

# Preciseline

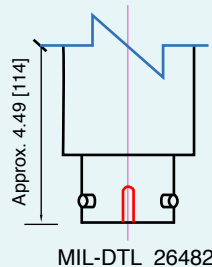
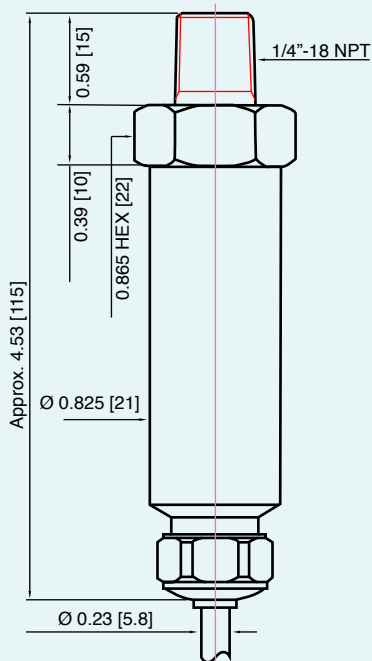
## High precision digital pressure transmitter

### Features:

- NSF/ANSI 61 and 372 certified construction for use in drinking water applications
- Excellent 0.1% FS static accuracy, 0.25% Total Error Band (TEB)
- 4...20mA models include guaranteed lightning protection at no additional cost
- Standard 316L stainless steel construction, titanium optional
- 2-year warranty covers defects in materials and workmanship
- User-rangeable analog output ensures compatibility as requirements change.
- RS485 modified-MODBUS compatible interface allows up to 128 transmitters on a single bus.
- Standard dual (analog & RS485) outputs simplify interface to controls, data collection and telemetry system
- IP68-rated cabled versions suitable for submersion
- 2021 IIJA Build America, Buy America-compliant configurations available
- Standard 3-day lead time.

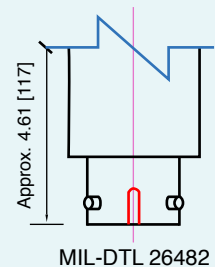
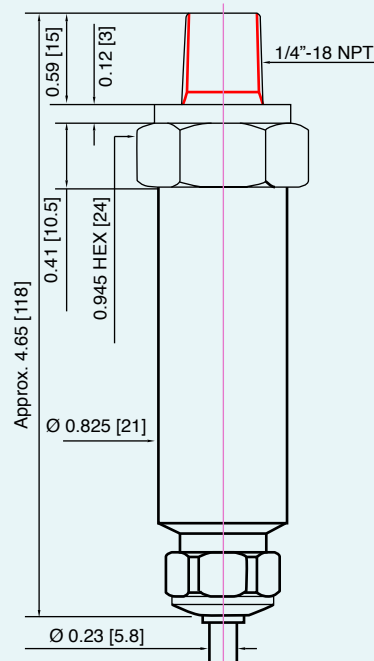


### Ranges $\leq 450$ PSI



MIL-DTL 26482

### Ranges $\geq 450$ PSI



MIL-DTL 26482

Dimensions in inches [mm]

# Preciseline - SPECIFICATIONS

| Pressure Ranges <sub>1,2,3</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------|
| Relative                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Infinite between 0...2 and 0...450 PSIG     |         |
| Absolute                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Infinite between 0...2 and 0...450 PSIA     |         |
| Sealed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Infinite between 0...500 to 0...15,000 PSIS |         |
| Proof pressure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Ranges $\leq 1500$ PSI FS                   | 3X FS   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Ranges $> 1500... \leq 9000$ PSI FS         | 2X FS   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Ranges $> 9000... \leq 15,000$ PSI FS       | 1.2X FS |
| <p>1. PSIG = Gage; Zero-point referenced to local atmospheric pressure.<br/> PSIA = Absolute; Zero-point set at hard vacuum.<br/> PSIS = Sealed Gage; Zero-point set at 1 bar absolute (14.504 PSIA).</p> <p>2. Zero-point can be suppressed or elevated for special applications.</p> <p>3. Intermediate ranges are realized by deranging the analog output from the next highest basic range: 1, 3, 10, and 30 bar (relative) 1, 3, 10, and 30 bar (absolute), and 100, 300, and 1000 bar (sealed). Pressure range may be specified in units of lb/in<sup>2</sup>(psi), inches WC or feet WC. KELLER America uses the International Standard conversion of 2.3067 feet WC/psi.</p> |                                             |         |

| Accuracy <sub>4</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |          |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Standard | Optional | Unit |
| Static                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.1%     | 0.05%    | FS   |
| Total Error Band                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.25%    | 0.1%     | BR   |
| <p>4. Static accuracy includes the combined effects of non-linearity, hysteresis, and non-repeatability at room temperature (25°C). Total Error Band (TEB) includes the combined effects of non-linearity, hysteresis, and non-repeatability as well as thermal dependencies, over the compensated temperature range, expressed as a percentage of the basic range (BR).</p> <p>The calculation for maximum TEB on intermediate ranges (IR) is: <math>TEB_{IR} = (BR/IR) \times TEB_{BR}</math></p> |          |          |      |

