

QPress Pressure Transducer - QSF-CLAMP 1300 Series

Hygienic flush-diaphragm pressure transducer for CIP/SIP to 150 °C

Certifications

Quality Lab Solutions data sheet R4



Applications

- Food and beverage processing
- Dairy and CIP/SIP lines
- Pharmaceutical and bioprocessing
- Hygienic tanks and pipework
- Viscous or particulate media

Special Features

- 316L flush diaphragm; hygienic process connections (Tri-Clamp; G1/2; M20×1.5)
- Food-grade sealing and fill fluid; Ra < 0.8 µm surface finish
- Medium temperature –30 to 125 °C; short-term 150 °C for CIP/SIP
- Accuracy ±0.5 % FS; repeatability ≤ 0.1 % FS; ≤ 1 ms response
- Outputs: 4–20 mA, 0–10 V, 0–5 V, 1–5 V
- IP67 protection; IEC 61000-6-2 immunity; IEC 61000-6-3 emissions
- Overpressure up to 200 % FS; burst up to 500 % FS
- ≥ 10⁶ pressure cycles; vibration rated (sine 20 g, random 7.5 grms)



QSF-CLAMP 1300

Description

Compact sanitary pressure transducer with a flush 316L diaphragm for clean-in-place and sterilise-in-place duties. A piezoresistive silicon element is isolated by a fully welded stainless-steel membrane and food-grade fill fluid. The design prevents product dead zones and resists fouling, making it suitable for food, beverage and pharmaceutical lines. It provides ±0.5 % FS accuracy with fast response and robust EMC compliance. Hygienic connections include Tri-Clamp, G1/2 and M20×1.5 flush options. Protection is IP67.

Specifications

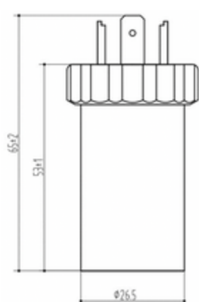
TECHNICAL SPECIFICATIONS	
Pressure range	0–0.35 bar; 0–0.7 bar; 0–1 bar; 0–2.5 bar; 0–6 bar; 0–10 bar
Pressure reference	Gauge; Absolute
Accuracy	±0.5 % FS
Hysteresis & repeatability	Hysteresis ≤ 0.1 % FS; Repeatability ≤ 0.1 % FS
Temp. drift	35 kPa: ±3 % FS (0–60 °C); others: ±1.5 % FS (–10–70 °C)
Response time	≤ 1 ms (to 90 % FS)
Ambient temp.	–20 to 85 °C
Medium temp.	–30 to 125 °C (short-term 150 °C CIP/SIP)
Storage temp.	–40 to 125 °C
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	≥ 100 MΩ @ 250 V DC
Vibration resistance	Sine 20 g (25 Hz–2 kHz); random 7.5 grms
Protection	IP67
Wetted Parts	316L stainless steel; food-grade elastomer seal
Approvals/Certification	CE, UKCA, RoHS
Electrical Outputs	4–20 mA; 0–10 V; 0–5 V; 1–5 V
Anti-Vibration	Yes
Overpressure/Burst Pressure	35/70/100 kPa: 300 % FS; 250/600 kPa & 1 MPa: 200 % FS
Housing Material	304 stainless steel
Electrical connections	M12 × 1; DIN 43650; Integral cable
Power Supply	12–30 V DC

Measuring Range

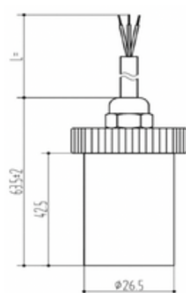
Range Code	Measuring Range	Pressure Reference	Overpressure	Burst Pressure
01	0-0.35 bar	GP	300%FS	600%FS
02	0-0.7 bar	GP	300%FS	600%FS
03	0-1 bar	GP/AP	200%FS	500%FS
04	0-2.5 bar	GP	200%FS	500%FS
05	0-6 bar	GP	200%FS	500%FS
06	0-10 bar	GP	200%FS	500%FS
07	0-16 bar	GP/SP	200%FS	500%FS
08	0-25 bar	GP/SP	200%FS	500%FS

Output Signals

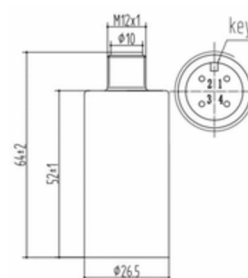
Code	Output	Power Supply
I4	4-20 mA	12-30 VDC
VX	0-10 V	12-30 VDC



DIN43650



DIN43650 with cable



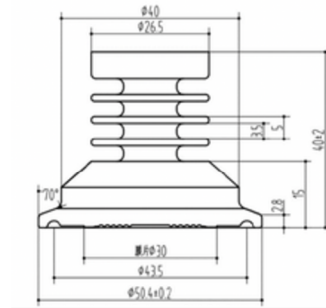
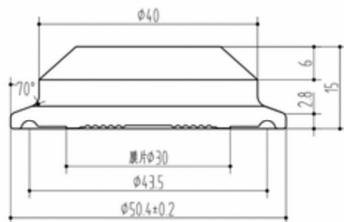
M12

Electrical Connections

2-wire current (I4)	Pinout
E5 - DIN43650	Pin 1: Supply +; Pin 2: Current output
E1 - DIN43650 with cable	Red: Supply +; Green: Current output
E2 - M12	Pin 1: Supply +; Pin 2: Common ground
3-wire voltage (VX)	Pinout
E5 - DIN43650	Pin 1: Supply +; Pin 2: Common ground; Pin 3: Voltage output
E1 - DIN43650 with cable	Red: Supply +; Green: Common ground; Yellow: Voltage output
E2 - M12	Pin 1: Supply +; Pin 2: Common ground; Pin 3: Voltage output

Cooling Fins

Code	Description	Application
T0	No cooling fins	Medium temperature <= 100 C
T3	3 pieces cooling fins	100 C < Medium temperature <= 150 C



Order Guide

Segment	Your Code	Options
Product family	QSF-CLAMP 1300	QSF-CLAMP 1300
Range	01 ... 08	See "Measuring range & accuracy" (Range code)
Pressure Reference	GP / AP / SP	GP = Gauge; AP = Absolute; SP = Sealed
Output	I4 / VX	See Output table
Electrical Connection	E1 / E2 / E5	See Electrical Connections
Cooling Fins	T0 / T3	See Cooling Fins

Ordering Example 0-16 bar sealed gauge, 4-20 mA, M12, 3-piece cooling fins

Family	Range	Ref	Output	Electrical	Cooling
QSF-CLAMP 1300	07	SP	I4	E2	T3

Notes

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