# QPress Pressure Transducer - QLS-UNIVERSAL 3200 Series

General-purpose industrial pressure transducer, 0–250 bar ranges, IP65/IP67.

## Certifications



## Applications

- Water treatment
- Pumps and compressors
- Hydraulics and pneumatics
- Mechanical equipment
- Refrigeration systems
- Measurement & control
- Vessels

QLS-UNIVERSAL 3200

## Special Features

- Wide ranges: 0–0.025 to 0–250 bar (gauge); 0–25 bar (absolute); −1–+24 bar (compound)
- Output options: 4–20 mA, 0–5 V, 1–5 V, 0–10 V, 0.5–4.5 V
- Fully welded 316L construction with digital temperature compensation
- Accuracy classes: ±0.25 % FS or ±0.5 % FS; repeatability ≤ 0.1 % FS
- EMC to IEC 61000-4 series; CE, RoHS, REACH, UL
- IP65/IP67, vibration 10 g, shock 100 g; response < 4 ms (liquid)

## Description

The QLS-UNIVERSAL 3200 is a compact, general-purpose pressure transducer for industrial monitoring and control. A piezoresistive sensing element is oil-filled and isolated by a fully welded 316L stainless-steel diaphragm with NBR/FKM/copper process sealing to suit common media. Output options include 4–20 mA and voltage signals (0–5 V, 1–5 V, 0–10 V, 0.5–4.5 V) with ranges from 0–0.025 bar up to 0–250 bar gauge, 0–25 bar absolute, and compound −1–+24 bar. The unit meets IP65/IP67 protection and is qualified for EMC immunity to IEC 61000-4 tests; long-term stability is ≤ ±0.2 % FS/year (max.).

## Specifications

| TECHNICAL SPECIFICATIONS | |
|---|---|
| Pressure range | Gauge: 0–1 to 0–250 bar; Absolute: 0–1 to 0–25 bar; Compound: −1–0 to −1–+24 bar |
| Pressure reference | Gauge; Absolute; Positive/Negative |
| Accuracy | ±0.25 % FS; ±0.5 % FS |
| Hysteresis & repeatability | Hysteresis ≤ 0.1 % FS; Repeatability ≤ 0.1 % FS |
| Temp. drift | Total error band 0–50 °C: ±0.75 % FS (max.) |
| Response time | < 4 ms (liquid); < 35 ms (gas) |
| Service life | > 10 million cycles |
| Ambient temp. | −30 to +85 °C |
| Medium temp. | −30 to +85 °C |
| Storage temp. | −40 to +100 °C |
| EMC-immunity | IEC 61000-4-2/-3/-4/-5/-6/-8 |
| Insulation resistance | ≥ 100 MΩ / 500 VDC |
| Vibration resistance | 10 g (10–2000 Hz) |
| Shock resistance | 100 g / 11 ms |
| Protection | IP65; IP67 |
| Wetted Parts | 316L stainless steel |
| Net weight | ≤ 135 g (DIN); ≤ 95 g (M12); ≤ 160 g (cable) |
| Size of hexagon | Body Ø27 mm; process hex 14 mm (G1/4A) |
| Approvals/Certification | CE; RoHS; REACH; UL |
| Electrical Outputs | 4-20 mA; 0-5 V; 1-5 V; 0-10 V; 0.5-4.5 V |
| Process connections | G1/4A; G1/8; G1/4; G3/8; G1/2; M12×1.5; M14×1.5; M20×1.5; NPT1/8; NPT1/4; NPT1/2; R1/4; R3/8; R1/2; 7/16–20 UNF-74° |
| Anti-Vibration | Yes - vibration qualified to 10 g |
| Overpressure/Burst Pressure | Per range table; up to 450 bar (max., at 250 bar FS) |
| Housing Material | 316L stainless steel; nylon head |
| Electrical connections | DIN 175301-803A; M12×1 (4-pin); Cable (PUR) |
| Power Supply | 8–30 V DC (all except 0–10 V); 14–30 V DC (0–10 V); 5 ±0.1 V DC (proportional 0.5–4.5 V) |
| Longterm Stability | ≤ ±0.1 % FS/year (typ.); ≤ ±0.2 % FS/year (max.) |

