

Solenoid valves VZWP, servo-controlled, NPT



# Solenoid valves VZWP, servo-controlled, NPT



Key features and overview

## Function

The solenoid valve VZWP-L-... is a servo-controlled 2/2-way valve with solenoid coil. The solenoid valve is closed when de-energised. When energised, the differential pressure

from the secondary side of the piston is reduced via the servo hole. The differential pressure lifts the piston away from the valve seat.

## General

-  - Connecting thread  
NPT $\frac{1}{4}$  ... NPT1
-  - Flow rate Kv  
1.5 ... 11.5 m<sup>3</sup>/h

## Application

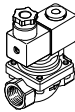
- All applications with a differential pressure of 0.5 bar
- Applications with an open medium circuit

## Design

- The valve features a simple, sturdy design. The valve drive only fulfils a pilot control function, which relieves the burden on the main sealing element

## Advantages

- High pressures can be controlled with large nominal diameters using small magnets
- The valves can be operated with air, neutral gases and neutral liquids
- The N/C version guarantees that the valve will be closed in the event of a voltage failure

Version	Type	Process valve connection	Nominal size (DN)	Process valve nominal pressure (PN)	→ Page/Internet
	VZWP-L-...	G $\frac{1}{4}$	13	40	4
		G $\frac{3}{8}$	13		
		G $\frac{1}{2}$	13		
		G $\frac{3}{4}$	25		
		G1	25		

# Solenoid valves VZWP, servo-controlled, NPT

Type codes

VZWP - L - M22C - N1 - 130 - V - 1A - P4 - 40

**Type**

VZWP	Electrically actuated process valve, servo-controlled
------	---

**Valve type**

L	In-line valve
---	---------------

**Valve function**

M22C	2/2-way valve, normally closed (N/C), mechanical reset
------	--

**Process valve connection**

N14	NPT 1/4
N38	NPT 3/8
N12	NPT 1/2
N34	NPT 3/4
N1	NPT 1

**Nominal size (DN)**

130	13 mm
250	25 mm

**Sealing material**

-	NBR
V	FPM

**Nominal voltage**

1A	24 V DC
2A	110 V AC
3A	230 V AC

**Electrical connection**

P4	Plug socket, 3-pin
----	--------------------

**Operating pressure**

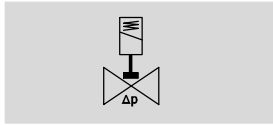
40	Max. 40 bar
----	-------------

# Solenoid valves VZWP, servo-controlled, NPT

FESTO

Technical data

Function



Flow rate Kv  
1.5 ... 11.5 m<sup>3</sup>/h

Connecting thread  
NPT<sup>1</sup>/<sub>4</sub> ... NPT1



General technical data					
Process valve connection	NPT <sup>1</sup> / <sub>4</sub>	NPT <sup>3</sup> / <sub>8</sub>	NPT <sup>1</sup> / <sub>2</sub>	NPT <sup>3</sup> / <sub>4</sub>	NPT1
Nominal size (DN)	13	13	13	25	25
Valve function	2/2-way, single solenoid, closed				
Design	Piloted piston poppet valve				
Type of mounting	In-line installation				
Actuation type	Electric				
Type of control	Piloted				
Manual override	None				
Mounting position	Coil preferably on top				
Sealing principle	Soft				
Direction of flow	Non-reversible				
Max. viscosity [mm <sup>2</sup> /s]	22				
Protection class	IP65				
Product weight [g]	600	575	550	1,500	1,400

