

# SOLENOID VALVES Pneumax F300 | Asco/Sirai L/D/S



Pneumax Fluid Control Catalogue

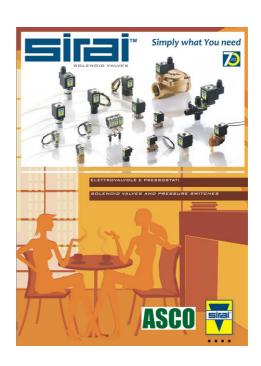
Series F300

#### Series F300

#### General

F300 series includes a vast range of solenoid valves in brass and stainless steel designed to control air, water, steam and all fluids that are compatible with the materials used for bodies and seals. The solenoid valves are 2 or 3-way, normally closed, normally open, general service, direct acting or servo-assisted, with connections available in NPT & BSP threads from G1/8" up to G3", with a working pressure range from vacuum to 100 bar. Solenoid valves are available with coils that conform to CESI 03 ATEX 344 certification for explosive environments. Our technical office ensures the highest standard of skill and understanding for the widest variety of applications, ensuring that the best possible solutions are found.





DIRECT ACTING

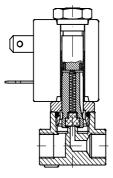


INDIRECT ACTING

#### Version manifactured

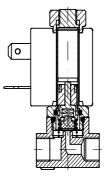
Solenoid valves direct action 2-way: 2-way solenoid valves have an input connection and an output connection machined in the valve body, the orifice being intercepted by the poppet moved by the core tube.

They can be **normally closed (2/2 N.C.)**, in this case the fluid is intercepted by the poppet at rest, with electricity applied, the input orifice is opened and the media reaches the intended use.



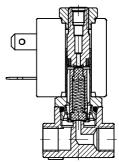
They can be **normally open (2/2 N.O.)**, in this case at rest the orifice remains open without electricity applied, the media reaches the intended use. When electricity is applied the input orifice closes.

Performance in both cases depends solely on the magnetic field produced by the solenoid coil. The solenoid valves can also work at zero pressure.



**Solenoid valves direct action 3-way:** 3-way solenoid valves have an input and an output connection in the valve body and an exhaust connection fitted in the stem of the core tube. The input and exhaust orifices are intercepted directly by the poppet fitted within the core tube.

They can be **normally closed (3/2 N.C.)** and in this case, at rest, the incoming fluid is intercepted by the poppet and output port in connected to the exhaust port. Applying electrical power, the input orifice is opened and feed is supplied to the output. Exhaust is closed.

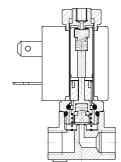


They can be **normally open (3/2 N.O.)** and in this case, at rest, the input orifice is open without electricity applied, the media reaches the intended use. Exhaust is closed.

Applying power, the input orifice closes and the output discharges through the exhaust port.

Performance in both cases depends solely on the magnetic field produced by the solenoid coil.

The solenoid valves can also work at zero pressure.



Technical modifications keep in reserve!

10/6606/

7.02.02







#### Servo-assisted solenoid valves

Large-sized passage orifices increase the value of the static pressure which has to be overcome by the magnetic field produced by the coil. These solenoid valves are used to control high-pressure values with large diameter bores.

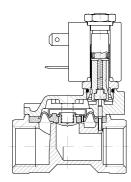
In these models, the fluid helps in the opening or closing of the main poppet.

They can be **normally closed (2/2 N.C.)** and have an input and a utilisation connection machined into the valve body and at rest the fluid is intercepted by the main poppet, which can be either diaphragm or a piston. In this condition, the fluid acts on both faces of the main plunger though a pinhole contributing to closure of the poppet.

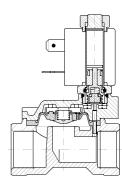
Applying electrical power, the secondary, or pilot, orifice opens leading to the exhaust of the fluid, which acts to close the main poppet.

Greater force is thus applied when opening, the poppet is raised from the orifice and allows the media to flows to the output.

In these versions, performance does not depend solely on the magnetic field produced by the coil; a minimum input pressure is also needed so as to move the diaphragm or the piston overcoming its rigidity and to keep it raised from the main orifice. ( $\Delta p$  minimum performance).



They can be **normally open (2/2 N.O.)** and have an input and output connection machined into the valve body, and at rest the core tube communicates with output, a minimum-pressure difference between the feed and the output causes the main poppet to rise, leading to it opening. Applying electrical power, the secondary orifice closes and equilibrium between the pressure on the two faces of the main poppet is reinstated, and so it returns to its closed position on the main orifice. In this version a minimum working pressure is also needed.

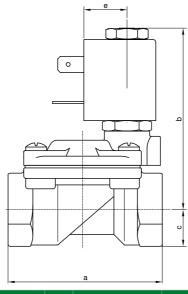


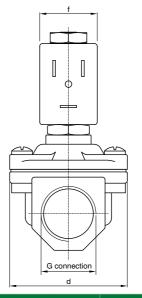
#### **Sealing materials**

Designation	Trade names	General characteristics	Field of use
FPM (Fluorocarbon)	VITON TECNOFLON FLUOREL	A synthetic hexa-fluoropropylene-based elastomer. Excellent resistance to high temperatures. Excellent resistance to ozone, oxygen, mineral oils, synthetic hydraulic fluids, fuels, hydrocarbons and many chemical products. Not specific for superheated steam.	For general use up to 140°C

#### F3107 - 2-way solenoid valve N.C. brass body and cover, with G connection (ISO 228) - 1/4" ... 1" 1/4







	CODE	G connection (ISO 228) ©= Connection			Orifice	KV Di	Differ	Differential pressure (bar)		Power consumption			B= Solenoid coil		Temperature						
	"V"= FPM seals	В	С	D	Е	F	G	(mm)	(m³/h)	Min	М	ax	AC Inrush	AC Holding	DC	Series	Size	range (°C)			
		В	, ,			C	0	_		G			IVIIII	AC	DC	(VA)	(VA)	(W)	Selles	Size	
STD	F3107@V10@	1/4	,		/			10	1,5		15	15									
	F3107@V10@	/	3/8"			/		10	1,7		15	15									
STD	F3107@V12@	/	3/8"			/		12	2,2		15	15									
STD	F3107@V12@		/	1/2"	'	/		12	2,5	0,15	15	15	12	8	6,5	MI	22	-10 +140			
STD	F3107@V18@		/		3/4"		/	18	5,5		13	13									
STD	F3107@V25@			/		1"	/	25	10,2		10	10									
	F3107@V30@			/			1" 1/4	30	15		10	10									

Diagram

Technical characteristics

G connection	а	b	С	d	е	f	Weight (g)
1/4" Ø10	49	65	11	32			230
3/8" Ø10	49	65	11	32		22	240
3/8" Ø12	59	70	14	45			420
1/2" Ø12	59	70	14	45	16		390
3/4"	79	76	18	55			650
1"	96	85	20	72			1050
1" 1/4 Ø30	119	92	25	85			1700

### N.B. For use with steam maximum admitted pressure PS is 2,5 bar (relative pressure). Example: F3107 $\Theta$ V25 $\Theta$ => F3107FV25MI58:

2-way solenoid valve normally closed, servo-assisted diaphragm with G connection (ISO 228) 1", FPM seals, 25 mm orifice, solenoid coil 230 VAC (50-60 Hz) (MI58, size 22).

