

QPress Pressure Transducer - QUP-THINFILM 1300 Series

Sputtered thin-film high-pressure transmitter for hydraulics, up to 2000 bar.

Certifications

Quality Lab Solutions data sheet R4



Applications

- Hydraulic & pneumatic systems
- Oxygen services
- Petrochemical industry
- Metallurgy
- Refrigeration & compressor systems;
- Industrial machinery
- Construction equipment
- Combustion/oil engine & generator units
- HVAC
- LNG
- CNG

Special Features

- Sputtered thin-film stainless-steel sensing element (all-metal wetted)
- $\leq \pm 0.5\%$ FS accuracy ($\leq \pm 0.25\%$ FS option), ≤ 1 ms response
- Ranges from 0...5 to 0...2000 bar; strong overload and burst ratings
- Outputs: 4–20 mA (2-wire), 0–5 V, 0.5–4.5 V
- EMC: EN 61326-1/-2-3; excellent vibration/shock resilience (50 g)
- Multiple process threads (G, NPT, M20×1.5) and M12/cable connectors

Overview

Industrial pressure transducer employing a sputtered thin-film stainless-steel sensor for long-term stability. Optimised for hydraulic and general industrial systems with ranges up to 2000 bar. Available with 4–20 mA two-wire or low-power voltage outputs. Temperature compensation 0...80 °C; ambient –40...85 °C; medium –40...125 °C. EMC compliance to EN 61326-1/-2-3 with robust vibration and shock performance.



QUP-THINFILM 1300

Specifications

TECHNICAL SPECIFICATIONS	
Pressure range	0...5 bar; 0...10 bar; 0...20 bar; 0...30 bar; 0...40 bar; 0...50 bar; 0...60 bar; 0...80 bar; 0...100 bar; 0...150 bar; 0...200 bar; 0...300 bar; 0...400 bar; 0...600 bar; 0...700 bar; 0...800 bar; 0...900 bar; 0...1000 bar; 0...1100 bar; 0...1200 bar; 0...1300 bar; 0...1400 bar; 0...1500 bar; 0...1600 bar; 0...1700 bar; 0...1800 bar; 0...1850 bar; 0...1900 bar; 0...2000 bar
Pressure reference	Gauge
Accuracy	$\leq \pm 0.5\%$ FS (typ.); $\leq \pm 0.25\%$ FS (optional); $\leq \pm 0.1\%$ FS (custom)
Temp. drift	Zero 0.02% FS/°C; Span 0.02% FS/°C; Compensation 0...80 °C
Response time	≤ 1 ms
Ambient temp.	-40...85 °C (typical)
Medium temp.	-40...125 °C (typical); -55...150 °C (custom)
Connector Material	Metal shell (M12); cable (PVC/PTFE/PUR/PE options).
EMC-immunity	EN 61326-1:2013; EN 61326-2-3:2013
Insulation resistance	>500 MΩ @ 250 VDC
Vibration resistance	5-1000 Hz, 2 mm amplitude; output change <0.03% FS (X/Y/Z, 30 min)
Shock resistance	50 g, 11 ms
Service Life	10 years
Wetted Parts	17-4PH stainless steel diaphragm; 304/316 stainless steel body
Size of hexagon	24 mm (S24)
Approvals/Certification	UKCA ; CE ; RoHS
Electrical Outputs	4-20 mA; 0-5 V; 0.5-4.5 V
Process connections	G1/4 male; 1/4 NPT male; 1/2 NPT male; M20×1.5 male; G1/2 male
Anti-Vibration	Yes
Overpressure/Burst Pressure	Overload: 200% FS (5-25 bar); 300% FS (40-2000 bar) Burst: 1000% FS (5-25 bar); 1000% FS (40-500 bar); 500% FS (500-2000 bar)
Housing Material	Stainless steel (304/316).
Electrical connections	M12 4-pin; Cable (flying leads)
Power Supply	4-20 mA (2-wire): 8-32 VDC; 0-5 V (3-wire): 8-32 VDC; 0.5-4.5 V (3-wire): 5 VDC $\pm 5\%$
Dimensions	Body $\varnothing \approx 24$ mm; hex S24; length ≈ 53.5 mm plus fitting.