Operating and environmental conditions					
Process valve connection	NPT <sup>1</sup> / <sub>4</sub>	NPT <sup>3</sup> / <sub>8</sub>	NPT <sup>1</sup> / <sub>2</sub>	NPT <sup>3</sup> / <sub>4</sub>	NPT1
Switching time on [ms]	100	100	100	130	130
Switching time off [ms]	250	250	250	300	300
Standard nominal flow rate [l/min]	1,600	2,100	2,650	8,750	12,250
Flow rate [m <sup>3</sup> /h]	1.5	2	2.5	8.2	11.5
Operating pressure [bar]	0.5 ... 40				
Process valve nominal pressure (PN)	40				
Differential pressure [bar]	0.5				
Process valve operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4] Neutral liquids Inert gases Further media upon request				
Ambient temperature [°C]	-10 ... +35				
Temperature of medium [°C]	-10 ... +80				
Leak rate to EN 12266-1	A				
Corrosion resistance class CRC <sup>1)</sup>	1				

1) Corrosion resistance class 1 according to Festo standard 940 070  
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Materials		
Solenoid valves		Material number
1 Housing	Cast brass	CW617N
2 Screws	High-alloy stainless steel	1.4301
3 Seals	NBR, FPM	-
- Note on materials	Contains PWIS (paint-wetting impairment substances), RoHS-compliant	-

# Solenoid valves VZWP, servo-controlled, NPT

Technical data

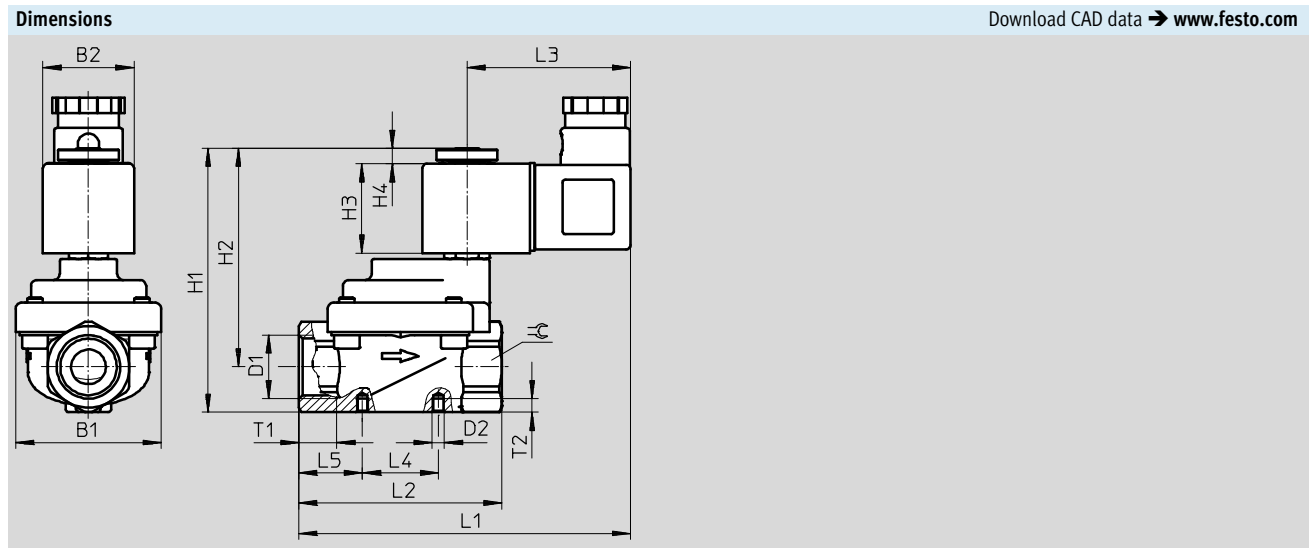
Electrical data – 24 V AC			
			VZWP- ...1- ...
Electrical connection			Type A
			Plug
			To EN 175301-803
Coil characteristics	Direct current DC	[V]	24
		[W]	6.8
Permissible voltage fluctuations		[%]	±10
Duty cycle		[%]	100
Protection class			IP65

Electrical data – 110 V AC				
			VZWP- ...2A- ...	
Electrical connection			Type A	
			Plug	
			To EN 175301-803	
Coil characteristics	Alternating current AC	[V]	110	
		[Hz]	50, 60	
		Pick-up power	[VA]	10.5
		Holding power	[VA]	8
Permissible voltage fluctuations		[%]	±10	
Duty cycle		[%]	100	
Protection class			IP65	
CE marking (see declaration of conformity)			To EU Low Voltage Directive	

