

QPress Pressure Transducer - QLS-SMARTLINK 3800 Series

Smart industrial pressure transducer with HART or RS485 for networked measurement.

Certifications

Quality Lab Solutions data sheet R4



Applications

- Process control in petrochemical plants
- Leak detection and monitoring
- Laboratory and R&D measurement
- Project integration / kitting
- General precision fluid pressure measurement

Special Features

- Smart 4–20 mA + HART or RS485-MODBUS communication
- Digitally compensated with software zero/span adjustment
- Oil-filled, fully welded stainless-steel construction
- Gauge, absolute and sealed gauge references
- Wide measuring ranges: 0–0.35 bar to 0–100 bar
- IP65 ingress protection; 20 g vibration; 10 g shock
- Response time ≤ 4 ms; repeatability $\leq \pm 0.1$ % FS
- Insulation ≥ 100 M Ω at 250 V DC



QLS-SMARTLINK 3800

Description

Compact, intelligent pressure transducer using a piezoresistive, oil-filled stainless-steel sensor with digital compensation. Provides either analogue 4–20 mA with HART or RS485 (MODBUS) for integration into networked systems. Suitable for precise fluid pressure measurement across general industrial applications, with gauge, absolute and sealed gauge references. IP65 protection, high vibration resistance and a ≤ 4 ms response support reliable operation in demanding environments.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	0–0.35 bar; 0–0.7 bar; 0–1 bar; 0–1.6 bar; 0–2.5 bar; 0–4 bar; 0–6 bar; 0–10 bar; 0–16 bar; 0–25 bar; 0–60 bar; 0–100 bar
Pressure reference	Gauge; Absolute; Sealed gauge
Accuracy	±0.5 % FS (@ 25 ± 5 °C)
Hysteresis & repeatability	±0.1 % FS
Temp. drift	±3 % FS (–10 to 70 °C)
Response time	≤ 4 ms
Service Life	≥10 ⁶ pressure cycles
Ambient temp.	–20 to 80 °C
Medium temp.	–30 to 105 °C
Storage temp.	–40 to 120 °C
Insulation resistance	≥ 100 MΩ at 250 V DC
Vibration resistance	Sine 20 g, 25 Hz–2 kHz (IEC 60068-2-6); Random 7.5 grms, 5 Hz–1 kHz (IEC 60068-2-64)
Shock resistance	10 g/11 ms (IEC 60068-2-27); 1 m drop (IEC 60068-2-32)
Protection	IP65
Wetted Parts	316L stainless steel
Approvals/Certification	CE, UKCA, RoHS
Electrical Outputs	4–20 mA + HART; RS485-MODBUS
Process connections	M20×1.5; G1/2; G1/4; M14×1.5; NPT1/4; R1/4 (PT1/4, ZG1/4); NPT1/2; R1/2 (PT1/2, ZG1/2); 7/16-20 UNF; G3/8
Anti-Vibration	Sine curve: 20g, 25Hz~2kHz; IEC 60068-2-6 Random: 7.5grms, 5Hz~1kHz; IEC 60068-2-64
Overpressure/Burst Pressure	150–300 % FS (overpressure; range-dependent)
Housing Material	SS304
Electrical connections	DIN 43650; DIN 43650 with cable
Power Supply	4~20mA+HART protocol (12~30V), RS485-MODBUS communication protocol (12~30V)

Measuring Range

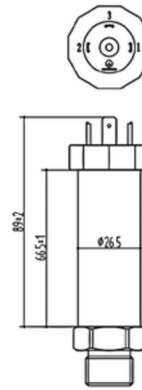
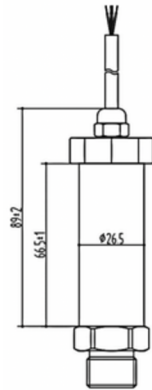
Range Code	Measuring Range	Pressure Reference	Overpressure	Burst Pressure
01	0-0.35 bar	GP	300%FS	500%FS
02	0-0.7 bar	GP	300%FS	500%FS
03	0-1 bar	GP/AP	200%FS	300%FS
04	0-1.6 bar	GP	200%FS	300%FS
05	0-2.5 bar	GP/AP	200%FS	300%FS
06	0-4 bar	GP	200%FS	300%FS
07	0-6 bar	GP	200%FS	300%FS
08	0-10 bar	GP/SP	200%FS	300%FS
09	0-16 bar	SP	200%FS	300%FS
10	0-25 bar	SP	200%FS	300%FS
11	0-60 bar	SP	150%FS	300%FS
12	0-100 bar	SP	150%FS	300%FS