#### Pneumatic symbol







Cons	truc	tio	n cha	racte	ristic	s

- Brass body and cover
- brass body and cover
   AISI 303 stainless steel guide tube
   AISI 430FR stainless steel mobile and fixed core
   AISI 302 stainless steel springs
   FPM sealing assemblies

- OPTIONS (on request):
   Manual override
   Chemical nickel plating surface treatment
- Version with slowed commutation Version for vacuum (air/gas)
- For use with oxygen
   XME solenoid coil for potentially explosive environments to ATEX standards Ex mb IIC
   XMs certified solenoid coils

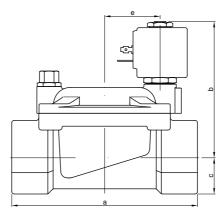
Maximum admitted pressure (bar)	25
Minimum differential pressure (bar)	0,15
Maximum fluid viscosity (mm²/s)	25cSt
Ambient temperature: with class F solenoid coil (°C)	-10 +55
Mounting position	preferably with solenoid coil upwards

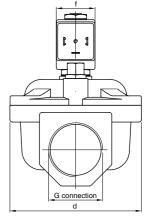


Servo-assisted diaphragm solenoid valves 2/2 Series F300

#### F3107 - 2-way solenoid valve N.C. brass body and cover, with G connection (ISO 228) - 1" 1/4 ... 3"







	CODE "V"= FPM seals	G connection (ISO 228) ⊚= Connection			Orifice	Diffei KV		rential pressure (bar)		Power consumption			B= Solenoid coil		remperature		
	"B" = NBR seals	G	н	1	М	R	(mm)	(m³/h)	Min	AC M	ax DC	AC Inrush (VA)	AC Holding (VA)	DC (W)	Series	Size	range (°C)
	F3107 <b>@</b> V37 <b>®</b>	1" 1/4		/			37	18		10	10	, ,	, ,	( )			
STD	F3107@V37@	/	1" 1/2		/		37	21	0,15	10	10	20	15	10	MG	30	-10 +140
STD	F3107 <b>@</b> V50 <b></b>		/	2"	/		50	36		10	10						
	F3107 <b>⊕</b> B75 <b>⊕</b>		/		2" 1/2	/	75	75	0.3	5	5	20	15	10	MG	30	-10 +90
	F3107@B75@			/		3"	75	84	0,3	5	5	20	15	10	IVIG	30	-10 +90

Diagram

G connection	а	b	С	d	е	f	Weight (g)
1" 1/4	142	105	28	102			3000
1" 1/2	142	105	28	102			2850
2"	158	115	35	119	21	30	4300
2" 1/2	226	134	51	169			1170
3"	226	134	51	169			9900

N.B. For use with steam maximum admitted pressure PS is 2,5 bar (relative pressure).

Example: F3107@V37@ => F3107GV37MG5:

2-way solenoid valve normally closed, servo-assisted diaphragm with G connection (ISO 228) 1" 1/4, FPM seals, 37 mm orifice, solenoid coil 24 VDC (MG5, size 30).

#### Pneumatic symbol







Construction characteristics	Technical characteristics	
- Brass body and cover	Maximum admitted pressure (bar)	20
- AISI 303 stainless steel guide tube - AISI 430FR stainless steel mobile and fixed core	Minimum differential pressure (bar)	0,15 3
- AISI 302 stainless steel springs	Maximum fluid viscosity (mm²/s)	25cSt
- FPM sealing assemblies (NBR only for "M" and "R" versions)	Ambient temperature: with class F solenoid coil (°C)	-10 +55
OPTIONS (on request):  - Manual override  - Chemical nickel plating  - Version for vacuum (air/gas)  - Nus certified solenoid colls	Mounting position	preferably with solenoid coil upwards

Coils see page 7.02.09 Connectors see page 7.02.20 Timer see page 7.02.20

ORDER EXAMPLE F3107DV12 MI5-24VDC MP1

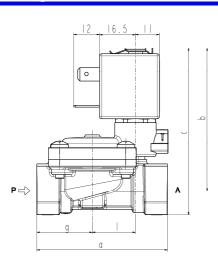


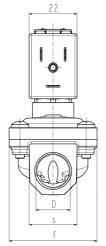
**ASCO** 

#### **SOLENOID VALVE**

2/2- NC (Normally closed)
Pilot operated
G 3/8 ÷ G 1

L182







D	а	b	С	f	g	- 1	S
G 3/8	60	66	77	40	25,5	20	22
G 1/2	66	68	82	40	29	20	27
G 3/4	79	72,5	89	50	35,5	24,5	33
G 1	105	85	106	71	46	28	42

#### **▶** GENERAL FEATURES

Diaphragm valve, pilot operated, having full orifice. Suitable to shut off liquid and gaseous fluids (verify the compatibility of fluid with material in contact).

#### **▶ TECHNICAL FEATURES**

Maximum allowable pressure (PS)
Response times
Opening time (ms)

Closing time (ms)

Fluid temperature

-10°C +90°C (NBR) 0°C +130°C (FPM) -10°C +140°C (EPDM)

1/2

70

600

3/4

70

500

90

420

20bar

3/8

70

670

Max viscosity 5°E (~37 cStokes or mm²/s)

#### **▶** COIL

Approval
Encapsulation material

Insulation class Ambient temperature Continuous duty Electric connection

Protection degree

Voltages DC AC

ZDIVA	ZDIZA T	2017A T					
1	UL and CSA	UL and CSA					
PA	PET	PET					
fiberglass	fiberglass	fiberglass					
reinforced	reinforced	reinforced					
F (155°C)	F (155°C)	H (180°C)					
-10°C +60°C	-10°C +60°C	-10°C +75°C					
ED 100%							

12-24V (+10% -5%)

24V/50-60Hz - 115V/50Hz - 230V/50-60Hz (+10% -15%)

(Other voltages and frequencies on request).

### ► MATERIALS IN CONTACT WITH FLUID

Body Brass

Sealing NBR or FPM or EPDM
Internal components Brass and stainless steel

Seat Brass
Core tube Stainless steel
Shading coil Copper

* On reque	est
Approval	
Voltages	AC

1	ZB12Y	ZB14Y			
1	UL	UL			
1	220-230V/50Hz 208-240V/60Hz (+10% -15%)				

			Different	ial pressu	ure (bar)				Ourise and house				sorption	n						
Port size	Orifice size			Δрι	max		Kv		Series and type			Series and type  AC (VA)  DC			AC (VA)			Sealings	Notes	Weight
ISO 228	(mm)	Δp min	Gas	ses	Liqu	uids	(m <sup>3</sup> /h)	Valve	Valve with	Coil	Inrush	Hole	ding	50	oougo	110100	(kg)			
			AC	DC	AC	DC		valve	manual override	Coll	VA	VA	W	W						
3/8	40.5		16	16	16	16	2,5								(*) = B (NBR)	4.0	0,32			
1/2	13,5	0.05	(12)	(12)	(12)	(12)	3,8	1.400(*)04	1.400/#\00	ZB10A	40				(*) = V	1-3	0,38			
3/4	18	0,35	12	12	12	12	5	L182(*)01	L182(*)02	ZB12A	12	6	4	5,5	(FPM)	2-3	0,52			
1	24		(10)	(10)	(10)	(10)	12								(*) = D (EPDM)	2-3	1,08			

#### ► NOTES

- Sealings: B(NBR)=Nitrile-butylene elastomer V(FPM)=Fluoro-carbon elastomer D(EPDM)=Ethylene-propylene elastomer (WRAS/KTW certified compound)
- Operation with gaseous media, at high pressure without any outlet restriction, can reduce the diaphragm life.
- On request coil in class H (ZB14A see § "COIL")
- The bracketed values of  $\Delta p$  max are related to valves with V(FPM) seals.
- 1 Low power consumption coil on request (3,5 VA in AC 3W in DC):  $\Delta p$  max = 12 bar
- 2 Low power consumption coil on request (3,5 VA in AC 3W in DC):  $\Delta p$  max = 8 bar
- 3 L182D01 L182D02: WRAS certified solenoid valves (certificate n. 1411048).

