

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

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]	
<b>Pressure switches</b>							
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
<b>Vacuum switches</b>							
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
<b>PE converter</b>							
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

Type codes, technical data



Type codes	
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-...-M12	PEV-1/4	VPEV-1/8-...-M12	VPEV-1/8
<b>Design</b>					
Pneumatic connection		G1/4		G1/8	
<b>Electrical data</b>					
Operating voltage range	[V DC]	0 ... 48	0 ... 250	0 ... 48	0 ... 250
	[V AC]	0 ... 48	0 ... 125	0 ... 48	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			
<b>Operating and environmental conditions</b>					
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)		Not necessary	In accordance with EU Low Voltage Directive	Not necessary	In accordance with EU Low Voltage Directive
Certification		CCC			
<b>Materials</b>					
Housing		Wrought aluminium alloy			

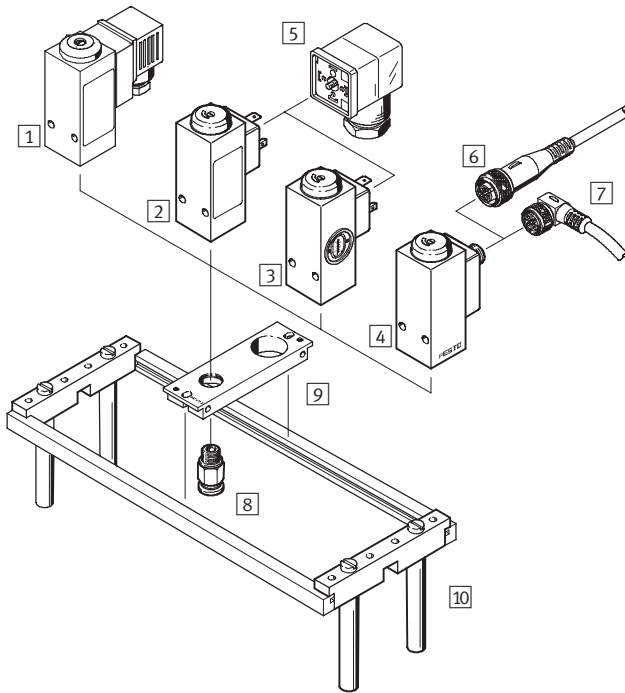
# Pressure and vacuum switches PEV/VPEV, with through-holes

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
<b>Pressure switches</b>						
	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>
	-	■	-	-	161 760	PEV-1/4-SC-OD
	Plug M12x1, 4-pin	■	-	-	192 488	PEV-1/4-B-M12
<b>Vacuum switches</b>						
	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 → 247
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

Type codes, technical data

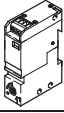
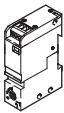


Sensors for pressure and vacuum

1.2

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

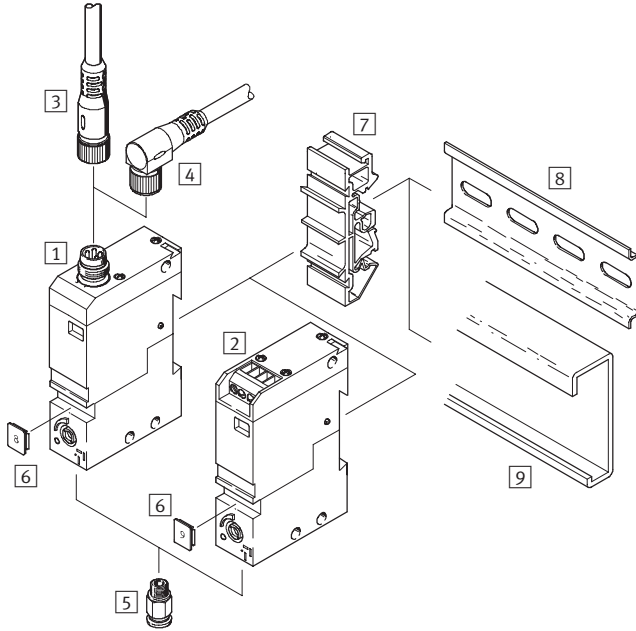
Technical data			
Type		PEV-W	VPEV-W
<b>Design</b>			
Pneumatic connection		M5	M5
<b>Electrical data</b>			
Operating voltage range	[V DC]	10 ... 30	10 ... 30
	[V AC]	–	–
Switching element function		Changeover switch	
Max. output current	[mA]	5,000	2,500
Protection against short circuit		No	
Protection against polarity reversal		Yes	
Protection class		IP65	
<b>Operating and environmental conditions</b>			
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	
<b>Materials</b>			
Housing		Wrought aluminium alloy	

Ordering data				
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

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 → 247

	Number of wires	Cable length [m]	Part No.	Type
<b>M8x1, straight socket</b>				
	4	2.5	541 342	NEBU-M8G4-K-2.5-LE4
		5	541 343	NEBU-M8G4-K-5-LE4
<b>M8x1, angled socket</b>				
	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](http://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

# Pressure switches PEV, screw-in

Type codes, technical data



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
<b>Design</b>		
Pneumatic connection	G1/4	
<b>Electrical data</b>		
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	
<b>Operating and environmental conditions</b>		
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	
<b>Materials</b>		
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

FESTO

## 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							

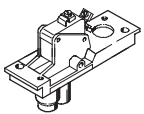
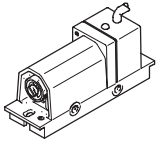
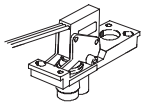
## Technical data

Type	PE-1/8-2N	PE-1/8-2N-SW	PEN-M5	VPE-1/8-2N	VPE-1/8-2N-SW
<b>Design</b>					
Pneumatic connection	G1/8		M5	G1/8	
<b>Electrical data</b>					
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
<b>Operating and environmental conditions</b>					
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	
<b>Materials</b>					
Housing		Die-cast aluminium, polyamide	Die-cast zinc	Die-cast aluminium, polyamide	

# PE converters PE/PEN/VPE

Technical data



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