

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

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Product overview



- 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

Product overview							
Method of measurement	Operating pressure [bar]	Type	Pneumatic connection	Type of mounting	Max. switching output voltage		➔ Page/ Internet
					[V DC]	[V AC]	
Pressure switches							
Pneumatic/electrical pressure transducer	1 ... 12	PEV-1/4-B-M12	G1/4	With through-holes	48	48	2
		PEV-1/4-B			125	250	
		PEV-1/4-SC-OD			125	250	
	0 ... 8	PEV-W	M5	Via DIN H-rail	10 ... 30	–	4
	1 ... 10	PEV-1/4-A	G1/4	Screw-in	250	250	6
Vacuum switches							
Pneumatic/electrical pressure transducer	–1 ... 1.6	VPEV-1/8-M12	G1/8	Via through-hole	48	48	2
		VPEV-1/8			125	250	
	–1 ... 0	VPEV-W	M5	Via DIN H-rail	10 ... 30	–	4
PE converter							
Pneumatic/electrical differential pressure switch	–1 ... +8	PEN-M5	M5	On mounting frame 2N	10 ... 30	–	7
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

Type codes, technical data

Type codes

Type		PEV	1/4	B				
PEV	Pressure switch							
VPEV	Vacuum switch							
Pneumatic connection								
1/8	G1/8							
1/4	G1/4							
Generation								
B	B series							
Electrical connection								
–	Plug, square design to EN 43 650, type A							
M12	Plug, M12x1, 4-pin, round design							
Setting options								
SC	Scale for pressure adjustment							
Plug socket								
–	Included in scope of delivery							
OD	Not included in scope of delivery							
Note on materials								
–	Not free of copper and PTFE							
CT	Free of copper and PTFE							

Technical data

Type	PEV-1/4-B-M12	PEV-1/4-B(-OD) PEV-1/4-SC-OD	PEV-1/4-B-CT PEV-1/4-B-OD-CT	VPEV-1/8-M12	VPEV-1/8	
Design						
Pneumatic connection	G1/4			G1/8		
Electrical data						
Max. switching output voltage	[V DC]	48	125	125	48	125
	[V AC]	48	250	250	48	250
Switching element function	Changeover switch					
Max. output current	[mA]	5,000			–	
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		
	Water			unlubricated		
	Mineral oil			Vacuum, lubricated or unlubricated		
Operating pressure	[bar]	1 ... 12			–1 ... +1.6	
Ambient temperature	[°C]	–20 ... +80				
CE mark (see declaration of conformity)	In accordance with EU Low Voltage Directive					
Certification	CCC					
	c UL us - Recognized (OL)	–			c UL us - Recognized (OL)	–
Materials						
Housing	Wrought aluminium alloy					
Note on materials	RoHS-compliant			–	RoHS-compliant	

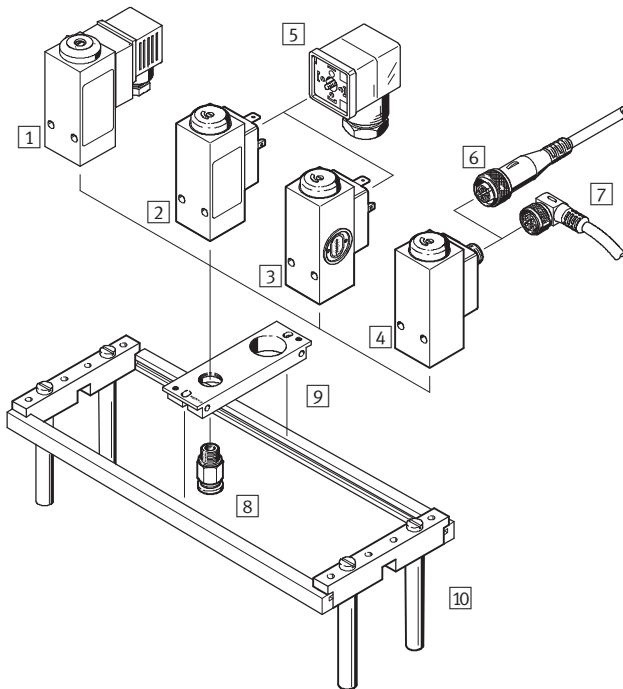
Pressure and vacuum switches PEV/VPEV, with through-holes

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	■	—	■	10773	PEV-1/4-B
		■	—	■	165869	PEV-1/4-B-CT ¹⁾
		■	—	—	175250	PEV-1/4-B-OD
		■	—	—	175251	PEV-1/4-B-OD-CT ¹⁾
	Plug M12x1, 4-pin	—	■	—	161760	PEV-1/4-SC-OD
		■	—	—	192488	PEV-1/4-B-M12
Vacuum switches						
	Plug, square design to DIN 43650, type A	■	—	■	150261	VPEV-1/8
	Plug M12x1, 4-pin	■	—	—	192489	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	164274	PEV-1/4-WD-LED-24
		164275	PEV-1/4-WD-LED-230
	Without switching status display	171157	MSSD-C-4P

