

The P2E-•V solenoid valve range

The P2E-•V range of valves are normally closed (NC) 3/2 solenoid valves, with exceedingly compact dimensions in relation to their capacity.

International standard

The port connection pattern complies with a new French CNOMO standard (in process of drafting), with cable plug connections in accordance with DIN 43650, Form C.

Compact design

Overall dimensions of the P2E-•V valve are substantially less than those of earlier generations of solenoid valves.

High flow capacity

High flow capacity relative to the electrical operating power as a result of optimised internal flow paths.

Corrosion-resistant design

The valve is made of thermoplastic material and stainless steel, with Viton™ and nitrile rubber seals for excellent corrosion resistance.

Clean lines suitable for food industry applications, P2E-QV

The valve has been designed in conjunction with several machine manufacturers and organisations in the food processing industry, with corrosion-resistant materials and smooth lines being important starting points. The valve and its accessories have been designed so that there are no gaps or crevices in which dirt could collect.

High reliability

Few moving parts result in high reliability, rapid changeover and very long life.

Low power demand

The standard valves NC have a power demand of 1.2 W at 24 V DC and 1.6 VA at 24 V AC, 115 V AC and 230 V AC.

High protection class

The protection class is IP 67 when connected using the cable plug with a moulded cable. When using the standard cable plug for fitting by the user, the protection class is IP65, the bare valve, with quick connectors, has an encapsulation class of IP 20.

Insensitive to dirty air

The use of generously sized flow paths (1.0 mm diameter) means that the valve can be used in normal industrial environments without problems of blocking.

Manual override as option

The valves can be supplied with or without manual override. The manual override device is available as flush or extended, and is either non locking (blue) or locking (yellow).

Order key, solenoid valves

P	2	E	-	K	V	3	2	C	1
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Valve family	P2E Solenoid valves
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Subfamily	Solenoid valve, 15 mm wide Electric connection acc. to DIN 43650, form C EI/supply connection on opposite side
K	Standard version
M	Mobile version
Q	Food industry version

Type of current	1 AC 50 Hz
	2 DC
	4 AC 50/60 Hz
	5 Mobile and wide band only

Valvetype/Function	1 3/2 valve, normally open (NO) For standard "K"
	3 3/2 valve, normally closed (NC)

Voltage	B 12 V
	C 24 V
	D 48 V
	F 115 V*
	J 230 V*
	W 37,5 V**
	T 72 V**
	Y 78 V**
	V 96 V**
	E 110 V**

Overrides	0 Without
	1 Non locking (blue)
	2 Locking (yellow)
	3 Extended non locking (blue)
	4 Extended locking (yellow)

Possible combinations
See page 24 and 46

* For standard "K" and food type "Q" only
** For mobile "M" version only

Technical data

	NC, Standard	NO, Standard	NC, Food¹⁾	NC, Mobile²⁾
Working pressure	0 to 10 bar	0 to 10 bar	0 to 10 bar	1 to 10 bar
Working temperature	-15 °C to +60 °C	-15 °C to +50 °C	-15 °C to +60 °C	-40 °C to +70 °C
Orifice	1,0 mm	1,1 mm	1,0 mm	1,0 mm
Flow Qmax	33 NI/min	33 NI/min	33 NI/min	22 NI/min
Power, hold	DC 1,2 W / AC 1,6 VA	DC 1,8 W / AC 2,4 VA	DC 1,2 W / AC 1,6 VA	DC 1,4 W
Power, surge	DC 1,2 W / AC 3,5 VA	DC 1,8 W / AC 5,5 VA	DC 1,2 W / AC 3,5 VA	DC 1,4 W
Connection time	100%	100%	100%	100%
Voltage rated	+10%/-15%	+10%/-15%	+10%/-15%	+25%/-30%
Electric connection:	DIN 43650 form C			
Interface:	CNOMO standard			
Protection:	IP 65 - IP 67, depending on type of cable plug			
Approval:	Some valves are UL-approved and marked with the following symbol			
Working media:	All neutral media, such as compressed air, water, hydraulic oil and many gases.			
1) Design:	Completely smooth exterior, suitable for food industry.			
2) Mobile standard	According to European standard EN 50 155.			