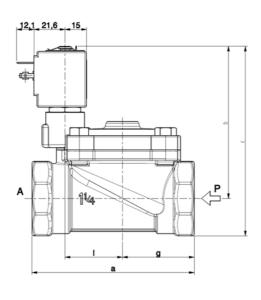
ORDER EXAMPLE L182B01-1/2" ZB10A-230VAC MP1

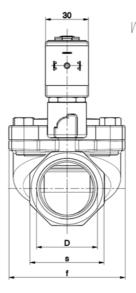


2/2 - NC (Normally closed) Pilot operated G1 1/4 ÷ 2

**L182**-BIG

G 1" 1/4 ÷ 2"







D	а	b	С	f	g	-1	s
G 1 1/4	113	106	132	81	50	40	52
G 1 ½	140	110	140	110	64	53	60
G 2	157	114	150	110	72	53	72

#### **▶** GENERAL FEATURES

Diaphragm valve, pilot operated, having full orifice.

Suitable to shut off liquid and gaseous fluids (verify the compatibility of fluid with materials in contact).

Not suitable for use with dangerous fluids listed in Group 1, therefore they are free from CE marking in conformity with article 3 § 3 of the European Directive 97/23/EC (Pressure Equipment Directive).

#### ► TECHNICAL FEATURES

Maximum allowable pressure (PS)

Response times Opening time (ms)

Closing time (ms) Fluid temperature

Max viscosity

15 bar

1 1/4	1 1/2	2
100	360	360
650	650	650

-10°C +90°C (NBR) 0°C +130°C (FPM)

5°E (~37 cStokes or mm<sup>2</sup>/s)

#### ► MATERIALS IN CONTACT WITH FLUID

Body

Sealing Diaphragm: NBR or FPM / Actuator: FPM

Internal components Brass and stainless steel

**Brass** Guide assembly Stainless steel Shading ring Copper

#### ► COIL

UL (class F) - for UL cl.H: ZA34 Approval

Continuous duty

Encapsulation material Coil insulation class

Ambient temperature

Electric connections

Protection degree

Voltages DC AC

PPS (Polyphenilsulfure) fiberglass reinforced F (155°C) on request class H (180°C)

-10°C +50°C

DIN 46340 - 3 poles connectors (EN175301-803)

IP 67 (EN 60529) with plug connector

12-24V (+10% -5%)

24V/50Hz - 110V/50Hz (120V/60Hz) - 230V/50Hz

(+10% -15%)

(Other voltages and frequencies on request)

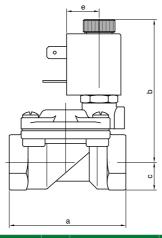
			Different	ial press	ure (bar	.)		Series and type			Po	ver absorpti	on			
Port size	Orifice size.			Δр	max		Kv	,	,			1 ower aboorption			Notes	Weight
ISO 228	(mm)	Δp min	Ga	ses	Liq	uids	(m <sup>3</sup> /h)	Valve with		Coil	AC (VA)		DC	Sealings	inotes	(kg)
	, ,		AC	DC	AC	DC		valve	Valve manual override		Inrush	Holding	(W)			
G 1 1/4	30						15							NBR		1,590
G 1 ½	45						27	L182B48 L182B49	L182B48 L182B49					(diaphragm) FPM		2,510
G 2	45	0,50	10	10	10	10	34		ZA10A	A 23	14	9	(actuator)	_	2,990	
G 1 1/4	30	0,50	10	10	10	10	15			ZATUA	23	14	9		-	1,590
G 1 ½	45						27	L182V48	L182V49					FPM		2,510
G 2	45						34									2,990

- Sealings: NBR = Nitrile-butylene elastomer FPM = Fluoro-carbon elastomer
- Operation with gaseous fluids at high pressure without any outlet restriction can reduce the diaphragm life.
- IMQ CSV approval, see ZA10 datasheet for further details
- UL approved coil (E153691)

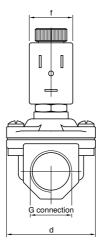
#### F3207 - 2-way solenoid valve N.O. brass body and cover, with G connection (ISO 228) - 1/4" ... 1" 1/4

Series F300





Servo-assisted diaphragm solenoid valves 2/2



CODE	G	con		i <b>on (</b> onne			Orifice	ку	αv		Differential pressure (bar)		Power consumption			enoid coil	Temperature
"V"= FPM seals		С		Е	F		(mm)	(m³/h)		M	ax	AC Inrush	AC Holding	DC	0	0.	range (°C)
	В	C	D	E	F	G			Min	AC	DC	(VA)	(VA)	(W)	Series	Size	
F3207@V10@	1/4"			/			10	1,5		15	15						
F3207@V10@	/	3/8"			/		10	1,7		15	15						
F3207 <b>@</b> V12 <b>®</b>	/	3/8"			/		12	2,2		15	15						
F3207 <b>@</b> V12 <b>®</b>		/	1/2"		/		12	2,5	0,15	15	15	12	8	6,5	MI	22	-10 +140
F3207@V18@		/		3/4"		/	18	5,5		13	13						
F3207@V25@			/		1"	/	25	10,2		10	10						
F3207@V30®			/			1" 1/4	30	15		10	10						

G connection	а	b	C	d	е	f	Weight (g)
1/4" Ø10	49	65	11	32			230
3/8" Ø10	49	65	11	32			240
3/8" Ø12	59	73	14	45			420
1/2" Ø12	59	73	14	45	16	22	390
3/4"	79	76	18	55			650
1"	96	85	20	72			1050
1" 1/4 Ø30	119	96	25	85			1700

N.B. For use with steam maximum admitted pressure PS is 2,5 bar (relative pressure).

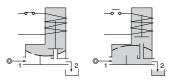
Example: F3207@V10@ => F3207CV10MI58:

2-way solenoid valve normally open, servo-assisted diaphragm, with G connection (ISO 228) 1/4", FPM seals, 10 mm orifice, solenoid coil 230 VAC (50-60 Hz) (MI58, size 22).

#### Pneumatic symbol







Construction characteristics	Technical characteristics						
- Brass body and cover	Maximum admitted pressure (bar)	25					
- AISI 303 stainless steel guide tube - AISI 430FR stainless steel mobile and fixed core	Minimum differential pressure (bar)	0,15					
- AISI 302 stainless steel springs	Maximum fluid viscosity (mm²/s)	25cSt					
- FPM sealing assemblies	Ambient temperature: with class F solenoid coil (°C						
OPTIONS (on request):  - Manual override  - Chemical nickel plating surface treatment  - XME solenoid coil for potentially explosive environments to ATEX standards - Ex mb IIC  - c 11 c certified solenoid coils	Mounting position	preferably with solenoid coil upwards					

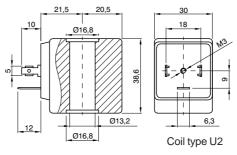
Coils see page 7.02.09 Connectors see page 7.02.20 Timer see page 7.02.20

**ORDER EXAMPLE** F3207DV12 MI5-24VDC MP1

#### Solenoid coil 30 mm Ø13, type MG



- Options:
   Electrical connection via cables
   Special voltages and powers
   Self-extinguish



