



Product range overview

Function	Design	Туре	Operating pressure	Pneumatic connection	Electrical connection	Max. swit voltage	ching output	→ Page					
			[bar]			[V DC]	[V AC]						
Nechanical pressure	Mounting via retai							1					
switch		PEV	112	G1/4	Plug, type A ¹⁾	125	250	3					
		PEV	1 12	G1/4	Plug, type A	125	250	3					
		PEV Visual scale for pressure adjustment	1 12	G1/4	Plug, type A	125	250	3					
		PEV	1 12	G1/4	M12x1 plug, 4-pin	48	48	3					
	H-rail mounting												
	(See)	PEV-W	08	M5	M8x1 plug, 4-pin	30	-	11					
		PEV-W	08	M5	Screw terminal, 4-pin	30	-	11					
	Mounting via screw-in thread												
		PEV-SW27	1 10	G1/4	For plug socket PEV-1/4-A-WD	250	250	16					
		PEV-SW27	1 10	G1/4	For plug socket PEV-1/4-WD-LED	250	250	16					
Nechanical vacuum	Mounting via retai	ning scrows											
witch		VPEV	-1 +1.6	G1/8	Plug, type A ¹⁾	125	250	3					
Switti													
		VPEV	-1+1.6	G1/8	M12x1 plug, 4-pin	48	48	3					
	H-rail mounting		1	1	1	1		1					
	(See)	VPEV-W	-1 0	M5	M8x1 plug, 4-pin	30	-	11					
		VPEV-W	-1 0	M5	Screw terminal, 4-pin	30	-	11					

1) Plug socket included in the scope of delivery



Peripherals overview – PEV/VPEV with through-hole

- Note

The vacuum switch VPEV can be used as a pressure switch by repositioning the plug screw supplied from the pressure supply port to the vacuum port.

Mour	ting attachments and accessories	→ Page/Internet
[1]	Angled plug socket with switching status indication PEV	20
	Plug socket without switching status indication MSSD	25
[2]	Connecting cable NEBU-M12	25
[3]	Mounting plate APL	23

Mour	nting attachments and accessories	→ Page/Internet
[4]	Mounting frame NRRQ	24
[5]	Push-in fitting QS	qs
[6]	Quick connector CK-1/8, LCK-1/8	ck
[7]	Plug screw VPEV-1/8 (included in the scope of delivery of VPEV)	-

Type codes – PEV/VPEV with through-hole

001	Series	004	Electrical connection
PEV	Pressure switch		Plug, type A, square design, to EN 175301-803
VPEV	Vacuum switch	M12	Plug M12x1, 4-pin, round design, to EN 60947-5-2
002	Pneumatic connection	005	Setting options
1/8	G1/8		None
1/4	G1/4	SC	Scale for pressure setting
003	Generation	006	Plug socket
	None		Included in the scope of delivery
В	Series B	OD	Not included in the scope of delivery

Function PEV/VPEV

PEV/VPEV-...-M12



General technical data								
Туре		PEV-1/4-B(-OD)	PEV-1/4-SC-OD	PEV-1/4-B-M12	VPEV-1/8	VPEV-1/8-M12		
General								
Type of mounting		With through-hole						
Mounting position		Any						
Pneumatic connection		G1/4			G1/8			
Input signal/measuring element								
Measured variable		Relative pressure						
Measurement method		Pneumatic/electric pr	essure transducer					
l		-	With setting scale	-	-	-		
Pressure measuring range	[bar]	-			-1 +1.6			
Electrical data		1	1	1	1	1		
Туре		PEV-1/4-B(-OD)	PEV-1/4-SC-OD	PEV-1/4-B-M12	VPEV-1/8	VPEV-1/8-M12		
Switching output								
Switching element function		Changeover switch						
Max. switching frequency	[Hz]	3						
Max. switching output voltage	[V AC]	250		48	250	48		
	[V DC]	125		48	125	48		
Max. output current	[mA]	5000		4000	5000	4000		
Minimum load current	[mA]	1 (at 24 V)						
	[mA]	10 (at 10 V)						
	[mA]	100 (at 5 V)						
Electronics								
Utilisation category for inductive load		AC-14						
		DC-13						
Utilisation category for resistive load		AC-12						
		DC-12						
Electromechanics								
Electrical connection		Plug, type A, square d	esign, to EN 175301-803	M12x1 plug, 4-pin, round design, to EN 60947-5-2	Plug, type A, square de- sign, to EN 175301-803	M12x1 plug, 4-pin, round design, to EN 60947-5-2		

