

## QPress Pressure Transducer — QOM-HYDRA 1920 Series

Hydraulic-grade pressure transmitter with microfused stainless construction, wide ranges up to 1000 bar.

### Certifications

Quality Lab Solutions data sheet R4



### Applications

- Engineering machinery
- Hydraulic & pneumatic
- Energy & water
- Refrigeration
- Process control
- Pumps & compressors
- HVAC

### Special Features

- Micro-fused sensing core for high overload and shock resistance
- Stainless-steel pressure chamber, all-metal sealing; no oil fill
- Gauge or sealed gauge ranges from 16 to 1000 bar
- Outputs: 4–20 mA (2-wire), 0–10 V, 0.5–4.5 V (incl. 5 V ratiometric)
- IP65, vibration 20 g (20–2000 Hz), shock 100 g (6 ms)
- Compact, ≤100 g
- 10 million Pressure cycles



**QOM-HYDRA 1920**

### Description

The QOM-HYDRA 1920 Series is a compact transmitter for hydraulic and pneumatic service. Its micro-fused sensor and all-metal sealing deliver stable performance under strong overloads, vibration and shock. Outputs include 4–20 mA (2-wire), 0–10 V and 0.5–4.5 V (5 V ratiometric option). Gauge and sealed-gauge ranges span 0–16 bar to 0–1000 bar with tiered overpressure and burst ratings. An IP65 enclosure, broad temperature envelope and multiple process/connector options suit OEM and industrial use.

## Specifications

| TECHNICAL SPECIFICATIONS    |                                                                                                                                                            |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pressure range              | Gauge/Sealed gauge: 0–16 bar ... 0–1000 bar                                                                                                                |
| Pressure reference          | Gauge; Sealed gauge                                                                                                                                        |
| Accuracy                    | $\leq \pm 0.5\%FS$ (@25 °C)                                                                                                                                |
| Total error band            | Total error band $\leq \pm 1\%FS$ (–10...80 °C)                                                                                                            |
| Service life                | 10 million cycles                                                                                                                                          |
| Medium temp.                | –40...125 °C (application)                                                                                                                                 |
| Storage temp.               | –30 to +105 °C                                                                                                                                             |
| Vibration resistance        | –40...125 °C                                                                                                                                               |
| Shock resistance            | 20 g, 20–2000 Hz                                                                                                                                           |
| Protection                  | 100 g, 6 ms                                                                                                                                                |
| Wetted Parts                | IP65                                                                                                                                                       |
| Net weight                  | Isolation diaphragm: 17-4PH; Pressure port: SS304; Seal: FKM/NBR                                                                                           |
| Size of hexagon             | $\leq 100$ g                                                                                                                                               |
| Approvals/Certification     | SW22                                                                                                                                                       |
| Electrical Outputs          | CE; UKCA; RoHS                                                                                                                                             |
| Process connections         | 4–20 mA (2-wire); 0–10 V; 0.5–4.5 V; 0.5–4.5 V (5 V ratiometric)<br>G1/4 A (face seal); M20×1.5 (waterline); NPT1/4; G3/8 A (face seal); G1/2 (waterline)  |
| Overpressure/Burst Pressure | $\leq 50$ bar: 3×FS; 50–<750 bar: 2×FS; 750–1000 bar: 1.5×FS; Burst: $\leq 5$ ×FS (max 2000 bar)                                                           |
| Housing Material            | Cable: PUR (5-core, Ø5 mm)                                                                                                                                 |
| Electrical connections      | Mini Hirschmann; Cable; M12×1 4-pin; Packard                                                                                                               |
| Power Supply                | 4–20 mA: 8–33 V DC; 0–10 V: 11–33 V DC; 0.5–4.5 V: 8–33 V DC; 0.5–4.5 V (K1):<br>5±0.1 V DC; Load: 2-wire $\leq (U-8)/0.02 \Omega$ ; 3-wire voltage >10 kΩ |
| Long term Stability         | <0.25%FS/year                                                                                                                                              |

