# Solenoid Valves for Automation

2/2 way - Normally Closed - Diaphragm pilot operated



Series 168.1

### General description:

PARKER series 168.1 solenoid valves are diaphragm pilot operated and therefore require a minimum differential pressure to operate.

They are used for air applications, even with high operating frequencies. The diaphragm is made of plastic with a fabric reinforcement. Series 168.1 valves are normally closed.

On request and for large orders, all the models can be supplied with manual control (MC).

# Temperatures:

The working temperature for media is: maximum +90°C minimum -10°C

The maximum ambient temperature is:
•with class "F" coils +50°C

•with class "H" coils +80°C

#### Coils:

For series 168.1 valves class "F" coils (155°C) are available encapsulated in thermoplastic containing 30% glass fiber (types: ZB, YB).

Fittings: G = 3/8" - 1"

Class "H" coils (180°C) are also available encapsulated in thermoplastic containing 40% glass fiber (type: ZH).

All the coils are for continuous service, 100% E.D.

The rated voltage tolerance is:

±10% for A.C. power supply and +10% -5% for D.C.

The "Z" and "Y" coils can be used on a.c. with frequency of 50/60Hz (dualfrequency).

The "Z" coils have Faston terminals for DIN 43650A connectors with protection to IP65.

The "Y" coil has terminals with 2 x 1,000 mm cables with protection to IP67.

Materials:	
Valve body:	OT58 UNI 5705 brass stamping
Seals:	NBR (Buna N)
<ul> <li>Enclosing tube:</li> </ul>	AISI 304 stainless steel
Plunger:	AISI 430 F stainless steel
Spring:	AISI 302 stainless steel
Shading ring:	Copper

Coil type		Pov [V	Insulat.	
C.A.(~)	D.C.(=)	C.A.(~)	D.C.(=)	
ZB 09	ZB 12	9	12	F
YB 09	YB 12	9	12	E
ZH 14	ZH 16	14	16	Н

Fittings Ø G  Valve type		Nominal orifice Ø	Flow coefficient Kv	Minimum pressure	Max. differential pressure (M.O.P.D.)		Coil type	Weight	Notes
[ " ]	[]	[mm]	[m³/h]	[bar]	in C.A.(~) bar	in D.C.(=) bar	[ ]	[Kg]	[ ]
3/8	168.1 I	13	2.0	0.5	16	16	Z - Y	0.550	1 - 2
1/2	168.1 A	13	2.5	0.5	16	16	Z - Y	0.580	1 - 2
3/4	168.1 C	20	7.0	0.5	16	16	Z - Y	1.020	1 - 2
1	168.1 D	25	8.0	0.5	16	16	Z - Y	1.080	1 - 2
								5	

### Application:

Series 168.1 solenoid valves are ideal for air applications where high flow rates with high operating frequencies are required.

Some typical application examples are:

- ·Air compressors;
- Dust removal systems;
- ·Systems of distribution by compressed air;
- Pneumatic mail;
- ·Suction systems.

#### Installation:

The valves can be mounted in any position without jeopardising their operation. It is however advisable to install them with the coil in a vertical position above the body.

# Approvals:

Coil certification:

24V/50-60Hz, 115V/50-60Hz

220-230V/50-60Hz, 240V/50-60Hz

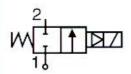
ZB 12 12V DC, 24V DC YB 09 220-230V/50-60Hz

•For the coil:

ZB 09 220-230V/50-60Hz, 240V/50-60Hz

 UL Recognized Comp. Mark for the coil: 24V/60Hz, 110-120V/60Hz, 208-240V/60Hz

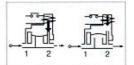
YB 09 24V/60Hz, 110-120V/60Hz, 208-240V/60Hz Series 168.1

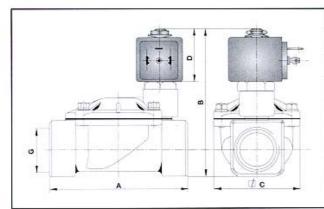


N.C.

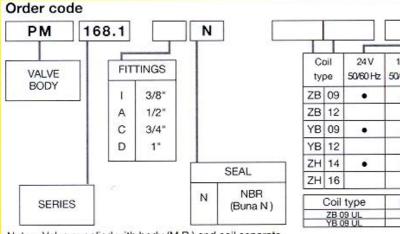
Normally closed

Coil energised - open Coil de-energised - closed





Fittings ØG	Α	В	С	D
[ " ]	[mm]	[mm]	[mm]	[mm]
3/8	69.0	93.5	40.0	37.5
1/2	72.0	95.5	40.0	37.5
3/4	100.0	101.0	65.0	37.5
1	104.0	106.5	65.0	37.5



C	oil	24V	115V	220-230V	240V	12 V	24 V
typ		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	C.C.	C.C.
ZB	09	•	•	•	•		
ZB	12					•	•
YΒ	09	•	•	•			
YΒ	12						•
ZH	14	•	•	•			
ZH	16						•
3	Coil	type	24 V/60	Hz 1	10-120 V/60 H	tz 208-	240 V/60 H
		19 LH			•		•

Note: Valve supplied with body (M.P.) and coil separate. Connector to be ordered separately.

Parker Climate & Industrial Controls

Parker Hannifin S.p.A. Climate & Industrial Controls Group Gessate (Milano) - Italy