Pin assignment

Plug, type A	Pin	Description	M12x1 plug, 4-pin	Pin	Description
4	1	Operating voltage	2	1	Operating voltage
	2	N/C	+	2	N/C
1 5 3 2	3	N/O	3(+ +)1	3	Not assigned
3	4	Earthing	4	4	N/O

PEV-1/4-B(-OD)	PEV-1/4-SC-OD	PEV-1/4-B-M12	VPEV-1/8	VPEV-1/8-M12
Yellow ¹⁾ LED			Yellow LED	
1 12			-0.950.2	
-			0.16 1.6	
	Yellow ¹⁾ LED	Yellow ¹⁾ LED	Yellow ¹)LED	Yellow ¹)LED Yellow LED 1 12 -0.950.2

1) PEV-1/4-B-OD

Operating and environmental conditions

		PEV-1/4-B(-OD)	PEV-1/4-SC-OD	PEV-1/4-B-M12	VPEV-1/8	VPEV-1/8-M12		
Operating pressure	[bar]	1 12			-1 +1.6			
	[MPa]	0.1 1.2			-0.1 +0.16			
Operating medium		Compressed air to ISO 85	73-1:2010 [7:-:-]		Compressed air to ISO 85	73-1:2010 [7:4:4]		
		Water			-			
Note on the operating/pilot medium		Lubricated operation pos	sible (in which case lubrica	ation will always be require	d)			
Temperature of medium	[°C]	-20 +80						
Ambient temperature	[°C]	-20 +80						
Conforms to		EN 60947-5-1						
Certification		-	-	c UL us - Recognized	-	c UL us - Recognized		
				(OL)		(OL)		
		CCC						
CE marking (see declaration of conformity)	1)	To EU Low Voltage Directive						
UKCA marking (see declaration of conformit	ty) ¹⁾	To UK regulations for electrical equipment						
Degree of protection		IP65						
Corrosion resistance class	CRC ²⁾	2 - Moderate corrosion st	ress					

1) More information: www.festo.com/catalogue/pev \rightarrow Support/Downloads.

2) More information www.festo.com/x/topic/crc

Materials							
	PEV-1/4-B(-OD)	PEV-1/4-SC-OD	PEV-1/4-B-M12	VPEV-1/8	VPEV-1/8-M12		
Information on housing materials	Die-cast aluminium	Die-cast aluminium			Wrought aluminium alloy		
Information on switching contact materials	Silver						
Note on materials	RoHS-compliant						
LABS (PWIS) conformity	VDMA24364-B1/B2-L						



B1



11

[2] Hex nut for adjusting the hyster-

- esis (under protective cap)
- [3] Protective cap
- [4] Push-in connector suitable for plug socket M16x1.5 to EN 175301-803-A
- [5] Scale for reading off the set switching pressure

Туре	B1	B2	D1	D2	D3	H1	H2	H3	L1	L2	=©1
	±0.2	±0.1		Ø ±0.2		±0.6		±0.5		±0.2	
PEV-1/4-SC-OD	30	20	G1/4	5.2	min. 5	77.3	40	18.5	56	1	11



55.4

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10

Datasheet – PEV/VPEV with through-hole



M12x1

91

-

VPEV-1/8-M12

12.5

Ordering data					
	Pneumatic connection	Electrical connection	Product weight [g]	Part no.	Туре
Pressure switch			1		
	G1/4	Plug, type A, square design, to EN 175301- 803 Plug socket included in the scope of delivery	194	10773	PEV-1/4-B
	G1/4	Plug, type A, square design, to EN 175301- 803	194	175250	PEV-1/4-B-OD
	61/4	Plug, type A, square design, to EN 175301- 803	144	161760	PEV-1/4-SC-OD
	G1/4	M12x1 plug, 4-pin, round design, to EN 60947-5-2	194	192488	PEV-1/4-B-M12
Vacuum switch					
	G1/8	Plug, type A, square design, to EN 175301- 803 Plug socket included in the scope of delivery	240	150261	VPEV-1/8
	G1/8	M12x1 plug, 4-pin, round design, to EN 60947-5-2	194	192489	VPEV-1/8-M12

Peripherals overview – PEV-W/VPEV-W for H-rail mounting



Mountin	Mounting attachments and accessories					
[1]	Connecting cable NEBU-M8	25				
[2]	Push-in fitting QSM-M5	qsm				
[3]	Mounting latch PENV	25				
[4]	DIN mounting rail NRH to EN 60715	25				
[5]	DIN mounting rail NRC to EN 50035	25				

Type codes – PEV-W/VPEV-W for H-rail mounting

Series	
Pressure switch	
Vacuum switch	
Electrical connection	
Plug M8x1, 4-pin	
Screw terminal, 4-pin	
-	Pressure switch Vacuum switch Electrical connection Plug M8x1, 4-pin

