

Data Sheet

E2 Sanitary Pressure Transducer

FEATURES

- Available with 1.5" and 2.0" Tri-Clamp® connection
- Ranges vacuum through 1000 psi
- Glycerin fill fluid is standard for ranges from 0 to 1000 psi, mineral oil fill fluid is standard on vacuum, compound and absolute ranges.
- Wide selection of electrical terminations
- Customizable configurations
- External magnetic offset & span adjustment

TYPICAL USES

- Food, dairy and beverage production
- Pharmaceutical
- 3A Sanitary applications
- Biotech and medical equipment
- Filtration

PERFORMANCE SPECIFICATIONS

| | |
|------------------------|--|
| Reference Temperature: | 21°C ±2°C (70°F ±3°F) |
| Static Accuracy: | ±0.25% of span, ±0.50% of span, ±1.0% of span, Terminal Point Method includes: hysteresis, linearity, repeatability, offset and span |
| Stability: | ±0.25% year at reference conditions |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------|--|
| Thermal Coefficients: | Offset: ±0.009% /°C from -40°C to 125°C Span: ±0.009% /°C from -40°C to 125°C |
|-----------------------|--|

Additional Offset Temperature Error (21°C Reference Temp.)

| | Glycerin | Silicone |
|--------------|---------------|---------------|
| 1.5" Fitting | 0.8 psi/100°C | 1.4 psi/100°C |
| 2.0" Fitting | 0.5 psi/100°C | 0.7 psi/100°C |

Temperature Limits: (Subject to Fill Fluid)

| Code | Fill Fluid | Storage Operating and Media Temperature |
|------|---------------------|---|
| CG* | Glycerine | 0°F to 257°F (-18°C to 125°C) (STD.) *Standard on ranges from 0 to 1000 psig. |
| CZ | Food grade Silicone | -40°F to 257°F (-40°C to 125°C) |
| FJ | Distilled water | 40°F TO 185°F (4°C TO 85°C) |
| MY* | Mineral oil | 10°F to 257°F (-12°C to 125°C) *Standard on all vacuum, compound and absolute ranges. |
| NM | Neobee® M20 | 5°F to 257°F (-5°C to 125°C) |

Note: Contact Ashcroft for alternate fill fluids

| | |
|-----------|-------------------------|
| Humidity: | 0-100% (non-condensing) |
|-----------|-------------------------|

FUNCTIONAL SPECIFICATIONS

| | |
|---------------------------------|-----------------------------------|
| Response Time (Output) | 4 ms |
| Gauge/Compound Pressure Ranges: | VAC to 1000 psig |
| Absolute Pressure Ranges: | 0 to 500 psia |
| Proof Pressure: | 1.2X - 2X (See Table 1 on page 2) |
| Burst Pressure: | 3X - 8X (See Table 1 on page 2) |



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KEY BENEFITS

- Highly configurable
- Easy calibration of offset and span

ELECTRICAL SPECIFICATIONS

| | | |
|--|---|--------|
| Circuit Protection: | Reverse polarity protected | |
| Output Signal: | Supply Voltage: (unregulated) | |
| | Min. | Max: |
| 0-5 Vdc (3 Wire) | 9 Vdc | 36 Vdc |
| 1-5 Vdc (3 Wire) | 9 Vdc | 36 Vdc |
| 1-6 Vdc (3 Wire) | 9 Vdc | 36 Vdc |
| 0-10 Vdc (3 Wire) | 14 Vdc | 36 Vdc |
| 1-11 Vdc (3 Wire) | 14 Vdc | 36 Vdc |
| 0.1-5 Vdc (3 Wire) | 9 Vdc | 36 Vdc |
| 0.1-10 Vdc (3 Wire) | 14 Vdc | 36 Vdc |
| 0.5-4.5 Vdc (3 Wire) | 9 Vdc | 36 Vdc |
| 4-20 mA (2 Wire) | 9 Vdc | 36 Vdc |
| 20-4 mA (2 Wire) | 9 Vdc | 36 Vdc |
| Adjustability: | ±5% of span non-interactive offset & span | |
| Supply Current: | <8 mA (Vout) | |
| Current Source/Sink for Voltage Output | 1 mA (source)/ 0.1 mA (sink) MAX. | |
| Withstand/Breakdown | 100 Vdc/Vac, optional 500 Vdc/Vac | |

