

QPress Pressure Transducer — QLS-CORE 2100 Series

Compact all-stainless industrial pressure transducer with fast response and wide range coverage.

Certifications

Quality Lab Solutions data sheet R4



Applications

- Process control
- Automotive and medical equipment
- Pipeline and HVAC systems
- General industrial automation

Special Features

- 316L stainless-steel isolation diaphragm
- Accuracy ± 0.5 % FS; repeatability and hysteresis $\leq \pm 0.1$ % FS
- Response time ≤ 1 ms (to 90 % FS)
- Pressure types: gauge, absolute, sealed gauge
- Outputs: 4–20 mA; 0–5 V; 1–5 V; 0–10 V; 1–10 V; 0.5–4.5 V (ratiometric)
- IP65 ingress protection; strong EMC immunity (IEC 61000-6-2)
- Vibration 20 g (25 Hz–2 kHz); shock 200 g / 1 ms; free fall 1 m
- Ambient $-20\ldots+85$ °C; media $-30\ldots+105$ °C; storage $-40\ldots+125$ °C



QOM-COMPACT 2100

Description

The QLS-CORE 2100 Series is a general-purpose pressure transducer for industrial measurement and control. A diffused-silicon sensing element with a 316L isolation diaphragm and stainless-steel housing provides reliable operation in a wide range of media. Integrated conditioning delivers standard analogue outputs with fast 1 ms response, low hysteresis and repeatability, and stable performance over the $-20\ldots+85$ °C ambient range. EMC compliance, IP65 ingress protection, and proven vibration/shock robustness support long-term service in process equipment, vehicles and test systems.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	-1-0 bar (vacuum); 0-0.35 bar; 0-0.7 bar; 0-1 bar; 0-2.5 bar; 0-4 bar; 0-6 bar; 0-10 bar; 0-16 bar; 0-25 bar; 0-40 bar; 0-60 bar; 0-100 bar; 0-160 bar; 0-250 bar; 0-400 bar; 0-600 bar; 0-1000 bar
Pressure reference	Gauge; Absolute; Sealed gauge
Accuracy	±0.5 % FS
Hysteresis & repeatability	Hysteresis ≤ ±0.1 % FS; Repeatability ≤ ±0.1 % FS
Temp. drift	Ranges ≤ 0.035 bar: ±2 % FS (0-60 °C); others: ±1.5 % FS (-20 to +85 °C)
Response time	≤ 1 ms (to 90 % FS)
Service life	≥ 1×10 ⁶ cycles
Ambient temp.	-20 to +85 °C
Medium temp.	-30 to +105 °C
Storage temp.	-40 to +125 °C
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	≥ 100 MΩ / 500 VDC
Vibration resistance	Sine 20 g (25 Hz-2 kHz); Random 7.5 grms (5 Hz-1 kHz)
Shock resistance	200 g / 1 ms; free fall 1 m
Protection	IP65
Wetted Parts	316L stainless steel
Net weight	150-180 g
Size of hexagon	HEX27
Approvals/Certification	CE, UKCA, RoHS
Electrical Outputs	4-20 mA; 0-5 V; 1-5 V; 0-10 V; 1-10 V; 0.5-4.5 V (ratiometric)
Process connections	M20×1.5; G1/2; G1/4; M14×1.5; NPT 1/4; R1/4 (PT 1/4); NPT 1/2; M12×1.5; R1/2 (PT 1/2); G3/8; M10×1; M16×1.5; M18×1.5; 7/16-20 UNF; G1/8; M22×1.5; 1/8-27 NPT; R3/8 (PT 3/8); ZG3/8
Anti-Vibration	Anti-vibration construction
Overpressure/Burst Pressure	150-300 % FS (range-dependent)
Housing Material	Stainless steel
Electrical connections	DIN 43650; DIN 43650 with cable; Cable outlet; M12
Power Supply	12-30 VDC (all voltage/current outputs); 5 VDC (0.5-4.5 V ratiometric)

