

QPress Hygienic Pressure Transmitter QHY-HYGIENIC 6600 Series

Hygienic monosilicon transmitter with tri-clamp fittings and 4–20 mA + HART.

Certifications

Quality Lab Solutions data sheet R4



Applications

- Hygienic pressure lines in food and beverage plants
- Level monitoring in pressurised vessels
- CIP/SIP cleaning and sterilisation circuits

Special Features

- Hygienic design for CIP/SIP; surface roughness $\leq 0.4 \mu\text{m}$
- Tri-clamp and dairy fittings; IP67; LCD option
- 4–20 mA (2-wire) with HART
- Typical accuracy $\pm 0.2 \%$ URL; zero/span trim
- FDA-approved Neobee M-20 fill; EHEDG & 3-A option
- Overpressure up to 150 bar; vibration 10 g RMS



QHY-HYGIENIC 6600

Description

Compact hygienic pressure transmitter for food and pharmaceutical duties, built on a monosilicon sensor with a 316L diaphragm. The QPress Hygienic Pressure – QHY-HYGIENIC 6600 Series supports tri-clamp and dairy fittings for clean-in-place and steam-in-place regimes, with IP67 protection and an optional local LCD. Standard analogue output is 4–20 mA (2-wire) with HART for configuration and diagnostics. Typical reference accuracy is $\pm 0.2 \%$ URL, with robust temperature behaviour and configurable electronic damping. FDA-approved Neobee M-20 fill is available, EHEDG & 3-A certification is supported. Measuring ladders span from $-0.4 \dots 0.4$ bar up to $-1 \dots 30$ bar, with overpressure capability to 150 bar depending on range—suited to process lines, vessels and CIP/SIP loops.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	−0.4...0.4 bar; −1...2.5 bar; −1...10 bar; −1...30 bar
Pressure reference	Gauge
Accuracy	±0.2 %URL (typ.); ±0.5 %URL (max.)
Turn down	4:1; 10:1
Temp. drift	Ambient effect: ±0.2 %URL / 10 K (−20...80 °C)
Response time	Sensor module ≤0.2 s; damping adjustable 0–100 s
Power consumption	≤500@24VDC , 20.8mA
Ambient temp.	−40...85 °C (with LCD: −20...70 °C)
Medium temp.	Neobee M-20 (FDA): −10...180 °C; Silicone oil: −45...205 °C
Storage temp.	−40...110 °C (with LCD: −40...85 °C)
Operating humidity	0...95 %RH
Shock resistance	500 g / 1 ms
Damping time	0...100s
Relative humidity	0...95 %RH
Protection	IP67
Overpressure	Overpressure limit: 10 bar (URL 0.4 bar); 40 bar (URL 2.5 bar); 60 bar (URL 10 bar); 150 bar (URL 30 bar)
Net weight	≈ 0.8 kg
Vibration Resistance	10 g RMS (25–2000 Hz)
Approvals/Certification	UKCA; CE; RoHS ; 3-A; FDA (filling fluid and gasket); EHEDG EL Class I
Electrical Outputs	4–20 mA (2-wire); HART
Process connections	Tri-clamp 1-1/2 in; Tri-clamp 2 in; DIN 32676 DN32; DIN 32676 DN40; DIN 32676 DN50; ISO 2852 DN38; ISO 2852 DN40; ISO 2852 DN51; DIN 11851 DN25; DIN 11851 DN40; DIN 11851 DN50; SMS DN1-1/2 in; SMS DN2 in; IDF DN1-1/2 in; IDF DN2 in; DRD; Plug-in tube flush hygienic clamp
Cable Gland Types	M12×1 connector, IP67
Electrical entry threads	M12×1
Insulation resistance	≥20 MΩ @ 100VDC
Fill fluid options	Neobee M-20 (FDA); Silicone oil
Wetted parts	316L; Hastelloy C; Silicone rubber (gasket, FDA)
Housing Material	Stainless steel
Electrical connections	M12×1 4-pin (IP67)
Power Supply	10.5...55 V DC (standard); 16.5...55 V DC (HART)
Longterm Stability	±0.2 %URL / 1 year
Overpressure	10 bar; 40 bar; 60 bar; 150 bar (range dependant)