Ordering data – Connecting cables			
	Number of wires	Cable length [m]	Part No. Type
M12x1, straight socket			
	4	5	541328 NEBU-M12G5-K-5-LE4
M12x1, angled socket			
	4	5	541329 NEBU-M12W5-K-5-LE4

Ordering data – Push-in fittings		
	Part No.	Type
	186097	QS-G1/4-6
	186099	QS-G1/4-8

Ordering data – Mounting attachments		
	Part No.	Type
	9349	APL-2N-PEV
	9365	NRRQ-2N
	11571	NRW-9/1,5-B

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

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Type codes, technical data

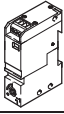
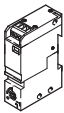
Type codes

		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]	2,500	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		
Materials			
Housing	Wrought aluminium alloy		
Note on materials	RoHS-compliant		

Ordering data

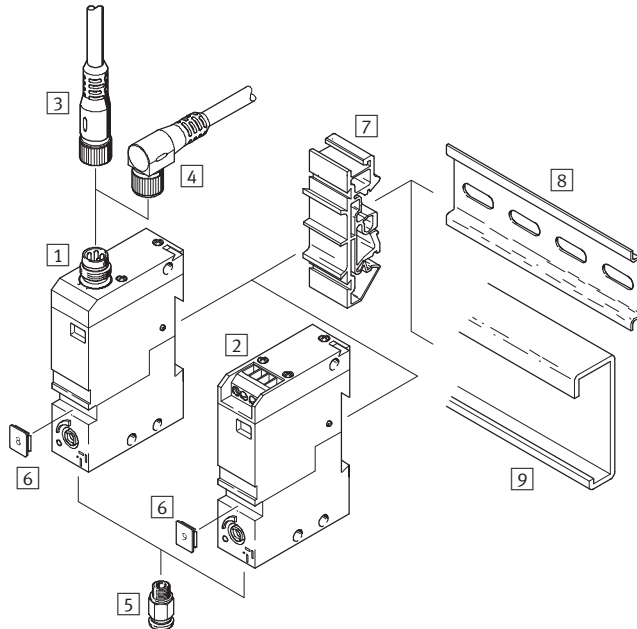
Description	Electrical connection	Plug socket in scope of delivery	Part No.	Type
Pressure switches				
	Screw terminal, 4-pin	–	152618	PEV-W-KL-LED-GH
	Plug, M8x1, 4-pin	–	152616	PEV-W-S-LED-GH
Vacuum switches				
	Screw terminal, 4-pin	–	152619	VPEV-W-KL-LED-GH
	Plug, M8x1, 4-pin	–	152617	VPEV-W-S-LED-GH

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

Peripherals overview

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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 60715
9	Mounting rail to DIN EN 50035

Ordering data – Connecting cables

Technical data → Internet: nebu

	Number of wires	Cable length [m]	Part No.	Type
M8x1, straight socket				
	4	2.5	541342	NEBU-M8G4-K-2.5-LE4
		5	541343	NEBU-M8G4-K-5-LE4
M8x1, angled socket				
	4	2.5	541344	NEBU-M8W4-K-2.5-LE4
		5	541345	NEBU-M8W4-K-5-LE4

Ordering data – Push-in fittings

Technical data → Internet: quick star

	For tubing O.D. [mm]	Part No.	Type
	3	153302	QSM-M5-3
	4	153304	QSM-M5-4
	6	153306	QSM-M5-6

Ordering data – Accessories

	Part No.	Type
	6888	BZ-N1-50
	6889	BZ-N51-100
	164597	PENV-BGH

Pressure switches PEV, screw-in

Type codes, technical data

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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		
Max. switching output voltage		[V DC]	250		
		[V AC]	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	Part No.	Type
		Plug, 4-pin	-	159259	PEV-1/4-A-SW27
		Plug, 4-pin	-	175252	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	161209	PEV-1/4-A-WD
		For pressure switch PEV-1/4-A-SW27-B-OD	15 ... 30	-	164274	PEV-1/4-WD-LED-24
			≤180	≤230	164275	PEV-1/4-WD-LED-230

PE converter PE/PEN/VPE

Type codes, technical data

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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							

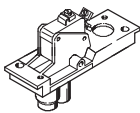
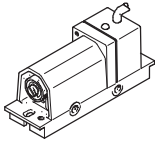
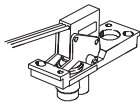
Technical data

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

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Ordering data				
	Operating pressure [bar]	Electrical connection	Part No.	Type
	0 ... 8	Screw terminal	7860	PE-1/8-2N
		3 wires	7862	PE-1/8-2N-SW
	-1 ... +8	Cable, 3-wire	8625	PEN-M5
	-0.95 ... 0	Screw terminal	12594	VPE-1/8-2N
		3 wires	12595	VPE-1/8-2N-SW