Output Signals

Code	Output	Power Supply
I4	4-20 mA + HART	12-30 VDC
RS	RS485-MODBUS	12-30 VDC

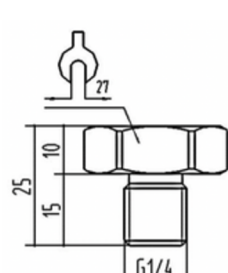
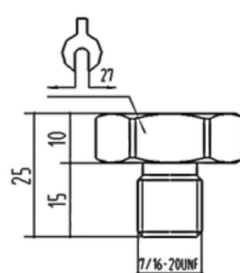
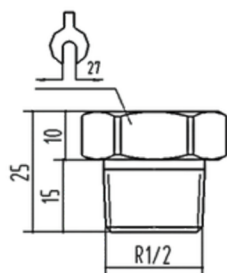
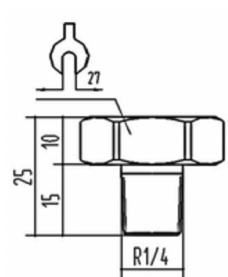
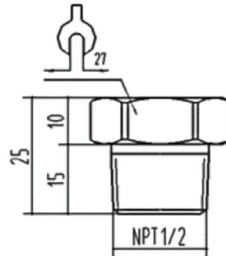
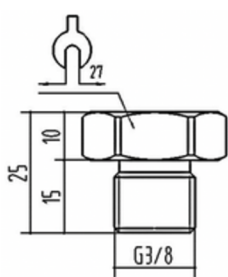
Electrical Connections

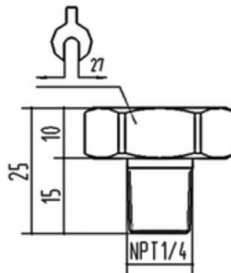
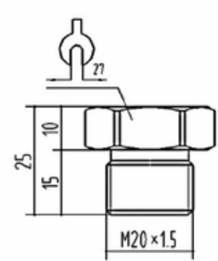
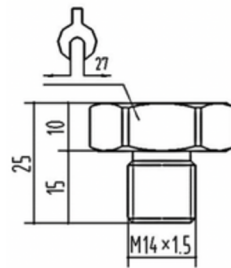
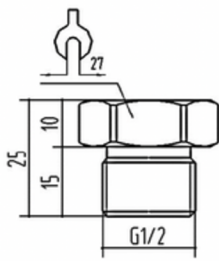
4-20mA+HART (I4)	Pinout
E6 - DIN43650 with cable	Red: Vin; Green: Current output
E5 - DIN43650	Pin 1: Vin; Pin 2: Current output
RS485 MODBUS (RS)	Pinout
E6 - DIN43650 with cable	Red: V+; Green: V-; Yellow: RS485-A; White: RS485-B
E5 - DIN43650	Pin 1: V+; Pin 2: V-; Pin 3: RS485-A; Ground: RS485-B



Process Connections/Drawings

Code	Thread / Port
P1	M20x1.5-6g
P2	G1/2
P3	G1/4
P4	M14x1.5-6g
P5	NPT1/4, Z1/4
P6	R1/4, PT1/4, ZG1/4
P7	NPT1/2, Z1/2
P8	R1/2, PT1/2, ZG1/2
P9	7/16-20 UNF
P10	G3/8





Order Guide

Segment	Your Code	Options
Product family	QLS-SMARTLINK 3800	QLS-CORE 2100
Range	01 ... 12	See "Measuring range & accuracy" (Range code)
Pressure Reference	GP / AP / SP	GP = Gauge; AP = Absolute; SP = Sealed
Output	I4 / RS	See Output table
Process Connection	P1 ... P10	See Process Connections
Electrical Connection	E5 / E6	See Electrical Connections

Ordering Example 0-16 bar sealed gauge, 4-20 mA + HART, G1/2, DIN43650

Family	Range	Ref	Output	Process	Electrical
QLS-SMARTLINK 3800	09	SP	I4	P2	E5

Notes

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