Transients

Interrupting the current through the solenoid coil produces momentary voltage peaks which, under unfavourable conditions, can amount to several hundred times the rated operating voltage. Normally, these transients do not cause problems, but to achieve the maximum life of relays in the circuit (and particularly of transistors, thyristors and integrated circuits) it is desirable to provide protection by means of voltage-dependent resistors (varistors). All cable plugs with a yellow LED also incorporate such protection.

Service life

With compressed air at 6 bar, 20 °C and complying with the requirements for compressed air quality as set out in ISO8573-1 norm (class 4 for dry and class 5 for filtered air), the valves should have a life of at least 50 million cycles.

Materials

Valve

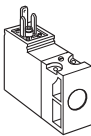
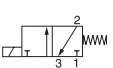





















Body, coil casing	Thermoplastic
Internal metal parts	Steel
Screws	Stainless steel
Bottom plug	Thermoplastic
Sealing materials	FPM (Viton™) and nitrile rubber





Cable head

Sheath	Thermoplastic
Retaining screw	Stainless steel, zinc-plated steel

Solenoids 15 mm NC, standard

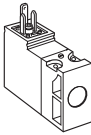
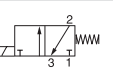
(Note! Mounting screws included in basic valve P2L-A/B/D...)

Voltage	Weight Kg	Order code		Weight Kg	Order code		Weight Kg	Order code	
		Without manual override			Override, blue, non locking flush			Override, yellow, locking flush	
 	12 VDC	0,038	P2E-KV32B0 	0,038	P2E-KV32B1 	0,038	P2E-KV32B2 		
	24 VDC	0,038	P2E-KV32C0 	0,038	P2E-KV32C1 	0,038	P2E-KV32C2 		
	48 VDC	0,038	P2E-KV32D0 	0,038	P2E-KV32D1 	0,038	P2E-KV32D2 		
	24 VAC 50Hz	0,038	P2E-KV31C0 	0,038	P2E-KV31C1 	0,038	P2E-KV31C2 		
	48 VAC 50/60Hz	0,038	P2E-KV34D0 	0,038	P2E-KV34D1 	0,038	P2E-KV34D2 		
	115 VAC 50Hz/ 120 VAC 60Hz	0,038	P2E-KV31F0 	0,038	P2E-KV31F1 	0,038	P2E-KV31F2 		
	230 VAC 50Hz/ 240 VAC 60Hz	0,038	P2E-KV31J0 	0,038	P2E-KV31J1 	0,038	P2E-KV31J2 		

Voltage	Weight Kg	Order code	Weight Kg	Order code
24 VDC	0,038	P2E-KV32C3 	0,038	P2E-KV32C4 
24 VAC 50Hz	0,038	P2E-KV31C3 	0,038	P2E-KV31C4 

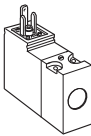
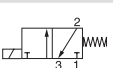


















Solenoids 15 mm NC, mobile




(Note! Mounting screws included in basic valve P2L-A/B/D...)

Voltage	Weight Kg	Order code	Weight Kg	Order code
 	12 VDC	P2E-MV35B0	0,038	P2E-MV35B1
	24 VDC	P2E-MV35C0	0,038	P2E-MV35C1
	37,5 VDC	P2E-MV35W0	0,038	P2E-MV35W1
	48 VDC	P2E-MV35D0	0,038	P2E-MV35D1
	72 VDC	P2E-MV35T0	0,038	P2E-MV35T1
	78 VDC	P2E-MV35Y0	0,038	P2E-MV35Y1
	96 VDC	P2E-MV35V0	0,038	P2E-MV35V1
	110 VDC	P2E-MV35E0	0,038	P2E-MV35E1

Solenoids 15 mm NC, food industry version

(Note! Mounting screws included in basic valve P2L-A/B/D...)

