

QPress Pressure Transducer — QHY-AUTOH2 3100 Series

Hydrogen-compatible stainless-steel pressure transducer for automotive and pneumatic systems

Certifications

Quality Lab Solutions data sheet R4



Applications

- Hydrogen measurement
- Hydrogen-powered vehicles
- High-pressure pneumatic control systems
- General pneumatic control

Special Features

- Hydrogen-ready design; 316L wetted parts
- Outputs: 4–20 mA; 0–5 V; 0–10 V; 0.5–4.5 V ratiometric
- Pressure ranges: 0–25 bar; 0–250 bar; 0–450 bar; 0–700 bar
- Response time ≤ 90 ms; service life $\geq 1 \times 10^6$ pressure cycles
- EMC tested to CISPR 25 and ISO 7637; automotive-grade immunity
- Protection: IP65 (IP67 with Round Packard connector)
- Process connections: M20 $\times$ 1.5; G1/4; NPT 1/4; 7/16-20 UNF
- Electrical connectors: M12 $\times$ 1; Mini 4-pin; Round Packard



QHY-AUTOH2 3100 Series

Description

Compact, all-stainless pressure transducer designed for hydrogen service. A glass-fused silicon sensing element with full temperature compensation provides stable measurement across ranges up to 700 bar. The fully welded 316L construction resists hydrogen permeation and the integral design eliminates leak paths. Multiple analogue outputs and automotive-grade EMC immunity support use in fuel-cell vehicles, hydrogen distribution and high-pressure pneumatic control. Protection is IP65, rising to IP67 with the Round Packard connector.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	0–25 bar; 0–250 bar; 0–450 bar; 0–700 bar
Accuracy	±0.5 % FS
Temp. drift	±1.5 % FS over –20 to 85 °C (full temperature range accuracy)
Response time	≤ 90 ms
Service life	≥ 1×10 ⁶ pressure cycles
Ambient temp.	–40 to 125 °C
Medium temp.	–40 to 125 °C
Storage temp.	–40 to 125 °C
EMC-interference	CISPR 25 conducted & radiated emissions; BCI high-current injection
EMC-immunity	ISO 7637-2/-3 pulses; Low-frequency magnetic field immunity
Insulation resistance	≥ 100 MΩ @ 250 VDC
Vibration resistance	20 g (20–2400 Hz)
Protection	IP65; IP67 with Round Packard
Wetted Parts	316L stainless steel
Net weight	150–180 g
Electrical Outputs	4–20 mA; 0–5 V; 0–10 V; 0.5–4.5 V ratiometric
Process connections	M20×1.5; G1/4; NPT 1/4; 7/16-20 UNF
Anti-Vibration	Yes
Overpressure/Burst Pressure	2× range
Housing Material	Stainless steel
Electrical connections	M12×1; Mini 4-pin; Round Packard
Power Supply	12–30 VDC (current/voltage); 5 VDC (ratiometric)

Measuring Range

Range Code	Measuring Range	Overpressure	Burst Pressure
01	0-25 bar	200%FS	500%FS
02	0-250 bar	200%FS	500%FS
03	0-450 bar	200%FS	400%FS
04	0-700 bar	200%FS	400%FS

Output Signals

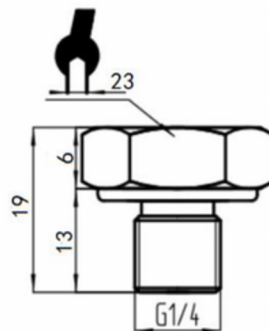
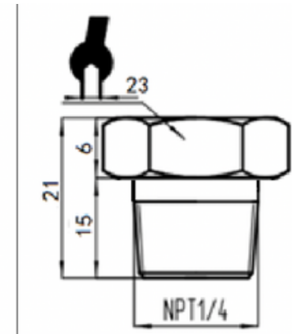
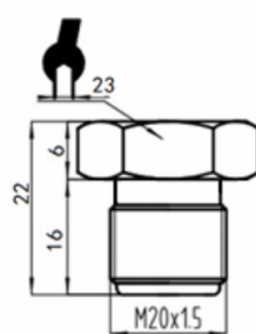
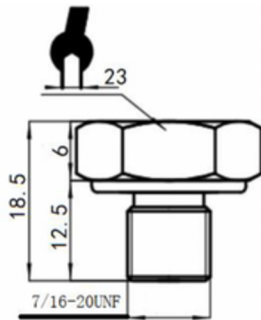
Code	Output	Power Supply
I4	4-20 mA (2-wire)	12-30 VDC
V5	0-5 V	12-30 VDC
VX	0-10 V	12-30 VDC
VR	0.5-4.5 V ratiometric	5 VDC

Electrical Connections

2-wire current (I4)	Pinout
E3 - Mini 4-pin	Pin 1: Supply +; Pin 2: Current output; Pin 3: Floating
E4 - Round Packard	Pin 1: Supply +; Pin 2: Current output; Pin 3: Floating
E2 - M12	Pin 1: Supply +; Pin 2: Current output; Pin 3: Floating; Pin 4: Floating
3-wire voltage (V5/VX/VY/VR)	Pinout
E3 - Mini 4-pin	Pin 1: Supply +; Pin 2: Common Ground; Pin 3: Voltage output
E4 - Round Packard	Pin 1: Supply +; Pin 2: Common Ground; Pin 3: Voltage output
E2 - M12	Pin 1: Supply +; Pin 2: Voltage output; Pin 3: Common Ground; Pin 4: Floating

Process Connections/Drawings

Code	Thread / Port
P1	M20x1.5-6g
P2	G1/4
P3	NPT1/4
P4	7/16-20 UNF



Order Guide

Segment	Your Code	Options
Product family	QHY-AUTOH2 3100	QHY-AUTOH2 3100
Range	01 ... 04	See "Measuring range & accuracy" (Range code)
Pressure Reference	GP / AP / SP	GP = Gauge; AP = Absolute; SP = Sealed
Output	I4 / V5 / VX / VR	See Output table
Process Connection	P1 ... P4	See Process Connections
Electrical Connection	E2 / E3 / E4	See Electrical Connections

Ordering Example 0-250 bar sealed gauge, 4-20 mA, G1/4, M12

Family	Range	Ref	Output	Process	Electrical
QHY-AUTOH2 3100	07	SP	I4	P1	E2

Notes

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