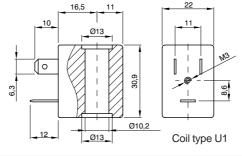
Ordering code							
	MG❶						
	VOLTAGE						
	4= 12 VDC	STD					
0	5= 24 VDC	STD					
v	56= 24 VAC (50-60 Hz)	STD					
	57= 110 VAC (50-60 Hz)						
	58= 230 VAC (50-60 Hz)	STD					
EAC							

	Operational characteristics									
Class of insulation	Tolerance on AC voltage	Tolerance on DC voltage	IP Rating with connector	Continuous service	Electrical connection	Connector	Po	wer	Weight (g)	
-	100/ 1150/	. 100/	IDOS	ED1000/	DIN 43650 A	Code: 300.11.00	AC (VA)	DC (W)	100	
Г	-10% +15%	±10%	IP65	ED100%	DIN 43650 A	Code: 300.11.00	15	10	120	

#### Solenoid coil 22 mm Ø10, type MI



- Options:
   Electrical connection via cables
   Special voltages and powers
   Self-extinguish



	Ordering code								
	MI								
	VOLTAGE								
	4= 12 VDC	STD							
	5= 24 VDC	STD							
0	21 = 48-50 VAC (50-60 Hz	<u>z</u> )							
	56= 24 VAC (50-60 Hz)	STD							
	57= 110 VAC (50-60 Hz)								
	58= 230 VAC (50-60 Hz)	STD							
	ERE								

	Operational characteristics									
Class of insulation	Tolerance on AC voltage	Tolerance on DC voltage	IP Rating with connector	Continuous service	Electrical connection	Connector	Po	wer	Weight (g)	
_	-10% +15%	±10%	IP65	ED100%	DIN 43650 B	Code: 305.11.00	AC (VA)	DC (W)	50	
	-10/6 + 15/6	±1076	11-05	LD100%	DIN 43630 B	Code. 303.11.00	8	6,5	50	

#### Solenoid coil 36 mm Ø13, type MK



- Options:
   Electrical connection via cables
   Special voltages and powers
   Self-extinguish

ļ <del>-</del>	24,3	23,5	36
10	Ø16,:	2	18
		38.5	000
12	4	Ø13,2	
	Ø16,	2	Coil type U2

	Ordering code  MK	
	VOLTAGE	
	4= 12 VDC	STD
•	5= 24 VDC	STD
v	56= 24 VAC (50-60 Hz)	STD
	57= 110 VAC (50-60 Hz)	
	58= 230 VAC (50-60 Hz)	STD
	ERE	

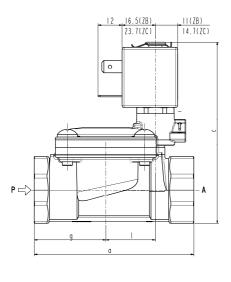
	Operational characteristics													
Class of insulation	Tolerance on AC voltage	Tolerance on DC voltage	IP Rating with connector	Continuous service	Electrical connection	Connector	Por	wer	Weight (g)					
Н	-10% +15%	±10%	IP65	ED100%	DIN 43650 A	Code: 300.11.00	AC (VA)	DC (W)	200					
		±10%	11-05	ED100%	DIN 43030 A	Code. 300.11.00	30	27	200					

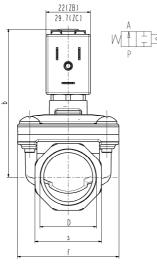
Coils see page 7.02.09 Connectors see page 7.02.20 Timer see page 7.02.20



2/2- NO (Normally open)
Pilot operated
G 3/8 ÷ G 1

**L282** 







D	а	b	С	f	g	- 1	s
G 3/8	60	67	78	40	25,5	20	22
G 1/2	66	69	83	40	29	20	27
G 3/4	79	73,5	90	50	35,5	24,5	33
G 1	105	86	107	71	46	28	42

#### **▶** GENERAL FEATURES

Diaphragm valve, pilot operated, having full orifice. Suitable to shut off liquid and gaseous fluids (verify the compatibility of fluid with material in contact).

#### ► TECHNICAL FEATURES

Maximum allowable pressure (PS) 20bar

 Opening time
 from ~300ms to ~1500ms

 Closing time
 from ~1000ms to ~2000ms

 Fluid temperature
 -10°C +90°C (NBR)

 0°C +130°C (FPM)

10 C + 130 C (FPINI)

Max viscosity 5°E (~37 cStokes or mm²/s)

#### ► MATERIALS IN CONTACT WITH FLUID

Body Brass
Sealing NBR or FPM

Internal components Brass and stainless steel

SeatBrassCore tubeStainless steelShading coilCopper

#### ► COIL

Approval

Encapsulation material

Insulation class Ambient temperature Continuous duty Electric connection

Protection degree

Voltages DC AC

ZB10K ZC10A	ZB12K ZC12A	ZB14K ZC14A
1	▲ UL and CSA	▲ UL and CSA
PA	PET	PET
fiberglass	fiberglass	fiberglass
reinforced	reinforced	reinforced
F (155°C)	F (155°C)	H (180°C)
-10°C +60°C	-10°C +60°C	-10°C +75°C
	ED 100%	

DIN 46340-3 poles plug connector (EN 175301-803 for ZC)											
IP 65 IP 67 IP 67											
(EN 60529) with	(EN 60529) with	(EN 60529) with									
plug connector	plug connector	plug connector									

**ZC**: 12-24V (+10% -5%)

**ZB:** 24V/50-60Hz - 120V/60Hz - 230V/50-60Hz - 220-230/50Hz 208-240/60Hz (on request) - (+10% -15%)

(Other voltages and frequencies on request)

▲ : approval valid for ZB12K – ZB14K only

			Different	ial pressi	ure (bar)			Series and ty	rno.	Po	Power absorption								
Port size	Orifice	_		Δр	max		Kv	Series and ty	pe	A	C (VA)		DC			Weight			
ISO 228	size (mm)	Δp min	G	as	Liq	uids	(m <sup>3</sup> /h)	Valve	Coil	Inrush	Hol	ding	DC	Sealings	Notes	(kg)			
	(111111)	1111111	AC	DC	AC	DC		valve	Coll	VA	VA	W	W		<u> </u>				
3/8							2,5	L282B01						NBR		0,32			
3/0	13,5							2,5	L282V01						FPM		0,32		
1/2	13,3		12		12		3.8	L282B01						NBR		0,38			
1/2				_		_	3,0	L282V01	ZB10K	11,7	10	7,6	_	FPM		0,30			
3/4	18			_		-	5	L282B01	ZB12K	11,7	1,1	7,0	-	NBR		0,52			
3/4	10		10		10		3	L282V01						FPM		0,32			
1	24		12		12		12	L282B01						NBR		1,08			
· ·	24	0,35	10		10		12	L282V01						FPM	_	1,00			
3/8		0,33					2,5	L282B01						NBR	_	0,32			
3/0	13,5						2,5	L282V01						FPM	ı L	0,32			
1/2	13,3						12		12	3.8	L282B01						NBR		0,38
1/2					_		3,0	L282V01	ZC10A	_	_	_	5.5	FPM		0,30			
3/4	18		-		_		5	L282B01	ZC12A	_	-	-	5,5	NBR		0,52			
3/4	10				10		10	3	L282V01						FPM		0,32		
1	24			12		12	12	L282B01						NBR		1,08			
ı	24			10		10	12	L282V01						FPM		1,00			

#### ► NOTES

- Sealings: NBR=Nitrile-butylene elastomer FPM=Fluoro-carbon elastomer
- Operation with gaseous media, at high pressure without any outlet restriction, can reduce the diaphragm life.
- On request coil in class H (ZB14K ZC14A see § "COIL")
- On request WRAS certified solenoid valve with EPDM sealing (certificate n° 1411048).

