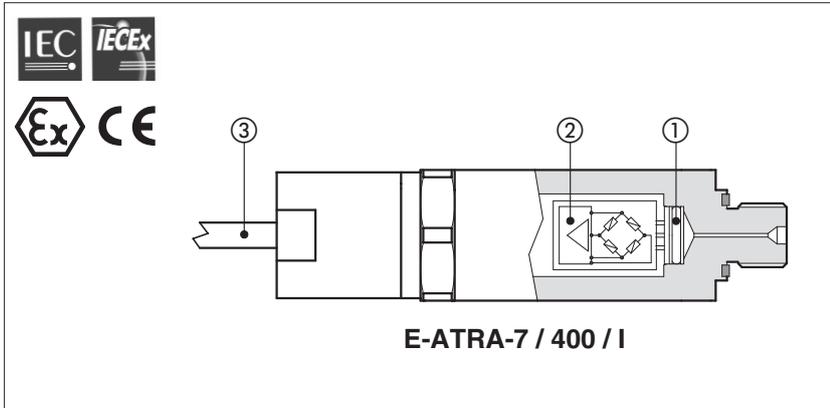


Ex-proof pressure transducers type E-ATRA-7

analog, for open and closed loop systems - ATEX and IECEx certifications



Ex-proof E-ATRA-7 pressure transducers measure the static and dynamic pressure of the hydraulic fluid, supplying a current output signal.

The sensor is composed by a thin-film circuit ①, with high resistance to overloads and pressure peaks.

The integrated electronic circuit ② supplies an amplified voltage or current output signal, proportional to the hydraulic pressure, with thermal drift compensation.

The transducer housing and electronics housing are designed to contain the possible explosion which could be caused by the presence of the gas mixture inside the housing, thus avoiding dangerous propagation in the external environment.

They are also designed to limit the external temperature according to the certified class to avoid the self ignition of the explosive mixture present in the environment.

E-ATRA-7 equip ex-proof pressure control digital proportional valves with integral transducer and electronics, TERS execution (see tech table F650).

They are also used in association with other Atos ex-proof digital proportionals to perform closed loop pressure controls:

- pressure control valves with remote pressure transducer, AERS execution (see tech table F650)

Features:

- Factory preset and calibrated
- 5 m cable connection ③
- 1/4" GAS - DIN 3852 hydraulic connection (pressure port orifice Ø 0,6 mm)
- IP67 protection degree
- CE mark according to EMC directive

1 MODEL CODE

E-ATRA-7	/	400	/	I	/	*
Pressure transducer amplified type for ex-proof applications						Series number
Pressure measuring range: 60 = 0 ÷ 60 bar 160 = 0 ÷ 160 bar 250 = 0 ÷ 250 bar 400 = 0 ÷ 400 bar						
				I = current output signal 4 ÷ 20 mA (1)		

(1) available only with current output signal 4 ÷ 20 mA

2 EXPLOSION PROOF CERTIFICATION MAIN DATA

ATEX certification IECEx certification	II 2G Ex db IIC T6...T1 Gb Ex db IIC T6...T1 Gb		
	T6	T5	T4
Temperature class (only for Group II)			
Surface temperature	≤ 85 °C	≤ 100 °C	≤ 135 °C
Ambient temperature	-40 ÷ +60 °C	-40 ÷ +75 °C	-40 ÷ +102 °C
Mechanical construction	Flame proof housing classified Ex d, according to EN 60079-0: 2012, EN 60079-1: 2014		
Electrical connection	Type: 5 m cable 2 wires + shield		
Special features	Available on request with FM, CSA, EAC, INMETRO and KAZINMETR certification For further details, please contact Atos technical department		

