

# 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](http://www.festo.com/catalogue/pev)

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	G1/4	With through-holes	0 ... 250	0 ... 250	58
	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	G1/8	Via through-hole	0 ... 125	0 ... 250	58
	–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	

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Type codes, technical data

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

Technical data			
Type		PEV-1/4	VPEV-1/8
Design			
Pneumatic connection		G1/4	G1/8
Electrical data			
Operating voltage range	[V DC]	0 ... 250	0 ... 250
	[V AC]	0 ... 125	0 ... 250
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 Water Mineral oil	Filtered compressed air, lubricated or unlubricated 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	
Materials			
Housing		Wrought aluminium alloy	

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

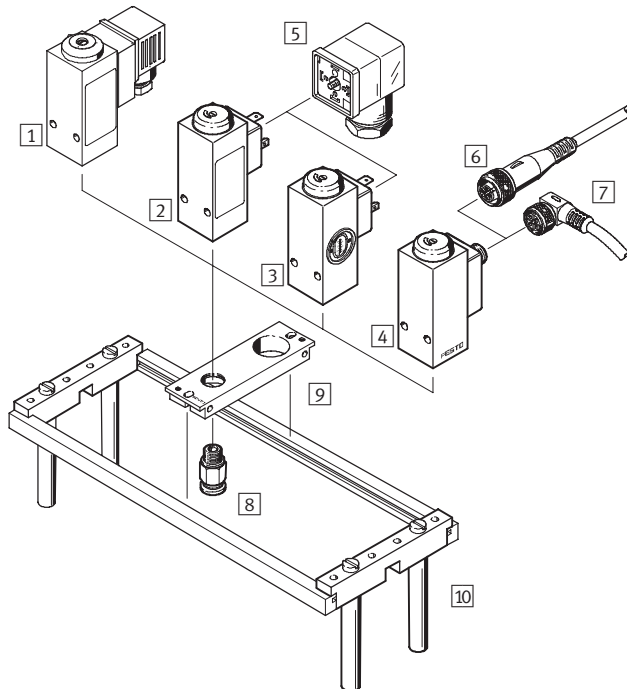
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Technical data, peripherals overview

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 <sup>1)</sup>
		■	—	—	175 250	PEV-1/4-B-OD
		■	—	—	175 251	PEV-1/4-B-OD-CT <sup>1)</sup>
	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	
	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 → 169
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
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

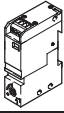
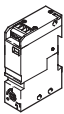
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Type codes, technical data

## Type codes

		PEV-W	–	KL	–	LED	–	GH
<b>Type</b>								
PEV-W	Pressure switch							
VPEV-W	Vacuum switch							
<b>Electrical connection</b>								
KL	Screw terminal, 4-pin							
S	Plug, M8x1, 4-pin							
<b>Switching status display</b>								
LED	Yellow LED							
<b>Type of mounting</b>								
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	

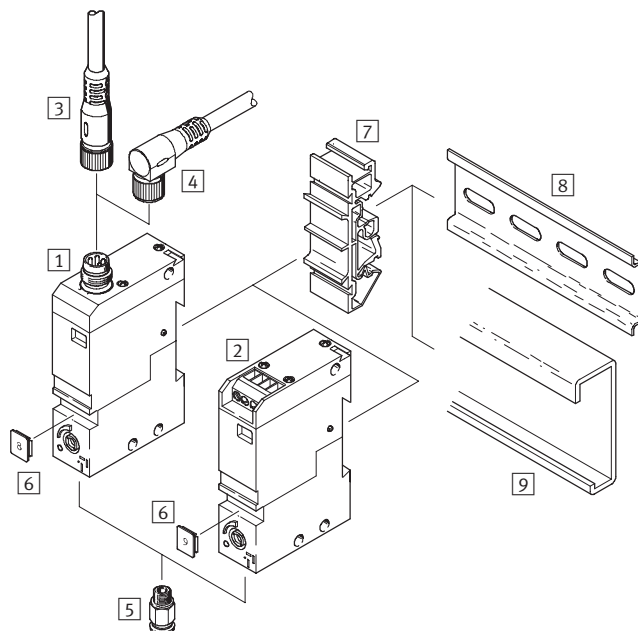
<b>Ordering data</b>				
Description	Electrical connection	Plug socket in scope of delivery	Part No.	Type
<b>Pressure switches</b>				
	Screw terminal, 4-pin	–	152 618	PEV-W-KL-LED-GH
	Plug, M8x1, 4-pin	–	152 616	PEV-W-S-LED-GH
<b>Vacuum switches</b>				
	Screw terminal, 4-pin	–	152 619	VPEV-W-KL-LED-GH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

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

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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 → 169

	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

	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


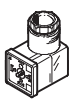
Type codes, technical data

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Type codes	
	PEV – 1/4 – A – SW27 –
<b>Type</b>	
PEV	Pressure switch
<b>Pneumatic connection</b>	
1/4	G1/4
<b>Generation</b>	
A	A series
<b>Width across flats</b>	
SW27	27 mm
<b>Electrical connection</b>	
–	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	Part No. Type
		Plug, 4-pin	–	159 259 PEV-1/4-A-SW27
		Plug, 4-pin	–	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

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### Type codes

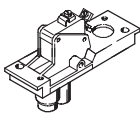
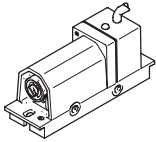
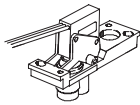
		PE	–	1/8	–	2N	–	SW
<b>Type</b>								
PE	PE converter							
PEN	PE converter							
VPE	PE converter for vacuum							
<b>Pneumatic connection</b>								
1/8	G1/8							
M5	Female thread M5							
<b>Type of mounting</b>								
2N	On mounting frame 2N							
<b>Width across flats</b>								
SW	Splash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