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PHYSICAL SPECIFICATIONS

Ingress Rating: IP66 (NEMA 4X) (STD.)
IP67 (IP69K Consult factory)

WETTED MATERIAL

Diaphragm: 316L Stainless steel (12-20 Ra Surface finish)
Process Connection: 316L Stainless steel (Electro-polished)

NON-WETTED MATERIAL

Housing: 316L Stainless steel
Sensor: A - 17-4PH Stainless steel
C - 316L Stainless steel

EMC TESTING

EMC: Directive 2014/30/EU, EN61326-1,
EN61326-2-3 (Industrial Env.)

| Immunity: | 61000-4-2 (ESD) | ±4kV/±8kV (Contact/Air) |
|-----------|---------------------------------|--|
| | 61000-4-3 (Radiated RF) | 10 V/m to 1GHZ, 3 V/m to 2GHZ, 1 V/m to 2.7GHZ |
| | 61000-4-4 (EFT/Burst) | ±1kV (5/50ns, 5kHz) |
| | 61000-4-5 (Surge) | ±1kV, Earth to Shield over all I/O lines |
| | 61000-4-6 (Conducted RF) | 3V/ (0.15 to 80MHz) |
| | 61000-4-8 (Line Freq. Magnetic) | 30A/m |

Emissions: EN 55011 (CISPR 11) Class A, Group 1 & FCC (47 CFR 15)

TABLE 1: PROOF & BURST PRESSURE MULTIPLIERS

| Sensor Range | Sensor A - 17-4PH SS | | Sensor C - 316L SS | |
|-------------------|----------------------|-------|--------------------|-------|
| | Proof | Burst | Proof | Burst |
| (psi) | | | | |
| 30 | | | 60 | 150 |
| 45 | 90 | 360 | 90 | 225 |
| 50 | 100 | 400 | 100 | 250 |
| 60 | 120 | 480 | 120 | 300 |
| 75 | 150 | 600 | 150 | 375 |
| 100 | 200 | 800 | 200 | 500 |
| 150 | 300 | 1000 | 300 | 600 |
| 200 | 400 | 1000 | 400 | 600 |
| 300 | 600 | 1000 | 600 | 900 |
| 500 | 1000 | 1000 | 1000 | 1000 |
| 750 | 1000 | 1000 | | |
| 1000 | 1000 | 1000 | | |
| (Compound) | | | | |
| VAC# | | | 30 | 75 |
| V&15# | | | 60 | 150 |
| V&30# | | | 90 | 225 |
| V&45# | 120 | 480 | | |
| V&60# | 150 | 600 | 150 | 375 |
| V&100# | 230 | 920 | | |
| V&150# | 330 | 1000 | 330 | 660 |
| V&200# | 430 | 1000 | | |
| V&300# | 630 | 1000 | 630 | 945 |
| (psia) | | | | |
| 15 | | | 30 | 75 |
| 30 | | | 60 | 150 |
| 70 | | | 140 | 350 |
| 150 | | | 300 | 600 |
| 300 | | | 600 | 900 |
| 500 | | | 1000 | 1000 |

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E2 Sanitary Pressure Transducer

