



# Pressure transmitter for short ranges

## Type 404327

### General application

Pressure transmitters are used for evaluating pressures in liquids and gases. The pressure transmitter incorporates a capacitive ceramic sensor. The pressure is converted into an electrical signal.

### Technical data

#### Reference conditions

to DIN 16 086 and IEC 770/5.3

#### Ranges

see ordering data

#### Overload limit

Code	Range	Overload
412	0—50 mbar	-0.3/4 bar
414	0—100 mbar	-0.3/4 bar
415	0—160 mbar	5 bar
451	0—0.25 bar	6 bar
452	0—0.4 bar	6 bar
453	0—0.6 bar	10 bar
454	0—1.0 bar	10 bar

#### Bursting pressure

150 bar

#### Wetted components

normally aluminium oxide Al<sub>2</sub>O<sub>3</sub> (96%)  
stainless steel Mat. Ref. 1.4571  
FPM  
others to special order

#### Output

0.5 — 4.5 V min. burden 10 kΩ  
4 — 20 mA max. burden (U<sub>B</sub>-12 V)/0.02A

#### Burden error

less than 0.15%

#### Zero error

not exceeding 0.3% full scale

#### Output span tolerance

≤ 1.0% of full scale

#### Ambient temperature error

within the range -20 to +80°C  
(compensated temperature range)

zero: less than 0.1%/10°C typical  
less than 0.3%/10°C max.  
span: less than 0.1%/10°C typical  
less than 0.2%/10°C max.

#### Deviation from characteristic

not exceeding 0.2% full scale  
(after full-scale calibration)

06.05 / 00349923

#### Response time

10 msec max.

#### Stability per year

0.2% full scale or better

#### Supply

12 — 30 V DC (with 4 — 20 mA output)

5 V ±0.5 V DC (with 0.5 — 4.5 V output)

Residual hum: the voltage spikes must not go above or below the values specified for the supply.

#### Current uptake:

on 5 V DC: 2 mA max.

on 24 V DC: 25 mA max.

#### Supply voltage error

24 V DC nominal supply voltage:

not exceeding 0.01%/V

5 V DC (±0.5 V) supply:

proportional to supply voltage

#### Permitted ambient temperature

-20 to +80°C

#### Storage temperature

-20 to +125°C

#### Permitted temperature of medium

-20 to +80°C

#### Electromagnetic compatibility

Electrostatic discharge:

IEC 801-2 severity 4

(test voltage 15 kV)

Radiated electromagnetic field:

IEC 801-3 severity 3

Fast transients (burst):

IEC 801-4 severity 4

Immunity to voltage pulses (surge):

VDE 0843 Part 5 severity 2

Immunity to conductor-born interference

induced by high-frequency fields:

VDE 0843 Part 6 severity 3 (U<sub>0</sub>=3 V)

The pressure transmitter Type 404327

meets all requirements of EN 50082-2

(CE mark) for use in industrial areas.

#### Mechanical shock

100 g/1 msec

#### Mechanical vibration

20 g max. at 15 — 2000 Hz



#### Protection

with terminal box  
IP65 to EN 60 529  
(connecting cable diameter  
5 mm min., 7 mm max.)

with attached cable  
IP67 to EN 60 529

#### Case

stainless steel, Mat. Ref. 1.4571  
polycarbonate GF

#### Pressure connection

see ordering data,  
other connections to special order

#### Electrical connection

see ordering data

All connection variants are fitted with 2 m  
PVC cable (other lengths to special order)

Terminal box to DIN 43 650,

Form A,

max. conductor cross-section 1.5 mm<sup>2</sup>;

or

attached PVC cable

or

terminal head

#### Nominal position

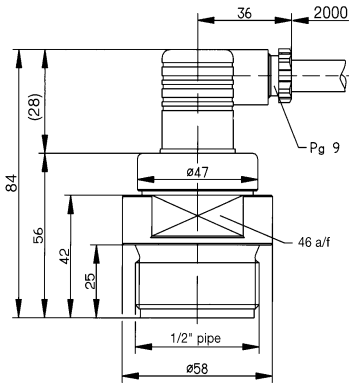
flat horizontal (pressure connection to the  
side)

#### Weight

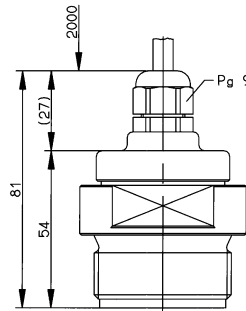
0.35 to 0.55 kg (depending on version)

