

QPress Digital Pressure Transmitter - QOM-DIGI 1700 Series

Compact stainless-steel digital pressure transmitter (I²C/SPI), IP67, ranges up to 70 bar.

Certifications

Quality Lab Solutions data sheet R4



Applications

- Industrial process control
- Smart instruments
- Gas flowmeters
- Medical devices
- IoT

Special Features

- I²C or SPI digital output, 14-bit effective span (10–90% of 16383 counts)
- Full stainless-steel wetted parts and housing (316L/304)
- Temperature compensated; low power (~5 μ A standby, ~3 mA operating @25 °C)
- Gauge, Absolute, Sealed gauge, and Positive/Negative types
- IP67, vibration 10 g (20–2000 Hz), shock 100 g (11 ms)
- Process connections: G1/4 male; M20×1.5 male (waterline); NPT1/4 male



QOM-DIGI 1700

Description

The QOM-DIGI 1700 Series is a compact digital pressure transmitter for OEM instrumentation. It provides a temperature-compensated 14-bit output via I²C or SPI, supporting low-power operation and robust performance. Pressure types include Gauge, Absolute, Sealed gauge and Positive/Negative with ranges from 0.07 bar to 70 bar and compound ranges extending to –1...+35 bar. Overpressure is typically $\leq 2 \times FS$; refer to range tables for specifics. Stainless-steel wetted parts, PUR cabling and an IP67 enclosure suit harsh industrial environments.

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	Gauge/Absolute/Sealed: 0–0.07 bar ... 0–70 bar; Negative Gauge: –0.25–0 ... –1–+35 bar (see tables).
Pressure reference	Gauge; Absolute; Sealed gauge
Accuracy	±1%FS; ±0.5%FS; ±0.25%FS (range-dependent)
Temperature Accuracy	±1.5°C (under stable temperatures)
Medium temp.	–20...80 °C (operating)
Compensation temp.	–10 to +50 °C
Storage temp.	–20...85 °C (storage)
Insulation resistance	≥ 100 MΩ / 500 VDC
Vibration resistance	10 g, 20–2000 Hz
Shock resistance	100 g, 11 ms
Protection	IP67
Wetted Parts	Isolated diaphragm: SS316L; Pressure port: SS304/SS316L
Net weight	≤100 g
Size of hexagon	SW24
Approvals/Certification	UKCA; CE; RoHS; EMC
Electrical Outputs	I ² C; SPI (14-bit)
Process connections	G1/4 male; M20×1.5 male (waterline); NPT1/4 male
Overpressure/Burst Pressure	≤2× FS (specific per range; see tables)
Housing Material	Housing: SS304/SS316L; Cable: PUR
Electrical connections	5-core PUR cable: Black V–; Red V+; Green SCL/SCLK; White SDA/MISO; Yellow SS
Power Supply	3.3 V ±0.1 V (default); 5 V ±0.1 V (optional)
Longterm Stability	±0.2%FS/year

Measuring Range (Gauge Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	-0.25...+0 bar	200%FS	±1%FS
02	-0.4...+0 bar	250%FS	±1%FS
03	-0.6...+0 bar	167%FS	±1%FS
04	-1...+0 bar	150%FS	±1%FS
05	-0.03...+0.03 bar	167%FS	±1%FS
06	-0.05...+0.2 bar	120%FS	±1%FS
07	-0.05...+0.25 bar	100%FS	±1%FS
08	-0.15...+0.15 bar	100%FS	±1%FS
09	-0.2...+0.2 bar	75.0%FS	±1%FS
10	-0.25...+0.25 bar	100%FS	±1%FS
11	-0.3...+0.3 bar	83.3%FS	±1%FS
12	-0.5...+0.5 bar	100%FS	±1%FS
13	-1...+0.6 bar	93.8%FS	±0.5%FS
14	-1...+1 bar	100%FS	±0.5%FS
15	-1...+1.5 bar	120%FS	±0.5%FS
16	-1...+3 bar	125%FS	±0.5%FS
17	-1...+5 bar	167%FS	±0.5%FS