| ORDERING CODE | Example: | E2G | A | 5 | C | S15 | 42 | CC | X | 10 | F | 100# | -XNH |
|--|----------|------|---|---|---|-----|----|----|---|----|---|------|------|
| Model | | | | | | | | | | | | | |
| E2G - Sanitary Pressure Transducer | | E2G | | | | | | | | | | | |
| Sensor Materials - See Table 2 on page 4 for range options | | | | | | | | | | | | | |
| A - 17-4PH Stainless steel | | A | | | | | | | | | | | |
| C - 316L Stainless steel (liquid isolated) | | | | | | | | | | | | | |
| Accuracy | | | | | | | | | | | | | |
| 3 - ±0.25% span | | | | | | | | | | | | | |
| 5 - ±0.50% span | | 5 | | | | | | | | | | | |
| 7 - ±1.00% span | | | | | | | | | | | | | |
| Calibration Chart | | | | | | | | | | | | | |
| N - Without calibration chart | | | | | | | | | | | | | |
| C - With calibration chart | | C | | | | | | | | | | | |
| Pressure Connections - See Table 3 on page 4 for dimensional information | | | | | | | | | | | | | |
| S15 - 1.5" Tri-Clamp | | S15 | | | | | | | | | | | |
| S20 - 2.0" Tri-Clamp | | | | | | | | | | | | | |
| Output Type | | | | | | | | | | | | | |
| 05 - 0-5 Vdc | | | | | | | | | | | | | |
| 10 - 0-10 Vdc | | | | | | | | | | | | | |
| 11 - 1-11 Vdc | | | | | | | | | | | | | |
| 12 - 1-10 Vdc | | | | | | | | | | | | | |
| 13 - 0.1-5 Vdc | | | | | | | | | | | | | |
| 15 - 1-5 Vdc | | | | | | | | | | | | | |
| 16 - 1-6 Vdc | | | | | | | | | | | | | |
| 42 - 4-20 mA | | 42 | | | | | | | | | | | |
| 45 - 0.5-4.5 Vdc non-ratiometric | | | | | | | | | | | | | |
| 00 - Custom | | | | | | | | | | | | | |
| Electrical Terminations - See Table 4 on page 5 for more options | | | | | | | | | | | | | |
| CC - (½ NPT conduit w/cable) | | CC | | | | | | | | | | | |
| Mating Connector | | | | | | | | | | | | | |
| M - With mating connector | | | | | | | | | | | | | |
| X - Without mating connector | | X | | | | | | | | | | | |
| Cable Length | | | | | | | | | | | | | |
| Max cable length of 30 ft for outputs 05, 10, 11, 12, 13, 15, 16 and 45. Max cable length of 99 ft for outputs 24 and 42 | | | | | | | | | | | | | |
| 00 - No cable | | | | | | | | | | | | | |
| XX - 01 to 99 | | 10 | | | | | | | | | | | |
| Unit of Length | | | | | | | | | | | | | |
| F - Feet | | F | | | | | | | | | | | |
| M - Meter | | | | | | | | | | | | | |
| N - Inches | | | | | | | | | | | | | |
| 0 - No cable | | | | | | | | | | | | | |
| Pressure Ranges - Coding example only, see Table 5 on page 6 for more options | | | | | | | | | | | | | |
| 100# - 100 psig | | 100# | | | | | | | | | | | |
| Options (if choosing an option(s) must include an "X") | | | | | | | | | | | | | |
| NN - Paper tag | | | | | | | | | | | | | |
| NH - Stainless steel tag | | NH | | | | | | | | | | | |
| CZ - Silicone fill fluid (3A certified) | | | | | | | | | | | | | |
| MY - Light mineral oil fill fluid (3A certified) | | | | | | | | | | | | | |
| NM - Neobee® M20 fill fluid (3A certified) | | | | | | | | | | | | | |
| FJ - Distilled water fill fluid (3A certified) | | | | | | | | | | | | | |

