

QPress Pressure Transducer - QLS-SURGE 2200 Series

Robust stainless-steel pressure transducer for hydraulic systems with fast response and high surge tolerance.

Certifications

Quality Lab Solutions data sheet R4



Applications

Hydraulic process control; Aerospace and aviation systems; Automotive and medical equipment; Hydraulic piping and HVAC systems

Special Features

- 316L stainless-steel isolation diaphragm; stainless-steel housing
- Accuracy ± 0.5 % FS; hysteresis $\leq \pm 0.1$ % FS; repeatability $\leq \pm 0.1$ % FS
- Response time ≤ 90 ms (to 90 % FS)
- Pressure types: gauge, absolute, sealed gauge
- Output: 4–20 mA; supply 12–36 VDC
- IP65 ingress protection; EMC immunity IEC 61000-6-2; emissions IEC 61000-6-3
- Vibration 20 g (25 Hz–2 kHz); shock 20 g / 1 ms; free fall 1 m
- Ambient $-40...+85$ °C; storage $-40...+125$ °C; medium temperature dependent on ambient



QLS-SURGE 2200

Description

The QLS-SURGE 2200 Series is a compact pressure transducer designed for hydraulic applications. A diffused-silicon sensing element with a 316L isolation diaphragm provides reliable measurement in oils and compatible media. Signal conditioning delivers a 4–20 mA output with ≤ 90 ms response. The device maintains stable performance over $-40...+85$ °C ambient conditions and is protected to IP65 with strong EMC immunity and mechanical robustness for long-term service.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	-1-0 bar (vacuum); 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; 0-40 bar; 0-60 bar; 0-100 bar; 0-160 bar; 0-250 bar; 0-400 bar; 0-600 bar
Pressure reference	Gauge; Absolute; Sealed gauge
Accuracy	±0.5 % FS
Hysteresis & repeatability	Hysteresis ≤ ±0.1 % FS; Repeatability ≤ ±0.1 % FS
Temp. drift	±1.5 % FS (-20 to +85 °C)
Response time	≤ 90 ms (to 90 % FS)
Service life	≥ 1×10 ⁶ cycles
Ambient temp.	-40 to +85 °C
Medium temp.	115 - (0.35 × ambient temperature) °C (datasheet formula)
Storage temp.	-40 to +125 °C
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	≥ 100 MΩ / 250 VDC
Vibration resistance	Sine 20 g (25 Hz-2 kHz); Random 7.5 grms (5 Hz-1 kHz)
Shock resistance	20 g / 1 ms; free fall 1 m
Protection	IP65
Wetted Parts	316L stainless steel
Net weight	130 g ± 20 g
Size of hexagon	HEX27
Approvals/Certification	CE, UKCA, RoHS
Electrical Outputs	4-20 mA
Process connections	G1/2; G1/4; M14×1.5; NPT 1/4; NPT 1/2; G3/8; G1/4 (EN 837); Z1/4; Z1/2
Anti-Vibration	Anti-vibration construction
Overpressure/Burst Pressure	150-200 % FS (range-dependent)
Housing Material	Stainless steel
Electrical connections	M12×1; DIN 43650
Power Supply	12-36 VDC

Measuring Range

Range Code	Measuring Range	Pressure Reference	Overpressure	Burst Pressure
01	0-1 bar	GP / AP	200 %FS	500 %FS
02	0-1.6 bar	GP / AP	200 %FS	500 %FS
03	0-2.5 bar	GP / AP	200 %FS	500 %FS
04	0-4 bar	GP / AP	200 %FS	500 %FS
05	0-6 bar	GP / AP	200 %FS	500 %FS
06	0-10 bar	GP / AP	200 %FS	500 %FS
07	0-16 bar	GP / AP	200 %FS	500 %FS
08	0-25 bar	SP	200 %FS	500 %FS
09	0-40 bar	SP	200 %FS	300 %FS
10	0-60 bar	SP	200 %FS	300 %FS
11	0-100 bar	SP	200 %FS	300 %FS
12	0-160 bar	SP	200 %FS	300 %FS
13	0-250 bar	SP	150 %FS	200 %FS
14	0-400 bar	SP	150 %FS	200 %FS
15	0-600 bar	SP	150 %FS	200 %FS
16	-0-0 bar	GP	300 %FS	600 %FS

Output Signals

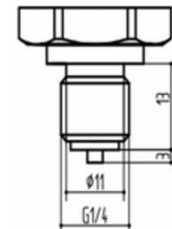
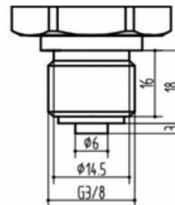
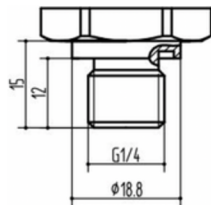
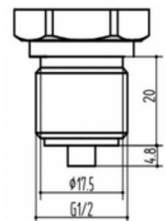
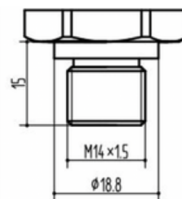
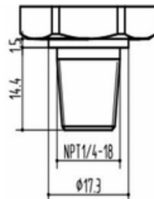
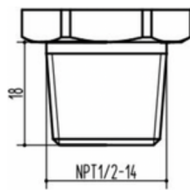
Code	Output	Power Supply
I4	4–20 mA (2-wire)	12–36 VDC

Electrical Connections

2-wire current (I4)	Pinout
E2 – M12	Pin 1: Supply +; Pin 2: Current output
E5 – DIN 43650	Pin 1: Supply +; Pin 2: Current output

Process Connections/Drawings

Code	Thread / Port
P1	G1/2
P2	G1/4 (ED)
P3	M14x1.5
P4	NPT1/4, Z1/4
P5	NPT1/2, Z1/2
P6	G3/8
P7	G1/4 (EN837)



Order Guide

Segment	Your Code	Options
Product family	QLS-SURGE 2200	QLS-SURGE 2200
Range	01 ... 16	See "Measuring range & accuracy" (Range code)
Pressure Reference	GP / AP / SP	GP = Gauge; AP = Absolute; SP = Sealed Gauge
Output	I4	See Output table
Process Connection	P1 ... P7	See Process Connections
Electrical Connection	E2 / E5	See Electrical Connections

Ordering Example 0–10 bar gauge, 4–20 mA, G1/4 (ED), DIN 43650.

Family	Range	Ref	Output	Process	Electrical
QLS-SURGE 2200	06	GP	I4	P2	E5

Notes

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