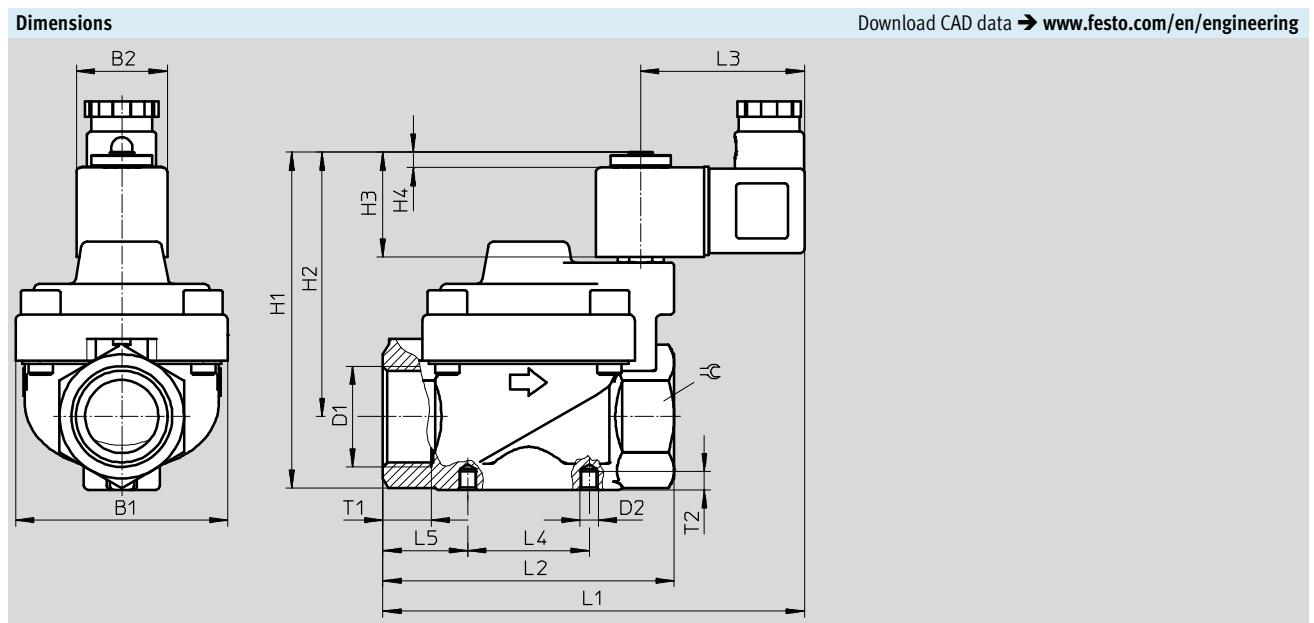
Electrical data – 230 V AC				
			VZWP- ...3A- ...	
Electrical connection			Type A	
			Plug	
			To EN 175301-803	
Coil characteristics	Alternating current AC	[V]	230	
		[Hz]	50, 60	
		Pick-up power	[VA]	10.5
		Holding power	[VA]	7.6
Permissible voltage fluctuations		[%]	±10	
Duty cycle		[%]	100	
Protection class			IP65	
CE marking (see declaration of conformity)			To EU Low Voltage Directive	

# Solenoid valves VZWP, servo-controlled, NPT

Technical data



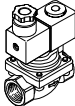
	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5	T1	T2	⊕
VZWP-L-M22C-N14-130-...	48	30	NPT $\frac{1}{4}$	M4	88	73	30	5	110	67	54	25	21	12.5	4.5	27
VZWP-L-M22C-N38-130-...	48	30	NPT $\frac{3}{8}$	M4	88	73	30	5	110	67	54	25	21	12.5	4.5	27
VZWP-L-M22C-N12-130-...	48	30	NPT $\frac{1}{2}$	M4	88	73	30	5	110	67	54	25	21	12.5	4.5	27



