

QPress Pressure Transducer - QOM-HYDRA 1900 Series

Hydraulic-grade pressure transmitter with dual-output safety option, IP67, and fast 4–7 ms response.

Certifications

Quality Lab Solutions data sheet R4



Applications

- Aerial work platforms
- Hydraulic & pneumatic systems
- Energy & water treatment
- Refrigeration
- Process control
- Pumps & compressors
- HVAC
- Injection moulding hydraulic servo control

Special Features

- Microfused sensing element with high resistance to vibration, shock and overload
- Dual-output safety option (current+current or voltage+voltage) with PL d to EN ISO 13849-1:2015
- Wide supply options and outputs: 4–20 mA; 0–10 V; 0.5–4.5 V; dual 4–20 mA/20–4 mA; dual 0.5–4.5 V/4.5–0.5 V
- Robust environmental envelope: –40... 125 °C (single-output), IP67, vibration 20 g, shock 100 g
- Stainless-steel construction; 17-4PH isolated diaphragm; FVMQ seals per DIN 3869
- G1/4 A or M14×1.5 process connections with face seal (ISO 1179-2 / ISO 9974-2)



QOM-HYDRA 1900

Description

The QOM-HYDRA 1900 Series is a compact hydraulic and pneumatic pressure transmitter for OEM machinery. It uses a microfused sensor core and stainless-steel construction to provide stable performance under heavy shock and vibration. Outputs include 4–20 mA, 0–10 V and 0.5–4.5 V, plus dual-output variants for functional-safety use. Ranges span 0–16 bar to 0–350 bar with overpressure and burst ratings per range. IP67 protection, fast response (4 ms single-output / 7 ms dual-output) and a broad temperature envelope make it suitable for aerial work platforms, compressors, injection moulding, HVAC and general hydraulic systems.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	Gauge/Sealed gauge: 0–16 bar, 0–50 bar, 0–250 bar, 0–350 bar (see table)
Pressure reference	Gauge; Sealed gauge
Accuracy	$\leq \pm 0.5\%FS$ (@25 °C); total error $\leq \pm 1\%FS$ (–10...80 °C)
Hysteresis & repeatability	$\leq 0.2\%FS$
Temp. drift	Total error $\leq \pm 1\%FS$ (–10...80 °C)
Response time	4 ms (single-output); 7 ms (dual-output)
Ambient temp.	Single: –40...125 °C; Dual: –40...85 °C
Medium temp.	Single: –40...125 °C; Dual: –40...85 °C
Storage temp.	–40...125 °C
EMC-immunity	IEC 61000-4-2/-3/-4/-5/-6/-8
Connector material	PA66+30% GF (M12 plug)
Vibration resistance	20 g, 10–2000 Hz
Shock resistance	100 g, 11 ms
Protection	IP67
Wetted Parts	Isolated diaphragm: 17-4PH; Pressure port: SS304
Size of hexagon	SW22; OD 24 mm
Approvals/Certification	CE; UKCA; EAC; RoHS; PL d (dual output)
Electrical Outputs	4–20 mA (2-wire); 0–10 V; 0.5–4.5 V; Dual 4–20 mA/20–4 mA; Dual 0.5–4.5 V/4.5–0.5 V
Process connections	G1/4 A (ISO 1179-2); M14×1.5 (ISO 9974-2)
Overpressure/Burst Pressure	16 bar: 3×FS; 50 bar: 3×FS; 250 bar: 2×FS; 350 bar: 2×FS
Housing Material	Housing: SS304; Cable: Ø5 mm PUR; M12 plug: PA66+30% GF
Electrical connections	Cable; M12×1 4-pin metal; M12×1 5-pin plastic ; Packard
Power Supply	5 V ± 0.1 V; 8–33 V; 9–33 V; 12–33 V (per output type); Load (Ω): 2-wire $\leq (U-8)/0.02$; 3-wire current $\leq (U-9)/0.024$; 3-wire voltage > 10 k Ω
Longterm Stability	$\pm 0.25\%FS/Year$

Measuring Range (Gauge Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	0-16 bar	300%FS	$\pm 0.5\%FS$

Measuring Range (Sealed Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	0-50 bar	300%FS	$\pm 0.5\%FS$
02	0-250 bar	200%FS	$\pm 0.5\%FS$
03	0-350 bar	200%FS	$\pm 0.5\%FS$

Output Signals

Code	Output	Power Supply	Load
I4	4–20 mA (2-wire)	11–28 VDC	$\leq (U-11)/0.02 \Omega$
V1	1–5 V (3-wire)	11–28 VDC	≥ 10 k Ω
V5	0–5 V (3-wire)	11–28 VDC	≥ 10 k Ω
VX	0–10 V (3-wire)	15–28 VDC	≥ 10 k Ω
VR	0.5–4.5 V ratiometric (3-wire)	5 ± 0.1 VDC	≥ 10 k Ω
VN	0.5–2.5 V non-ratiometric (3-wire)	5 ± 0.1 or 3.3 ± 0.1 VDC	≥ 10 k Ω

Electrical Connections

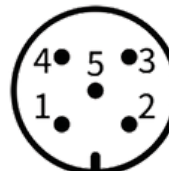
Code	Description	Pinout
E1	Cable outlet (2-wire current, single output)	2 wire: Red: Supply +; Black: Current output 3 Wire: Red: Supply +; Blue: Ground; Black: Output
E2	M12x1 4-pin plug, metal thread (single output)	Pin 1: Supply +; Pin 3: Ground; Pin 4: Output
E3	M12x1 5-pin plug, plastic thread (dual-output only)	Pin 1: Supply +; Pin 3: Ground; Pin 4: OUT1; Pin 2: OUT2
E4	Packard plug (single output)	B: Supply +; A: Ground; C: Output