## Measuring Range (Gauge Pressure)

| Range Code | Measuring Range | Overpressure | Accuracy      |
|------------|-----------------|--------------|---------------|
| 01         | 0-10 bar        | 300%FS       | $\pm 0.5\%FS$ |
| 02         | 0-16 bar        | 300%FS       | $\pm 0.5\%FS$ |
| 03         | 0-25 bar        | 300%FS       | $\pm 0.5\%FS$ |
| 04         | 0-40 bar        | 300%FS       | $\pm 0.5\%FS$ |
| 05         | 0-50 bar        | 300%FS       | $\pm 0.5\%FS$ |
| 06         | 0-60 bar        | 200%FS       | $\pm 0.5\%FS$ |
| 07         | 0-100 bar       | 200%FS       | $\pm 0.5\%FS$ |
| 08         | 0-160 bar       | 200%FS       | $\pm 0.5\%FS$ |
| 09         | 0-250 bar       | 200%FS       | $\pm 0.5\%FS$ |
| 10         | 0-400 bar       | 200%FS       | $\pm 0.5\%FS$ |
| 11         | 0-600 bar       | 200%FS       | $\pm 0.5\%FS$ |

## Measuring Range (Sealed Pressure)

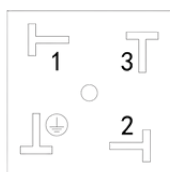
| Range Code | Measuring Range | Overpressure | Accuracy |
|------------|-----------------|--------------|----------|
| 01         | 0-25 bar        | 300%FS       | ±0.5%FS  |
| 02         | 0-40 bar        | 300%FS       | ±0.5%FS  |
| 03         | 0-60 bar        | 200%FS       | ±0.5%FS  |
| 04         | 0-100 bar       | 200%FS       | ±0.5%FS  |
| 05         | 0-160 bar       | 200%FS       | ±0.5%FS  |
| 06         | 0-250 bar       | 200%FS       | ±0.5%FS  |
| 07         | 0-400 bar       | 200%FS       | ±0.5%FS  |
| 08         | 0-600 bar       | 200%FS       | ±0.5%FS  |
| 09         | 0-1000 bar      | 150%FS       | ±0.5%FS  |

## Output Signals

| Code | Output                         | Power Supply | Load                          |
|------|--------------------------------|--------------|-------------------------------|
| I4   | 4-20 mA (2-wire)               | 8-33 VDC     | $\leq (U-8)/0.02 \text{ ohm}$ |
| VN   | 0.5-4.5 V non-ratio (3-wire)   | 11-33 VDC    | $\geq 10 \text{ k}\Omega$     |
| VR   | 0.5-4.5 V ratiometric (3-wire) | 5 ±0.1 VDC   | $\geq 10 \text{ k}\Omega$     |
| VX   | 0-10 V (3-wire)                | 11-33 VDC    | $\geq 10 \text{ k}\Omega$     |

## Electrical Connections

| Code | Description                                                     | Pinout                                                                                                                                                                 |
|------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E1   | Cable outlet -                                                  | <ul style="list-style-type: none"> <li>2-Wire: Red: Supply +; Black: Current output</li> <li>3-Wire: Red: Supply +; Black: Voltage output; White: Ground</li> </ul>    |
| E2   | M12 4-pin - 2-wire current (I4) 3-wire voltage (VN/VR/VX)       | <ul style="list-style-type: none"> <li>2-Wire: Pin 1: Supply +; Pin 3: Current output</li> <li>3-Wire Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output</li> </ul> |
| E5   | Mini Hirschmann - 2-wire current (I4) 3-wire voltage (VN/VR/VX) | <ul style="list-style-type: none"> <li>2-Wire: Pin 1: Supply +; Pin 3: Current output</li> <li>3-Wire Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output</li> </ul> |
| E6   | Packard plug - 2-wire current (I4) 3-wire voltage (VN/VR/VX)    | <ul style="list-style-type: none"> <li>2-Wire: Pin 1: Supply +; Pin 3: Current output</li> <li>3-Wire Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output</li> </ul> |



