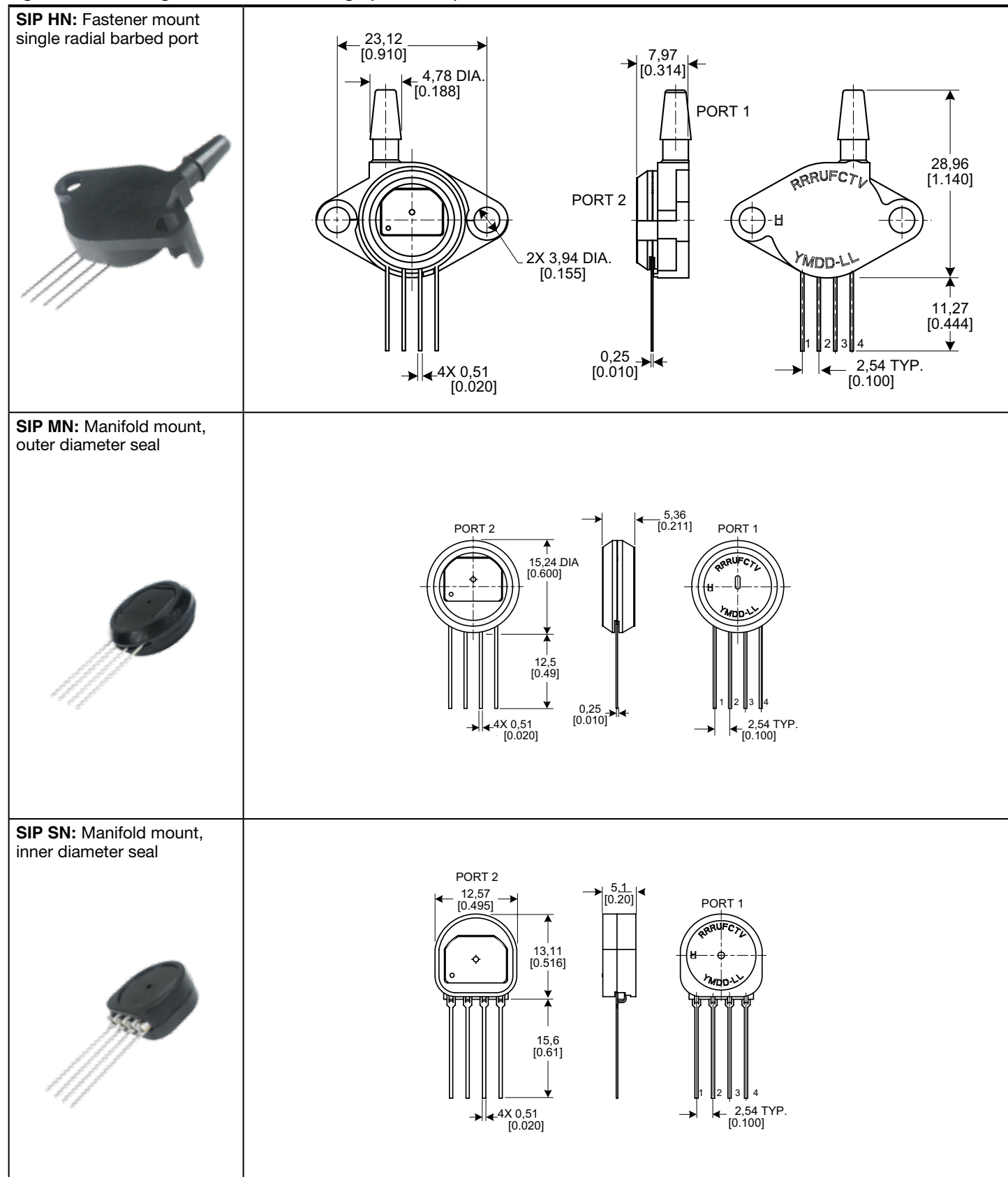


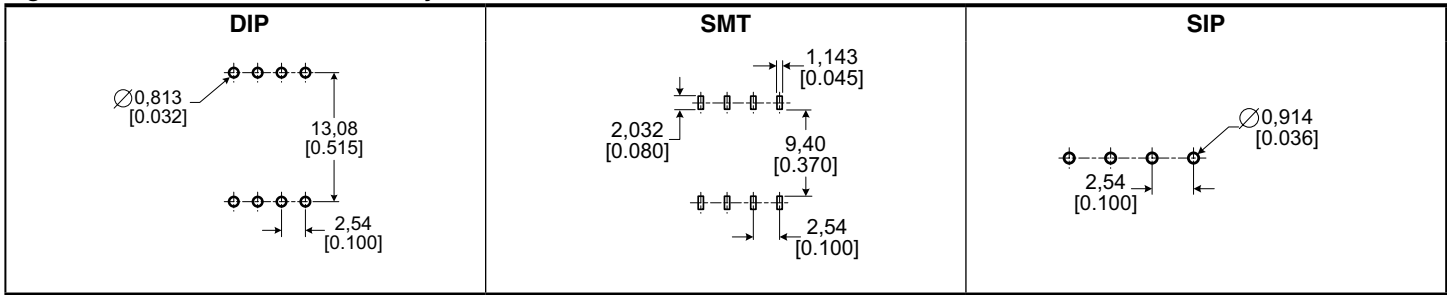
Table 6. Pinouts for DIP and SMT Packages

| Output Type      | Pin 1 | Pin 2   | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 |
|------------------|-------|---------|-------|-------|-------|-------|-------|-------|
| I <sup>2</sup> C | GND   | Vsupply | SDA   | SCL   | NC    | NC    | NC    | NC    |
| SPI              | GND   | Vsupply | MISO  | SCLK  | SS    | NC    | NC    | NC    |
| Analog           | NC    | Vsupply | Vout  | GND   | NC    | NC    | NC    | NC    |

Table 7. Pinouts for SIP Packages

| Output Type      | Pin 1 | Pin 2   | Pin 3 | Pin 4 |
|------------------|-------|---------|-------|-------|
| I <sup>2</sup> C | GND   | Vsupply | SDA   | SCL   |
| Analog           | NC    | Vsupply | Vout  | GND   |

Figure 4. Recommended PCB Pad Layouts



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For example, **HSCDNNN150PGAA3** defines an HSC Series TruStability® Pressure Sensor, DIP package, NN pressure port, no special options, 150 psi gage pressure range, analog output type, 10% to 90% of Vsupply transfer function, 3.3 Vdc supply voltage.

<sup>1</sup>The transfer function limits define the output of the sensor at a given pressure input. By specifying Pmin. and Pmax., the output at Pmin. and Pmax., the complete transfer function of the sensor is defined. See the graphical representations of the transfer function in the product datasheet, Figure 2. For other available transfer functions contact Honeywell Customer Service.

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Figure 6. SSC Series Nomenclature and Order Guide

For example, **SSCDNNN150PGAA3** defines an SSC Series TruStability® Pressure Sensor, DIP package, NN pressure port, no special options, 150 psi gage pressure range, analog output type, 10% to 90% of Vsupply transfer function, 3.3 Vdc supply voltage.

