General Catalogue 2013

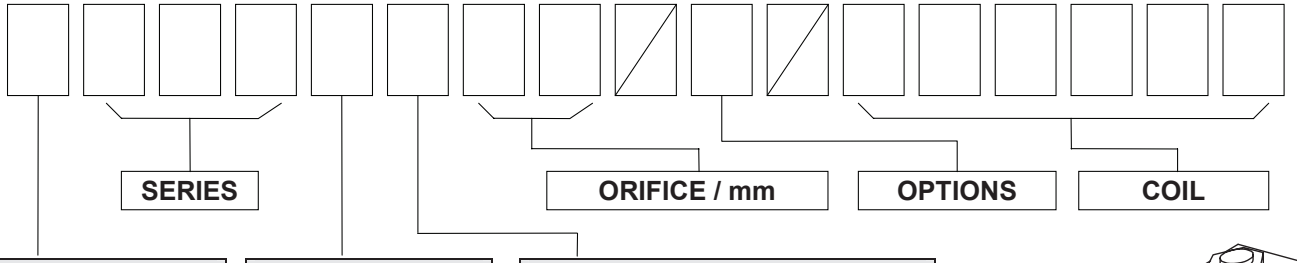
ACL

1

1.1 Introduction

The solenoid valves illustrated in this catalogue have applications in all industrial sectors, being compatible with a vast range of fluids.
The quality of the materials used and the precise engineering of the parts, coupled with rigorous testing of the large production guarantees their service capability.
In addition to the standard versions illustrated here, we are able to offer alternative designs to resolve specific problems.

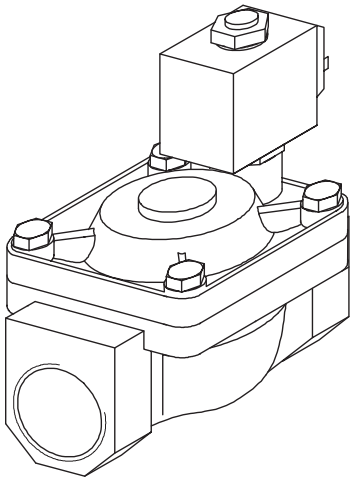
1.2 Type number composition for servo-assisted versions



CURRENT	
E	**D**
AC/DC CURRENT	**DC CURRENT ONLY**

CONNECTION	
A=G1/8”	**G**=G1” 1/4
B=G1/4”	**H**=G1” 1/2
C=G3/8”	**I**=G2”
D=G1/2”	**M**=G2” 1/2
E=G3/4”	**R**=G3”
F=G1”	

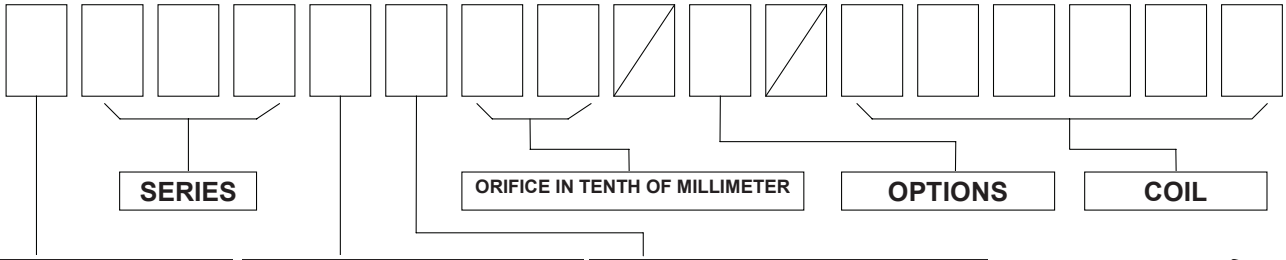
SEAL	
A=NBR DVGW	**S**=SILICONE
B=NBR	**V**=FPM
E=EPDM	**W**=PTFE
F=EPDM WRC	
H=HNBR	
N=CHLOROPRENE	



Example :
E207IV50///20E

Solenoid valve suited to work in alternative or direct current 2/2 normally open, 2”BSP connections, FPM seal, orifice 50 mm, coil width 30mm, class F insulation, power consumption 15VA, voltage 220-230V 50/60Hz.

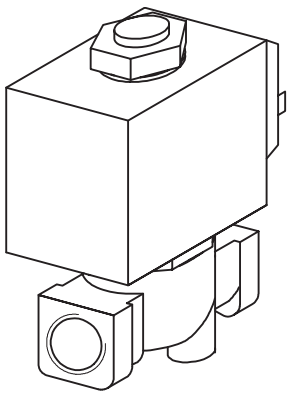
1.2 Type number composition for direct-acting versions



CURRENT	
E	**D**
AC/DC CURRENT	**DC CURRENT ONLY**

CONNECTION	
A=G1/8”	**X**=FLANGE
B=G1/4”	**K**=SPIGGOT
C=G3/8”	**N**=1/8" MALE
D=G1/2”	**P**=HOSETAIL
E=G3/4”	**W**=COMPRESSION
L=M5	**Z**=PUSH-IN
	Y= PUSH-IN

SEAL	
A=NBR DVGW	**W**=PTFE
B=NBR	**S**=SILICONE
E=EPDM	**N**=CHLOROPRENE
F=EPDM WRC	**H**=HNBR
V=FPM	



Example :
E105AB15///301

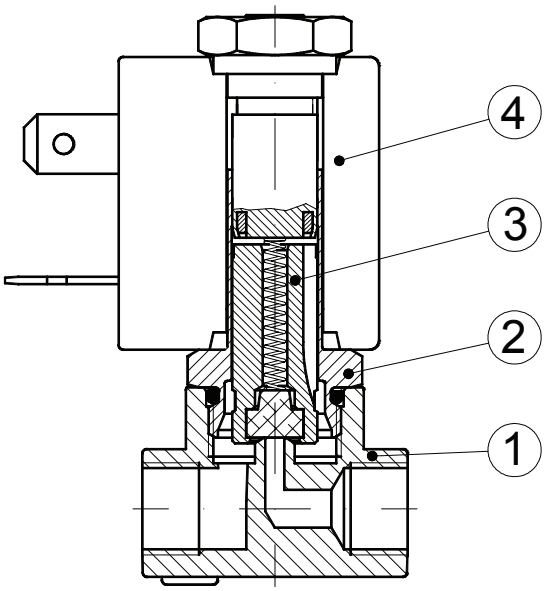
Solenoid valve suited to work in alternative or direct current 2/2 normally closed, 1/8”BSP connections, NBR seal, orifice 1,5mm, coil width 22mm, class F insulation, power consumption 6,5W, voltage 24V DC.

1.3 Construction details

Solenoid valves are equipments to control media in pressure.
Their action is to either open or close the interception device, directly or indirectly, when the coil is energised.

The most important components of the solenoid valve are :

1. The **body valve**, which has an inlet and an outlet connection and an orifice for media flowing.
2. The **armature tube**, with the core, where the coil is fitted.
3. The **plunger**, which in some cases serves like a seal, sliding in the armature tube.
4. The **coil**, which produces the magnetic field required to move the plunger.

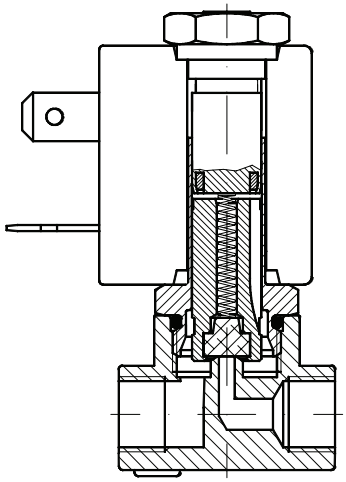


1.3.1 Methods of operation

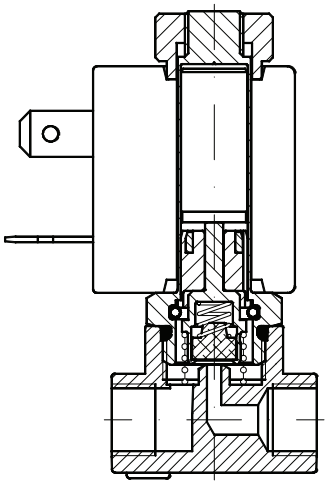
2 way direct-acting

The 2 way solenoid valve has an inlet and an outlet connection within the valve body.

It can be **normally closed** (2/2 NC). In this case the media is prevented from flowing through the orifice by the plunger seal. When connected to an electrical supply, the orifice opens allowing the inlet to feed the outlet port.



It can be **normally open** (2/2 NO). In this case the orifice is open, the inlet feeds through the outlet. When connected to an electrical supply the orifice is closed. The operation, in both cases depends only on the magnetic field produced by the coil. These solenoid valves are able to work at **zero pressure**.

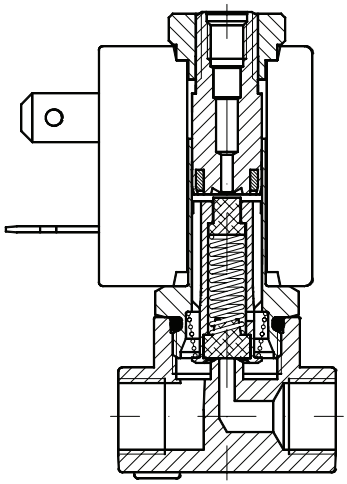


3 way direct-acting

The 3 way solenoid valve has inlet and outlet connections in the body and an exhaust connection above the core.

It can be **normally closed** (3/2 NC). In this case the media is prevented from flowing through the inlet orifice by the plunger seal.

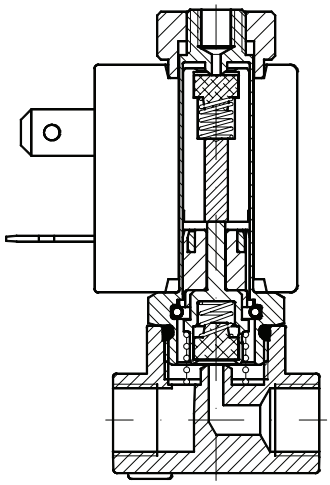
The inlet and exhaust orifices are at each end of the plunger. When connected to an electrical supply, the inlet orifice opens feeding the user port. The exhaust is closed.



It can be **normally open** (3/2 NO). In this case when the coil isn't energised the inlet orifice is open to the user port. Exhaust port is closed. When connected to an electrical supply, the inlet orifice closes, at the same time the exhaust port is opened and connected with the user port.

In both cases, the operation depends only on the magnetic field produced by the coil.

These solenoid valves are able to work at **zero pressure**



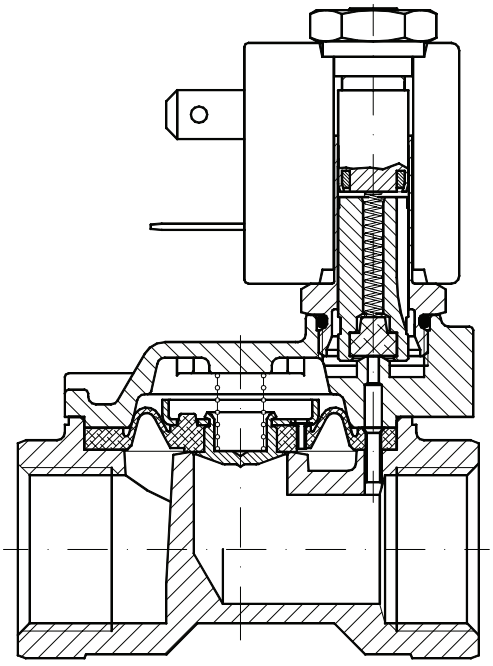
Servo-assisted action

With larger orifices, static pressures increase, and it's still necessary that the magnetic field produced by the coil is able to control these forces. This is achieved by using servo-assisted action in the solenoid valve.

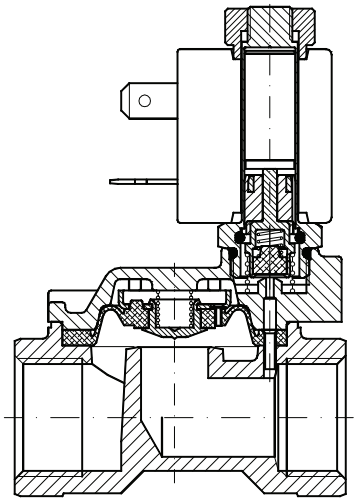
In this design the media pressure helps to keep the main valve seal closed.

The normally closed design (2/2 NC) has an inlet and outlet connection in the valve body. When the coil is not energised, the flow is blocked by the main seal, which could be either a diaphragm or a piston design. In this mode the media flows through a small hole in the diaphragm or piston and helps close the valve. When the coil is energised the pilot orifice opens, allowing the media above the main seal to exhaust and the main valve seal to open.

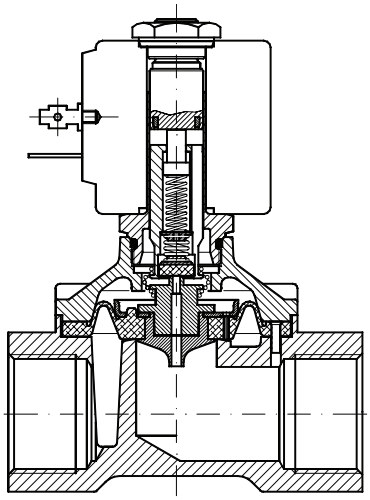
This type of solenoid valve needs a minimum differential pressure to work.



The **normally open** (2/2 NO) version has an inlet and outlet connection in the valve body. With larger orifices, static pressures increase, and it's still necessary that the magnetic field produced by the coil is able to control these forces. This is achieved by using servo-assisted action in the solenoid valve. In this design the media pressure helps to keep the main valve seal open. When the coil isn't energised, the flow is not interrupted by the main seal, which could be either a diaphragm or a piston design. In this mode the media flows through a small hole in the diaphragm or piston and helps the valve to open. When the coil is energised the pilot orifice closes, allowing the media above the main seal to pressurise and the main valve seal to close.
This type of solenoid valve needs a minimum differential pressure to work.



They are available with an **assisted lift** design pilot operated by diaphragm and **normally closed** (2/2 NC). In these models the plunger is mechanically attached to the diaphragm and controls the central pilot orifice and the stroke of the main seal.
This design allows the valve to work at zero differential pressure.



1.4 Seal materials

Designation	Commercial denomination	General characteristics	Typical application
NBR (Acrylic-nitrile butadylene)	BUNA -N PERBUNAN ELAPRIM JSR-N	A synthetic elastomer with good mechanical and thermal properties. Good resistance to oils. Poor resistance to ozone and atmospheric derivatives.	Water with a max. temperature 70°C, air with a max. temp.90°C. Mineral oils and their derivatives, hydrocarbons, methane, ethane, propane, butane, kerosene oil, fuel oil.
EPDM (Ethylene-propylene-dylene)	BUNA- AP DUTRAL NORDEL	A synthetic elastomer derived from the co-polymerization of ethylene and propylene. Suitable for use with non-phosphoric based hydraulic fluids(hold). Water and steam to a max. temp of 140°C. Not suitable for use with mineral based products. (oil, grease , fuel oils and petrol)	Hot water and steam. Detergents. Potassium and sodium solutions. Hydraulic fluids. Polarised solvents. Skydrol 500 and 700 *
FPM (Fluorocarbon)	VITON TECNOFLON FLUOREL	A synthetic elastomer derived from flour-propylene. Excellent resistance to the high temp. Excellent resistance to ozone, oxygen, mineral oils, synthetic hydraulic oil, petrol, hydro-carbons and many other chemicals. Not suitable for use with superheated steam.	For general use up to 130°C
PTFE (Polytetra-fluorethylene)	TEFLON	Thermoplastic material used also filled with a mineral resin. Excellent resistance to many chemicals. Optimum high temp. resistance. Poor resilience, improved by adding the mineral filling.	For general use up to 160°C

*Warning: not to be used with mineral oils and grease

1.5 Media compatibility

The following table has the scope to provide an indication of the general characteristics with regard to the compatibility with the different materials and media.

To determine the compatibility with corrosive fluids it is important to know all the data relative to :

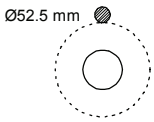
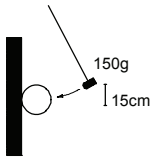
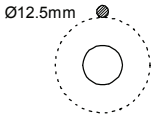
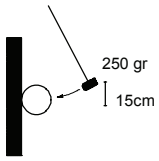
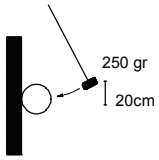
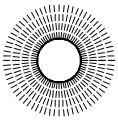
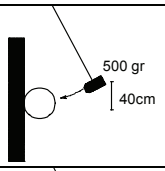
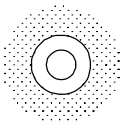
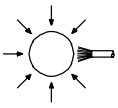
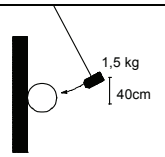
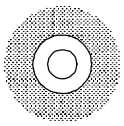
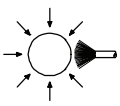
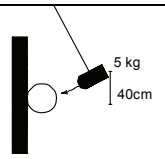
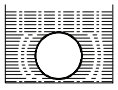
temperature, concentration and media composition.

MEDIA	Brass	Stainless Steel	NBR	EPDM	FPM	PTFE
Acetone	•	•	-	•	-	•
Acetylene	•	•	-	•	•	•
Argon hold	•	•	-	•	•	•
Benzol	•	•	-	-	-	•
Butane	•	•	-	-	•	•
Calcium monoxide	•	•	•	•	•	•
Carbon dioxide (liquid)	-	•	-	-	-	•
Carbon disulphide	•	•	-	-	-	•
Chloroform	•	•	-	-	-	•
De-ionised water	-	•	•	•	•	•
De-mineralised water	-	•	•	•	•	•
Dry carbon dioxide (gas)	•	•	•	•	•	•
Ethane	•	•	•	-	•	•
Ethanol	•	•	-	-	-	•
Ethyl acetate	•	•	-	-	-	•
Ethyl cloride	•	•	•	•	•	•
Ethylene glycol	•	•	•	•	•	•
Formaldehyde	•	•	•	•	•	•
Freon	•	•	-	-	-	•
Fuel oil	•	•	•	-	•	•
Glycerine	•	•	•	-	•	•
Hard water	•	•	•	•	•	•
Helium	•	•	•	-	•	•
Heptane	•	•	•	-	•	•
Hexane	•	•	•	-	•	•
Hot water <75°C	•	•	•	•	•	•
Hot water and steam <140°C	•	•	-	•	-	•
Hydrogen	•	•	-	-	•	•
Hydrogen dioxide	-	•	-	-	•	•
Isobutane	•	•	•	-	•	•
Isopentane	•	•	•	-	•	•
Methane	•	•	•	-	•	•
Methanol	•	•	-	•	-	•
Methyl cloride	•	•	-	-	-	•
Mineral oil	•	•	•	-	•	•
Natural gas	•	•	•	-	•	•
Neon	•	•	•	-	•	•
Nitrobenzene	•	•	-	-	-	•
Nitrogen	•	•	•	•	•	•
Oxygen	•	•	•	-	•	•
Pentane	•	•	•	•	•	•
Petrol	•	•	-	-	•	•
Propane-n	•	•	•	-	•	•
Soapy water	•	•	•	-	•	•
Toluene	•	•	-	-	•	•
Trichlorethylene dry	•	•	-	-	•	•
Vinegar	•	•	-	•	-	•
Water with glycol	•	•	-	-	•	•
Xilol	-	•	-	-	•	•

• Compatible - Not compatible

1.6.1 Protection class IP.....

Compliance with the standard DIN 40050 for the electrical protection at 1000 Volt AC and 1500 Volt DC.

1st number : protection against solid bodies			2nd number : protection against liquids			3rd number : mechanical protection		
IP	**Testes**	**Description**	**IP**	**Testes**	**Description**	**IP**	**Testes**	**Description**
0		No protection	**0**		No protection	**0**		No protection
1		Protection against solid bodies larger than d.50 mm (ex. involuntary contact by hand)	**1**		Protection against the vertical fall of water drops (condensation)	**1**		Impact energy 0.225 joules
2		Protection against solid bodies larger than d.12mm (ex. finger contact)	**2**		Protection against the fall of water drops up to 15° from the vertical	**2**		Impact energy 0.375 joules
3		Protection against solid bodies larger than d. 2,5mm (ends of tools, wires)	**3**		Protection against the fall of water drops and rain up to 60° from the vertical	**3**		Impact energy 0.500 joules
4		Protection against solid bodies larger than d. 1 mm (ends of tools, thin wires)	**4**		Protection against water jets from all directions	**4**		Impact energy 2.00 joules
5		Protection against dust (no harmful deposits)	**5**		Protection against forced water jets from all directions	**7**		Impact energy 6.00 joules
6		Total protection against dust	**6**		Protection against water similar to waves	**9**		Impact energy 20.000 joules
			7		Protection against water immersion			

In the case of the solenoid valve, use only the first two numbers

1.6.2 Insulation class (or temperature class) according to CEI 15-26

Insulation class	Temperature °C
Y	90
A	105
E	120
B	130
F	155
H	180
200	200
220	220
250	250

The indicated temperature is the effective temperature of the insulation and not the over temperature.

1.6.3 Service

The coils are normally expected to be used in continuous service (ED100%).
Definition of "Continuous service": when the electrical connection time exceed the thermal constant of the coil by approx.1/4 .
As a general rule, the continuous service corresponds to an electrical connection time that is equal or higher than 15 minutes.
It's possible, for non-continuous service (e.g. ED50%), either to have coils at powers that are higher than the standard ones, or to use the coils with an ambient temperature higher than the ones indicated.

$$ED = \frac{\text{connection time}}{(\text{connection time} + \text{disconnection time})} \times 100$$

EXAMPLE : $\frac{5'(\text{connection time})}{5'(\text{connection time}) + 5'(\text{disconnection time})} \times 100 = ED50\%$

1.6.4 Coils power

The power (P) indicated is referred to a temperature of 20°C.
For DC current it is as follows:

$$P(watt) = V(Volt) \times I(Ampere); \quad P = \frac{v^2\ (Volt)}{R\ (Ohm)}$$

In the case of AC current, the value is referred to the apparent power during inrush (connection moment) and during holding.

$$P(VA) = V(Volt) \times I(Ampere)$$

In the case of AC current, voltage and current are not in phase with each other. Phase angle between current and voltage is shown by the angle φ of the resistance triangle (the three sides represent: resistance, reactance and impedance of the circuit).
In the case of AC current the power showed in Watt become:

$$P(watt) = V(Volt) \times I(Ampere) \times \text{power factor } \varphi$$

power factor φ = power factor is always less than 1

The power, or electric input, in a AC current solenoid valve, is higher during inrush while it decreases when the plunger's stroke is complete.
In the DC current solenoid valve, as the power depends from the coil's Ohmic resistance, the power is the same during inrush and also when the plunger's stroke is complete too.

1.7 Units of measure

In the international system (SI) the physical and technical units are validated as follows :

Unit of length	:	Meter	(symbol m)
Unit of mass	:	Kilogram	(symbol Kg)
Unit of time	:	Second	(symbol s)
Unit of electrical current	:	Ampére	(symbol A)
Unit of temperature	:	Kelvin	(symbol K)
Unit of luminosity	:	Candle	(symbol cd)

Pressure

Old measuring units :

Kilopond per cm ²	Kp/cm²
Meter of water column	mH_20
Millimeter of mercury column	mmHg
Metric Atmosphere	at
Atmosphere	atm

They were replaced in the SI from Pascal.

One Pascal corresponds to the pressure of 1 Newton, which is acting on the area of 1 m².

$$1\,\text{Pascal} = \frac{1\text{N}}{1\text{m}^2}\ (\text{symbol Pa})$$

Unit Pa is a very low value and for standard industrial applications, the Bar (symbol bar) is used.

1 bar = 0.1 MegaPascal (symbol Mpa=1.000.000 Pa).

The conversion from the old unit of measure to the new one (SI) is the following :

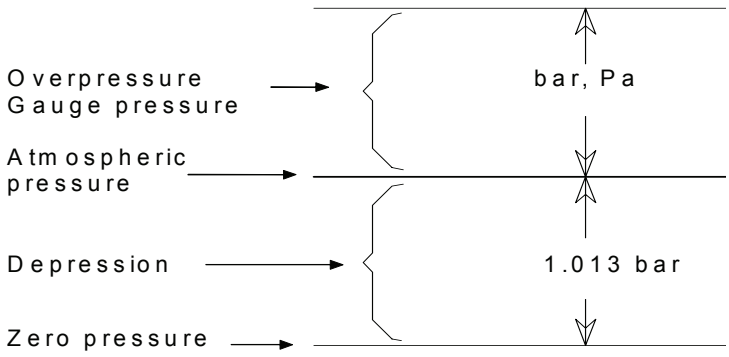
1 Kp/cm² = 0.981 bar

1 bar = 1.02 Kp/cm²

The conversion in the SI unit is also possible where the metric system is not yet used.

Conversion : 1 bar = 14.50 psi

1 psi = 0.07 bar = 7.000 Pa

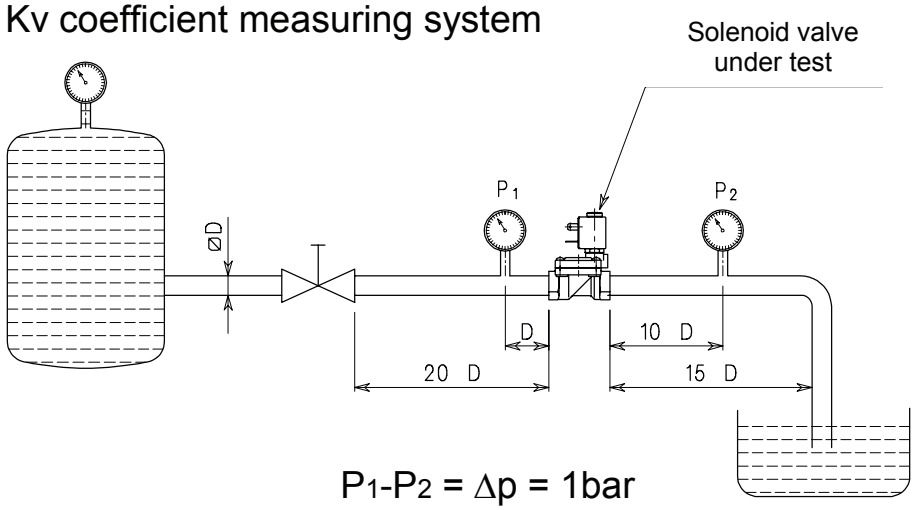


Pressure values, except specific references, are referred to the atmospheric pressure.

1.8 Flow calculation

Each solenoid valve has a flow coefficient (Kv).
It is possible, with this data, to calculate the flow. Given the loss of flowing pressure (pressure drop),the media type and the working pressure it's possible to calculate the flow rate.
This flow coefficient is determined by way of experimentation according to the standard VDE 2173 and it represents the quantity of water discharged from the solenoid valve with a pressure difference of 1 bar at a temperature between 5°C and 40°C.

Kv coefficient measuring system



P_1-P_2 = Δp = 1bar

Kv	=	m^3/h	Flow coefficient
Q	=	m^3/h	Flow
Q_n	=	m^3_n/h	Normal flow (20°C 760mm Hg)
P_1	=	bar	Inlet pressure (Gauge pressure + 1)
P_2	=	bar	Outlet pressure (Gauge pressure + 1)
Δp	=	bar	Pressure drop (differential pressure between inlet & outlet)
ρ	=	Kg/dm^3	Relative density referred to water (Water at 4°C = 1)

ρ_n	=	Kg/dm³	Normal relative density referred to air
G	=	Kg/h	Mass
t	=	°C	Inlet media temperature
V_1	=	m³/Kg	Inlet specific volume
V_2	=	m³/Kg	Outlet specific volume referred to "P2" pressure and "t" temperature

Liquids : $Q = Kv\sqrt{\frac{\Delta p}{\rho}}$

Gas : $\Delta p = \Delta p < P_1/2 \quad Q_n = 514 \times Kv\sqrt{\frac{\Delta p \times P_2}{\rho_n \times (273 + t)}}$

$\Delta p = \Delta p > P_1/2 \quad Q_n = 257 \times Kv \frac{P_1}{\sqrt{\rho_n (273 + t)}}$

Air : $\Delta p = \Delta p < P_1/2 \quad Q_n = 26 \times Kv\sqrt{\Delta p \times P_2}$

$\Delta p = \Delta p > P_1/2 \quad Q_n = Kv \times P_1 \times 13$

Steam : $\Delta p = \Delta p < P_1/2 \quad G = 31.6 \times Kv\sqrt{\frac{\Delta p}{V_2}}$

$\Delta p = \Delta p > P_1/2 \quad G = 31.6 \times Kv\sqrt{\frac{P_1}{v_1}}$

1.9 Technical tables

1.9.1 Pressure

bar	N/cm²	MPa	Psi	bar	N/cm²	MPa	Psi
0.1	1	0.01	1.45	14	140	1.4	203.00
0.2	2	0.02	2.90	15	150	1.5	217.50
0.3	3	0.03	4.35	16	160	1.6	232.00
0.4	4	0.04	5.80	17	170	1.7	246.50
0.5	5	0.05	7.25	18	180	1.8	261.00
0.6	6	0.06	8.70	19	190	1.9	275.50
0.7	7	0.07	10.15	20	200	2.0	390.00
0.8	8	0.08	11.60	21	210	2.1	304.50
0.9	9	0.09	13.05	22	220	2.2	316.00
1.0	10	0.10	14.50	23	230	2.3	333.50
1.5	15	0.15	21.75	24	240	2.4	348.00
2.0	20	0.20	29.00	25	250	2.5	362.50
2.5	25	0.25	36.25	26	260	2.6	377.00
3.0	30	0.30	43.50	27	270	2.7	391.50
3.5	35	0.35	50.75	28	280	2.8	406.00
4.0	40	0.40	58.00	29	290	2.9	420.50
4.5	45	0.45	65.25	30	300	3.0	435.00
5.0	50	0.50	72.50	35	350	3.5	507.50
5.5	55	0.55	79.75	40	400	4.0	580.00
6.0	60	0.60	87.00	45	450	4.5	652.50
6.5	65	0.65	94.25	50	500	5.0	725.00
7.0	70	0.70	101.50	55	550	5.5	797.50
7.5	75	0.75	108.75	60	600	6.0	870.00
8.0	80	0.80	116.00	65	650	6.5	942.50
8.5	85	0.85	123.25	70	700	7.0	1015.00
9.0	90	0.90	130.50	75	750	7.5	1087.50
9.5	95	0.95	137.75	80	800	8.0	1160.00
10.0	100	1.00	145.00	85	850	8.5	1232.50
11.0	110	1.10	159.50	90	900	9.0	1305.00
12.0	120	1.20	174.00	95	950	9.5	1377.50
13.0	130	1.30	188.50	100	1000	10.0	1450.00

1.9.2 Viscosity

Kinematic viscosity centistokes cSt (mm²/s)	°Engler °E	Saybolt Universal Ssu	Redwood Seconds n°1 SRW n°1
1	1	---	---
2	1.1	32.7	31
3	1.2	36	33.5
4	1.3	39	36
5	1.4	42.5	38.5
7	1.5	49	44
10	1.8	59	52
15	2.3	77.5	68
20	2.9	98	86
25	3.4	119	105
30	4	140	120
35	4.7	164	145
40	5.3	186	165
50	6.6	232	205
60	8	278	245
70	9.2	324	286
80	10.5	370	327
90	12	415	370
100	13	465	410

1.9.3 Temperatures

°C	K	°F	°C	K	°F	°C	K	°F	°C	K	°F
-50	223	-58.0	1	274	33.8	51	324	123.8	105	378	221.0
-49	224	-56.2	2	275	35.6	52	325	125.6	110	383	230.0
-48	225	-54.4	3	276	37.4	53	326	127.4	115	388	239.0
-47	226	-52.6	4	277	39.2	54	327	129.2	120	393	248.0
-46	227	-50.8	5	278	41.0	55	328	131.9	125	398	257.0
-45	228	-49.0	6	279	42.8	56	329	132.8	130	403	266.0
-44	229	-47.2	7	280	44.6	57	330	134.6	135	408	275.0
-43	230	-45.4	8	281	46.4	58	331	136.4	140	413	284.0
-42	231	-43.6	9	282	48.2	59	332	138.2	145	418	293.0
-41	232	-41.8	10	283	50.0	60	333	140.0	150	423	303.0
-40	233	-40.0	11	284	51.8	61	334	141.8	155	428	311.0
-39	234	-38.2	12	285	53.6	62	335	143.6	160	433	320.0
-38	235	-36.4	13	286	55.4	63	336	145.4	165	438	329.0
-37	236	-34.6	14	287	57.2	64	337	147.2	170	443	338.0
-36	237	-32.8	15	288	59.0	65	338	149.0	175	448	347.0
-35	238	-31.0	16	289	60.8	66	339	150.8	180	453	356.0
-34	239	-29.2	17	290	62.6	67	340	152.6	185	458	365.0
-33	240	-27.4	18	291	64.4	68	341	154.4	190	463	374.0
-32	241	-25.6	19	292	66.2	69	342	156.2	195	468	383.0
-31	242	-23.8	20	293	68.0	70	343	158.0	200	473	392.0
-30	243	-22.0	21	294	69.8	71	344	159.8	205	478	401.0
-29	244	-20.2	22	295	71.6	72	345	161.6	210	483	410.0
-28	245	-18.4	23	296	73.4	73	346	163.4	215	488	419.0
-27	246	-16.6	24	297	75.2	74	347	165.2	220	493	428.0
-26	247	-14.8	25	298	77.0	75	348	167.0	225	498	437.0
-25	248	-13.0	26	299	78.8	76	349	168.8	230	503	446.0
-24	249	-11.2	27	300	80.6	77	350	170.6	235	508	455.0
-23	250	-9.4	28	301	82.4	78	351	172.4	240	513	464.0
-22	251	-7.6	29	302	84.2	79	352	174.2	245	518	473.0
-21	252	-5.8	30	303	86.0	80	353	176.0	250	523	482.0
-20	253	-4.0	31	304	87.8	81	354	177.8	255	528	491.0
-19	254	-2.2	32	305	89.6	82	355	179.6	260	533	500.0
-18	255	-0.4	33	306	91.4	83	356	181.4	265	538	509.0
-17	256	1.4	34	307	93.2	84	357	183.2	270	543	518.0
-16	257	3.2	35	308	95.0	85	358	185.0	275	548	527.0
-15	258	5.0	36	309	96.8	86	359	186.8	280	553	536.0
-14	259	6.8	37	310	98.6	87	360	188.6	285	558	545.0
-13	260	8.6	38	311	100.4	88	361	190.4	290	563	554.0
-12	261	10.4	39	312	102.2	89	362	192.2	295	568	563.0
-11	262	12.2	40	313	104.0	90	363	194.0	300	573	572.0
-10	263	14.0	41	314	105.8	91	364	195.8	310	583	590.0
-9	264	15.8	42	315	107.6	92	365	197.6	320	593	608.0
-8	265	17.6	43	316	109.4	93	366	199.4	330	603	626.0
-7	266	19.4	44	317	111.2	94	367	201.2	340	613	644.0
-6	267	21.2	45	318	113.0	95	368	203.0	350	623	662.0
-5	268	23.0	46	319	114.8	96	369	204.8	360	633	680.0
-4	269	24.8	47	320	116.6	97	370	206.6	370	643	698.0
-3	270	26.6	48	321	118.4	98	371	208.4	380	653	716.0
-2	271	28.4	49	322	120.2	99	372	210.2	390	663	734.0
-1	272	30.2	50	323	122.0	100	373	212.0	400	673	752.0
0	273	32.0									

1.9.4 Steam

Relative pressure (bar)	Absolute pressure (bar)	Temperature (°C)	Steam specific volume (m³/kg)
---	0.050	32.88	28.192
---	0.500	81.33	3.240
0.00	1.013	100.00	1.673
0.10	1.113	102.66	1.533
0.20	1.213	105.10	1.414
0.35	1.363	108.50	1.268
0.50	1.513	111.61	1.149
0.70	1.713	115.40	1.024
1.00	2.013	120.42	0.881
1.50	2.513	127.62	0.714
2.00	3.013	133.69	0.603
2.50	3.513	139.02	0.522
3.00	4.013	143.75	0.461
3.50	4.513	148.02	0.413
4.00	5.013	151.96	0.374
4.50	5.513	155.55	0.342
5.00	6.013	158.92	0.315
6.00	7.013	165.04	0.272
7.00	8.013	170.50	0.240
8.00	9.013	175.43	0.215
9.00	10.013	179.97	0.194
10.00	11.013	184.13	0.177

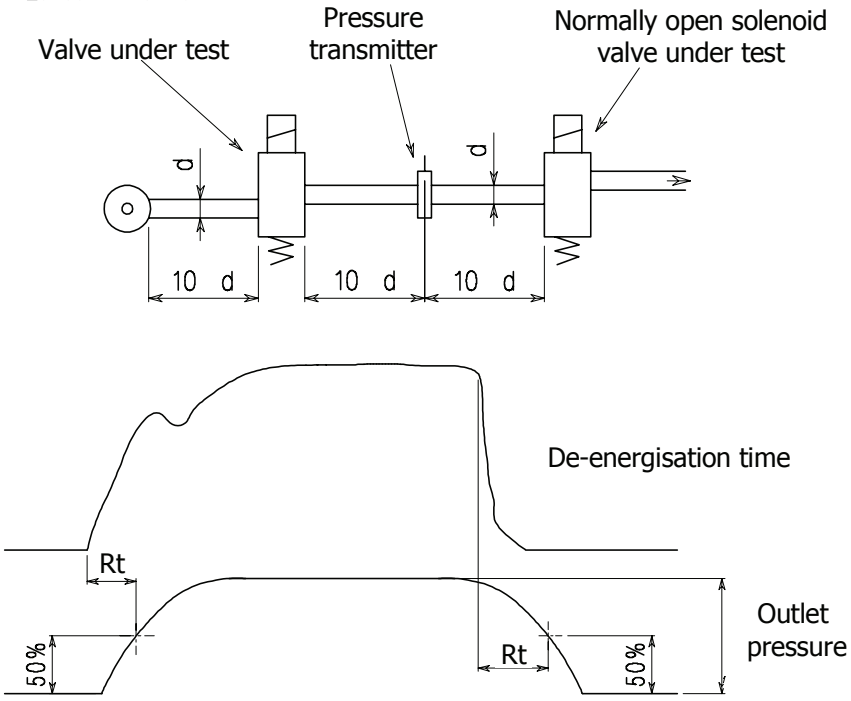
1.9.5 Specific gravity

Liquid substances			Gases and vapors at 20°C and 1atm *		
Liquid	Temp. (°C)	Specific gravity (Kg/dm³)	Gases and vapors	Specific gravity	
				Relative density to air	(Kg/m³)
Acetone	25	0,787	Acetylene (ethyne)	0,90	1,085
Acetylene, liquid	70°F	0,38	Air	1,00	1,205
Alcohol, ethyl (ethanol)	25	0,787	Alcohol vapor	1,60	1,929
Alcohol, methyl (methanol)	25	0,791	Ammonia	0,59	0,711
Alcohol, propyl	25	0,802	Argon	1,38	1,663
Ammonia (aqua)	25	0,826	Benzene	2,70	3,249
Aniline	25	1,022	Butane	2,01	2,417
Benzene	25	0,876	Isobutene	1,94	2,338
Benzil	25	1,084	Carbon dioxide	1,52	1,830
Bromine	25	3,12	Carbon monoxide	0,97	1,165
Butane, liquid	25	0,601	Chlorine	2,49	2,996
Caustic soda 9% - NaOH	15	1,10	Cyclobutane	1,94	2,335
Caustic soda 18% - NaOH	15	1,20	Cyclopentane	2,42	2,919
Caustic soda 27% - NaOH	15	1,30	Cyclopropane	1,45	1,748
Caustic soda 47% - NaOH	15	1,50	Deuterium	0,07	0,084
Chloroform	25	1,469	Ethane	1,04	1,251
Ethane	-89	0,572	Ether vapor	2,59	3,116
Ether	25	0,716	Ethyl Chloride	2,23	2,687
Ethylene glycol	25	1,1	Ethylene (Ethene)	0,97	1,167
Formaldehyde	45	0,815	Fluorine	1,31	1,579
Freon R-11	25	1,48	Helium	0,14	0,166
Freon R-12	25	1,315	Heptanes	3,46	4,168
Freon R-22	25	1,197	Hexane	2,97	3,582
Fuel oil	60°F	0,893	Hydrogen	0,07	0,084
Gasoline, Vehicle	60°F	0,739	Hydrogen chloride	1,27	1,528
Hydrochloric acid 10%	15	1,05	Hydrogen sulfide	1,18	1,417
Hydrochloric acid 20%	15	1,10	Hydrofluoric acid	2,37	2,856
Hydrochloric acid 30%	15	1,15	Hydrochloric acid	1,26	1,520
Hydrochloric acid 40%	15	1,20	Illuminating gas	0,40	0,482
Kerosene	60°F	0,82	Isobutane	2,01	2,422
Mercury	25	13,633	Isopentane	2,48	2,988
Milk	15	1,035	Mercury vapor	6,94	8,363
Naphtha	15	0,667	Methane	0,55	0,667
Nitric acid 17%	15	1,10	Natural Gas (typical)	0,7 - 0,5	0,844 - 0,723
Nitric acid 25%	15	1,15	Neon	0,70	0,840
Nitric acid 47%	15	1,30	Nitrogen	0,97	1,165
Nitric acid 94%	15	1,50	Nitrous oxide	1,53	1,844
Octane	25	0,701	Octane	3,94	4,753
Olive Oil	15	0,703	Oxygen	1,10	1,331
Oxygen	-183	1,14	Ozone	1,66	2,000
Potassium Hydroxide 21%	15	1,2	Pentane	2,49	2,997
Potassium Hydroxide 49%	15	1,5	Propane	1,52	1,834
Propane	25	0,495	Propene (Propylene)	1,45	1,750
Sulphuric acid 27%	15	1,20	R-12	4,17	5,030
Sulphuric acid 50%	15	1,40	R-134A	3,52	4,244
Sulphuric acid 87%	15	1,80	Sulfur Dioxide	2,26	2,728
Sulphuric acid, pure	15	1,89	Water vapor	0,62	0,749
Turpentine	25	0,871	Xenon	4,53	5,459
Water, pure	4	1			
Water, sea	77°F	1,025			

*) NTP - Normal Temperature and Pressure - is defined as air at 20°C and 1 atm
Specific gravity is the ratio between the density (mass per unit volume) of the actual gas and the density of air, specific gravity has no dimension. The density of air at NTP is 1.205 kg/m3.

1.10 Response time

The Response time (Rt) of a solenoid valve is the period passing between the energisation (or de-energisation) of the coil and the moment when the outlet pressure reaches the 50% of its peak.
Example of a circuit test :



The response time depends from the type of valve, the nature of the medium, the pressure and the current (AC or DC), if these value are measured at the moment of electrical connection or disconnection.

SERIES	Tr (ms) Air P=6 bar		NOTES
	Opening	Closing	
2 & 3 ways direct acting NC	8	25	With liquids +50% ÷150% depending on the viscosity
2 & 3 ways direct acting NO	25	8	
Servoassisted NC G3/8 & G1/2 G3/4 & G1	 30 50	 50 70	
Servoassisted NO G3/8 & G1/2 G3/4 & G1	 50 70	 30 50	
Servoassisted G1”1/4 -G1”1/2 - G2” G2”1/2 - G3”	Adjustable time		

1.11 P.E.D. Directive (97/23/EC)

P.E.D. DECLARATION OF CONFORMITY

ACL S.r.l.
Via Giovanni Falcone, 6
20873 Cavenago di Brianza (MI)

Declares that the solenoid valves listed in the present catalogue are in conformity with the following EU directive

97/23/EC (Pressure Equipment Directive)

We also declare that they are not allowed to carry the CE mark in conformity to the article 3, paragraph 3.

Remark:
In case that on our goods you will find the CE sticker, means that the product meets the EC 89/336, EC 92/31, EC 93/68, EC 72/23.
Limitedly to the rules apply by EN 55014, EN 61000-3-2, EN 61000-3-3, EN 60335-1 (CEI 61-150 volume N 2616E).