## Measuring Range (Gauge Pressure)

| Range Code | Measuring Range | Overpressure | Accuracy |
|---|---|---|---|
| 01 | 0-1 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 02 | 0-1.6 bar | 188%FS | ±0.25%FS/±0.5%FS |
| 03 | 0-2 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 04 | 0-2.5 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 05 | 0-4 bar | 250%FS | ±0.25%FS/±0.5%FS |
| 06 | 0-6 bar | 167%FS | ±0.25%FS/±0.5%FS |
| 07 | 0-10 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 08 | 0-16 bar | 188%FS | ±0.25%FS/±0.5%FS |
| 09 | 0-20 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 10 | 0-25 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 11 | 0-40 bar | 250%FS | ±0.25%FS/±0.5%FS |
| 12 | 0-60 bar | 167%FS | ±0.25%FS/±0.5%FS |
| 13 | 0-100 bar | 150%FS | ±0.25%FS/±0.5%FS |
| 14 | 0-160 bar | 188%FS | ±0.25%FS/±0.5%FS |
| 15 | 0-200 bar | 150%FS | ±0.25%FS/±0.5%FS |
| 16 | 0-250 bar | 180%FS | ±0.25%FS/±0.5%FS |

## Measuring Range (Absolute Pressure)

| Range Code | **Measuring Range** | Overpressure | **Accuracy** |
|---|---|---|---|
| 01 | 0-1 bar | 200%FS | ±0.5%FS |
| 02 | 0-1.6 bar | 188%FS | ±0.5%FS |
| 03 | 0-2 bar | 200%FS | ±0.5%FS |
| 04 | 0-2.5 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 05 | 0-4 bar | 250%FS | ±0.25%FS/±0.5%FS |
| 06 | 0-6 bar | 167%FS | ±0.25%FS/±0.5%FS |
| 07 | 0-10 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 08 | 0-16 bar | 188%FS | ±0.25%FS/±0.5%FS |
| 09 | 0-20 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 10 | 0-25 bar | 200%FS | ±0.25%FS/±0.5%FS |

## Measuring Range (Negative Pressure)

| Range Code | **Measuring Range** | **Overpressure** | Accuracy |
|---|---|---|---|
| 01 | -0.25...0 bar | 200%FS | ±0.5%FS |
| 02 | -0.4...0 bar | 250%FS | ±0.5%FS |
| 03 | -0.6...0 bar | 167%FS | ±0.5%FS |
| 04 | -1...0 bar | 150%FS | ±0.5%FS |
| 05 | -0.03...+0.03 bar | 167%FS | ±0.5%FS |
| 06 | -0.05...+0.25 bar | 100%FS | ±0.5%FS |
| 07 | -0.15...+0.15 bar | 100%FS | ±0.5%FS |
| 08 | -1...+1 bar | 100%FS | ±0.25%FS/±0.5%FS |
| 09 | -1...+1.5 bar | 120%FS | ±0.25%FS/±0.5%FS |
| 10 | -1...+3 bar | 125%FS | ±0.25%FS/±0.5%FS |
| 11 | -1...+5 bar | 167%FS | ±0.25%FS/±0.5%FS |
| 12 | -1...+9 bar | 200%FS | ±0.25%FS/±0.5%FS |
| 13 | -1...+10 bar | 227%FS | ±0.25%FS/±0.5%FS |
| 14 | -1...+15 bar | 188%FS | ±0.25%FS/±0.5%FS |
| 15 | -1...+16 bar | 176%FS | ±0.25%FS/±0.5%FS |
| 16 | -1...+20 bar | 143%FS | ±0.25%FS/±0.5%FS |
| 17 | -1...+24 bar | 200%FS | ±0.25%FS/±0.5%FS |