| Product Series                               |  |  | Supply Voltage                 |                                                                  |
|----------------------------------------------|--|--|--------------------------------|------------------------------------------------------------------|
| SSC Standard Accuracy, Compensated/Amplified |  |  | 3                              | 3.3 Vdc                                                          |
|                                              |  |  | 5                              | 5.0 Vdc                                                          |
| Package                                      |  |  | Transfer Function <sup>1</sup> |                                                                  |
| D DIP (Dual Inline Pin)                      |  |  | A                              | 10% to 90% of Vsupply (analog), 2 <sup>14</sup> counts (digital) |
| M SMT (Surface Mount Technology)             |  |  | B                              | 5% to 95% of Vsupply (analog), 2 <sup>14</sup> counts (digital)  |
| S SIP (Single Inline Pin)                    |  |  | C                              | 5% to 85% of Vsupply (analog), 2 <sup>14</sup> counts (digital)  |
|                                              |  |  | F                              | 4% to 94% of Vsupply (analog), 2 <sup>14</sup> counts (digital)  |
| Pressure Port                                |  |  | Output Type <sup>2</sup>       |                                                                  |
| DIP                                          |  |  | A                              | Analog                                                           |
| SMT                                          |  |  | S                              | SPI                                                              |
| SIP                                          |  |  | 2                              | I <sup>2</sup> C, Address 0x28                                   |
|                                              |  |  | 3                              | I <sup>2</sup> C, Address 0x38                                   |
|                                              |  |  | 4                              | I <sup>2</sup> C, Address 0x48                                   |
|                                              |  |  | 5                              | I <sup>2</sup> C, Address 0x58                                   |
|                                              |  |  | 6                              | I <sup>2</sup> C, Address 0x68                                   |
|                                              |  |  | 7                              | I <sup>2</sup> C, Address 0x78                                   |
| Pressure Range <sup>3, 4</sup>               |  |  |                                |                                                                  |
| ±1.6 mbar to ±10 bar                         |  |  | ±160 Pa to ±1 MPa              |                                                                  |
| Absolute                                     |  |  | Absolute                       |                                                                  |
| 001BA 0 bar to 1 bar                         |  |  | 100KA 0 kPa to 100 kPa         |                                                                  |
| 1.6BA 0 bar to 1.6 bar                       |  |  | 160KA 0 kPa to 160 kPa         |                                                                  |
| 2.5BA 0 bar to 2.5 bar                       |  |  | 250KA 0 kPa to 250 kPa         |                                                                  |
| 004BA 0 bar to 4 bar                         |  |  | 400KA 0 kPa to 400 kPa         |                                                                  |
| 006BA 0 bar to 6 bar                         |  |  | 600KA 0 kPa to 600 kPa         |                                                                  |
| 010BA 0 bar to 10 bar                        |  |  | 001GA 0 kPa to 1 MPa           |                                                                  |
| Differential                                 |  |  | Differential                   |                                                                  |
| 1.6MD ±1.6 mbar                              |  |  | 160LD ±160 Pa                  |                                                                  |
| 2.5MD ±2.5 mbar                              |  |  | 250LD ±250 Pa                  |                                                                  |
| 004MD ±4 mbar                                |  |  | 400LD ±400 Pa                  |                                                                  |
| 006MD ±6 mbar                                |  |  | 600LD ±600 Pa                  |                                                                  |
| 010MD ±10 mbar                               |  |  | 001KD ±1 kPa                   |                                                                  |
| 016MD ±16 mbar                               |  |  | 1.6KD ±1.6 kPa                 |                                                                  |
| 025MD ±25 mbar                               |  |  | 2.5KD ±2.5 kPa                 |                                                                  |
| 040MD ±40 mbar                               |  |  | 004KD ±4 kPa                   |                                                                  |
| 060MD ±60 mbar                               |  |  | 006KD ±6 kPa                   |                                                                  |
| 100MD ±100 mbar                              |  |  | 010KD ±10 kPa                  |                                                                  |
| 160MD ±160 mbar                              |  |  | 016KD ±16 kPa                  |                                                                  |