Measuring Range

Range Code	Measuring Range	Pressure Reference	Overpressure	Burst Pressure
01	0-0.35 bar	GP / AP	300 %FS	600 %FS
02	0-0.7 bar	GP	300 %FS	600 %FS
03	0-1 bar	GP / AP	200 %FS	500 %FS
04	0-2.5 bar	GP / AP	200 %FS	500 %FS
05	0-4 bar	GP / AP	200 %FS	500 %FS
06	0-6 bar	GP / AP	200 %FS	500 %FS
07	0-10 bar	GP / AP / SP	200 %FS	500 %FS
08	0-16 bar	GP / SP	200 %FS	500 %FS
09	0-25 bar	GP / SP	200 %FS	500 %FS
10	0-40 bar	SP	200 %FS	400 %FS
11	0-60 bar	SP	200 %FS	400 %FS
12	0-100 bar	SP	200 %FS	400 %FS
13	0-160 bar	SP	200 %FS	400 %FS
14	0-250 bar	SP	150 %FS	400 %FS
15	0-400 bar	SP	150 %FS	300 %FS

Range Code	Measuring Range	Pressure Reference	Overpressure	Burst Pressure
16	0–600 bar	SP	150 %FS	300 %FS
17	0–1000 bar	SP	150 %FS	300 %FS
18	1-0 bar	-	300 %FS	600 %FS
19	0- -1 bar	-	300 %FS	600 %FS
20	-1- 1 bar	-	150 %FS	300 %FS

Output Signals

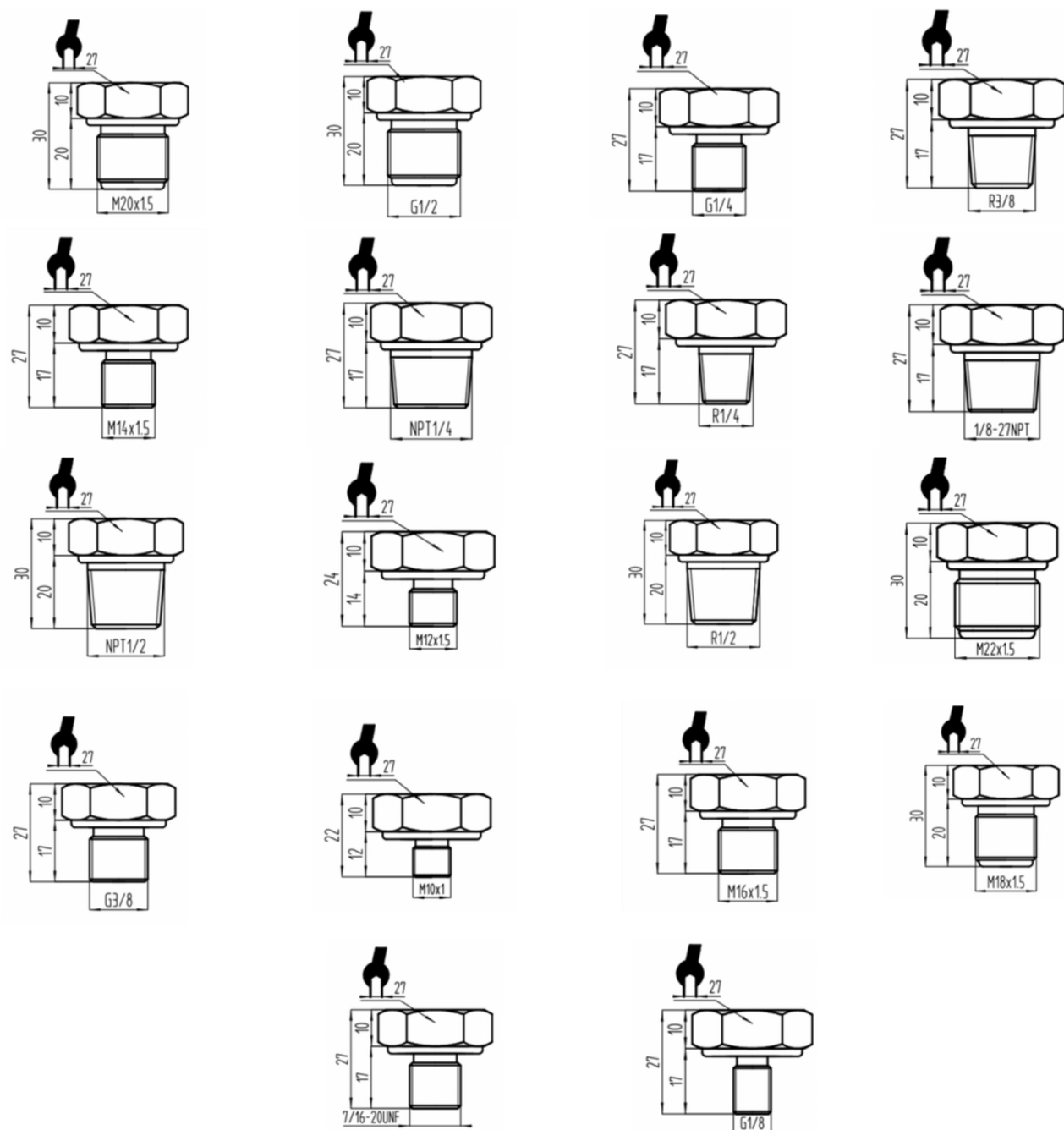
Code	Output	Power Supply
I4	4–20 mA (2-wire)	12–30 VDC
V5	0–5 V	12–30 VDC
V1	1-5 V	12–30 VDC
VX	0–10 V	12–30 VDC
VY	1-10 V	12–30 VDC
VR	0.5–4.5 V ratiometric	5 VDC