Accessory

Part Number

Offset and Span Adjustment Magnet 266A143-01

Accessories must be ordered separately

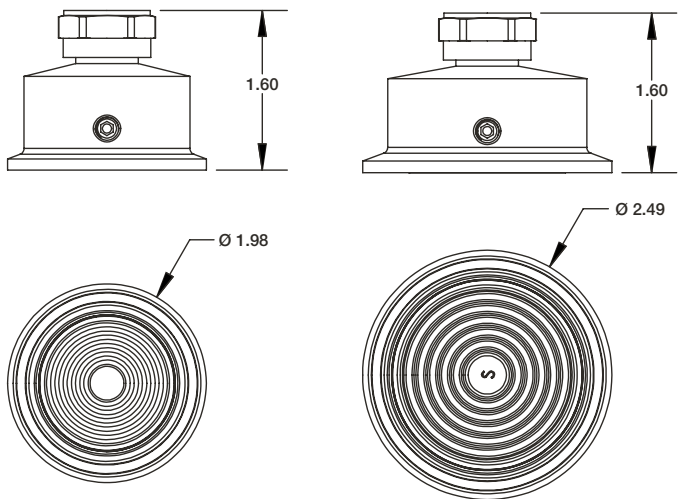
E2 Sanitary Pressure Transducer

TABLE 2 - SENSOR PRESSURE RANGE

| psi | Sensor Material | | bar | Sensor Material | |
|--------|-----------------|---------|---------|-----------------|---------|
| | A | C | | A | C |
| | 17-PH SS | 316 ISO | | 17-PH SS | 316 ISO |
| 1.5# | | • | | | |
| 5# | | • | 400MB | | • |
| 10# | | • | 600MB | | • |
| 15# | | • | 1BR | | • |
| 30# | • | • | 1.6BR | | • |
| 45# | • | • | 2BR | | • |
| 50# | • | • | 2.5BR | • | • |
| 60# | • | • | 4BR | • | • |
| 75# | • | • | 6BR | • | • |
| 100# | • | • | 10BR | • | • |
| 150# | • | • | 16BR | • | • |
| 200# | • | • | 20BR | • | • |
| 250# | • | • | 25BR | • | • |
| 300# | • | • | 40BR | • | • |
| 500# | • | • | 60BR | • | • |
| 750# | • | | | | |
| 1000# | • | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | VACBR | | • |
| | | | V&1BR | | • |
| | | | V&1.6BR | | • |
| | | | V&2BR | | • |
| VAC# | | • | V&4BR | • | • |
| V&15# | • | • | V&6BR | • | • |
| V&30# | • | • | 1BRA | | • |
| V&45# | • | • | 1.6BRA | | • |
| V&60# | • | • | 2BRA | | • |
| V&100# | • | • | 2.5BRA | | • |
| V&150# | • | • | 4BRA | | • |
| V&200# | • | • | 6BRA | | • |
| V&300# | • | • | 10BRA | | • |
| 15#A | | • | 16BRA | | • |
| 30#A | | • | 20BRA | | • |
| 50#A | | • | | | |
| 100#A | | • | | | |
| 120#A | | • | | | |
| 300#A | | • | | | |

TABLE 3 - PRESSURE CONNECTION DIMENSIONS

| 1½" Tri-Clamp® Connection | 2" Tri-Clamp® Connection |
|---------------------------|--------------------------|
| Code: S15 | Code: S20 |
| MAWP: 1,000 psi | MAWP: 1,000 psi |



