QPress Pressure Transducer — QHY-GOLD 2100 Series

Hydrogen-compatible pressure transmitter with gold-plated 316L diaphragm and up to ≤±0.25%FS accuracy.

Certifications

CE UKCA RoHS compliant c UL us LISTED

Applications

- Hydrogen production
- Hydrogen storage
- Fuel cells
- Industrial gas systems

Special Features

- Gold-plated stainless-steel diaphragm (H_2 permeation barrier)
- Fully welded inner sensor assembly; laser-welded sealing
- Multiple outputs including 4–20 mA and ratiometric voltage
- Reverse-polarity, overcurrent and overvoltage protection; EMI compliant
- Intrinsically safe circuit option for hazardous areas
- IP65 protection; vibration 20 g (20–2000 Hz), shock 20 g (11 ms)

QHY-GOLD 2100

Description

The QHY-GOLD 2100 Series is a hydrogen-service pressure transmitter for gas applications. It uses a gold-plated stainless-steel sensing diaphragm inside a high-strength stainless-steel housing to resist hydrogen permeation while maintaining stability and long-term reliability. It offers multiple analogue outputs with robust electrical protection and optional intrinsic-safety for hazardous areas. Available from low mbar ranges up to 70 bar, temperature-compensated and rated IP65.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	Gauge/Absolute/Sealed gauge: 0–0.25 bar to 0–70 bar (see range table)
Pressure reference	Gauge; Absolute; Sealed gauge
Accuracy	≤±0.25%FS (see range table); options: ±0.5%FS, ±1%FS
Temp. drift	Compensation: −10 to 60°C
Medium temp.	−30 to 85°C; −20 to 70°C; −20 to 80°C
Storage temp.	−30 to 85°C ; −20 to 85°C
Insulation resistance	≥100 MΩ @ 500 V DC
Vibration resistance	20 g, 20–2000 Hz
Shock resistance	20 g, 11 ms
Protection	IP65
Wetted Parts	Isolated diaphragm: SS316L (gold plated); Pressure port: SS304/SS316L
Size of hexagon	SW27; SW17
Approvals/Certification	CE; RoHS; cULus Listed; Intrinsic-safety circuit (option)
Electrical Outputs	4–20 mA (2-wire); 0–10 V; 0–5 V; 1–5 V; 0.5–4.5 V (two supply options); 0.5–2.5 V
Process connections	M20×1.5 male; G1/4 male; G1/2 male; NPT1/4 male
Overpressure/Burst Pressure	≤1.5 × FS
Housing Material	SS304/SS316L
Electrical connections	Hirschmann 4-pin (B1); Cable (B2); M12×1 4-pin (B4)
Power Supply	12–28 V DC (4–20 mA); 15–28 V DC (voltage); 5–10 V DC (K1); 3.2–5 V DC (W)
Longterm Stability	±0.2%FS/year

Measuring Range (Gauge Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	0-0.25 bar	150%FS	±1%FS
02	0-0.3 bar	150%FS	±1%FS
03	0-0.35 bar	150%FS	±1%FS
04	0-0.4 bar	150%FS	±0.5%FS
05	0-0.6 bar	150%FS	±0.5%FS
06	0-1 bar	150%FS	±0.5%FS
07	0-1.6 bar	150%FS	±0.25%FS / ±0.5%FS
08	0-2.5 bar	150%FS	±0.25%FS / ±0.5%FS
09	0-4 bar	150%FS	±0.25%FS / ±0.5%FS
10	0-6 bar	150%FS	±0.25%FS / ±0.5%FS
11	0-10 bar	150%FS	±0.25%FS / ±0.5%FS
12	0-16 bar	150%FS	±0.25%FS / ±0.5%FS
13	0-25 bar	150%FS	±0.25%FS / ±0.5%FS
14	0-40 bar	150%FS	±0.25%FS / ±0.5%FS
15	0-60 bar	150%FS	±0.25%FS / ±0.5%FS
16	0-70 bar	150%FS	±0.25%FS / ±0.5%FS

Measuring Range (Absolute Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	0-0.7 bar	150%FS	±1%FS
02	0-0.8 bar	150%FS	±1%FS
03	0-0.9 bar	150%FS	±1%FS
04	0-1 bar	150%FS	±1%FS
05	0-1.6 bar	150%FS	±0.5%FS
06	0-2.5 bar	150%FS	±0.5%FS
07	0-4 bar	150%FS	±0.5%FS
08	0-6 bar	150%FS	±0.5%FS
09	0-10 bar	150%FS	±0.5%FS
10	0-16 bar	150%FS	±0.25%FS
11	0-25 bar	150%FS	±0.25%FS
12	0-40 bar	150%FS	±0.25%FS
13	0-60 bar	150%FS	±0.25%FS
14	0-70 bar	150%FS	±0.25%FS

Measuring Range (Sealed Pressure)

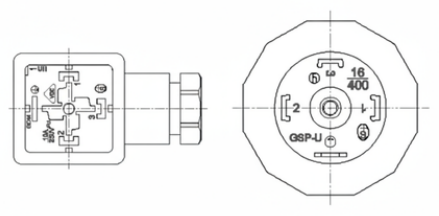
Range Code	Measuring Range	Overpressure	Accuracy
01	0-35 bar	150%FS	±0.25%FS / ±0.5%FS
02	0-40 bar	150%FS	±0.25%FS / ±0.5%FS
03	0-60 bar	150%FS	±0.25%FS / ±0.5%FS
04	0-70 bar	150%FS	±0.25%FS / ±0.5%FS