Voltage	Weight Kg	Order code	Weight Kg	Order code	Weight Kg	Order code	
 	24 VDC	P2E-QV32C0 	0,038	P2E-QV32C1 	0,038	P2E-QV32C2 	
	48 VDC	P2E-QV32D0 	0,038	P2E-QV32D1 	0,038	P2E-QV32D2 	
	24 VAC 50Hz	P2E-QV31C0 	0,038	P2E-QV31C1 	0,038	P2E-QV31C2 	
	48 VAC 50/60Hz	P2E-QV34D0 	0,038	P2E-QV34D1 	0,038	P2E-QV34D2 	
	115 V 50Hz/ 120 V 60Hz	0,038	P2E-QV31F0 	0,038	P2E-QV31F1 	0,038	P2E-QV31F2 
	230 VAC 50Hz/ 240 VAC 60Hz	0,038	P2E-QV31J0 	0,038	P2E-QV31J1 	0,038	P2E-QV31J2 

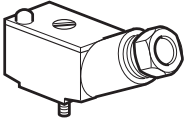
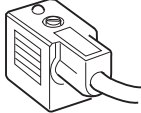

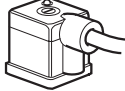
Voltage	Weight Kg	Order code	Weight Kg	Order code
24 VDC	0,038	P2E-QV32C3 	0,038	P2E-QV32C4 
24 VAC 50Hz	0,038	P2E-QV31C3 	0,038	P2E-QV31C4 
115 VAC 50 Hz	0,038	P2E-QV31F3 	0,038	P2E-QV31F4 
230 VAC 50 Hz	0,038	P2E-QV31J3 	0,038	P2E-QV31J4 

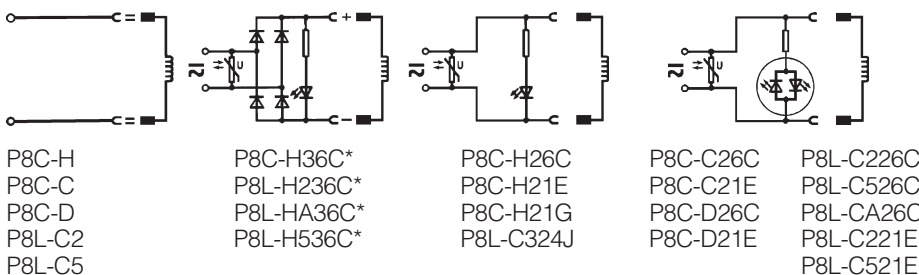


In accordance with the EU Machine Directive, EN 983, solenoid valves with manual override should have spring-return operating arms for safety.

 = UL-approved


Cable plugs DIN 43650, form C (Cable plug with cable and round connector see page 50)

	Description	Weight kg	Order code	
	Electrical connection through top cover Stainless steel screw	0.02	P8C-H	
	12-24 VAC/DC VDR + LED + REC IP65*	0.02	P8C-H36C	
	12-24 VAC/DC VDR + LED IP65	0.02	P8C-H26C	
	110-120 VAC/DC VDR + LED IP65	0.02	P8C-H21E	
	220-240 VAC/DC VDR + LED IP65	0.02	P8C-H21G	
	24 VAC/DC VDR + LED + REC, 2 m cable PVC IP67*	0.13	P8L-H236C	
	24 VAC/DC VDR + LED + REC, 5 m cable PVC IP67*	0.30	P8L-H536C	
	24 VAC/DC VDR + LED + REC, 10 m cable PVC IP67*	0.58	P8L-HA36C	
	230 VAC/DC VDR + LED, 3 m cable PVC IP67	0.19	P8L-C324J	
	With large headed screw suitable for mounting in inaccessible or recess position	Standard IP 65	0,02	P8C-C
	24 VDC VDR+ LED IP65	0,02	P8C-C26C	
	110 VAC VDR + LED IP65	0,02	P8C-C21E	
	With standard screw	Standard IP 65	0,02	P8C-D
	24 VDC VDR+ LED IP65	0,02	P8C-D26C	
	110 VAC VDR + LED IP65	0,02	P8C-D21E	
	With cable	Standard with 2 m cable IP 65	0,13	P8L-C2
	Standard with 5 m cable IP 65	0,30	P8L-C5	
	24 VAC/DC, 2 m cable VDR + LED IP65	0,13	P8L-C226C	
	24 VAC/DC, 5 m cable VDR + LED IP65	0,30	P8L-C526C	
	24 VAC/DC, 10 m cable VDR + LED IP65	0,58	P8L-CA26C	
	110 VAC/DC, 2 m cable VDR + LED IP65	0,13	P8L-C221E	
	110 VAC/DC, 5 m cable VDR + LED IP65	0,30	P8L-C521E	



