

QPress Pressure Transmitter - QLS-ATEX 4400 Series

ATEX intrinsically-safe pressure transmitter, –1...600 bar, IP68, analogue/RS485/HART options.

Certifications

Quality Lab Solutions data sheet R4



Applications

- Oil & gas
- Drilling platforms
- Pipelines
- Refineries
- Natural-gas compressors
- Marine
- Diesel tank level
- Hydraulic and pneumatic systems
- Hazardous areas

Special Features

- Intrinsically-safe pressure transmitter (Ex ia IIC T6 Ga), ATEX certified
- IP68 sealed stainless-steel construction with 316L diaphragm
- Wide range set –1...600 bar; overload 200 %FS; burst 500 %FS
- Outputs: 4–20 mA / HART / voltage options / RS485 (MODBUS RTU)



QLS-ATEX 4400

Description

QLS-ATEX 4400 is an intrinsically-safe industrial pressure transmitter for hazardous areas. A fully welded 316L stainless-steel diaphragm and pressure port with IP68 sealing resist corrosion and water ingress. Measuring ranges span vacuum (–1...0 bar) to 600 bar with total accuracy to ± 0.25 %FS and stability $\leq \pm 0.1$ %FS/year. Analogue and digital outputs are available, including 4–20 mA, voltage options, RS485 (MODBUS RTU) and 4–20 mA + HART for asset integration. Certified Ex ia IIC T6 Ga, the unit offers ≤ 10 ms response, >100 million pressure cycles and a wide 5...30 V DC supply. Standard G/NPT/M20×1.5 process connections and cable or Hirschmann terminations simplify retrofit. Options include oxygen-service preparation and fluorocarbon oil fill.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	-1-0 bar; 0-0.1 bar; 0-0.6 bar; 0-1 bar; 0-2 bar; 0-3 bar; 0-5 bar; 0-6 bar; 0-10 bar; 0-16 bar; 0-20 bar; 0-25 bar; 0-30 bar; 0-35 bar; 0-40 bar; 0-50 bar; 0-60 bar; 0-70 bar; 0-100 bar; 0-160 bar; 0-200 bar; 0-250 bar; 0-300 bar; 0-350 bar; 0-400 bar; 0-500 bar; 0-600 bar
Pressure reference	Gauge; Absolute; Negative pressure (vacuum)
Accuracy	±0.5 %FS (typ.); ±0.25 %FS; ±0.1 %FS (custom)
Hysteresis & repeatability	Hysteresis ≤ ±0.1 % FS; Repeatability ≤ ±0.1 % FS
Temp. drift	Zero thermal drift 0.03 %FS/°C (≤ 100 kPa); 0.02 %FS/°C (> 100 kPa)
Response time	≤ 10 ms
Service life	> 100 million cycles
Medium temp.	-40...+80 °C (non-corrosive); -20...+80 °C (corrosive); up to +250 °C (custom)
Storage temp.	-40...+125 °C (NBR seal); -30...+150 °C (FKM seal)
Insulation resistance	≥ 100 MΩ, 100 V DC
Vibration resistance	±20 g
Protection	IP68
Wetted Parts	Stainless steel 316L (optional 316/321); silicone oil filled (optional fluorocarbon oil)
Approvals/Certification	UKCA ;CE; RoHS; ATEX Ex ia IIC T6 Ga
Electrical Outputs	4-20 mA (2-wire); 4-20 mA + HART (2-wire); 0-5 V; 0.5-5 V; 0-10 V; 0.5-4.5 V (non-ratiometric); RS485 (MODBUS RTU)
Process connections	G1/4 male; G1/2 male; 1/4 NPT male; 1/2 NPT male; M20×1.5 male
Overpressure/Burst Pressure	200 %FS / 500%FS
Housing Material	Stainless steel (SUS316L welded body)
Electrical connections	Cable outlet with 1/2 NPT thread; Hirschmann connector
Power Supply	5...30 V DC (per output variant)
Longterm Stability	≤ ±0.1 %FS/year