Accuracy

Item	Value
Calibration temperature	20 deg ±5 deg
Linear output accuracy (TD≤10)	±0.2%URL (nominal values 0.4 / 2.5 / 10 / 30 bar)
Max reference accuracy	±0.5%URL
Typical overall performance	±0.2%URL (includes environment temperature effects and other errors)
Stability	±0.2%URL / 1 year
Square-root output accuracy	1.5 × linear reference output accuracy
TD definition	TD = URL / URV – LRV = URL / SPAN

Ambient temperature effects

Effect (per 10°C)	Applicable nominal ranges	Notes
±0.2%URL/10°C	0.4 / 2.5 / 10 / 30 bar	Within -20...80°C window (typical)

Environmental conditions

Item	Condition	Notes
Operating temperature	-40 to +85 deg (no LCD); -20 to +70 deg (with LCD)	-
Storage temperature	-40 to +110 deg (no LCD); -40 to +85 deg (with LCD)	-
Medium temperature (Hygienic fill)	-10 to +180 deg	-
Medium temperature (Silicon oil)	-45 to +205 deg	-
Operating humidity	0–95 %RH	-
Ingress protection	IP67	Housing M12 entry

EMC standards

Test	Test / Standard	Condition	Performance
Radiated emission (enclosure)	CISPR 22 radiated	30 MHz–1 GHz	OK (A)
Conducted emission (DC port)	CISPR 22 conducted (DC port)	0.15–30 MHz	OK (A)
Electrostatic discharge immunity	IEC 61000-4-2 ESD	±4 kV contact, ±8 kV air	Level B
RF electromagnetic field immunity	IEC 61000-4-3 RF field	10 V/m (80 MHz–1 GHz)	Level A
Power-freq magnetic field immunity	IEC 61000-4-8 Power-freq magnetic	30 A/m	Level A
Electrical fast transient/burst immunity	IEC 61000-4-4 EFT/Burst	2 kV (5/50 ns, 100 kHz)	Level B
Surge immunity	IEC 61000-4-5 Surge	1 kV L-L / 2 kV L-G (1.2/50 µs)	Level B
Conducted RF immunity	IEC 61000-4-6 Conducted RF	3 V (150 kHz–80 MHz)	Level A

Power supply & Load

Item	Specification	Notes
Supply (standard)	10.5–55 VDC	-
Supply (HART comms)	16.5–55 VDC	HART comms requires 250–600 Ω load
Loop load (operation)	0–2119 Ω	-
Loop load (HART comms)	250–600 Ω	-
Transmission distance	< 1000 m	-
Power consumption	≤ 500 mW @ 24 VDC (20.8 mA)	-
Power supply effects	Zero and span change ≤±0.005%URL/V	-
Loading effects	Zero and span change ≤±0.05%URL/kΩ	-

Measuring Range (Gauge Pressure)

Range Code	Measuring Range	LRL	URL	Overload	Overpressure	Accuracy
1	±0.4 bar	-0.4 bar	0.4 bar	10 bar	1250%FS	±0.2%URL
2	-1...+2.5 bar	-1 bar	2.5 bar	40 bar	1142.9%FS	±0.2%URL
3	-1...+10 bar	-1 bar	10 bar	60 bar	545.5%FS	±0.2%URL
4	-1...+30 bar	-1 bar	30 bar	150 bar	483.9%FS	±0.2%URL

Output Signals

Code	Output	Power Supply	Load
I4	4–20 mA (2-wire)	10.5–55 VDC	See Power Supply & Load Requirements
IH	4–20 mA + HART (2-wire)	16.5–55 VDC	250–600 Ω for comms

Electrical Connections & Pin outs

Code	Description	Pinout
E1H	M12×1 (4-pin) male on housing (horizontal)	2-wire current (I4/IH): Pin 1 = Supply +; Pin 4 = Supply –
E1V	M12×1 (4-pin) male on housing (vertical)	2-wire current (I4/IH): Pin 1 = Supply +; Pin 4 = Supply –



E1

Power Supply

Code	Supply
V4	10.5–55 VDC (standard)
VI	16.5–55 VDC (HART comms)

Display

Code	Display
DP1	None
DP2	LCD

Application

Code	Description
AP1	Degreased for oxygen
AP2	Electropolished wetted parts (improved surface finish for hygienic service)

Fill Fluid

Code	Description	Temp Range
FFH	Hygienic fill (Neobee M-20)	-10...+180 deg
FFS	Silicon oil	-45...+205 deg

Construction Materials

Code	Diaphragm	Pressure Port / Process Connection	Housing
CM1	316L stainless steel	316 or 316L stainless steel hygienic connection (tri-clamp / DIN / SMS / IDF / DRD)	Stainless steel housing
CM2	Hastelloy C	316 or 316L stainless steel hygienic connection	Stainless steel housing