7.02.10

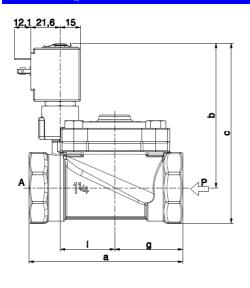


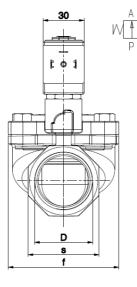
2/2 - NO (Normally open) Pilot operated

G1 1/4 ÷ 2

**L282**-BIG

G 1" 1/4 ÷ 2"







D	а	b	С	f	g	1	s
G 1 ¼	113	106	132	81	50	40	52
G 1 ½	140	110	140	110	64	53	60
G 2	157	114	150	110	72	53	72

#### **▶** GENERAL FEATURES

Diaphragm valve, pilot operated, having full orifice.

Suitable to shut off liquid and gaseous fluids (verify the compatibility of fluid with materials in contact).

Not suitable for use with dangerous fluids listed in Group 1, therefore they are free from CE marking in conformity with article 3 § 3 of the European Directive 97/23/EC (Pressure Equipment Directive).

#### ► TECHNICAL FEATURES

Maximum allowable pressure (PS) 15 bar

from ~300ms to ~1500ms Opening time Closing time from ~1000ms to ~2000ms Fluid temperature -10°C +90°C (NBR) 0°C +130°C (FPM)

Max viscosity 5°E (~37 cStokes or mm2/s)

#### ► MATERIALS IN CONTACT WITH FLUID

Body Brass Sealing NBR or FPM

Internal components Brass and stainless steel

Brass Guide assembly Stainless steel Shading ring Copper

#### **▶** COIL

Approval UL (class F) - for UL cl.H: ZA34

Continuous duty ED 100%

Encapsulation material PPS (Polyphenilsulfure) fiberglass reinforced Coil insulation class F (155°C) on request class H (180°C) Ambient temperature -10°C +50°C

DIN 46340 - 3 poles connector (EN175301-803) Electric connection

IP 67 (EN 60529) with plug connector Protection degree

Voltages **ZA10A:** 12-24V (+10% -5%) DC

ZA10YE: 24V/50Hz - 110V/50Hz (120V/60Hz) -

230V/50Hz (+10% -15%)

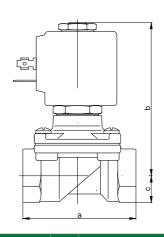
(Other voltages and frequencies on request)

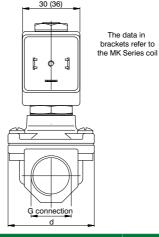
			Different	tial press	ure (bar	)		Series a	Power absorption						
Port size	Orifice size			Δр	max		Kv	conce and type			ower absorption		Sealings	Notes	Weight
ISO 228	(mm)	Δp min	Ga	ses	Liq	uids	(m <sup>3</sup> /h)	Valve	Coil	AC (VA)		DC	Sealings	Notes	(kg)
			AC	DC	AC	DC		valve	Coll	Inrush	Holding	(W)			
G 1 1/4	30		10	-	10	-	15						NBR		1,590
G 1 ½	45		9		9		27	L282B48					(diaphragm) FPM		2,510
G 2	45		9	-	9	-	34		ZA10Y	28	20		(actuator)		2,990
G 1 1/4	30		10	-	10	-	15		ZATOT	20	20	-		_	1,590
G 1 ½	45		9		9		27	L282V48					FPM		2,510
G 2	45	0.50	9	-	9	-	34								2,990
G 1 1/4	30	0,50	-	10	-	10	15						NBR		1,590
G 1 ½	45			9		9	27	L282B48					(diaphragm) FPM		2,510
G 2	45		-	9	-	9	34	L282V48	ZA10A			9	(actuator)		2,990
G 1 1/4	30		-	10	-	10	15		ZATUA	-	-	9			1,590
G 1 ½	45			9		9	27						FPM		2,510
G 2	45		-	9	-	9	34								2,990

- Sealings : NBR = Nitrile-butylene elastomer FPM = Fluoro-carbon elastomer
- Operation with gaseous fluids at high pressure without any outlet restriction can reduce the diaphragm life.
- IMQ CSV approval, see ZA10 datasheet for further details
- UL approved coil (E153691)

### F3108 - 2-way solenoid valve N.C. brass body and cover, with G connection (ISO 228) - 3/8" ... 1"







	CODE "V" = FPM seals	G connection (ISO 228) ©= Connection			Orifice	κv	Differential pressure (bar)			Pov	tion	B= Solenoid coil		Temperature		
	"V"= FPM seals	С	D	Е	F	(mm)	(m³/h)	Min	M	ax	AC Inrush	AC Holding	DC	Series	Size	range (°C)
		C	D	_	,			IVIIII	AC	DC	(VA)	(VA)	(W)	Selles	Size	
STD	F3108@V12@	3/8"		/		12	2		10	/	20	15	,	MG/AC	30	
STD	F3108@V12@	/	1/2"		/	12	2,2		10	/	20	15	,	WG/AC	30	
STD	F3108@V12@	3/8"		/		12	2		12	10	40	30	27			
STD	F3108@V12@	/	1/2"		/	12	2,2	0	12	10	40	30	21	MK		-10 +140
STD	F3108@V18@		/	3/4"	/	18	4,5	U	9	/	40	30	,	(AC/DC)	36	-10 +140
STD	F3108@V25@		/		1"	25	8,5		7	/	40	30	,		30	
	F3108 <b>@</b> V18C <b></b>		/	3/4"	/	18	4,5		/	9	,	,	27	MK/DC		
	F3108 <b>@</b> V25C <b>③</b>		/		1"	25	8,5		/ 8	1 /		21	IVIK/DC			

0	_		_		Weig	ht (g)
G connection	а	b	С	d	MG	MK
3/8"	59	83	14	45	520	600
1/2"	59	83	14	45	490	570
3/4"	79	90	18	55	/	810
1"	96	101	20	72	/	1220

N.B. For use with steam maximum admitted pressure PS is 2,5 bar (relative pressure).

Example: F3108@V12@ => F3108CV12MG5:

2-way solenoid valve normally closed, with assisted-lift diaphragm with G connection (ISO 228) 3/8", FPM seals, 12 mm orifice, solenoid coil 24 VDC (MG5, size 30).

#### Pneumatic symbol







Construction characteristics	recillical characteristics	
	Maximum admitted pressure(bar)	25
AISI 303 stainless steel guide tube     AISI 430FR stainless steel mobile and fixed core	Maximum fluid viscosity (mm²/s)	25cSt
- AISI 302 stainless steel springs	Ambient temperature: with class F solenoid coil (°C)	-10 +55
- FPM sealing assemblies	Ambient temperature: with class H solenoid coil (°C)	-10 +80
OPTIONS (on request):		
- Chemical nickel plating		
- • Nus certified solenoid coils	Mounting position	preferably with solenoid coil upwards

Coils see page 7.02.09 Connectors see page 7.02.20 Timer see page 7.02.20

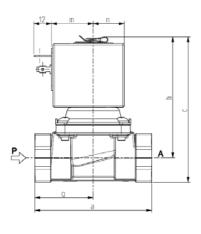
**ORDER EXAMPLE** F3108DV12 MG5-24VDC MP2

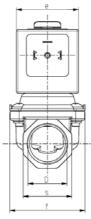


2/2 - NC (Normally closed) Pilot operated hung diaphragm

 $G3/8 \div 1$ 







WITTE												
Р	D	а	b	С	е	f	m	n	S	g		
	G 3/8	60	67,5	78,7	30	40,2	21,6	15*	22	25,5		
	G 1/2	66	67,5	78,7	30	40,2	21,6	15*	27	-		
	G 3/4	79	81	98	42	51	28	21	33	-		
	G 1	105	100	121	48,6	71	35	24,3	42	46		

\*Only for ZA10B n=19,9

#### **▶** GENERAL FEATURES

Pilot operated hung diaphragm valve with full orifice.