1.12 Operating instructions and installation

1.PRECAUTIONS DURING THE HYDRAULIC CONNECTION

Check that the valve series meets the application. Don't exceed the specification shown on the valve label.
Check that the fluid is in the same direction as the arrow stamped on the valve body and that the pipes are compatible with the flow rate of the valve.
Check that the pipes are clean and, if possible, fit a filter before the valve.
When connecting the valve , make sure that no foreign matter and sealing materials such as tape and jointing paste get inside the valve, as this could obstruct the internal pilot holes. (pilot operated valves)
When making connections using a wrench, apply force only the body of the valve. Avoid the coil area.
The solenoid valve can work in any position but to avoid the eventual precipitation of impurities inside the guide tube it's recommended that the coil is positioned above a horizontal pipe run.
When connecting with flexible tubes, it's recommended to use the provided fixing holes.
(types with 1/8" and ¼" threads)

2.PRECAUTIONS DURING THE ELECTRICAL CONNECTION

Check if the electrical data on the coil are compatible with the electrical supply.
The direct current valves don't require a fixed polarity with the exception of bi-stable valves.
To help heat dissipation of the coil, put the valve in a ventilated environment away from any other heat source.
It's possible that the coil working temperature could, in conjunction with ambient and fluid temperatures, cause scorching.
It's recommended an appropriate protection of the coil from water and humidity.
The coil fixing nut should not be over tightened. Don't exceed a torque more than 1.5Nm

3. MAINTENANCE

Coils can be changed without removing the valve from the system.
Spare parts are available for all wearing valve components.
When replacing the guide tube do not exceed the following tightening torque :

Normally Open valves	Normally Closed valves
16mm wrench=10Nm	11mm wrench=5Nm
22mm wrench=20Nm	16mm wrench=15Nm
	22mm wrench=50Nm

Before removing the valve, check that the power supply has been switched off and that no pressure is present in the pipeline.
If the valve needs cleaning, pay special attention to the seat area to avoid any damage.
The plunger must move freely inside the guide tube. If this isn't achievable due to incrustations, scale deposits or worn surfaces, then replacement parts must be fitted.
Seals must be replaced if swollen or damaged with incisions etc.
The diaphragm pilot holes must not be blocked to guarantee the correct operation of servo-assisted valves. Check that both holes are clear. Check also that the diaphragm has not hardened, swollen or it shows wear in the seat/seal area. Replace if necessary

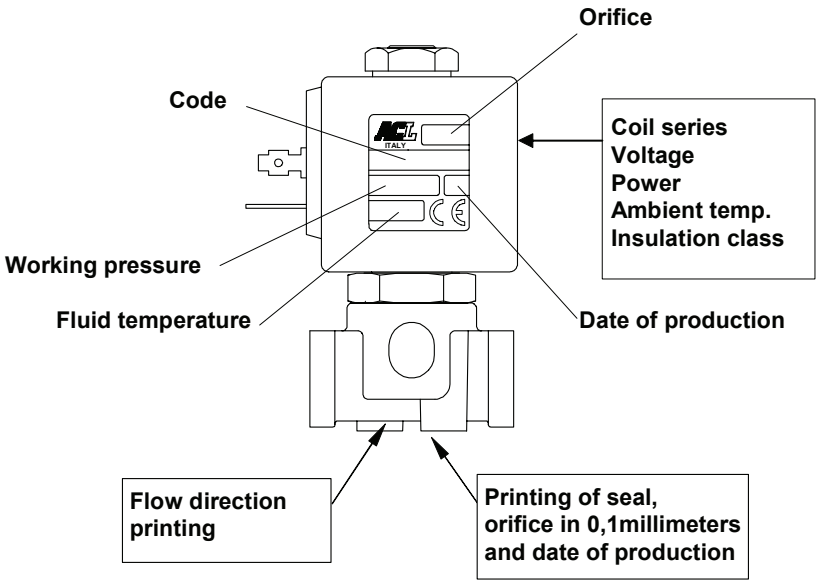
4. GENERAL PRECAUTIONS

When the solenoid valve is used on machines or equipment with high mechanical stress (for example, vibrating stress), contact the manufacturer or verify life and functionality testes with appropriate tests.

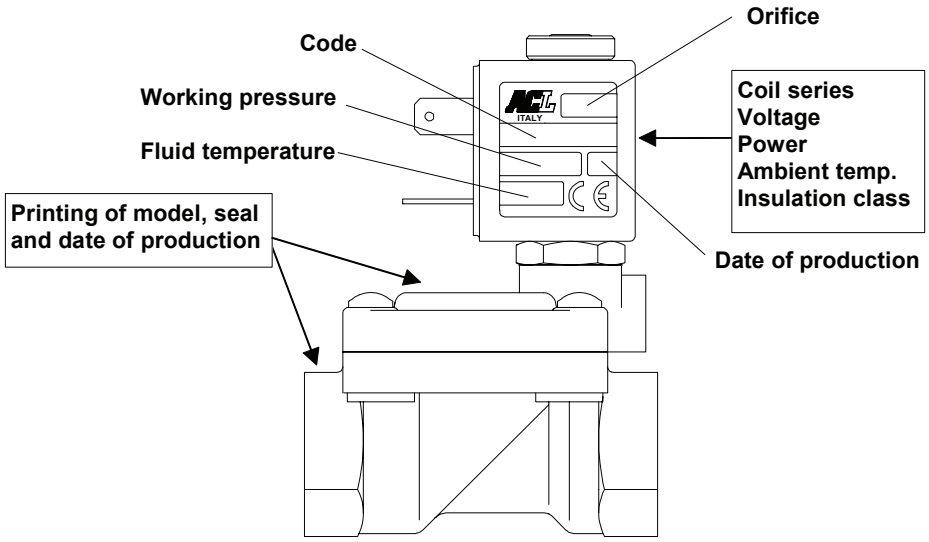
1.13 Model identification

Solenoid valves are identified as follow :

1.13.1 DIRECT ACTING



1.13.2 SERVO-ASSISTED



DESCRIPTION

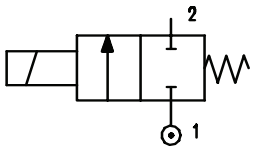
Solenoid valve 2 way normally closed
direct acting poppet type

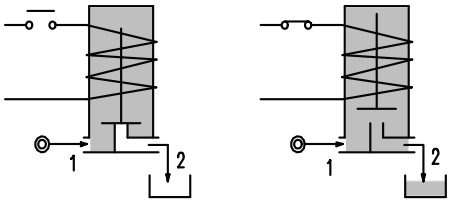
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Armature tube in stainless steel
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series7
Manual override
Version for use with oxygen

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E105A.....12///.....	1/8”	1.2	0.04	0	25	25	12	8	6.5	3	22	NBR=B	-10 +90
E105A.....15///.....		1.5	0.06	0	16	16							
E105A.....20///.....		2	0.09	0	12	10							
E105A.....25///.....		2.5	0.14	0	8	5.5							
E105A.....31///.....		3.1	0.19	0	5	2						EPDM=E	<+140
E105A.....40///.....		4	0.35	0	4	1.5							
E105A.....20///.....		2	0.09	0	25	15	15	11	5	4	30	FPM=V	-10 +130
E105A.....25///.....		2.5	0.14	0	16	8							
E105A.....31///.....		3.1	0.19	0	8	4							
E105A.....40///.....		4	0.35	0	5	2.5							

① Seal
② Coil

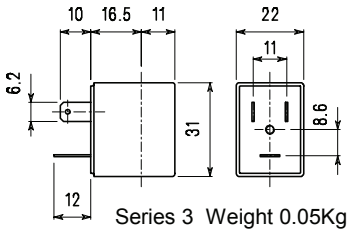
Example: E105AB20///30B NBR seal
Coil 24V 50/60Hz

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

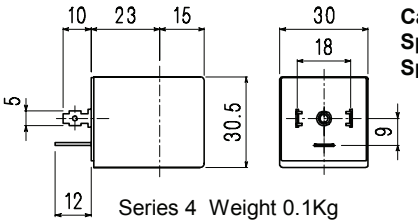
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000
Series **4** Width 30 Code ②	40A	40B	40C	40D	40E	40F	40G	400	401	402	DIN 43650A	PG9 code 10349000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltage
Special coil powers

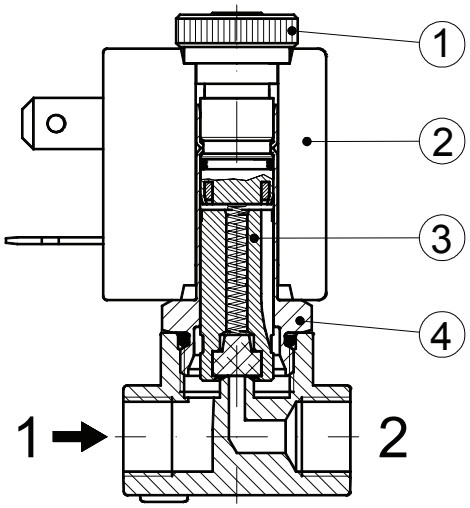


Series 3 Weight 0.05Kg

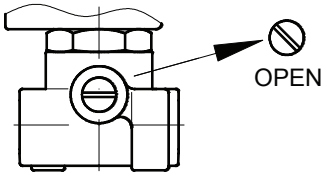


Series 4 Weight 0.1Kg

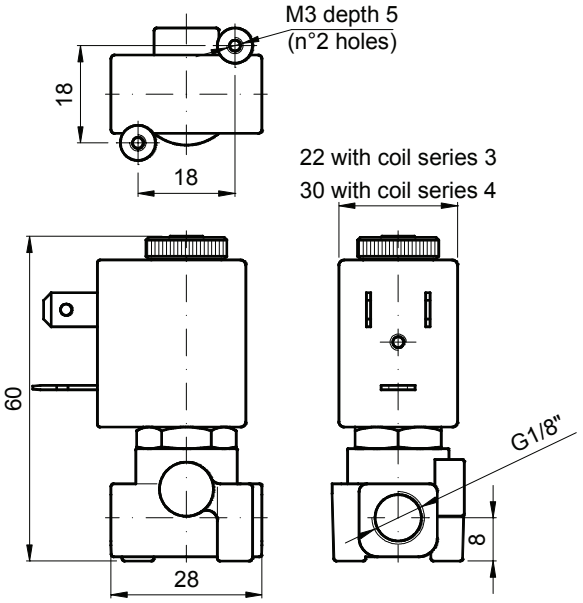
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



MANUAL OVERRIDE



OVERALL DIMENSION



Weight with coil series 3 = 0.13 Kg
Weight with coil series 4 = 0.18 Kg

DESCRIPTION

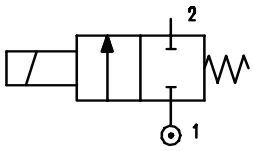
Solenoid valve 2 way normally closed
direct acting poppet type

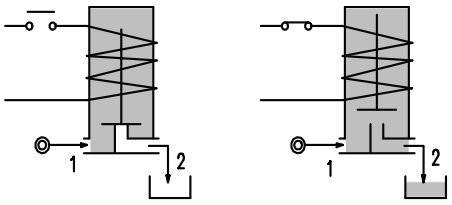
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	FPM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
W105AV15///.....	1/8”	1.5	0.06	0	14	3	12	8	6.5	3	22	FPM=V	-10 +130

② Coil

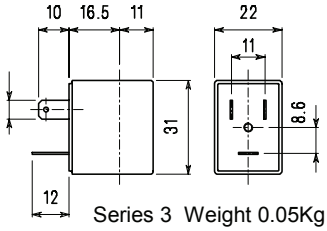
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **W105**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

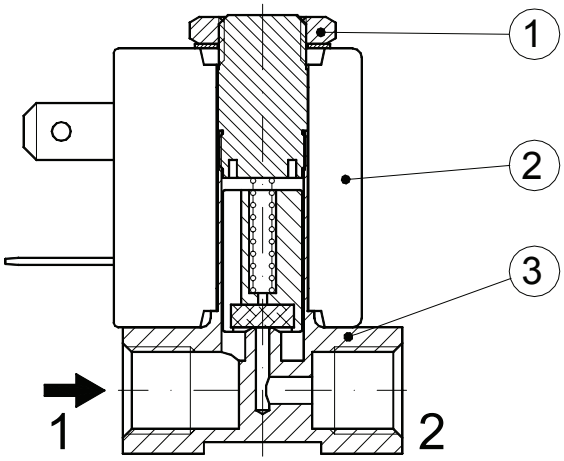
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector mounted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltage
Special coil powers

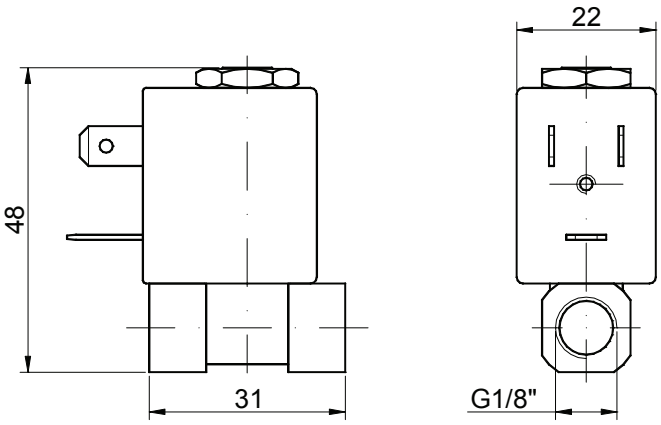


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Valve



OVERALL DIMENSION



Weight = 0.09 Kg

DESCRIPTION

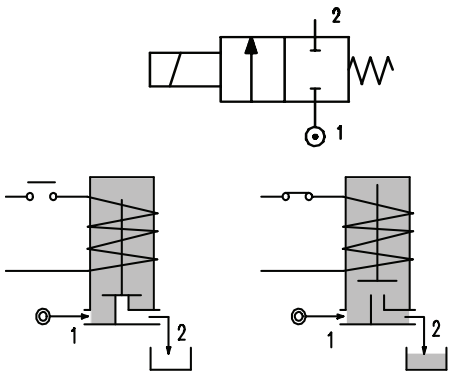
Solenoid valve 2 way normally closed
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM
	PTFE

FEATURES

Maximum allowable pressure 80 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Manual override
Electroless nickel plating
Stainless steel seat insert
Version for use with oxygen

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. Range °C
E106A.....15///.....	1/8”	1.5	0.07	0	30	26	20	15	10	2	30	NBR=B	-10 +90
E106A.....20///.....		2	0.1	0	22	20							
E106A.....25///.....		2.5	0.15	0	16	14							
E106A.....35///.....		3.5	0.32	0	10	8							
E106B.....15///.....	1/4”	1.5	0.07	0	30	26							
E106B.....20///.....		2	0.1	0	22	20							
E106B.....25///.....		2.5	0.15	0	16	14							
E106B.....35///.....		3.5	0.32	0	10	8							
E106B.....45///.....		4.5	0.41	0	6.5	3.5						EPDM=E	<+140
E106B.....52///.....		5.2	0.47	0	4	1.8							
E106B.....64///.....		6.4	0.64	0	3	1							
E106A.....15///.....	1/8”	1.5	0.07	0	80	80	40	30	27	5	36	FPM=V	-10 +130
E106A.....20///.....		2	0.1	0	50	40							
E106A.....25///.....		2.5	0.15	0	35	33							
E106A.....35///.....		3.5	0.32	0	20	19							
E106B.....15///.....	1/4”	1.5	0.07	0	80	80						PTFE=W ③	-10 +160
E106B.....20///.....		2	0.1	0	50	40							
E106B.....25///.....		2.5	0.15	0	35	33							
E106B.....35///.....		3.5	0.32	0	20	19							
E106B.....45///.....		4.5	0.41	0	14	13							
E106B.....52///.....		5.2	0.47	0	10	9							
E106B.....64///.....		6.4	0.64	0	5	4.5							

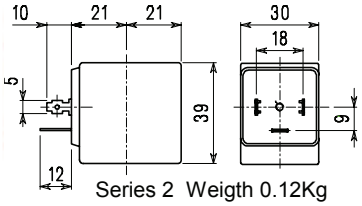
① Seal — Example: E106BB52///20E NBR seal
② Coil — Coil 220V 50/60Hz
③ Maximum allowable leakage < 0.2nL/h

* REMARK: The maximum allowable pressure PS for steam is 6 bar (gauge pressure) with PTFE seals and 2,5bar with EPDM seals

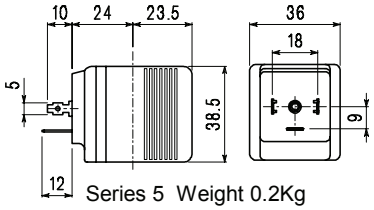
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

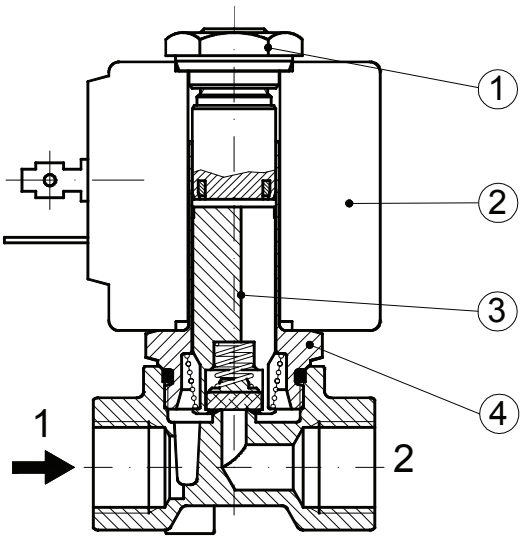


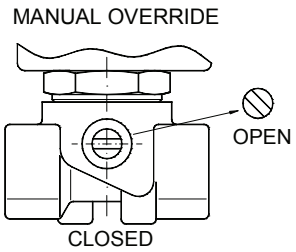
Series 2 Weigth 0.12Kg



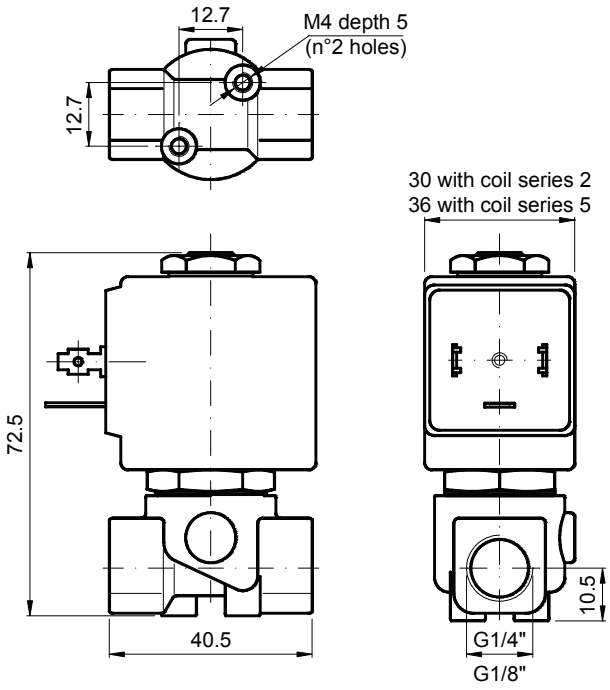
Series 5 Weight 0.2Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core





OVERALL DIMENSION



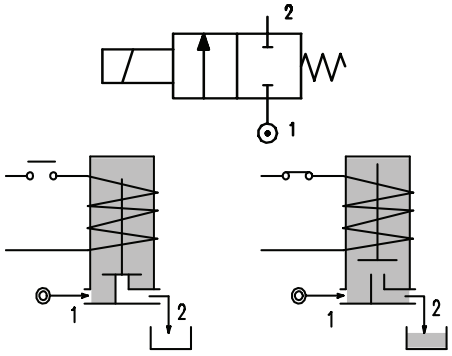
Weight with coil series 2 = 0.30 Kg
Weight with coil series 5 = 0.38 Kg

DESCRIPTION

Solenoid valve 2 way normally closed
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM
	PTFE



FEATURES

Maximum allowable pressure 80 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position

OPTIONS : Electroless nickel plating
For use with oxygen

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E106C.....30///.....	3/8”	3	0.25	0	15	10	20	15	10	2	30	NBR=B	-10 +90
E106C.....35///.....		3.5	0.32	0	10	8							
E106C.....40///.....		4	0.36	0	8	5							
E106C.....45///.....		4.5	0.41	0	6.5	3.5							
E106C.....52///.....		5.2	0.47	0	4	1.8							
E106C.....64///.....		6.4	0.64	0	3	1							
E106D.....30///.....	1/2”	3	0.25	0	15	10							
E106D.....35///.....		3.5	0.32	0	10	8							
E106D.....40///.....		4	0.36	0	8	5						EPDM=E	<+140
E106D.....45///.....		4.5	0.41	0	6.5	3.5							
E106D.....52///.....		5.2	0.47	0	4	1.8							
E106D.....64///.....		6.4	0.64	0	3	1							
E106C.....30///.....	3/8”	3	0.25	0	25	24	40	30	27	5	36	FPM=V	-10 +130
E106C.....35///.....		3.5	0.32	0	20	19							
E106C.....40///.....		4	0.36	0	16	15							
E106C.....45///.....		4.5	0.41	0	14	13							
E106C.....52///.....		5.2	0.47	0	10	9						PTFE=W ③	-10 +160
E106C.....64///.....		6.4	0.64	0	5	4.5							
E106D.....30///.....	1/2”	3	0.25	0	25	24							
E106D.....35///.....		3.5	0.32	0	20	19							
E106D.....40///.....		4	0.36	0	16	15							
E106D.....45///.....		4.5	0.41	0	14	13							
E106D.....52///.....		5.2	0.47	0	10	9							
E106D.....64///.....		6.4	0.64	0	5	4.5							

① Seal — Example: E106CE35///521 EPDM seal
② Coil — Coil 24V DC
③ Maximum allowable leakage < 0.2 nL/h

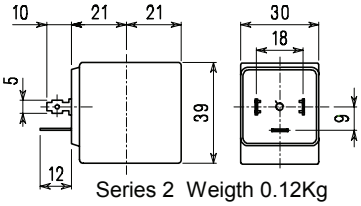
* REMARK: The maximum allowable pressure PS for steam is 6 bar (gauge pressure) with PTFE seals and 2,5bar with EPDM seals

Series **106**

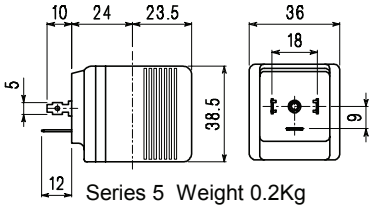
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	521	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

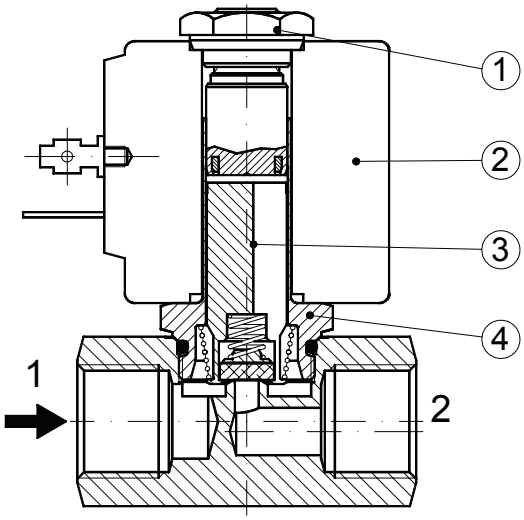


Series 2 Weigth 0.12Kg

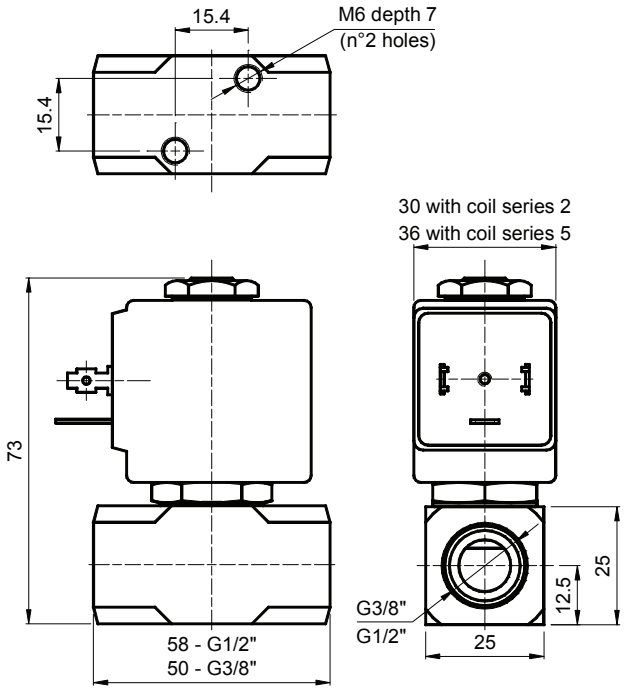


Series 5 Weight 0.2Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



Weight with coil series 2 = 0.36 Kg
Weight with coil series 5 = 0.44 Kg

DESCRIPTION

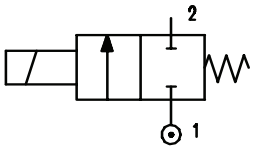
Solenoid valve 2 way normally closed
direct acting poppet type.
With explosion proof coil certified:
CESI 03 ATEX 344 ExII2G/D Eex ”d” IIC T6

VALVE CONSTRUCTION

Body	Brass
Seal material	FPM

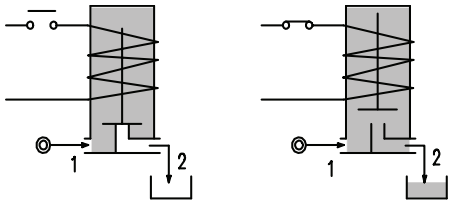
EXPLOSION PROOF CONSTRUCTION

Housing	Red colour alloy
Electrical connection	½” NPT



FEATURES

Maximum allowable pressure 80 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : -10°C +40°C
Mounting position with vertical coil above



OPTIONS : Manual override
Electroless nickel plating
Stainless steel seat

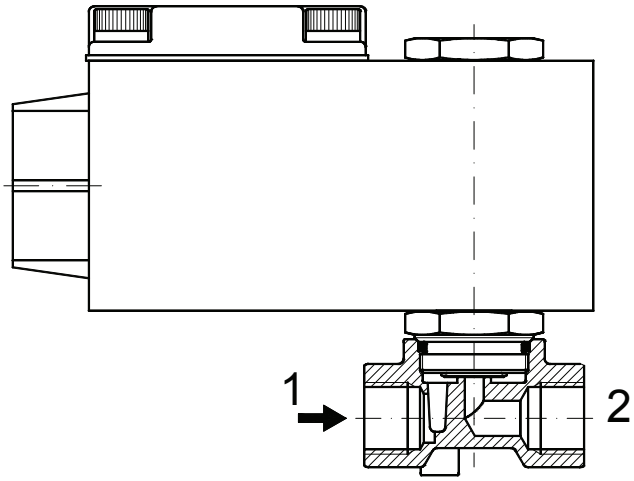
NOTE: The solenoid valve is suitable only with media that are **NOT** potentially explosive.

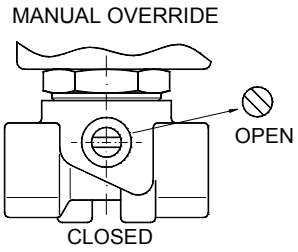
CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Holding	Nominal power DC Watt	Coil Series	Seal	Temperature range °C
A106AV15///.....	1/8”	1.5	0.07	0	30	26	12 VA	8 W	A6	FPM=V	-10 +130
A106AV20///.....		2	0.1	0	22	20					
A106AV25///.....		2.5	0.15	0	16	14					
A106AV35///.....		3.5	0.32	0	10	8					
A106BV15///.....	1/4”	1.5	0.07	0	30	26					
A106BV20///.....		2	0.1	0	22	20					
A106BV25///.....		2.5	0.15	0	16	14					
A106BV35///.....		3.5	0.32	0	10	8					
A106BV45///.....		4.5	0.41	0	6.5	3.5					
A106BV52///.....		5.2	0.47	0	4	1.8					
A106BV64///.....		6.4	0.64	0	3	1					

② Coil

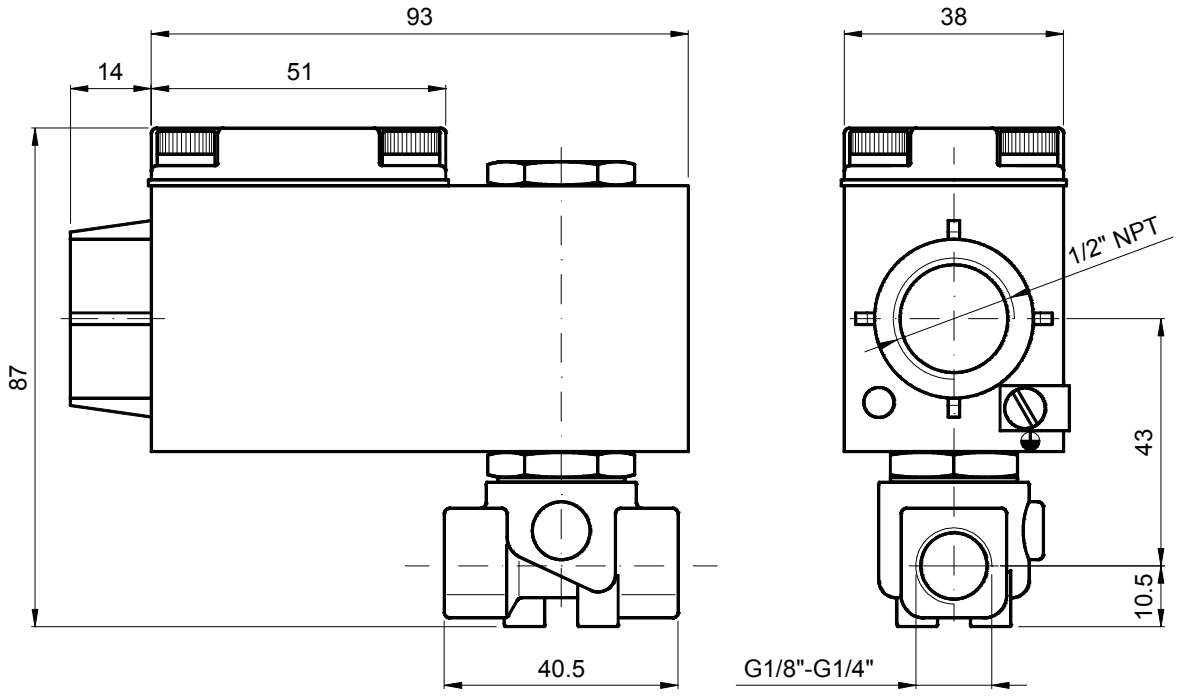
COILS	Alternating Current ~50/60Hz Volt				Direct Current Volt			Electrical connection
	24	48	110	220 230	12	24	48	
Series **A6** Code ②	**A6B**	**A6C**	**A6D**	**A6E**	**A60**	**A61**	**A62**	**1/2" NPT**

DESCRIPTION
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class IP66





OVERALL DIMENSION



Weight = 0.60 Kg

DESCRIPTION

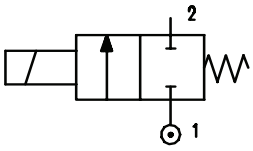
Solenoid valve 2 way normally closed
direct acting poppet type.
With explosion proof coil certified:
CESI 03 ATEX 344 ExII2G/D Eex ”d” IIC T6

VALVE CONSTRUCTION

Body	Brass
Seal material	FPM

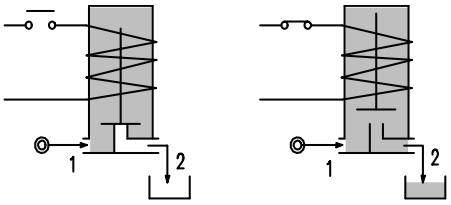
EXPLOSION PROOF CONSTRUCTION

Housing	Red colour alloy
Electrical connection	½” NPT



FEATURES

Maximum allowable pressure 80 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : -10°C +40°C
Mounting position with vertical coil above



OPTIONS : Electroless nickel plating
Stainless steel seat

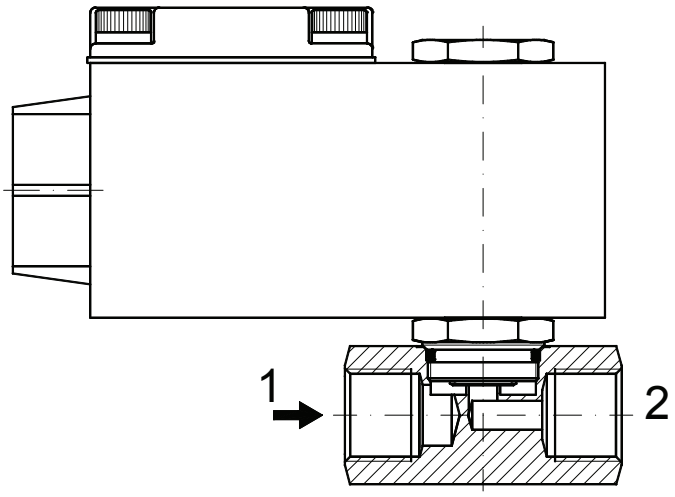
NOTE: The solenoid valve is suitable only with media that are **NOT** potentially explosive.

CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Holding	Nominal power DC Watt	Coil Series	Seal	Temperature Range °C
A106CV30///.....	3/8”	3	0.25	0	15	10	12 VA	8 W	A6	FPM=V	-10 +130
A106CV35///.....		3.5	0.32	0	10	8					
A106CV40///.....		4	0.36	0	8	5					
A106CV45///.....		4.5	0.41	0	6.5	3.5					
A106CV52///.....		5.2	0.47	0	4	1.8					
A106CV64///.....		6.4	0.64	0	3	1					
A106DV30///.....	1/2”	3	0.25	0	15	10					
A106DV35///.....		3.5	0.32	0	10	8					
A106DV40///.....		4	0.36	0	8	5					
A106DV45///.....		4.5	0.41	0	6.5	3.5					
A106DV52///.....		5.2	0.47	0	4	1.8					
A106DV64///.....		6.4	0.64	0	3	1					

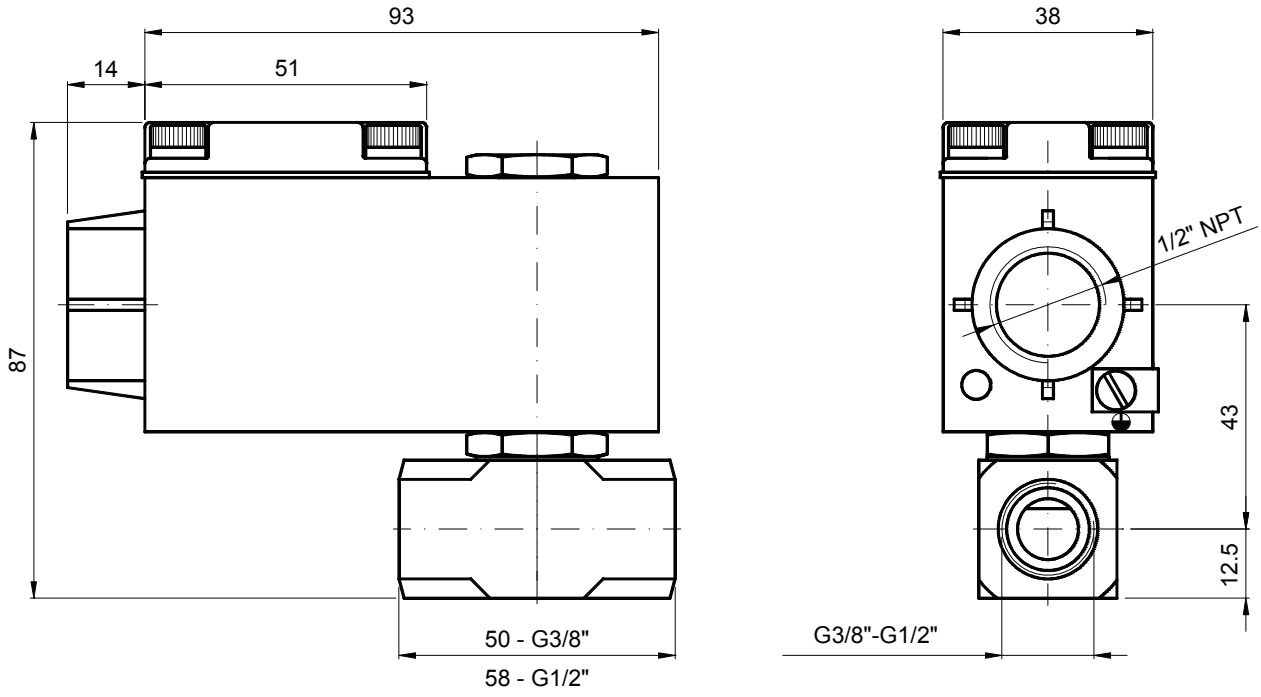
② Coil

COILS	Alternating Current ~50/60Hz Volt				Direct Current Volt			Electrical connection
	24	48	110	220 230	12	24	48	
Series **A6** Code ②	**A6B**	**A6C**	**A6D**	**A6E**	**A60**	**A61**	**A62**	**1/2" NPT**

DESCRIPTION
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class IP66



OVERALL DIMENSION



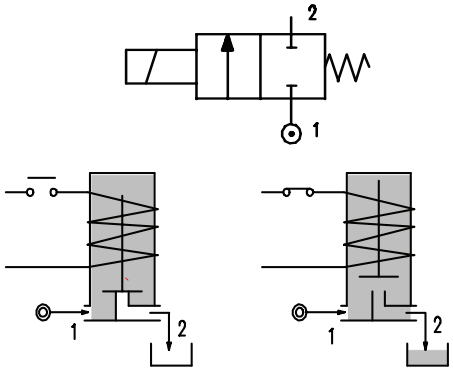
Weight = 0.66 Kg

DESCRIPTION
Drain valve

CONSTRUCTION
Solenoid valve series 106 with:
- Filter ball in chromium plated brass and stainless steel strainer, NBR seal
  Connection : inlet G1/2", outlet G3/8" or G1/2"
- Timer ACL mod.11303000
- Connector DIN 43650A code 1034900A

FEATURES
Maximum allowable pressure 80 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Protection class IP65

OPTIONS : Electroless nickel plating on the valve body
Overmoulded DIN cable connector



CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
S106BV30///.....	1/4"	3	0.18	0	14	6	20	15	10	2	30	FPM=V	-10 +130
S106BV40///.....		4	0.26	0	7	3							
S106C.....30///.....	3/8"	3	0.25	0	15	10	20	15	10	2	30	NBR=B	-10 +90
S106C.....35///.....		3.5	0.32	0	10	8							
S106C.....40///.....		4	0.36	0	8	5							
S106C.....45///.....		4.5	0.41	0	6.5	3.5							
S106D.....30///.....	1/2"	3	0.25	0	15	10							
S106D.....35///.....		3.5	0.32	0	10	8							
S106D.....40///.....		4	0.36	0	8	5							
S106D.....45///.....		4.5	0.41	0	6.5	3.5							
S106C.....30///.....	3/8"	3	0.25	0	25	24	40	30	27	5	36		
S106C.....35///.....		3.5	0.32	0	20	19							
S106C.....40///.....		4	0.36	0	16	15							
S106C.....45///.....		4.5	0.41	0	14	13							
S106D.....30///.....	1/2"	3	0.25	0	25	24							
S106D.....35///.....		3.5	0.32	0	20	19							
S106D.....40///.....		4	0.36	0	16	15							
S106D.....45///.....		4.5	0.41	0	14	13							

① Seal
② Coil

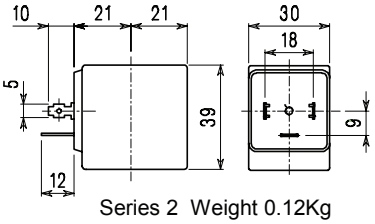
Example: S106CB25///201 NBR seal
Coil 24V DC

Series **S106**

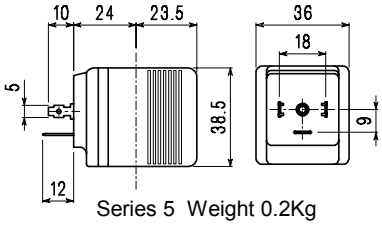
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	521	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTIONS
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

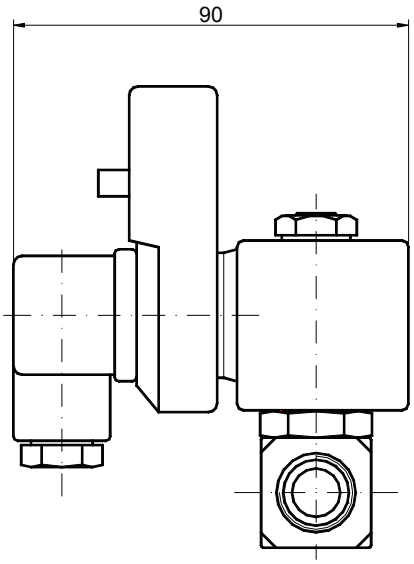


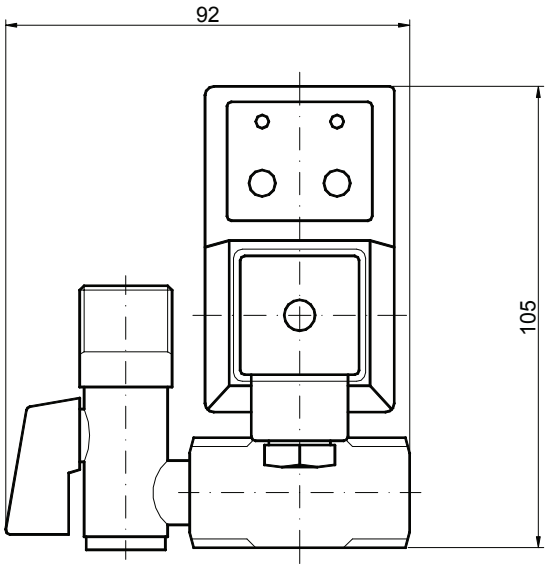
Series 2 Weight 0.12Kg



Series 5 Weight 0.2Kg

OVERALL DIMENSION





Weight with coil series 2 = 0.52 Kg
Weight with coil series 5 = 0.60 Kg

DESCRIPTION

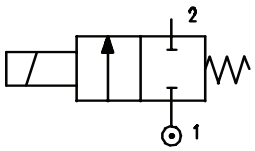
Solenoid valve 2 way normally closed
direct acting poppet type

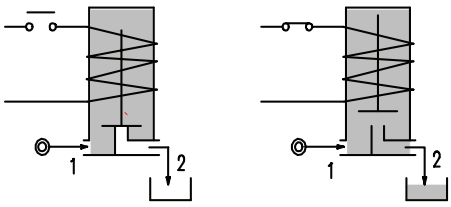
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	FPM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





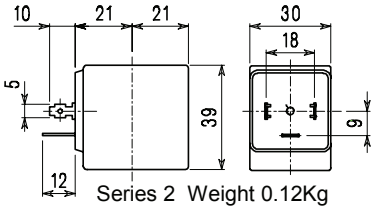
CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
W106BV30///.....	1/4”	3	0.18	0	14	6	20	15	10	2	30	FPM=V	-10 +130
W106BV40///.....		4	0.26	0	7	3							

② Coil

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **W106**

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

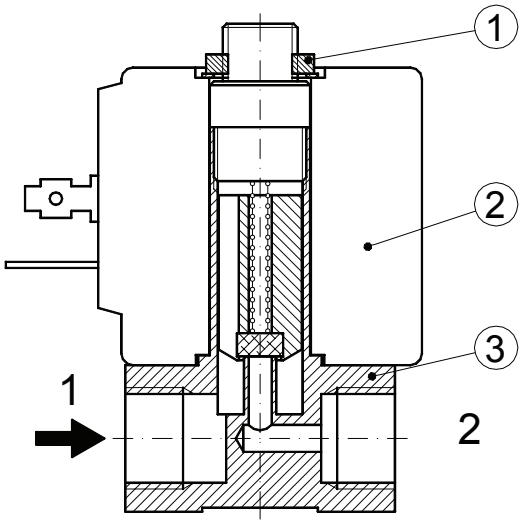


Series 2 Weight 0.12Kg

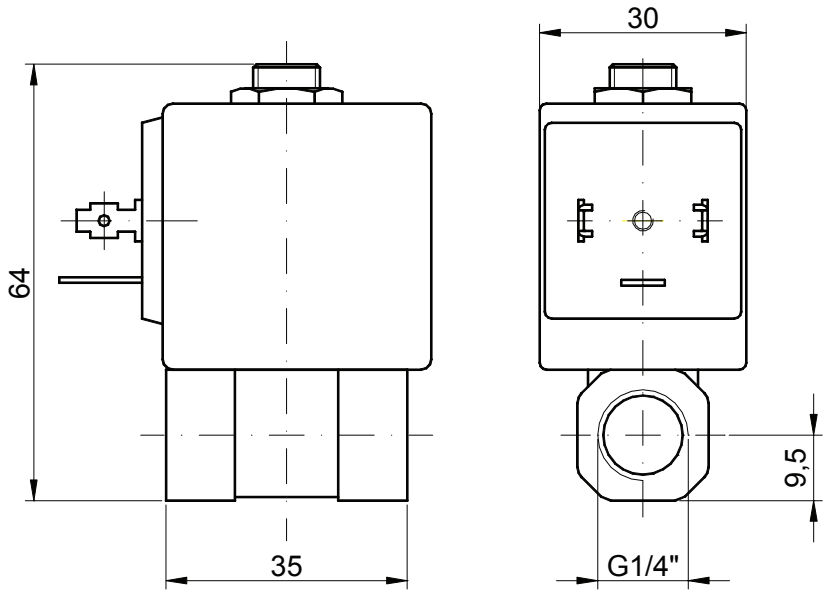
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector mounted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Valve