Range Code	Measuring Range	Overpressure	Accuracy
18	-1...+9 bar	200%FS	±0.5%FS
19	-1...+10 bar	227%FS	±0.5%FS
20	-1...+15 bar	188%FS	±0.5%FS
21	-1...+16 bar	176%FS	±0.5%FS
22	-1...+20 bar	143%FS	±0.5%FS
23	-1...+24 bar	200%FS	±0.5%FS
24	-1...+25 bar	192%FS	±0.5%FS
25	-1...+30 bar	194%FS	±0.5%FS
26	-1...+35 bar	194%FS	±0.5%FS
27	-0.25...+0 bar	200%FS	±1%FS
28	-0.4...+0 bar	250%FS	±1%FS
29	-0.6...+0 bar	167%FS	±1%FS
30	-1...+0 bar	150%FS	±1%FS
31	-0.03...+0.03 bar	167%FS	±1%FS
32	-0.05...+0.2 bar	120%FS	±1%FS
33	-0.05...+0.25 bar	100%FS	±1%FS
34	-0.15...+0.15 bar	100%FS	±1%FS
35	-0.2...+0.2 bar	75.0%FS	±1%FS
36	-0.25...+0.25 bar	100%FS	±1%FS
37	-0.3...+0.3 bar	83.3%FS	±1%FS
38	-0.5...+0.5 bar	100%FS	±1%FS
39	-1...+0.6 bar	93.8%FS	±0.5%FS
40	-1...+1 bar	100%FS	±0.5%FS
41	-1...+1.5 bar	120%FS	±0.5%FS
42	-1...+3 bar	125%FS	±0.5%FS
43	-1...+5 bar	167%FS	±0.5%FS
44	-1...+9 bar	200%FS	±0.5%FS
45	-1...+10 bar	227%FS	±0.5%FS
46	-1...+15 bar	188%FS	±0.5%FS
47	-1...+16 bar	176%FS	±0.5%FS
48	-1...+20 bar	143%FS	±0.5%FS
49	-1...+24 bar	200%FS	±0.5%FS
50	-1...+25 bar	192%FS	±0.5%FS
51	-1...+30 bar	194%FS	±0.5%FS
52	-1...+35 bar	194%FS	±0.5%FS

Measuring Range (Sealed Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	0-35 bar	200%FS	±0.5%FS
02	0-40 bar	250%FS	±0.5%FS
03	0-50 bar	200%FS	±0.5%FS
04	0-60 bar	167%FS	±0.5%FS
05	0-70 bar	143%FS	±0.5%FS

Measuring Range (Absolute Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	0-1 bar	200%FS	±0.5%FS
02	0-1.6 bar	188%FS	±0.5%FS
03	0-2 bar	200%FS	±0.5%FS
04	0-2.5 bar	200%FS	±0.5%FS
05	0-3 bar	200%FS	±0.5%FS
06	0-4 bar	250%FS	±0.5%FS
07	0-5 bar	200%FS	±0.5%FS
08	0-6 bar	167%FS	±0.5%FS
09	0-7 bar	200%FS	±0.5%FS
10	0-8 bar	200%FS	±0.5%FS
11	0-9 bar	200%FS	±0.5%FS
12	0-10 bar	200%FS	±0.5%FS
13	0-16 bar	188%FS	±0.25%FS
14	0-20 bar	200%FS	±0.25%FS
15	0-25 bar	200%FS	±0.25%FS
16	0-30 bar	200%FS	±0.25%FS
17	0-35 bar	171%FS	±0.25%FS
18	0-40 bar	250%FS	±0.25%FS
19	0-50 bar	200%FS	±0.25%FS
20	0-60 bar	167%FS	±0.25%FS
21	0-70 bar	200%FS	±0.25%FS