	B1	B2	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5	T1	T2	⊕
VZWP-L-M22C-N34-250-...	70	30	NPT $\frac{1}{4}$	M6	112	88	30	5	139	96	54	40	28	16	6	41
VZWP-L-M22C-N1-250-...	70	30	NPT1	M6	112	88	30	5	139	96	54	40	28	16	6	41

# Solenoid valves VZWP, servo-controlled, NPT

Technical data

Ordering data		Part No.	Type
	NPT $\frac{1}{4}$	1489970	VZWP-L-M22C-N14-130-1P4-40
		1489980	VZWP-L-M22C-N14-130-2AP4-40
		1489990	VZWP-L-M22C-N14-130-3AP4-40
		1489975	VZWP-L-M22C-N14-130-V-1P4-40
		1489985	VZWP-L-M22C-N14-130-V-2AP4-40
		1489995	VZWP-L-M22C-N14-130-V-3AP4-40
	NPT $\frac{3}{8}$	1489971	VZWP-L-M22C-N38-130-1P4-40
		1489981	VZWP-L-M22C-N38-130-2AP4-40
		1489991	VZWP-L-M22C-N38-130-3AP4-40
		1489976	VZWP-L-M22C-N38-130-V-1P4-40
		1489986	VZWP-L-M22C-N38-130-V-2AP4-40
		1489996	VZWP-L-M22C-N38-130-V-3AP4-40
	NPT $\frac{1}{2}$	1489972	VZWP-L-M22C-N12-130-1P4-40
		1489982	VZWP-L-M22C-N12-130-2AP4-40
		1489992	VZWP-L-M22C-N12-130-3AP4-40
		1489977	VZWP-L-M22C-N12-130-V-1P4-40
		1489987	VZWP-L-M22C-N12-130-V-2AP4-40
		1489997	VZWP-L-M22C-N12-130-V-3AP4-40
	NPT $\frac{3}{4}$	1489973	VZWP-L-M22C-N34-250-1P4-40
		1489983	VZWP-L-M22C-N34-250-2AP4-40
		1489993	VZWP-L-M22C-N34-250-3AP4-40
		1489978	VZWP-L-M22C-N34-250-V-1P4-40
		1489988	VZWP-L-M22C-N34-250-V-2AP4-40
		1489998	VZWP-L-M22C-N34-250-V-3AP4-40
	NPT1	1489974	VZWP-L-M22C-N1-250-1P4-40
		1489984	VZWP-L-M22C-N1-250-2AP4-40
		1489994	VZWP-L-M22C-N1-250-3AP4-40
		1489979	VZWP-L-M22C-N1-250-V-1P4-40
		1489989	VZWP-L-M22C-N1-250-V-2AP4-40
		1489999	VZWP-L-M22C-N1-250-V-3AP4-40

## Product Range and Company Overview

### A Complete Suite and Company Overview

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 & drivers



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



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

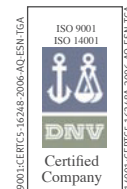
### Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 16,000 employees in 60 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.