Designed for closed circuit hydraulic systems and for vessels draining. Suitable to shut off liquid and gaseous fluids (verify the compatibility of fluid with materials in contact).

#### **► TECHNICAL FEATURES**

Maximum allowable pressure (PS)

Opening time from ~100ms to ~150ms Closing time from ~100ms to ~400ms Fluid temperature -10°C +90°C (NBR)

0°C +130°C (FPM) -10°C +140°C (EPDM)

Max viscosity 5°E (~37 cStokes or mm2/s)

### ► MATERIALS IN CONTACT WITH FLUID

Body

NBR or FPM or EPDM Sealing

Internal components Stainless steel and PPS (G3/8 - G1/2)

Stainless steel and brass (G3/4 - G1)

Seat Core tube

Stainless steel

Shading coil Copper (except L133(\*)17)

#### **▶** COIL

Approval

Continuous duty

Encapsulation material

Insulation class

Ambient temperature Electric connections

Protection degree

DC Voltages AC

	ZA10A	ZA10B	Z130A	Z923A/E
Ī	UL (class F) - for	UL cl.H:		
	ZA34*			-
		ED	100%	
	PPS (Polyphenilsulfure)	PET (p	olyethylene	PPS (Polyphenilsulfure)

(Polyphenilsulfure) fiberglass reinforced	terephtal	ate) fiberglass nforced	(Polyphenilsulfure) fiberglass reinforced
F (155°C) on request class H		F (140°C) on request class H (165°C)	H (165°C)
-10°C +50	°C	-10°C +60°C	-10°C +80°C

DIN 46340 - 3 poles connectors (EN175301-803)

IP 67 (EN 60529) IP 65 (EN 60529) with plug

with plug connector connector 12-24V (+10% -5%)

24V/50Hz-110V/50Hz(120V/60Hz) - 230V/50Hz

(+10% -15%)

(Other voltages and frequencies on request)

\* only for ZA10A

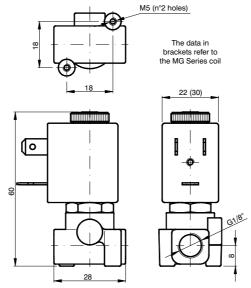
			Different	tial press	ure (bar)			Corion and to		Po	wer absorption				
Port size	Orifice			Δр	max		Kv	Series and ty	/pe	AC (VA)		D0	Sealings	Notes	Weight
ISO 228	size (mm)	Δp min	G	as	Liq	uids	(m <sup>3</sup> /h)	V.L.	0.1	L t	11.12	DC	Seamigs	Notes	(kg)
			AC	DC	AC	DC		Valve	Coil	Inrush	Holding	W			
00/0			10	3	10	3	_	L133(*)16	ZA10A	23	14	9	(*) = B (NBR)	1	0.340
G3/8	40.5		-	8	-	8	2	L133(*)17	ZA10B	-	-	10	(*) = V	-	0.350
04/0	12.5		10	3	10	3	0.0	L133(*)16	ZA10A	23	14	9	(ÉPM)	1	0.410
G1/2		0	-	8	-	8	2.2	L133(*)17	ZA10B	-	-	10	(*) = D (EPDM)		0.420
G3/4	17		10	3	10	3	4,5	L133(◆)07	Z130A	44	24	13	(•) = B		0,790
04	0.4		10	-	10	-	_	1.400/ .000	Z923E	65	33	-	(NBR) (•) = V	-	4.040
G1	24		-	3	-	3	9	L133(●)06	Z923A	-	-	17	(●) – v (FPM)		1,810

#### **▶** NOTES

- The nominal flow is guaranteed with  $\Delta p \min \ge 0.3$  bar. Contact us in case of lower  $\Delta p \min$  values.
- UL approved coil (E153691)
- 1 IMQ CSV approval, see ZA10 datasheet for further details

#### F3105 - 2-way solenoid valve N.C. brass body, with G connection (ISO 228) - 1/8"





	CODE "V"= FPM seals	G connection (ISO 228)  ©= Connection	Orifice	KV	Differ	ential pro (bar)	essure	Power consumption			<b>3</b> = Sole	noid coil	remperature
	"V"= FPM seals	Α	(mm)	(m³/h)	Min	М	ax	AC Inrush	AC Holding	DC	Series	Size	range (°C)
		A			IVIIII	AC	DC	(VA)	(VA)	(W)	Selles	Size	
	F3105@V12@		1,2	0,04		25	25	- 12					
	F3105@V15@		1,5	0,06		16	16		8				
	F3105@V20@	1/8"	2	0,09		12	10			0.5	м	22	
STD	F3105@V25@	1/8	2,5	0,14		8	5,5	12		6,5	IVII	22	
	F3105@V31@		3,1	0,19		5	2						-10 +140
	F3105@V40@		4	0,35	0	4	1,5						
	F3105@V20@		2	0,09		25	15						
STD	F3105@V25@	4 (0)	2,5	0,14		16	8			_			
	F3105@V31@	1/8"	3,1	0,19		8	4		11	5	MG	30	
	F3105@V40@		4	0,35	7	5	2,5						

N.B. For use with steam maximum admitted pressure PS is 2,5 bar (relative pressure).

Example: F3105@V25@ => F3105AV25MI58:

2-way solenoid valve normally closed, direct acting poppet type with G connection (ISO 228) 1/8", FPM seals, orifice 2,5 mm, solenoid coil 230 VAC (50-60 Hz) (MI58, size 22).

#### Pneumatic symbol







Construction characteristics	Technical characteristics	
- Brass body	Maximum admitted pressure (bar)	50
- Brass guide tube - AISI 430FR stainless steel mobile and fixed core	Maximum fluid viscosity (mm²/s)	25cSt
- AISI 302 stainless steel springs	Ambient temperature: with class F solenoid coil (°C)	-10 +55
- FPM sealing assemblies	Mounting position	indifferent
OPTIONS (on request): - Manual override	Weight (g) with solenoid coil MI series	130
- Manual override - Chemical nickel plating surface treatment - Stainless steel guide tube - For use with oxygen - XME solenoid coil for potentially explosive environments to ATEX standards - Ex mb IIC Nuc certified solenoid coils - Versions for use with fluid temperature at -40°C	Weight (g) with solenoid coil MG series	180

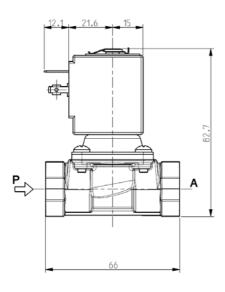
Coils see page 7.02.09 Connectors see page 7.02.20 Timer see page 7.02.20

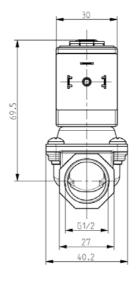
**ORDER EXAMPLE** F3105AV25 MI5-24VDC MP1



2/2 - NC (Normally closed)
Direct acting
G 1/2

**L113** 







#### **▶** GENERAL FEATURES

Direct acting solenoid valve with full orifice, for low pressure. Suitable to shut off liquid and gaseous fluids (verify the compatibility of fluid with materials in contact).