Output Signals

Code	Output	Power Supply	Load
DO1	I ² C	3.3V±0.1V DC or 5V±0.1V DC	14-bit, effective range 10%-90% (1638 to 14746); 5uA standby, 3mA operating @25C
DO2	SPI	3.3V±0.1V DC or 5V±0.1V DC	14-bit, effective range 10%-90% (1638 to 14746); 5uA standby, 3mA operating @25C

Electrical Connections

Code	Description	Pinout
E1	Cable outlet (I ² C/SPI)	- I²C: Black: V-; Red: V+; Green: SCL; White: SDA; Yellow: None - SPI: Black: V-; Red: V+; Green: SCLK; White: MISO; Yellow: SS

Power Supply

Code	Supply
PS33	3.3V±0.1V DC
PS5	5V±0.1V DC

Construction Materials

Code	Diaphragm	Pressure Port	Housing
M01	SS 316L	SS 304	SS 304
M02	SS 316L	SS 316L	SS 316L

Cable Length

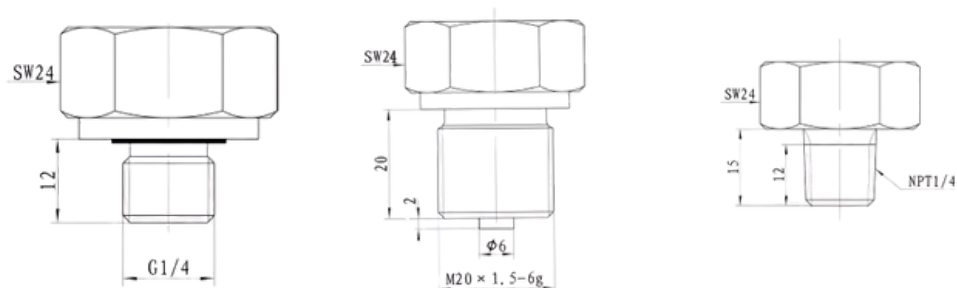
Code	Length
CL1	1 m
CL15	1.5 m (standard)
CL2	2 m

Accuracy options

Code	Accuracy
AC25	±0.25%FS
AC50	±0.5%FS
AC100	±1%FS

Process Connections/Drawings

Code	Thread / Port
P01	G1/4 Male, face seal
P02	M20x1.5 Male, waterline seal
P03	NPT1/4 Male



Process Connection Seal

Code	Seal type
S00	None
S01	NBR
S02	FKM
S03	EPDM
S04	Copper

Sensor Seal

Code	Seal type
00	FKM
01	EPDM
02	Weld
03	Integral Sintering

Cable Material

Code	Description
CB1	PUR

Certification

Code	Description
NA	No additional certification stated
RO	RoHS compliant

Order Guide

Segment	Your Code	Options
Product family	QOM-DIGI 1700	QOM-DIGI 1700
Pressure Reference	GP/AP/SP/NP	Gauge / Absolute / Sealed
Range	01...NN	See measuring range table
Accuracy	AC25/AC50/AC100	See Accuracy options
Output	DO1/DO2	See Digital Output (I2C / SPI)
Power Supply	PS33/PS5	See Power Supply
Construction Materials	M01/M02	See Construction Materials
Process Connection	P01...P03	See Process Connections & Drawings
Connection Seal	S00...S04	See Connection Seal
Electrical Connection	E1	Cable outlet
Cable Material	CB1	PUR
Cable Length	CL1/CL15/CL2	See Cable Length
Certification	NA/RO	See Certification

Ordering Example Gauge -0.4-0 bar (Range 02), $\pm 1\%FS$, I2C digital output, $3.3V \pm 0.1V$ supply, all 316L wetted/housing, G1/4 male face-seal, FKM process seal, cable outlet with PUR cable 1.5 m, RoHS.

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-DIGI 1700	GP	02	AC100	D01	PS33	M02	P01	S02	E1	CB1	CL15	RO

Notes

Ensure media compatibility with wetted parts. Torque depends on gasket, mating material and lubrication.
 Recommended cable length ≤ 2 m; cable material PUR.
 Max operating range 7 MPa (70 bar).