OVERALL DIMENSION

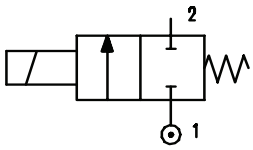


Weight = 0.22 Kg

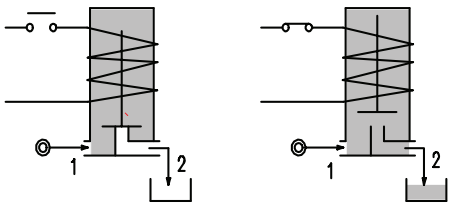
DESCRIPTION
Solenoid valve 2 way normally closed
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



FEATURES
Maximum allowable pressure 5 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Electroless nickel plating
Version for use with oxygen

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E109C.....12///.....	3/8”	12	2	0	0.5	0.06	20	15	10	2	30	NBR=B	-10 +90
E109D.....12///.....	1/2”	12	2.2	0	0.5	0.06							
E109E.....18///.....	3/4”	18	4.5	0	0.14	--	20	15	--			EPDM=E	<+140
E109C.....12///.....	3/8”	12	2	0	0.8	0.4	40	30	27	5	36	FPM=V	-10 +130
E109D.....12///.....	1/2”	12	2.2	0	0.8	0.4							
E109E.....18///.....	3/4”	18	4.5	0	0.2	0.12							

① Seal
② Coil

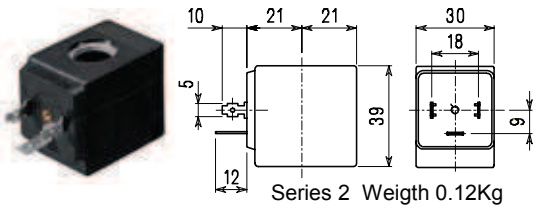
Example: E109EV18///52B FPM seal
Coil 24V 50/60Hz

Series **109**

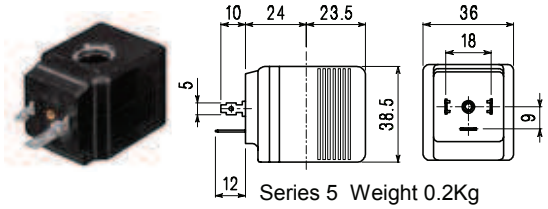
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	521	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

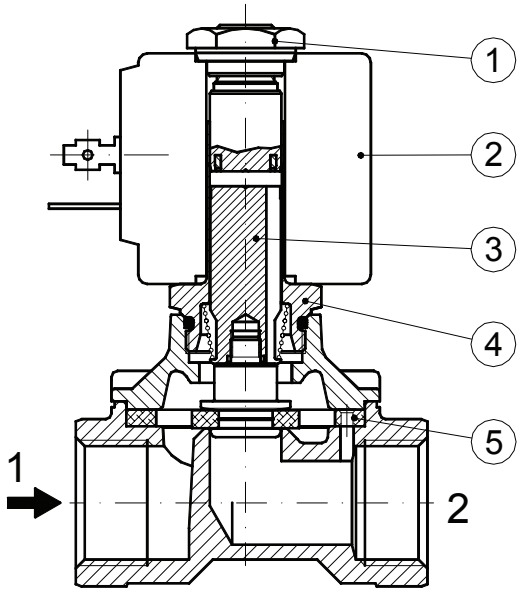


Series 2 Weigth 0.12Kg

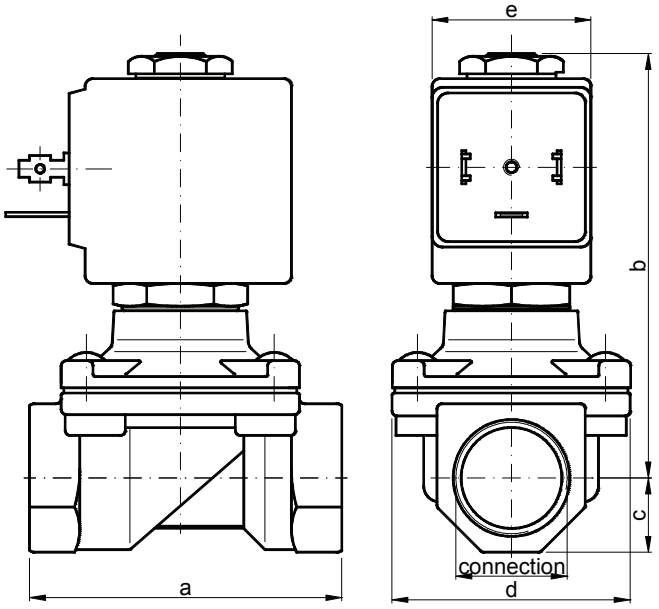


Series 5 Weight 0.2Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Body O-Ring



OVERALL DIMENSION



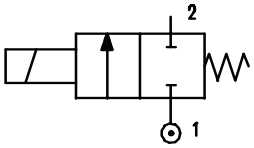
Connection	a	b	c	d	e with series 2	e with series 5	Weight kg series 2	Weight kg series 5
G3/8”	60	83	14	45	30	36	0.50	0.58
G1/2”	60	83	14	45	30	36	0.45	0.53
G3/4”	75	90	18	55	30	36	0.75	0.83

DESCRIPTION

Solenoid valve 2 way normally closed
direct acting poppet type

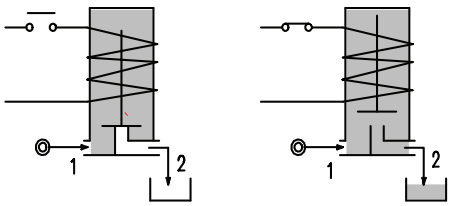
CONSTRUCTION

Body	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM
	PTFE



FEATURES

Maximum allowable pressure 100 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Silver shading ring
For use with oxygen

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E110B.....20///.....	1/4”	2	0.1	0	22	20	20	15	10	2	30	NBR=B	-10 +90
E110B.....25///.....		2.5	0.15	0	16	14							
E110B.....35///.....		3.5	0.32	0	10	8							
E110B.....45///.....		4.5	0.41	0	6.5	3.5							
E110B.....52///.....		5.2	0.47	0	4	1.8							
E110C.....20///.....	3/8”	2	0.1	0	22	20							
E110C.....35///.....		3.5	0.32	0	10	8							
E110C.....52///.....		5.2	0.47	0	4	1.8							
E110C.....64///.....		6.4	0.64	0	3.5	1							
E110D.....20///.....	1/2”	2	0.1	0	22	20						EPDM=E	<+140
E110D.....35///.....		3.5	0.32	0	10	8							
E110D.....52///.....		5.2	0.47	0	4	1.8							
E110D.....64///.....		6.4	0.64	0	3.5	1							
E110B.....20///.....	1/4”	2	0.1	0	50	40	40	30	27	5	36	FPM=V	-10 +130
E110B.....25///.....		2.5	0.15	0	35	33							
E110B.....35///.....		3.5	0.32	0	20	19							
E110B.....45///.....		4.5	0.41	0	14	13							
E110B.....52///.....		5.2	0.47	0	10	9							
E110C.....20///.....	3/8”	2	0.1	0	50	40							
E110C.....35///.....		3.5	0.32	0	20	19						PTFE=W ③	-10 +160
E110C.....52///.....		5.2	0.47	0	10	9							
E110C.....64///.....		6.4	0.64	0	5	4.5							
E110D.....20///.....	1/2”	2	0.1	0	50	40							
E110D.....35///.....		3.5	0.32	0	20	19							
E110D.....52///.....		5.2	0.47	0	10	9							
E110D.....64///.....		6.4	0.64	0	5	4.5							

① Seal — Example: E110BE35///521 EPDM seal
② Coil — Coil 24V DC
③ Maximum allowable leakage < 0.2 nL/h

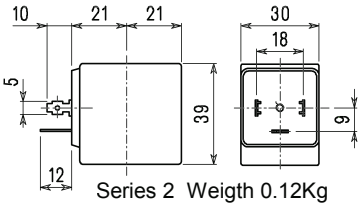
* REMARK: The maximum allowable pressure PS for steam is 6 bar (gauge pressure) with PTFE seals and 2,5bar with EPDM seals

Series **110**

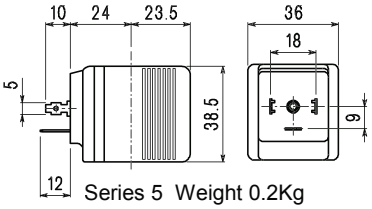
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	521	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

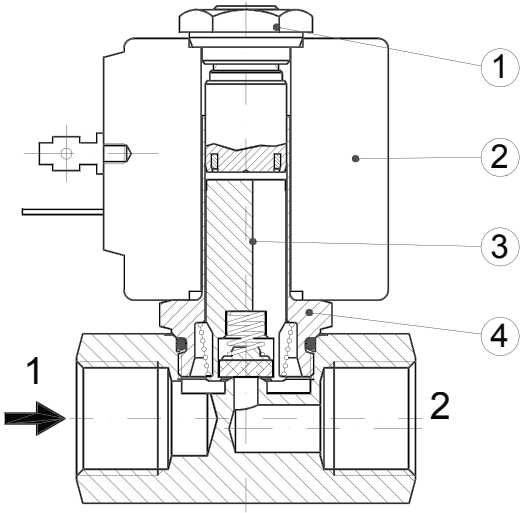


Series 2 Weigth 0.12Kg

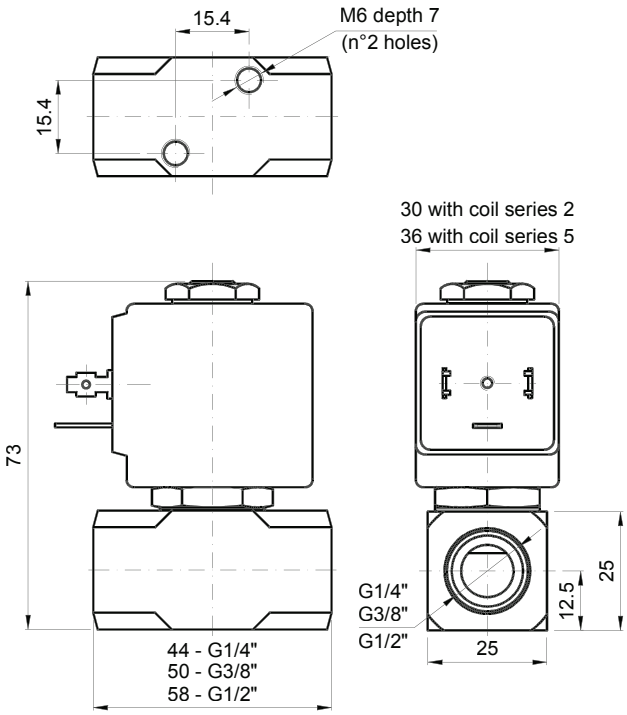


Series 5 Weight 0.2Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



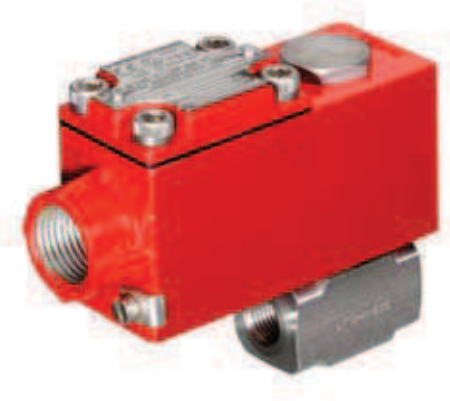
OVERALL DIMENSION



Weight with coil series 2 = 0.36 Kg
Weight with coil series 5 = 0.44 Kg

DESCRIPTION

Solenoid valve 2 way normally closed
direct acting poppet type.
With explosion proof coil certified:
CESI 03 ATEX 344 ExII2G/D Eex ”d” IIC T6

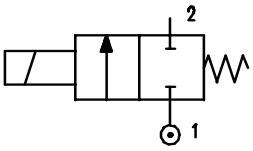


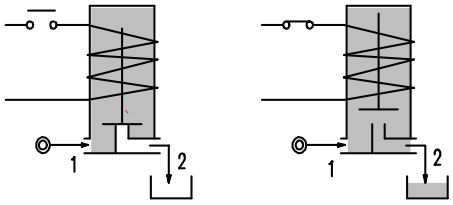
VALVE CONSTRUCTION

Body	Stainless steel
Seal material	FPM

EXPLOSION PROOF CONSTRUCTION

Housing	Red colour alloy
Electrical connection	½” NPT





FEATURES

Maximum allowable pressure 100 bar
Maximum fluid viscosity < 25cSt (mm ²/s)
Ambient temperature : -10°C +40°C
Universal mounting position

OPTIONS : Silver shading ring

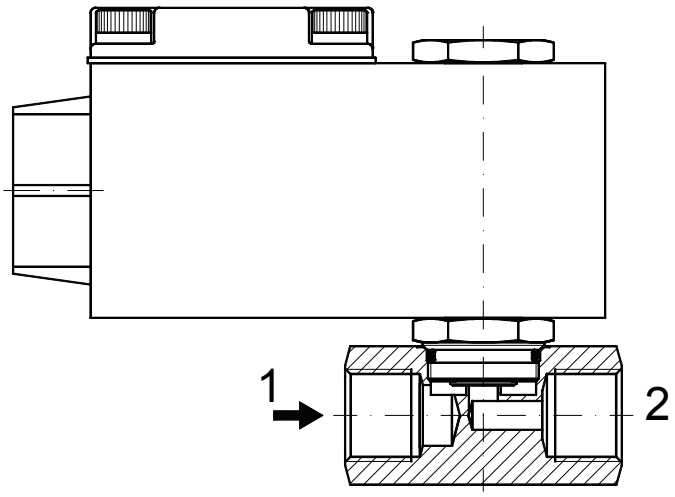
NOTE: The solenoid valve is suitable only with media that are **NOT** potentially explosive.

CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Holding	Nominal power DC Watt	Coil Series	Seal	Temperature range °C
A110BV20///.....	1/4”	2	0.1	0	22	20	12 VA	8 W	A6	FPM=V	-10 +130
A110BV25///.....		2.5	0.15	0	16	14					
A110BV35///.....		3.5	0.32	0	10	8					
A110BV45///.....		4.5	0.41	0	6.5	3.5					
A110BV52///.....		5.2	0.47	0	4	1.8					
A110BV64///.....		6.4	0.64	0	3.5	1					
A110CV20///.....	3/8”	2	0.1	0	22	20					
A110CV35///.....		3.5	0.32	0	10	8					
A110CV52///.....		5.2	0.47	0	4	1.8					
A110CV64///.....		6.4	0.64	0	3.5	1					
A110DV20///.....	1/2”	2	0.1	0	22	20					
A110DV35///.....		3.5	0.32	0	10	8					
A110DV52///.....		5.2	0.47	0	4	1.8					
A110DV64///.....		6.4	0.64	0	3.5	1					

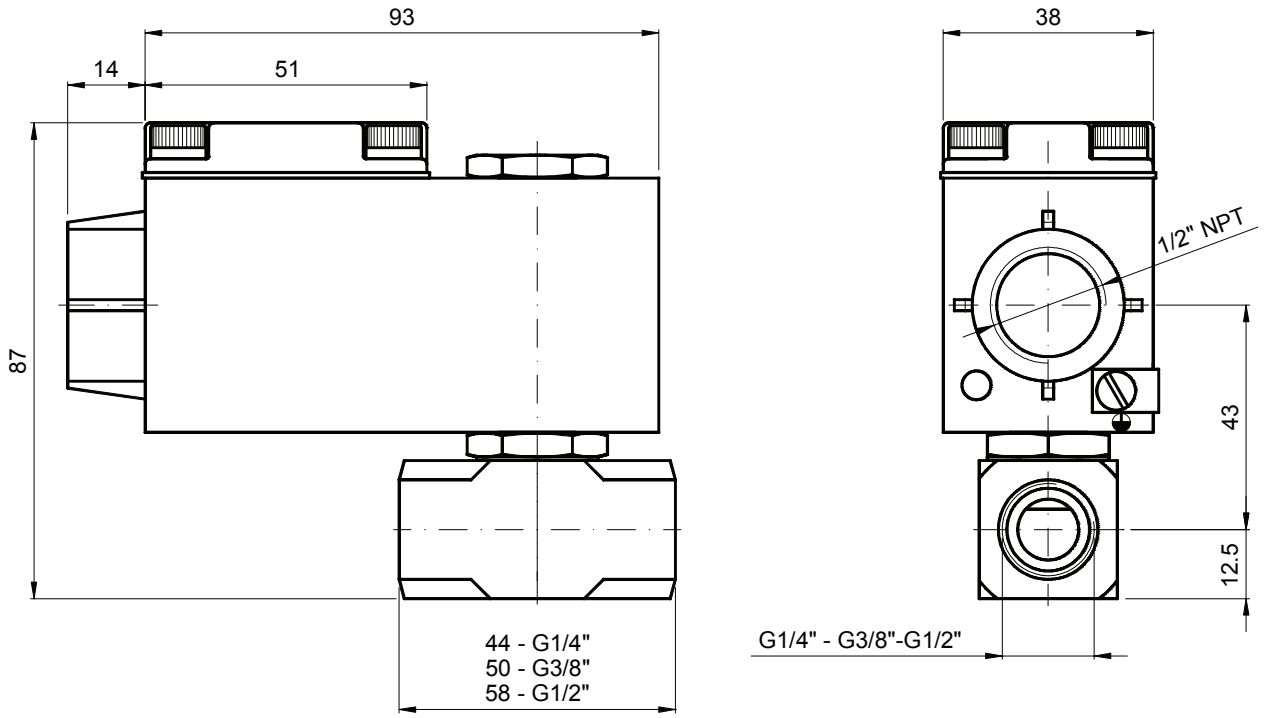
② Coil

COILS	Alternating Current ~50/60Hz Volt				Direct Current Volt			Electrical connection
	24	48	110	220 230	12	24	48	
Series **A6** Code ②	**A6B**	**A6C**	**A6D**	**A6E**	**A60**	**A61**	**A62**	**1/2" NPT**

DESCRIPTION
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class IP66



OVERALL DIMENSION



Weight = 0.66 Kg

DESCRIPTION

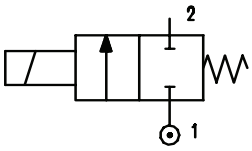
Solenoid valve 2 way normally closed
direct acting poppet type

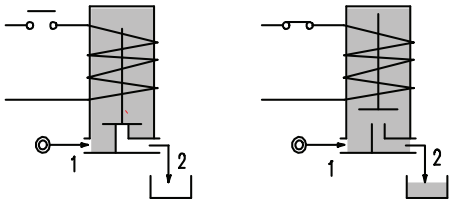
CONSTRUCTION

Body	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Silver shading ring
Explosion proof coil according
to ATEX - EExmII Series7
For use with oxygen

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E111A.....12///	1/8”	1.2	0.04	0	25	25	12	8	6.5	3	22	NBR=B	-10 +90
E111A.....15///		1.5	0.06	0	16	16							
E111A.....20///		2	0.09	0	12	10							
E111A.....25///		2.5	0.14	0	8	5.5						EPDM=E	<+140
E111A.....31///		3.1	0.19	0	5	2							
E111A.....20///		2	0.09	0	25	15	15	11	5	4	30	FPM=V	-10 +130
E111A.....25///		2.5	0.14	0	16	8							
E111A.....31///		3.1	0.19	0	8	4							

① Seal
② Coil

Example: E111AB20///30B NBR seal
Coil 24V 50/60Hz

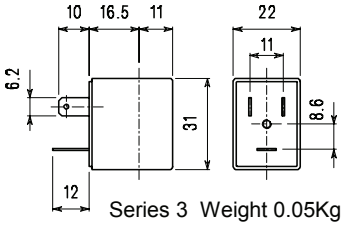
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **111**

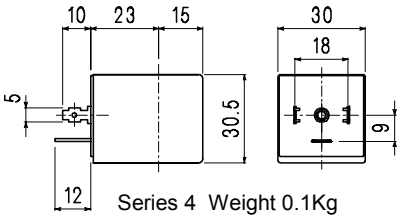
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000
Series **4** Width 30 Code ②	40A	40B	40C	40D	40E	40F	40G	400	401	402	DIN 43650A	PG9 code 10349000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

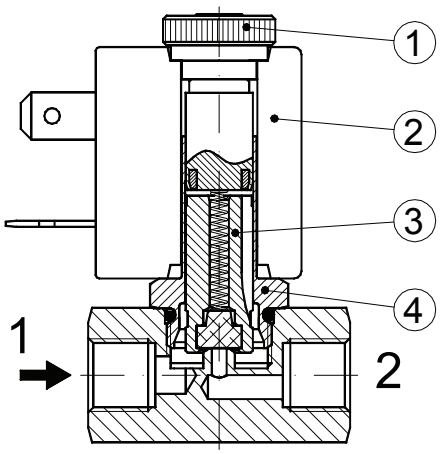


Series 3 Weight 0.05Kg

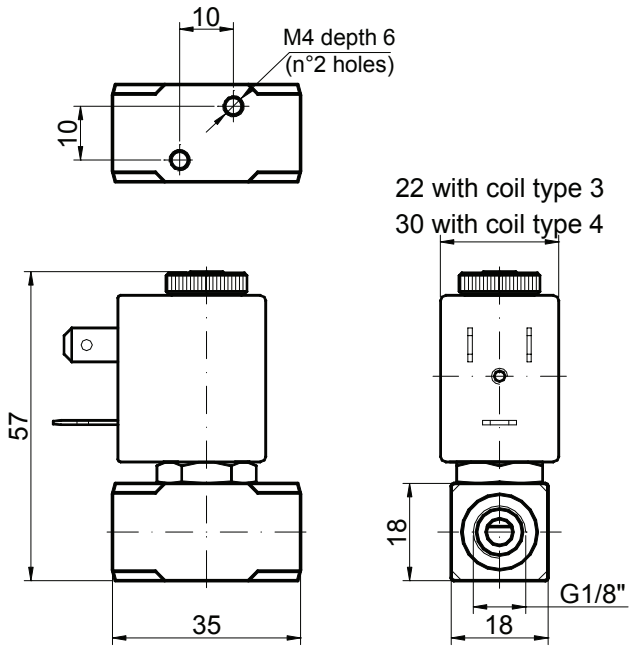


Series 4 Weight 0.1Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



Weight with coil series 3 = 0.15 Kg
Weight with coil series 4 = 0.20 Kg

DESCRIPTION

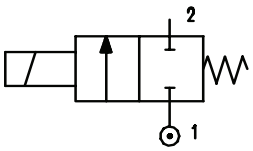
Solenoid valve 2 way normally close
direct acting poppet type

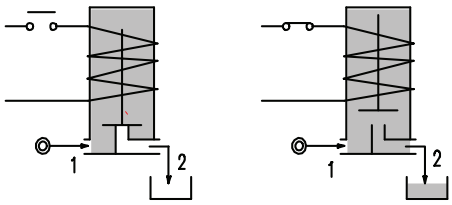
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according
to ATEX - EExmII Series7

CODE ① ②	Flange	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E112X.....12///	Q 25	1.2	0.04	0	25	25	12	8	6.5	3	22	NBR=B	-10 +90
E112X.....15///		1.5	0.06	0	16	16						EPDM=E	<+140
E112X.....20///		2	0.09	0	12	10							
E112X.....25///		2.5	0.14	0	8	5.5							
E112X.....20///		2	0.09	0	25	15	15	11	5	4	30	FPM=V	-10 +130
E112X.....25///		2.5	0.14	0	16	8							

① Seal
② Coil

Example: E112XB20///30B NBR seal
Coil 24V 50/60Hz

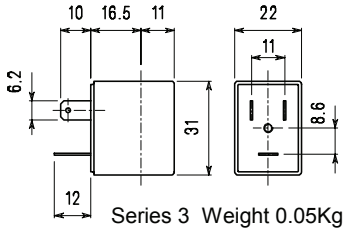
Solenoid valve supplied without fixing screws

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

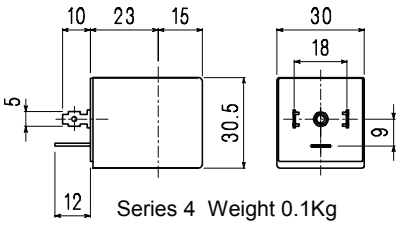
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical Connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000
Series **4** Width 30 Code ②	40A	40B	40C	40D	40E	40F	40G	400	401	402	DIN 43650A	PG9 code 10349000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

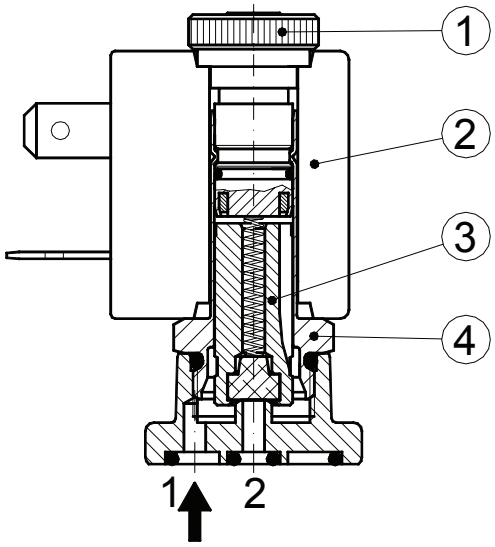


Series 3 Weight 0.05Kg

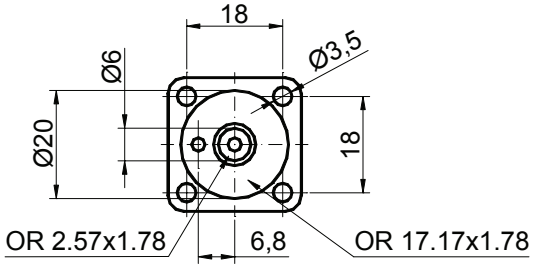


Series 4 Weight 0.1Kg

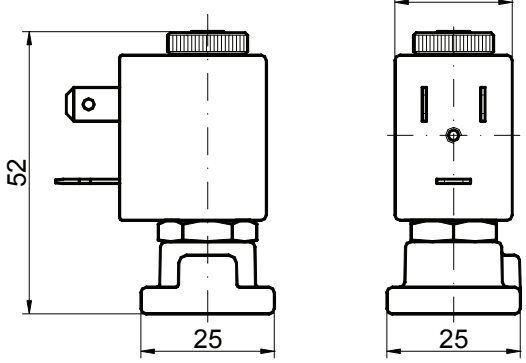
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



22 with coil series 3
30 with coil series 4



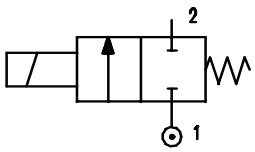
Weight with coil series 3 = 0.12 Kg
Weight with coil series 4 = 0.17 Kg

DESCRIPTION

Solenoid valve 2 way normally closed
direct acting poppet type

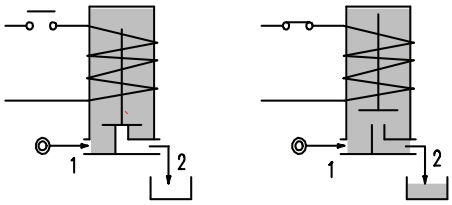
CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM
	PTFE



FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Manual override
Electroless nickel plating
Stainless steel seat

CODE ① ②	Flange	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E114X.....15///.....	Q 32	1.5	0.07	0	30	26	20	15	10	2	30	NBR=B	-10 +90
E114X.....20///.....		2	0.1	0	22	20							
E114X.....25///.....		2.5	0.15	0	16	14						EPDM=E	<+140
E114X.....35///.....		3.5	0.32	0	10	8							
E114X.....45///.....		4.5	0.41	0	6.5	3.5						FPM=V	-10 +130
E114X.....52///.....		5.2	0.47	0	4	1.8							
E114X.....25///.....		2.5	0.15	0	35	33	40	30	27	5	36	PTFE=W ③	-10 +160
E114X.....35///.....		3.5	0.32	0	20	19							
E114X.....45///.....		4.5	0.41	0	14	13							
E114X.....52///.....		5.2	0.47	0	10	9							

① Seal — Example: E114XB25///20E NBR seal
② Coil — Coil 220V 50/60Hz
③ Maximum allowable leakage < 0.2nL/h

Solenoid valve supplied without fixing screws

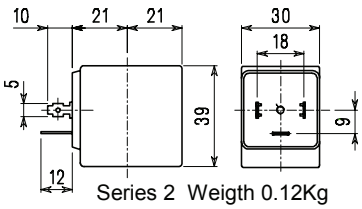
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **114**

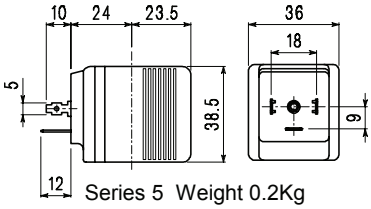
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	521	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

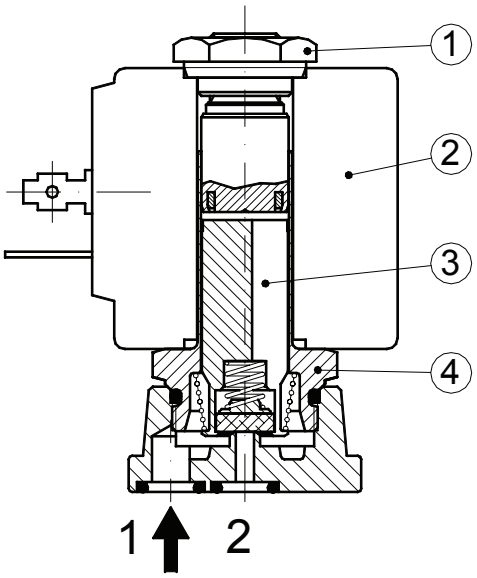


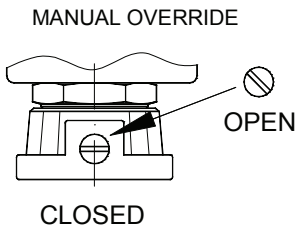
Series 2 Weigth 0.12Kg



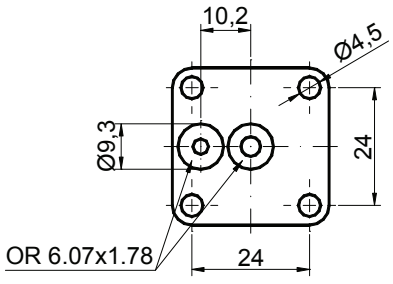
Series 5 Weight 0.2Kg

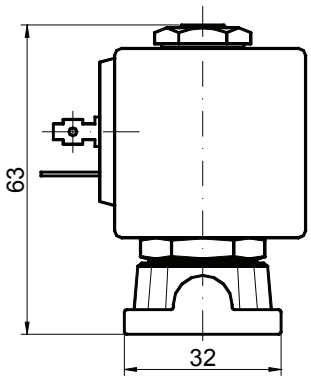
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



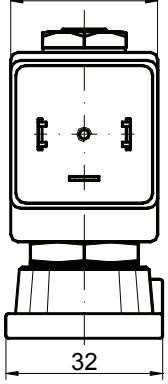


OVERALL DIMENSION





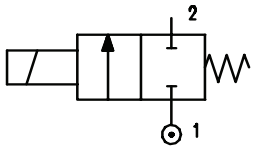
36 with coil series 5
30 with coil series 2



Weight with coil series 2 = 0.24 Kg
Weight with coil series 5 = 0.32 Kg

DESCRIPTION

Solenoid valve 2 way direct acting poppet type . Bi-stable impulse drive. The bi-stable function is achieved by the use of a polarised permanent magnet energising the coil with a DC current for at least 15ms in the reverse direction of the preceding impulse.

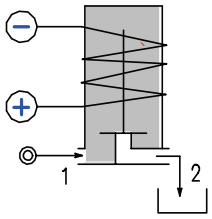


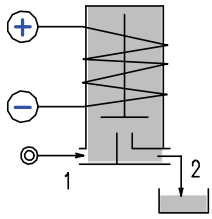
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Magnet	NeFeB
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS :

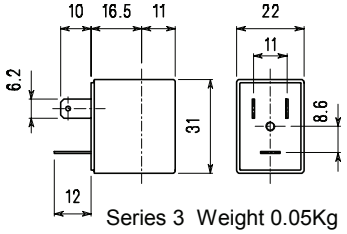
Armature tube in stainless steel
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series7
Special powers

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
D115A.....12///.....	1/8"	1.2	0.04	0	12	2	3	22	NBR=B	-10 +90
D115A.....15///.....	1/8"	1.5	0.06	0	8	2				
		1.5	0.06	0	20	5				
D115A.....20///.....	1/8"	2	0.09	0	3	2				
		2	0.09	0	12	5			EPDM=E	<+120
D115A.....25///.....	1/8"	2.5	0.14	0	1	2				
		2.5	0.14	0	5	5				
		2.5	0.14	0	8	6.5				
D115A.....31///.....	1/8"	3.1	0.19	0	2	5			FPM=V	-10 +120
		3.1	0.19	0	3.5	6.5				

① Seal
② Coil

Example: D115AE20///300120 EPDM seal
Coil 12V DC 2W

COIL	DIRECT CURRENT															Electrical connection	Connectors
	3V			6 V			9 V			12 V			24 V				
	2W	5W	6.5W	2W	5W	6.5W	2W	5W	6.5W	2W	5W	6.5W	2W	5W	6.5W		
Series **3** **Width 22** **Code** ②	308120			305120	305150		307120	307150		300120	300150	300	301120	301150	301	**DIN 46244**	**PG9 code 10348000**

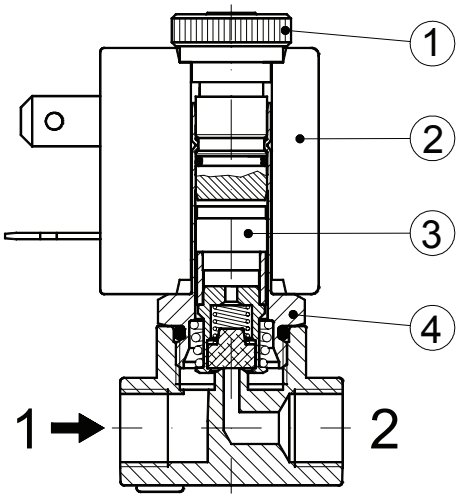


Series 3 Weight 0.05Kg

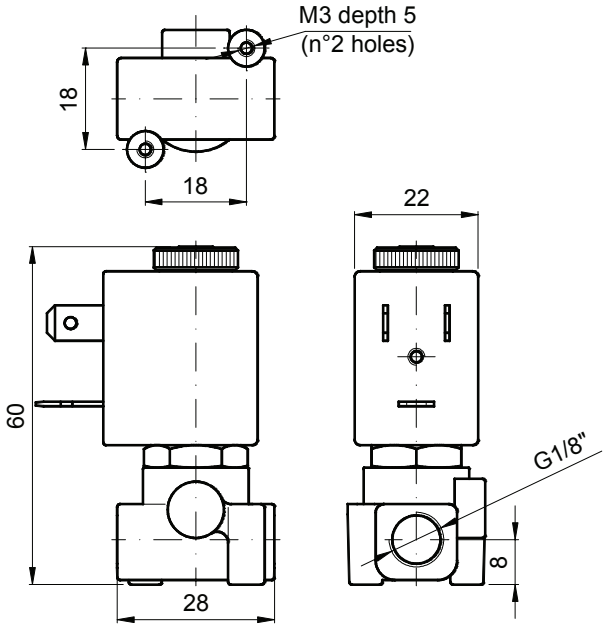
DESCRIPTION
Class F insulation
Voltage tolerance ± 10%
Protection class
IP65 with connector fitted
IP00 without connector

OPTIONS
Class H insulation
Cable attached
Special coil powers
Special coil voltages

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



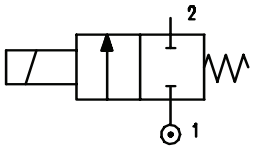
Weight = 0.14 Kg

DESCRIPTION

Solenoid valve 2 way direct acting poppet type . Bi-stable impulse drive. The bi-stable function is achieved by the use of a polarised permanent magnet energising the coil with a DC current for at least 15ms in the reverse direction of the preceding impulse.

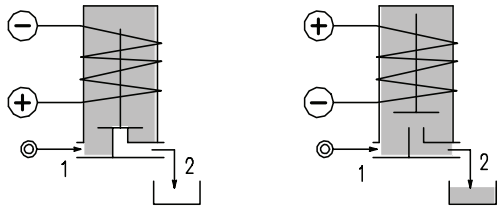
CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Magnet	NeFeB
Springs	Stainless steel
Seal	NBR
	FPM
	EPDM



FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Stainless steel seat insert
Electroless nickel plating
Special powers

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
D116A.....15///.....	1/8”	1.5	0.07	0	-	26	-	-	10	2	30	NBR=B	-10 +90
D116A.....20///.....		2	0.1	0	-	20							
D116A.....25///.....		2.5	0.15	0	-	14							
D116A.....35///.....		3.5	0.32	0	-	8							
D116B.....15///.....	1/4”	1.5	0.07	0	-	26							
D116B.....20///.....		2	0.1	0	-	20							
D116B.....25///.....		2.5	0.15	0	-	14							
D116B.....35///.....		3.5	0.32	0	-	8							
D116B.....45///.....		4.5	0.41	0	-	3.5							
D116B.....52///.....		5.2	0.47	0	-	1.8						EPDM=E	<+140
D116C.....30///.....	3/8”	3	0.25	0	-	10							
D116C.....35///.....		3.5	0.32	0	-	8							
D116C.....40///.....		4	0.36	0	-	5							
D116C.....45///.....		4.5	0.41	0	-	3.5						FPM=V	-10 +130
D116C.....52///.....		5.2	0.47	0	-	1.8							
D116D.....30///.....	1/2”	3	0.25	0	-	10							
D116D.....35///.....		3.5	0.32	0	-	8							
D116D.....40///.....		4	0.36	0	-	5							
D116D.....45///.....		4.5	0.41	0	-	3.5							
D116D.....52///.....		5.2	0.47	0	-	1.8							

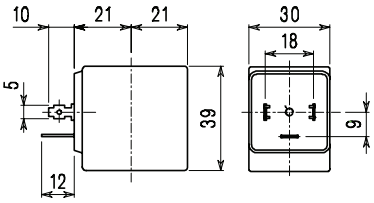
① Seal — Example: D116BB25///201 NBR seal
② Coil — Coil 24V DC

* REMARK: The maximum allowable pressure PS for steam is 2,5 bar (gauge pressure) with EPDM seals

COIL	Direct Current Volt			Electrical connection	Connectors
	12	24	48		
Series **2** Width 30 Code ②	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

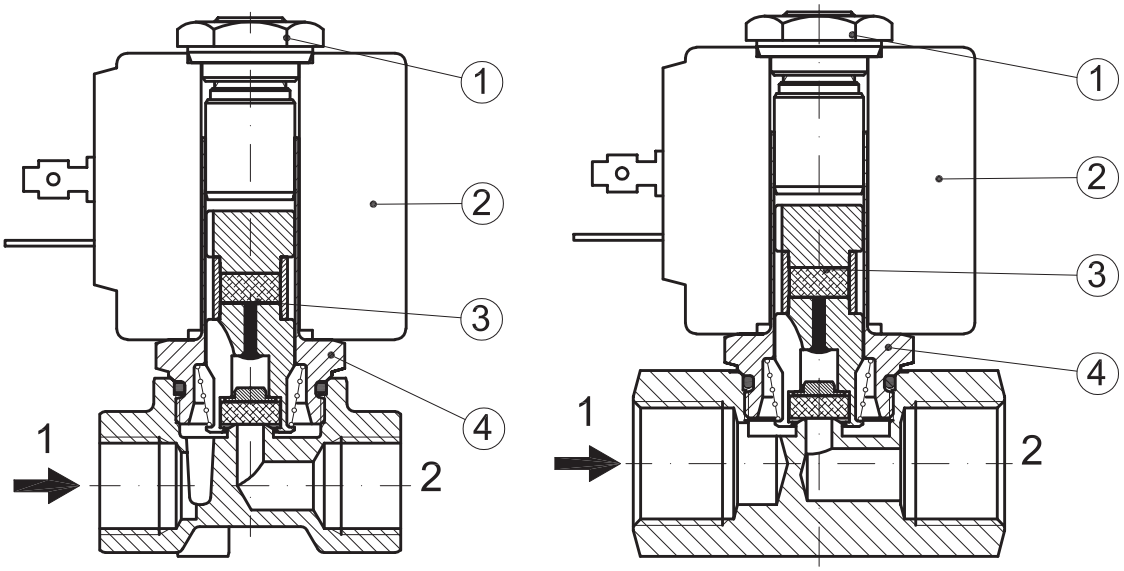
DESCRIPTION
Insulation class F
Voltage tolerance ± 10%
Protection class
IP65 with connector fitted
IP00 without connector

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

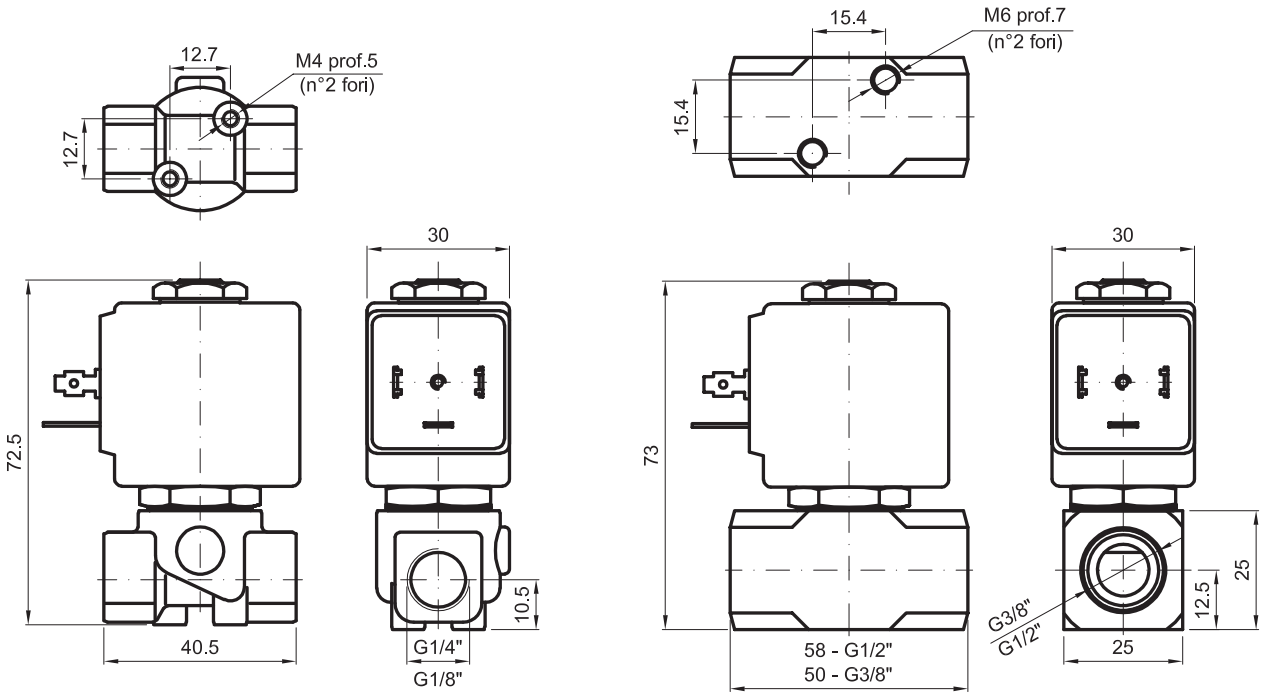


Series 2 Weight 0.12Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger assembly
4. Armature tube assembly



OVERALL DIMENSION



DESCRIPTION

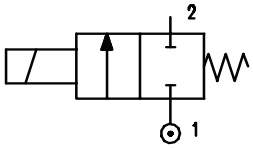
Solenoid valve 2 way normally closed
direct acting poppet type

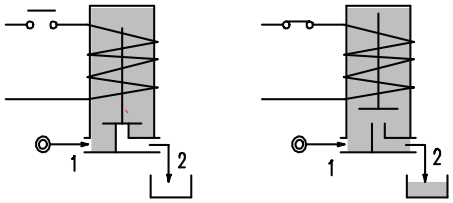
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM

FEATURES

Maximum allowable pressure 30 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Electroless nickel plating

CODE ① ②	Connection	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. Range °C
D121L.....10///.....	M5	1	0.03	0	-	10	-	-	2	6	16	NBR=B	-10 +90
D121L.....12///.....		1.2	0.037	0	-	7	-	-	2				
D121L.....12///.....		1.2	0.037	0	-	12	-	-	4				
D121L.....16///.....		1.6	0.055	0	-	3	-	-	2				
D121L.....16///.....		1.6	0.055	0	-	8	-	-	4			FPM=V	-10 +130
D121L.....20///.....		2	0.082	0	-	1.4	-	-	2				
D121L.....20///.....		2	0.082	0	-	4	-	-	4				

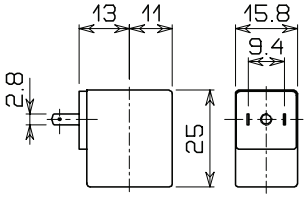
① Seal
② Coil

Example: D121LV12///60112 FPM seal
Coil 24V DC 2W

COIL	Direct Current				Electrical connection	Connectors
	12V		24V			
	2W	4W	2W	4W		
Series **6** Width 16 Code ②	**60012**	**60014**	**60112**	**60114**	**AMP 2.8X0.5**	**PG7 10348040**

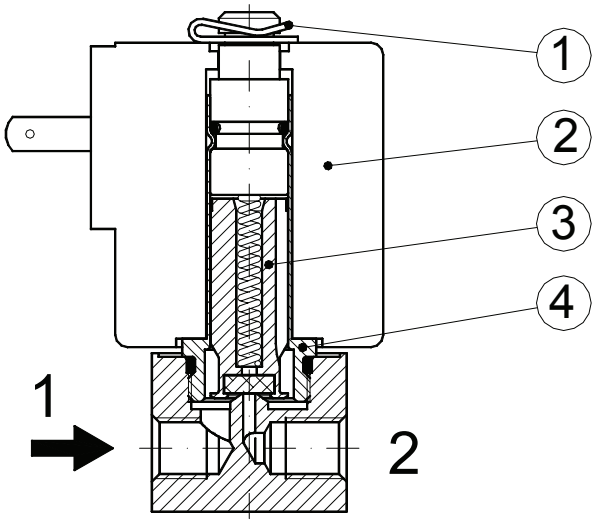
DESCRIPTION
Class F insulation
Voltage tolerance ± 5%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Cable attached
Special coil voltages
Special coil powers

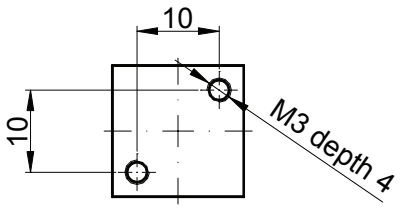


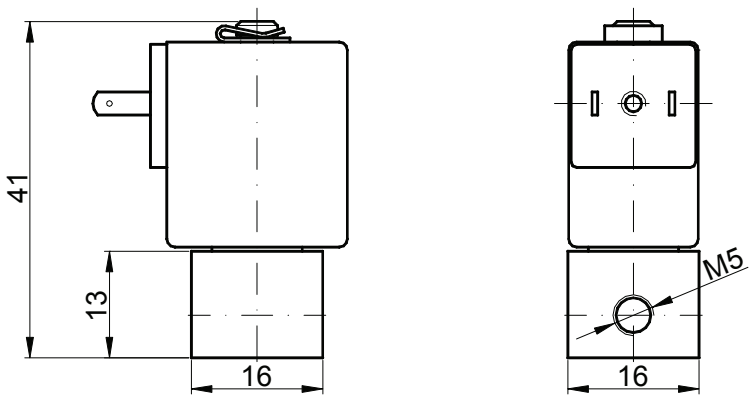
Series 6 Weight 0.02Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION





Weight = 0.05 Kg

DESCRIPTION

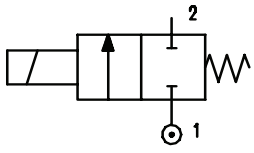
Solenoid valve 2 way normally closed direct acting poppet type, suitable for food application and all compatible fluids.