003	Switching status indication	
LED	Yellow LED	
004	Type of mounting	
	With H-rail or with through-hole	

Datasheet – PEV-W/VPEV-W for H-rail mounting

Function





General technical data										
Туре			PEV-W	PEV-W VPEV-W						
General										
Pneumatic connection			M5							
Type of mounting			With through-hole, with	h H-rail						
			With H-rail							
Mounting position			Any							
Input signal/measuring ele	ment									
Measured variable			Relative pressure							
Measurement method			Pneumatic/electric pre	ssure transduc	er					
Pressure measuring range		[bar]	28			-0.8	0.25			
Electrical data										
Туре			PEV-W-S	PEV	W-KL	VPEV	-W-S		VPEV-W-KL	
Switching output										
Switching element function			Changeover switch							
Hysteresis		[bar]	0.5 2			0.08	0.08 0.25			
Max. switching frequency		[Hz]	3							
Max. output current		[mA]	2500							
Operating voltage range		[V DC]	10 30							
Electromechanics										
Electrical connection			M8x1 plug, 4-pin	Scre	w terminal, 4-pin	M8x2	1 plug, 4-p	in	Screw terminal, 4-pin	
Pin assignment										
M8x1 plug, 4-pin	Pin	Descriptio	n		Screw terminal, 4-pin		Pin	Description		
	1	+ (-)					1	+ ()		
	2	N/C					2	N/C		
3 1	3	- (+)			⊕ ⊕		3	- (+)		
4 2	4	N/O			0000		4	N/0		
					1234					

Disp	lav/	operation
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

Display/operation		
Туре	PEV-W	VPEV-W
Switching output		
Switching status indication	Yellow LED	
Threshold-value setting range [bar]	28	-0.80.25

Datasheet – PEV-W/VPEV-W for H-rail mounting

Operating and environmental	conditions				
Туре		PEV-W-S	PEV-W-KL	VPEV-W-S	VPEV-W-KL
Operating pressure	[bar]	0 +8		-1 0	
Operating medium		Compressed air to ISC) 8573-1:2010 [7:-:-]		
Max. overload pressure	[bar]	20		8	
Note on the operating/pilot mediur	n	Lubricated operation	possible (in which case lubricat	ion will always be required)	
Temperature of medium	[°C]	0 +60			
Ambient temperature	[°C]	0 +60			
Certification		RCM compliance mark	(
CE marking (see declaration of conf	formity) ¹⁾	To EU EMC Directive			
		To EU RoHS Directive			
UKCA marking (see declaration of co	onformity) ¹⁾	To UK EMC regulations	5		
		To UK RoHS regulation	15		
Degree of protection		IP65	IP20	IP65	IP20
Corrosion resistance class	KBK ²⁾	2			

1) More information: www.festo.com/catalogue/pev-w → Support/Downloads.

If the devices are subject to usage restrictions in residential, commercial or light-industrial environments, further measures for the reduction of the emitted interference may be necessary.

In this case, the signal line length needs to be < 30 m.

2) More information www.festo.com/x/topic/crc

Materials

Information on housing materials	PA, PET, POM
Diaphragm material	NBR
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

Datasheet - PEV-W/VPEV-W for H-rail mounting



Peripherals overview – Pressure switch PEV-SW27, screw-in



Mountin	Mounting attachments and accessories -			
[1]	Angled plug socket PEV-1/4-A-WD	22		
[2]	Angled plug socket PEV-1/4-WD-LED	20		

Type codes – Pressure switch PEV-SW27, screw-in

001	Series	
PEV	Pressure switch	
002	Pneumatic connection	
1/4	G1/4	
003	Generation	

004	Width across flats	
SW27	27 mm	
005	Electrical connection	
	For angled plug socket PEV-1/4-A-WD	
B-OD	For angled plug socket PEV-1/4-WD-LED	

Datasheet – Pressure switch PEV-SW27, screw-in

Function





General technical data

Туре		PEV-1/4-A-SW27	PEV-1/4-A-SW27-B-OD	
General				
Pneumatic connection		G1/4		
Type of mounting		Screw-in		
Mounting position		Any		
Input signal/measuring element				
Measured variable		Relative pressure		
Measurement method		Pneumatic/electric pressure transducer		
Pressure measuring range	[bar]	110	-	
		·		

