

2/2 BISTABLE DIAPHRAGM ASSISTED CEME SOLENOID VALVE ESM 117

FEATURES

The ESM 117 is a 2/2-way solenoid valve with assisted diaphragm for automatic shut-off of drinking water networks. Its bistable operation allows a high energy saving. The solenoid valve only consumes energy when switching position O/C on inverted. The state is changed by reversing the polarity at the coil terminals for at least 15ms (pulse). Brass body construction with stainless steel core and internal parts, the diaphragm is available in EPDM version. The ESM 117 is ACS approved for drinking water.

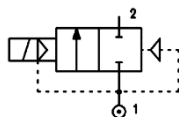
AVAILABLE MODELS

ESM117 : G 1/4" to G 1"1/4

Diaphragm : EPDM ACS.

Voltages : 12 Vdc, 24 Vdc.

BSP Screwed end connections.

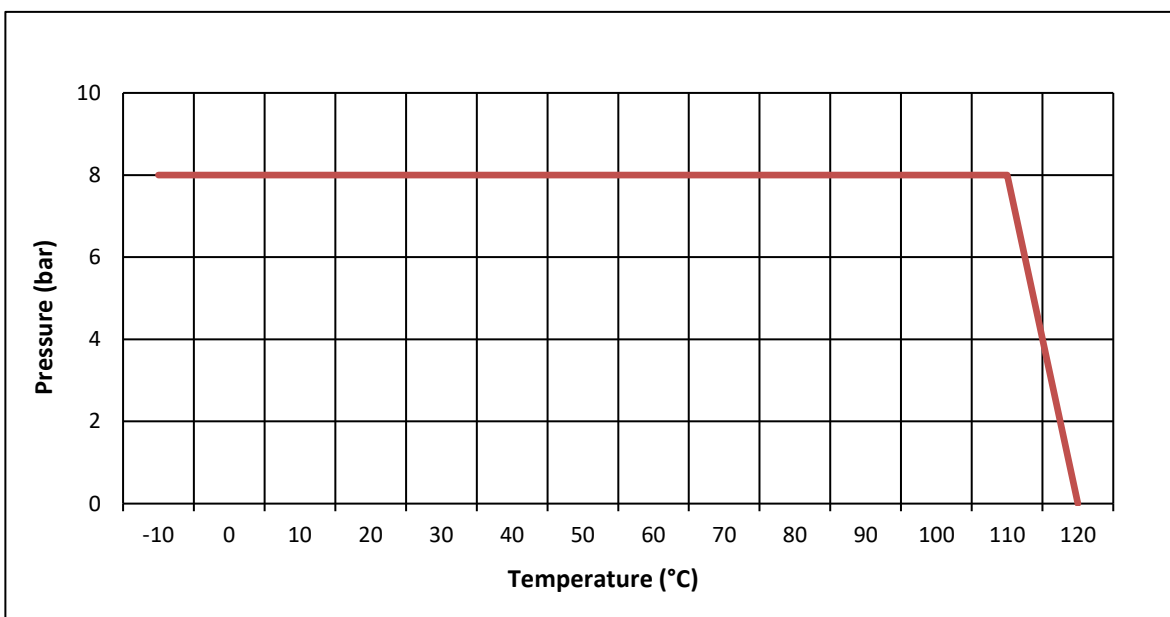


LIMITS OF USE

Electric protection :	IP 65
Max allowed fluid pressure : PS	0 - 25 bar
Differential pressure ΔP :	0,15 bar mini / 8 bar maxi
Max allowed fluid temperature : W°T	-10°C / +120°C
Ambiant temperature : TS	-10°C / +80°C
Maximum fluid viscosity :	25 cSt (mm2/s)



