



**Pressure and Vacuum Switches PEV/VPEV,
PE Converters PE/PEN/VPE**

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

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	
	-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

Type codes, technical data



Type codes	
PEV - 1/4 - B - - - - -	
Type	
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-...-M12	PEV-1/4	VPEV-1/8-...-M12	VPEV-1/8
Design					
Pneumatic connection		G1/4		G1/8	
Electrical data					
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			
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)		Not necessary	In accordance with EU Low Voltage Directive	Not necessary	In accordance with EU Low Voltage Directive
Certification		CCC			
Materials					
Housing		Wrought aluminium alloy			

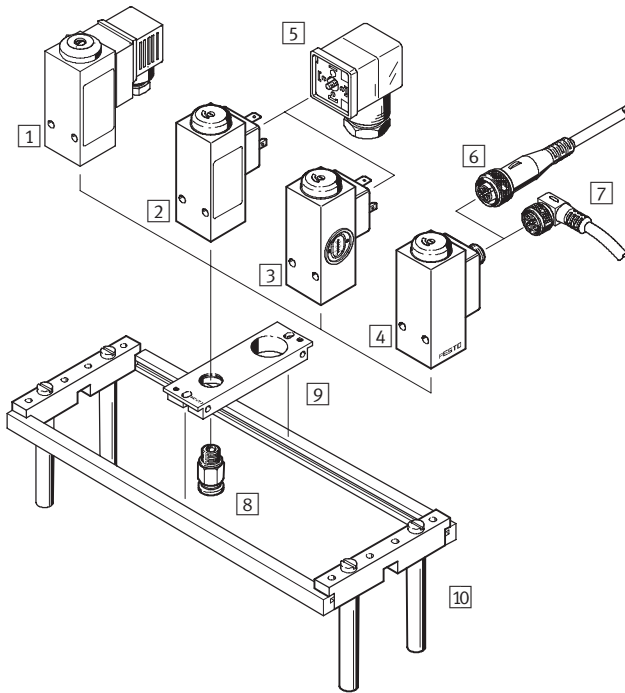
Pressure and vacuum switches PEV/VPEV, with through-holes

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
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⁾
	-	■	-	-	161 760	PEV-1/4-SC-OD
	Plug M12x1, 4-pin	■	-	-	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 → 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

Type codes, technical data



Sensors
Sensors for pressure and vacuum

1.2

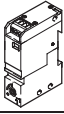
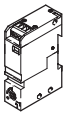
Type codes

		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		

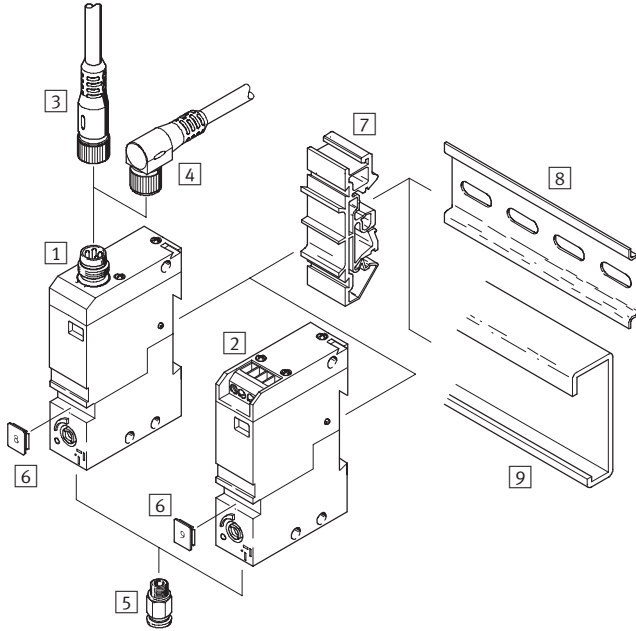
Ordering data

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

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



Pressure switches PEV, screw-in



Type codes, technical data



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	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

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							

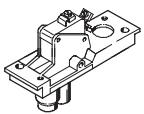
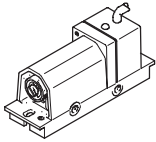
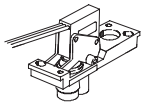
Technical data

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
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



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

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

United States

Customer Resource Center
502 Earth City Expy., Suite 125
Earth City, MO 63045

For ordering assistance, or to find
your nearest Festo Distributor,

Call: 1.800.99.FESTO

Fax: 1.800.96.FESTO

Email: customer.service@us.festo.com

For technical support,

Call: 1.866.GO.FESTO

Fax: 1.800.96.FESTO

Email: product.support@us.festo.com

Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788
www.festo.com/us

Sales Offices

Appleton

N. 922 Tower View Drive, Suite N
Greenville, WI 54942

Boston

120 Presidential Way, Suite 330
Woburn, MA 01801

Chicago

1441 East Business Center Drive
Mt. Prospect, IL 60056

Dallas

1825 Lakeway Drive, Suite 600
Lewisville, TX 75057

Detroit - Automotive Engineering Center

2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326

New York

395 Moreland Road
Hauppauge, NY 11788

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550

Design and Manufacturing Operations



East: 395 Moreland Road, Hauppauge, NY 11788



Central: 1441 East Business Center Drive, Mt. Prospect, IL 60056



West: 4935 Southfront Road, Suite F, Livermore, CA 94550

Mexico

Headquarters

Festo Pneumatic, S.A.
Av. Ceylán 3, Col. Tequesquahuac
54020 Tlalnepantla, Edo. de México
Call: 011 52 [55] 53 21 66 00
Fax: 011 52 [55] 53 21 66 65
Email: festo.mexico@mx.festo.com
www.festo.com/mx



Canada

Headquarters

Festo Inc.
5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Call: 1.905.624.9000
Fax: 1.905.624.9001
Email: info.ca@ca.festo.com
www.festo.com/ca



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark
Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan
Latvia Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore
Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com