Ε	lec	tri	са	l d	at	ć

Electrical data			
Туре		PEV-1/4-A-SW27	PEV-1/4-A-SW27-B-OD
Switching output			
Switching element function		Changeover switch	
Max. switching frequency	[Hz]	3	
Max. switching output voltage	[V AC]	250	
	[V DC]	250	
Max. output current	[mA]	4000	
Operating voltage range	[V DC]	12 250	-
Electromechanics			
Electrical connection		Plug, 4-pin	

Pin assignment

PEV-1/4-A-SW27	Pin	Description	PEV-1/4-A-SW27-B-OD	Pin	Description
E	1	Switchable voltage	ŧ	1	Switchable voltage
	2	N/C		2	N/C
	4	N/O		4	N/O
1			4		

Display/operation

- F 7 / - F		
Switching output		
Threshold-value setting range	[bar]	110

Materials		
Туре	PEV-1/4-A-SW27	PEV-1/4-A-SW27-B-OD
Housing material	Galvanised steel	PA66-GF30 Galvanised steel
Diaphragm material	NBR	
LABS (PWIS) conformity	VDMA24364-B1/B2-L	

Datasheet – Pressure switch PEV-SW27, screw-in

Operating and environmental conditions				
Туре		PEV-1/4-A-SW27	PEV-1/4-A-SW27-B-OD	
Operating pressure	[bar]	110		
Operating medium		Compressed air to ISO 8573-1:2010 [7:]		
Note on the operating/pilot medium		Lubricated operation possible (in which case lubrication will always be required)	-	
Temperature of medium	[°C]	-20 +80	·	
Ambient temperature	[°C]	-20 +100	-30 +100	
CE marking (see declaration of conformity) ¹⁾		To EU Low Voltage Directive		
UKCA marking (see declaration of conformity) ¹⁾		-	To UK regulations for electrical equipment	
Degree of protection		IP65		

1) More information: www.festo.com/catalogue/pev → Support/Downloads.



Ord	lering	data
UIU	iering	uata

Ordering data					
	Pneumatic connection	Electrical connection	Product weight	Part no.	Туре
			[g]		
Pressure switch					
	G1/4	For angled plug socket PEV-1/4-A-WD	138	159259	PEV-1/4-A-SW27
	G1/4	For angled plug socket PEV-1/4-WD-LED	900	175252	PEV-1/4-A-SW27-B-OD

Accessories

Angled plug socket PEV-1/4-WD-LED-... For pressure switches PEV-1/4-B-(OD), PEV-1/4-SC-OD and PEV-1/4-A-SW27-B-OD

With integrated LEDs for switching status indication



General technical data

Type of mounting	Screw-clamped		
Cable outlet	Angled		
Switching status indication	Yellow LED		
	Green LED		

Electronics			
Туре		PEV-1/4-WD-LED-24	PEV-1/4-WD-LED-230
Operating voltage range	[V AC]	-	150 230
	[V DC]	15 30	140 180

Electromechanics

Liectioniechanics			
Туре		PEV-1/4-WD-LED-24	PEV-1/4-WD-LED-230
Electrical connection 1	Function	Field device side	
	Design	Square	
	Connection type	Socket	
	Connection technology	Plug pattern type A based on EN 175301-803	
	Number of pins/wires	4	
	Assigned pins/wires	4	
	Type of mounting	Central screw M3	
	Tightening torque	0.5 Nm	
Electrical connection 2	Function	Controller side	
	Connection technology	Screw terminal	
	Number of pins/wires	5	
	Assigned pins/wires	5	
Cable fitting		Pg11	
Current rating at 40°C	[A]	8	-
Permissible cable diameter	[mm]	4.5 11	
Connection cross section	[mm ²]	0.25 1.5	

Operating and environmental conditions				
Туре	PEV-1/4-WD-LED-24	PEV-1/4-WD-LED-230		
Ambient temperature [°C]	-40 +80			
CE marking (see declaration of conformity)	To EU RoHS Directive			
	-	To EU Low Voltage Directive		
UKCA marking (see declaration of conformity)	To UK RoHS regulations			
	-	To UK regulations for electrical equipment		
Conforms to	EN 175301-803			
Degree of protection	IP65			
Note on degree of protection	In mounted state			

Accessories

Materials

Materials	
Housing material	Reinforced PA6
Housing colour	Transparent
Information on pin contact materials	Brass
	Nickel-plated
	Tin-plated
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B2-L

Dimensions



Download CAD data \rightarrow <u>www.festo.com</u>

[1] Inserts can be rotated 90°

Dimensions and ordering data

Dimensions and oraci	ing auto	•											
Туре	B1	B2	D1	D2	D3	H1	H2	L1	L2	L3	Weight	Part no.	Туре
				ø							[g]		
PEV24	30	27.5	М3	22.5	Pg11	53	43	34.2	5.5	1.5	34	164274	PEV-1/4-WD-LED-24
PEV230											34	164275	PEV-1/4-WD-LED-230