Measuring Range (Gauge Pressure)

Range Code	Measuring Range	Overpressure	Accuracy
01	0-5 bar	200%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
02	0-10 bar	200%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
03	0-20 bar	200%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
04	0-30 bar		$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
05	0-40 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
06	0-50 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
07	0-60 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
08	0-80 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
09	0-100 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
10	0-150 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
11	0-200 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
12	0-300 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)
13	0-400 bar	300%FS	$\pm 0.5\%$ FS (typ) / $\pm 0.25\%$ FS (opt) / $\pm 0.1\%$ FS (custom)

Range Code	Measuring Range	Overpressure	Accuracy
14	0-600 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
15	0-700 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
16	0-800 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
17	0-900 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
18	0-1000 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
19	0-1100 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
20	0-1200 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
21	0-1300 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
22	0-1400 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
23	0-1500 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
24	0-1600 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
25	0-1700 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
26	0-1800 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
27	0-1850 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
28	0-1900 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)
29	0-2000 bar	300%FS	$\pm 0.5\%FS$ (typ) / $\pm 0.25\%FS$ (opt) / $\pm 0.1\%FS$ (custom)

Output Signals

Code	Output	Power Supply	Load
I4	4-20 mA (2-wire)	8-32 VDC	$\leq (U-10)/0.02 \Omega$
V5	0-5 V (3-wire)	8-32 VDC	$> 100 \text{ k}\Omega$
VN	0.5-4.5 V (3-wire)	5 VDC $\pm 5\%$	$> 100 \text{ k}\Omega$

Electrical Connections

Code	Description	Pinout
E2	M12 4-pin	2-wire current (I4): Pin1 Supply+; Pin2 Si+; Pin3 NC; Pin4 Shield 3-wire voltage (V5/VN): Pin1 Supply+; Pin2 Vout; Pin3 GND; Pin4 Shield
E1	Cable outlet	2-wire current (I4): Red Supply+; Green Si+; Black Shield 3-wire voltage (V5/VN): Red Supply+; Green Vout; Black GND
E3	Packard 3-pin	2-wire current (I4): Pin1 Supply+; Pin2 Si+; Pin3 NC; Pin4 Shield 3-wire voltage (V5/VN): Pin1 Supply+; Pin2 Vout; Pin3 GND



E2 – M12



E1 – Cable outlet



E3 – Packard 3-pin

Power Supply

Code	Supply
PS1	8-32 VDC (I4)
PS2	8-32 VDC (0-5 V)
PS3	5 VDC $\pm 5\%$ (0.5-4.5 V)

Cable Length

Code	Length
CL000	0 m (no cable)
CL001	1 m
CL002	2 m

Construction Materials

Code	Diaphragm	Pressure Port	Housing
M1	17-4PH stainless steel	316 stainless steel	304/316 stainless steel

Accuracy options

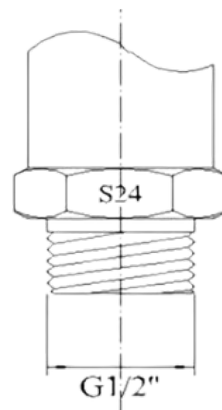
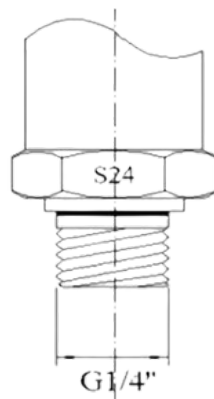
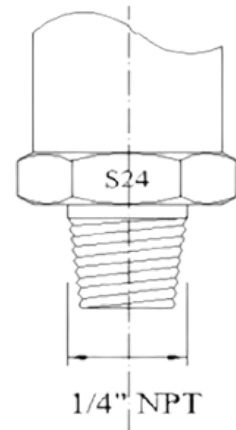
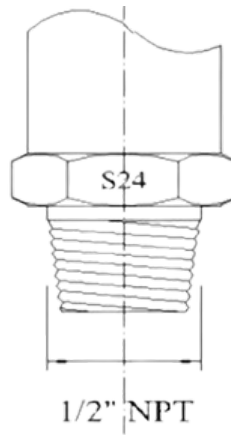
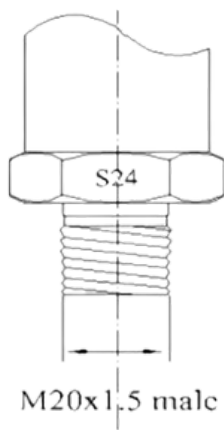
Code	Accuracy
A05	$\pm 0.5\%$ FS
A025	$\pm 0.25\%$ FS
A01	$\pm 0.1\%$ FS