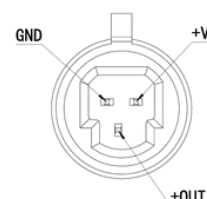
E5 – Mini Hirschmann



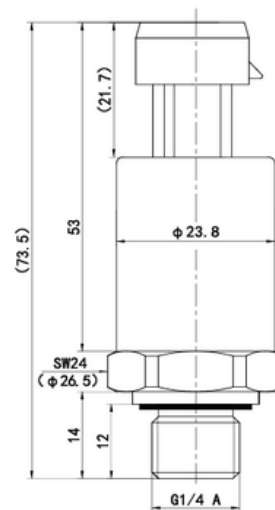
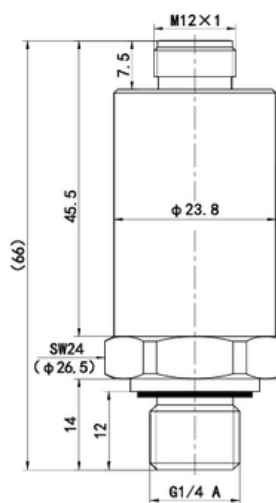
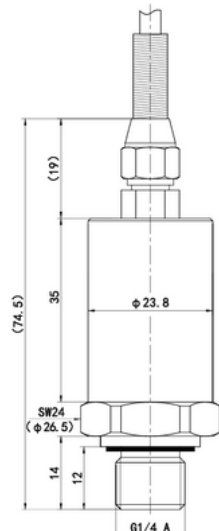
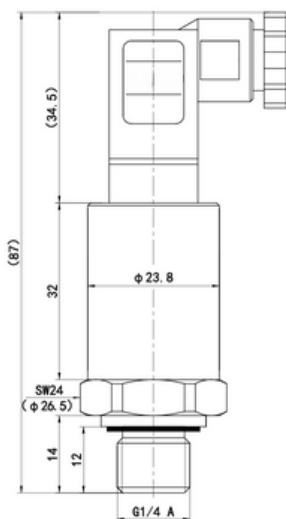
E1 – Cable outlet



E2 – M12



E6 – Packard Plug



## Power Supply

| Code | Supply     |
|------|------------|
| PS1  | 8-33 VDC   |
| PS2  | 11-33 VDC  |
| PS3  | 5 ±0.1 VDC |

## Construction Materials

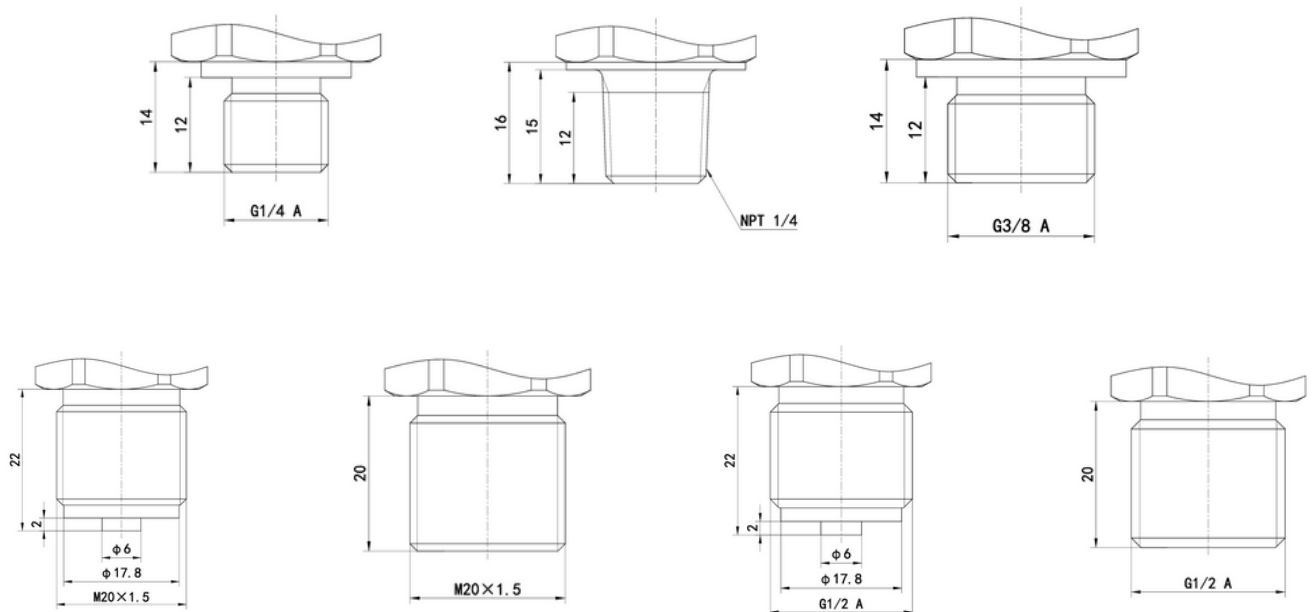
| Code | Diaphragm | Pressure Port | Housing |
|------|-----------|---------------|---------|
| M1   | SS 17-4PH | SS 304        | SS 304  |