IP
65



Information given as an indication only, and subject to possible modifications



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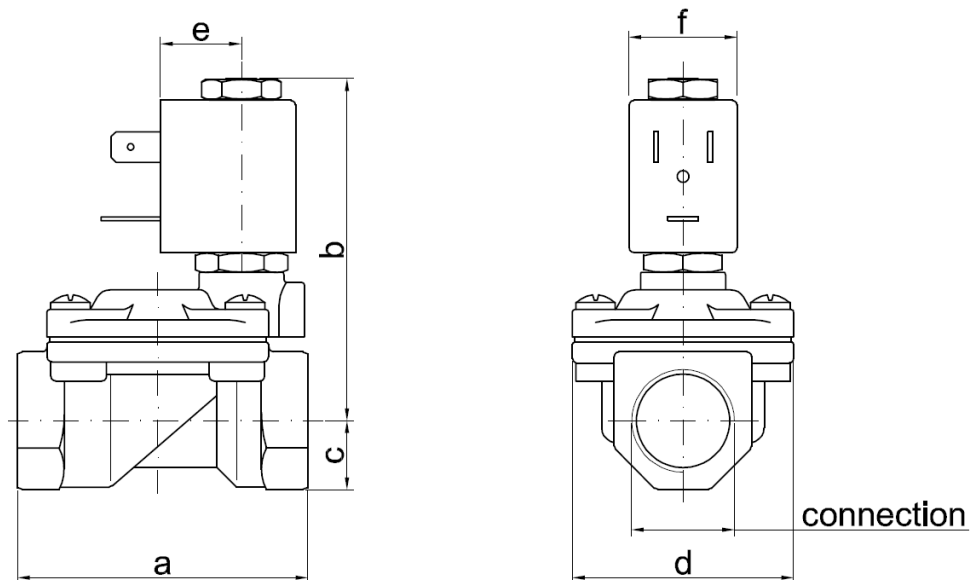
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REGULATIONS AND STANDARDS OF CONSTRUCTION

Item	Standard	Item	Standard
Pressure Equipement Directive CE 2014/68	<u>1/4" to 1 1/4" : A4 § 3</u>	Brass grade	EN 1503-4
Low voltage directive CE 2014/35		BSP thread	ISO 228
Coil / connector	DIN 46244 / PG9	Drinking water	ACS

DIMENSIONS (mm) AND WEIGHT (kg)

DN	a	b	c	d	e	f	Weight (kg)
G 1/4"	49	65	11	32	16	22	0,23
G 3/8"	59	70	14	45	16	22	0,42
G 1/2"	59	70	14	45	16	22	0,39
G 3/4"	79	76	18	55	16	22	0,65
G 1"	96	85	20	72	16	22	1,05
G 1 1/4"	119	92	25	85	16	22	1,70



HYDRAULIC FEATURES

DN	Port (mm)	Kv (m³/h)	Min diff. pressure (bar)	Max diff. pressure (bar)	Coil
G 1/4"	10	1,5	0,15	8	B4
G 3/8"	12	2,2	0,15	8	
G 1/2"	12	2,5	0,15	8	
G 3/4"	18	5,5	0,15	8	
G 1"	25	10,2	0,15	8	
G 1 1/4"	30	15	0,15	8	

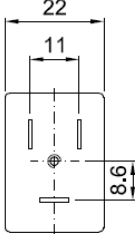
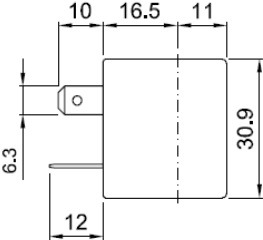
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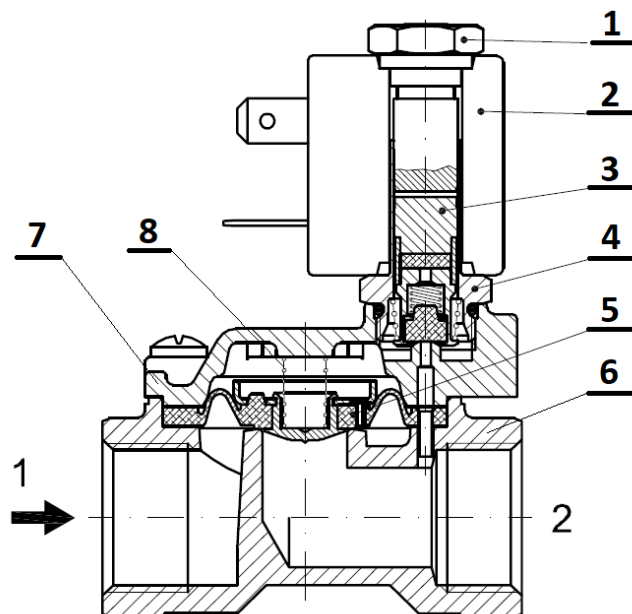
ELECTRICAL CHARACTERISTICS

Coil	Current	Available voltages (V)		Power consumption	
				holding	Rush
S3	DC Coil	12	24	2 W	
	Coil classified H. Duty 100%. Connecting by connector T22 - PG9 cable gland				