Certification/Documentation

Code	Description
CE	CE (EMC)
UK	UKCA
RO	RoHS
3A	3-A Certification
EHEDG	EHEDG Certification

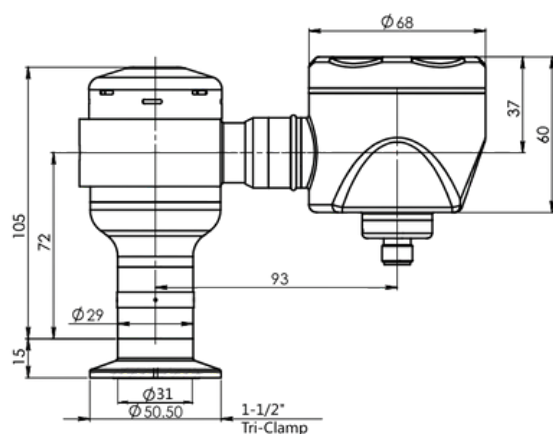
Process Connections/Drawings

Code	Thread / Port
PC1	Tri-clamp 1-1/2"
PC2	Tri-clamp 2"
PC3	DIN32676 DN32
PC4	DIN32676 DN40
PC5	DIN32676 DN50
PC6	ISO2852 DN38
PC7	ISO2852 DN40
PC8	ISO2852 DN51
PC9	DIN11851 DN25
PC10	DIN11851 DN40
PC11	DIN11851 DN50
PC12	SMS DN1-1/2"
PC13	SMS DN2"
PC14	IDF DN1-1/2"
PC15	IDF DN2"
PC16	DRD DN50
PC17	Plug-in tube flush hygienic clamp

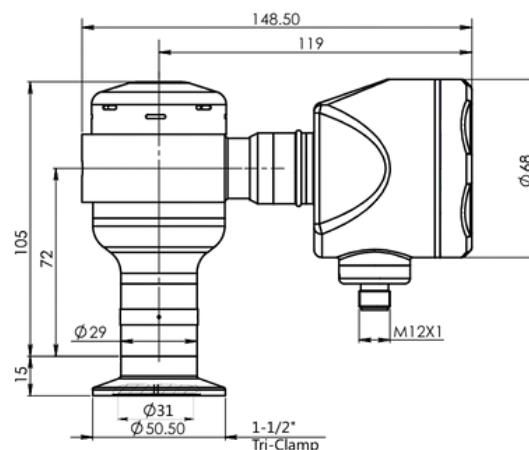
Connection Seal

Code	Seal type	Notes
CS1	1-1/2" tri-clamp sealing gasket, silicone rubber	Process temperature -60 to +200 deg; FDA approved
CS2	2" tri-clamp sealing gasket, silicone rubber	Process temperature -60 to +200 deg; FDA approved

Vertical Mount dimensions (mm)

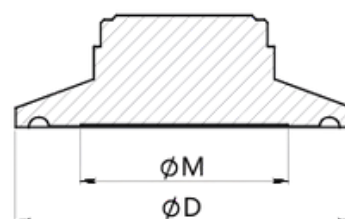


Horizontal Mount dimensions (mm)



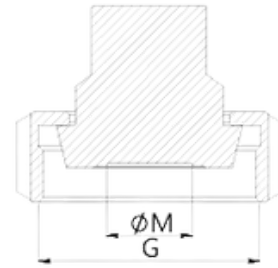
Connection Drawings PC1-PC8 (mm)

Standard	Specification	Size(ΦD)	Diaphragm size (ΦM)
Tri-Clamp	1-1/2"	50.5	31
Tri-Clamp	2"	64	42
DIN32676	DN32	50.5	31
DIN32676	DN40	50.5	31
DIN32676	DN50	64	42
ISO2852	DN38	50.5	31
ISO2852	DN40	64	42
ISO2852	DN51	64	42



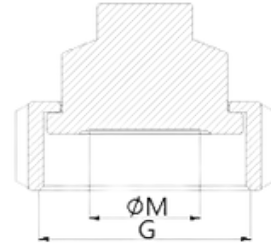
Connection Drawings PC9-PC11 (mm)

Standard	Specification	Size(G)	Diaphragm size(ΦM)
DIN11851	DN25	Rd 52*1/6	20
DIN11851	DN40	Rd 65*1/6	31
DIN11851	DN50	Rd 78*1/6	42