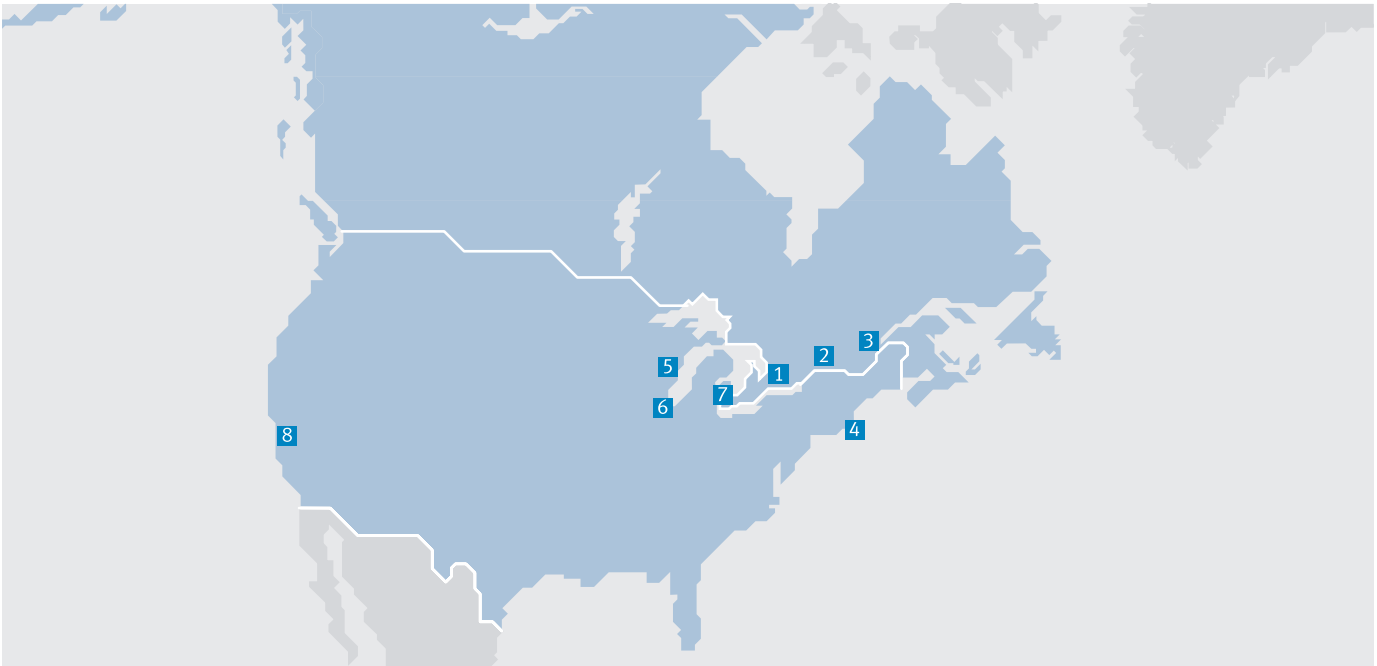
© Copyright 2013, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. 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 environmental friendly printing plant.



# Festo North America



**1 Festo Canada  
Headquarters  
Festo Inc.**  
5300 Explorer Drive  
Mississauga, ON  
L4W 5G4

**2 Montréal**  
5600, Trans-Canada  
Pointe-Claire, QC  
H9R 1B6

**3 Québec City**  
2930, rue Watt#117  
Québec, QC  
G1X 4G3



**4 Festo United States  
Headquarters  
Festo Corporation**  
395 Moreland Road  
Hauppauge, NY  
11788

**5 Appleton**  
North 922 Tower View Drive, Suite N  
Greenville, WI  
54942

**7 Detroit**  
1441 West Long Lake Road  
Troy, MI  
48098

**6 Chicago**  
85 W Algonquin - Suite 340  
Arlington Heights, IL  
60005

**8 Silicon Valley**  
4935 Southfront Road, Suite F  
Livermore, CA  
94550

## Festo Regional Contact Center

### Canadian Customers

Commercial Support:  
Tel: 1 877 GO FESTO (1 877 463 3786)  
Fax: 1 877 FX FESTO (1 877 393 3786)  
Email: festo.canada@ca.festo.com

Technical Support:  
Tel: 1 866 GO FESTO (1 866 463 3786)  
Fax: 1 877 FX FESTO (1 877 393 3786)  
Email: technical.support@ca.festo.com

### USA Customers

Commercial Support:  
Tel: 1 800 99 FESTO (1 800 993 3786)  
Fax: 1 800 96 FESTO (1 800 963 3786)  
Email: customer.service@us.festo.com

Technical Support:  
Tel: 1 866 GO FESTO (1 866 463 3786)  
Fax: 1 800 96 FESTO (1 800 963 3786)  
Email: product.support@us.festo.com