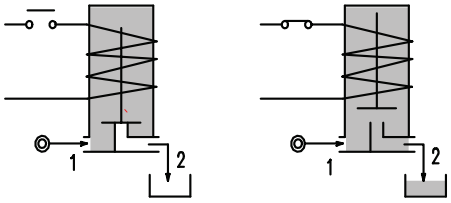
CONSTRUCTION

Body	Thermoplastic polymer: NSF, WRC, KTW, FDA certified
Armature tube	Brass chemically nickel plated
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR food contact certified FPM food contact certified EPDM food contact certified

FEATURES

Maximum allowable pressure 30 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Stainless steel armature tube
Type N connection without nut

CONNECTIONS					
K	**N**	**P**	**W** ③	**Y**	**Z**
					
SPIGGOT	**G1/8"** male thread with **NUT** for flexible and semiflexible pipes	**HOSETAIL** for flexible pipes	**COMPRESSION** for flexible and semiflexible pipes	**PUSH IN** for semiflexible pipes ∅ext.6	**PUSH IN** for semiflexible pipes ∅ext.4

CODE ① ②	Connection *	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. Range ** °C
E135*...15///.....	K-N-P-W-Y-Z	1.5	0.06	0	16	16	12	8	6.5	3	22	NBR=A	-10 +90
E135*...20///.....	K-N-P-W-Y-Z	2	0.09	0	12	10							
E135*...25///.....	K-N-P-W-Y-Z	2.5	0.14	0	8	5.5							
E135*...30///.....	K-N-P-Y	3	0.19	0	4.5	2							
E135*...40///.....	N-P-Y	4	0.35	0	2.5	1.2						EPDM=E	<+140
E135*...20///.....	K-N-P-W-Y-Z	2	0.09	0	25	15	15	11	5	4	30		
E135*...25///.....	K-N-P-W-Y-Z	2.5	0.14	0	16	8							
E135*...30///.....	K-N-P-Y	3	0.19	0	8	4						FPM=V	-10 +130
E135*...40///.....	N-P-Y	4	0.35	0	5	2.5							

① Seal — Example: E135KA20///30B NBR seal SPIGGOT connection
② Coil — Coil 24V 50/60Hz
③ Only for connection "W" — E135W…./1/….

REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

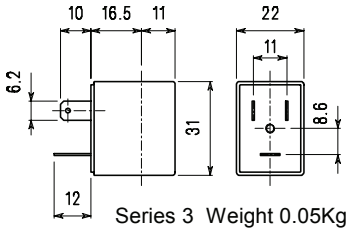
** The temperature range is related to the material of the seals (NBR, EPDM, FPM), and the valves' body. Please contact us concerning the temperature range referred to the different types of connection.

Series **135**

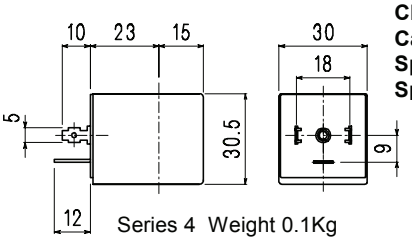
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000
Series **4** Width 30 Code ②	40A	40B	40C	40D	40E	40F	40G	400	401	402	DIN 43650A	PG9 code 10349000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

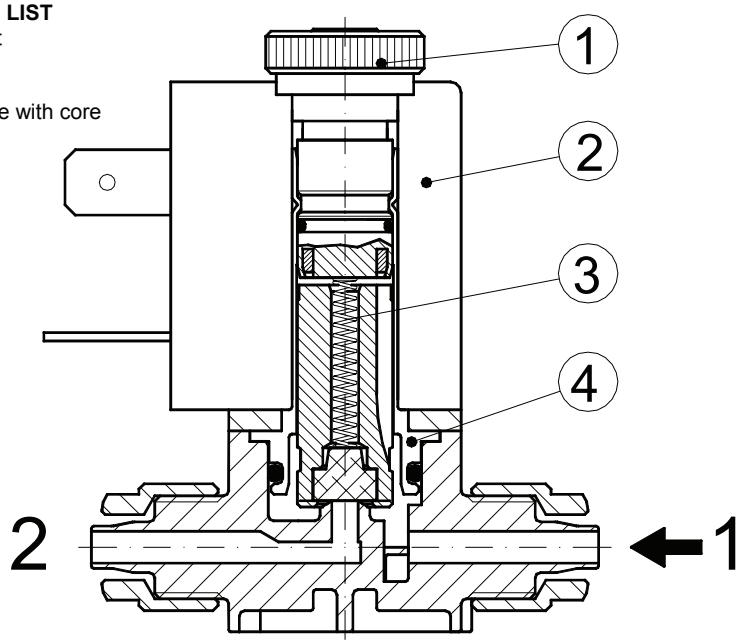


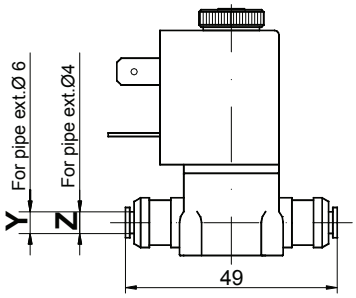
Series 3 Weight 0.05Kg

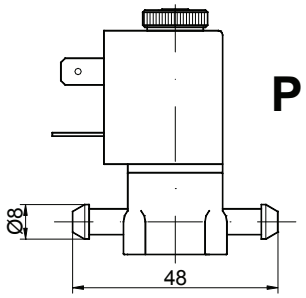


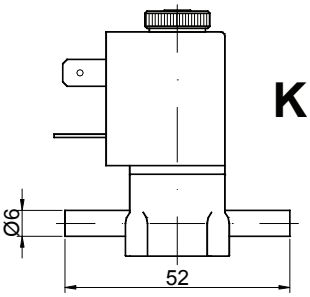
Series 4 Weight 0.1Kg

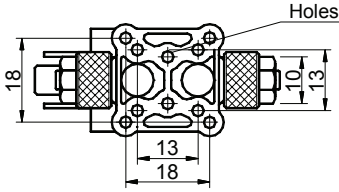
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core

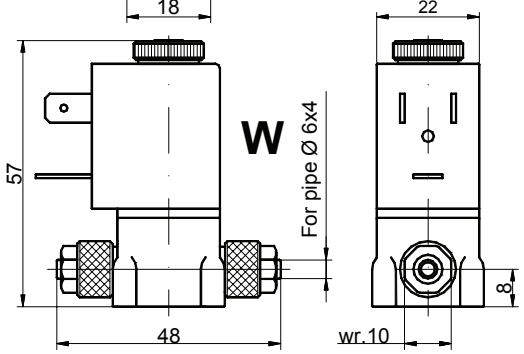




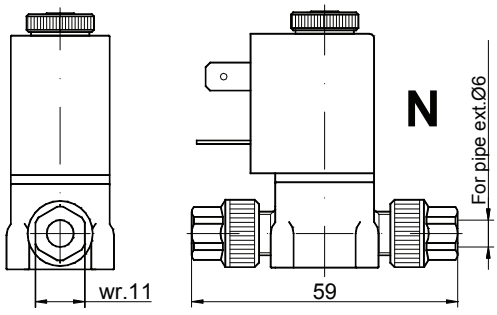








Nut Max torque 2 Nm



Screw the nut with wrench 11 up to the sliding on the hexagon (TORQUE LIMITING DEVICE)

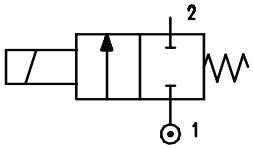
Weight with coil series 3 = 0.10 Kg
Weight with coil series 4 = 0.15 Kg

DESCRIPTION

Solenoid valve 2 way normally closed
direct acting with dry armature.
No metal parts in contact with the media.

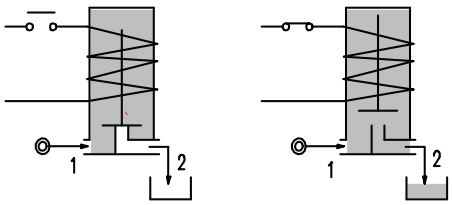
CONSTRUCTION

Body	Acetal copolymer
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	Silicone



FEATURES

Maximum allowable pressure 2 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above.



Versions with closed vent

CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E150PS75///.....	-	7.5	0.7	0	0.2	0.2	12	8	6.5	3	22	SILICONE=S	< +95
E150PS75/6/.....	1/4"	7.5	0.7	0	0.2	0.2							
D150PS75///.....	-	7.5	0.7	0	-	0.2							
D150PS75/5/.....	1/4"	7.5	0.7	0	-	0.2							

Versions with open vent

CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E150PS75/7/.....	-	7.5	0.7	0	0.2	0.2	12	8	6.5	3	22	SILICONE=S	< +95
E150PS75/1/.....	1/4"	7.5	0.7	0	0.2	0.2							
D150PS75/4/.....	-	7.5	0.7	0	-	0.2							
D150PS75/3/.....	1/4"	7.5	0.7	0	-	0.2							

② Coil

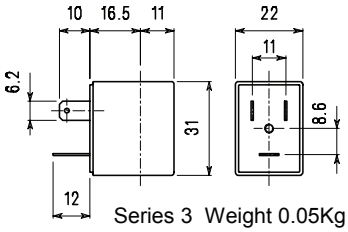
Example: E150PS75///30E Fixing by flange – Closed vent
Coil 220V 50/60Hz

Series **150**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical Connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

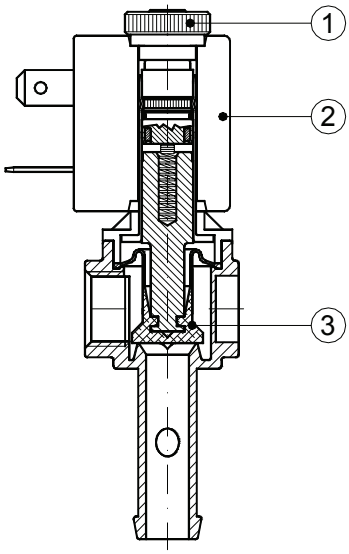
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

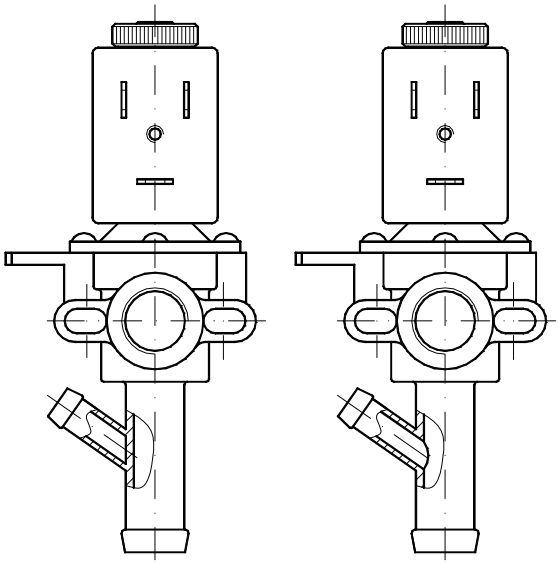
OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers



Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Diaphragm

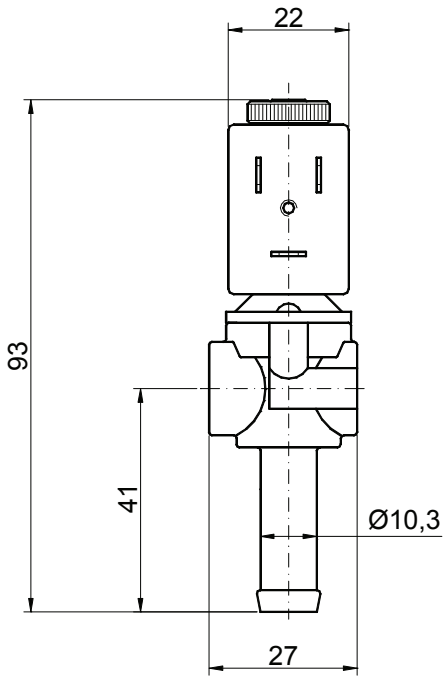


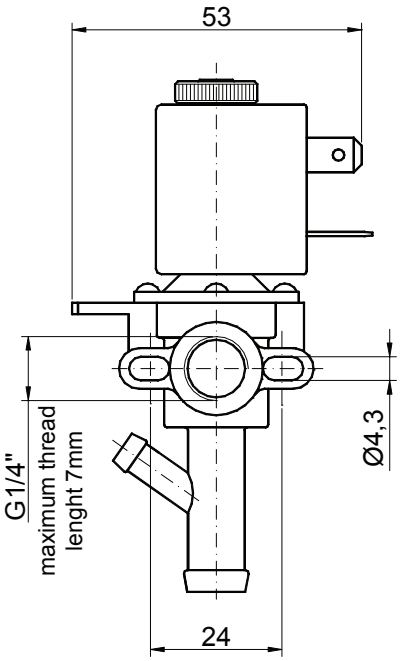


Version with closed vent

Version with open vent

OVERALL DIMENSION





Weight = 0.1 Kg

DESCRIPTION

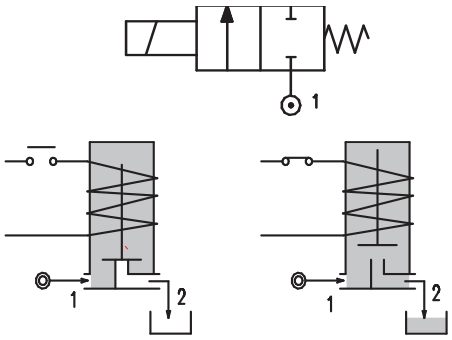
Solenoid valve 2 way normally closed
direct acting with dry armature.
No metal parts in contact with the media.

CONSTRUCTION

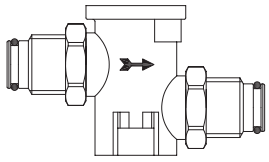
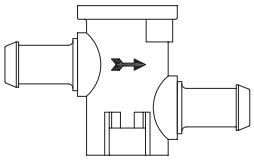
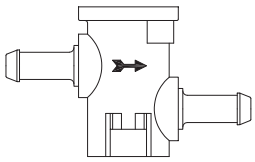
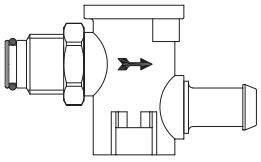
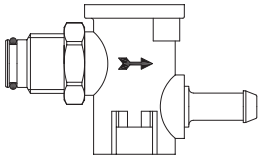
Body	Acetal copolymer
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Diaphragm	Silicone

FEATURES

Maximum allowable pressure 2 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above



OPTIONS : Nickel plated armature tube
For connection accessories see section 8

CONNECTION				
E151BBS70	**E151PPS60**	**E151PPS40**	**E151BPS60**	**E151BPS40**
				
G1/4”	**Hosetail DN6**	**Hosetail DN4**	**G1/4” - Hosetail DN6**	**G1/4” - Hosetail DN4**

OTHER CONFIGURATIONS AVAILABLE ON REQUEST

CODE ②	Connection	Orifice mm	KV m³/h	Differential pressure bar			Nominal power			Coil		Diaphragm	Temp. range °C
				Min	Max		AC	VA	DC	Series	Width		
					AC	DC	Inrush	Holding	Watt				
E151BBS70///…	**G1/4”**	**7**	**0.83**	**0**	**0.6**	**0.3**							
E151PPS60///…	**Hosetail DN6**	**6**	**0.63**	**0**	**0.6**	**0.3**							
E151PPS40///…	**Hosetail DN4**	**4**	**0.34**	**0**	**0.6**	**0.3**	**12**	**8**	**6.5**	**3**	**22**	**SILICONE=S**	**< +95**
E151BPS60///…	**G1/4”- Hosetail DN6**	**6**	**0.63**	**0**	**0.6**	**0.3**							
E151BPS40///…	**G1/4”- Hosetail DN4**	**4**	**0.34**	**0**	**0.6**	**0.3**							

② Coil

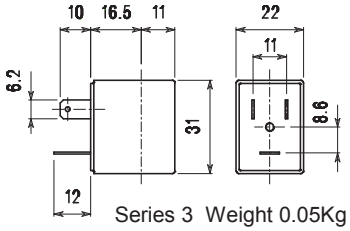
Example: E151BPS60///30E G1/4” inlet , Hosetail DN6 outlet, silicone seal
Coil 220V 50/60Hz

FOR HIGHER DIFFERENTIAL PRESSURE CONTACT THE MANUFACTURER

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

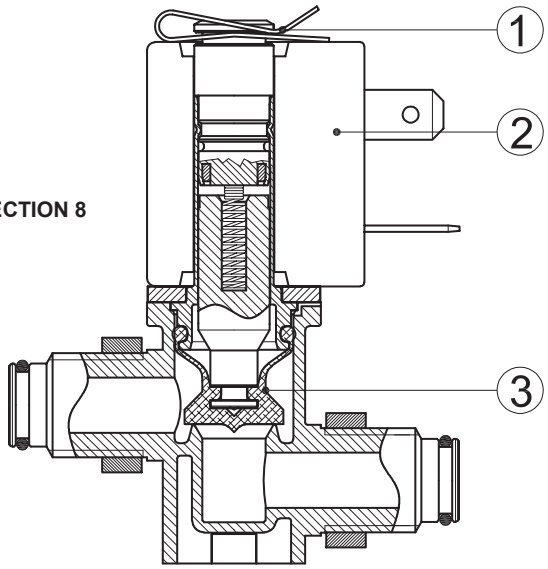
OPTIONS
Class H insulation
Cable attached
Special coil voltage
Special coil powers



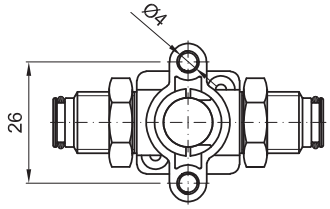
Series 3 Weight 0.05Kg

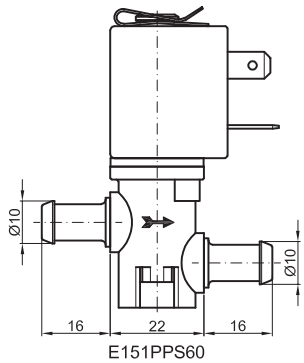
SPARE PARTS LIST
1. Coil fixing clip
2. Coil
3. Diaphragm

FOR CONNECTION ACCESSORIES SEE SECTION 8

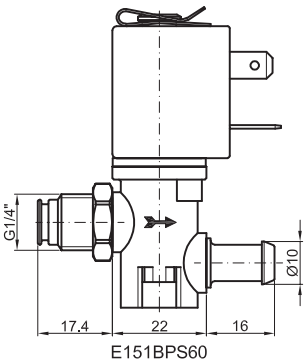


OVERALL DIMENSION

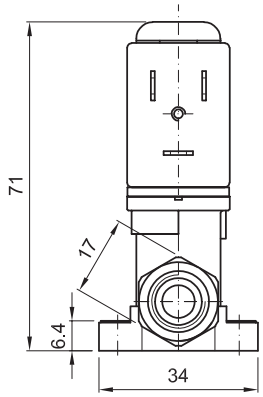


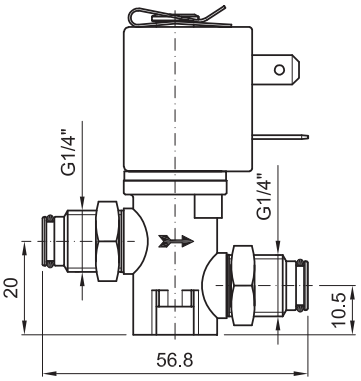


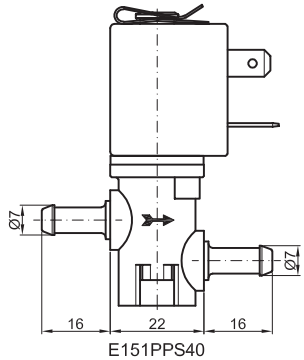
E151PPS60



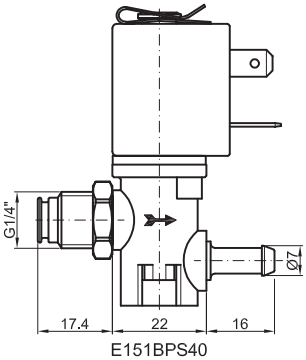
E151BPS60







E151PPS40



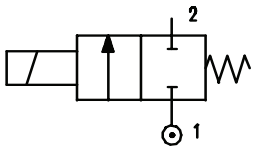
E151BPS40

DESCRIPTIONS

Solenoid valve 2 way normally closed
direct acting with dry armature.
No metal parts in contact with the media.

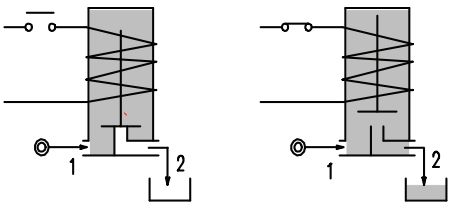
CONSTRUCTION

Body	Acetal copolymer
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	Silicone



FEATURES

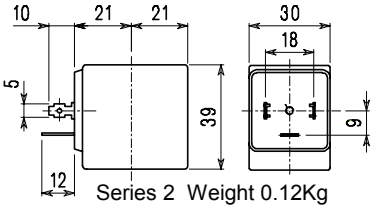
Maximum allowable pressure 1.5 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Mounting position with vertical coil above



CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar		Nominal power			Coil		Seal	Temp. range °C
				Inlet	Outlet	AC Inrush	VA Holding	DC Watt	Series	Width		
Version with closed vent												
E160SS10/2/.....	**1/2”**	**10**	**1.7**	**0.5**	**0.1**	**20**	**15**	**10**	**2**	**30**	**SILICONE=S**	**< +95**
Version with open vent												
E160SS10/3/.....	**1/2”**	**10**	**1.7**	**0.5**	**0.1**	**20**	**15**	**10**	**2**	**30**		

② Coil Example: E160SS10/2/20E Closed vent - Coil 220V 50/60Hz

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

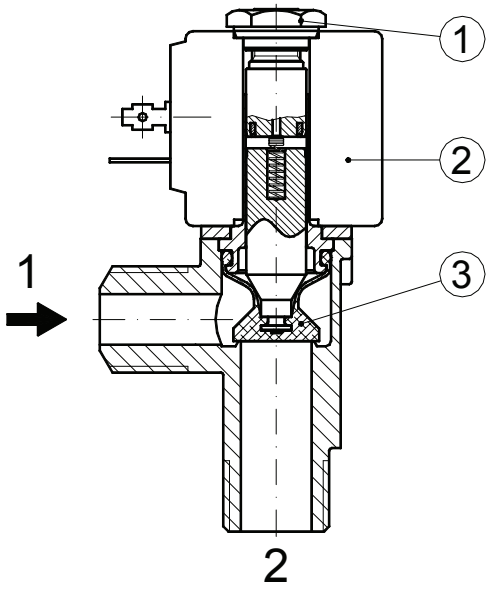


Series 2 Weight 0.12Kg

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

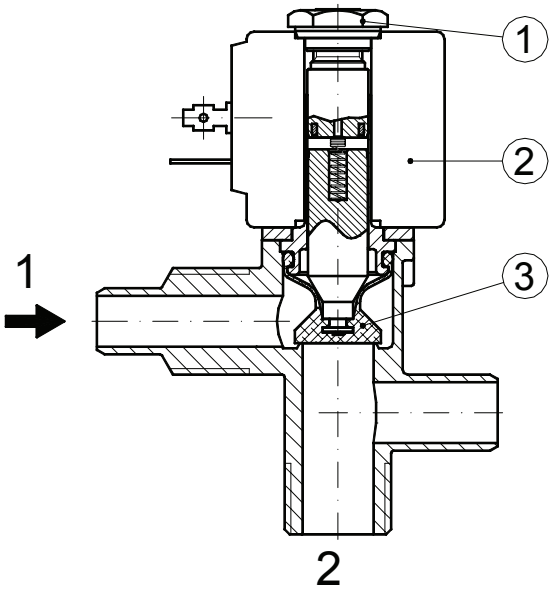
OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Diaphragm



E160SS10/2/…

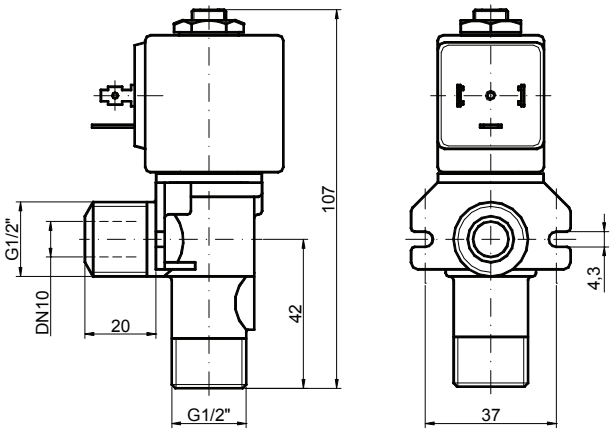
Version with closed vent



E160SS10/3/…

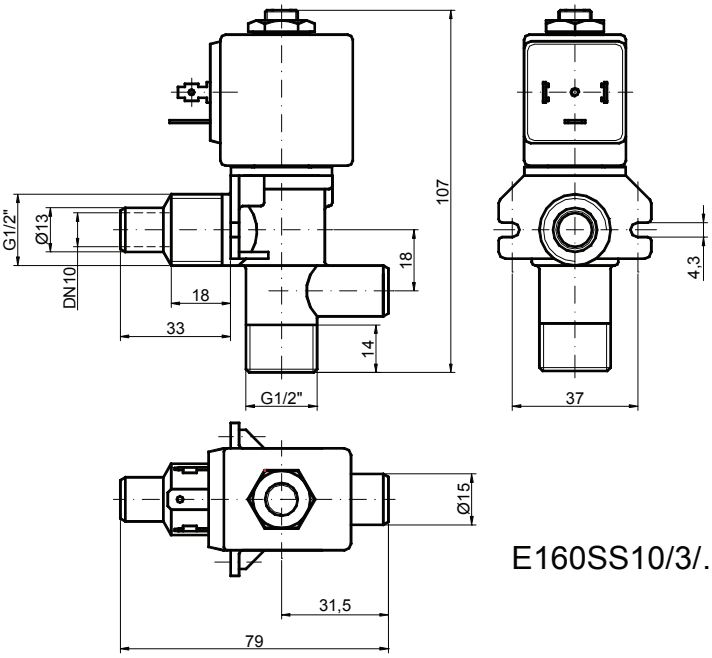
Version with open vent

OVERALL DIMENSION



E160SS10/2/…

Weight 0.22 Kg



E160SS10/3/…

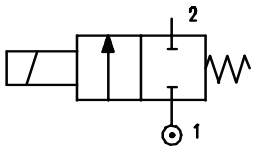
Weight 0.24 Kg

DESCRIPTION

Solenoid valve 2 way normally closed direct acting with dry armature and hosetails for flexible pipes.
No metal parts in contact with the media.

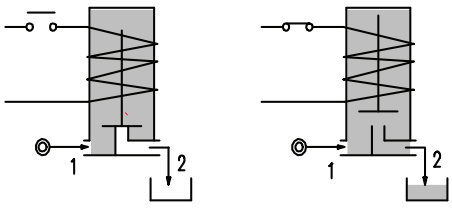
CONSTRUCTION

Body	Acetal copolymer
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	Silicone



FEATURES

Maximum allowable pressure 2 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10° +55°C
with class H coil -10° +80°C
Mounting position with vertical coil above



CODE ②	Connection mm	KV m³/h	Differential pressure bar			Nominal power			Coil		Seal	Temp. range °C
			Min	Max		AC	VA	DC	Series	Width		
				AC	DC	Inrush	Holding	Watt				
E161PS8///.....	8	1.1	0	0.15	0.15	20	15	10	2	30	SILICONE=S	< +95
E161PS8/1/.....	8	1.1	0	0.5	0.5	40	30	27	5	36		

For use with VACUUM – feeds from 2 to 1

CODE ②	Connection mm	KV m³/h	Differential pressure bar			Nominal power			Coil		Seal	Temp. range °C
			Min	Max		AC	VA	DC	Series	Width		
				AC	DC	Inrush	Holding	Watt				
E161PS8/V/.....	8	1.1	0	-0.9	-0.7	20	15	10	2	30	SILICONE=S	< +95
E161PS8/V/.....	8	1.1	0	-0.9	-0.9	40	30	27	5	36		

② Coil

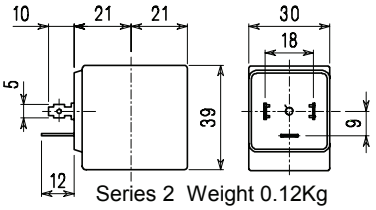
Example: E161PS8///20E
Coil 220V 50/60Hz

Series **161**

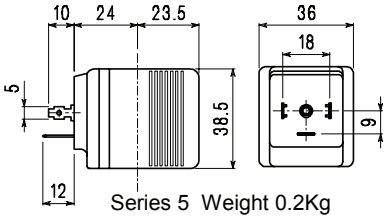
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	521	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

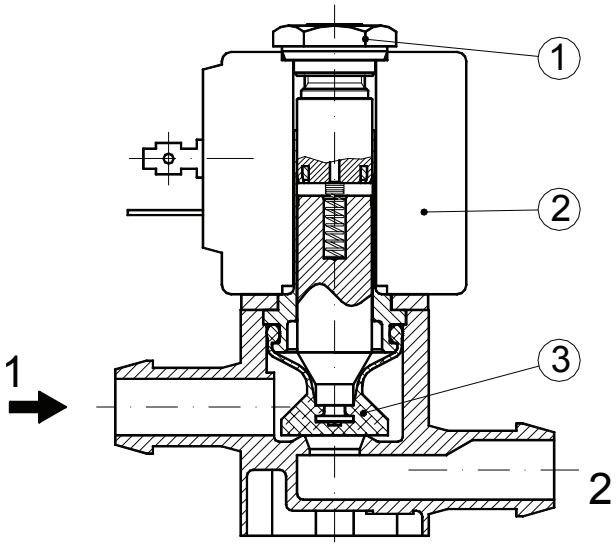


Series 2 Weight 0.12Kg

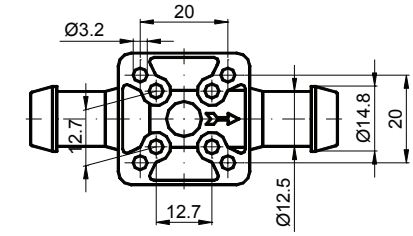


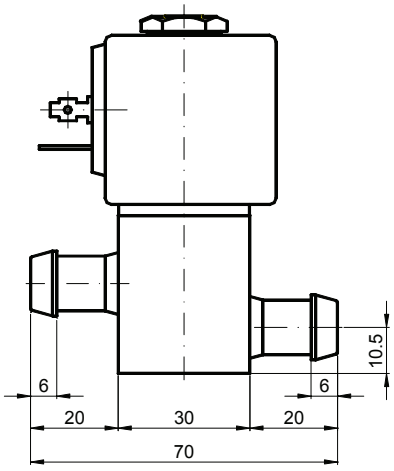
Series 5 Weight 0.2Kg

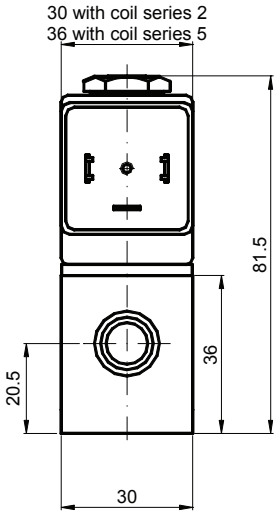
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Diaphragm



OVERALL DIMENSION







Weight with coil series 2 = 0.23 Kg
Weight with coil series 5 = 0.31 Kg

DESCRIPTION

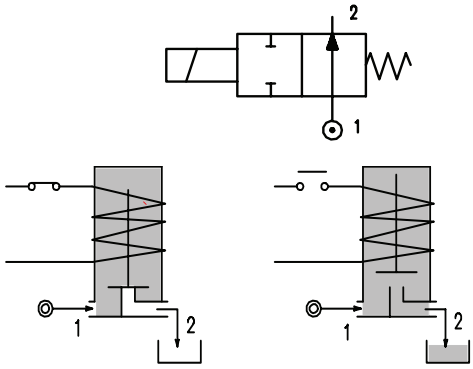
Solenoid valve in-line 2 way normally open direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Electroless nickel plating

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E203A.....20///.....	1/8”	2	0.1	0	16	16	20	15	10	2	30	NBR=B	-10 +90
E203A.....25///.....	1/8”	2.5	0.14	0	13	13						EPDM=E	<+140
E203A.....29///.....	1/8”	2.9	0.17	0	10	10						FPM=V	-10 +130

① Seal
② Coil

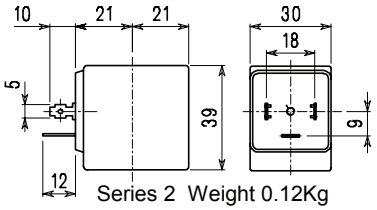
Example: E203AV25///20E FPM seal
Coil 220V 50/60Hz

Series **203**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

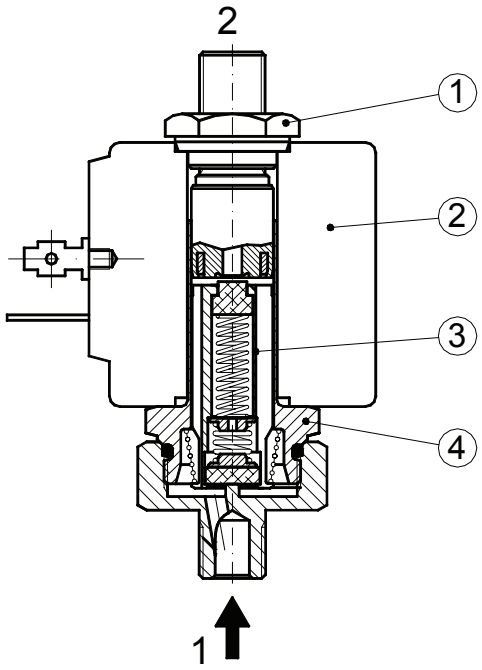
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

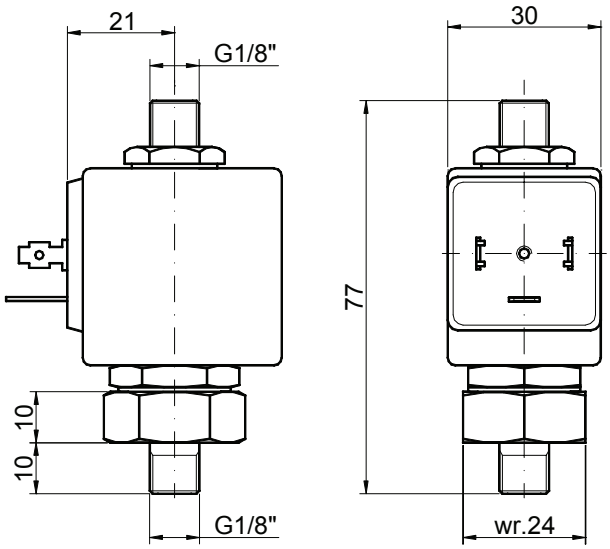


Series 2 Weight 0.12Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



Weight = 0.22 Kg

DESCRIPTION

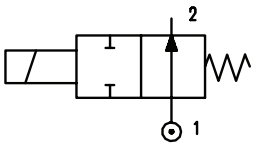
Solenoid valve in-line 2 way normally open direct acting poppet type.

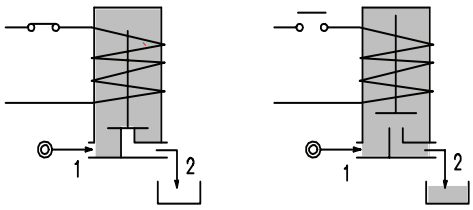
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure : max working pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS :

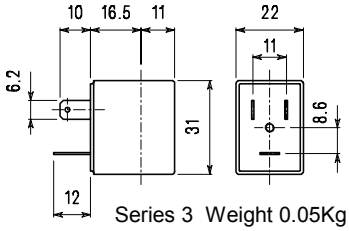
Armature tube in stainless steel
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series 7
User port with hosetail connection

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
User port with M5 connection													
E204A.....15///.....	1/8”	1.5	0.06	0	16	16	12	8	6.5	3	22	NBR=B	-10 +90
E204A.....17///.....		1.7	0.08	0	12	12							
User port with hosetail connection													
E204A.....15/1/.....	1/8”	1.5	0.06	0	16	16	12	8	6.5	3	22	EPDM=E	<+140
E204A.....17/1/.....		1.7	0.08	0	12	12							
User port with hosetail connection and relief valve													
E204A.....15/3/.....	1/8”	1.5	0.06	0	16	16	12	8	6.5	3	22	FPM=V	-10 +130
E204A.....17/3/.....		1.7	0.08	0	12	12							

① Seal — Example: E204AB17///301 NBR seal
② Coil — Coil 24V DC

Series **204**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

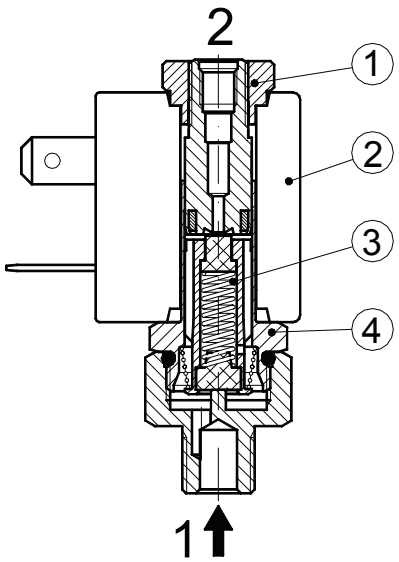


Series 3 Weight 0.05Kg

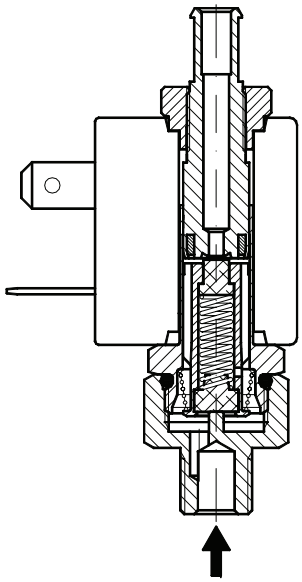
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

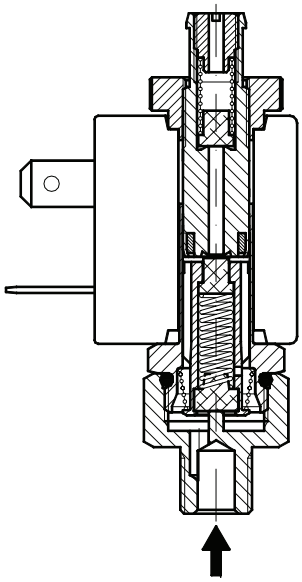
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



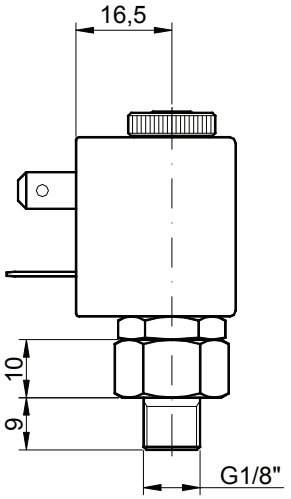
Hosetail

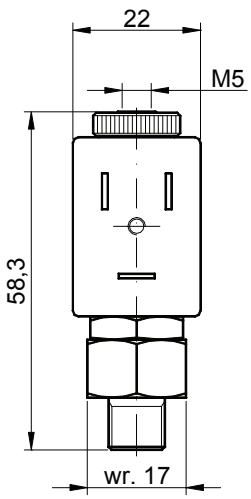


Hosetail with relief valve

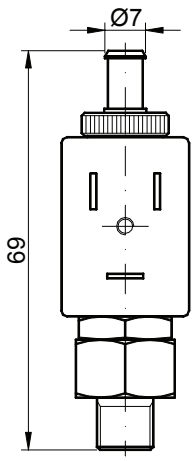


OVERALL DIMENSION

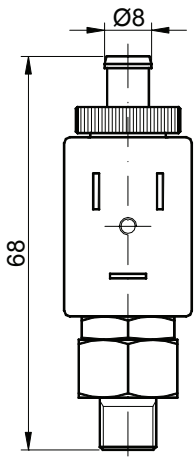




Hosetail



Hosetail with relief valve



Weight = 0.10 Kg

DESCRIPTION

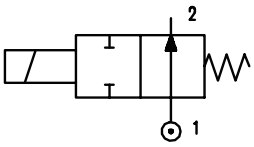
Solenoid valve 2 way normally open
open direct acting poppet type.

