



- high chemical resistance
- simple application
- universal usage
- high stability
- favourable price

The transducers series A are designed for a general use. They are capable to measure both the positive and negative pressure in the liquids and gases that can be partially chemically aggressive. These transducers series A will find a wide use in a full scale of the industrial automation, power measurements, heating technology, agricultural applications.

The transducer case is made from stainless steel with high chemical resistance. Connecting thread proper has a dimension G 1/2" or M20x1.5. Special design connection with open membrane is suitable for media with high viscosity and contamination. This solution has advantage in cleaning this membrane from residues of media. The second advantage is faster dynamic response and it's recommended for measuring fast pressure shocks.

As a pressure-sensing element in this series of transducers, there are used piezoelectric sensors on ceramic membrane. Measuring system is created by thick-film technology and is adjusted during production by laser beam. With proper supply is output signal equal to input pressure. This sensor is sealed in stainless steel by "O" ring from Viton.

Small signal from sensor is amplified, compensated and calibrated by electronics, which is based inside the transmitter case. This transmitters are produced with two-wire current output 4 ÷ 20 mA, three-wire current output 0 ÷ 20 mA and three-wire voltage output 0 ÷ 10 V. Nominal supply voltage is 24 V DC, but they can operate from 12 to 36 V DC without influence on accuracy. The transmitter has a protection from changing polarity of supply voltage. Calibration is provided through laser-trimmed-thick-film resistors and for slight change of transfer characteristics end-points are used two small multi-rotation trim pots under connector cover. Correction range is  $\pm 2\%$  form nominal range, approximately. Trim pot for zero-correction is signed by red colour.

The transducer design uses new modern elements, surface mount technology, etc. A special care is taken of the resistance against the outer electromagnetic and electrostatic interference. On bottom side of connector base is placed special filter and protection circuit. The case body is not electrically connected with the system but it is connected to the earthing pin of the connector. We recommend connection of this pin always to the fixed potential, especially with a view to achieving satisfactory immunity against the outer electromagnetic interference. Electric connection is realized by means of the sealed arrested connector (ISO 4400/6952 – DIN 43650) with a cable bushing PG9, which enables to connect the transducer by means of the cable with a diameter 6 – 9 mm.

If agreed, it is possible to set different input pressure values and /or output electrical values, namely for the voltage outputs.

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## TECHNICAL INFORMATION

Nominal pressure range	0 ÷ 10 kPa to 0 ÷ 60 MPa
Overpressure	200% (400%) nominal range
Error	max. 1% (0.5%)
Zero temperature error	typ. 0,1 max. 0,3%/10°C
Span temperature error	typ. 0,1 max. 0,3%/10°C
Compensated temp. range	0 ÷ +85°C
Operating temp. range	-15 ÷ +85°C (non condensing)
Storage temperature	-25 ÷ 100°C
Supply voltage	12 ÷ 36V dc
Supply voltage – output H	< 4mA
Output	4 ÷ 20mA two-wire 0 ÷ 20mA three-wire 0 ÷ 10V three-wire
Operated position	arbitrary
Protection	min. IP 54
Voltage strength case - electronics	min. 1000V dc
Weight	cca 200g

CE EMC – according to ČSN EN 61326-1

At the customer's wish it is possible to secure a metrological verification of the transmitters at an accredited Calibration Service Centre.

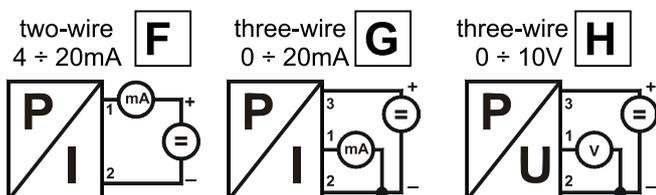
## INSTRUCTIONS FOR USE

- Before connection of the transducer into the pressure circuit, it is necessary to verify that the pressure being measured corresponds to the nominal range of this transducer. Even a transient loading over the maximum allowable overpressure may cause a destruction of the measuring diaphragm!
- Measured media is in contact with stainless steel, Viton sealing and ceramic membrane. If you use aggressive media, it is necessary to verify the transducer material resistance.
- Transmitter with open membrane must be sealed by the "O" ring on six-edge surface to avoid mechanical strain in sensor fitting.
- In the case of turning-off with connector nut you must avoid to turning of connector base! In opposite case input wires can be ruptured!
- The device requires no maintenance during operation. Potential repairation performs manufacturer. Device will be electronic waste after end of its usage. The user is obliged to guarantee liquidation of device in accordance with a valid prescription at the liquidation time. It is recommended deliver device to authorised person.

## PIN ASSIGNMENTS VALID FOR CONNECTOR DIN 43650

	two-wire 4 ÷ 20mA	three-wire 0 ÷ 20mA	three-wire 0 ÷ 10V
+ supply voltage	1	3	3
- supply voltage	2	2	2
output		1	1
shielding	⊥	⊥	⊥

## DIAGRAM



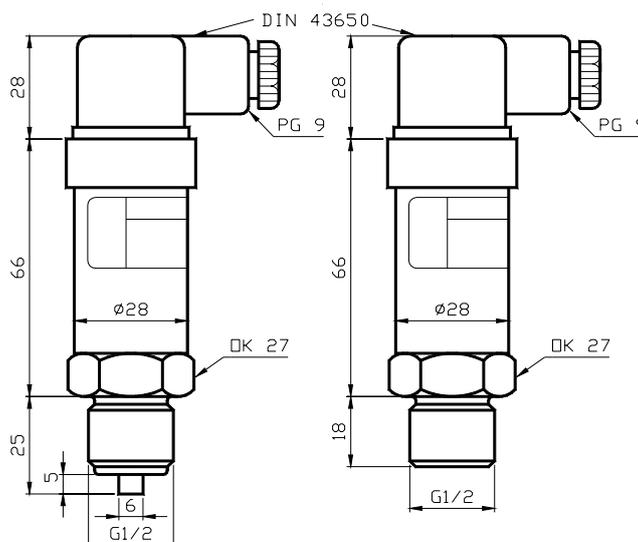
## ORDERING CODE

TM G617A3F

type of press. measure.		
relative overpressure		V
relative underpressure		A
absolute (barometrical)		
exponent of pressure range		
10 <sup>4</sup> Pa (tens kPa)		4
10 <sup>5</sup> Pa (hundreds kPa)		5
10 <sup>6</sup> Pa (units MPa)		6
10 <sup>7</sup> Pa (tens MPa)		7
multiplicand of pressure range		
1,0		1
1,6		2
2,5		3
4,0		4
6,0		6
membrane material		
ceramic		7
case material		
stainless, G1/2"		A
stainless, G1/2", open membrane		B
stainless, M20x1,5		C
stainless, G1/4"		D
electrical connection		
conector DIN 43650		3
electrical output		
current 4 ÷ 20mA		F
current 0 ÷ 20mA		G
voltage 0 ÷ 10V		H
other analog		X
additional signs		

Basic version: relative overpressure, case material - stainless with thread G1/2", conector according to DIN 43650, output 4 ÷ 20mA.

## DIMENSIONS



## MAINTENANCE

- The sensor requires no maintenance during operation. All repairs are performed by the manufacturer.