3 MAIN CHARACTERISTICS OF EX-PROOF PRESSURE TRANSDUCER

Pressure measuring range	0 ÷ 60/160/250/400 bar; other values available on request Note: negative pressure can damage the pressure transducer
Overload pressure	2 x FS without exceeding 600 bar
Burst pressure	5 x FS without exceeding 1700 bar
Response time	≤ 1 ms
Temperature compensated	0 ÷ +80 °C
Thermal drift	@ zero: ≤ ±0,025 % FS/°C max; @ FS: ≤ ±0,025 % FS/°C max
Accuracy	≤ ±0,5 % FS
Non-Linearity	≤ ±0,2 % of FS (BFSL) as per IEC 61298-2
Fluid Compatibility	Hydraulic oil as per DIN51524...535 for other fluid please contact Atos technical department
Power supply	24 Vdc nominal; maximum range 10 ÷ 30 Vdc
Output signal	Current output signal 4 ÷ 20 mA (2 wire); for max load see section 5
Wiring protections	Against reverse polarity on power supply and short-circuit on output signal
Materials	Wetted parts: stainless steel and Elgiloy®; seals: FPM
Mass	Approx. 240 g
Electromagnetic compatibility (EMC)	EN 61326 emission (group 1, class B) and immunity (industrial application)
Vibration resistance	20 g according to DIN EN 60068-2-6
Shock resistance	1000 g according to DIN EN 60068-2-27
Protection class	IP67

Notes: FS = Full Scale; BFSL = Best Fit Straight Line

4 INSTALLATION AND COMMISSIONING

4.1 Warning

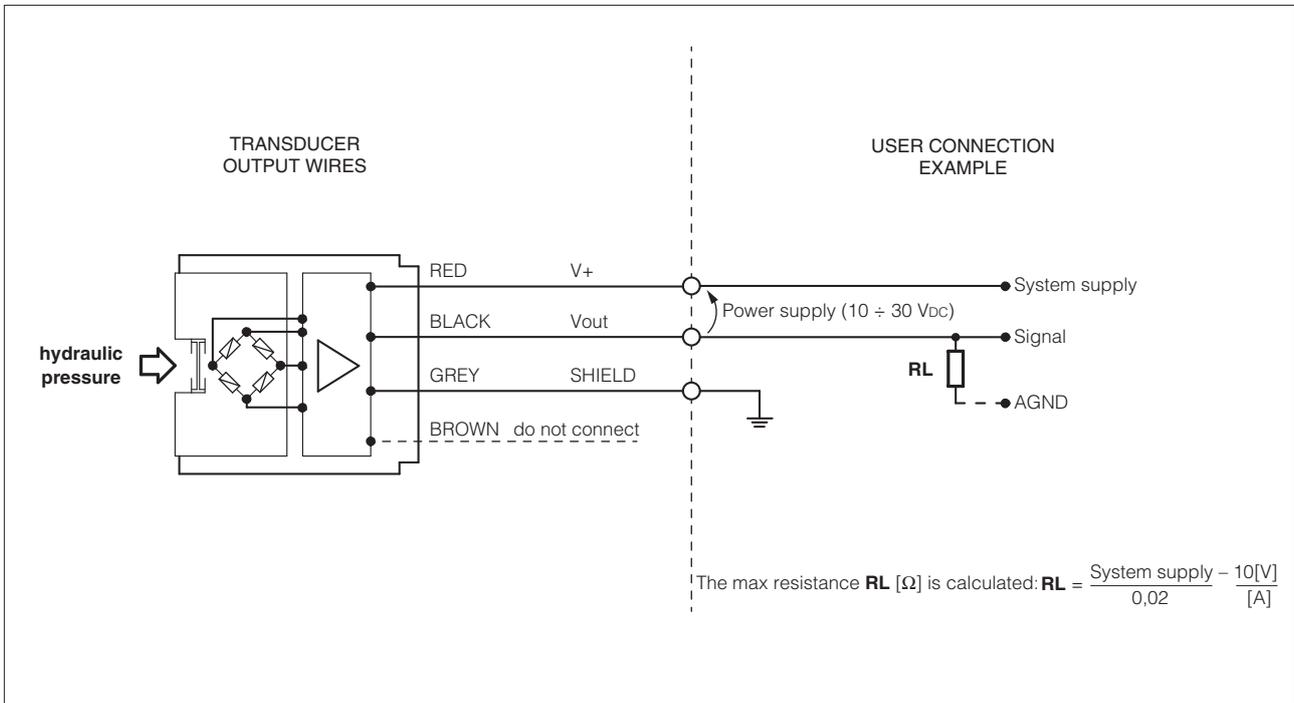
E-ATRA-7 transducers have to be installed as near as possible to the point where the pressure have to be measured, taking care that the oil flow is not turbulent.

4.2 Commissioning

Install the transducer in the hydraulic circuit.

Switch-off the power supply before connecting and disconnecting the transducer cable as shown in scheme [5].

5 ELECTRONIC CONNECTIONS



6 OVERALL DIMENSIONS [mm]