Measuring Range (Gauge Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
1	-1...0 bar	200%FS	±0.5%FS / ±0.25%FS
2	0-1 bar	200%FS	±0.5%FS / ±0.25%FS
3	0-2 bar	200%FS	±0.5%FS / ±0.25%FS
4	0-3 bar	200%FS	±0.5%FS / ±0.25%FS
5	0-5 bar	200%FS	±0.5%FS / ±0.25%FS
6	0-6 bar	200%FS	±0.5%FS / ±0.25%FS
7	0-10 bar	200%FS	±0.5%FS / ±0.25%FS
8	0-16 bar	200%FS	±0.5%FS / ±0.25%FS
9	0-20 bar	200%FS	±0.5%FS / ±0.25%FS
10	0-25 bar	200%FS	±0.5%FS / ±0.25%FS
11	0-30 bar	200%FS	±0.5%FS / ±0.25%FS
12	0-35 bar	200%FS	±0.5%FS / ±0.25%FS
13	0-40 bar	200%FS	±0.5%FS / ±0.25%FS
14	0-50 bar	200%FS	±0.5%FS / ±0.25%FS
15	0-60 bar	200%FS	±0.5%FS / ±0.25%FS
16	0-70 bar	200%FS	±0.5%FS / ±0.25%FS
17	0-100 bar	200%FS	±0.5%FS / ±0.25%FS
18	0-160 bar	200%FS	±0.5%FS / ±0.25%FS
19	0-200 bar	200%FS	±0.5%FS / ±0.25%FS
20	0-250 bar	200%FS	±0.5%FS / ±0.25%FS
21	0-300 bar	200%FS	±0.5%FS / ±0.25%FS
22	0-350 bar	200%FS	±0.5%FS / ±0.25%FS
23	0-400 bar	200%FS	±0.5%FS / ±0.25%FS
24	0-500 bar	200%FS	±0.5%FS / ±0.25%FS
25	0-600 bar	200%FS	±0.5%FS / ±0.25%FS

Measuring Range (Absolute Pressure)

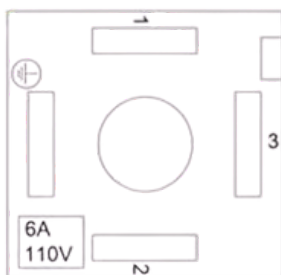
Range Code	Measuring Range	Overpressure	Accuracy
1	0-1 bar	200%FS	±0.5%FS / ±0.25%FS
2	0-2 bar	200%FS	±0.5%FS / ±0.25%FS
3	0-3 bar	200%FS	±0.5%FS / ±0.25%FS
4	0-5 bar	200%FS	±0.5%FS / ±0.25%FS
5	0-6 bar	200%FS	±0.5%FS / ±0.25%FS
6	0-10 bar	200%FS	±0.5%FS / ±0.25%FS
7	0-16 bar	200%FS	±0.5%FS / ±0.25%FS
8	0-20 bar	200%FS	±0.5%FS / ±0.25%FS
9	0-25 bar	200%FS	±0.5%FS / ±0.25%FS
10	0-30 bar	200%FS	±0.5%FS / ±0.25%FS
11	0-35 bar	200%FS	±0.5%FS / ±0.25%FS
12	0-40 bar	200%FS	±0.5%FS / ±0.25%FS
13	0-50 bar	200%FS	±0.5%FS / ±0.25%FS
14	0-60 bar	200%FS	±0.5%FS / ±0.25%FS
15	0-70 bar	200%FS	±0.5%FS / ±0.25%FS
16	0-100 bar	200%FS	±0.5%FS / ±0.25%FS
17	0-160 bar	200%FS	±0.5%FS / ±0.25%FS
18	0-200 bar	200%FS	±0.5%FS / ±0.25%FS
19	0-250 bar	200%FS	±0.5%FS / ±0.25%FS
20	0-300 bar	200%FS	±0.5%FS / ±0.25%FS
21	0-350 bar	200%FS	±0.5%FS / ±0.25%FS
22	0-400 bar	200%FS	±0.5%FS / ±0.25%FS
23	0-500 bar	200%FS	±0.5%FS / ±0.25%FS
24	0-600 bar	200%FS	±0.5%FS / ±0.25%FS