Electrical Connections

2-wire current (I4)	Pinout
E1 – Cable outlet	Red: Supply +; Green: Current output
E2 – M12	Pin 1: Supply +; Pin 2: Current output
E5 – DIN 43650	Pin 1: Supply +; Pin 2: Current output
E6 – DIN 43650 with cable	Red: Supply +; Green: Current output
3-wire voltage (V5/V1/VX/VY/VR)	Pinout
E1 – Cable outlet	Red: Supply +; Green: Ground; Yellow: Voltage output
E2 – M12	Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output
E5 – DIN 43650	Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output
E6 – DIN 43650 with cable	Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output

Process Connections/Drawings

Code	Thread / Port
P1	G1/4
P2	M14×1.5
P3	NPT1/4, Z1/4
P4	R1/4, PT1/4, ZG1/4
P5	M20x1.5-6g
P6	G 1/2
P7	NPT1/2, Z1/2
P8	M12X1.5
P9	R1/2, PT1/2, ZG1/2
P10	G3/8
P11	M10X1
P12	M16X1.5
P13	M18X1.5
P14	7/16-20 UNF
P15	G1/8
P16	M22×1.5
P17	1/8-27 NPT
P18	R3/8, PT3/8, ZG3/8



Order Guide

Segment	Your Code	Options
Product family	QLS-CORE 2100	QLS-CORE 2100
Range	01 ... 20	See "Measuring range & accuracy" (Range code)
Pressure Reference	GP / AP / SP	GP = Gauge; AP = Absolute; SP = Sealed
Output	I4 / V5 / V1 / VX / VY / VR	See Output table
Process Connection	P1 ... P18	See Process Connections
Electrical Connection	E1 / E2 / E5 / E6	See Electrical Connections

Ordering Example 0–10 bar sealed gauge, 4–20 mA, G1/4, M12.

Family	Range	Ref	Output	Process	Electrical
QLS-CORE 2100	07	SP	I4	P1	E2

Notes

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