Data Sheet

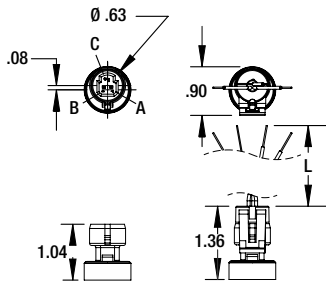
E2 Sanitary Pressure Transducer

TABLE 4 - ELECTRICAL TERMINATION DIMENSIONS

Maximum temperature range listed

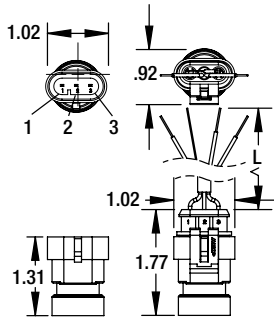
Metri Pack 3-Pin

Code: GN – IP67 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



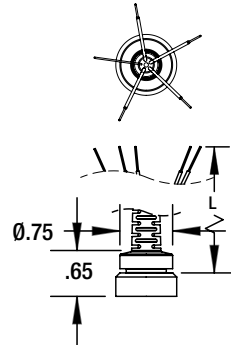
AMP Superseal 3-Pin

Code: AP – IP66 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



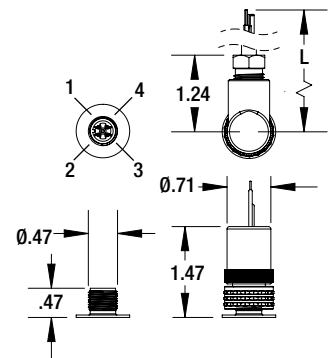
Over-Mold Cable

Code: FC, FV* – IP67 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



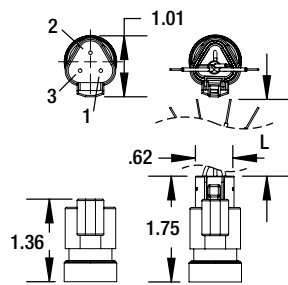
M12 4-Pin

Code: EW – IP66 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



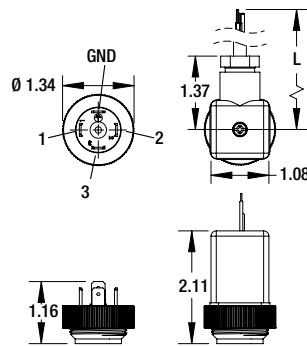
DEUTSCH DT04 3-Pin

Code: DT – IP66 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



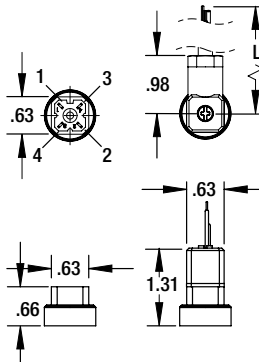
Hirschmann EN 175301-803 Form A

Code: DA – IP66 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



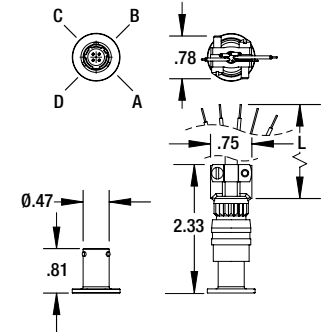
Mini-Hirschmann

Code: HM – IP66 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



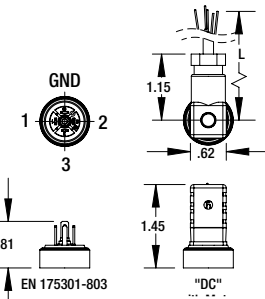
MIL DTL 26482 8 4-Pin

Code: B4 – No IP or NEMA rating
-40°F to 221°F (-25°C to 105°C)



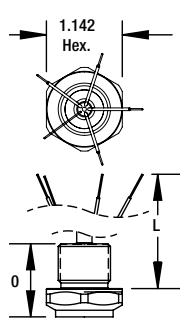
Hirschmann EN 175301-803 Form C

Code: DC
IP66 (NEMA 4X)
-40°F to 185°F (-40°C to 85°C)



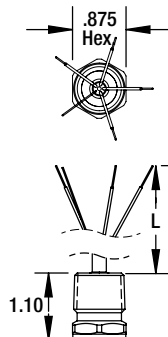
M20 Conduit With Cable

Code: MC, MV*
IP67 (NEMA 4X)
-40°F to 257°F (-40°C to 125°C)



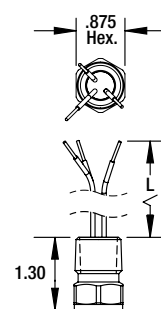
1/2 NPT Conduit With Cable

Code: CC, CV*
IP67 (NEMA 4X)
-40°F to 257°F (-40°C to 125°C)



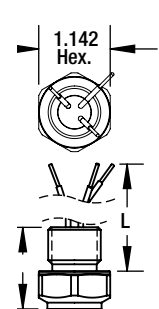
1/2 NPT Conduit With Flying Leads

Code: CF
IP67 (NEMA 4X)
-40°F to 257°F (-40°C to 125°C)



M20 Conduit With Flying Leads

Code: MF
IP67 (NEMA 4X)
-40°F to 257°F (-40°C to 125°C)