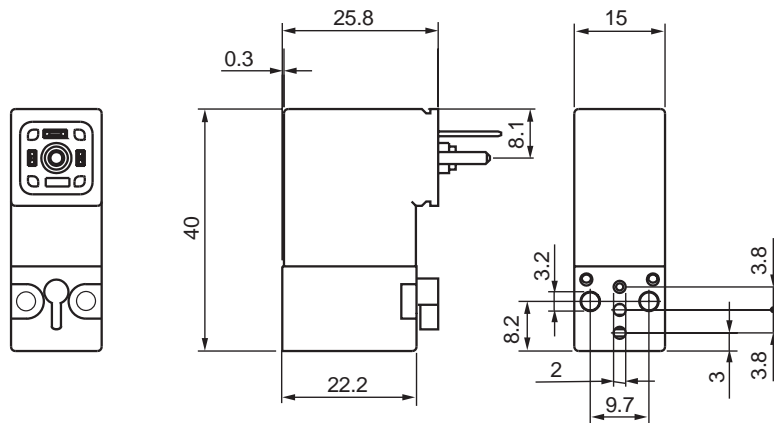
*** NB!**
The cable plug with integral rectifier (REC) can be used for both AC and DC supplies to valves intended for DC operation.

Spare mounting screws (package of 10)

Type	Material	Ø mm	Length mm	Weight Kg	Order code	
	P2L-A, self tapping	Stainless steel	3	27	0,04	P2E-KD027SS3
	P2L-B, metric thread	Zinc-plated steel	M3	25	0,04	P2E-KP025PM3
	P2L-D, metric thread	Stainless steel	M3	25	0,04	6008517

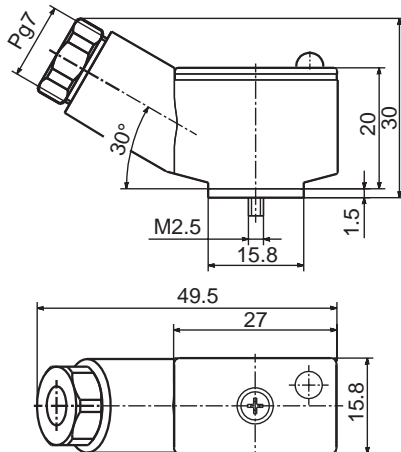
Dimensions

Solenoid valves P2E-→V...



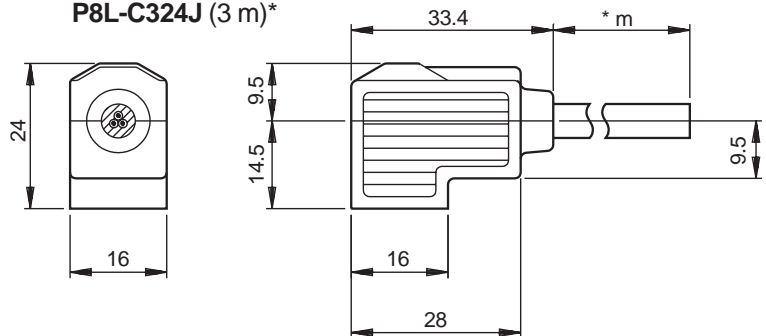
Cable plugs

P8C-H
P8C-H36C
P8C-H26C
P8C-H21E
P8C-H21G



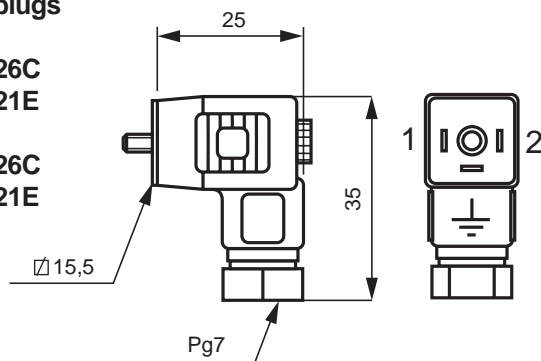
Cable plugs

P8L-H236C (2 m)*
P8L-H536C (5 m)*
P8L-HA36C (10 m)*
P8L-C324J (3 m)*



Cable plugs

P8C-C
P8C-C26C
P8C-C21E
P8C-D
P8C-D26C
P8C-D21E



Cable plugs

P8L-C2
P8LC5
P8L-C226C
P8L-C526C
P8L-CA26C
P8L-C221E
P8L-C521E

