

Pressure and vacuum switches PEV/VPEV, PE converters PE/PEN/VPE

Product overview

FESTO



- Mechanical pressure and vacuum switches with adjustable switching point
- PE converter
- Designs with adjustable hysteresis
- Designs with switching status display
- Variant with scale for pressure adjustment
- Wide range of mounting options

Detailed product information

→ www.festo.com/catalogue/pev

Sensors
Sensors for pressure and vacuum

1.2

Product overview							
Method of measurement	Operating pressure [bar]	Type	Pneumatic connection	Type of mounting	Operating voltage range		➔ Page
					[V DC]	[V AC]	
Pressure switches							
Pneumatic/electrical pressure transducer	1 ... 12	PEV-1/4-...-M12	G1/4	With through-holes	0 ... 48	0 ... 48	58
		PEV-1/4			0 ... 250	0 ... 250	
	0 ... 8	PEV-W	M5	Via DIN H-rail	10 ... 30	–	60
	1 ... 10	PEV-1/4-A	G1/4	Screw-in	10 ... 30	–	62
Vacuum switches							
Pneumatic/electrical pressure transducer	–1 ... 1.6	VPEV-1/8-...-M12	G1/8	Via through-hole	0 ... 48	0 ... 48	58
		VPEV-1/8			0 ... 125	0 ... 250	
	–1 ... 0	VPEV-W	M5	Via DIN H-rail	10 ... 30	–	60
PE converter							
Pneumatic/electrical differential pressure switch	–1 ... +8	PEN-M5	M5	On mounting frame 2N	10 ... 30	–	63
Pneumatic/electrical pressure transducer	0 ... 8	PE-1/8-2N	G1/8	On mounting frame 2N	12 ... 250	12 ... 250	
	–0.95 ... 0	VPE-1/8-2N	G1/8	On mounting frame 2N	12 ... 250	12 ... 250	

Pressure and vacuum switches PEV/VPEV, with through-holes

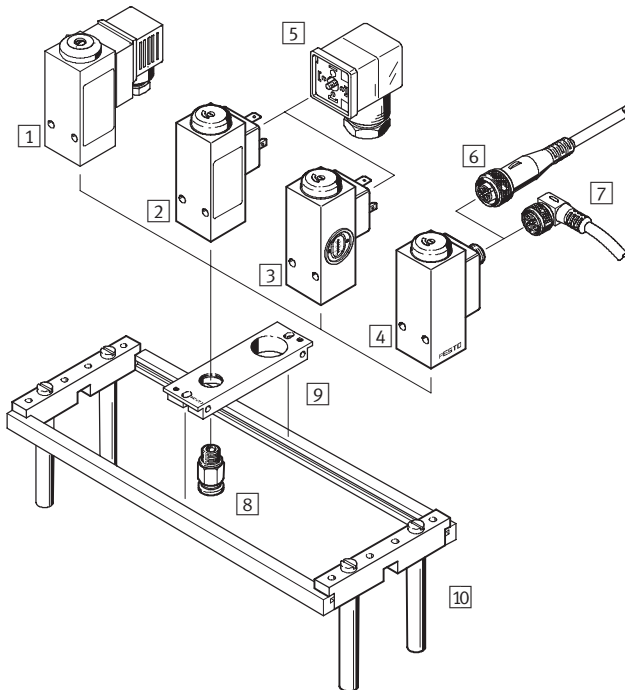
FESTO

Technical data, peripherals overview

Ordering data						
Description	Electrical connection	Adjustable hysteresis	Visual scale for pressure adjustment	Plug socket in scope of delivery	Part No.	Type
Pressure switches						
	Plug, square design to DIN 43650, type A	■	—	■	10 773	PEV-1/4-B
		■	—	■	165 869	PEV-1/4-B-CT ¹⁾
		■	—	—	175 250	PEV-1/4-B-OD
		■	—	—	175 251	PEV-1/4-B-OD-CT ¹⁾
	Plug M12x1, 4-pin	—	■	—	161 760	PEV-1/4-SC-OD
		■	—	—	192 488	PEV-1/4-B-M12
Vacuum switches						
	Plug, square design to DIN 43650, type A	■	—	■	150 261	VPEV-1/8
	Plug M12x1, 4-pin	■	—	—	192 489	VPEV-1/8-M12

1) Free of copper and PTFE

Peripherals overview



Accessories	
1	Pressure switch PEV-1/4-B-..., vacuum switch VPEV-1/8
2	Pressure switch PEV-1/4-B-OD...
3	Pressure switch PEV-1/4-SC-OD... with scale for pressure adjustment
4	Pressure switch PEV-1/4-B-M12, vacuum switch VPEV-1/8-M12
5	Plug socket PEV-1/4-WD-LED... with switching status display Plug socket MSSD-C-4P without switching status display
6	Connecting cable NEBU-M12G5... with straight socket
7	Connecting cable NEBU-M12W5... with angled socket
8	Push-in fitting QS...
9	Mounting plate APL-2N-PEV
10	Mounting frame NRRQ-2N