Accessories

Angled plug socket PEV-1/4-A-WD For pressure switch PEV-1/4-A-SW27



General technical data

Type of mounting		With through-hole					
Electromechanics							
Electrical connection		ngled socket, 4-pin					
Operating and environmenta	al conditions						
Ambient temperature	[°C]	-40 +90					
Degree of protection		IP65					

Materials

Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Dimensions



Dimensions and ordering data

Dimensions and e	acting aata						
D1	D2	D3	H1	L1	Weight	Part no.	Туре
Ø	Ø				[g]		
34	30	Pg9	44	51	55	161209	PEV-1/4-A-WD

Download CAD data → <u>www.festo.com</u>

Accessories

Mounting plate APL

Dimensions

For pressure switch PEV

For pressure switch PEV and vacuum switch VPEV



Download CAD data → <u>www.festo.com</u>







For vacuum switch VPEV



[1] CK-1/4-...

	B1	B2	B3	0	01	D2	H1	H2	H3	H4	H5	L1
For PEV	27	16	4.4	Ν	Λ4	4.4	10	7.7	5	2	-	88.5
For VPEV				4	.4	M4	101	10	7.7	5	2	
	L2	L3	L4	L5	L6	L7	L8	Weight [g]	Part no.	Туре		
For PEV	80.8	74	82	75	45	21	2.3	18	9349	APL-2N-PE	1	
For VPEV			81		24	22		18	150218	APL-2N-VPE	V	

23

Accessories

Mounting frame NRRQ Mounting bracket NRW

- Scope of delivery:
- 2 x Connecting piece NRV-2N
- 2 x Profile rail NRQ-8-480
- 4 x Mounting bracket NRW-1 2/3
- 4 x Bolt NRB-1 2/604 x Socket head screw
- DIN 84-M6X18-4.8 4 x Socket head screw DIN 84-M6X12-4.8
- 4 x Mounting bracket NRW-9/1.5-B
- 4 x Socket head screw DIN 84-M4X10-4.8



Download CAD data → www.festo.com

Dimensions – Mounting frame NRRQ





- [1] Connecting component NRV-2N
- [2] Profile strip NRQ-8-480
- [3] Mounting bracket NRW-1 2/3
- [4] Bolt NRB-1 2/60
- [5] Socket head screw
- DIN 84-M6X12-4.8 [6] Socket head screw
- DIN 84-M6X18-4.8

B1	B2	D1 Ø	D2	H1	H2	H3	H4	H5	H6	H7	L1	L2	L3	L4	L5	L6
480	12	12	M6	60	15.5	14	8	2.4	1.2	6.2	97	88.6	88.2	44.5	16	8

Dimensions and ordering data

	Part no.	Туре
Mounting frame complete for 16 elements	9365	NRRQ-2N
Mounting bracket for mounting sub-bases on the frame	11571	NRW-9/1.5-B

Accessories

Ordering data – Pl	ug socket MSSD		Datasheets → Internet: mssd			
	Electrical connection	Cable fitting	Part no.	Туре		
	Angled socket, 3-pin, type A	Pg9	171157	MSSD-C-4P		

Ordering data – Co	nnecting cable NEBU-M8			Datasheets \rightarrow	Internet: nebu
	Electrical connection	Number of cores	Cable length [m]	Part no.	Туре
	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
Cont of the			5	541345	NEBU-M8W4-K-5-LE4

Ordering data – Connecting cable NEBU-M12				Datasheets → Internet: nebu	
	Electrical connection	Number of cores	Cable length [m]	Part no.	Туре
	M12x1, straight socket	4	2.5	550326	NEBU-M12G5-K-2.5-LE4
O INC			5	541328	NEBU-M12G5-K-5-LE4
	M12x1, angled socket	4	2.5	550325	NEBU-M12W5-K-2.5-LE4
Contraction of the second			5	541329	NEBU-M12W5-K-5-LE4

Ordering data – DIN mounting rail NRC			Datasheets → Internet: nrc	
	Description	Length	Part no.	Туре
	G-rail to EN 50035	2 m	6756	NRC-32-2000

Ordering data – DIN mounting rail NRH			Datasheets → Internet: nrh	
	Description	Length	Part no.	Туре
	H-rail to EN 60715	2 m	35430	NRH-35-2000

Ordering data – Mounting latch PENV		Datasheets → Internet: penv	
	Description	Part no.	Туре
	For mounting on DIN mounting rail	164597	PENV-BGH