

QPress Pressure Transducer — QOM-REF 3100 Series

Compact refrigeration-grade OEM pressure transducer with 1800 V AC isolation

Certifications

Quality Lab Solutions data sheet R4



Applications

Refrigeration systems; air-conditioning; air compressors; hydraulic/pneumatic equipment; servo valves; general pipeline monitoring

Special Features

- Compact all-stainless construction
- 316L diaphragm; 304 housing
- 1800 V AC insulation; IP65
- Outputs: 4–20 mA; 0–10 V; 0.5–4.5 V (ratiometric)
- Pressure types: gauge; absolute; sealed gauge
- Process connections: G1/4; NPT 1/4; 7/16-20 UNF; 7/16-20 UNF (female); NPT 1/8
- Accuracy ± 0.5 % FS (typ); repeatability $\leq \pm 0.1$ % FS
- Temp drift $\leq \pm 1.5$ % FS (–20 to 85 °C); response < 100 ms
- EMC: IEC 61000-6-2/-6-3; vibration 20 g; shock 10 g/11 ms



QOM-REF 3100

Description

Designed for refrigeration and HVAC equipment, compressors and compact machinery, this transducer provides stable pressure measurement in a small envelope. A 316L diaphragm and fully sealed stainless-steel body maintain media compatibility, while temperature-compensated electronics ensure a reliable output across the stated temperature range. High insulation withstands 1800 V AC for safety on electrically noisy plant. IP65 ingress protection and robust vibration/shock ratings support long service intervals.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	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; 0–50 bar
Pressure reference	Gauge; Absolute; Sealed gauge
Accuracy	±0.5 % FS (typ), ±1 % FS (max)
Hysteresis & repeatability	≤ ±0.1 % FS
Temp. drift	≤ ±1.5 % FS (–20...85 °C)
Response time	< 100 ms
Service life	≥ 1,000,000 cycles
Ambient temp.	–20...80 °C
Medium temp.	–30...105 °C
Storage temp.	–40...120 °C
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	≥ 100 MΩ @ 500 V DC
Vibration resistance	Sine 20 g (25 Hz–2 kHz); Random 7.5 g rms (5 Hz–1 kHz)
Shock resistance	10 g/11 ms; 1 m free-fall
Protection	IP65
Wetted Parts	316L stainless steel
Net weight	50–90 g
Size of hexagon	22 mm
Approvals/Certification	EMC per IEC 61000-6-2/-6-3
Electrical Outputs	4–20 mA; 0–10 V; 0.5–4.5 V
Process connections	G1/4; NPT 1/4; 7/16-20 UNF; 7/16-20 UNF (female); NPT 1/8
Anti-Vibration	IEC 60068-2-6/-64
Overpressure/Burst Pressure	200 % FS
Housing Material	304 stainless steel
Electrical connections	Cable; M12; Mini-DIN; Packard
Power Supply	5 V DC; 9–30 V DC; 12–30 V DC

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	200%FS	500%FS
03	0-2.5 bar	GP/AP	200%FS	500%FS
04	0-4 bar	GP	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/SP	200%FS	500%FS
08	0-25 bar	SP	200%FS	500%FS
09	0-40 bar	SP	200%FS	400%FS
10	0-50 bar	SP	200%FS	300%FS

Output Signals

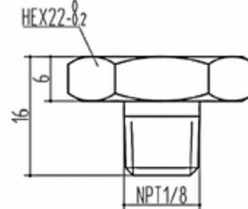
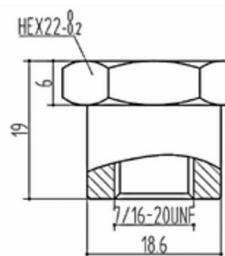
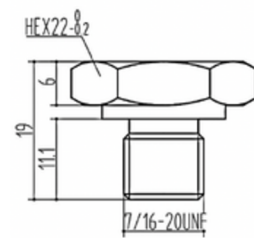
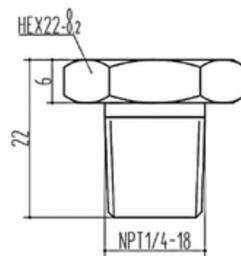
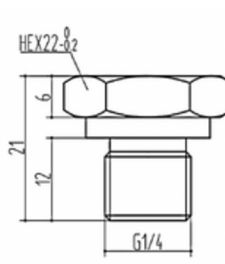
Code	Output	Power Supply
I4	4-20 mA (2-wire)	9-30 VDC
VX	0-10 V	12-30 VDC
VR	0.5-4.5 V ratiometric	5 VDC

Electrical Connections

2-wire current (I4)	Pinout
E1 - Cable outlet	Red: Supply +; Green: Current output
E2 - M12	Pin 1: Supply +; Pin 2: Current output; Pin 3: Not connected
E3 - Mini 4-pin	Pin 1: Supply +; Pin 2: Current output; Pin 3: Not connected
E4 - Packard	Pin 1: Supply +; Pin 2: Current output; Pin 3: Not connected
3-wire voltage (VX/VR)	Pinout
E1 - Cable outlet	Red: Supply +; Green: Ground; Yellow: Voltage output
E2 - M12	Pin 1: Supply +; Pin 2: Voltage output; Pin 3: Ground
E3 - Mini 4-pin	Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output
E4 - Packard	Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output

Process Connections/Drawings

Code	Thread / Port
P1	G1/4
P2	NPT1/4-18
P3	7/16-20 UNF
P4	7/16-20 UNF Female
P5	NPT1/8



Order Guide

Segment	Your Code	Options
Product family	QOM-REF 3100	QOM-REF 3100
Range	01 ... 10	See "Measuring range & accuracy" (Range code)
Pressure Reference	GP / AP / SP	GP = Gauge; AP = Absolute; SP = Sealed
Output	I4 / VX / VR	See Output table
Process Connection	P1 ... P5	See Process Connections
Electrical Connection	E1 / E2 / E3 / E4	See Electrical Connections

Ordering Example 0-16 bar sealed gauge, 4-20 mA, G1/4, M12

Family	Range	Ref	Output	Process	Electrical
QOM-REF 3100	07	SP	I4	P1	E2

Notes

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