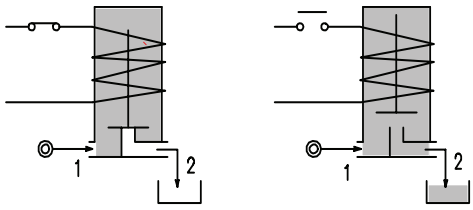
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according
to ATEX - EExmII Series 7

CODE ① ②	Connection G ISO 228	Orifice mm	KV M³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E205A.....12///	1/8”	1.2	0.04	0	19	19	12	8	6.5	3	22	NBR=B	-10 +90
E205A.....15///		1.5	0.06	0	14	14						EPDM=E	<+140
E205A.....20///		2	0.09	0	8	8						FPM=V	-10 +130
E205A.....25///		2.5	0.14	0	4.5	4.5							
E205A.....31///		3.1	0.19	0	2.5	2.5							

① Seal
② Coil

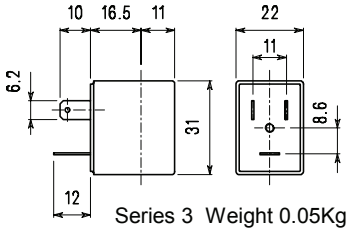
Example: E205AB20///30B NBR seal
Coil 24V 50/60Hz

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

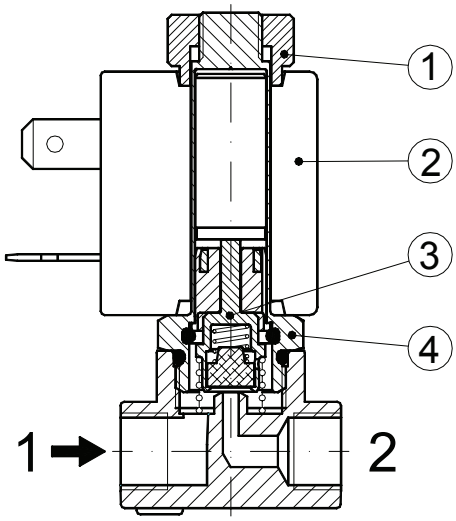
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

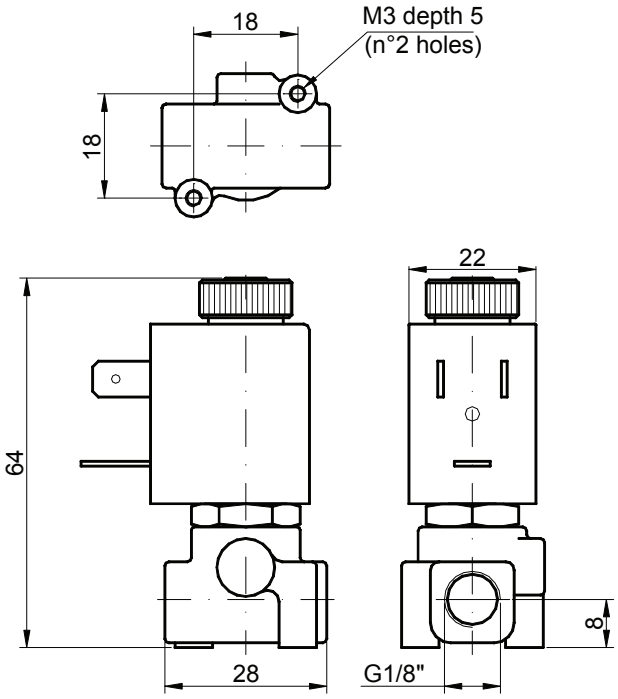


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube with core



OVERALL DIMENSION



Weight = 0.13 Kg

DESCRIPTION

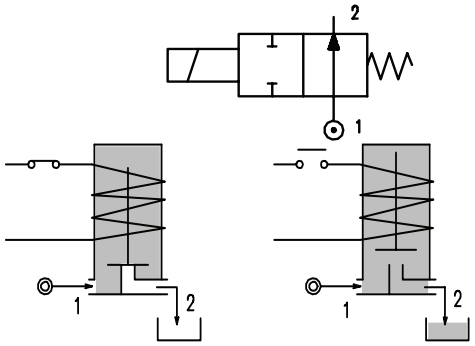
Solenoid valve 2 way normally open
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with coil class F -10°C +55°C
with coil class H -10°C +80°C
Universal mounting position



OPTIONS : Electroless nickel plating
Stainless steel armature tube

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E206A.....15///.....	1/8”	1.5	0.07	0	23	-	20	15	-	2	30	NBR=B	-10 +90
E206A.....20///.....		2	0.1	0	17	-							
E206A.....25///.....		2.5	0.15	0	12	-							
E206A.....35///.....		3.5	0.32	0	7	-							
E206A.....15///.....	1/8”	1.5	0.07	0	23	23	40	30	27	5	36	EPDM=E	<+140
E206A.....20///.....		2	0.1	0	17	17							
E206A.....25///.....		2.5	0.15	0	12	12							
E206A.....35///.....		3.5	0.32	0	7	7							
D206A.....15/3/.....	1/8”	1.5	0.07	0	-	18	-	-	10	2	30	FPM=V	-10 +130
D206A.....20/3/.....		2	0.1	0	-	11							
D206A.....25/3/.....		2.5	0.15	0	-	7							
D206A.....35/3/.....		3.5	0.32	0	-	4							

① Seal
② Coil

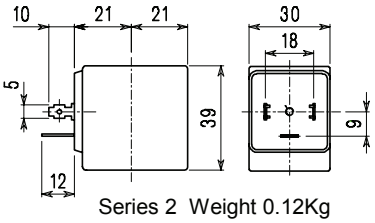
Example: E206AB35///20E NBR seal
Coil 220V 50/60Hz

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

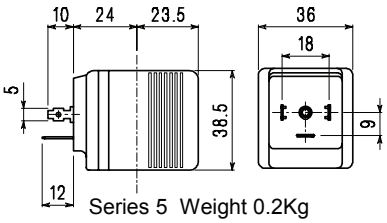
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

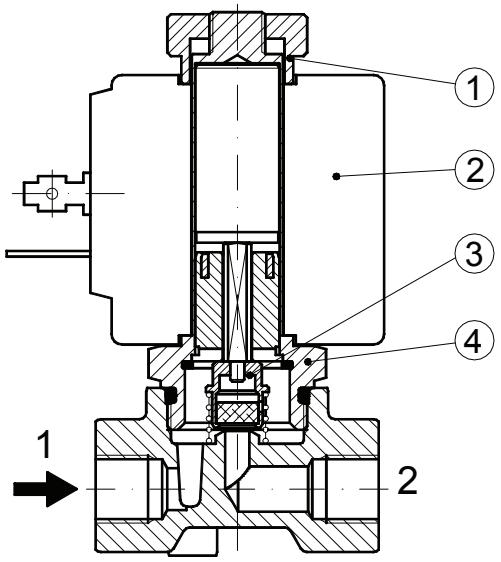


Series 2 Weight 0.12Kg

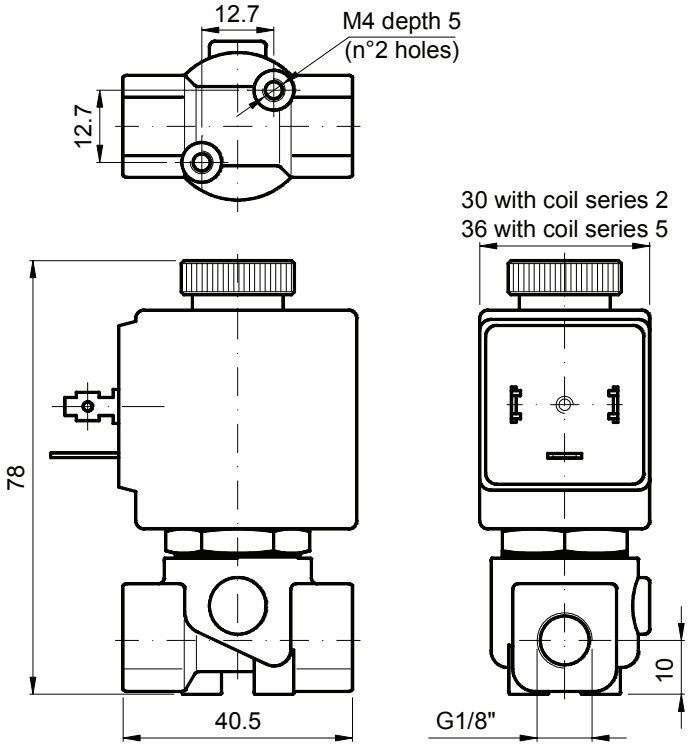


Series 5 Weight 0.2Kg

SPARE PARTS
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION



Weight with coil series 2 = 0.30 Kg
Weight with coil series 5 = 0.38 Kg

DESCRIPTION

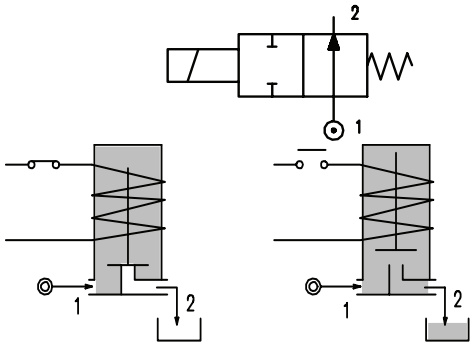
Solenoid valve 2 way normally open
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with coil class F -10°C +55°C
with coil class H -10°C +80°C
Universal mounting position



OPTIONS : Electroless nickel plating
Stainless steel armature tube

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E206B.....15///.....	1/4”	1.5	0.07	0	23	-	20	15	-	2	30	NBR=B	-10 +90
E206B.....20///.....		2	0.1	0	17	-							
E206B.....25///.....		2.5	0.15	0	12	-							
E206B.....35///.....		3.5	0.32	0	7	-							
E206B.....45///.....		4.5	0.41	0	4.5	-							
E206B.....52///.....		5.2	0.47	0	3	-							
E206B.....15///.....	1/4”	1.5	0.07	0	23	23	40	30	27	5	36		
E206B.....20///.....		2	0.1	0	17	17							
E206B.....25///.....		2.5	0.15	0	12	12							
E206B.....35///.....		3.5	0.32	0	7	7						EPDM=E	<+140
E206B.....45///.....		4.5	0.41	0	4.5	4.5							
E206B.....52///.....		5.2	0.47	0	3	3							
E206B.....64///.....		6.4	0.64	0	3.5	3.5						FPM=V	-10 +130
D206B.....15/3/.....	1/4”	1.5	0.07	0	-	18	-	-	10	2	30		
D206B.....20/3/.....		2	0.1	0	-	11							
D206B.....25/3/.....		2.5	0.15	0	-	7							
D206B.....35/3/.....		3.5	0.32	0	-	4							
D206B.....45/3/.....		4.5	0.41	0	-	3							
D206B.....52/3/.....		5.2	0.47	0	-	2.2							

① Seal
② Coil

Example: E206BB35///20E NBR seal
Coil 220V 50/60Hz

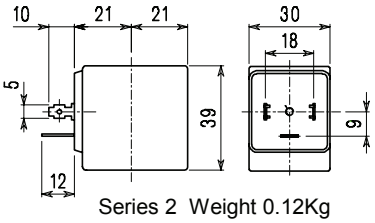
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **206**

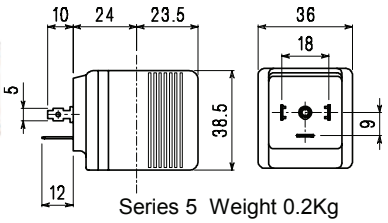
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

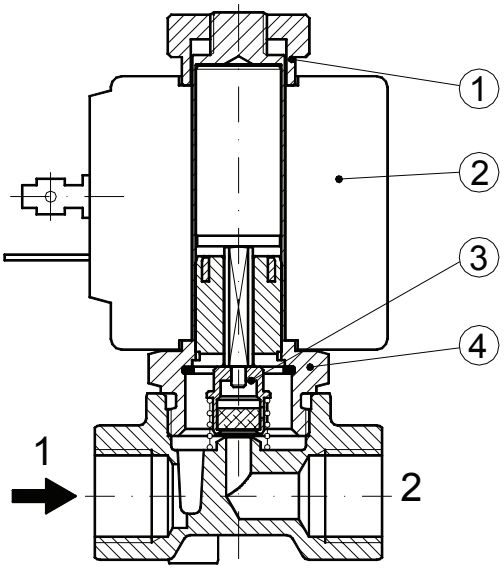


Series 2 Weight 0.12Kg

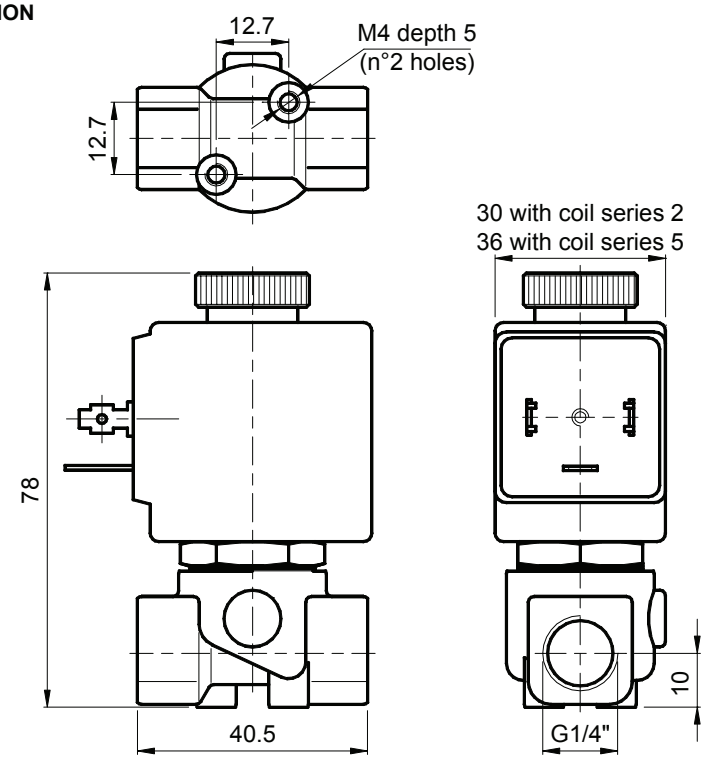


Series 5 Weight 0.2Kg

SPARE PARTS
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION



Weight with coil series 2 = 0.30 Kg
Weight with coil series 5 = 0.38 Kg

DESCRIPTION

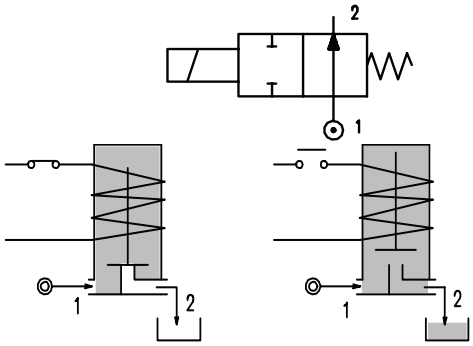
Solenoid valve 2 way normally open
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with coil class F -10°C +55°C
with coil class H -10°C +80°C
Universal mounting position



OPTIONS : Electroless nickel plating
Stainless steel armature tube

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. Range °C
E206C.....30///.....	3/8”	3	0.25	0	9	-	20	15	-	2	30	NBR=B	-10 +90
E206C.....35///.....		3.5	0.32	0	7	-							
E206C.....40///.....		4	0.36	0	5.5	-							
E206C.....45///.....		4.5	0.41	0	4.5	-							
E206C.....52///.....		5.2	0.47	0	3	-							
E206C.....30///.....	3/8”	3	0.25	0	9	9	40	30	27	5	36	EPDM=E	<+140
E206C.....35///.....		3.5	0.32	0	7	7							
E206C.....40///.....		4	0.36	0	5.5	5.5							
E206C.....45///.....		4.5	0.41	0	4.5	4.5							
E206C.....52///.....		5.2	0.47	0	3	3							
E206C.....64///.....		6.4	0.64	0	3.5	3.5							
D206C.....30/3/.....	3/8”	3	0.25	0	-	6.5	-	-	10	2	30	FPM=V	-10 +130
D206C.....35/3/.....		3.5	0.32	0	-	4							
D206C.....40/3/.....		4	0.36	0	-	3.5							
D206C.....45/3/.....		4.5	0.41	0	-	3							
D206C.....52/3/.....		5.2	0.47	0	-	2.2							

① Seal — Example: E206CB45///20E NBR seal
② Coil — Coil 220V 50/60Hz

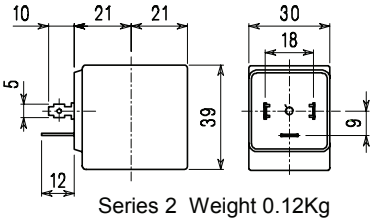
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **206**

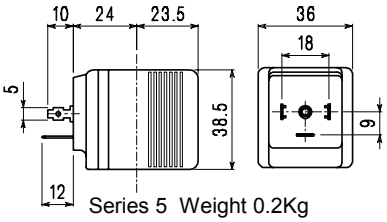
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

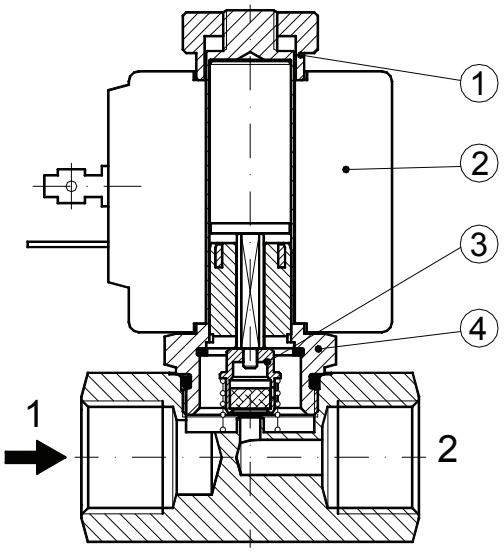


Series 2 Weight 0.12Kg

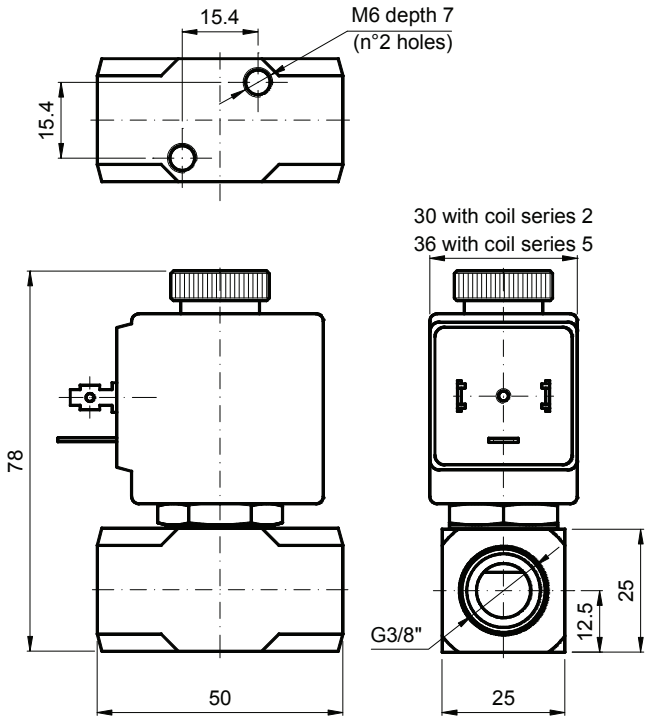


Series 5 Weight 0.2Kg

SPARE PARTS
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION



Weight with coil series 2 = 0.30 Kg
Weight with coil series 5 = 0.38 Kg

DESCRIPTION

Solenoid valve 2 way normally open
direct acting poppet type

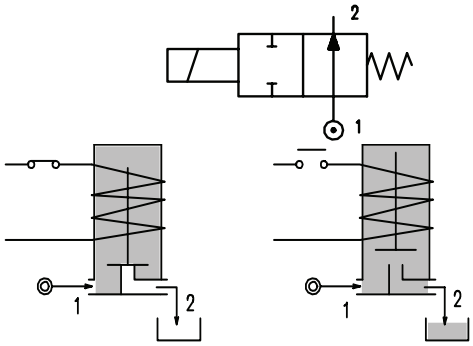
2

CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with coil class F -10°C +55°C
with coil class H -10°C +80°C
Universal mounting position



OPTIONS : Electroless nickel plating
Stainless steel armature tube

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E206D.....30///.....	1/2”	3	0.25	0	9	-	20	15	-	2	30	NBR=B	-10 +90
E206D.....35///.....		3.5	0.32	0	7	-							
E206D.....40///.....		4	0.36	0	5.5	-							
E206D.....45///.....		4.5	0.41	0	4.5	-							
E206D.....52///.....		5.2	0.47	0	3	-							
E206D.....30///.....	1/2”	3	0.25	0	9	9	40	30	27	5	36	EPDM=E	<+140
E206D.....35///.....		3.5	0.32	0	7	7							
E206D.....40///.....		4	0.36	0	5.5	5.5							
E206D.....45///.....		4.5	0.41	0	4.5	4.5							
E206D.....52///.....		5.2	0.47	0	3	3							
E206D.....64///.....		6.4	0.64	0	3.5	3.5							
D206D.....30/3/.....	1/2”	3	0.25	0	-	6.5	-	-	10	2	30	FPM=V	-10 +130
D206D.....35/3/.....		3.5	0.32	0	-	4							
D206D.....40/3/.....		4	0.36	0	-	3.5							
D206D.....45/3/.....		4.5	0.41	0	-	3							
D206D.....52/3/.....		5.2	0.47	0	-	2.2							

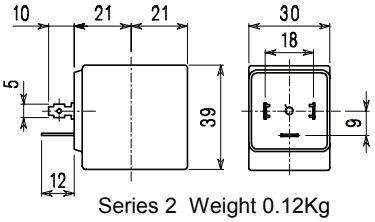
① Seal — Example: E206DB45///20E NBR seal
② Coil — Coil 220V 50/60Hz

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

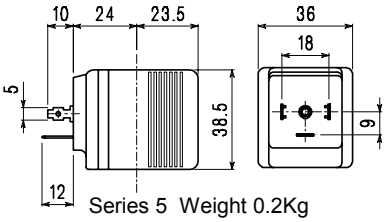
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

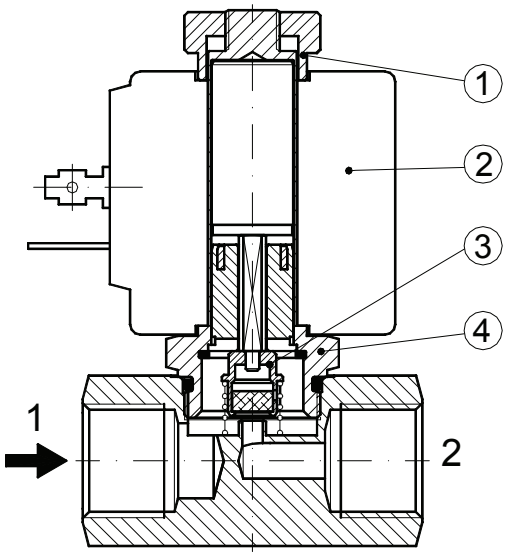


Series 2 Weight 0.12Kg

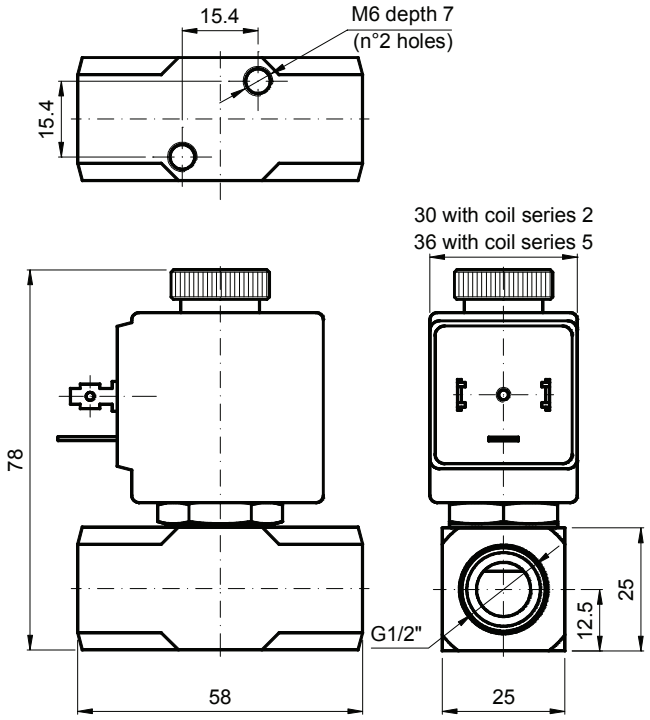


Series 5 Weight 0.2Kg

SPARE PARTS
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION



Weight with coil series 2 = 0.30 Kg
Weight with coil series 5 = 0.38 Kg

DESCRIPTION

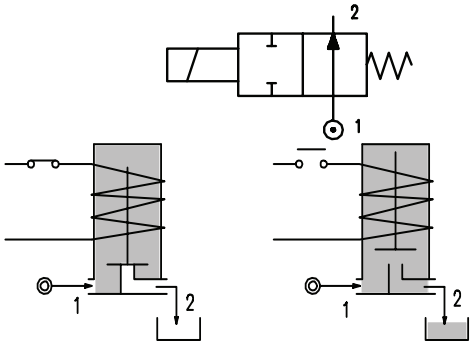
Solenoid valve 2 way normally open
direct acting poppet type

CONSTRUCTION

Body	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with coil class F -10°C +55°C
with coil class H -10°C +80°C
Universal mounting position



OPTIONS : Silver shading ring

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E210B.....20///.....	1/4”	2	0.1	0	16	-	20	15	-	2	30	NBR=B	-10 +90
E210B.....25///.....		2.5	0.15	0	10	-							
E210B.....35///.....		3.5	0.32	0	7	-						EPDM=E	<+140
E210B.....45///.....		4.5	0.41	0	4.5	-							
E210B.....52///.....		5.2	0.47	0	3	-						FPM=V	-10 +130
E210B.....20///.....	1/4”	2	0.1	0	16	16	40	30	27	5	36		
E210B.....25///.....		2.5	0.15	0	10	10							
E210B.....35///.....		3.5	0.32	0	7	7							
E210B.....45///.....		4.5	0.41	0	4.5	4.5							
E210B.....52///.....		5.2	0.47	0	3	3							
D210B.....20///.....	1/4”	2	0.1	0	-	16	-	-	10	2	30		
D210B.....25///.....		2.5	0.15	0	-	10							
D210B.....35/3/.....		3.5	0.32	0	-	4							
D210B.....45/3/.....		4.5	0.41	0	-	3							
D210B.....52/3/.....		5.2	0.47	0	-	2.2							

① Seal — Example: E210BB45///20E NBR seal
② Coil — Coil 220V 50/60Hz

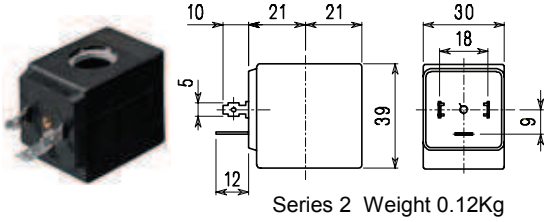
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **210**

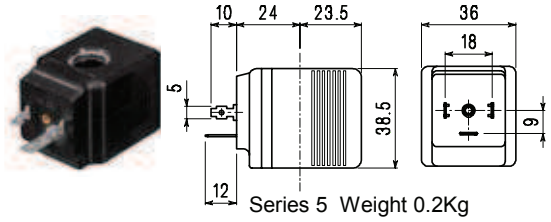
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

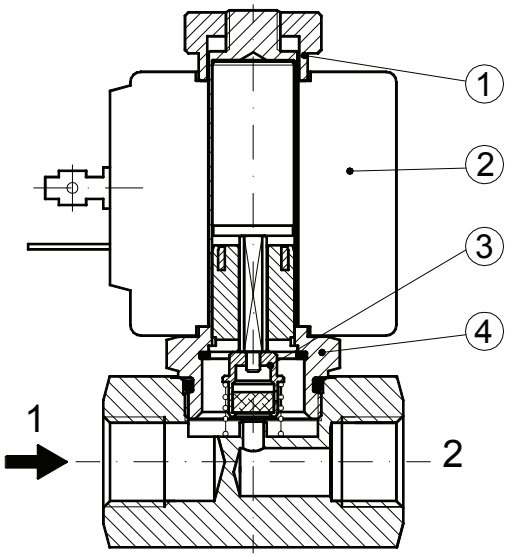


Series 2 Weight 0.12Kg

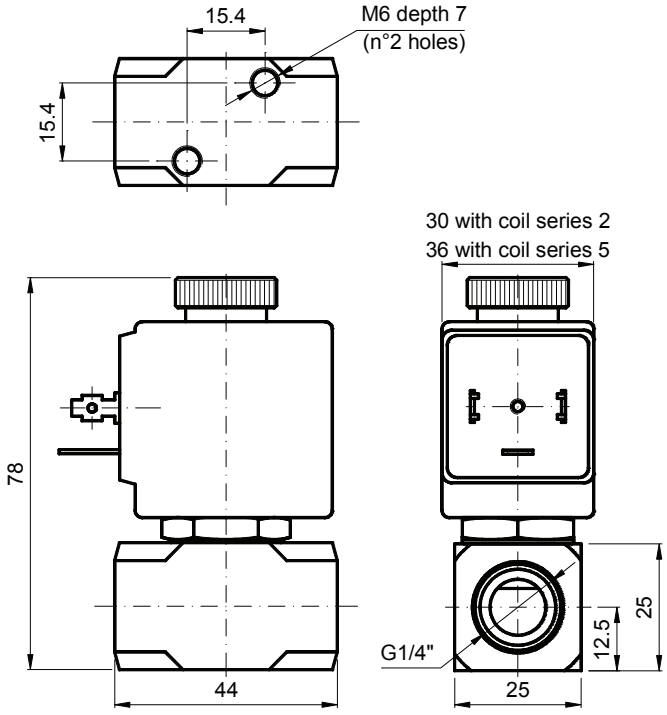


Series 5 Weight 0.2Kg

SPARE PARTS
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION



Weight with coil series 2 = 0.30 Kg
Weight with coil series 5 = 0.38 Kg

DESCRIPTION

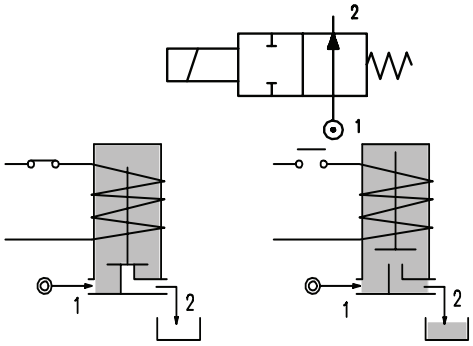
Solenoid valve 2 way normally open
direct acting poppet type

CONSTRUCTION

Body	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with coil class F -10°C +55°C
with coil class H -10°C +80°C
Universal mounting position



OPTIONS : Silver shading ring

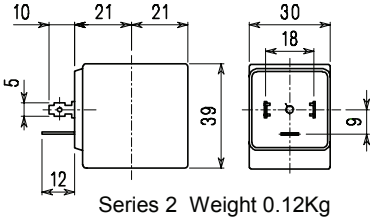
CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E210C.....20///.....	3/8”	2	0.1	0	16	-	20	15	-	2	30	NBR=B	-10 +90
E210C.....35///.....		3.5	0.32	0	7	-							
E210C.....52///.....		5.2	0.47	0	3	-							
E210D.....20///.....	1/2”	2	0.1	0	16	-							
E210D.....35///.....		3.5	0.32	0	7	-							
E210D.....52///.....		5.2	0.47	0	3	-							
E210C.....20///.....	3/8”	2	0.1	0	16	16	40	30	27	5	36	EPDM=E	<+140
E210C.....35///.....		3.5	0.32	0	7	7							
E210C.....52///.....		5.2	0.47	0	3	3							
E210C.....64///.....		6.4	0.64	0	3.5	3.5							
E210D.....20///.....	1/2”	2	0.1	0	16	16							
E210D.....35///.....		3.5	0.32	0	7	7							
E210D.....52///.....		5.2	0.47	0	3	3							
E210D.....64///.....		6.4	0.64	0	3.5	3.5						FPM=V	-10 +130
D210C.....20///.....	3/8”	2	0.1	0	-	16	-	-	10	2	30		
D210C.....35/3/.....		3.5	0.32	0	-	4							
D210C.....52/3/.....		5.2	0.47	0	-	2.2							
D210D.....20///.....	1/2”	2	0.1	0	-	16							
D210D.....35/3/.....		3.5	0.32	0	-	4							
D210D.....52/3/.....		5.2	0.47	0	-	2.2							

① Seal — Example: E210CB52///20E NBR seal
② Coil — Coil 220V 50/60Hz

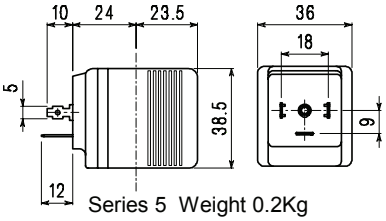
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **210**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001



Series 2 Weight 0.12Kg

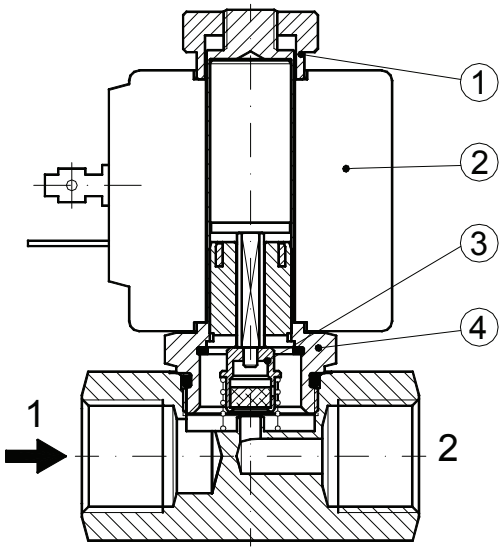


Series 5 Weight 0.2Kg

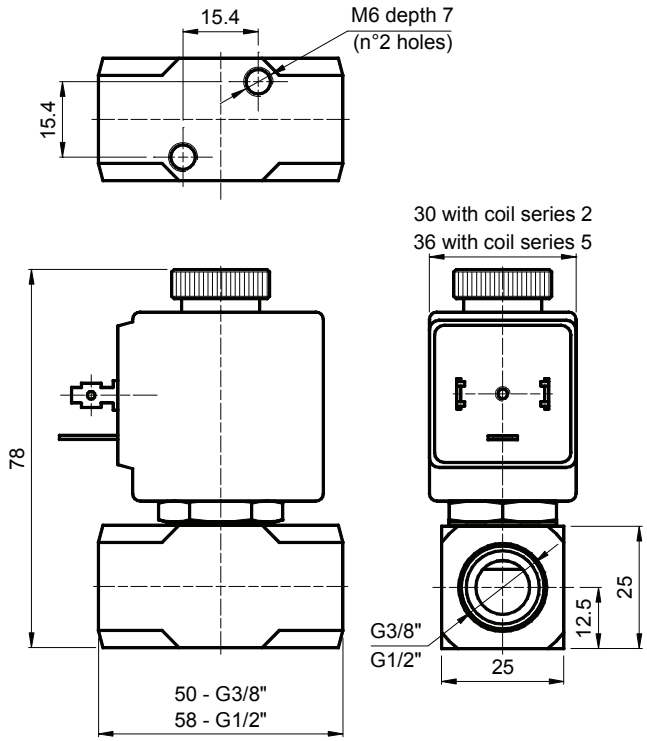
DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

SPARE PARTS
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION



Weight with coil series 2 = 0.30 Kg
Weight with coil series 5 = 0.38 Kg

DESCRIPTION

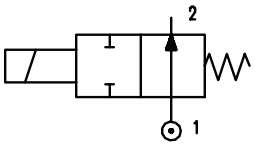
Solenoid valve 2 way normally open
open direct acting poppet type.

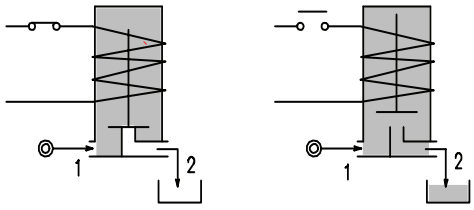
CONSTRUCTION

Body	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according
to ATEX - EExmII Series 7

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E211A.....12///	1/8"	1.2	0.04	0	19	19	12	8	6.5	3	22	NBR=B	-10 +90
E211A.....15///		1.5	0.06	0	14	14							
E211A.....20///		2	0.09	0	8	8						EPDM=E	<+140
E211A.....25///		2.5	0.14	0	4.5	4.5						FPM=V	-10 +130
E211A.....31///		3.1	0.19	0	2.5	2.5							

① Seal
② Coil

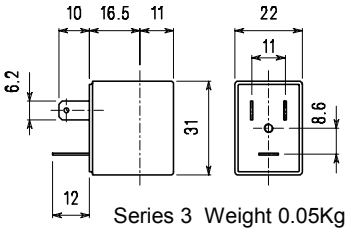
Example: E211AB20///30B NBR seal
Coil 24V 50/60Hz

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

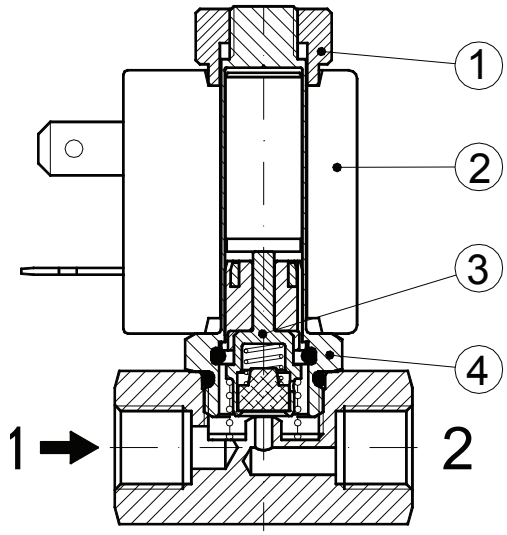
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

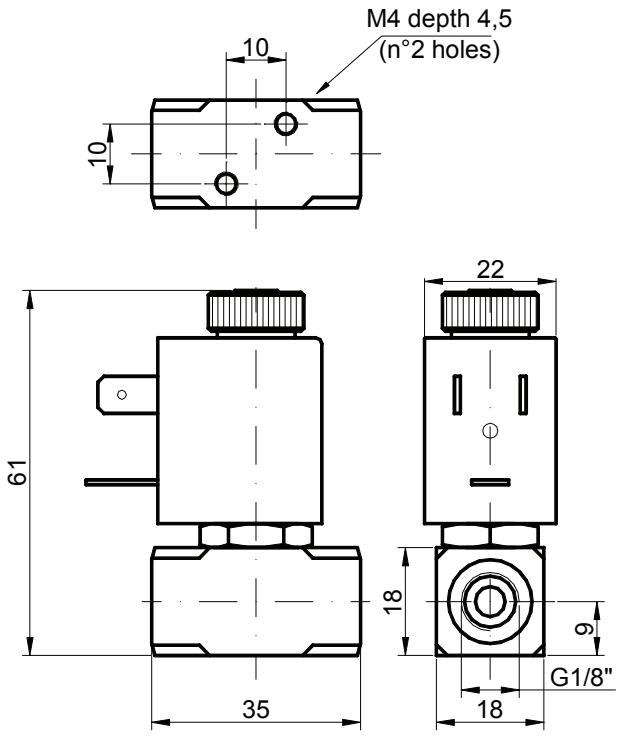


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube with core



OVERALL DIMENSION



Weight = 0.15 Kg

DESCRIPTION

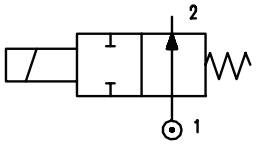
Solenoid valve 2 way normally open
direct acting poppet type.

