

QPress Pressure Transducer - QLS-COMBO 3100 Series

Combined pressure and temperature output in a single stainless-steel body (P: 4–20 mA; T: PT100/PT1000).

Certifications

Quality Lab Solutions data sheet R4



Applications

- Process control
- Aviation
- Aerospace
- Automotive
- Medical equipment

Special Features

- Pressure and temperature in one compact probe
- Pressure outputs: 4–20 mA (2-wire)
- Temperature element: PT100 or PT1000 (RTD)
- Ranges: 0–0.35 bar to 0–40 bar
- Pressure reference: gauge; absolute; sealed gauge
- Overload 200 % FS; burst 400 % FS
- Response time ≤ 1 ms
- Ambient $-20 \dots 85$ °C; media $-20 \dots 100$ °C
- Stainless-steel housing; G1/4 process
- DIN 43650 (Hirschmann) connector; IP65
- Vibration 20 g (IEC 60068-2-6); shock 10 g, 11 ms (IEC 60068-2-27)
- EMC surge immunity IEC 61000-4-5 Level 3 (2 kV)
- Accuracy ± 0.5 % FS typical; ± 0.25 % FS optional



QLS-COMBO 3100

Description

The QLS-COMBO 3100 is a combined pressure and temperature transducer that integrates a piezoresistive silicon sensing element with a platinum RTD in a single stainless-steel body. It provides a 4–20 mA pressure signal and a PT100 or PT1000 temperature output for streamlined installation and wiring. Typical measuring ranges span 0–0.35 bar up to 0–40 bar with gauge, absolute or sealed-gauge reference. The robust design maintains stability with zero/span thermal errors of 0.02 % FS/°C, withstands 200 % FS overload (400 % FS burst), and achieves ≤ 1 ms response. A G1/4 process thread, DIN 43650 connector and IP65 protection suit general industrial applications including process control, automotive, medical devices, and aerospace ground systems.

Specifications

TECHNICAL SPECIFICATIONS	
Measuring Range	Pressure Range: 0–0.35 bar; 0–1 bar; 0–3.5 bar; 0–10 bar; 0–20 bar; 0–40 bar Temperature Range: -40 to 120°C
Pressure reference	Gauge; Absolute; Sealed gauge
Accuracy	Pressure accuracy: ± 0.5 % FS typical; ± 0.25 % FS optional Temperature accuracy: ± 2 %FS(type)
Hysteresis & repeatability	± 0.1 % FS
Pressure temp. drift	≤ 35 kPa: ± 3 %FS (0°C-60 °C), Other ranges: ± 1.5 %FS (-10 °C-70 °C)
Startup Response time	≤ 90 ms
Ambient temp.	-20...85 °C
Medium temp.	-30...120 °C
Storage temp.	-40...125 °C
EMC-immunity	IEC 61000-6-2, Radiated emissions: IEC 61000-6-3
Insulation resistance	≥ 100 M Ω (250 V DC)
Vibration resistance	Sinusoidal curve: 20g, 25Hz ~ 2kHz; IEC 60068-2-6, Random: 7.5grms, 5Hz ~ 1kHz; IEC 60068-2-64
Shock resistance	Shock: 10g/11ms; IEC60068-2- 27, Free fall: 1m; IEC60068-2-32
Protection	IP65
Wetted Parts	Stainless steel 304
Size of hexagon	27 mm
Approvals/Certification	CE, UKCA, RoHS
Electrical Outputs	4–20 mA (pressure); PT100; PT1000 (temperature)
Process connections	G1/4
Anti-Vibration	Sinusoidal 20 g per IEC 60068-2-6
Overpressure/Burst Pressure	200 % FS
Housing Material	Stainless steel
Electrical connections	DIN 43650 (Hirschmann)
Power Supply	12–30 V DC
Surge	IEC 61000-4-5 Level 3 2KV

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	200%FS	500%FS
03	0-1 bar	GP/AP	200%FS	500%FS
04	0-2.5 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/SP	200%FS	500%FS
08	0-25 bar	GP/AP/SP	200%FS	500%FS
09	0-40 bar	SP	200%FS	400%FS
10	0-60 bar	SP	200%FS	400%FS
11	0-100 bar	SP	200%FS	400%FS
12	0-160 bar	SP	200%FS	400%FS
13	0-250 bar	SP	150%FS	400%FS
14	0-400 bar	SP	150%FS	300%FS

Output Signals

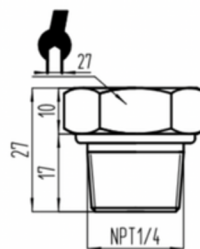
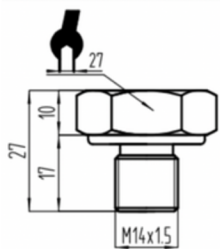
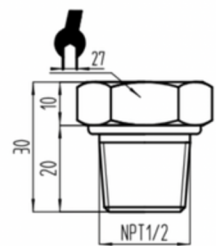
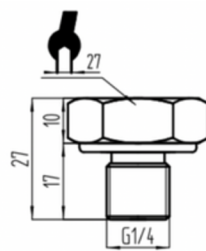
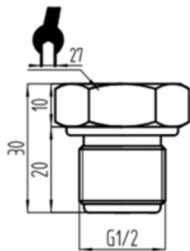
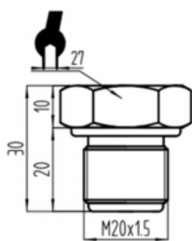
Pressure Outputs		
Code	Output	Power Supply
I4	4-20 mA (2-wire)	12-30 VDC
Temperature Outputs		
Code	Output	Power Supply
T1	4-20 mA (2-wire)	12-30 VDC
T2	PT100 (RTD)	
T3	PT1000 (RTD)	

Electrical Connections

2-wire current (I4)	Pinout
E5 - DIN43650 (Hirschmann)	Pressure: Pin 1: Supply +; Pin 2: Current output Temperature: Pin 3: Supply +; Pin 4: Current output

Process Connections/Drawings

Code	Thread / Port
P1	M20x1.5-6g
P2	G1/2
P3	G1/4
P4	M14x1.5
P5	NPT1/4 or Z1/4
P7	NPT1/2



Order Guide

Segment	Your Code	Options
Product family	QLS-COMBO 3100	QLS-COMBO 3100
Range	01 ... 14	See "Measuring range & accuracy" (Range code)
Pressure Reference	GP / AP / SP	GP = Gauge; AP = Absolute; SP = Sealed
Pressure Output	I4	See Output table
Temperature Output	T1 / T2 / T3	See Output table
Process Connection	P1 ... P7	See Process Connections
Electrical Connection	E5	See Electrical Connections

Ordering Example 0-1 bar gauge; pressure 4-20 mA; temperature PT100; G1/4; DIN43650

Family	Range	Ref	Pressure Output	Temp. Output	Process	Electrical
QLS-COMBO 3100	03	GP	I4	T2	P3	E5

Notes

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