Output Signals

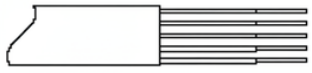
Code	Output	Power Supply	Load
I4	4-20 mA (2-wire)	12-28 VDC	≤(U-11V)/0.02 Ω
VX	0-10 V (3-wire)	15-28 VDC	>=10 kΩ
V5	0-5 V (3-wire)	15-28 VDC	>=10 kΩ
V1	1-5 V (3-wire)	15-28 VDC	>=10 kΩ
VR	0.5-4.5 V (ratiometric, 3-wire)	5-10 VDC	>=10 kΩ
VN	0.5-4.5 V (non-ratio, 3-wire)	15-28 VDC	>=10 kΩ

Electrical Connections

Code	Description	Pinout
E5	DIN 175301-803A 4-pin angular	• 2-wire current (I4): Pin 1: Supply +; Pin 2: Current output • 3-wire voltage (V5/V1/VX/VR/VN): Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output
E1	Cable	• 2-wire current (I4): Red: Supply +; Black: Current output • 3-wire voltage (V5/V1/VX/VR/VN): Red: Supply +; White: Ground; Black: Voltage output
E2	M12×1 A-coded 4-pin (B4)	• 2-wire current (I4): Pin 1: Supply +; Pin 2: Current output • 3-wire voltage (V5/V1/VX/VR/VN): Pin 1: Supply +; Pin 2: Ground; Pin 3: Voltage output; Pin 4: unused



E5 - Hirschmann 4-pin Angular Connector



E1 – Cable outlet

E2 – M12

Power Supply

Code	Supply
S1	12-28 VDC (for I4)
S2	15-28 VDC (for V5/V1/VX/VN)
S3	5-10 VDC (for VR)

Accuracy options

Code	Accuracy
A25	±0.25%FS
A50	±0.5%FS
A10	±1%FS

Construction Materials

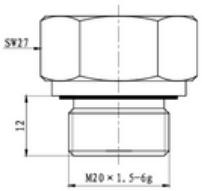
Code	Diaphragm	Pressure Port	Housing
M1	SS316L (gold-plated)	SS304	SS304
M2	SS316L (gold-plated)	SS316L	SS316L

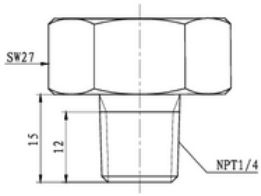
Cable Material

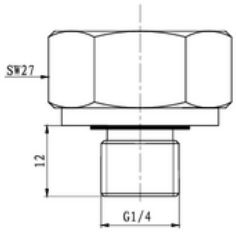
Code	Description
CB1	PE
CB2	PUR
CB3	PVC

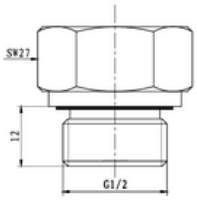
Process Connections/Drawings

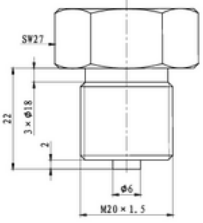
Code	Thread / Port
P01	M20×1.5 male, end face seal
P02	G1/4 male, end face seal
P03	G1/2 male, end face seal
P05	M20×1.5 male, waterline seal
P06	NPT1/4 male



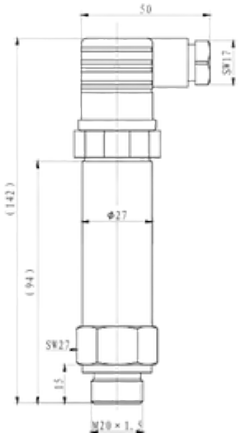




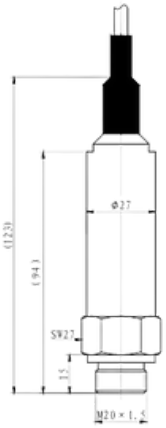




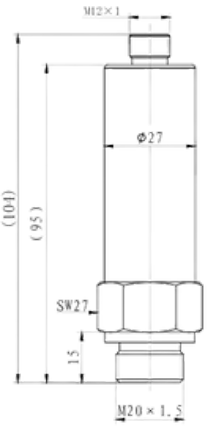
E5 - Hirschmann 4-pin Angular Connector



E1 – Cable outlet



E2 – M12



Process Connection Seal

Code	Seal type
CS1	End face seal
CS5	Waterline seal

Certification

Code	Description
CE	EU Declaration of Conformity
UL	UL Listed (Process Control Equipment)
RO	RoHS

Order Guide

Segment	Your Code	Options
Product family	QHY-GOLD 2100	QHY-GOLD 2100
Pressure Reference	GP/AP/SP	Gauge, Absolute or Sealed
Range	GP: 01-16 / AP: 01-14 / SP: 01-04	See Measuring range
Accuracy	A25/A50/A10	See Accuracy options
Output	I4/V5/V1/VX/VR/VN	See Output Signals
Power Supply	S1/S2/S3	See Power Supply
Construction Materials	M1/M2	See Construction Materials
Process Connection	P01/P02/P03/P05/P06	See Process Connections & Drawings
Connection Seal	CS1/CS5	See Connection Seal
Electrical Connection	E1/E2/E5	See Electrical Connections
Cable Material	CB1/CB2/CB3	E1 (cable) only
Certification	CE/UL/RO	See Certification

Ordering Example *0-0.25bar Gauge, ±1%FS, 4-20 mA (2-wire), 12-28 VDC, gold-plated SS316L diaphragm, G1/4 male end-face seal, cable connection (E1), PE cable, CE.*

Family	Ref	Range	Accuracy	Output	Power Supply	Construction Materials	Process Connection	Process Connection Sealing	Electrical Connection	Cable Material (E1 only)	Certification
QHY-GOLD 2100	GP	01	A10	I4	S1	M1	P02	CS1	E1	CB1	CE

Notes

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