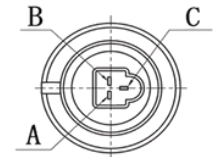
E1 – Cable outlet



E2 – M12 4-Pin



E3 – M12 5-Pin



E4 – Packard

Cable Length

Code	Length
CL05	0.5 m (default)
CLxx	Custom (specify)

Construction Materials

Code	Diaphragm	Pressure Port	Housing
M01	17-4PH	Stainless steel 304	Stainless steel 304

Cable Material

Code	Description
CB1	PUR, Ø5 mm

Process Connection Seal

Code	Seal type
S01	FVMQ O-ring (DIN 3869), end face seal

Accuracy options

Code	Accuracy
AC50	±0.5%FS

Power Supply

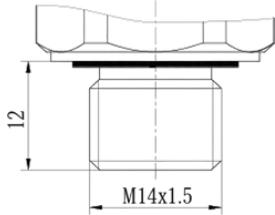
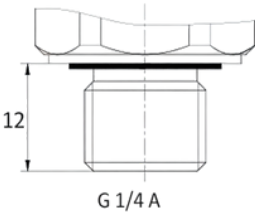
Code	Supply
PS08-33	8-33 VDC
PS12-33	12-33 VDC
PS09-33	9-33 VDC (dual-output variants)
PS05	5 V±0.1 VDC

Certification

Code	Description
CE	EU Declaration of Conformity (EMC, PED)
UK	UK Conformity Assessment (UKCA)
EA	EAC (Eurasian Conformity)
RO	RoHS Compliance
PL	PL d (EN ISO 13849-1:2015) functional safety (dual-output)

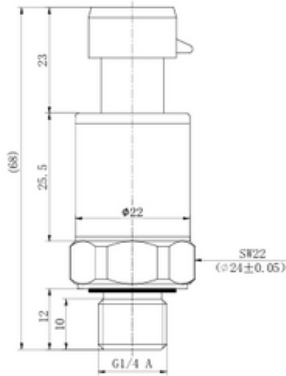
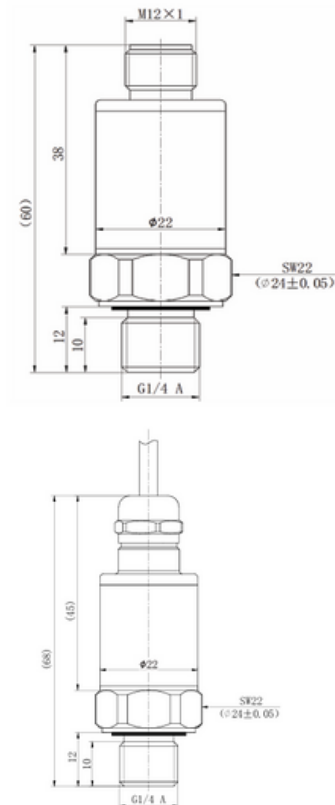
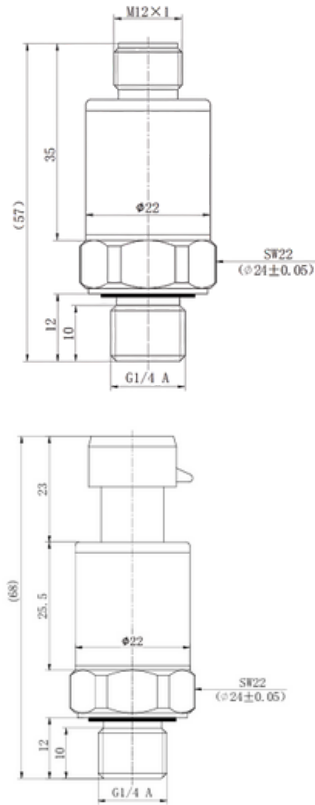
Process Connections/Drawings

Code	Thread / Port
P01	G1/4 A (ISO 1179-2, end face seal)
P02	M14x1.5 (ISO 9974-2, end face seal)



Unit: mm

Unit: mm



Order Guide

Segment	Your Code	Options
Product family	QOM-HYDRA 1900	QOM-HYDRA 1900
Pressure Reference	GP/SP	Gauge (0-16 bar) / Sealed (0-50...350 bar)
Range	01...NN	See MR_Gauge / MR_Sealed
Accuracy	AC50	See Accuracy options
Output	I4/V5/VN/VR	See Output Signals
Power Supply	PS08-33/PS12-33/PS09-33/PS05	See Power Supply
Construction Materials	M01	See Construction Materials
Process Connection	P01/P02	See Process Connections & Drawings
Connection Seal	S01	See Connection Seal
Electrical Connection	E1/E1V/E2/E3/E4	See Electrical Connections
Cable Material	CB1	See Cable Material
Cable Length	CL05/CLxx	See Cable Length
Certification	CE/UK/EA/RO/PL	See Certification

Ordering Example Sealed gauge 0-350 bar (Range 03), $\pm 0.5\%FS$, 4-20 mA (2-wire), 8-33 VDC supply, 17-4PH diaphragm, SS304 port/housing, G1/4 A end-face seal, FVMQ O-ring, M12 4-pin connector, PUR cable 0.5 m, CE.

Family	Ref	Range	Accuracy	Output	Power Supply	Construction Materials	Process Connection	Process Connection Sealing	Electrical Connection	Cable Material (E1 only)	Cable Length (E1 only)	Certification
QOM-HYDRA 1900	SP	03	AC50	I4	PS08-33	M01	P01	S01	E2	CB1	CL05	CE

Notes

Ensure media compatibility with wetted parts. Torque depends on gasket, mating material and lubrication.
Media must not solidify in operation; standard pressure port includes damping hole $\varnothing 0.5$ mm.