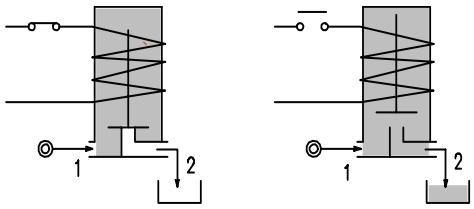
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS : Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according
to ATEX - EExmII Series 7

CODE ① ②	Flange	Orifice mm	KV m³/h	Differential pressure bar			Nominal power			Coil		Seal ①	Temp. Range °C
				Min	Max		AC	VA	DC	Series	Width		
					AC	DC	Inrush	Holding	Watt				
E212X.....12///	Q25	1.2	0.04	0	19	19	12	8	6.5	3	22	NBR=B EPDM=E FPM=V	-10 +90 <+140 -10 +130
E212X.....15///		1.5	0.06	0	14	14							
E212X.....20///		2	0.09	0	8	8							
E212X.....25///		2.5	0.14	0	4.5	4.5							

① Seal
② Coil

Example: E212XB20///30B NBR seal
Coil 24V 50/60Hz

Solenoid valve supplied without fixing screws

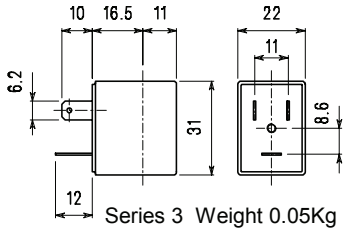
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **212**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

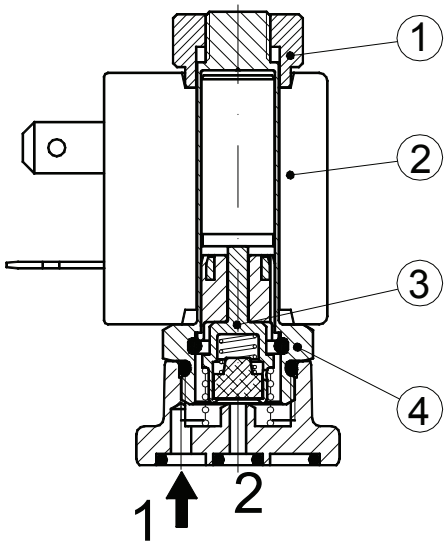
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

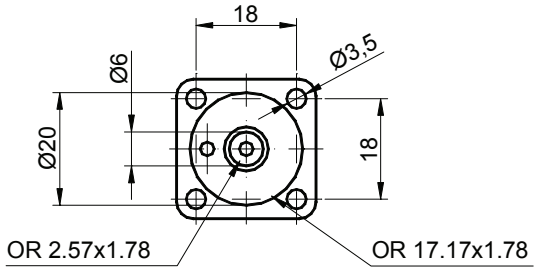


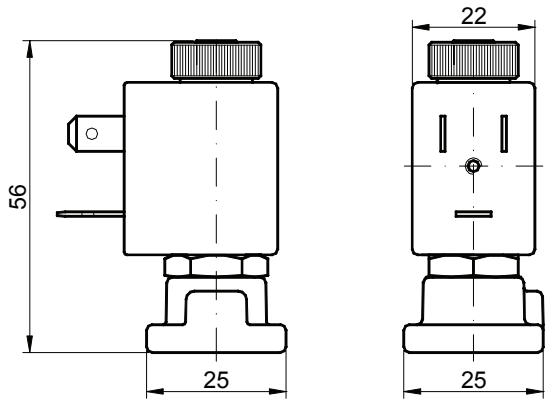
Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION





Weight = 0.12 Kg

DESCRIPTION

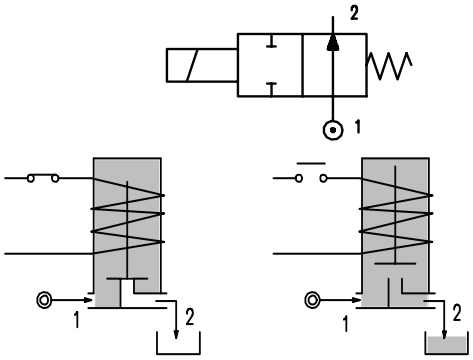
Solenoid valve 2 way normally open
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure 50 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with coil class F -10°C +55°C
with coil class H -10°C +80°C
Universal mounting position



OPTIONS : Electroless nickel plating
Stainless steel armature tube

CODE ① ②	Flange	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC W	Coil Series	Coil Width	Seal ①	Temp. range °C
E214X.....15///.....	Q32	1.5	0.07	0	23	-	20	15	-	2	30	NBR=B	-10 +90
E214X.....20///.....		2	0.1	0	17	-							
E214X.....25///.....		2.5	0.15	0	12	-							
E214X.....35///.....		3.5	0.32	0	7	-							
E214X.....45///.....		4.5	0.41	0	4.5	-							
E214X.....15///.....	Q32	1.5	0.07	0	23	23	40	30	27	5	36	EPDM=E	<+140
E214X.....20///.....		2	0.1	0	17	17							
E214X.....25///.....		2.5	0.15	0	12	12							
E214X.....35///.....		3.5	0.32	0	7	7							
E214X.....45///.....		4.5	0.41	0	4.5	4.5							
D214X.....15/5/.....	Q32	1.5	0.07	0	-	18	-	-	10	2	30	FPM=V	-10 +130
D214X.....20/5/.....		2	0.1	0	-	11							
D214X.....25/5/.....		2.5	0.15	0	-	7							
D214X.....35/5/.....		3.5	0.32	0	-	4							
D214X.....45/5/.....		4.5	0.41	0	-	3							

① Seal — Example: E214XV52///20B FPM seal
② Coil — Coil 24V 50/60Hz

Solenoid valve supplied without fixing screws

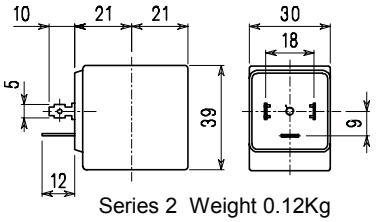
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **214**

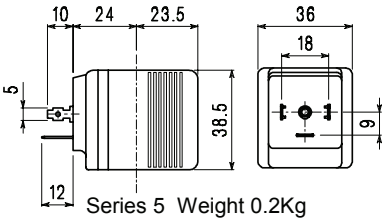
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

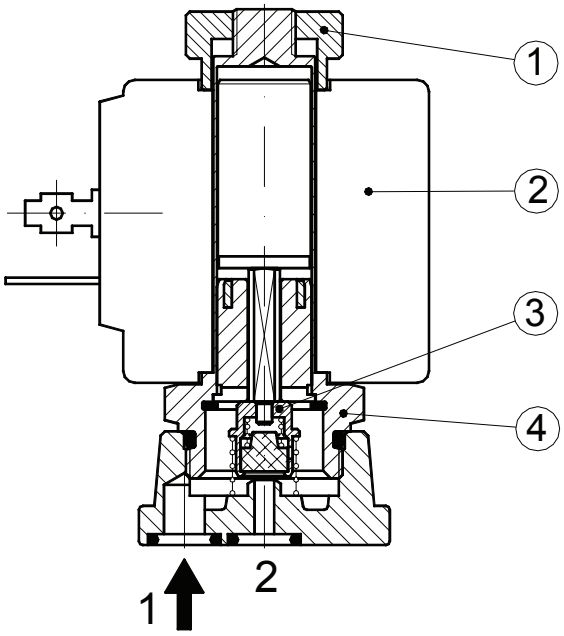


Series 2 Weight 0.12Kg

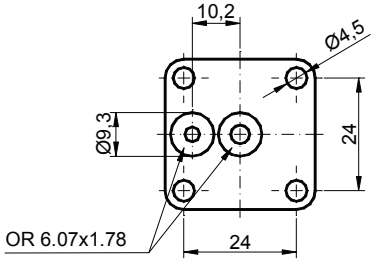


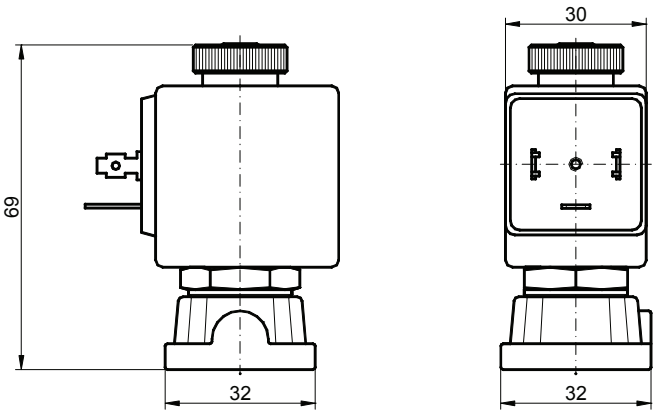
Series 5 Weight 0.2Kg

SPARE PARTS
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



OVERALL DIMENSION





Weight with coil series 2 = 0.25 Kg
Weight with coil series 5 = 0.33 Kg

DESCRIPTION

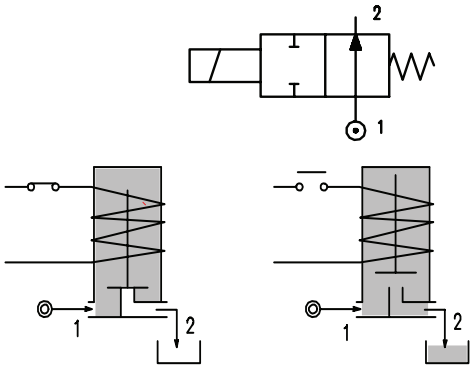
Solenoid valve 2 way normally open
direct acting poppet type, suitable for
food application and all compatible fluids.

CONSTRUCTION

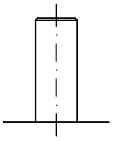
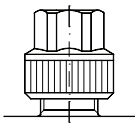
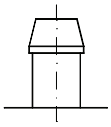
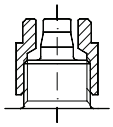
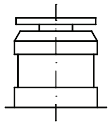
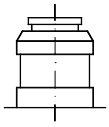
Body	Thermoplastic polymer: NSF, WRC, KTW, FDA certified
Armature tube	Brass chemically nickel plated
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR food contact certified FPM food contact certified EPDM food contact certified

FEATURES

Maximum allowable pressure 20 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Stainless steel armature tube
Type N connection without nut

CONNECTIONS					
K	**N**	**P**	**W** ③	**Y**	**Z**
					
SPIGGOT	**G1/8"** male thread with **NUT** for flexible and semiflexible pipes	**HOSETAIL** for flexible pipes	**COMPRESSION** for flexible and semiflexible pipes	**PUSH IN** for semiflexible pipes ∅ext.6	**PUSH IN** for semiflexible pipes ∅ext.4

CODE ① ②	Connection *	Orifice mm	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temperature range ** °C
E235*.....15///.....	K-N-P-W-Y-Z	1.5	0.06	0	14	14	12	8	6.5	3	22	NBR=A	-10 +90
E235*.....20///.....	K-N-P-W-Y-Z	2	0.09	0	8	8						EPDM=E	<+140
E235*.....25///.....	K-N-P-W-Y-Z	2.5	0.14	0	4.5	4.5						FPM=V	-10 +130

① Seal
② Coil
③ Only for connection "W"

Example: E235PV20///30E FPM seal HOSETAIL connection
Coil 230V 50/60Hz
E235W…./1/….

REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

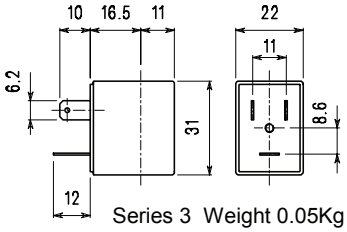
** The temperature range is related to the material of the seals (NBR, EPDM, FPM), and the valves' body. Please contact us concerning the temperature range referred to the different types of connection.

Series **235**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

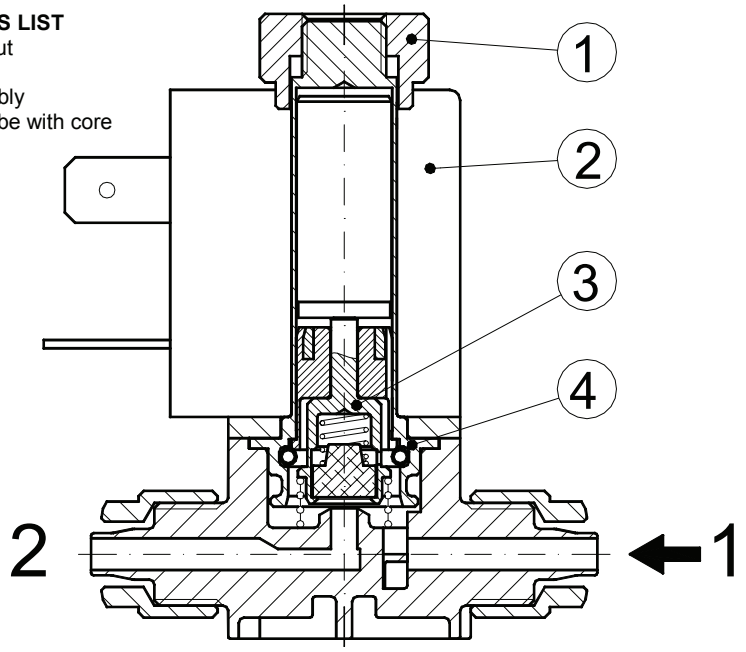
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

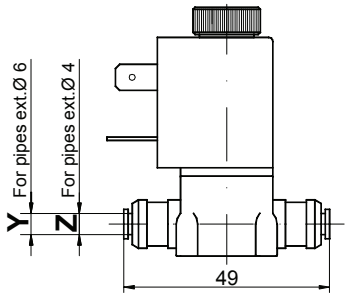
OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

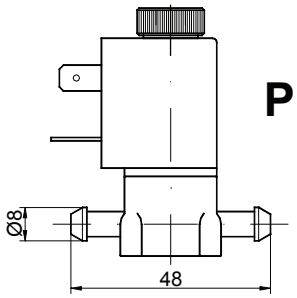


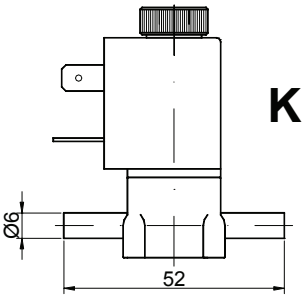
Series 3 Weight 0.05Kg

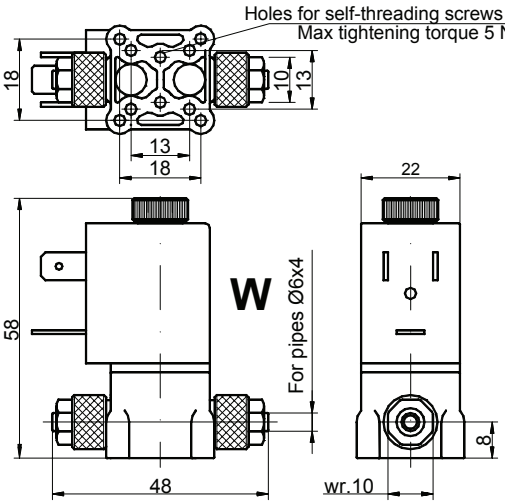
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube with core



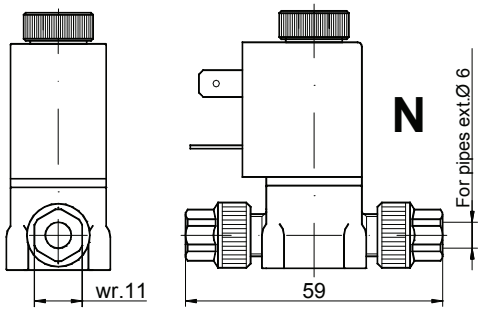








Nut Max torque 2 Nm



Screw the nut with wrench 11 up to the sliding on the hexagon (TORQUE LIMITING DEVICE)

Weight = 0.10 Kg

DESCRIPTION

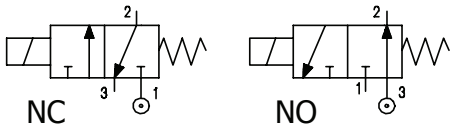
Solenoid valve 3 way
direct acting poppet type

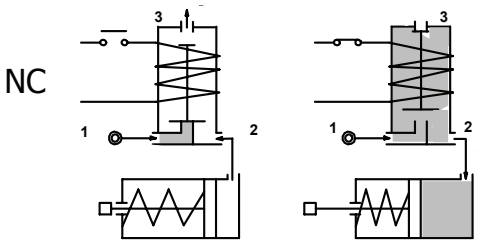
CONSTRUCTION

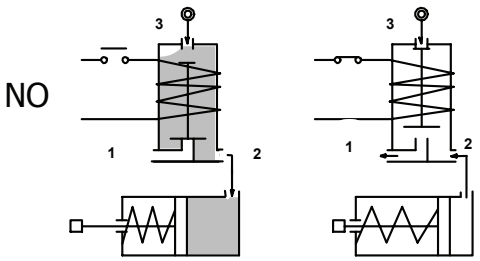
Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure : maximum differential pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position







OPTIONS :

Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series7
Exhaust port with hosetail connection

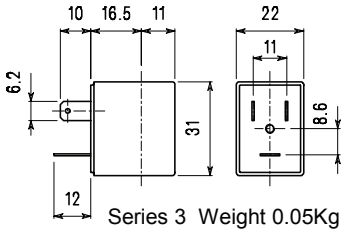
CODE ① ②	Connection G ISO 228	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
NC Normally closed													**NBR=B EPDM=E FPM=V**	**-10 +90 <+140 -10 +130**
E304A.....15///.....	**1/8”**	**1.5**		**0.06**	**0**	**10**	**10**	**12**	**8**	**6.5**	**3**	**22**		
NO Normally open														
E304A.....15/S/.....	**1/8”**	**1.5**		**0.06**	**0**	**10**	**10**	**12**	**8**	**6.5**	**3**	**22**		

① Seal
② Coil

Example: E304AV15///30B FPM seal Coil 24V 50/60Hz NC
E304AB15/S/301 NBR seal Coil 24V DC NO

Series **304**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

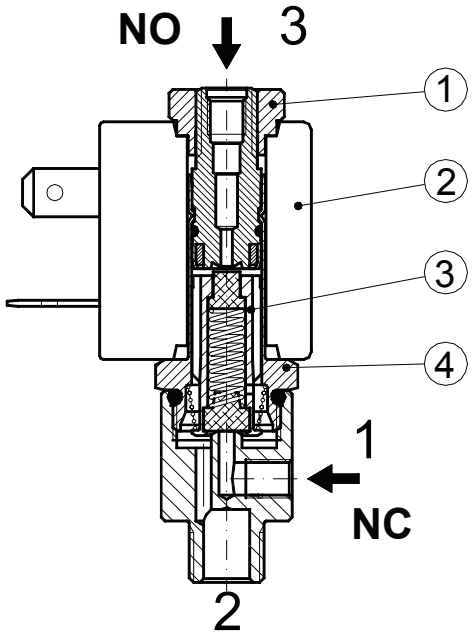


Series 3 Weight 0.05Kg

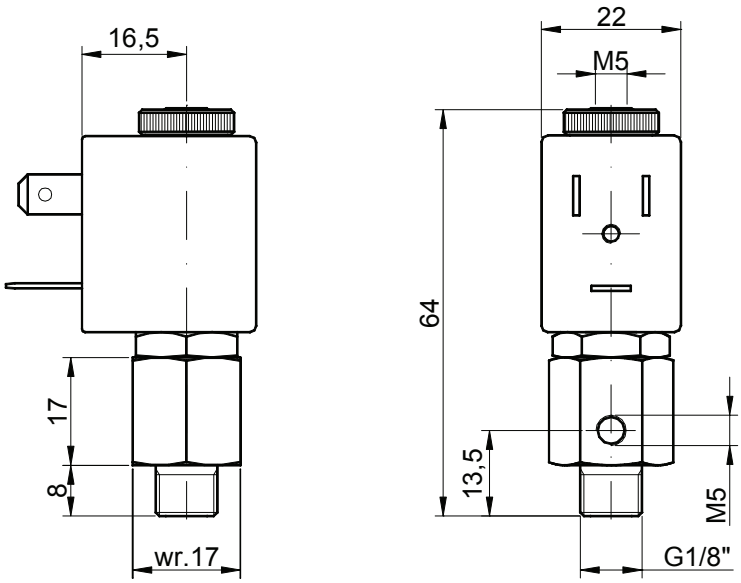
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



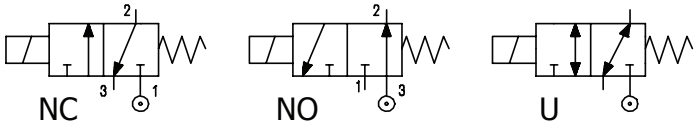
Weight = 0.11 Kg

DESCRIPTION

Solenoid valve 3 way
direct acting poppet type

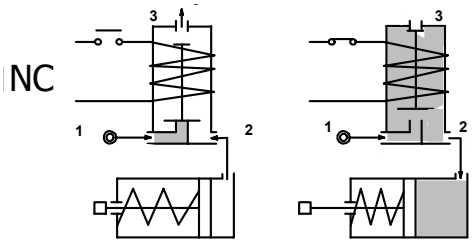
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



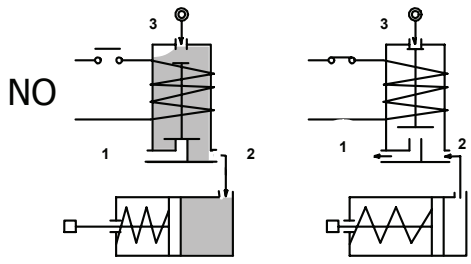
FEATURES

Maximum allowable pressure : maximum differential pressure+10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS :

Manual override
Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series7
Exhaust port with hosetail connection



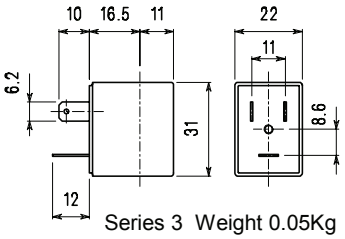
CODE ① ②	Connection G ISO 228	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
NC Normally closed														
E305A.....12///.....	1/8"	1.2	1.5	0.04	0	15	15	12	8	6.5	3	22	NBR=B	-10 +90
E305A.....15///.....		1.5	1.5	0.06	0	10	10							
E305A.....20///.....		2	1.7	0.09	0	6	6						EPDM=E	<+140
NO Normally open														
E305A.....15/S/.....	1/8"	1.5	1.5	0.06	0	10	10	12	8	6.5	3	22		
E305A.....17/S/.....		1.7	2	0.07	0	6	6							
U Universal													FPM=V	-10 +130
E305A.....15/G/.....	1/8"	1.5	1.5	0.06	0	6	6	12	8	6.5	3	22		

① Seal
② Coil

Example: E305AV15///30B FPM seal Coil 24V 50/60Hz NC
E305AB15/S/301 NBR seal Coil 24V DC NO

Series **305**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

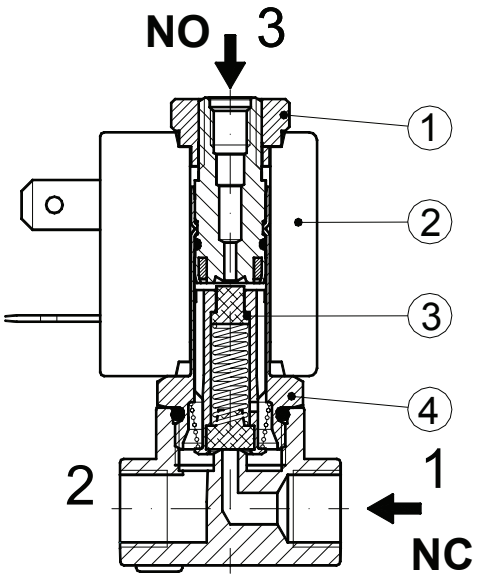


Series 3 Weight 0.05Kg

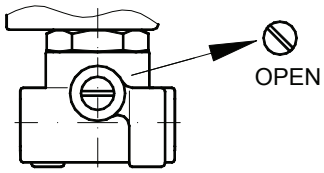
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

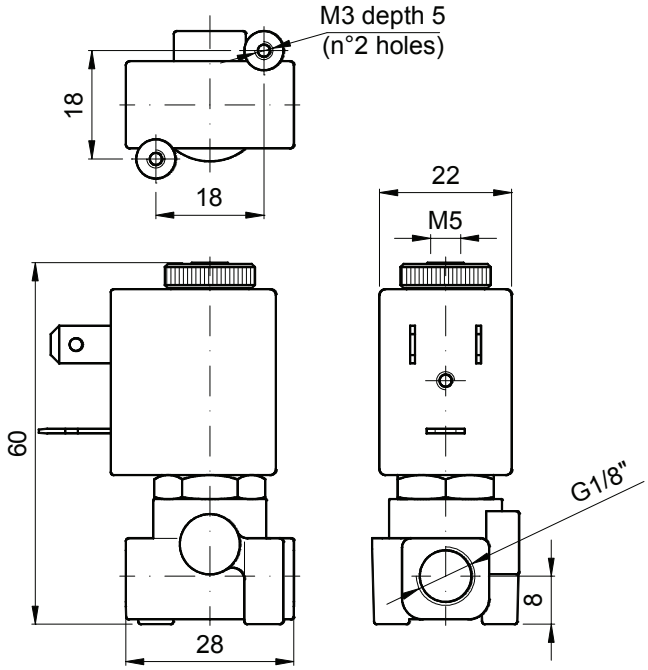
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



MANUAL OVERRIDE



OVERALL DIMENSION



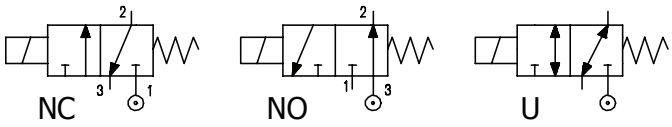
Weight = 0.13 Kg

DESCRIPTION

Solenoid valve 3 way
direct acting poppet type

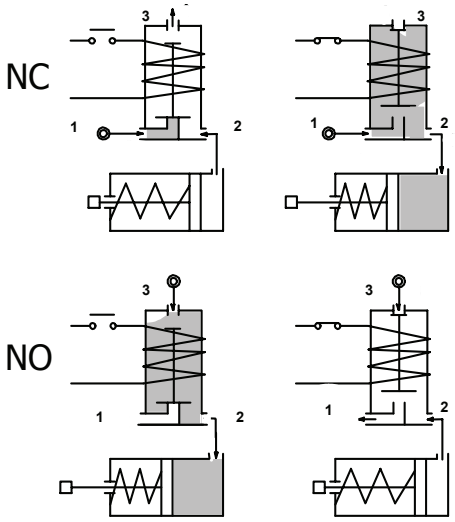
CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



FEATURES

Maximum allowable pressure : maximum differential pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS :

Manual override
Electroless nickel plating
Stainless steel seat

CODE ① ②	Connection G ISO 228	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
NC Normally closed														
E306A.....15///.....	1/8”	1.5	2.4	0.07	0	20	20	20	15	10	2	30	NBR=B	-10 +90
E306A.....20///.....		2	2.4	0.11	0	13	13							
E306A.....25///.....		2.5	2.4	0.16	0	10	10							
E306B.....15///.....	1/4”	1.5	2.4	0.07	0	20	20							
E306B.....20///.....		2	2.4	0.11	0	13	13						EPDM=E	<+140
E306B.....25///.....		2.5	2.4	0.16	0	10	10							
NO Normally open														
E306B.....24/S/.....	1/4”	2.4	2.5	0.16	0	9	9	20	15	10	2	30	FPM=V	-10 +130
E306B.....29/S/.....		2.9	3	0.20	0	6.5	6.5							
U Universal														
E306B.....25/G/.....	1/4”	2.5	2.4	0.16	0	5	4	20	15	10	2	30		

① Seal
② Coil

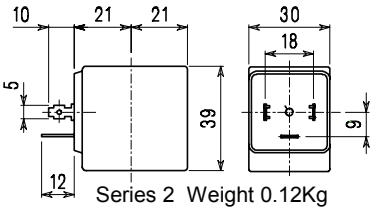
Example: E306BV15///20B FPM seal Coil 24V 50/60Hz NC
E306BB24/S/201 NBR seal Coil 24V DC NO

Series **306**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

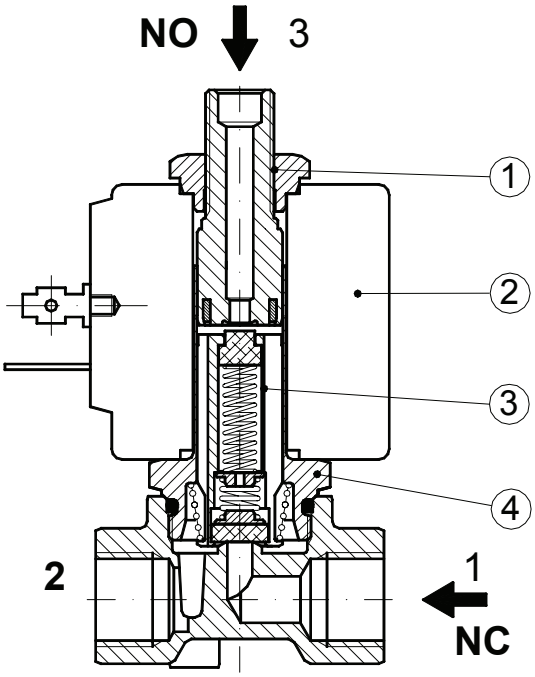
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

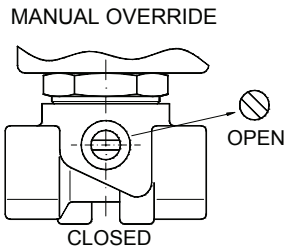
OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers



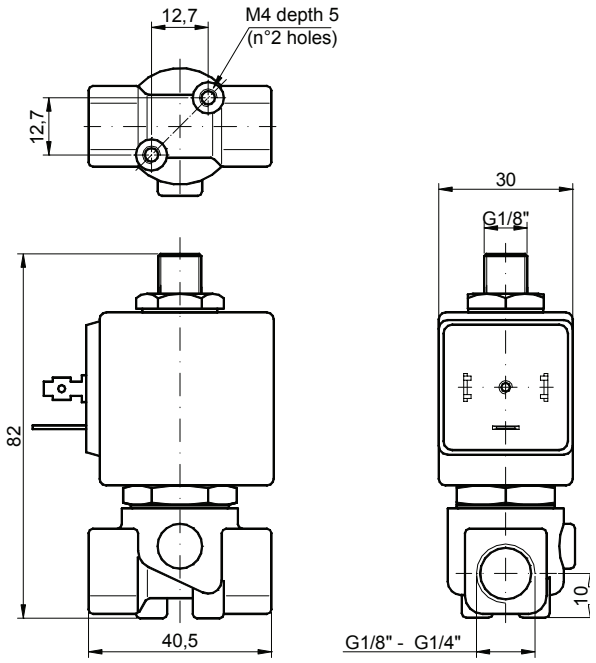
Series 2 Weight 0.12Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core





OVERALL DIMENSION



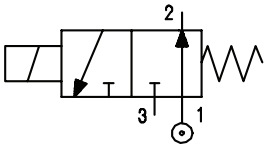
Weight = 0.32 Kg

DESCRIPTION

Solenoid valve 3 way normally open
direct acting poppet type

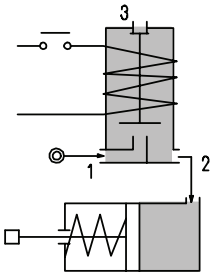
CONSTRUCTION

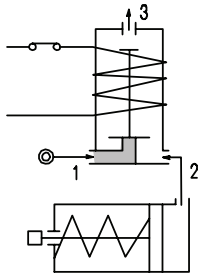
Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



FEATURES

Maximum allowable pressure : maximum differential
pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position





OPTIONS :

Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according
to ATEX - EExmII Series 7
Exhaust port with hosetail connection

CODE ① ②	Connection G ISO 228	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E307A.....12///.....	**1/8”**	**1.2**	**1.2**	**0.04**	**0**	**12**	**8**	**12**	**8**	**6.5**	**3**	**22**	**NBR=B EPDM=E FPM=V**	**-10 +90 <+140 -10 +130**
E307A.....15///.....	**1/8”**	**1.5**	**1.2**	**0.06**	**0**	**9**	**6**	**12**	**8**	**6.5**	**3**	**22**		

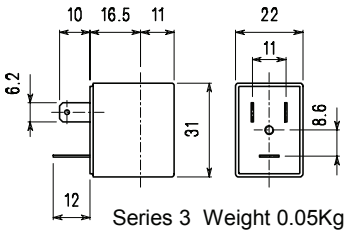
① Seal
② Coil

Example: E307AV15///30B FPM seal
Coil 24V 50/60Hz

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical Connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

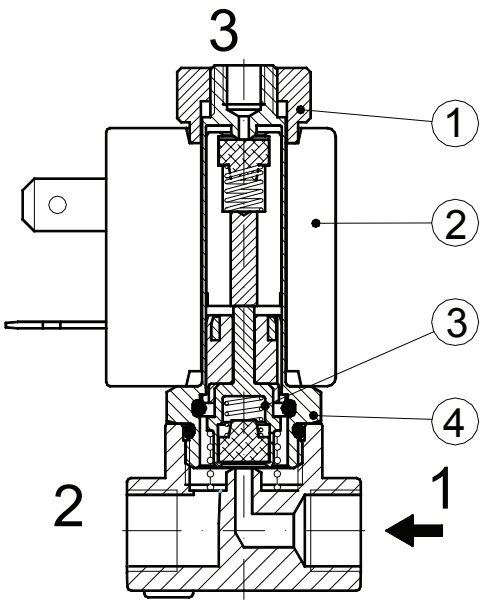
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

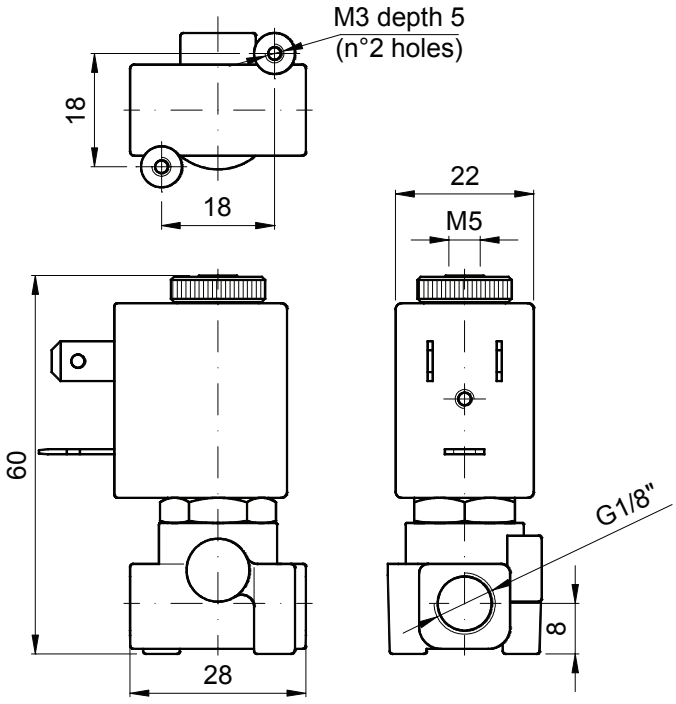


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube with core



OVERALL DIMENSION



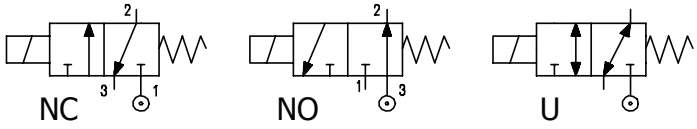
Weight = 0.13 Kg

DESCRIPTION

Solenoid valve 3 way
direct acting poppet type

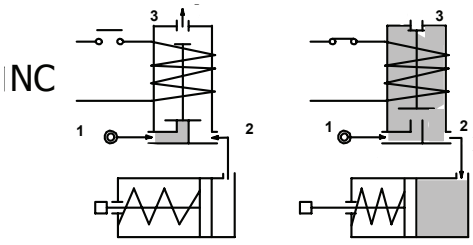
CONSTRUCTION

Body	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

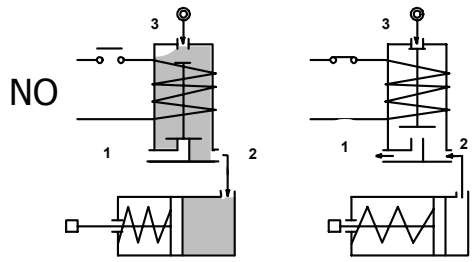


FEATURES

Maximum allowable pressure : maximum differential pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPZIONI : Silver shading ring



CODE ① ②	Connection G ISO 228	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
NC Normally closed													NBR=B	-10 +90
E310B.....20///.....	1/4"	2	2.4	0.11	0	13	13	20	15	10	2	30		
E310B.....25///.....		2.5	2.4	0.16	0	10	10							
NA Normally open													EPDM=E	<+140
E310B.....24/S/.....	1/4"	2.4	2.5	0.16	0	9	9	20	15	10	2	30		
E310B.....29/S/.....		2.9	3	0.20	0	6.5	6.5							
U Universal													FPM=V	-10 +130
E310B.....25/G/.....	1/4"	2.5	2.4	0.16	0	5	4	20	15	10	2	30		

① Seal
② Coil

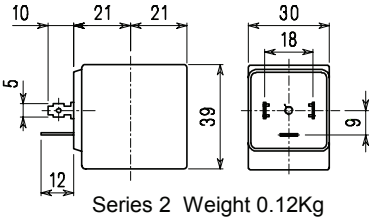
Example: E310BV20///20B FPM seal Coil 24V 50/60Hz NC
E310BB24/S/201 NBR seal Coil 24V DC NO

Series **310**

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

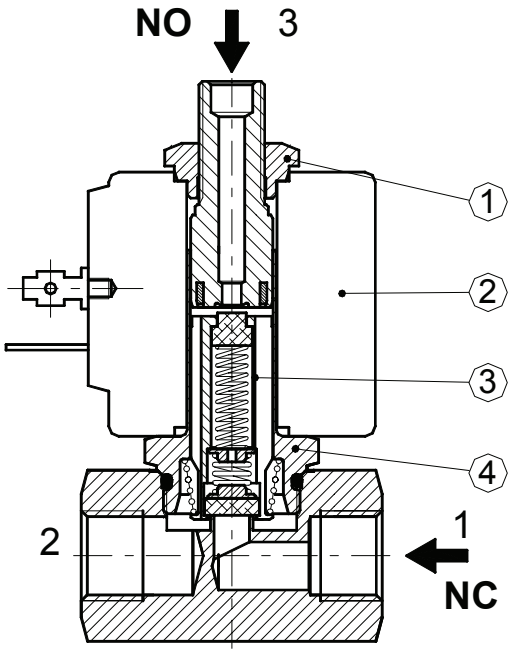
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

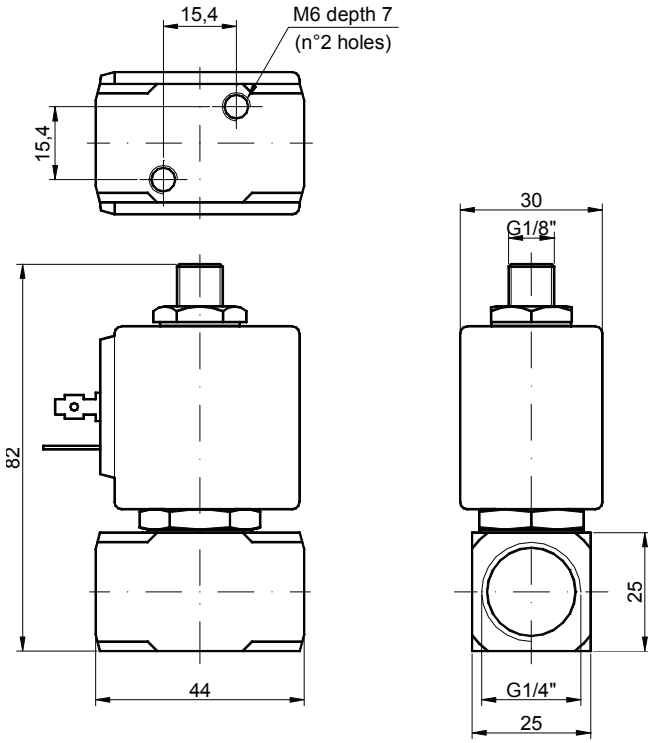


Series 2 Weight 0.12Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



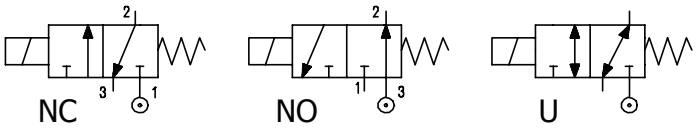
Weight = 0.36 Kg

DESCRIPTION

Solenoid valve 3 way
direct acting poppet type

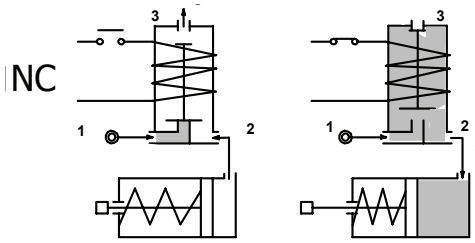
CONSTRUCTION

Body	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



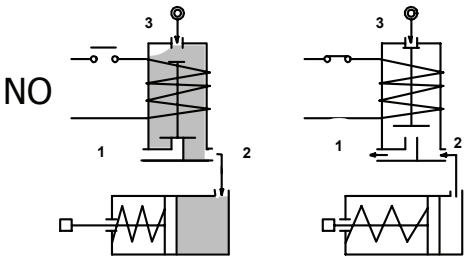
FEATURES

Maximum allowable pressure : maximum differential pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS :

Silver shading ring
Explosion proof coil according to ATEX - EExmII Series 7
Exhaust port with hosetail connection



CODE ① ②	Connection G ISO 228	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
NC Normally closed														
E311A.....12///.....	1/8”	1.2	1.5	0.04	0	15	15	12	8	6.5	3	22	NBR=B	-10 +90
E311A.....15///.....		1.5	1.5	0.06	0	10	10							
E311A.....20///.....		2	1.7	0.09	0	6	6						EPDM=E	<+140
NO Normally open														
E311A.....15/S/.....	1/8”	1.5	1.5	0.06	0	10	10	12	8	6.5	3	22		
E311A.....17/S/.....		1.7	2	0.07	0	6	6							
U Universal													FPM=V	-10 +130
E311A.....15/G/.....	1/8”	1.5	1.5	0.06	0	6	6	12	8	6.5	3	22		

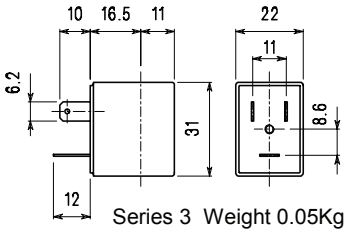
① Seal
② Coil

Example: E311AV15///30B FPM seal Coil 24V 50/60Hz NC
E311AB15/S/301 NBR seal Coil 24V DC NO

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

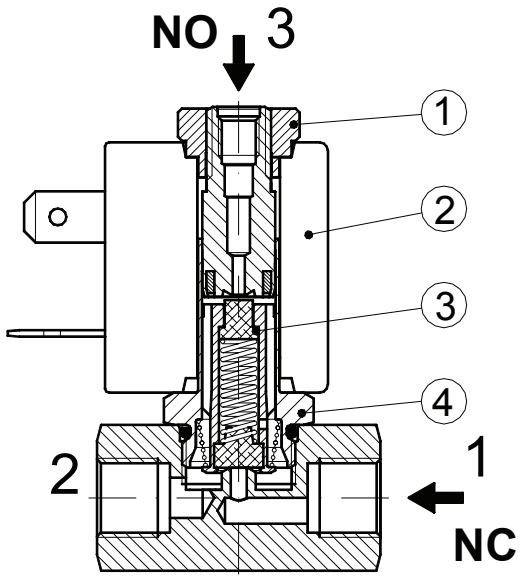
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

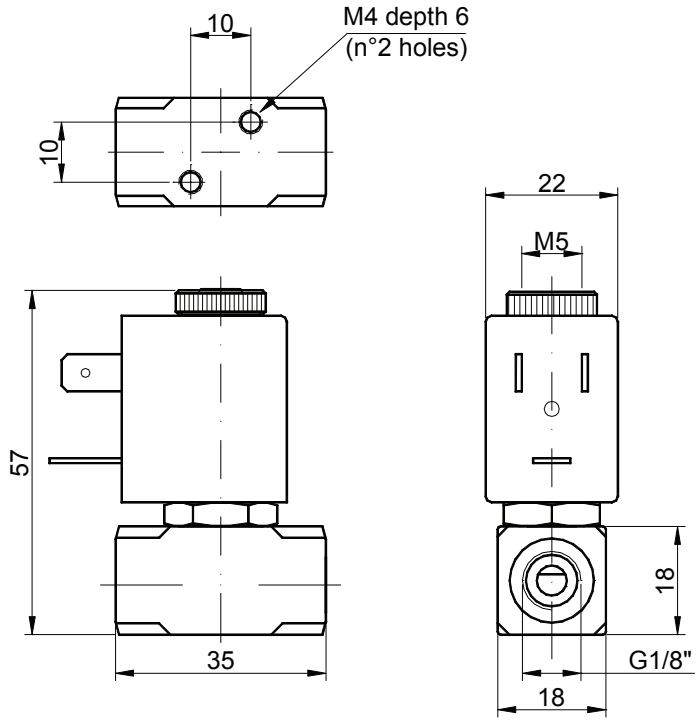


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



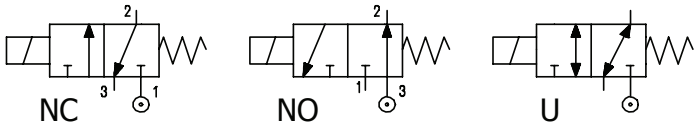
Weight = 0.15 Kg

DESCRIPTION

Solenoid valve 3 way
direct acting poppet type

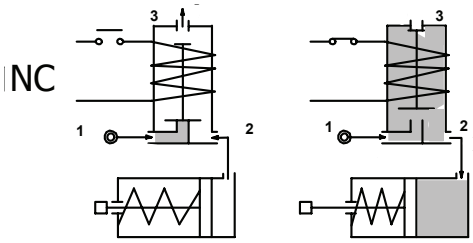
CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



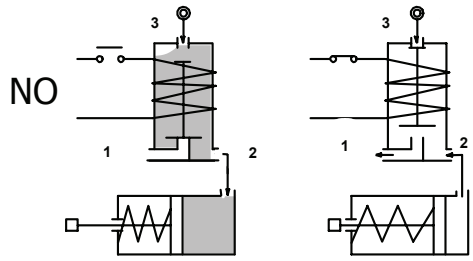
FEATURES

Maximum allowable pressure : maximum differential pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS :

Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series 7
Exhaust port with hosetail connection



CODE ① ②	Flange	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal powers AC Inrush	Nominal powers VA Holding	Nominal powers DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
NC Normally closed													**NBR=B**	**-10 +90**
E312X.....12///.....	**Q 25**	**1.2**	**1.5**	**0.04**	**0**	**15**	**15**	**12**	**8**	**6.5**	**3**	**22**		
E312X.....15///.....		**1.5**	**1.7**	**0.06**	**0**	**10**	**10**							
NO Normally open													**EPDM=E**	**<+140**
E312X.....15/S/.....	**Q 25**	**1.5**	**1.5**	**0.06**	**0**	**10**	**10**	**12**	**8**	**6.5**	**3**	**22**		
U Universal														
E312X.....10/G/.....	**Q 25**	**1**	**1**	**0.028**	**0**	**10**	**10**	**12**	**8**	**6.5**	**3**	**22**	**FPM=V**	**-10 +130**

① Seal
② Coil

Example: E312XV15///30B FPM seal Coil 24V 50/60Hz NC
E312XB15/S/301 NBR seal Coil 24V DC NO

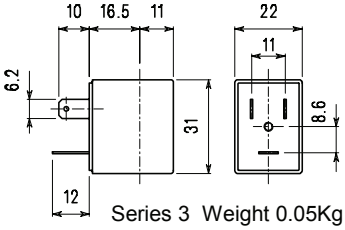
P.S. Solenoid valve supplied without fixing screws