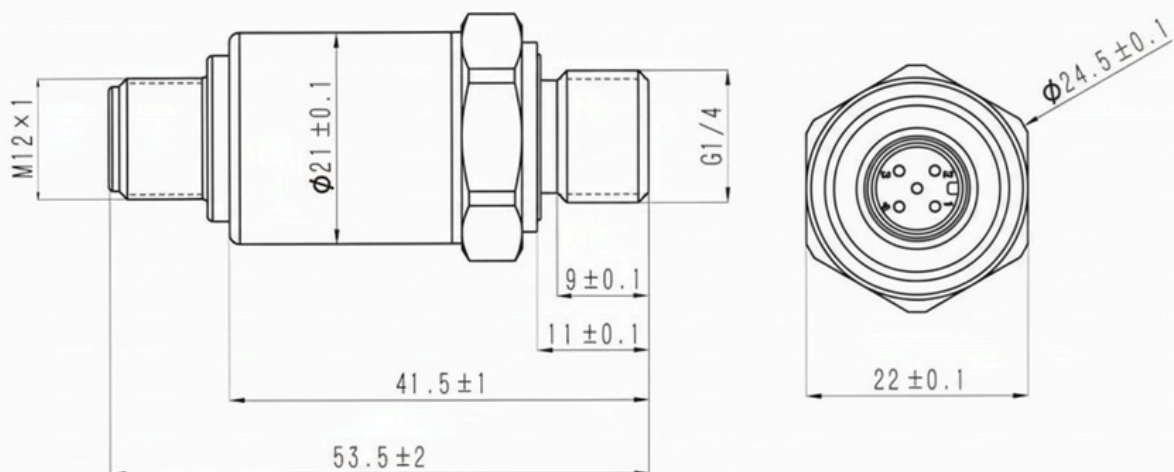
Cable Material

Code	Description
C-PVC	PVC (standard)
C-PTFE	PTFE (optional)
C-PUR	PUR (optional)
C-PE	PE (optional)

Process Connections/Drawings

Code	Thread / Port
P03	1/4 NPT male
P06	G1/4 male
P08	M20x1.5 male
P12	G1/2 male
P13	1/2 NPT male





Accessory

Code	Description
ACC-0008	Liquid level display control device
ACC-0025	Damper (protects against pulsation)

Certification

Code	Description
N	None
CE	EMC/CE
RO	RoHS
UK	UKCA

Order Guide

Segment	Your Code	Options
Product family	QUP-THINFILM 1300	QUP-THINFILM 1300
Pressure Reference	GP	Gauge Pressure
Range	01..29	See Measuring range
Accuracy	A05 / A025 / A01	See Accuracy options
Output	I4 / V5 / VN	See Output Signals
Power Supply	PS1 / PS2 / PS3	See Power Supply
Construction Materials	M1	See Construction Materials
Process Connection	P03 / P06 / P08 / P12 / P13	See Process Connections & Drawings
Electrical Connection	E1 / E2 / E3	See Electrical Connections
Cable Material	C-PVC / C-PTFE / C-PUR / C-PE	See Cable Material
Cable Length	CL000 / CL001 / CL002	See Cable Length
Certification	CE / RO / UK	See Certification
Accessories	ACC-0008 / ACC-0025	See Accessory

Ordering Example Gauge 0-400 bar, $\pm 0.25\%FS$, 4-20 mA (8-32 VDC), stainless steel build, G1/4 male, M12 4-pin, CE

Family	Ref	Range	Accuracy	Output	Power Supply	Construction Materials	Process Connection	Electrical Connection	Cable Material (E1 only)	Cable Length (E1 only)	Certification	Accessories
QUP-THINFILM 1300	GP	13	A025	I4	PS1	M1	P06	E2	-	-	CE	-

Notes

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