Output Signals

Code	Output	Power Supply	Load
I4	4-20 mA (2-wire)	7-30 VDC	(U-10)/0.02 Ω
IH	4-20 mA + HART (2-wire)	12-30 VDC	Per HART
V5	0-5 V (3-wire)	8-30 VDC	>= 10 kΩ
VX	0-10 V (3-wire)	13-30 VDC	>= 10 kΩ
VN	0.5-4.5 V (3-wire, non-ratiometric)	5 VDC ±5%	>= 10 kΩ
RM	RS485 (MODBUS RTU)	7-30 VDC	

Electrical Connections

Code	Description	Pinout
E1	Cable outlet — supports 2-wire current (I4/IH), 3-wire voltage (V5/VX/VN), and RS485 (RM)	- 2-wire current (I4/IH): Red U+; Green lout(U-); Yellow $\perp$ ground - 3-wire voltage (V5/VX/VN): Red U+; Green Vout; Black U-; Yellow $\perp$ ground - RS485 (RM): Red U+; Black U-; Green RS485A; Blue RS485B; Yellow $\perp$ ground
E5	DIN43650 (Hirschmann) — supports 2-wire current (I4/IH), 3-wire voltage (V5/VX/VN), and RS485 (RM)	- 2-wire current (I4/IH): Pin1 U+/Red; Pin2 lout(U-)/Green; Pin4 $\perp$ ground - 3-wire voltage (V5/VX/VN): Pin1 U+/Red; Pin2 U-/Black; Pin3 Vout/Green - RS485 (RM): Pin1 U+/Red; Pin2 U-/Black; Pin3 RS485A/Green; Pin4 RS485B/Yellow



E5 – DIN 43650



E1 – Cable outlet

Power Supply

Code	Supply
V6	7-30 VDC (I4/IH)
V8	8-30 VDC (0-5 V)
V9	13-30 VDC (0-10 V)
V5	5 VDC $\pm 5\%$ (0.5-4.5 V)
V7	7-30 VDC (RS485)

Construction Materials

Code	Diaphragm	Pressure Port	Housing
24	SS 316L	SS 316L	SS 316L
X	Custom		

Accuracy options

Code	Accuracy
A1	$\pm 0.5\%FS$
A2	$\pm 0.25\%FS$
A3	$\pm 0.1\%FS$

Accessory

Code	Description
AX10	Liquid level display control device
AX20	Terminal box, IP67, vented
AX30	RS232-to-RS485 converter (self-powered)
AX40	Surge/static protector for 4-20 mA/RS485 circuits

Cable Length

Code	Length
C00	None (non-cable)
C01	1 m
C02	2 m

Cable Material

Code	Description
P1	PVC
P2	PUR
P3	PTFE
P4	PE

Application

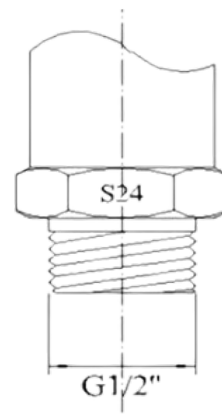
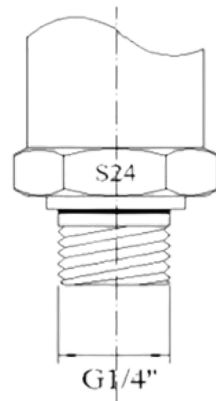
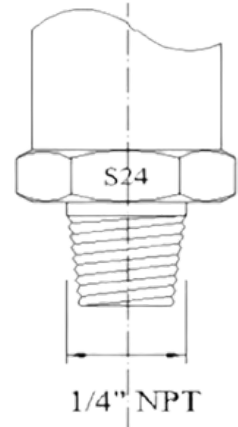
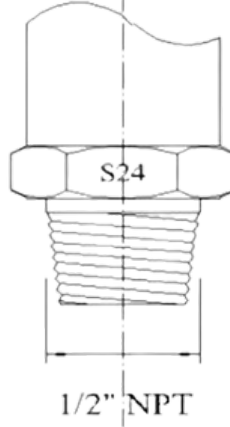
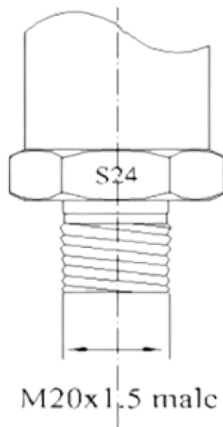
Code	Description
ST	Standard Type
AC	Anti-corrosive Type
XY	Xylene service
OX	Oxygen Service

