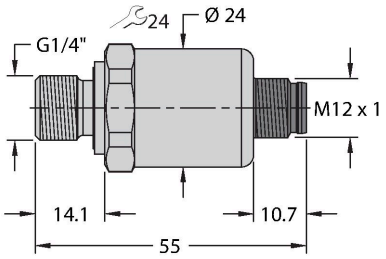
PT1V-1104-U1-H1141
Pressure Transmitter – With Voltage Output (3-Wire)



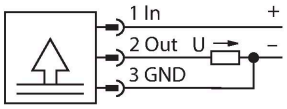
Features

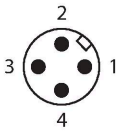
- For mobile hydraulic applications
- Ceramic measuring cell
- Compact and robust design
- Excellent EMC properties
- Excellent accuracy and long-term stability
- Complies with ISO 16750-2
- Pressure range -1…1 bar rel.
- 12…33 VDC
- Analog output 0…10 V
- Process connection G1/4" male thread (back sealing) according to DIN EN ISO 1179-2 with FPM profile sealing ring
- Connector device, M12 × 1

Technical data

Type	PT1V-1104-U1-H1141
ID	100028308
Pressure type	Relative pressure
Pressure range	-1…1 bar
	-14.5…14.5 psi
	-0.1…0.1 MPa
Admissible overpressure	≤ 7.5 bar
Burst pressure	≥ 7.5 bar
Response time	< 2 ms, typ. 1 ms
Long-term stability	0.3 % FS, acc. to IEC EN 61298-2
Power supply	
Operating voltage U_B	12…33 VDC
Current consumption	≤ 7 mA
Short-circuit/reverse polarity protection	yes / yes
Protection class	IP69K
Insulation class	III
Insulation voltage	500 VDC
Outputs	
Output 1	Analog output
Output function	Analog output voltage
Analog output	
Voltage output	0…10 V
Load	≤ 100 nF/> 10 kΩ
Accuracy LHR	±0.5 % FS (under EMC interference max. ±1.5 % FS)
Temperature behaviour	
Medium temperature	-40…+125 °C

Wiring diagram





Functional principle

The pressure sensors in the PT…-1100 product series are designed specifically for demanding mobile hydraulic applications. They operate with a ceramic measuring cell in different pressure ranges of up to 0…60 bar in 2- or 3-wire technology. Depending on the sensor variant, the processed signal is available as an analog output signal (4… 20 mA, 0…10 V, 0…5 V, ratiometric).
A wide range of process connections and electrical connections offer a high degree of flexibility in a wide range of applications.

PT1V-1104-U1-H1141| 22-02-2025 13-08 | Technical modifications reserved

Technical data

Temperature coefficient	± 0.2 % of full scale/10 K
Environmental conditions	
Ambient temperature	-40…+100 °C
Storage temperature	-50…+100 °C
Vibration resistance	Test VI (12 g, sinusodial 18 g random vibration)
Shock resistance	50 g, 11 ms, half sine curve, 1000x/axis acc. to ISO 16750-3
EMV	Interference Immunity/Interference Emission EN 61326-2-3 - Pressure transducer ISO 13766 - Earthmoving machinery DIN EN 13309 - Construction machinery DIN ISO 14982 - Forestry and agriculture Motor vehicle directive ECE R10 Motor vehicle directive 2004/104/EC Immunity Motor Vehicle Directive ISO 11452-2, HF (Field), 100 V/m (200…2000 MHz) ISO 11452-4, HF (BCI), 100 mA (20…400 MHz) ISO 10605, ESD, ±8 kV contact, ±15 kV air ISO 7637-2, pulses 1, 2a, 2b, 3a, 3b (test level 4) ISO 16750-2, load dump, 155 V (1 Ω, 300 ms) Interference Emission Motor Vehicle Directive CISPR25
Mechanical data	
Housing material	Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyarylamide 50 % GF UL 94 V-0
Pressure connection material	Stainless steel 1.4404 (AISI 316L)
Material pressure transducer	Ceramic Al_2O_3
Sealing material	FPM spez.
Process connection	G1/4" male thread (back sealing) according to DIN EN ISO 1179-2 with FPM profile sealing ring
Wrench size pressure connection / coupling nut	24
Electrical connection	Connector, M12 × 1
Max. tightening torque of housing nut	20 Nm
Reference conditions acc. to IEC 61298-1	
Temperature	15…+25 °C
Atmospheric pressure	860…1060 hPa abs.
Humidity	45 % rel.
Auxiliary power	24 VDC

PT1V-1104-U1-H1141| 22-02-2025 13-08 | Technical modifications reserved

Technical data

Tests/approvals	
MTTF	1238 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	Profile seal FKM special (1 pc)

PT1V-1104-U1-H1141| 22-02-2025 13-08 | Technical modifications reserved