



Differential pressure transmitter

# Huba Control

## OEM differential pressure transmitter

### Type 401

Type 401 pressure transmitters sense ultra fine changes in air pressure and are designed to provide optimum control. The dual component diaphragm with its unique geometry, gives highly sensitive operation and excellent repeatability, even in the range below 20 Pascal.



**Pressure range**  
**0 ... 3 – 8 mbar**

- + Special development for optimize of combustion mixture in gas boilers
- + With the special diaphragm geometry inherently stable
- + Ideal dimensioning for high sensitivity and with long term stability
- + Excellent repeatability even in the lower pressure range (< 20 Pascal)

## Technical overview

### Pressure range

Relative and differential	0 ... 3 – 8 mbar
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### Operating conditions

Medium		Air and neutral gases
Temperature	Medium / ambient	0 ... +70 °C
	Storage	-40 ... +70 °C
Tolerable overload on one side		25 mbar
Rupture pressure		100 mbar short period at room temperature
Leak rate		200 mbar
		< 5 cm <sup>3</sup> /h (Air), at nominal pressure

### Materials in contact with the medium

Case	Polycarbonate (PC)
Diaphragm	LSR (Liquid Silicon Rubber)
Sensor	Ceramic Al <sub>2</sub> O <sub>3</sub>

### Electrical overview

Output	0.5 ... 4.5 V
Power supply	10.4 ... 18 VDC <sup>1)</sup>
Load	> 15 kOhm (to GND)
Current consumption	At nominal pressure without load
	< 8 mA
Polarity reversal protection	Mechanically protected
Electrical compatibility	The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.

### Dynamic response

Response time	< 10 ms
Load cycle	< 10 Hz

### Electrical connections

3 pole plug connector RAST 2.5	Protection standard	IP 00	Protection class	III
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### Pressure connection

Pipe Ø 6.2 mm
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### Mounting instruction

Installation arrangement	Diaphragm horizontal (recommend)	Pressure connections facing downward
	Diaphragm vertical (on request)	Pressure connections lateral, signal approx. 13 Pa below actual pressure
Mounting		Snap mounting in sheet steel (thickness 1 and 2 mm)
		Mounting bracket type A / type B

### Tests / Admissions

DVGW	CE-0085BP0459 (DVGW) acc. DIN EN 1854
Gas appliance directive	2016/426/EG

### Weight

Without accessories	~ 45 g
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### Packaging

Cardboard boxes with blister pack inserts (returnable).
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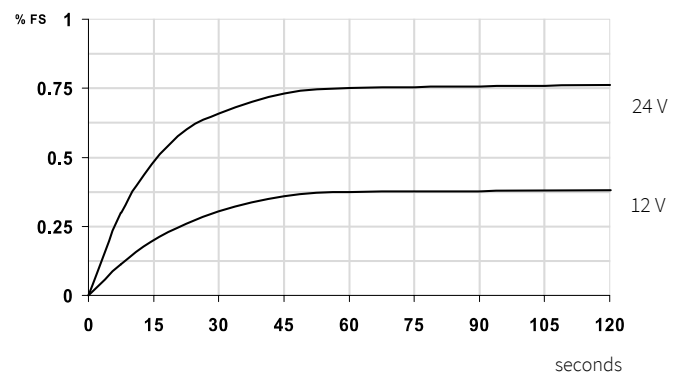
### Ordering batches quantities / Transport volumes

Pieces	Varaint	Length (cm)	Width (cm)	Height (cm)	Weight (kg)	Blister (20 pcs)
1440	12 Box on euro-palette	120	80	93	134	72
120	1 Box	59	39	26	9.5	6

## Accuracy

## Signal drift

Parameter		Unit	
Tolerance zero point <sup>2)</sup>	max.	% fs	± 0.5
Tolerance full scale <sup>2)</sup>	max.	% fs	± 1.5 /+ 0.5
Resolution		% fs	0.1
Total of linearity, hysteresis and repeatability	max.	% fs	± 0.3
long term stability acc. to DIN EN 60770		% fs	± 1.0
TC zero point <sup>3)</sup>	typ.	% fs/10K	± 0.2
TC zero point <sup>3)</sup>	max.	% fs/10K	± 0.3
TC sensitivity <sup>3)</sup>	typ.	% fs/10K	± 0.1



<sup>1)</sup> Power supply possible up to 28 VDC (with higher Power up drift see diagram)

<sup>2)</sup> For changing diaphragm position from horizontal to vertical, approx. -0.13 mbar.