Series **312**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

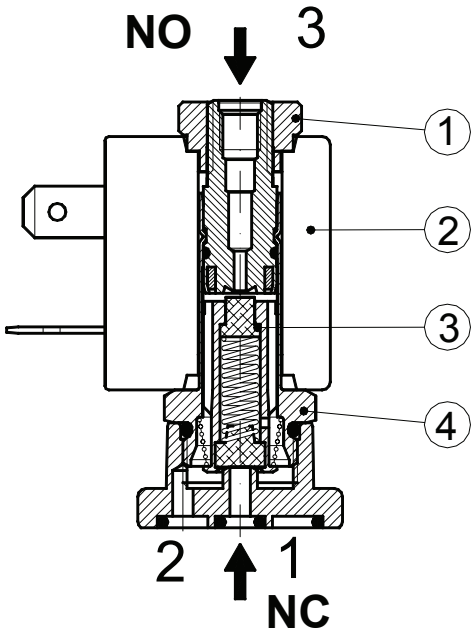
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

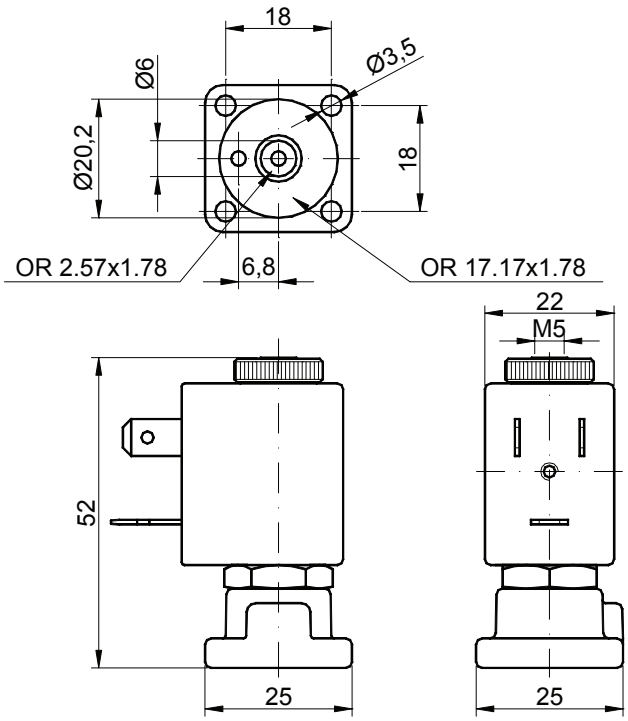


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



Weight = 0.12 Kg

DESCRIPTION

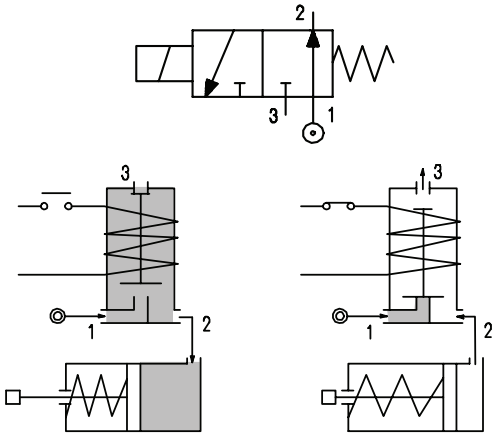
Solenoid valve 3 way normally open
direct acting poppet type

CONSTRUCTION

Body	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Maximum allowable pressure : maximum differential pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS :

Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series 7
Exhaust port with hosetail connection

CODE ① ②	Flange	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E313X.....12///.....	Q 25	1.2	1.2	0.04	0	12	8	12	8	6.5	3	22	NBR=B EPDM=E FPM=V	-10 +90 <+140 -10 +130
E313X.....15///.....		1.5	1.2	0.06	0	9	6							

① Seal
② Coil

Example: E313XV15///30B FPM seal
Coil 24V 50/60Hz

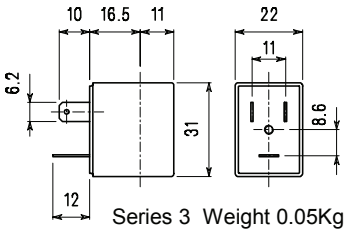
P.S. Solenoid valve supplied without fixing screws

Series **313**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

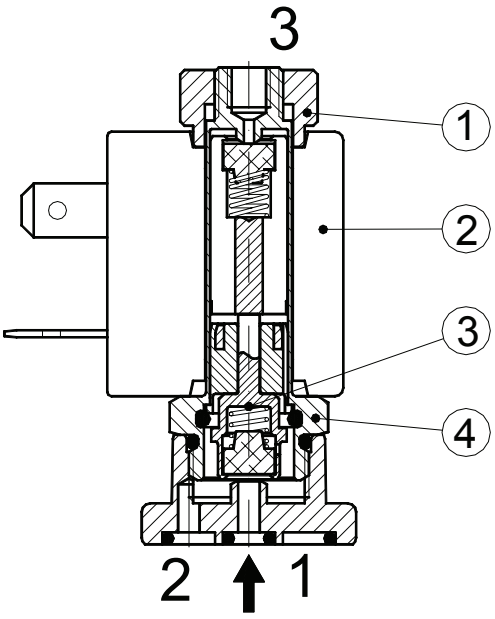
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

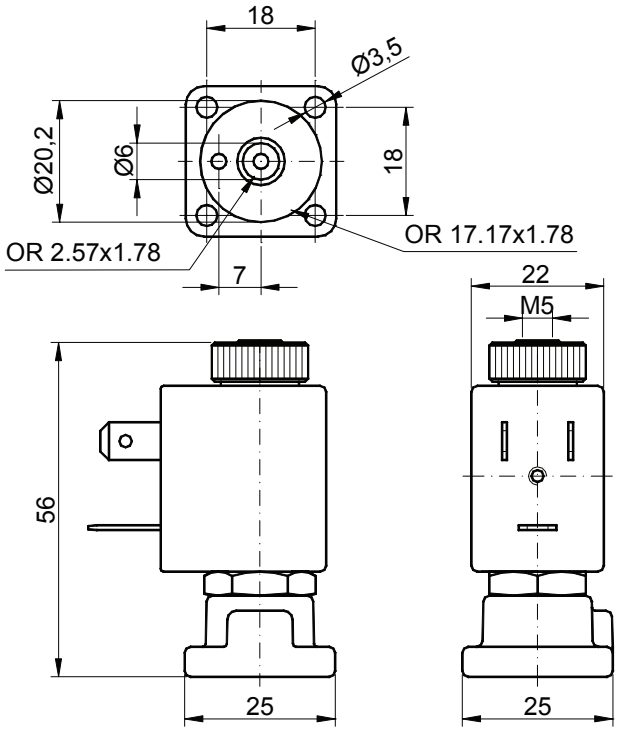


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



OVERALL DIMENSION



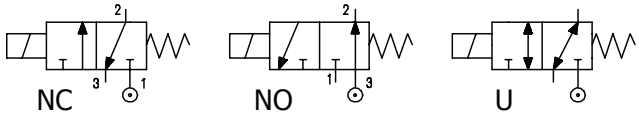
Weight = 0.12 Kg

DESCRIPTION

Solenoid valve 3 way
direct acting poppet type

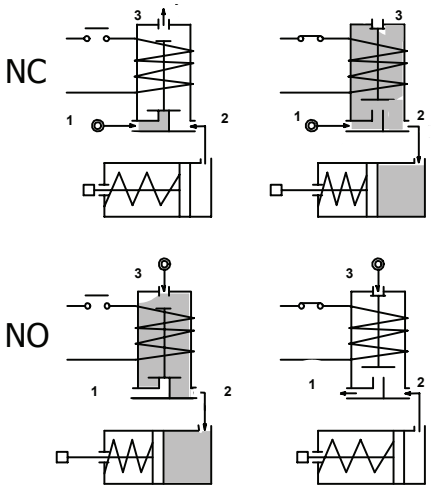
CONSTRUCTION

Body	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



FEATURES

Maximum allowable pressure : maximum differential pressure +10%
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS :

Manual override
Electroless nickel plating
Stainless steel seat

CODE ① ②	Flange	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
NC Normally closed														
E314X.....15///.....	Q 32	1.5	2.4	0.07	0	20	20	20	15	10	2	30	NBR=B	-10 +90
E314X.....20///.....		2	2.4	0.11	0	13	13							
E314X.....25///.....		2.5	2.4	0.16	0	10	10						EPDM=E	<+140
NO Normally open														
E314X.....24/S/.....	Q 32	2.4	2.5	0.16	0	9	9	20	15	10	2	30		
E314X.....29/S/.....		2.9	3	0.20	0	6.5	6.5							
U Universal													FPM=V	-10 +130
E314X.....25/G/.....	Q 32	2.5	2.4	0.16	0	5	4	20	15	10	2	30		

① Seal
② Coil

Example: E314XV15///20B FPM seal Coil 24V 50/60Hz NC
E314XB24/S/201 NBR seal Coil 24V DC NO

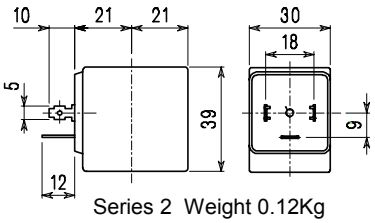
P.S. Solenoid valve supplied without fixing screws

Series **314**

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

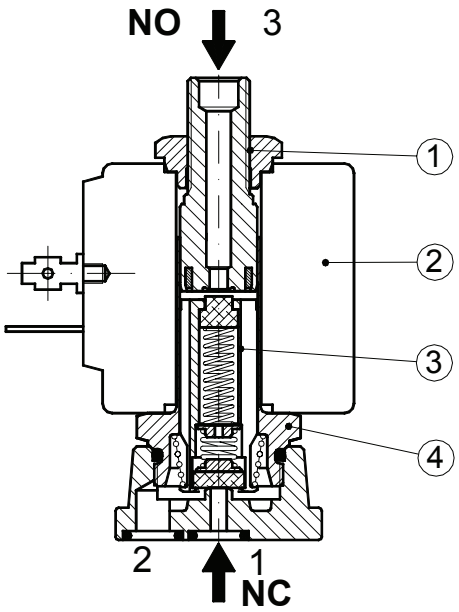
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

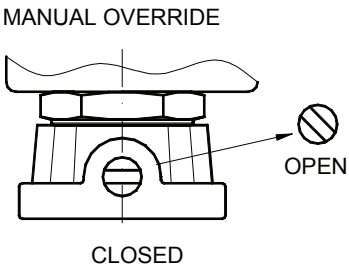
OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers



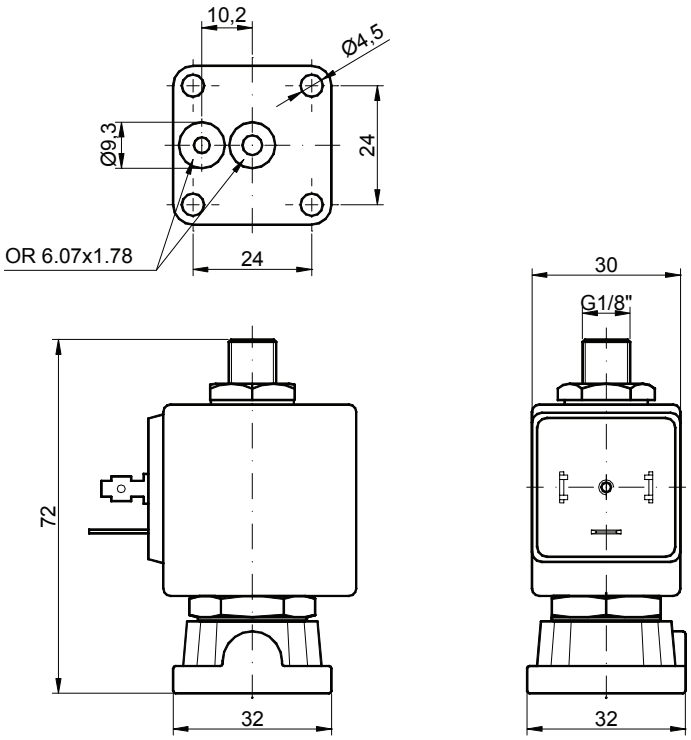
Series 2 Weight 0.12Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core





OVERALL DIMENSION



Weight = 0.25 Kg

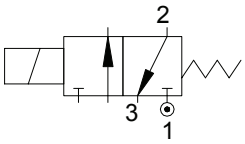
DESCRIPTION

Solenoid valve 3 way direct acting poppet type.
The balanced seal and the special construction allows a big flow.
The solenoid valve can be used as normally closed, normally open, mixer or diverter.

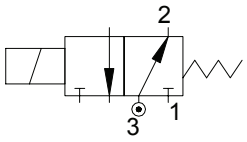
CONSTRUCTION

Body	Anodized aluminium
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal	FPM

3/2 NC



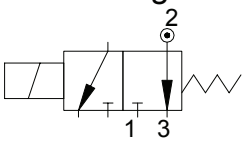
3/2 NO



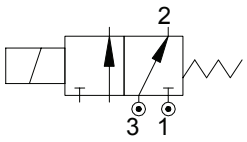
FEATURES

Maximum allowable pressure : 15 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : -10°C +80°C
Universal mounting position

Diverting



Mixing



CODE ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
Universal													
E320BV75///.....	**1/4”**	**7.5**	**0.64**	**0**	**5**	**5**	**40**	**30**	**27**	**5**	**36**	**FPM=V**	**-10 +130**
Normally Closed													
E321BV75///.....	**1/4”**	**7.5**	**0.64**	**0**	**9**	**9**	**40**	**30**	**27**	**5**	**36**	**FPM=V**	**-10 +130**
Normally Open													
E322BV75///.....	**1/4”**	**7.5**	**0.64**	**0**	**9**	**9**	**40**	**30**	**27**	**5**	**36**	**FPM=V**	**-10 +130**

② Coil

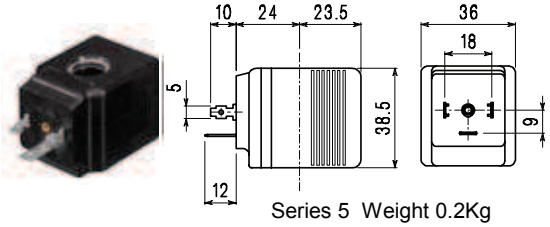
Example: E320BV75///52E Universal
FPM seal Coil 230V 50-60Hz

Series **320**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

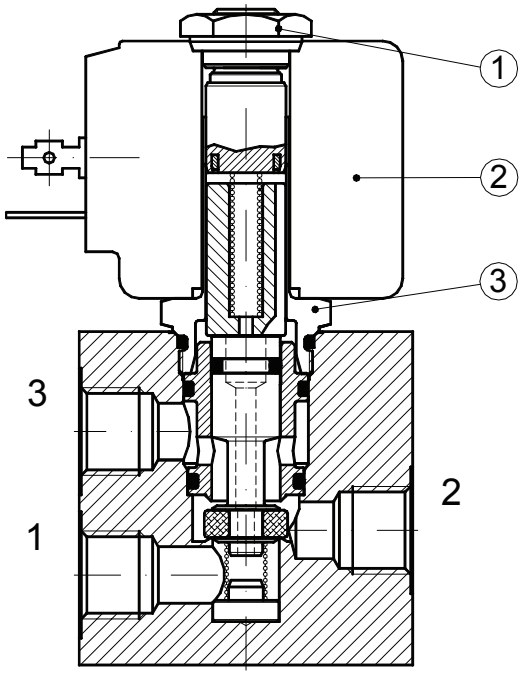
DESCRIPTION
Class H insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Cable attached
Special coil powers
Special coil voltages

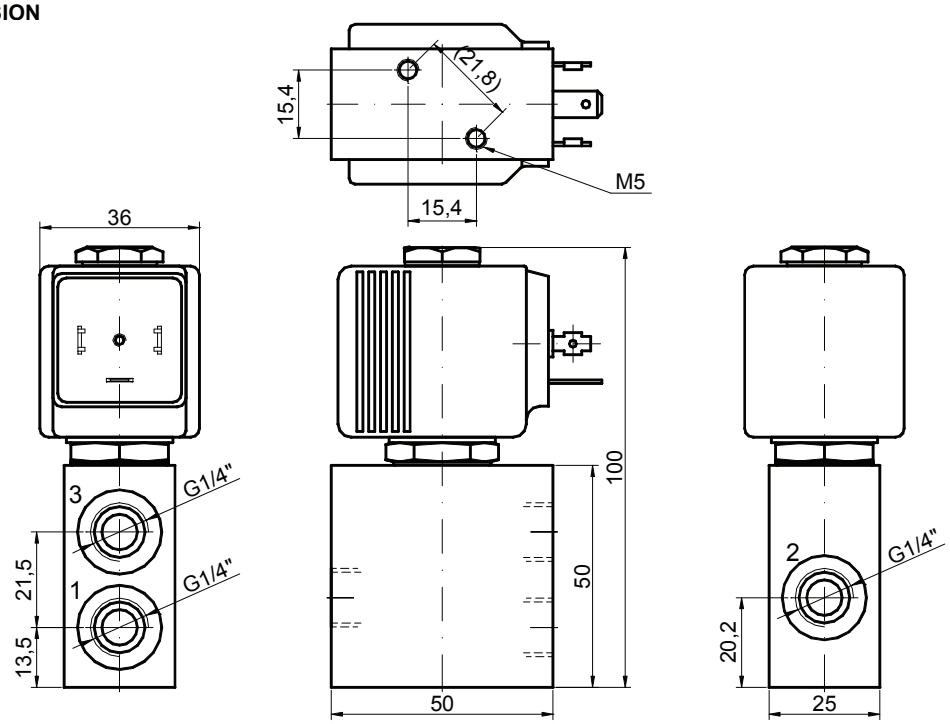


Series 5 Weight 0.2Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Armature tube with core



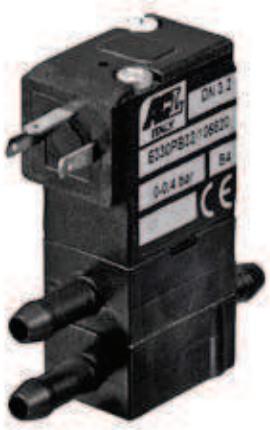
OVERALL DIMENSION



Weight = 0.43 Kg

DESCRIPTION

Solenoid valve 3 way direct acting with dry armature.
No metal parts in contact with the media.

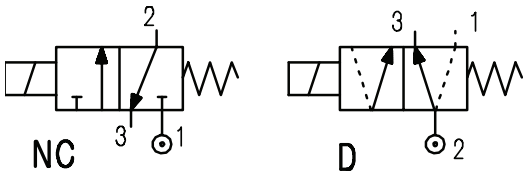


CONSTRUCTION

Body	Acetal copolymer
Seal material	NBR

FEATURES

Maximum allowable pressure 0.5 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature: -10°C +45°C
Maximum fluid temperature +50°C
Universal mounting position



ELECTRICAL OPERATING FEATURES

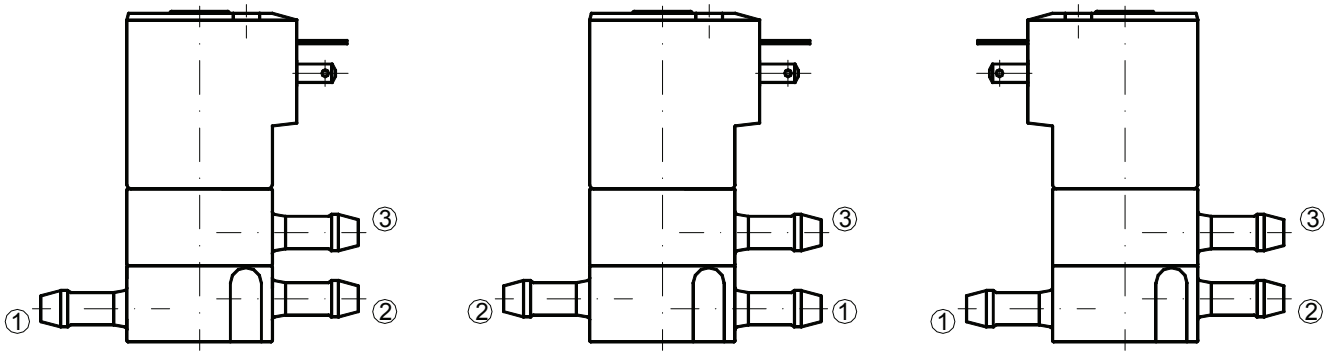
Duty cycle	: ED100%
Insulation class	: F
Voltage tolerance	: ±5%

Protection class to IP65 with connector fitted

CODE	Hosetail connection	Orifice mm	KV m³/h	Differential pressure bar		Nominal power			Voltage		Connector
				Min	Max	Alternating current VA Inrush	Alternating current VA Holding	Direct current Watt	AC	DC	
NC Normally closed D Diverting											
① E330PB32/.../106620	Ø5.5	3.2	0.2	0	0.4	6.5	4.5	---	230	---	PG7
① D330PB32/.../111140	Ø5.5	3.2	0.2	0	0.4	---	---	4	---	12	10348040
① D330PB32/.../111150	Ø5.5	3.2	0.2	0	0.4	---	---	4	---	24	

① Configuration

P.S. Solenoid valves and coils are not supplied separately

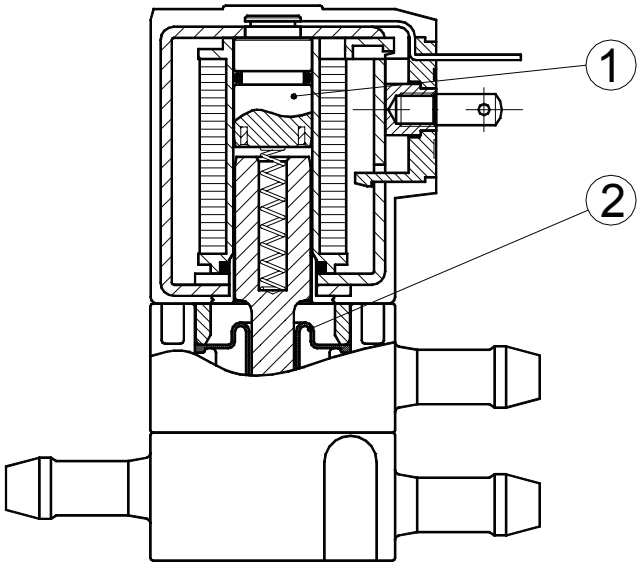


code /
3/2 NC

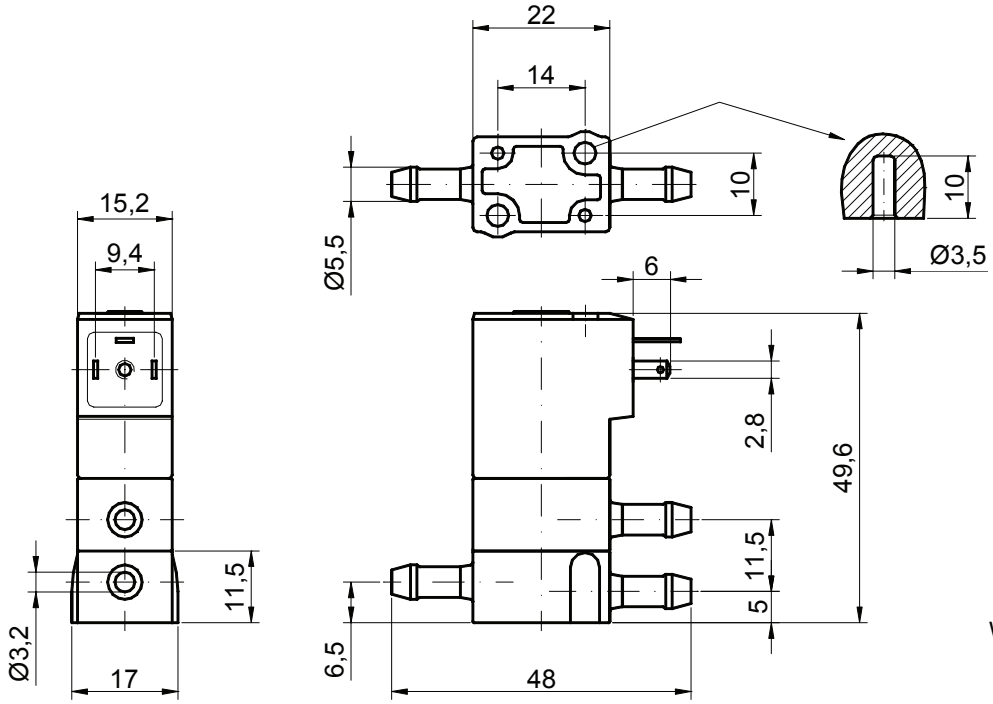
code D
DIVERTING

code R

SPARE PARTS LIST
1. Coil
2. Diaphragm



OVERALL DIMENSION



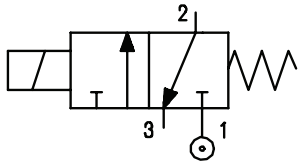
Weight = 0.04 Kg

DESCRIPTION

Solenoid valve 3 way normally closed direct acting poppet type, suitable for food application and all compatible fluids.

CONSTRUCTION

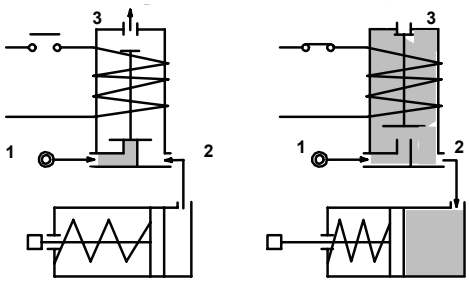
Body	Thermoplastic polymer: NSF, WRC, KTW, FDA certified
Armature tube	Brass chemically nickel plated
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR food contact certified FPM food contact certified EPDM food contact certified



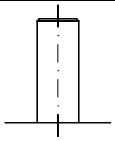
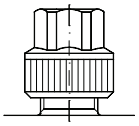
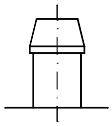
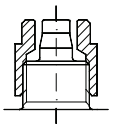
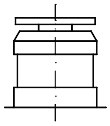
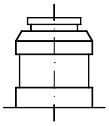
3

FEATURES

Maximum allowable pressure 10 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Universal mounting position



OPTIONS : Stainless steel armature tube
Type N connection without nut

CONNECTIONS					
K	**N**	**P**	**W** ③	**Y**	**Z**
					
SPIGGOT	**G1/8"** male thread with **NUT** for flexible and semiflexible pipes	**HOSETAIL** for flexible pipes	**COMPRESSION** for flexible and semiflexible pipes	**PUSH IN** for semiflexible pipes ∅ext.6	**PUSH IN** for semiflexible pipes ∅ext.4

CODE ① ②	Connection *	Orifice mm	KV m³/h	Differential pressure bar			Nominal power			Coil		Seal ①	Temp. range ** °C
				Min	Max		AC	VA	DC	Series	Width		
					AC	DC	Inrush	Holding	Watt				
E335*.....15///.....	**K-N-P-W-Y-Z**	**1.5**	**0.06**	**0**	**9**	**9**	**12**	**8**	**6.5**	**3**	**22**	**NBR=A EPDM=E FPM=V**	**-10 +90 <+140 -10 +130**

① Seal
② Coil
③ Only for connection "W"

Example: E335KA20///30B NBR seal SPIGGOT connection
Coil 24V 50/60Hz
E335W…./1/….

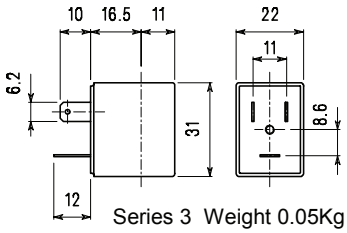
** The temperature range is related to the material of the seals (NBR, EPDM, FPM), and the valves' body. Please contact us concerning the temperature range referred to the different types of connection.

Series **335**

COILS	Alternating current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

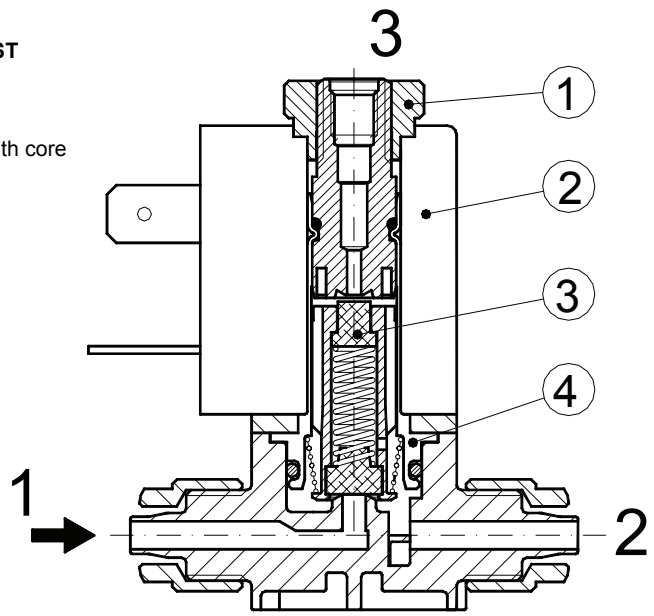
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

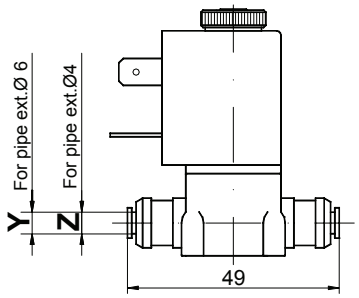
OPTIONS
Class H insulation
Cable attached
Special coil power
Special coil voltages

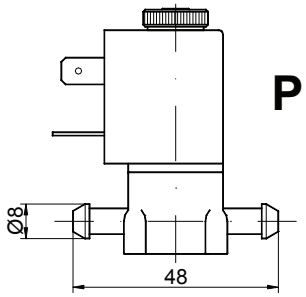


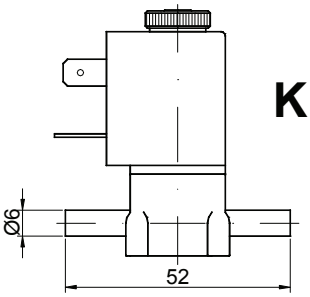
Series 3 Weight 0.05Kg

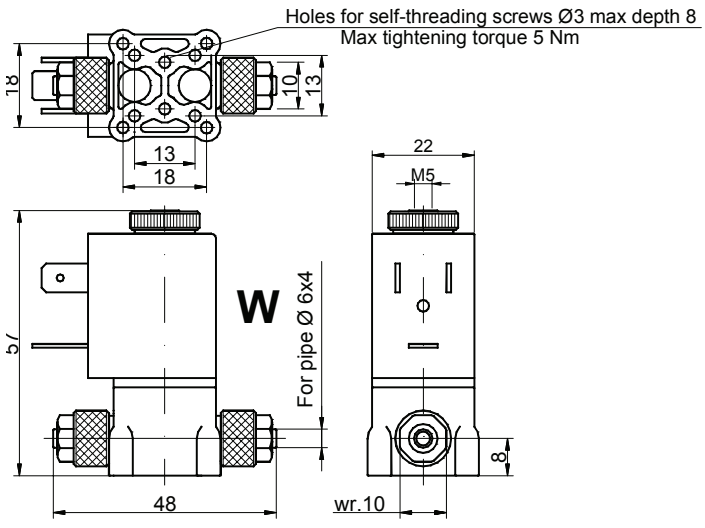
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core



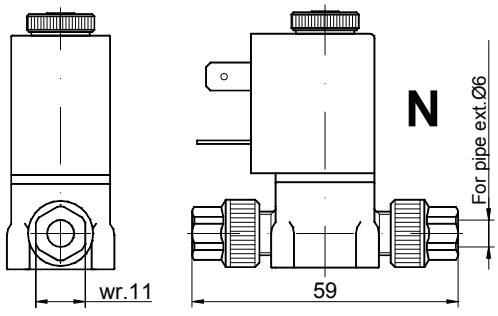








Nut Max torque 2 Nm



Screw the nut with wrench 11 up to the sliding on the hexagon (TORQUE LIMITING DEVICE)

Weight = 0.10 Kg

DESCRIPTION

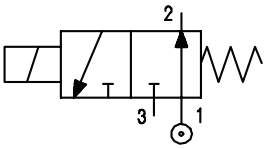
Solenoid valve 3 way normally closed direct acting poppet type, suitable for food application and all compatible fluids.

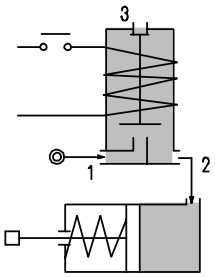
CONSTRUCTION

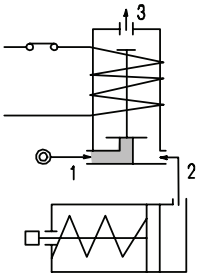
Body	Thermoplastic polymer: NSF, WRC, KTW, FDA certified
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR food contact certified FPM food contact certified EPDM food contact certified

FEATURES

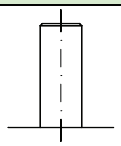
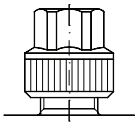
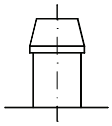
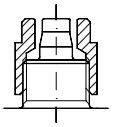
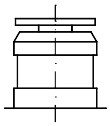
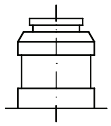
Maximum allowable pressure 10 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil H -10°C +80°C
Universal mounting position







OPTIONS : Stainless steel armature tube
Chemically nickel-plated armature tube
Type N connection without nut

CONNECTIONS					
K	**N**	**P**	**W** ③	**Y**	**Z**
					
SPIGGOT	**G1/8"** male thread with **NUT** for flexible and semiflexible pipes	**HOSETAIL** for flexible pipes	**COMPRESSION** for flexible and semiflexible pipes	**PUSH IN** for semiflexible pipes ∅ext.6	**PUSH IN** for semiflexible pipes ∅ext.4

CODE ① ②	Connections *	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temperature range ** °C
E337*.....15///.....	K-N-P-W-Y-Z	1.5	0.06	0	9	6	12	8	6.5	3	22	NBR=A EPDM=E FPM=V	-10 +90 <+140 -10 +130

① Seal
② Coil
③ Only for connection "W"

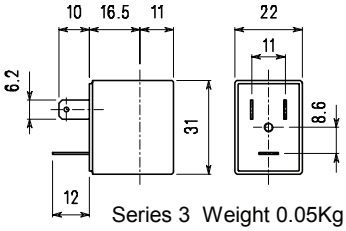
Es. E337KA20///30B NBR seal Spiggot connection
Coil 24V 50/60Hz
E337W…./1/….

** The temperature range is related to the material of the seals (NBR, EPDM, FPM), and the valves' body. Please contact us concerning the temperature range referred to the different types of connection.

COILS	Alternating Current ~50/60Hz Volt							Direct current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

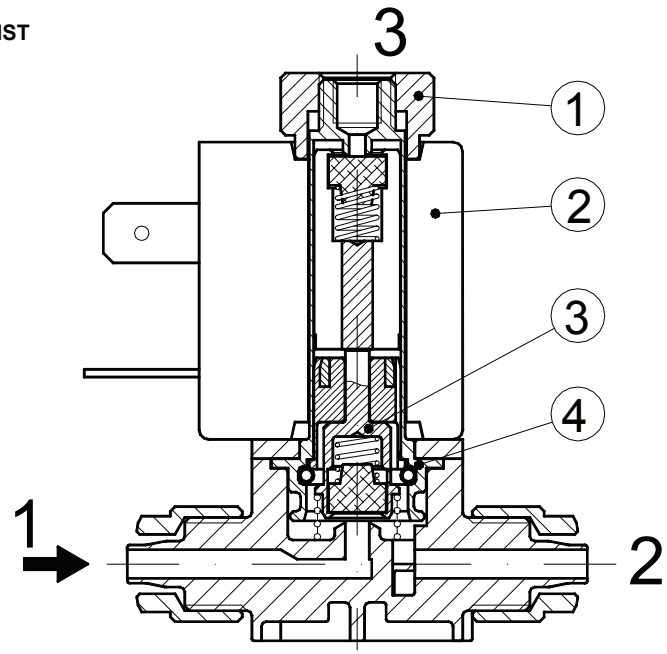
DESCRIPTION
Class F insulation
Voltage tolerance
CA +15% -10%
CC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

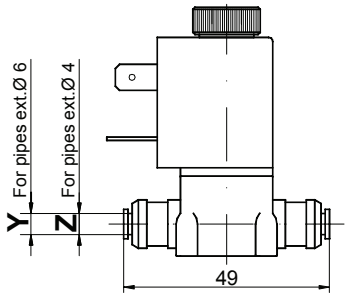
OPTIONS
Class H insulation
Cable attached
Special coil powers
Special coil voltages

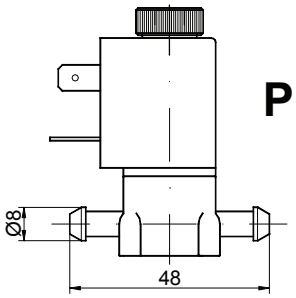


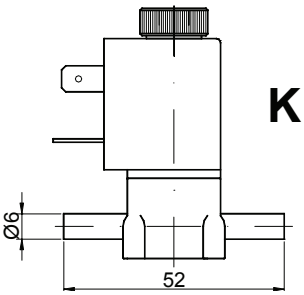
Series 3 Weight 0.05Kg

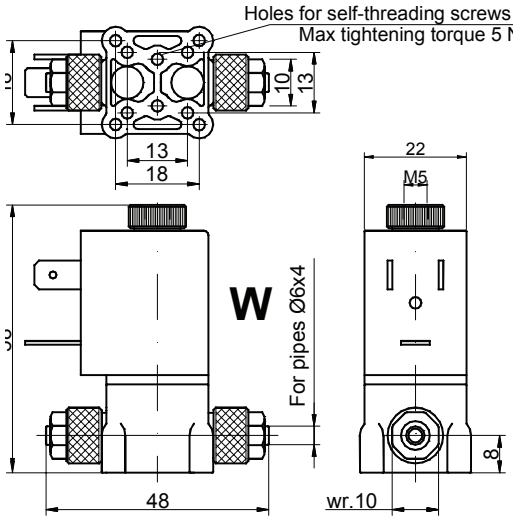
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube



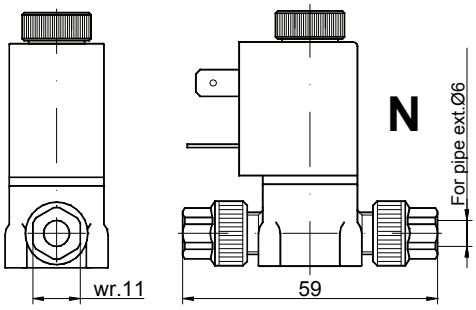








Nut Max torque 2 Nm



Screw the nut with wrench 11 up to the sliding on the hexagon (TORQUE LIMITING DEVICE)

Weight = 0.10 Kg

DESCRIPTION
Solenoid valve 3 way
direct acting poppet type

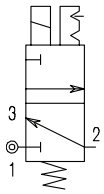
CONSTRUCTION

Body	Acetal copolymer
Internal parts	Acetal copolymer – Stainless steel
Seal material	NBR

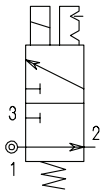
FEATURES

Fixing method :	M3 screws
	Max torque 0.5Nm
Universal mounting position	
Fluid temperature :	50°C max
Ambient temperature :	-15°C +50°C
Fluid :	Air, Neutral gases
Response time :	10-15ms
Manual override :	Enclosed bi-stable function

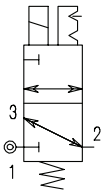
3/2 NC



3/2 NO



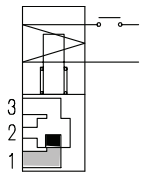
3/2 U

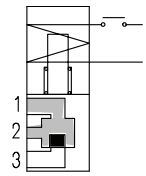


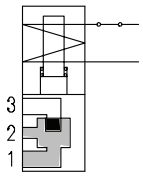
3

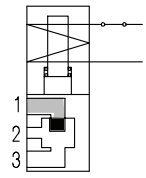
ELECTRICAL OPERATING FEATURES

Duty cycle :	ED100%
Insulation class :	F (155°C)
Voltage tolerance :	±10%
Protection class :	Cables IP65
	Fast-on IP00
	With connector fitted IP65
Electrical connection :	Cables (L=300mm)
	AMP 2.8x0.5
	DIN 43650/C









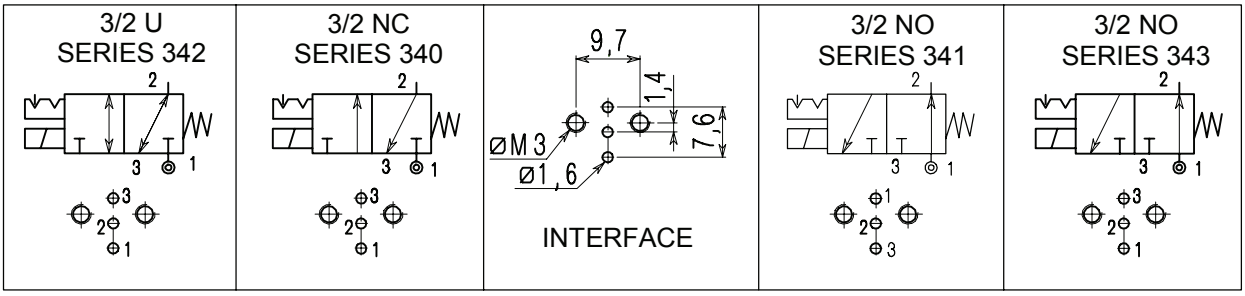
Connection	Orifice mm		Pa=6bar Nl/1' Nominal rate	Differential pressure bar		Power consumption at 20°C Alternating current VA		Direct current	CODE Alternating	CODE Direct
	1➔2	2➔3	Δp=1bar	Min	Max	Inrush	Holding	Watt	current	current
NC Normally closed										
Flange	0.8	0.9	23	0	10	---	---	1.5	E340XB08	D340XB08
Flange	1.2	1.3	29	0	10	3.6	2.5	2.5	E340XB12	D340XB12
Flange	1.5	1.6	43	0	6	3.6	2.5	2.5	E340XB15	D340XB15
NA Normally open										
Flange	1	1.2	26	0	8	3.6	2.5	2.5	E341XB10	D341XB10
Flange	1	1.2	26	0	8	3.6	2.5	2.5	E343XB10	D343XB10
U Universal										
Flange	1.5	1.6	43	0	2.5	3.6	2.5	2.5	E342XB15	D342XB15

COIL CODE

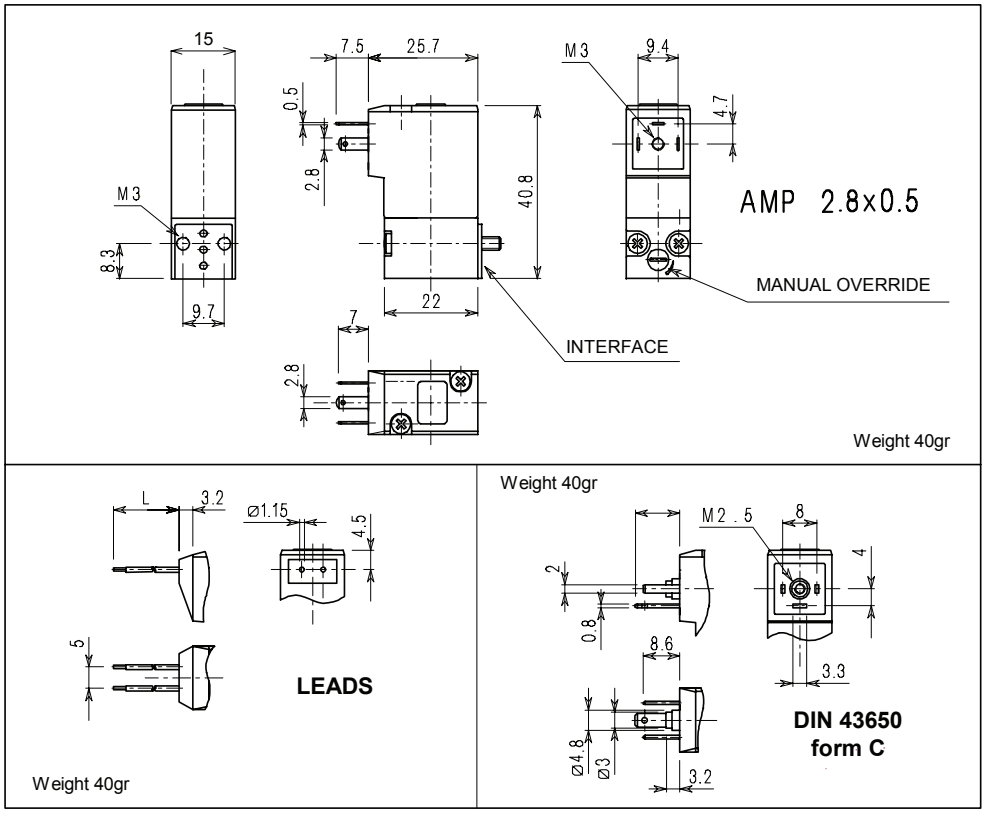
VOLTAGE	AMP 2.8 x 0.5			DIN 43650 C form			CABLE		
	50/60Hz	1.5WDC	2.5WDC	50/60Hz	1.5WDC	2.5WDC	50/60Hz	1.5WDC	2.5WDC
12	---	106970	106950	---	109020	109040	---	107010	106990
24	107030	106980	106960	108990	109030	109050	107040	107020	107000
110	107060	---	---	109000	---	---	---	---	---
220/230	107050	---	---	109010	---	---	---	---	---

P.S. 1,5W power available on Ø0.8 orifice only

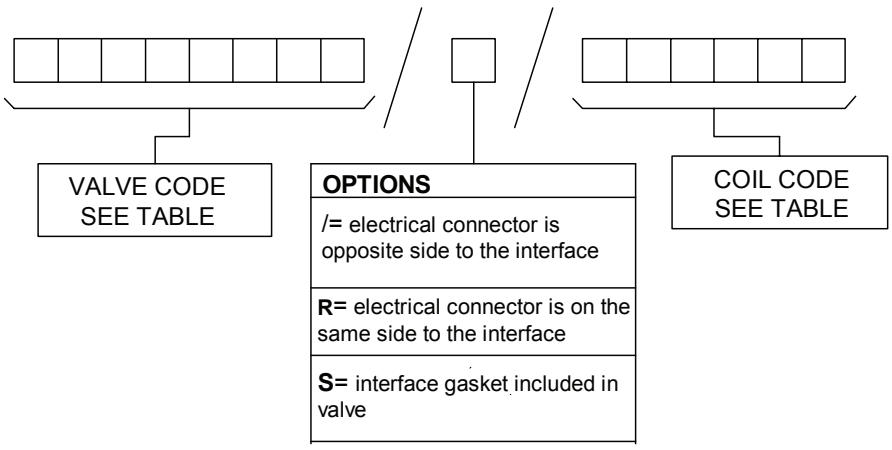
CONNECTIONS



OVERALL DIMENSIONS



TYPE NUMBER COMPOSITION



Example :D340XB12///106960 3way NC-24V DC 2,5W. Electrical connection AMP2.8x0.5 is on the opposite side of the interface.

