



# Multi-function Pressure & Temperature Transducers

## HT-TPSE Series

### TECHNICAL SPECIFICATIONS

#### Standard pressure ranges & signal outputs

|                              |            |          |           |           |           |            |            |
|------------------------------|------------|----------|-----------|-----------|-----------|------------|------------|
| <b>Measuring range (bar)</b> | <b>4</b>   | <b>6</b> | <b>10</b> | <b>40</b> | <b>60</b> | <b>100</b> | <b>400</b> |
| Overload pressure            | 20         | 20       | 20        | 200       | 200       | 200        | 840        |
| Burst pressure               | 30         | 30       | 30        | 300       | 300       | 300        | 1050       |
| <b>Measuring range (bar)</b> | <b>600</b> |          |           |           |           |            |            |
| Overload pressure            | 840        |          |           |           |           |            |            |
| Burst pressure               | 1050       |          |           |           |           |            |            |

\*Gauge ranges shown - vacuum and absolute ranges available on request

|                             |                  |                  |
|-----------------------------|------------------|------------------|
| Electrical                  | 2 wire / 3 wire  | 3 wire           |
| Output signal (pressure)    | 4-20mA           | 0-10Vdc          |
| Output signal (temperature) | 4-20 mA (2-wire) | 4-20 mA (2-wire) |
| Supply voltage              | 9-32Vdc          | 12-32Vdc         |

#### Temperature measurement

- External temperature sensing probe
- Media temperature -40°C to +125°C
- Compensated range -20°C to +85°C
- Ambient temperature -40°C to +105°C

#### Performance

- Accuracy: Non-linearity, hysteresis and non-repeatability at room temperature according to IEC 61298-2 (or BSFL/Best Fit Straight Line) <0.5% FS range (<0.25% BSFL)  
*Optional <0.25% FS (<0.15% BSFL)*
- Temperature effects: Zero/Span typical thermal coefficients <0.15% FS range/ 10°C
- Total Error Band: 2% FS from room temperature to -40°C or +105°C
- Long term stability: <0.1% FS range/year
- Response time: pressure <1ms (from 10% to 90% FS range) temperature 10-20s
- Vibration resistance: 20g (according to IEC 68-2-6 and IEC 68-2-36)
- Shock resistance: 1000g (according to IEC to 68-2-32)

#### Physical

- Material: body - stainless steel, pressure inlet port - stainless steel
- Process connection: G 1/4 A, G 1/2 A M18 x 1.5  
*Other connections available on request*
- Electrical connection: 1m integral cable, M12 x 1 male socket, M16 x 0.75  
*Other connections available on request*
- Weight: approximately 120g (dependent upon configuration)
- Ingress protection: IP65 (for connector versions with their mating plug fitted)

#### Options

- Improved accuracy <0.25% FS  
*Note: applies to pressure signal only*
- additional cable (specify length)  
*For further options or customised products please contact us.*

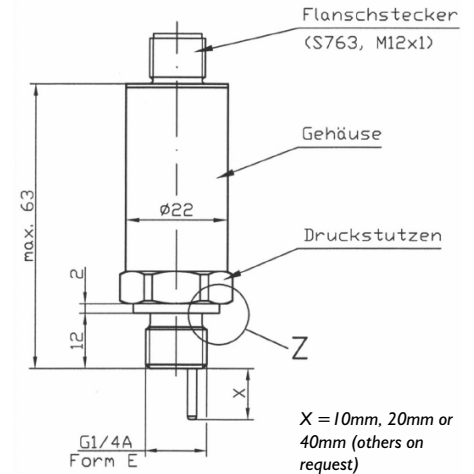
#### Related products

Hydrotechnik manufactures a wide range of sensors, test and measurement equipment. Contact us for further information or visit [www.hydrotechnik.co.uk](http://www.hydrotechnik.co.uk)

