halstrup walcher

PS 27

Measurement ranges (also ± measurement ranges) others available upon request	50/100/200/500 Pa 1/2.5/5/10/20/50/100 kPa
Margin of error (0.3 Pa margin of error for the reference)	± 2 % of the set value for ≥ 100 Pa or ± 3 % of the set value for 50 Pa
Temperature coefficient span	0.1 % of max. value/K
Temperature coefficient zero point	0.1 % of max. value/K
Overload capacity	50 kPa for measurement ranges ≤ 2 kPa 200 kPa for measurement ranges > 2 kPa 500 kPa for measurement ranges > 10 kPa
Medium	air, all non-aggressive gases
Max. system pressure	10 kPa for measurement ranges ≤ 10 kPa max. nominal pressure of sensor for measurement ranges above 10 kPa
Sensor response time	20 ms
Time constants	20 ms..4 s adjustable (factory-provided)
Operating temperature	-20..60 °C with Display 0..50 °C
Storage temperature	-20..70 °C
Power consumption	approx. 1 VA
Weight	approx. 0.25 kg
Cable glands	2 x M 12
Pressure ports	for tubing NW 4 or 6 mm
Protection class	IP 65
Certificates	CE

Output [1]	A
0..10 V (R_L ≥ 50 kΩ)	1
2..10 V (R_L ≥ 50 kΩ)	2
0..20 mA (R_L ≤ 500 Ω)	0
4..20 mA (R_L ≤ 500 Ω)	4
0..5 V (R_L ≥ 50 kΩ)	5

[1] the output signal can be configured using DIP switches

Measurement range	C
Standard [2] (e.g. 0..100 Pa)	
toggles between: 100 Pa/250 Pa/ 500 Pa/1 000 Pa	1
toggles between: 250 Pa/500Pa/ 1 000 Pa/2 kPa	2
toggles between: 1 kPa/2.5 kPa/ 5 kPa/10 kPa	3
toggles between: 10 kPa/25 kPa/ 50 kPa/100 kPa	4

[2] others available upon request, also ± measurement ranges

Power supply	B
24 V AC/DC ± 10 % without galvanic separation	AC/DC
15 .. 32 V DC two-wire (only for A = 4)	ZWL

Contact point	D
none	0
1 relay (changeover contacts) max. 230 V AC, 6 A (min. required switching capacity 300 mW) (not for two-wire)	1

LCD	E
none	0
4-digit	1

Time constant	F
20 msec	20
30 msec	30
60 msec	60
120 msec	120
250 msec	250
500 msec	500
1 sec	1
2 sec	2
4 sec	4

Order code	A	B	C	D	E	F
PS 27	–	–	–	–	–	–

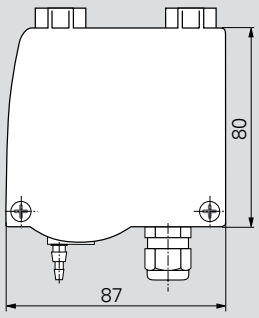
Relay parameter can be pre-set on request.

Photo: Version with optional display

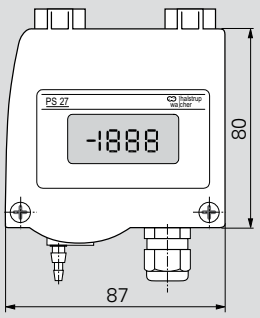
Features

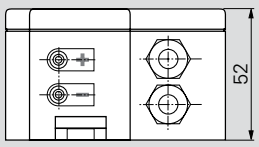
- Compact differential pressure transmitter for basic applications
- ± measurement ranges and asymmetric measurement ranges
- Either with one fixed measurement range or toggling between 4 different measurement ranges (can be selected via DIP switches, optional)
- Optionally with 2-wire technology (ZWL)
- With optional display
- With optional relay (6 A)
- Suitable for top-hat rail mounting and wall surface installation

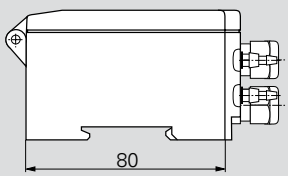
PS 27 without display



PS 27 with display







MEASUREMENT OF DIFFERENTIAL PRESSURE

Measurement of differential pressure is useful in a broad range of applications. It is used in ventilation and air-conditioning technology but also in many areas of air handling process technology. The next pages show a number of these. You can find more information about our pressure sensor technology on p. 6.
halstrup-walcher offers a wide range of products for stationary measurement of differential pressure:

Product	**PUC24**	**PUC28(K)**	**P26**	**P34**	**P29**	**PU/PI/PIZ**	**PS27**	**REG21**
Details on	**p. 14**	**p. 15**	**p. 16**	**p. 17**	**p. 18**	**p. 19**	**p. 20**	**p. 21**
								
Application	Process monitoring for cleanrooms (Pa, °C, % rH), with stainless steel front	Process monitoring panel aluminium, anodised (optional: with calibration port) (Pa, °C, % rH)	High precision, freely scalable pressure transmitter for critical applications	Measuring transmitter with very small dimensions – ideal for the control cabinet	High precision, freely scalable pressure transmitter for natural gas	For standard applications. PIZ: in two wire technology	A basic sensor for simple applications	Measurement and regulation of pressure
Housing installation	Installed in wall (panel)		Mounted on a wall/top-hat rail					Rack
Max. measurement range	± 250 Pa		± 100 kPa					
Min. measurement range	± 100 Pa		± 10 Pa		± 250 Pa	± 50 Pa		
Degree of measurement uncertainty (0.3 Pa margin of error for the reference)	± 0.5 % [1] (standard)		± 0.2 % [1] (optional) ± 0.5 % [1] (standard)		± 0.2 % [1] (optional) ± 0.5 % [1] (standard)	± 0.2 % [1] [2] ± 0.5 % [1] ± 1 % [1]	± 2 % (≥ 100 Pa) or ± 3 % (for 50 Pa) of the set value	± 0.5 % [1] ± 1 % [1]
Square-root (volume flow)	-	-	✓	✓[3]	✓	-	-	-
Display	✓	✓	optional	-	optional	optional	optional	✓

[1] of max. value [2] for measurement ranges ≥ 250 Pa

[3] optionally with stat. pressure sensor and temperature analogue output for compensation

ACCESSORIES

Certificates (see p. 42) **Order no.**

DAkkS calibration certificate (German)	9601.0003
DAkkS calibration certificate (English)	9601.0004
ISO factory calibration certificate	9601.0002

Connecting components

Silicone tubing ID 5 mm, OD 9 mm, red (please state length required)	9601.0160
Silicone tubing ID 5 mm, OD 9 mm, blue (please state length required)	9601.0161
Norprene tubing (please state length required)	9061.0132
Y-piece for tubing	9601.0171

Pressure ports

We can supply a wide range of customer-specific pressure ports, e.g. various cutting ring couplings or hose connectors.

User software

You can set the parameters for our instruments or monitor and record measurements using a PC via a USB or RS 232 interface. These features are supported by our free user software. This also allows you to transfer your settings to other devices by saving and reusing them.

Our user software is compatible with the following pressure transmitters: PUC 24, PUC 28 (K), P 26, P 34 and P 29.

You can download the file here:
www.halstrup-walcher.de/en/software