CONSTRUCTION

N°	Item	Material
1	Coil fixing nut	Steel
2	Coil	PBT + 30% GF
3	Plunger	AISI 430FR
4	Armature tube with core	AISI 303
5	Diaphragm	EPDM ACS
6	Body	Brass CW 625N
7	Cover	Brass CW 625N
8	Spring	AISI 302
	Magnet	NeFeB



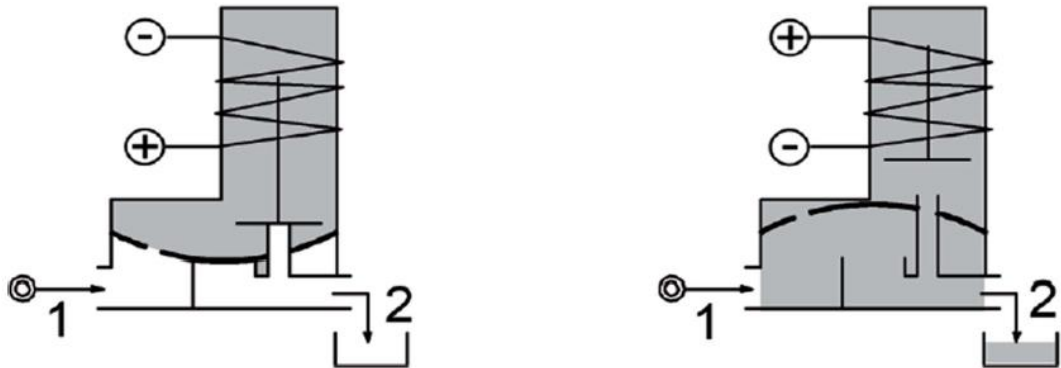
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OPERATING

The bistable function is achieved by using a polarised permanent magnet which supplies the coil with direct current. The state is changed by reversing the polarity at the coil terminals for at least 15ms (pulse).



RISK OF FREEZIN

If the fluid of the network is likely to freeze, intend to provide a heating system adapted to the solenoid valve.

MOUNTING

Installation in every position except horizontal pipe with coil towards the bottom.

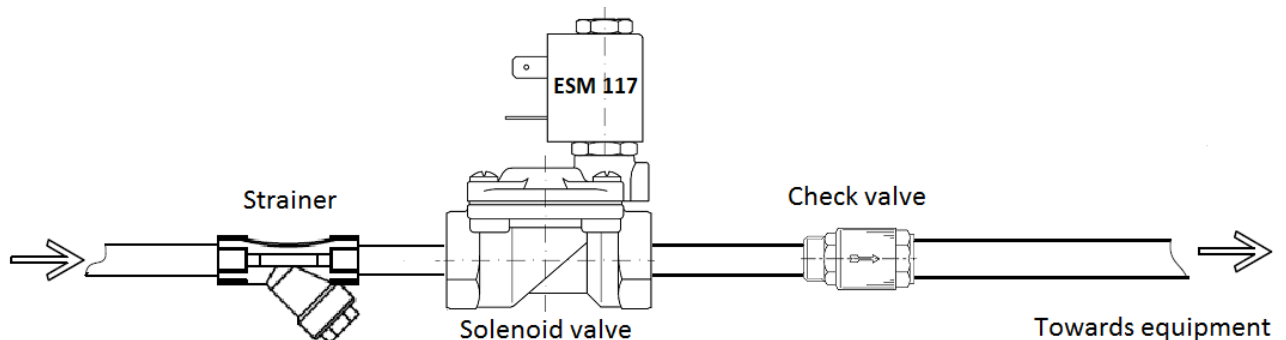
Respect the sense of flow indicated by the arrow marked on the body.

For an use on liquids, the installation of a strainer for upstream protection is recommended.

Check-valve :

A solenoid valve cannot be used as a check-valve. A de-energized normally closed solenoid valve can be crossed by a downstream counterflow. If a both side tightness is required, please add a check-valve downstream of the solenoid valve.

Example



Scaling :

A solenoid valve used on hard water and kept energized during long period can face scaling problem that can block the operation. For this kind of application, please consult.



Conform also to the assembly instructions supplied with the solenoid valve.

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SPARE PARTS

- Coil ESM 117
- Connector T22 - PG9
- ACS EPDM diaphragm (1/4" to 1"1/4)

Model	ACS EPDM diaphragm	Coil S3	Connector T22 -PG9
ESM117			
			
https://www.sectoriel.com/fr/esm-117-electrovanne-laiton-2-2-bistable-no-nf-a-membrane-epdm-acs.html			

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