*Continuing development can necessitate specification changes without notice*

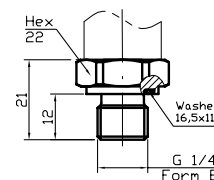
#### Dimensions

TPSE with M12 x 1 (S763) electrical connector

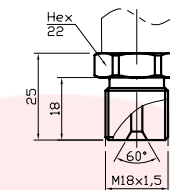


#### Mechanical Connections

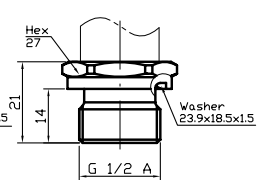
G 1/4 A;  
DIN 3852; Form E



M18x1.5

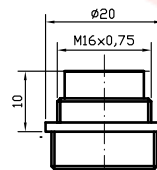


G 1/2 A;  
DIN 3852; Form E

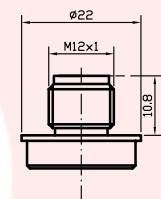


#### Electrical Connections

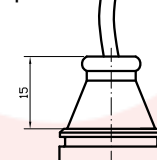
Male socket  
M16 x 0.75



Male socket  
M12 x 1



Cable output  
plastic



**HT-TPSE**  
**ORDER CODES**

| Series  | Output Signal | Pressure Range | Unit | Pressure Type | Process Connection | HEX | Electr. Connection | Extras |
|---------|---------------|----------------|------|---------------|--------------------|-----|--------------------|--------|
| HT-TPSE | 20.13         | 0001600        | MPA  | (sr)          | G14E               | 22  | M12                | -      |

|                                      |       |
|--------------------------------------|-------|
| Pressure<br>4 ... 20 mA / 2 wires    | 10.4  |
| Temperature<br>4 ... 20 mA / 2 wires |       |
| Pressure<br>0 ... 10 V               | 20.13 |
| Temperature<br>4 ... 20 mA / 2 wires |       |
| Others                               | AAA   |

|        |     |
|--------|-----|
| bar    | BAR |
| kPa    | KPA |
| MPa    | MPA |
| PSI    | PSI |
| kg/cm2 | KGC |
| m WC   | MWS |
| in WC  | IWS |
| others | CCC |

|                   |      |
|-------------------|------|
| Relative Pressure | (g)  |
| Sealed Reference  | (sr) |

|                 |      |    |
|-----------------|------|----|
| G 1/4 A Shape A | G14A | 22 |
| G 1/4 A Shape E | G14E | 22 |
| G 1/2 A Shape E | G12E | 27 |
| 1/4 NPT         | I4NP | 22 |
| 9/16-18 UNF-2A  | U98M | 22 |
| M 14x1.5 ISO    | M14O | 22 |
| M 18x1.5 male   | M18M | 22 |

|                          |     |
|--------------------------|-----|
| Male Socket M12/ S763    | M12 |
| Male Socket M16/ S723    | M16 |
| Male Socket M18/ S714    | M18 |
| Flying Leads 1,0*        | FLI |
| Cable Gland Plastic 1,0* | CPI |
| Cable Steel 1,0*         | KSI |
| Cable Plastic 1,0*       | KPI |
| Others                   | FFF |

\* e.g. with cable length 1 metre

|           |         |
|-----------|---------|
| 0 ... 10  | 0001000 |
| 0 ... 16  | 0001600 |
| 0 ... 20  | 0002000 |
| 0 ... 25  | 0002500 |
| 0 ... 4   | 0000400 |
| 0 ... 60  | 0006000 |
| 0 ... 100 | 0010000 |
| 0 ... 160 | 0016000 |
| 0 ... 200 | 0020000 |
| 0 ... 250 | 0025000 |
| 0 ... 400 | 0040000 |
| 0 ... 600 | 0060000 |
| Others    | BBB     |

|  |     |
|--|-----|
| Total Error 0.25%<br>Only for Pressure | F25 |
| Others (see below.)                    | GGG |