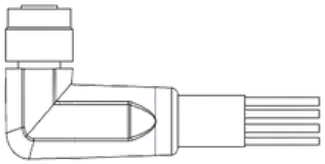
## Output Signals

| Code | Output | Power Supply | Load |
|---|---|---|---|
| I4 | 4-20 mA (2-wire) | 8-30 VDC | ≤(Vs-8V)/0.02A Ω |
| V5 | 0-5 V | 8-30 VDC | >10 kΩ |
| V1 | 1-5 V | 8-30 VDC | >10 kΩ |
| VX | 0-10 V | 14-30 VDC | >10 kΩ |
| VN | 0.5-4.5 V (non-ratio) | 8-30 VDC | >10 kΩ |
| VR | 0.5-4.5 V (ratiometric) | 5±0.1 VDC (10%-90%) | >10 kΩ |

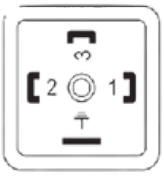
## Electrical Connections

| Code | Description | Pinout |
|---|---|---|
| E5 | DIN 175301-803A 4-pin | 2-wire: Pin 1: Supply +; Pin 2: Current output \| 3-wire: Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output |
| E2 | M12×1 4-pin (IEC 61076-2-101) | 2-wire: Pin 4: Supply +; Pin 2: Current output \| 3-wire: Pin 4: Supply +; Pin 2: Ground; Pin 1: Voltage output; Pin 3: Grounding |

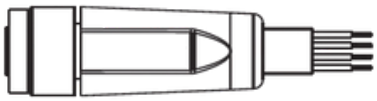
| Code | Description | Pinout |
|---|---|---|
| E1 | Cable, PUR | 2-wire current: Red: Supply +; Black: Current output \| 3-wire voltage: Red: Supply +; Black: Ground; White: Voltage output; Green: Grounding |
| E3 | M12 straight harness MS903 (2 m) | Brown: Supply +; Blue: Ground; Black: Voltage output; Yellow/Green: Grounding |
| E4 | M12 right-angle harness MS904 (2 m) | Black: Supply +; White: Ground; Brown: Voltage output; Blue: Grounding |



M12 right-angle harness MS904

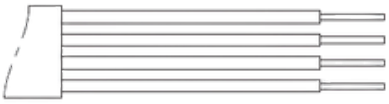



DIN 175301-803A 4-pin



M12 straight harness MS903


M12×1 4-pin (IEC 61076-2-101)



Cable, PUR

## Power Supply

| Code | Supply |
|---|---|
| S1 | 8-30 VDC |
| S2 | 14-30 VDC |
| S5 | 5±0.1 VDC (proportional) |

## Construction Materials

| Code | Diaphragm | Pressure Port | Housing |
|---|---|---|---|
| M1 | 316L SS | 316L SS | 316L SS/nylon |

## Cable Material

| Code | Description |
|---|---|
| CB1 | PUR |

## Accuracy options

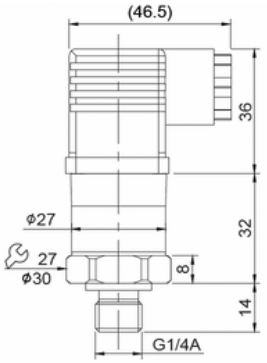
| Code | Accuracy |
|---|---|
| A25 | ±0.25%FS |
| A50 | ±0.5%FS |

## Cable Length

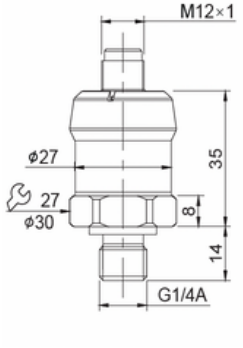
| Code | Length |
|---|---|
| L001 | 1 m |
| L1D5 | 1.5 m |
| L01 | 1 m |
| L02 | 2 m |
| L03 | 3 m |
| L04 | 4 m |
| L05 | 5 m |
| L06 | 6 m |
| L07 | 7 m |
| L08 | 8 m |
| L09 | 9 m |
| L10 | 10 m |
| LN | No cable |