Note: * Indicates Vented Cable

E2 Sanitary Pressure Transducer

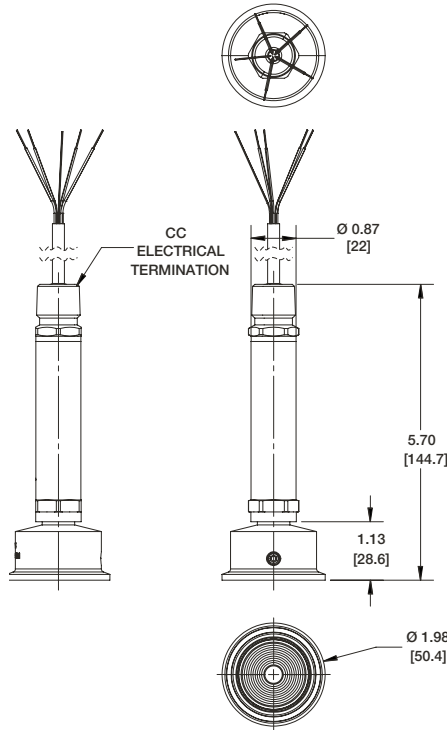
| TABLE 5 - PRESSURE RANGES | | |
|---------------------------|-----------------------|------------------------|
| Vac. | PSI | bar |
| Compound | VAC# ⁽¹⁾ | VACBR ⁽¹⁾ |
| | V&15# ⁽¹⁾ | V&1BR ⁽¹⁾ |
| | — | V&1.6BR ⁽¹⁾ |
| | V&30# ⁽¹⁾ | V&2BR ⁽¹⁾ |
| | V&45# ⁽¹⁾ | — |
| | V&60# ⁽¹⁾ | V&4BR ⁽¹⁾ |
| | — | V&6BR ⁽¹⁾ |
| | V&100# ⁽¹⁾ | — |
| | V&150# ⁽¹⁾ | — |
| | V&200# ⁽¹⁾ | — |
| Positive Pressure (psig) | 1.5# | 105MB |
| | 5# | 400MB |
| | — | 600MB |
| | 10# | — |
| | 15# | 1BR |
| | — | 1.6BR |
| | 30# | 2BR |
| | — | 2.5BR |
| | 45# | — |
| | 50# | — |
| Absolute Pressure (psia) | 60# | 4BR |
| | 75# | — |
| | — | 6BR |
| | 15#A ⁽¹⁾ | 1BRA |
| | — | 1.6BRA |
| | 30#A ⁽¹⁾ | 2BRA |
| | — | 2.5BRA |
| | 50# ⁽¹⁾ | — |
| | — | 4BRA |
| | — | 6BRA |
| 100#A ⁽¹⁾ | — | |
| — | 10BRA | |
| 200#A ⁽¹⁾ | — | |
| — | 16BRA | |
| — | 20BRA | |
| 500#A ⁽¹⁾ | — | |

⁽¹⁾All vacuum, compound and absolute ranges must be selected with mineral oil fill fluid (XMY)

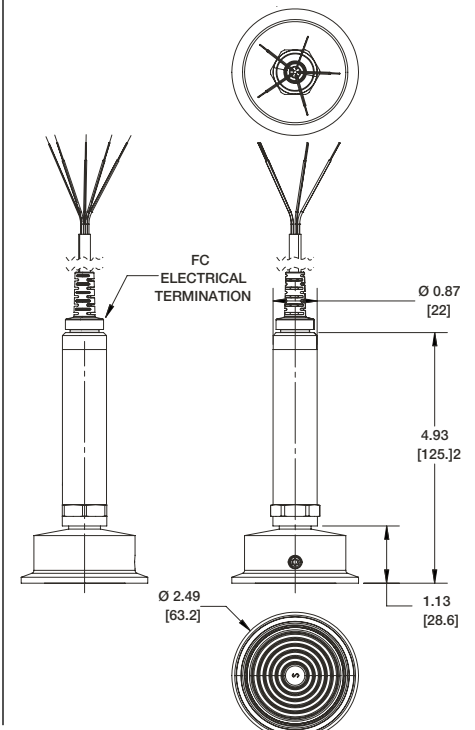
DIMENSIONS

For reference only, consult Ashcroft for specific dimensional drawings

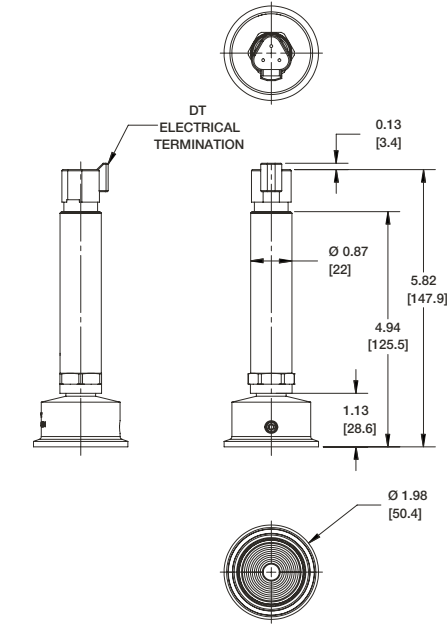
E2 Transducer with S15 Sanitary Seal and CC Electrical Termination



E2 Transducer with S20 Sanitary Seal and FC Electrical Termination



E2 Transducer with S15 Sanitary Seal and DT Electrical Termination



E2 Transducer with S20 Sanitary Seal and GN Electrical Termination

