

Solenoid Valves for Automation

2/2 way - Normally Closed - Diaphragm pilot operated

Fittings :

G = 3/8" - 2"
NPT = 3"



Series 133

General description:

PARKER series 133 solenoid valves are diaphragm pilot operated and require a minimum differential pressure to operate.

They are used for applications with high flow rates and media such as **water, light oils (2°E) and others**, provided they are compatible with the construction materials used.

Series 133 valves are **normally closed**.

Temperatures:

The working temperature for media is:

maximum +90°C
minimum -10°C

with NBR seals (Buna N).

On request seals in Viton are available, for fittings \leq G 1" for maximum working temperature +140°C.

The maximum ambient temperature is:

- with class "F" coils +50°C
- with class "H" coils +80°C

Coils:

For series 133 valves class "F" coils (155°C), encapsulated in thermoplastic containing 30% glass fiber (types: ZB, YB), are available.

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

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

The rated voltage tolerance is:

$\pm 10\%$ for A.C. power supply and +10% -5% for D.C.

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

Series 133 solenoid valves are also available in a watertight version for applications where the conditions of humidity are particularly critical (type: YE 09).

Materials:

- Valve body: OT58 UNI 5705 brass stamping
- Seals: NBR (Buna N) - Viton
- Enclosing tube: AISI 304 stainless steel
- Plunger: AISI 430 F stainless steel
- Spring: AISI 302 stainless steel
- Shading ring: Copper

Electrical features:

Coil type []		Power [W]		Insulat. class
A.C.(~)	D.C.(=)	A.C.(~)	D.C.(=)	
ZB 09	ZB 12	9	12	F
YB 09	YB 12	9	12	F
ZH 14	ZH 16	14	16	H
YE 09	-	9	-	E

Specification:

Fittings Ø G - NPT	Valve type	Nominal orifice Ø	Flow coefficient Kv	Minimum pressure	Max. differential pressure (M.O.P.D.)		Coil type []	Weight	Notes
					in A.C.(~) bar	in D.C.(=) bar			
["]	[]	[mm]	[m³/h]	[bar]			[]	[Kg]	[]
3/8 G	133 I	13	3.00	0.1	20	20	Z - Y	0.550	1
1/2 G	133 A	13	3.00	0.1	20	20	Z - Y	0.580	1
3/4 G	133 C	20	8.40	0.1	20	20	Z - Y	1.020	1
1 G	133 D	25	9.60	0.1	20	20	Z - Y	1.080	1
1 1/4 G	133.2 E	35	25.20	0.1	10	10	Z - Y	3.150	1 - 2
1 1/2 G	133.2 F	40	30.00	0.1	10	10	Z - Y	2.900	1 - 2
2 G	133 G	50	37.20	0.1	10	10	Z - Y	4.300	1 - 2
3 NPT	133 M	76	86.20	0.5	12	12	Z - Y	17,400	1

Note: 1) NP (nominal pressure): 25 bar (from 1 1/4 to 3" PN 16 bar).
2) Slow closure version.

Application:

Series 133 solenoid valves are ideal for the automatic control of media in a wide range of applications such as:


- thermohydraulic systems;
- autoclaves;
- cooling of machine tools;
- industrial washing plants;
- evaporation towers;
- hospital equipment;
- irrigation systems;
- fire-fighting systems;
- wood-working machines;
- marble-working machines;
- molding machines;
- hygiene-health equipment.

For air and inert gases they can be used for low operating frequencies.

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:

ZB 09 24V/50-60Hz, 115V/50-60Hz,
220-230V/50-60Hz, 240V/50-60Hz

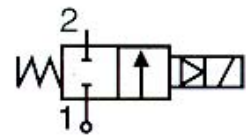
ZB 12 12VDC, 24VDC
YB 09 220-230V/50-60Hz

 •The coils:

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

 •Models are 133IN,133AN
ZB 09 coil:
24V/60Hz, 110-120V/60Hz,
208-240V/60Hz

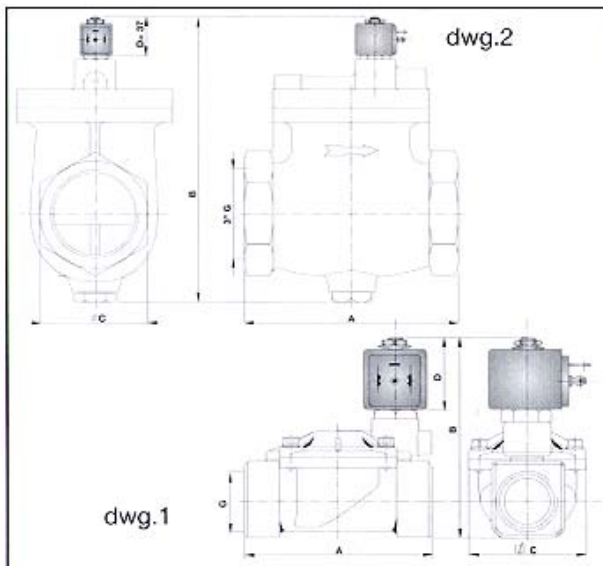
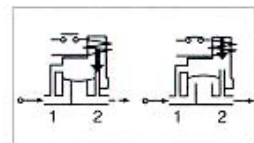
Series 133



N.C.

Normally closed

Coil energised - open
Coil de-energised - closed



Dimensions

Fittings Ø G - NPT	A	B	C	D
["]	[mm]	[mm]	[mm]	[mm]
3/8 G	69.0	92.5	40.0	37.5
1/2 G	72.0	94.5	40.0	37.5
3/4 G	100.0	100.0	65.0	37.5
1 G	104.0	105.5	65.0	37.5
1 1/4 G	145.0	127.0	102.0	37.5
1 1/2 G	145.0	127.0	102.0	37.5
2 G	173.0	141.0	118.0	37.5
3 NPT*	225.0	295.0	112.0	37.5

* = Dwg. 2

Order code

PM	133						
VALVE BODY	FITTINGS					[V]	[Hz]/c.c.
	I 3/8" G					Coil type	24V 50/60 Hz
	A 1/2" G						115V 50/60 Hz
	C 3/4" G						220-230V 50/60 Hz
	D 1" G						240V 50/60 Hz
	E 1 1/4" G						12V c.c.
	F 1 1/2" G						24V c.c.
	G 2" G						
	M 3" NPT						
SERIES	SEAL						
	N NBR (Buna N)						
	*V *Viton						

Note: Valve supplied with body (M.P.) and coil separate.
Connector to be ordered separately.
* Optional Viton for fittings to 1".

Coil type	24 V/60 Hz	110-120 V/60 Hz	208-240 V/60 Hz
ZB 09 UL	•	•	•