| Output                                                                                                                                 |                        |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Current                                                                                                                                | 4...20mA + RS485       |
| Voltage                                                                                                                                | 0...5 VDC + RS485      |
|                                                                                                                                        | 0...10 VDC + RS485     |
| Digital                                                                                                                                | RS485 Only             |
| Resolution                                                                                                                             | 0.002% FS <sub>5</sub> |
| 5. Resolution applies to digital output only. Analog resolution is continuous and limited by the process meter and not the instrument. |                        |

| Connection                                                              |                                                                          |                                                                            |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Process                                                                 | 1/4"-18 NPT Male <sub>8</sub>                                            |                                                                            |
| Electrical                                                              | std. 10 ft. Cable <sub>8</sub>                                           | MIL-DTL 26482 <sub>9</sub>                                                 |
| Wiring:                                                                 |                                                                          |                                                                            |
| 4-20 mA + RS485<br>(with or without lightning protection)               | BLACK: +Vcc<br>WHITE: OUT/GND<br>BLUE: RS485A<br>YELLOW: RS485B          | PIN A: +Vcc<br>PIN C: OUT/GND<br>BLUE: RS485A<br>YELLOW: RS485B            |
| Voltage + RS485                                                         | BLACK: +Vcc<br>WHITE: GND<br>RED: +OUT<br>BLUE: RS485A<br>YELLOW: RS485B | PIN A: +Vcc<br>PIN B: +OUT<br>PIN C: GND<br>BLUE: RS485A<br>YELLOW: RS485B |
| 8. Other process connections available on request. Consult the factory. |                                                                          |                                                                            |
| 9. Mating connector supplied at no extra cost.                          |                                                                          |                                                                            |

# Preciseline - SPECIFICATIONS

| Electrical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |           |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|----------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Supply <sub>6</sub>    | Current   | Load resistance      |
| 4-20mA + RS485- with lightning protection <sub>7</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 11...32 VDC            | 3.2-22 mA | <(Supply-11V)/0.022A |
| 4-20 mA + RS485 w/o lightning protection <sub>7</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 8...32 VDC             | 3.2-22 mA | <(Supply-8V)/0.022A  |
| 0-5VDC + RS485 <sub>7</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 8...32 VDC             | < 8 mA    | >5k ohm              |
| 0-10VDC + RS485 <sub>7</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 13...32 VDC            | < 8 mA    | >5k ohm              |
| Start-up time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 250 ms                 |           |                      |
| Communications <sub>7</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | KELLER-bus, MODBUS RTU |           |                      |
| 6. Nominal values may be higher depending upon cable length. Internal lightning protection increases the minimum-required supply voltage from 8VDC to 11VDC, due to internal resistance of the surge protectors. In addition, cable loop resistance (~76Ω / 1000ft) adds to the supply requirement. In order to insure proper system operation, calculate the minimum required supply voltage (at the source) as follows:<br><br>For internal only protector (standard with 4-20mA output):<br>MINIMUM SUPPLY VOLTAGE = 11 + 0.022 (CABLE LENGTH x 0.076) VDC<br><br>For two-part (internal+external) system (recommended):<br>MINIMUM SUPPLY VOLTAGE = 11.6 + 0.022 (CABLE LENGTH x 0.076) VDC |                        |           |                      |
| 7. Disturbance of the analog interface occurs during communication via the digital interface. Simultaneous operation of the analog and digital interface is not recommended.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |           |                      |

| Environmental     |                                                   |
|-------------------|---------------------------------------------------|
| Protection Rating |                                                   |
| Cable             | IP68                                              |
| Mil-C 26482       | IP65                                              |
| Operating Temp.   |                                                   |
| Cable             | -10...60° C                                       |
| Mil-C 26482       | -30...100° C                                      |
| Compensated Temp. | -10...80° C                                       |
| Wetted Materials  | Standard 316 L stainless steel, optional titanium |

| Certifications |                                                 |
|----------------|-------------------------------------------------|
| CE             | EN 61000-6-1 to 6-4 / EN 61326-1 / EN 61326-2-3 |
| Shock          | 20g (11ms)                                      |
| Vibration      | 20g (5-2KHz, max. amp ±3mm per IEC68-2-6)       |
| NSF / ANSI     | 61, 372                                         |

## Optional Accessories



1/2" NPT Conduit Fitting



Drying Tube Assembly



Bellows Assembly



Termination Enclosure



Process Meter



Signal Line Surge Protector



Interface Converter