Certification

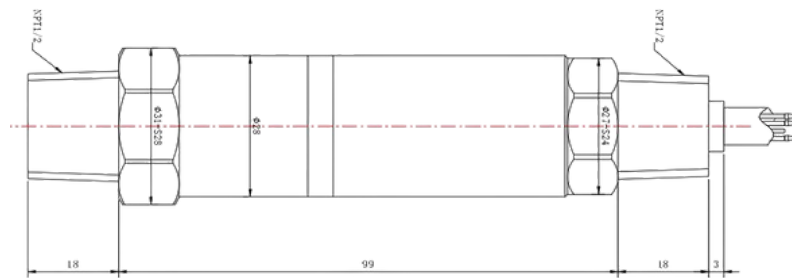
Code	Description
CE	EMC/CE
RO	RoHS
AX	ATEX Ex ia IIC T6 Ga
UK	UKCA

Process Connections/Drawings

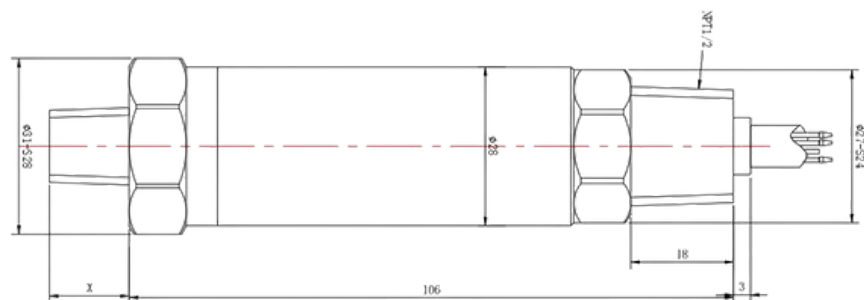
Code	Thread / Port
P01	M20x1.5 male
P02	1/2" NPT male
P03	1/4" NPT male
P04	G1/2 male
P05	G1/4 male



Range 0-60bar



Range 0-1000bar



Order Guide

Segment	Your Code	Options
Product family	QLS-ATEX 4400 Series	QLS-ATEX 4400 Series
Pressure Reference	GP / AP	Select pressure reference
Range	01...25	See measuring range
Accuracy	A1 / A2 / A3	See Accuracy options
Output	I4 / IH / V5 / VX / VN / RM	See Output Signals
Power Supply	V6 / V8 / V9 / V5 / V7	See Power Supply
Construction Materials	24/X	See Construction Materials
Process Connection	P01 ... P05	See Process Connections & Drawings
Electrical Connection	E1 / E5	See Electrical Connections
Cable Material (E1 only)	P1 / P2 / P3 / P4	See Cable Material
Cable Length (E1 only)	C00 / C01 / C02	See Cable Length
Certification	CE / RO / AX	See Certification
Application	ST / AC / XY / OX	See Application
Accessories	See Accessory	See Accessory

Ordering Example 0–10 bar gauge (code 19), $\pm 0.25\%FS$, 4–20 mA (2-wire), 7–30 VDC, 316L construction, G1/2 male, Oxygen service, 1m cable outlet, ATEX

Family	Ref	Range	Accuracy	Output	Power Supply	Construction Materials	Process Connection	Application	Electrical Connection	Cable Material (E1 only)	Cable Length (E1 only)	Certification	Accessories
QLS-ATEX 4400	GP	19	A2	I4	V6	24	P04	OX	E1	P1	C01	AX	AX10

Notes

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