#### ► TECHNICAL FEATURES

 $\begin{tabular}{llll} \it Maximum allowable pressure (PS) & 2 bar \\ \it Opening time & $\sim 30 ms$ \\ \it Closing time & $\sim 30 ms$ \\ \it Fluid temperature & 0°C +130°C \\ \end{tabular}$ 

Max viscosity 5°E (~37 cStokes or mm²/s)

#### ► MATERIALS IN CONTACT WITH FLUID

Body Brass Sealing FPM

Internal components Stainless steel and brass

Seat Brass

Core tube Stainless steel
Shading coil Copper

### ► COIL

Continuous duty ED 100%

Encapsulation material PPS (Polyphenilsulfure) fiberglass reinforced

Insulation class F (155°C) on request class H (180°C) – UL (vd. ZA34A)

Ambient temperature -10°C +50°C

Electric connections DIN 46340 - 3 poles connectors (EN175301-803)

Protection degree IP 67 (EN 60529) with plug connector

Voltages DC 12-24V (+10% -5%)

AC 24V/50Hz - 110V/50Hz (120V/60Hz) - 230V/50Hz

(+10% -15%)

(Other voltages and frequencies on request)

		  -		Differential pressure (bar)				Corio	a and time	Do	wer absorption							
	Port size ISO 228	Orifice size			Δp max			Kv	Selle	s and type	1 ower absorption			Sealings	Function	Weight		
		(mm)	Δp min	Δp min	Δp min	Δp min	Δp min	Ga	ses	Liq	uids	(m <sup>3</sup> /h)	Valvo	AC (VA)		(VA) DC		Notes
				AC	DC	AC	DC		vaive	Valve Coil		Holding	(W)					
	G 1/2	12	0	0,30	-	0,30	-	2	L113V22	L113V22 ZA10A		74404	23	14	-	FPM	1	0,390
	G 1/2	12	U	-	0,20	-	0,20	2	L113V23			1	9	FFINI	1 - 2	0,390		

#### ► NOTES

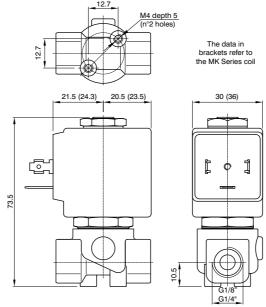
- Sealings : FPM = Fluoro-carbon elastomer
- 1 IMQ CSV approval, see ZA10 datasheet for further details
- 2 Silent model; only for direct current (DC).

ORDER EXAMPLE L113V22-1/2" ZA10A-24VAC MP2

Valve + Coil + Connector

F3106 - 2-way solenoid valve N.C. brass body, with G connection (ISO 228) - 1/8" and 1/4"





	CODE		on (ISO 228) Innection	Orifice	KV	Differ	ential pro (bar)	essure	Pov	ver consumpt	ion	<b>⊕</b> = Sole	noid coil	remperature
	"V"= FPM seals			(mm)	(m³/h)	N 41:	M	ax	AC Inrush	AC Holding	DC	O-vi	0:	range (°C)
		Α	В			Min	AC	DC	(VA)	(VA)	(W)	Series	Size	
	F3106@V10@			1	0,04		80	80						
	F3106@V12@			1,2	0,05		60	60					30	
	F3106@V15@			1,5	0,07		30	26	_			MG		
	F3106@V20@			2	0,1		22	20		15				
	F3106@V25@	1/8"		2,5	0,15		16	14			10			
	F3106@V30®		1/4"	3	0,25		15	10	20					
	F3106@V35@			3,5	0,32		10	8						
	F3106@V40@			4	0,36		8	5						
	F3106@V45@			4,5	0,41		6,5	3,5						
_ [	F3106@V52@	/		5,2	0,47		4	1,8	-					
	F3106@V64®	1		6,4	0,64	0	3	1						-10 +140
	F3106@V10®			1	0,04	0	100	100						-10 + 140
	F3106@V12@			1,2	0,05		100	100						
	F3106@V15@			1,5	0,07		80	80						
	F3106@V20@			2	0,1		50	40						
	F3106@V25@	1/8"		2,5	0,15		35	33						
	F3106@V30@		1/4"	3	0,25		25	24	40	30	27	MK	36	
ĺ	F3106@V35@			3,5	0,32		20	19						
	F3106@V40@			4	0,36		16	15						
	F3106@V45@			4,5	0,41		14	13	3					
	F3106@V52@	/		5,2	0,47	7	10	9						
	F3106@V64@	/		6,4	0,64		5	4,5						

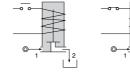
N.B. For use with steam, maximum admitted pressure PS is 9 bar (relative pressure) with seals in PTFE and 2.5 bar with seals in EPDM.

Example: F3106@V52@ => F3106BV52MG58:

2-way solenoid valve normally closed, direct acting poppet type with G connection (ISO 228) 1/4", FPM seals, 5,2 mm orifice, solenoid coil 230 VAC (50-60 Hz) (MG58, size 30).

#### Pneumatic symbol





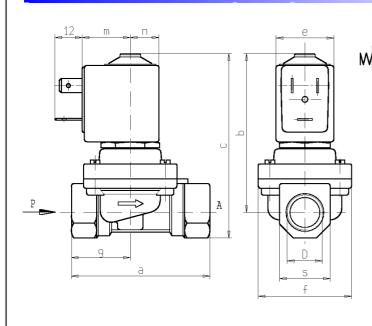
Construction characteristics	Technical characteristics	
- Brass body	Maximum admitted pressure (bar)	100
<ul> <li>AISI 303 stainless steel guide tube</li> <li>AISI 430FR stainless steel mobile and fixed core</li> </ul>	Maximum fluid viscosity (mm²/s)	25cSt
- AISI 302 stainless steel springs	Ambient temperature: with class F solenoid coil (°C)	-10 +55
- FPM sealing assemblies	Ambient temperature: with class H solenoid coil (°C)	-10 +80
OPTIONS (on request):	Mounting position	indifferent
Manual override     Chemical nickel plating surface treatment	Weight (g) with solenoid coil MG series	300
- Stainless steel seat insert (up to Ø4.5) - For use with oxygen - **\sqrt{1}_{15} certified solenoid coils - to use with fluid temperature at -40°C - PTFE - EPDM seals	Weight (g) with solenoid coil MK series	380

Technical modifications keep in reserve!



2/2 - NC (Normally closed) Pilot operated G3/8 ÷ 1

L145





D	а	b	С	Φ	f	E	n	s	g
G 3/8	60	69	80	25	40	21	12,5	22	25,5
G 1/2	66	72	85	25	40	21	12,5	27	33
G 3/4	79	78	94,5	32	50	27	16	33	39,5
G 1	105	102	123	32	71	27	16	42	46

#### **▶** GENERAL FEATURES

Diaphragm valve, pilot operated, having full orifice.

Suitable to shut off liquid and gaseous fluids; particularly suitable to shut off overheated water and steam (verify the compatibility of fluid with materials in contact).

Not suitable for use with dangerous fluids listed in Group 1, therefore they are free from CE marking in conformity with article 3 § 3 of the European Directive 97/23/EC (Pressure Equipment Directive).

#### **▶ TECHNICAL FEATURES**

Maximum allowable pressure (PS) G3/8 and G1/2: 16 bar

G3/4 and G1: 9 bar

Opening time ~100ms

Closing time from ~500ms to ~1500ms

+60°C +170°C Fluid temperature

Max viscosity 5°E (~37 cStokes or mm2/s)

#### ► MATERIALS IN CONTACT WITH FLUID

Body **Brass** 

Sealing Reinforced PTFE (Polytetrafluorethylene)

Brass and stainless steel Internal components

Stainless steel Seat Guide assembly Stainless steel Shading ring Copper

#### **▶** COIL

Continuous duty ED 100% Coil impregnation Polyester resin

Encapsulation material

PPS (polyphenilsulfure) glass fibre reinforced Insulation class H (180°C) - UL -10 C° +80 °C Ambient temperature

Z5: DIN 46340 - 3 poles connector (DIN 43650) Electric connenctions

Z6: DIN 46340 - 3 poles connector

IP 65 (EN 60529) with plug connector Protection degree Voltages AC 24V/50Hz - 110V/50Hz (120V/60Hz)

230V/50Hz (+10% -15%)

(Other voltages and frequencies on request).