## Process Connections/Drawings

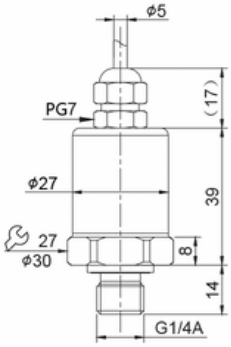
| Code | Thread / Port |
|---|---|
| P01 | G1/4 B |
| P02 | G1/4 A |
| P03 | NPT1/4 |
| P04 | R1/4 |
| P05 | M20×1.5 |
| P06 | M12×1.5 |
| P07 | G1/2 A |
| P08 | G3/8 A |



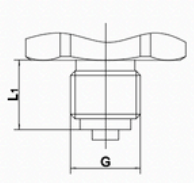

DIN 175301-803A 4-pin

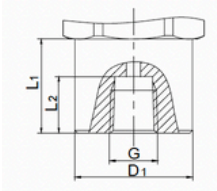


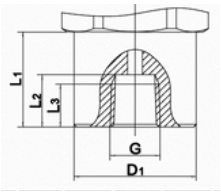

M12×1 4-pin

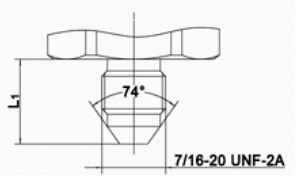


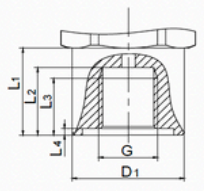

Cable

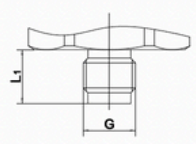


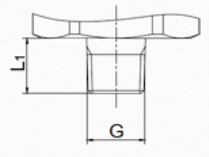



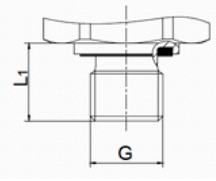




## Process Connection Seal

| Code | Seal type |
|---|---|
| CS0 | PTFE tape (ISO 7/ANSI/SAE/ASME threads) |
| CS1 | NBR (ISO 1179 / ISO 9974-2) |
| CS2 | FKM (ISO 1179 / ISO 9974-2) |
| CS4 | Copper (EN 837) |

## Certification

| Code | Description |
|---|---|
| CE | EU Declaration of Conformity |
| RO | RoHS |
| RE | REACH/SVHC |
| UL | UL Listed |

## Accessory

| Code | Description |
|---|---|
| ACC1 | MS903 M12 straight harness, 2 m |
| ACC2 | MS904 M12 right-angle harness, 2 m |

## Order Guide

| Segment | Your Code | Options |
|---|---|---|
| Product family | QLS-UNIVERSAL 3200 | QLS-UNIVERSAL 3200 |
| Pressure Reference | GP/AP/NP | Select Pressure reference |
| Range | 01-..17 | Range as per Pressure reference see measuring range tables |
| Accuracy | A25/A50 | See Accuracy options |
| Output | I4/V5/V1/VX/VN/VR | See Output Signals |
| Power Supply | S1/S2/S5 | See Power Supply |
| Construction Materials | M1 | See Construction Materials |
| Process Connection | P01-..P08 | See Process Connections & Drawings |
| Connection Seal | CS0/CS1/CS2/CS4 | See Connection Seal |
| Electrical Connection | E1/E2/E3/E4/E5 | See Electrical Connections |
| Cable Material | CB1 | See Cable Material |
| Cable Length | L001/L1D5/L002-.../LN | See Cable Length |
| Certification | CE/RO/RE/UL | See Certification |
| Accessories | ACC1/ACC2 | See Accessories |

**Ordering Example** *Gauge 0-10 bar, ±0.5%FS, 4-20 mA (2-wire), 8-30 VDC, 316L construction, G1/4 A port with FKM seal, M12 connector, PUR cable, 1.5 m, CE.*

| Family | Ref | Range | Accuracy | Output | Power Supply | Construction Materials | Process Connection | Process Connection Sealing | Electrical Connection | Cable Material (E1 only) | Cable Length (E1 only) | Certification | Accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QLS-UNIVERSAL 3200 | GP | 07 | A50 | I4 | S1 | M1 | P02 | CS2 | E2 | CB1 | L1D5 | CE | - |

**Notes**

Ensure media compatibility with wetted parts. Torque depends on gasket, mating material and lubrication.