## Cable Material

| Code | Description                         |
|------|-------------------------------------|
| CM1  | Polyurethane cable, 5-core, 5 mm OD |

## Process Connections/Drawings

| Code | Thread / Port                          |
|------|----------------------------------------|
| P01  | G1/4 male, face type seal (ISO 1179-2) |
| P02  | M20x1.5 male, waterline seal (EN 837)  |
| P03  | NPT 1/4 male (ANSI/ASME B1.20.1)       |
| P04  | G3/8 male, face type seal (ISO 1179-2) |
| P05  | G1/2 male, waterline seal (ISO 1179-2) |



## Certification

| Code | Description    |
|------|----------------|
| NA   | None specified |
| CE   | EMC/CE/UKCA    |
| RO   | RoHS           |

## Process Connection Seal

| Code | Seal type |
|------|-----------|
| Z0   | None      |
| Z1   | NBR       |
| Z2   | FKM       |

## Accuracy options

| Code | Accuracy |
|------|----------|
| AC1  | ±0.5%FS  |

## Cable Length

| Code | Length |
|------|--------|
| L0D5 | 0.5 m  |

## Order Guide

| Segment                | Your Code         | Options                              |
|------------------------|-------------------|--------------------------------------|
| Product family         | QOM-HYDRA 1920    | QOM-HYDRA 1920                       |
| Pressure Reference     | GP / SP           | Gauge/Sealed                         |
| Range                  | 01...XX           | See Measuring range                  |
| Accuracy               | AC1               | ±0.5%FS                              |
| Output                 | I4 / VN / VR / VX | See Output Signals                   |
| Power Supply           | PS1 / PS2 / PS3   | See Power Supply                     |
| Construction Materials | M1                | SS 17-4PH diaphragm; SS 304 port     |
| Process Connection     | P01-P05           | See Process connections              |
| Connection Seal        | Z1 / Z2           | FKM or NBR                           |
| Electrical Connection  | E1 / E2 / E5 / E6 | Cable; M12; Mini Hirschmann; Packard |
| Cable Material         | CM1               | Polyurethane                         |
| Cable Length           | LOD5              | 0.5m                                 |
| Certification          | NA / CE / RO      | See Certification                    |

**Ordering Example** *Sealed 0-100 bar, ±0.5%FS, 4-20 mA (2-wire), 8-33 VDC supply, SS 17-4PH diaphragm with SS 304 port, G1/4 male face seal, FKM seal, M12 4-pin connector*

| 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 | Accessories |
|----------------|-----|-------|----------|--------|--------------|------------------------|--------------------|----------------------------|-----------------------|--------------------------|------------------------|---------------|-------------|
| QOM-HYDRA 1920 | SP  | 04    | AC1      | I4     | PS1          | M1                     | P01                | Z2                         | E2                    | -                        | -                      | -             | -           |

### Notes

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