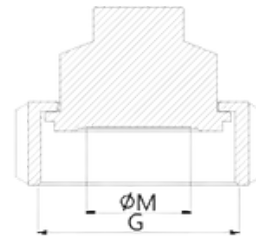
Connection Drawings PC12-PC13 (mm)

Standard	Specification	Size(G)	Diaphragm size(ΦM)
SMS	1-1/2"	Rd 60*1/6	31
SMS	2"	Rd 70*1/6	42



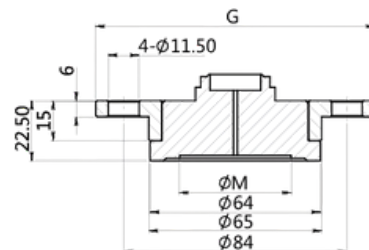
Connection Drawings PC14-PC15 (mm)

Standard	Specification	Size(G)	Diaphragm size(ΦM)
IDF	1-1/2"	IDF 1-1/2"	31
IDF	2"	IDF 2"	42



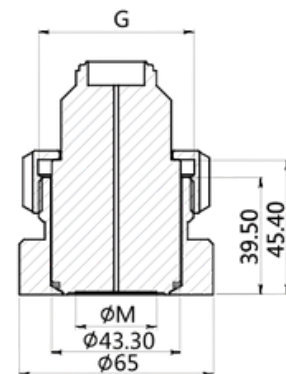
Connection Drawings PC16 (mm)

Standard	Specification	Size(G)	Diaphragm size(ΦM)
DRD	DN50	105	42



Connection Drawings PC17 (mm)

Standard	Specification	Size(G)	Diaphragm size(ΦM)
Normal	Standard	Rd 52*1/6	27



Accessory

Code	Description
AX1	Aviation female plug, straight, 4-pin M12×1 with 2 m cable
AX2	Aviation female plug, elbow, 4-pin M12×1 with 2 m cable
AX3	Aviation female plug, straight, 4-pin M12×1 without cable
AX4	Aviation female plug, elbow, 4-pin M12×1 without cable
AX5	1-1/2" tri-clamp
AX6	2" tri-clamp
AX7	Welding adapter for 1-1/2" tri-clamp
AX8	Welding adapter for 2" tri-clamp

Order Guide

Segment	Your Code	Options
Product family	QHY6600	QHY-HYGIENIC 6600
Pressure Reference	GP	GP = Gauge pressure
Range	01/02/03/04	See measuring range
Accuracy	ACC1	ACC1 = $\pm 0.2\%$ URL (TD ≤ 10), $\pm 0.5\%$ URL max
Output	I4 / IH	See Outputs
Power Supply	V4 / VI	See Power Supply
Display	DP1 / DP2	DP1 = without LCD; DP2 = with LCD
Construction Materials	CM1 / CM2	See Construction Materials
Fill Fluid	FF1 / FF2	FF1 = Neobee M-20 hygienic fluid; FF2 = silicon oil
Process Connection	PC1...PC17	See Process connections
Connection Seal	CS1 / CS2	See Connection Seal
Electrical Connection	E1H/E1V	See Electrical Connections
Certification	UKCA / RoHS / CE / 3A / EHEDG	See Certification
Calibration (LRV-URV)	DOC1	DOC1 = factory calibration report; span set per order
Application / Other Options	AP1 / AP2	See Applications
Accessories	AX1...AX8	See Accessories

Ordering Example QHY-HYGIENIC 6600, gauge pressure, -1 to +2.5 bar range, standard accuracy, 4-20 mA + HART, vertical housing with LCD, 316L wetted parts, hygienic fill fluid, 1-1/2" tri-clamp with 1-1/2" silicone gasket, M12 electrical connection, CE, electropolished wetted parts, with calibration report.

Family	Ref	Range	Accuracy	Output	Power Supply	Display	Construction Materials	Fill Fluid	Process Connection	Connection seal	Electrical Connection	Certification	Calibration (LRV-URV)	Application	Accessories
QHY-HYGIENIC 6600	GP	02	ACC1	IH	VI	DP2	CM1	FF1	PC1	CS1	E1V	CE	DOC1	AP2	-

Notes

Ensure media compatibility with wetted parts. Torque depends on gasket, mating material and lubrication.
All QHY-HYGIENIC 6600 hygienic variants use a stainless steel welding seal as standard sensor construction.