Ordering data – Plug sockets			
	Description	Part No.	Type
	With switching status display	164 274	PEV-1/4-WD-LED-24
		164 275	PEV-1/4-WD-LED-230
	Without switching status display	171 157	MSSD-C-4P

Ordering data – Connecting cables				Technical data → 261
	Number of wires	Cable length [m]	Part No.	Type
M12x1, straight socket				
	4	5	541 328	NEBU-M12G5-K-5-LE4
M12x1, angled socket				
	4	5	541 329	NEBU-M12W5-K-5-LE4

Ordering data – Push-in fittings			Technical data → www.festo.com/catalogue/qs
	Part No.	Type	
	186 097	QS-G1/4-6	
	186 099	QS-G1/4-8	

Ordering data – Mounting attachments		
	Part No.	Type
	9 349	APL-2N-PEV
	9 365	NRRQ-2N
	11 571	NRW-9/1,5-B

Pressure and vacuum switches PEV-W/VPEV-W, DIN H-rail mounting

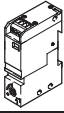
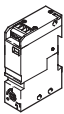
FESTO

Type codes, technical data

Type codes

		PEV-W	–	KL	–	LED	–	GH
Type								
PEV-W	Pressure switch							
VPEV-W	Vacuum switch							
Electrical connection								
KL	Screw terminal, 4-pin							
S	Plug, M8x1, 4-pin							
Switching status display								
LED	Yellow LED							
Type of mounting								
GH	Via DIN H-rail or via through-holes							

Technical data			
Type		PEV-W	VPEV-W
Design			
Pneumatic connection		M5	M5
Electrical data			
Operating voltage range	[V DC]	10 ... 30	10 ... 30
	[V AC]	–	–
Switching element function		Changeover switch	
Max. output current	[mA]	5,000	2,500
Protection against short circuit		No	
Protection against polarity reversal		Yes	
Protection class		IP65	
Operating and environmental conditions			
Operating medium		Filtered compressed air, lubricated or unlubricated	Filtered compressed air, lubricated or unlubricated Vacuum, lubricated or unlubricated
Operating pressure	[bar]	0 ... 8	0 ... –1
Ambient temperature	[°C]	–20 ... +80	
CE mark (see declaration of conformity)		In accordance with EU EMC directive	
Certification		CCC	
Materials			
Housing		Wrought aluminium alloy	

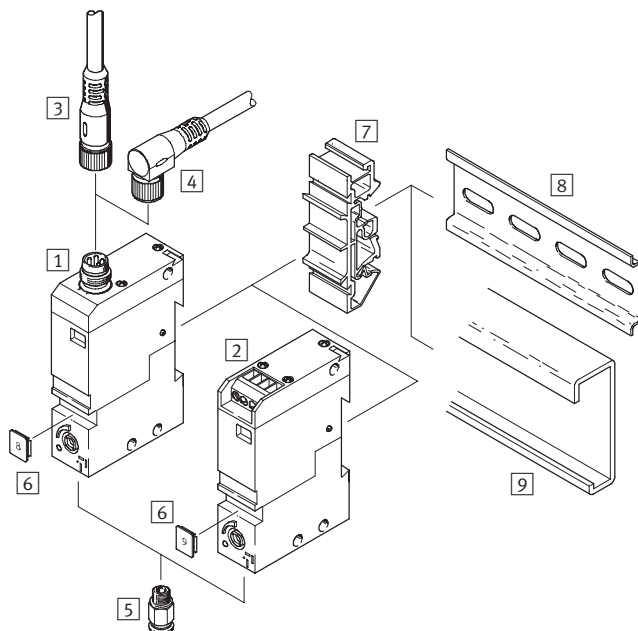
Ordering data				
Description	Electrical connection	Plug socket in scope of delivery	Part No.	Type
Pressure switches				
	Screw terminal, 4-pin	–	152 618	PEV-W-KL-LED-GH
	Plug, M8x1, 4-pin	–	152 616	PEV-W-S-LED-GH
Vacuum switches				
	Screw terminal, 4-pin	–	152 619	VPEV-W-KL-LED-GH
	Plug, M8x1, 4-pin	–	152 617	VPEV-W-S-LED-GH

Pressure and vacuum switches PEV-W/VPEV-W, DIN H-rail mounting



FESTO

Peripherals overview

Peripherals overview



Accessories	
1	Pressure switch PEV-W-S-... with plug M8x1 Vacuum switch VPEV-W-S-... with plug M8x1
2	Pressure switch PEV-W-KL-... with screw terminals Vacuum switch VPEV-W-KL-... with screw terminals
3	Connecting cable NEBU-M8G4-... with straight socket
4	Connecting cable NEBU-M8W4-... with angled socket
5	Push-in fitting QSM-M5
6	Identification plate BZ-N...
7	Mounting latch PENV-BGH
8	Mounting rail to DIN EN 50022
9	Mounting rail to DIN EN 50035

Ordering data – Connecting cables			Technical data ➔ 261	
	Number of wires	Cable length [m]	Part No.	Type
M8x1, straight socket				
	4	2.5	541 342	NEBU-M8G4-K-2.5-LE4
		5	541 343	NEBU-M8G4-K-5-LE4
M8x1, angled socket				
	4	2.5	541 344	NEBU-M8W4-K-2.5-LE4
		5	541 345	NEBU-M8W4-K-5-LE4