Dimensions

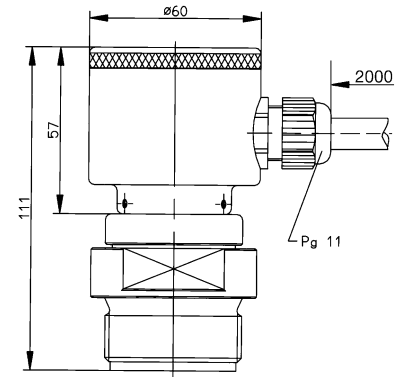
Type 404327-...-570-61



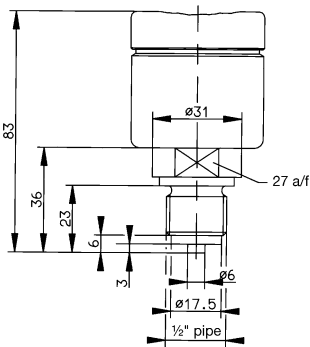
Type 404327-...-570-12



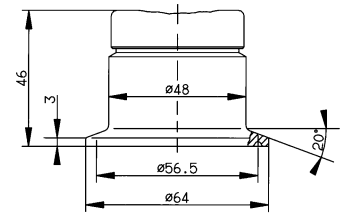
Type 404327-...-570-75



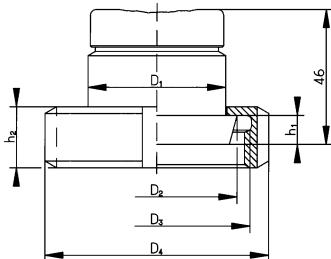
Pressure connection 504



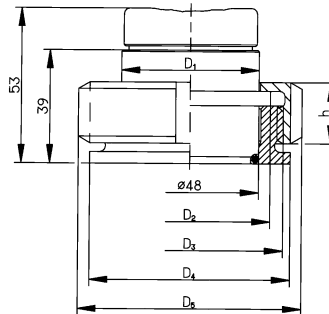
Pressure connection 616



Pressure connection 606/607



Pressure connection 653/654



Item	DN	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	h <sub>1</sub>	h <sub>2</sub>
606	40	Ø48	Ø48	RD 65x <sup>1</sup> / <sub>6</sub>	Ø78	10	21
607	50	Ø61	Ø68.5	RD 78x <sup>1</sup> / <sub>6</sub>	Ø92	11	22

Item	DN	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>	h
653	40	Ø48	Ø56	RD 65x <sup>1</sup> / <sub>6</sub>	Ø70	78	21
654	50	Ø61	Ø68.5	RD 78x <sup>1</sup> / <sub>6</sub>	Ø84	92	22

Electrical connection

Connection		Termination		
		Plug	Cable	Terminal head
Supply 12 – 30 V DC 5 V DC		1	white	1
		2	grey	2
Output 0.5 – 4.5 V		3	yellow	
		2	grey	
Output 4 – 20 mA 2-wire		1	white	1
		2	grey	2
		Proportional current 4–20 mA in supply circuit		
Protective earth				3
Screen			black	

**Warning:**  
transmitter must be earthed!  
(pressure connection and / or or screen)

## Ordering data

### Basic type

404327 Pressure transmitter Type 404327 with capacitive ceramic sensor

#### Input

412	0 – 50 mbar gauge pressure
414	0 – 100 mbar gauge pressure
415	0 – 160 mbar gauge pressure
451	0 – 0.25 bar gauge pressure
452	0 – 0.4 bar gauge pressure
453	0 – 0.6 bar gauge pressure
454	0 – 1.0 bar gauge pressure
999	special range (+/- ranges)

#### Output

405	4 – 20 mA
412	0.5 – 4.5 V

#### Pressure connection

504	pressure connection 1/2" pipe to DIN EN 837
570	pressure connection 1 1/2" pipe
606	pressure connection cone nipple with ring nut DN 40 DIN 11 851 (milk pipe)
607	pressure connection cone nipple with ring nut DN 50 DIN 11 851 (milk pipe)
653	tank connection with ring nut DN 40
654	tank connection with ring nut DN 50
616	clamp connection DN50 DIN 32 676 / DN 51 (40) ISO 2852 / 2"

#### Material of pressure connection

26	stainless steel Mat. Ref. 1.4571
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#### Electrical connection

12	with attached cable <sup>1</sup>
61	with terminal box <sup>1</sup>
75	terminal head <sup>1</sup> (only with 4 – 20 mA output)

404327 /  -  -  -  -  **Ordering code**

<sup>1</sup> If the cable length required is not 2m, please specify cable length in plain text.