		Differential pressure (bar)					Corio	es and type	Po	ver absorption					
Port size	Ø Int.		Δp max		Kv	Selle	s and type	FU	vei absorption		Sealings	Notes	Weight		
ISO 228	(mm)	Δp min	G	as	Liq	uids	(m³/h)	Valve	Coil	AC	AC (VA)		Sealings	Notes	(kg)
			c.a.	c.c.	c.a.	C.C.		valve	Coll	Inrush	Holding	(W)			
G 3/8	10		8		8		2	L145R2	Z614A	16	10				0,360
G 1/2	10	0,4	0		0		2,5	L 145RZ	2014A	10	10		reinforced PTFE	1	0,415
G 3/4	16	0,4	6	-	6	-	4,5	L145R4	Z534A	23	14	_	PIFE	'	0,760
G1	18,5		0		0		8,5	L145R2	Z554A	23	23 14				1,365

#### **▶** NOTES

- Sealings: PTFE = Polytetrafluorethylene (reinforced)
- 1 On request Z610A or Z530A coil, encapsulated in PBT (Polybutylene-terephtalate) class "F" (+155°C): maximum fluid temperature +100°C, maximum ambient temperature +60°C.

### DRY VALVES (Total Separation) Series D

#### **Description:**

Dry valves are needed in applications where it must be avoided that the controlled liquid or gaseous medium gets in touch with certain internal parts of the valve.

The solenoid controls the opening & closing movement by means of a lever or a diaphragm.

In the first case the lever penetrates the valve through an elastic protective sheath.

In the second case, the diaphragm is inside the valve body.

#### **Advantages:**

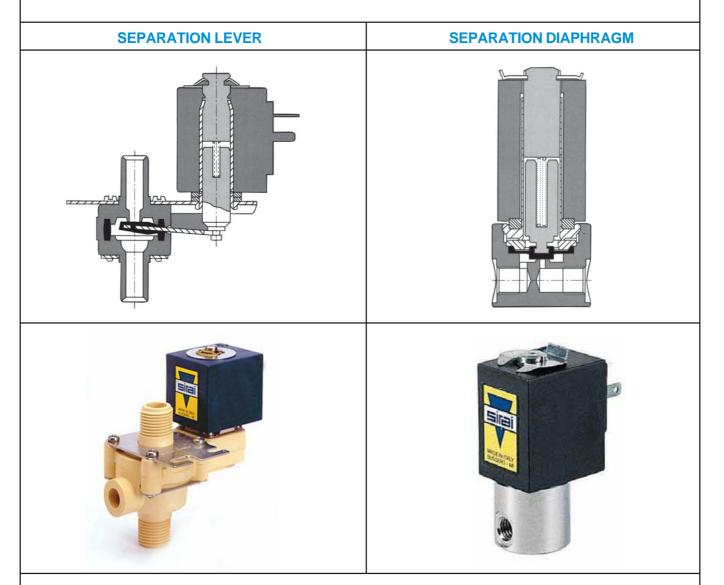
- Total separation between medium & solenoid
- Direct acting
- Available in Stainless steel (AISI 316)

#### **Versions:**

- Two or three way, normally closed or open
- Female or male threaded ports or hose connections
- Internal orifices Ø 1.2 to 10 mm

#### **Applications:**

- -Food
- Agriculture & horticulture
- -Laboratory
- Paramedical installations



MORE DETAILS & OTHER TYPES AVAILABLE ON REQUEST

### **PINCH VALVES Series S**





#### **Description:**

This pinch valves controls the distribution of a fluid by pinching or loosing the tube into which the fluid is flowing and NOT the fluid himself.

#### **Advantages:**

- No contact of the fluid with metallic components
- Free total & bidirectional flow
- Quick mounting & replacement of tubing
- Absence of dead spaces (e.g. bacteria)
- Direct acting

#### **Attention:**

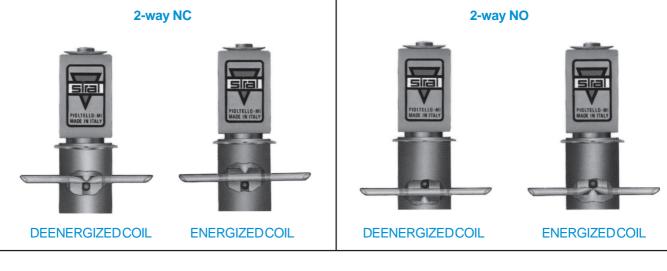
The valves are suitable for soft silicon tubings or others, similar per elasticity & hardness, 55 Shore A. The tubings are not included in our supply.

#### **Versions:**

- Two or three way, normally closed or open
- Tubing with internal orifices Ø 0.8 to 6.4 mm and external orifices 1.7 to 9.5 mm

#### **Applications:**

- Paramedical sector
- Laboratory (e.g. blood-test & sampling)





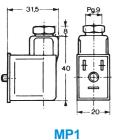
MORE DETAILS & OTHER TYPES AVAILABLE ON REQUEST

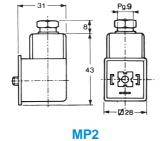
#### **ACCESSORIES**



#### **CONNECTORS FOR COILS**

(Protection class IP65) by DIN 43650





#### ADJUSTABLETIMER to preset DUTY CYCLE



A "TEST" button is provided and 2 leds are used to show the state of the timer.

The load is supplied as soon as the power is switched on. The trimmer "ON" controls the ON-time forvalve energizing, while the trimmer "OFF" sets the interval between 2 sequential times. The sequence is repeated as long as the power supply remains connected.

TIME: **OFF** 0.5-45 min. adjustable **ON** 0.5-10 sec.adjustable *VOLTAGES*: 24-240 V AC/DC

MAX. CURRENT: 1A

CURRENT CONSUMPTION: 4mA max.

TEMPERATURE: -40° +60° C

PROTECTION CLASS: IP65 when installed with 3 pole plug connector MP2 (DIN 43650)

WEIGHT: 55 gr.

## ORDER CODIFICATION TEC22

#### Connector for coil (DIN 43650)

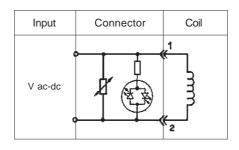


Ordering	Supply	Coil	Protection	Remarks
code	voltage	type	class	
	until			
MP1	0-250V~/300V=	U1	IP 65	CONNECTOR
MP1-LED-24V	24V	U1	IP 65	+LED
MP1-LED-24V-5M	24V	U1	IP 65	+LED+CABLE
MP1-LED-230V	230V	U1	IP 65	+LED



Ordering	Supply	Coil	Protection	Remarks
code	voltage	type	class	
	until			
MP2	0-250V~/300V=	U2/U3	IP 65	CONNECTOR
MP2-LED-24V	24V	U2/U3	IP 65	+LED
MP2-LED-230V	230V	U2/U3	IP 65	+LED

#### **Electronic circuit for MP-LED**



Bipolar LED and VDR to protect supply and switch. (The energy in the coil is limited by the VDR). Voltage: 24 or 230V.

7.02.20