| 250MD ±250 mbar                              |  |  | 025KD ±25 kPa                  |                                                                  |
| 400MD ±400 mbar                              |  |  | 040KD ±40 kPa                  |                                                                  |
| 600MD ±600 mbar                              |  |  | 060KD ±60 kPa                  |                                                                  |
| 001BD ±1 bar                                 |  |  | 100KD ±100 kPa                 |                                                                  |
| 1.6BD ±1.6 bar                               |  |  | 160KD ±160 kPa                 |                                                                  |
| 2.5BD ±2.5 bar                               |  |  | 250KD ±250 kPa                 |                                                                  |
| 004BD ±4 bar                                 |  |  | 400KD ±400 kPa                 |                                                                  |
| Gage                                         |  |  | Gage                           |                                                                  |
| 2.5MG 0 mbar to 2.5 mbar                     |  |  | 250LG 0 Pa to 250 Pa           |                                                                  |
| 004MG 0 mbar to 4 mbar                       |  |  | 400LG 0 Pa to 400 Pa           |                                                                  |
| 006MG 0 mbar to 6 mbar                       |  |  | 600LG 0 Pa to 600 Pa           |                                                                  |
| 010MG 0 mbar to 10 mbar                      |  |  | 001KG 0 kPa to 1 kPa           |                                                                  |
| 016MG 0 mbar to 16 mbar                      |  |  | 1.6KG 0 kPa to 1.6 kPa         |                                                                  |
| 025MG 0 mbar to 25 mbar                      |  |  | 2.5KG 0 kPa to 2.5 kPa         |                                                                  |
| 040MG 0 mbar to 40 mbar                      |  |  | 004KG 0 kPa to 4 kPa           |                                                                  |
| 060MG 0 mbar to 60 mbar                      |  |  | 006KG 0 kPa to 6 kPa           |                                                                  |
| 100MG 0 mbar to 100 mbar                     |  |  | 010KG 0 kPa to 10 kPa          |                                                                  |
| 160MG 0 mbar to 160 mbar                     |  |  | 016KG 0 kPa to 16 kPa          |                                                                  |
| 250MG 0 mbar to 250 mbar                     |  |  | 025KG 0 kPa to 25 kPa          |                                                                  |
| 400MG 0 bar to 400 mbar                      |  |  | 040KG 0 kPa to 40 kPa          |                                                                  |
| 600MG 0 bar to 600 mbar                      |  |  | 060KG 0 kPa to 60 kPa          |                                                                  |
| 001BG 0 bar to 1 bar                         |  |  | 100KG 0 kPa to 100 kPa         |                                                                  |
| 1.6BG 0 bar to 1.6 bar                       |  |  | 160KG 0 kPa to 160 kPa         |                                                                  |
| 2.5BG 0 bar to 2.5 bar                       |  |  | 250KG 0 kPa to 250 kPa         |                                                                  |
| 004BG 0 bar to 4 bar                         |  |  | 400KG 0 kPa to 400 kPa         |                                                                  |
| 006BG 0 bar to 6 bar                         |  |  | 600KG 0 kPa to 600 kPa         |                                                                  |
| 010BG 0 bar to 10 bar                        |  |  | 001GG 0 kPa to 1 MPa           |                                                                  |
| Options <sup>5, 6</sup>                      |  |  |                                |                                                                  |
| N Dry gases only, no diagnostics             |  |  |                                |                                                                  |
| D Dry gases only, diagnostics on             |  |  |                                |                                                                  |
| T Liquid media on Port 1, no diagnostics     |  |  |                                |                                                                  |
| V Liquid media on Port 1, diagnostics on     |  |  |                                |                                                                  |

<sup>1</sup>The transfer function limits define the output of the sensor at a given pressure input. By specifying Pmin. and Pmax., the output at Pmin. and Pmax., the complete transfer function of the sensor is defined. See the graphical representations of the transfer function in the product datasheet, Figure 2. For other available transfer functions contact Honeywell Customer Service.

<sup>2</sup>SPI output function is not available in SIP package.

<sup>3</sup>Custom pressure ranges are available. Contact Honeywell Customer Service for more information.

<sup>4</sup>See the explanation of sensor pressure types in the product datasheet, Table 4.

<sup>5</sup>See the CAUTION in this document.

<sup>6</sup>Options T and V are only available on pressure ranges ±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi.

# HSC Series—High Accuracy, Compensated/Amplified

## SSC Series—Standard Accuracy, Compensated/Amplified

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### WARNING

#### PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

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