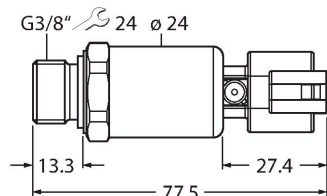


PT50R-2149-U6-DT043P

Pressure Transmitter – Ratiometric Output (3-Wire)



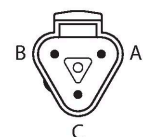
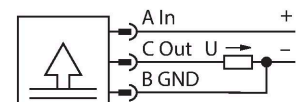
Features

- For mobile hydraulic applications
- Fully welded metal measuring cell
- Sealless
- With pressure tip orifice
- Compact and robust design
- Excellent EMC properties
- Excellent accuracy and long-term stability
- Kfz-Norm ISO 16750
- Pressure range 0...50 bar rel.
- 5 VDC $\pm$ 10 %
- Ratiometric output 10...90 %
- Process connection G3/8" male thread
- Plug-in device, Deutsch DT04-3P

Technical data

Type	PT50R-2149-U6-DT043P
ID	100030750
Pressure type	Relative pressure
Pressure range	0...50 bar
	0...725.19 psi
	0...5 MPa
Admissible overpressure	$\leq$ 150 bar
Burst pressure	$\geq$ 300 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	4.5...5.5 VDC
Current consumption	$\leq$ 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	ratiom. 10...90%
Analog output	
Voltage output	0.5...4.5 V
Load	$\leq$ 100 nF / $\geq$ 10 k Ω
Accuracy LHR	$\pm$ 0.5 % FS (under EMC interference max. $\pm$ 1.5 % FS)
Temperature behaviour	
Medium temperature	-40...+125 °C

Wiring diagram



Functional principle

The pressure sensors in the PT...-2100 product series are designed specifically for demanding mobile hydraulic applications. They operate with a fully welded metal measuring cell in different pressure ranges of up to 0...600 bar in 2- or 3-wire technology. Depending on the sensor variant, the processed signal is available as an analog output (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 many different applications.

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, sinusoidal 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 CISPR11 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, ±15 kV contact, ±15 kV air ISO 7637-2 3), pulses 1, 2a, 2b, 3a, 3b (test level 4) ISO 16750-2, load dump, 155 V (1 Ω, 300 ms) Motor vehicle directive ECE R10 Motor vehicle directive 2004/104/EC
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	Stainless steel 1.4404 (AISI 316L)
Process connection	G 3/8" male thread
Wrench size pressure connection / coupling nut	24
Electrical connection	Connector, Deutsch DT04-3P
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
Tests/approvals	
MTTF	1564 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	Profile seal FKM special (1 pcs)

Accessories

Dimension drawing	Type	ID	
	DT06-3S-A-2/TXL	100000367	Valve connector connection cable, Deutsch, DT06 female connector, straight, 3-pin, cable length: 2 m, jacket material: TPE-U (PUR), black, housing: Deutsch DT06/black
	DT06-3S-A-20/TXL	100038083	Valve connector connection cable, Deutsch, DT06 female connector, straight, 3-pin, cable length: 2 m, jacket material: TPE-U (PUR), black, housing: Deutsch DT06/black