Ordering data – Push-in fittings			Technical data → www.festo.com/catalogue/qsm	
	For tubing O.D. [mm]	Part No.	Type	
	3	153 302	QSM-M5-3	
	4	153 304	QSM-M5-4	
	6	153 306	QSM-M5-6	

Ordering data – Accessories		
	Part No.	Type
	6 888	BZ-N1-50
	6 889	BZ-N51-100
	164 597	PENV-BGH

Sensors
Sensors for pressure and vacuum

1.2

Pressure switches PEV, screw-in



Type codes, technical data



FESTO

Type codes

		PEV	-	1/4	-	A	-	SW27	-	
Type										
PEV	Pressure switch									
Pneumatic connection										
1/4	G1/4									
Generation										
A	A series									
Width across flats										
SW27	27 mm									
Electrical connection										
-	For plug socket PEV-1/4-A-WD									
B-OD	For plug socket PEV-1/4-WD-LED-...									

Technical data					
Type		PEV-1/4-A-SW27		PEV-1/4-A-SW27-B-OD	
Design					
Pneumatic connection		G1/4			
Electrical data					
Operating voltage range		[V DC]	12 ... 250		
Switching element function		Changeover switch			
Max. output current		[mA]	4,000		
Protection against short circuit		No			
Protection against polarity reversal		No			
Protection class		IP65			
Operating and environmental conditions					
Operating medium		Filtered compressed air, lubricated or unlubricated			
Operating pressure		[bar]	1 ... 10		
Ambient temperature		[°C]	−30 ... +100		−20 ... +100
CE mark (see declaration of conformity)		In accordance with EU Low Voltage Directive			
Materials					
Housing		Galvanised steel			

Ordering data			
		Electrical connection	Plug socket in scope of delivery
		Plug, 4-pin	-
		Plug, 4-pin	-
		Part No.	Type
		159 259	PEV-1/4-A-SW27
		175 252	PEV-1/4-A-SW27-B-OD

Ordering data – Plug sockets					
		Description	Operating voltage range		Part No. Type
			[V DC]	[V AC]	
		For pressure switch PEV-1/4-A-SW27	≤180	≤230	161 209 PEV-1/4-A-WD
		For pressure switch PEV-1/4-A-SW27-B-OD	15 ... 30	-	164 274 PEV-1/4-WD-LED-24
			≤180	≤230	164 275 PEV-1/4-WD-LED-230

PE converter PE/PEN/VPE

Type codes, technical data

FESTO

Type codes

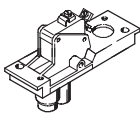
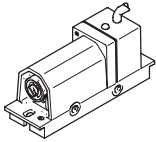
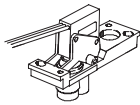
		PE	–	1/8	–	2N	–	SW
Type								
PE	PE converter							
PEN	PE converter							
VPE	PE converter for vacuum							
Pneumatic connection								
1/8	G1/8							
M5	Female thread M5							
Type of mounting								
2N	On mounting frame 2N							
Width across flats								
SW	Splash proof design							

Technical data						
Type		PE-1/8-2N	PE-1/8-2N-SW	PEN-M5	VPE-1/8-2N	VPE-1/8-2N-SW
Design						
Pneumatic connection		G1/8		M5	G1/8	
Electrical data						
Operating voltage range	[V DC]	12 ... 250		12 ... 30	12 ... 250	
	[V AC]	12 ... 250		–	12 ... 250	
Switch output		–		PNP	–	
Switching element function		Changeover switch		N/O contact	Changeover switch	
Max. output current	[mA]	4,000				
Minimum load current	[mA]	100		–	100	
Protection against short circuit		No		Yes	No	
Protection against polarity reversal		No				
Protection class		IP00, IP20 with protective cap	IP67	IP67	IP00, IP20 with protective cap	IP67
Operating and environmental conditions						
Operating medium		Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm				
		–				Vacuum
Operating pressure	[bar]	0 ... 8		–1 ... +8	–0.95 ... 0	
Ambient temperature	[°C]	0 ... 60		–20 ... +60	0 ... 60	
CE mark (see declaration of conformity)		In accordance with EU Low Voltage Directive		In accordance with EU EMC directive	In accordance with EU Low Voltage Directive	
Certification		CCC		–	CCC	
Materials						
Housing		Die-cast aluminium, polyamide		Die-cast zinc	Die-cast aluminium, polyamide	

PE converters PE/PEN/VPE

Technical data

FESTO

Ordering data				
	Operating pressure [bar]	Electrical connection	Part No.	Type
	0 ... 8	Screw terminal	7 860	PE-1/8-2N
		3 wires	7 862	PE-1/8-2N-SW
	-1 ... +8	Cable, 3-wire	8 625	PEN-M5
	-0.95 ... 0	Screw terminal	12 594	VPE-1/8-2N
		3 wires	12 595	VPE-1/8-2N-SW