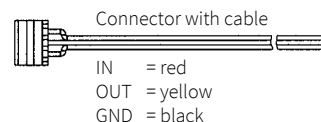
<sup>3)</sup> TC = Temperature coefficient

Order code selection table		Order number								
Pressure range	0 ... 3 mbar	4	0	1	.	9	3	0	0	0
	0 ... 5 mbar	4	0	1	.	9	5	0	0	0
	0 ... 8 mbar	4	0	1	.	9	8	0	0	0

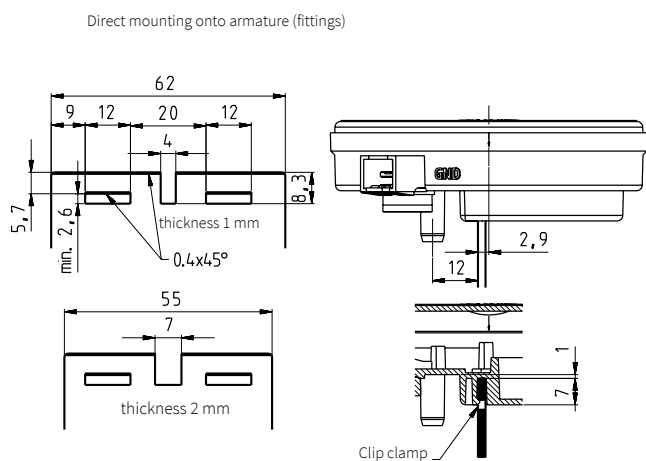
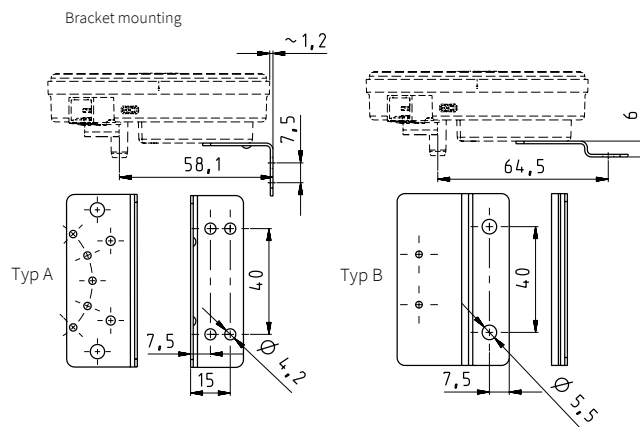
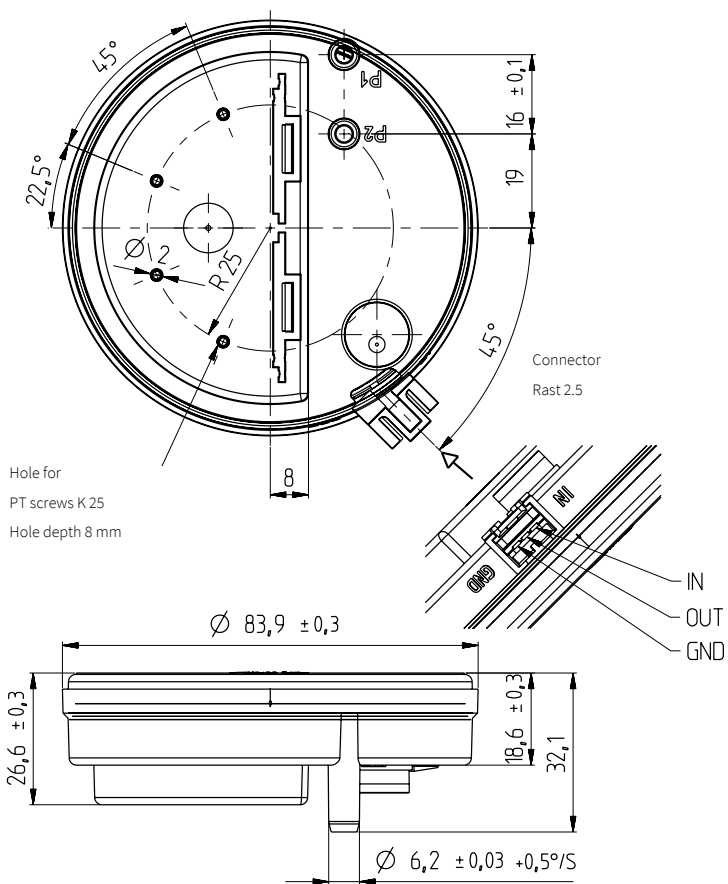
▲ Full scale signal at these pressure

Accessories (supplied loose)		Order number
Bracket type A		100295
Bracket type B		100098
Fixing screw for wall thickness 1 – 2 mm	Length of screw 6 mm (min. required 2 pcs)	102976
Orifice for pulsed pressure		100251
Connector Rast 2.5 with cable 30 cm		111668
Connector Rast 2.5 with cable 110 cm		101817
Connector Rast 2.5 with cable 150 cm		112282
Calibration certificate		104551

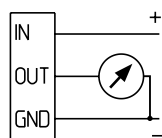
AMP connector <sup>1)</sup>	Manufacture's Part No.	Colour	for flexible wire
	3-829868-3	grey	7 x 0.20 mm = 0.22 mm <sup>2</sup> or 12 x 0.20 mm = 0.35 mm <sup>2</sup>
	1-966194-3	beige	7 x 0.25 mm = 0.35 mm <sup>2</sup>



### Dimensions in mm / Electrical connections



Other dimensions as per «Thickness 1 mm»



<sup>1)</sup> To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049.49.

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