DESCRIPTION
Solenoid valve 3 way
Direct acting poppet type

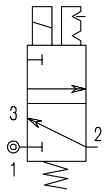
CONSTRUCTION

Body	Acetal copolymer
Internal parts	Acetal copolymer – Stainless steel
Seal material	NBR

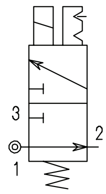
FEATURES

Fixing method :	M2.5 screws Max torque 0.5Nm
Universal mounting position	
Fluid temperature :	50°C max
Ambient temperature :	-15°C +50°C
Fluid :	Air, Neutral gases
Response time :	10-15ms
Manual override :	Enclosed bi-stable function

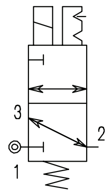
3/2 NC



3/2 NO

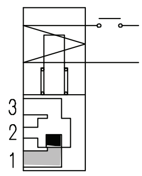


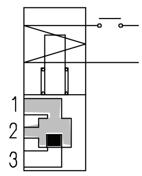
3/2 U

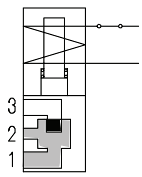


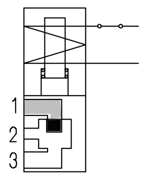
ELECTRICAL OPERATING FEATURES

Duty cycle :	ED100%
Insulation class :	F (155°C)
Voltage tolerance :	±10%
Protection class :	Cables IP65 Fast-on IP00 With connector fitted IP65
Electrical connection :	Cables (L=300mm) AMP 2.8x0.5 DIN 43650/C









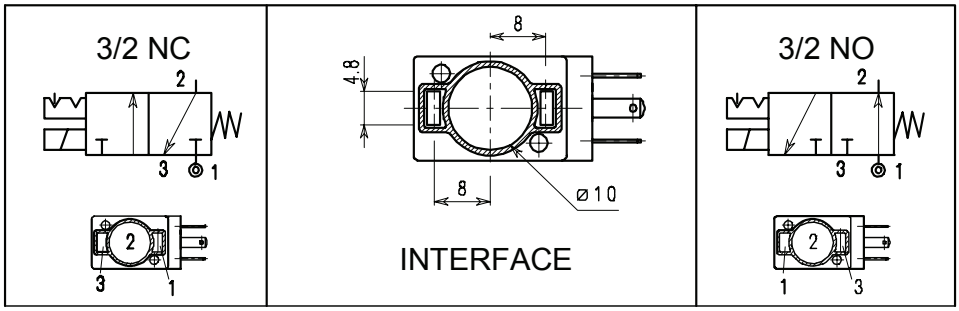
Connection	Orifice mm		Pa=6bar Nl/1‘ Nominal rate	Differential pressure bar		Power consumption at 20°C			CODE	
						Alternating current VA		Direct current	Alternating	Direct
	1→2	2→3	Δp=1bar	Min	Max	Inrush	Holding	Watt	current	current
NC Normally closed										
Flange	0.8	0.9	23	0	10	---	---	1.5	E345XB08	D345XB08
Flange	1.2	1.3	29	0	10	3.6	2.5	2.5	E345XB12	D345XB12
Flange	1.5	1.6	43	0	6	3.6	2.5	2.5	E345XB15	D345XB15
NO Normally open										
Flange	1	1.2	26	0	8	3.6	2.5	2.5	E346XB10	D346XB10
U Universal										
Flange	1.5	1.6	43	0	2.5	3.6	2.5	2.5	E347XB15	D347XB15

COIL CODE

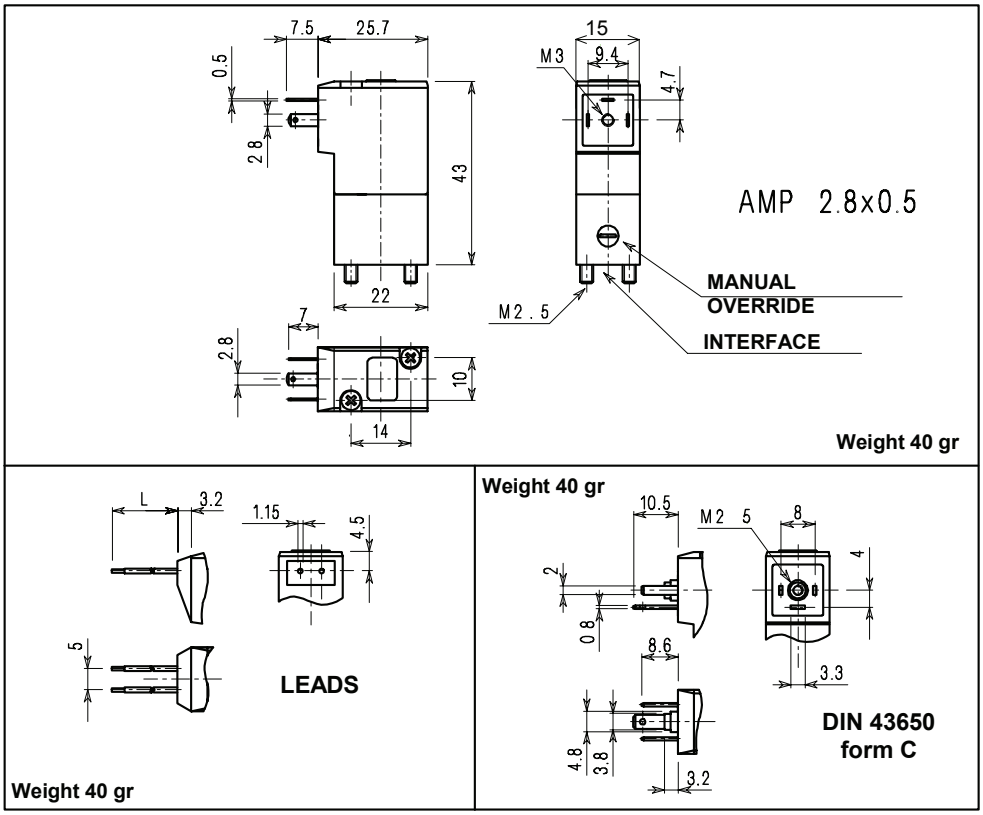
VOLTAGE	AMP 2.8 x 0.5			DIN 43650 C form			CABLE		
	50/60Hz	1.5WDC	2.5WDC	50/60Hz	1.5WDC	2.5WDC	50/60Hz	1.5WDC	2.5WDC
12	---	106970	106950	---	109020	109040	---	107010	106990
24	107030	106980	106960	108990	109030	109050	107040	107020	107000
110	107060	---	---	109000	---	---	---	---	---
220/230	107050	---	---	109010	---	---	---	---	---

P.S. 1,5W power available on Ø0.8 orifice only

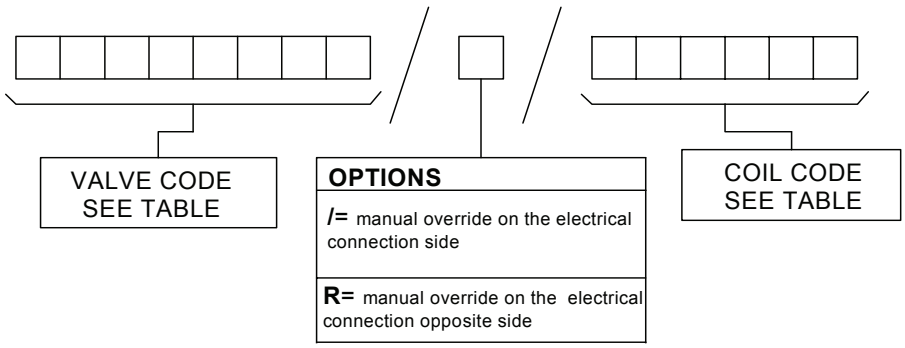
CONNECTION



OVERALL DIMENSIONS



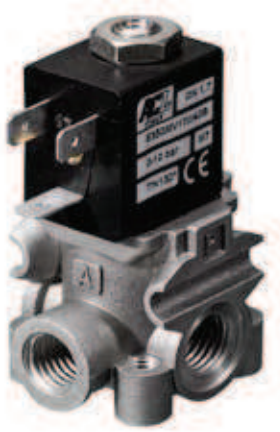
TYPE NUBER COMPOSITION



Example:D345XB12///10960 3 way NC-24VDC 2,5W. Electrical connection AMP2.8x0.5 is on the opposite side of the manual override.

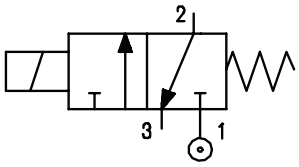
DESCRIPTION

Solenoid valve 3 way normally closed
direct acting poppet type for modular construction



CONSTRUCTION

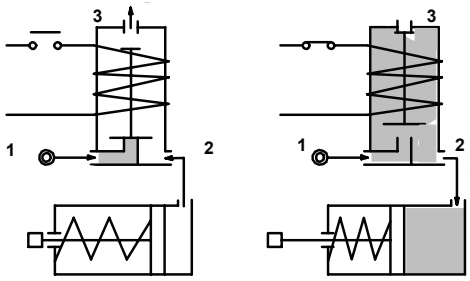
Body	Die-cast aluminium
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM



FEATURES

Media :	Air, Neutral gases
Ambient temperature :	with class F coil -10°C +55°C
	with class H coil -10°C +80°C

Universal mounting position



OPTIONS : Manual override
Stainless steel armature tube
Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series 7
Wet proof coil fixing nut

NOTE: This valve ISN'T standard. Contact the manufacturer for any question

CODE ① ②	Connection	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E350B.....15///.....	G1/4"	1.5	1.5	0.06	0	10	10	12	8	6.5	3	22	NBR=B	-10 +90
E350B.....17///.....		1.7	1.7	0.08	0	8	8	12	8	6.5	3	22		
E350B.....17///.....		1.7	1.7	0.08	0	10	10	15	11	5	4	30	EPDM=E	<+140
E350M.....15///.....	M12x1.5	1.5	1.5	0.06	0	10	10	12	8	6.5	3	22		
E350M.....17///.....		1.7	1.7	0.08	0	8	8	12	8	6.5	3	22	FPM=V	-10 +130
E350M.....17///.....		1.7	1.7	0.08	0	10	10	15	11	5	4	30		

① Seal
② Coil

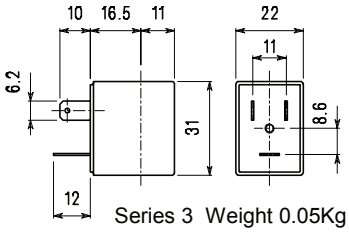
Example: E350MV17///30B FPM seal M12x1.5 connection
Coil 24V 50/60Hz

Series **350**

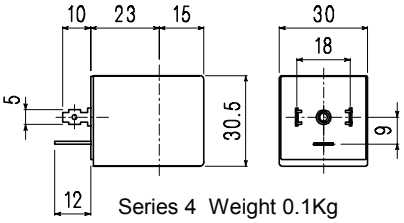
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000
Series **4** Width 30 Code ②	40A	40B	40C	40D	40E	40F	40G	400	401	402	DIN 43650A	PG9 code 10349000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltage
Special coil powers

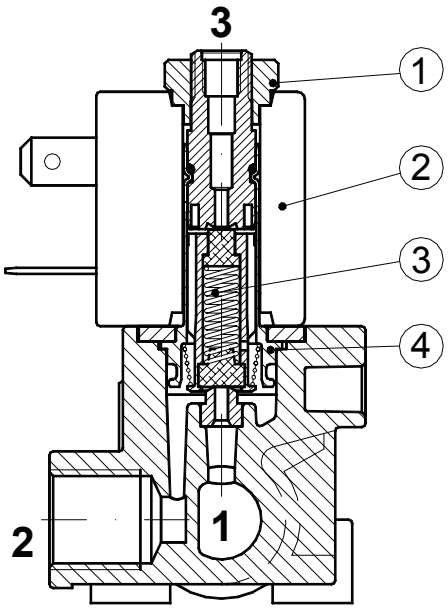


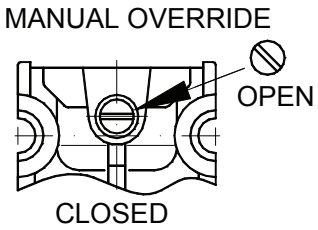
Series 3 Weight 0.05Kg



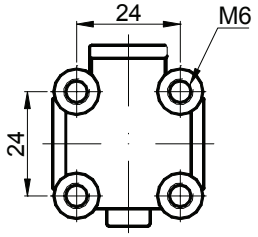
Series 4 Weight 0.1Kg

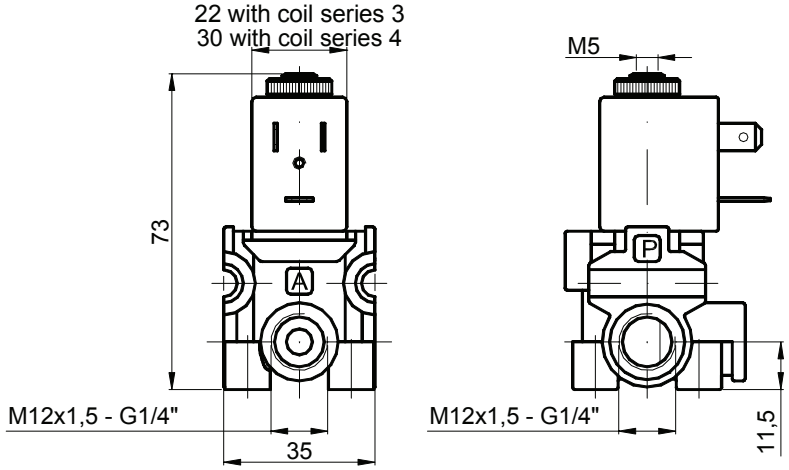
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core





OVERALL DIMENSION





Weight with coil series 3 = 0.14 Kg
Weight with coil series 4 = 0.19 Kg

DESCRIPTION

Solenoid valve 3 way normally open
direct acting poppet type for modular construction

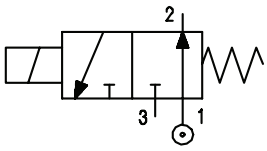
CONSTRUCTION

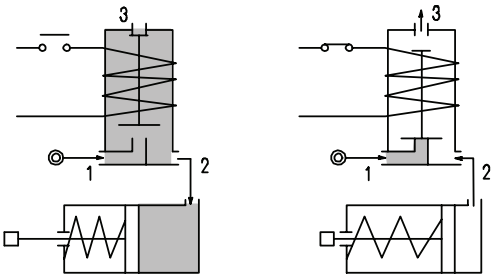
Body	Die-cast aluminium
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Media :	Air, Natural gases
Ambient temperature :	with class F coil -10°C +55°C
	with class H coil -10°C +80°C

Universal mounting position





OPTIONS : Electroless nickel plating
Explosion proof coil according to ATEX - EExmII Series 7
Wet proof coil fixing nut

NOTE: This valve ISN'T standard. Contact the manufacturer for any question

CODE ① ②	Connection	Orifice mm Inlet	Orifice mm Exh.	KV m³/h	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E351B.....15///.....	G1/4"	1.5	1.5	0.06	0	10	10	12	8	6.5	3	22	NBR=B	-10 +90
E351B.....17///.....		1.7	1.7	0.08	0	8	8	12	8	6.5	3	22		
E351B.....17///.....		1.7	1.7	0.08	0	10	10	15	11	5	4	30	EPDM=E	<+140
E351M.....15///.....	M12x1.5	1.5	1.5	0.06	0	10	10	12	8	6.5	3	22		
E351M.....17///.....		1.7	1.7	0.08	0	8	8	12	8	6.5	3	22	FPM=V	-10 +130
E351M.....17///.....		1.7	1.7	0.08	0	10	10	15	11	5	4	30		

① Seal
② Coil

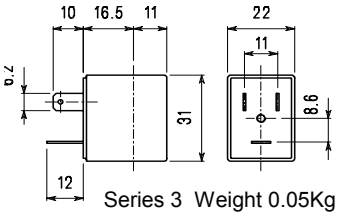
Example: E351MV17///301 FPM seal M12x1.5 connection
Coil 24V DC

Series **351**

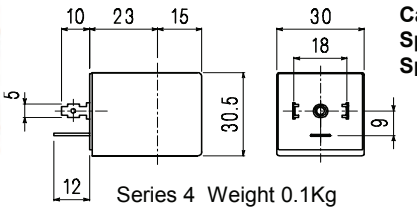
COIL	Alternating current ~50/60Hz Volt							Direct current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000
Series **4** Width 30 Code ②	40A	40B	40C	40D	40E	40F	40G	400	401	402	DIN 43650A	PG9 code 10349000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil powers
Special coil voltages

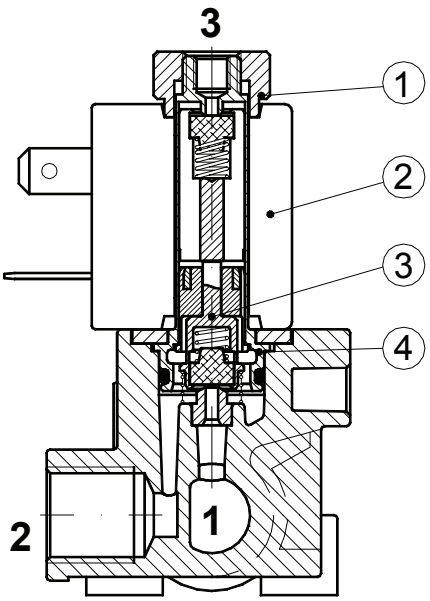


Series 3 Weight 0.05Kg

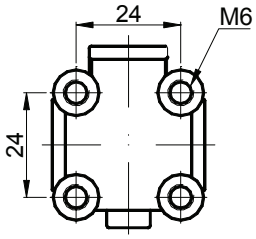


Series 4 Weight 0.1Kg

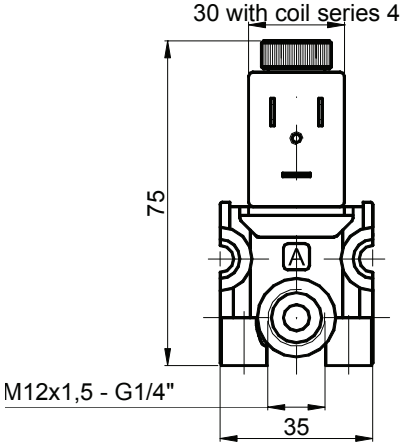
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube

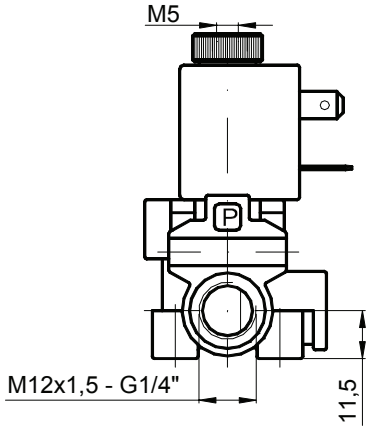


OVERALL DIMENSION



22 with coil series 3
30 with coil series 4





Weight with coil series 3 = 0.14 Kg
Weight with coil series 4 = 0.19 Kg

DESCRIPTION

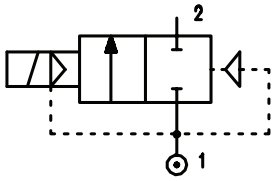
Solenoid valve 2 way normally closed
with servo-assisted diaphragm

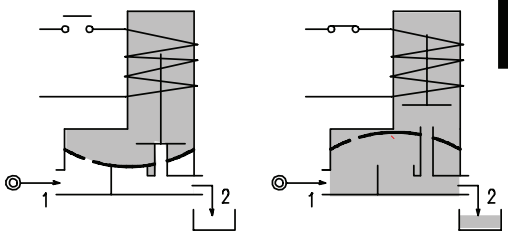
CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Minimum differential pressure 0.15 bar
Maximum allowable pressure* : 25 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above





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OPTIONS :

Manual override
Electroless nickel plating
Explosion proof coil according
to ATEX - EExmII Series 7
Version with slow closing diaphragm
Version for vacuum applications (air/gas)
Version for use with oxygen

Certified versions: SVGW SSIGE

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E107B...10///...	1/4"	10	1.5	0.15	15	15	12	8	6.5	3	22	NBR=B	-10 +90
E107C...10///...	3/8"	10	1.7	0.15	15	15							
E107C...12///...	3/8"	12	2.2	0.15	15	15						EPDM=E	<+140
E107D...12///...	1/2"	12	2.5	0.15	15	15							
E107E...18///...	3/4"	18	5.5	0.15	13	13						FPM=V	-10 +130
E107F...25///...	1"	24	10.2	0.15	10	10							
E107G...30///...	1"1/4	30	15	0.15	10	10							
③ E107C...12/W/...	3/8"	12	2.2	0.5	25	25	15	11	5	4	30	NBR=B	-10 +90
③ E107D...12/W/...	1/2"	12	2.5	0.5	25	25							

① Seal
② Coil
③ Reinforced diaphragm

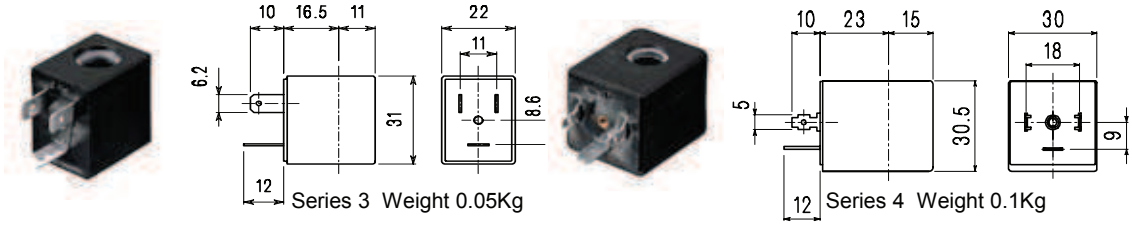
Example: E107DB12///301 NBR seal
Coil 24V DC

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

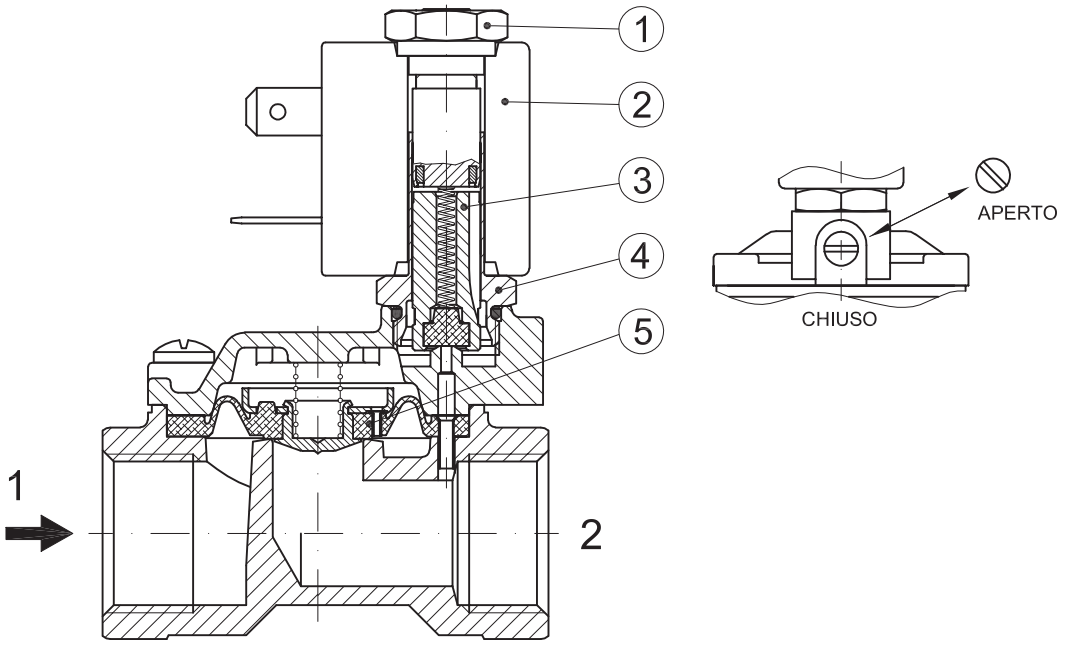
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	30A	30B	30C	30D	30E	30F	30G	300	301	302	DIN 46244	PG9 code 10348000
Series **4** Width 30 Code ②	40A	40B	40C	40D	40E	40F	40G	400	401	402	DIN 43650A	PG9 code 10349000

DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

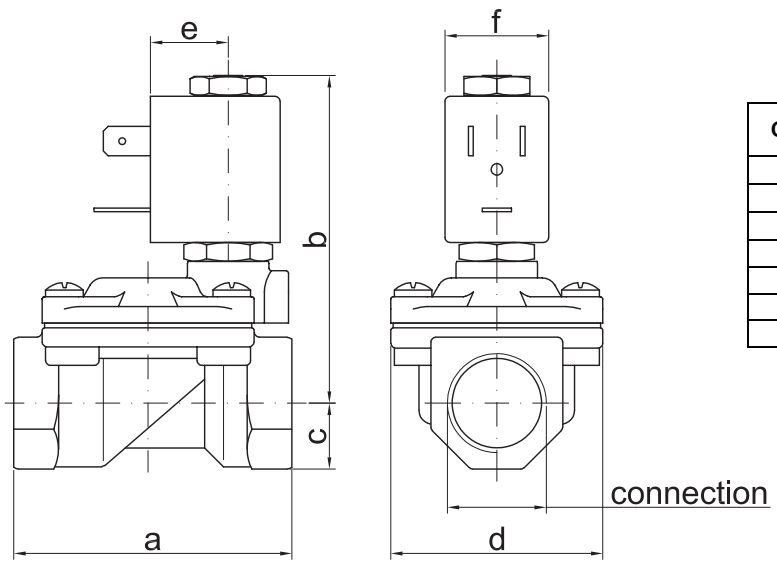
OPTIONS
Class H insulation
Cable attached
Special coil voltage
Special coil powers



SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Diaphragm assembly



OVERALL DIMENSION



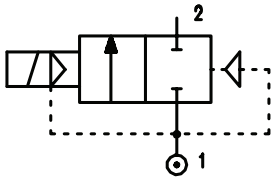
CONNECTION	a	b	c	d	e	f	Weight Kg
G1/4" ∅10	49	65	11	32	16	22	0.25
G3/8" ∅10	49	65	11	32	16	22	0.25
G3/8" ∅12	59	70	14	45	16	22	0.45
G1/2"	59	70	14	45	16	22	0.45
G3/4"	79	74	18	55	16	22	0.65
G1"	96	85	20	72	16	22	1.05
G1"1/4 Ø30	119	92	25	85	16	22	1.80

DESCRIPTION
Solenoid valve 2 way normally closed
with servo-assisted diaphragm

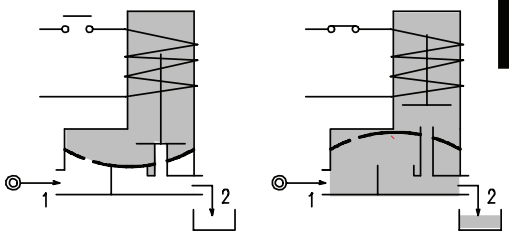
CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES
Minimum differential pressure 0.15÷3 bar
Maximum allowable pressure* : 20 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above



OPTIONS : Manual override
Electroless nickel plating
Version for vacuum applications (air/gas)



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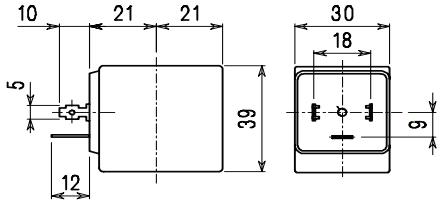
CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E107G.....37///.....	1”1/4	37	18	0.15	10	10	20	15	10	2	30	NBR=B	-10 +90
E107H.....37///.....	1”1/2	37	21	0.15	10	10						EPDM=E	<+140
E107I.....50///.....	2”	50	36	0.15	10	10						FPM=V	-10 +130
E107MB75///.....	2”1/2	75	75	0.3	5	5	20	15	10	2	30	NBR=B	-10 +90
E107RB75///.....	3”	75	84	0.3	5	5							
③E107MB75/W/.....	2”1/2	75	75	3	15	15							
③E107RB75/W/.....	3”	75	84	3	15	15							

① Seal
② Coil
③ Reinforced diaphragm

Example: E107IB50///201 NBR seal
Coil 24V DC

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

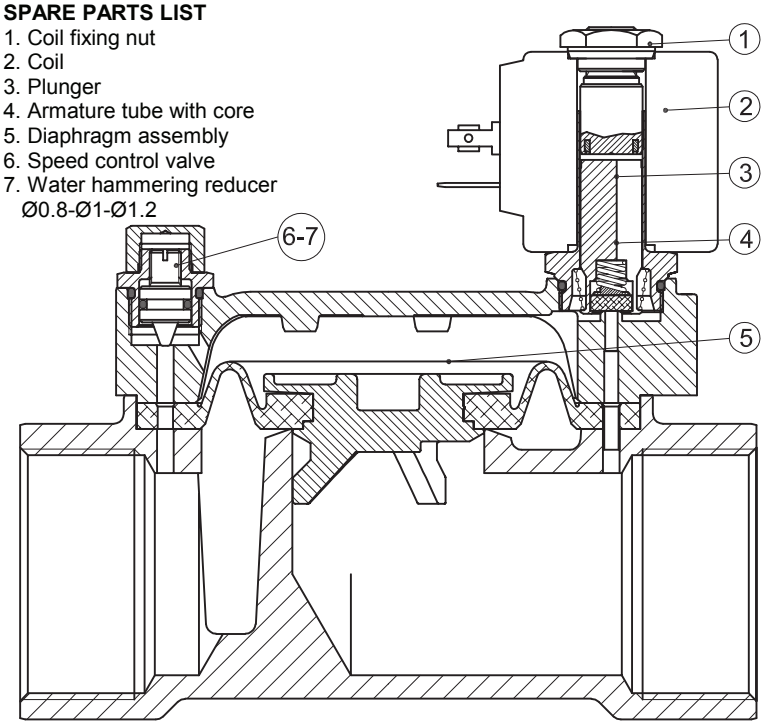


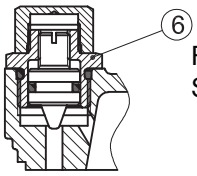
Series 2 Weight 0.12Kg

DESCRIPTION
Insulation class
Series 2=F
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

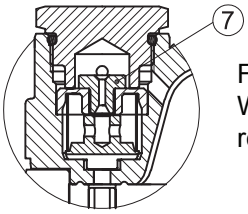
OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Diaphragm assembly
6. Speed control valve
7. Water hammering reducer
   Ø0.8-Ø1-Ø1.2



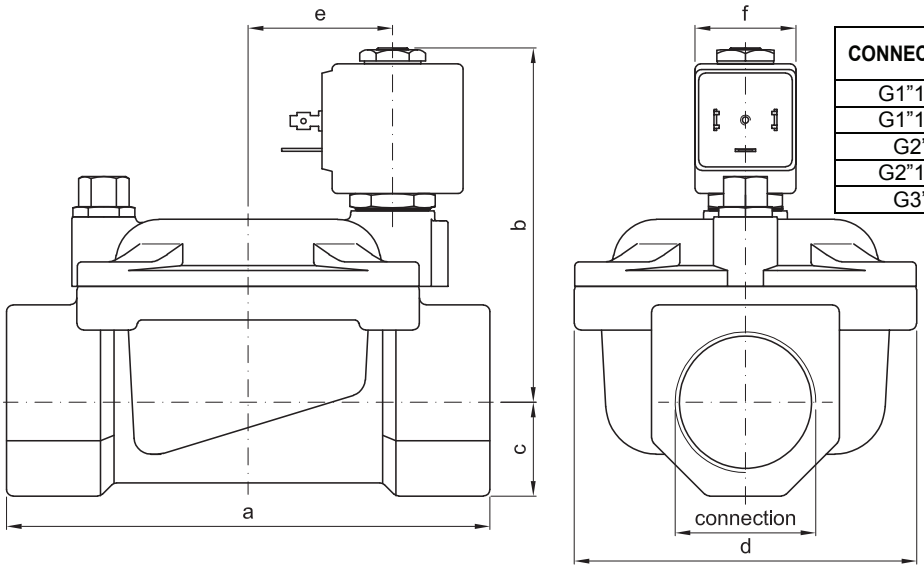


FOR G1”1/4-1”1/2-2”
Speed control valve



FOR G2”1/2-3”
Water hammering reducer

OVERALL DIMENSION



CONNECTION	a	b	c	d	e	f	Weight Kg
G1”1/4	142	107	28	102	21	30	2.95
G1”1/2	142	107	28	102	21	30	2.74
G2”	158	117	35	119	21	30	4.32
G2”1/2	226	134	51	169	21	30	10
G3”	226	134	51	169	21	30	9.65

DESCRIPTION

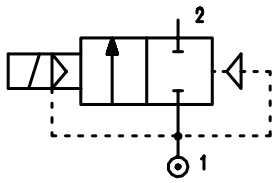
Solenoid valve 2 way normally closed
with servo-assisted diaphragm and explosion proof coil certified:
CESI 03 ATEX 344 ExII2G/D EEx “d” IIC T6

VALVE CONSTRUCTION

Body and cover	Brass
Seal material	FPM
	NBR

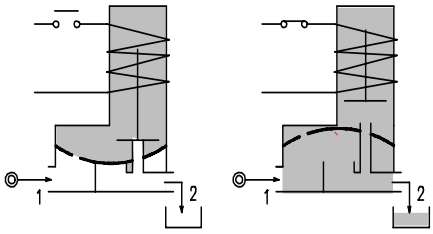
EXPLOSION PROOF CONSTRUCTION

Housing	Red colour alloy
Electrical connection	½” NPT



FEATURES

Minimum differential pressure 0.15 bar
Maximum allowable pressure 25 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : -10°C +40°C
Preferred mounting position with vertical coil above



OPTIONS : Electroless nickel plating
Version with slow closing diaphragm

4

NOTE: The solenoid valve is suitable only with media that are **NOT** potentially explosive.

CODE ①	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar			Nominal power		Coil ①	Seal	Temp. range °C
				Min	Max		AC	DC	Series		
					AC	DC	Holding				
A107BV10/1/.....	1/4”	10	1.5	0.15	15	15	12VA	8W	A6	FPM=V	-10 +130
A107CV10/1/.....	3/8”	10	1.7	0.15	15	15					
A107CV12/1/.....	3/8”	12	2.2	0.15	15	15					
A107DV12/1/.....	1/2”	12	2.5	0.15	15	15					
A107EV18/1/.....	3/4”	18	5.5	0.15	13	13					
A107FV25/1/.....	1”	24	10.2	0.15	10	10					
A107GV30/1/.....	1”1/4	30	15	0.15	10	10					
A107GV37/1/.....	1”1/4	37	18	0.15	10	10					
A107HV37/1/.....	1”1/2	37	21	0.15	10	10					
A107IV50/1/.....	2”	50	36	0.15	10	10					
A107MB75/1/.....	2”1/2	75	75	0.3	5	10				NBR=B	-10 +90
A107RB75/1/.....	3”	75	84	0.3	5	10					

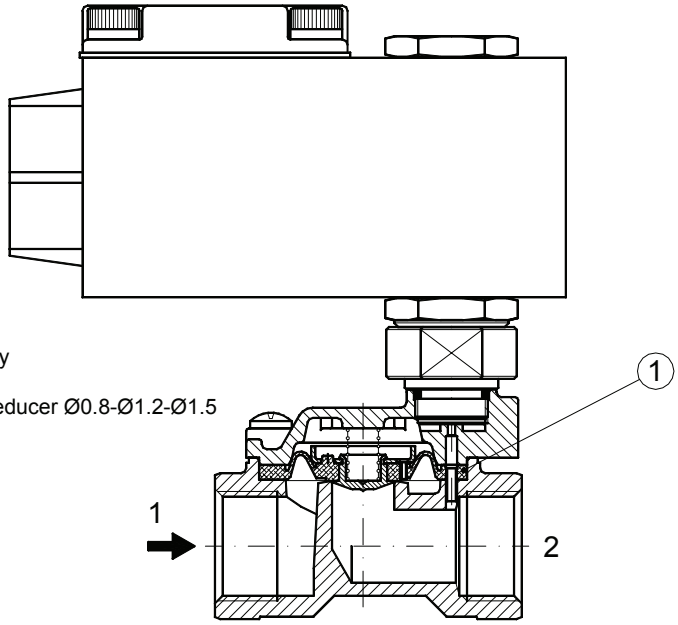
① Coil

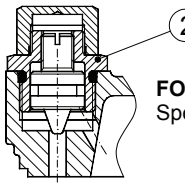
Example: A107DV12/1/A6E FPM seal
Coil 230V 50-60Hz

Note: For G2”1/2 e G3” NBR seal only

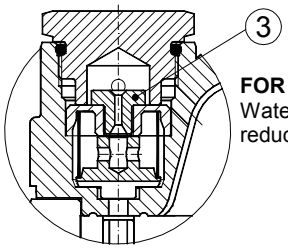
COILS	Alternating Current ~50/60Hz Volt				Direct current Volt			Electrical connection
	24	48	110	220 230	12	24	48	
Series **A6** Code ①	**A6B**	**A6C**	**A6D**	**A6E**	**A60**	**A61**	**A62**	**1/2" NPT**

DESCRIPTION
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class IP66





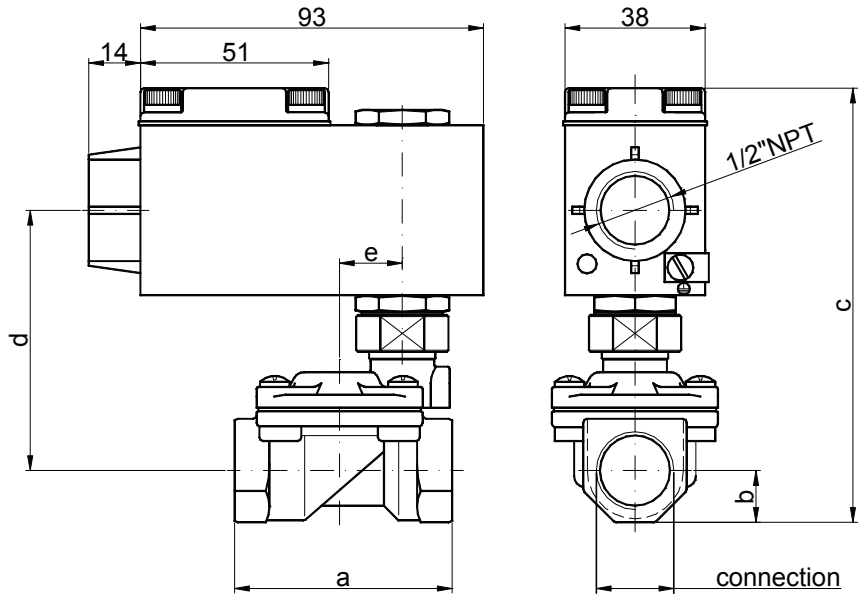
FOR G1"1/4-1"1/2-2"
Speed control valve



FOR G2"1/2-3"
Water hammering reducer Ø0.8-Ø1.2-Ø1.5

SPARE PARTS LIST
1. Diaphragm assembly
2. Speed control valve
3. Water hammering reducer Ø0.8-Ø1.2-Ø1.5

OVERALL DIMENSION



CONNECTION	a	b	c	d	e	Weight Kg
G1/4" ∅10	49	11	110	66	16	0.72
G3/8" ∅10	49	11	110	66	16	0.72
G3/8" ∅12	59	14	118	70	17	0.92
G1/2"	59	14	118	70	17	0.92
G3/4"	79	18	127	75.5	22.2	1.12
G1"	96	20	141	88	30.2	1.50
G1"1/4 Ø30	119	25	150	91	36	2.27
G1"1/4	142	28	147	86	43	3.33
G1"1/2	142	28	147	86	43	3.12
G2"	158	35	168	95	48	4.72
G2"1/2	226	51	197	112	69.2	10.40
G3"	226	51	197	112	69.2	10

DESCRIPTION

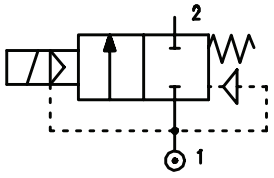
Solenoid valve 2 way normally closed
with assisted lift diaphragm

CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	FPM

FEATURES

Maximum allowable pressure 25 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above
For complete diaphragm opening, a differential pressure of at least 0,15 bar is necessary



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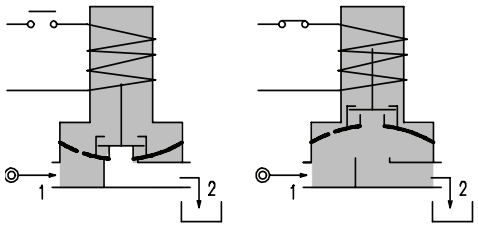
OPTIONS : Electroless nickel plating



CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E108C.....12///.....	3/8”	12	2	0	10	-	20	15	-	2	30	FPM=V	-10 +130
E108D.....12///.....	1/2”	12	2.2	0	10	-	20	15	-				
E108C.....12///.....	3/8”	12	2	0	12	10	40	30	27	5	36		
E108D.....12///.....	1/2”	12	2.2	0	12	10	40	30	27				
E108E.....18///.....	3/4”	18	4.5	0	9	-	40	30	-				
E108F.....25///.....	1”	24	8.5	0	7	-	40	30	-				
D108E.....18///.....	3/4”	18	4.5	0	-	9	-	-	27				
D108F.....25///.....	1”	24	8.5	0	-	8	-	-	27				

① Seal
② Coil

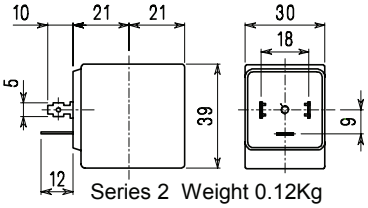
Example: E108FV25///52E FPM seal
Coil 230V 50-60Hz

Series **108**

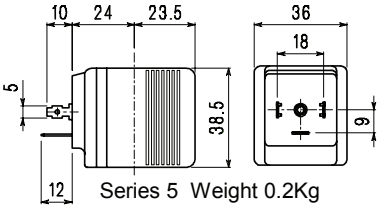
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Insulation class H (series 2)
Cable attached
Special coil voltages
Special coil powers



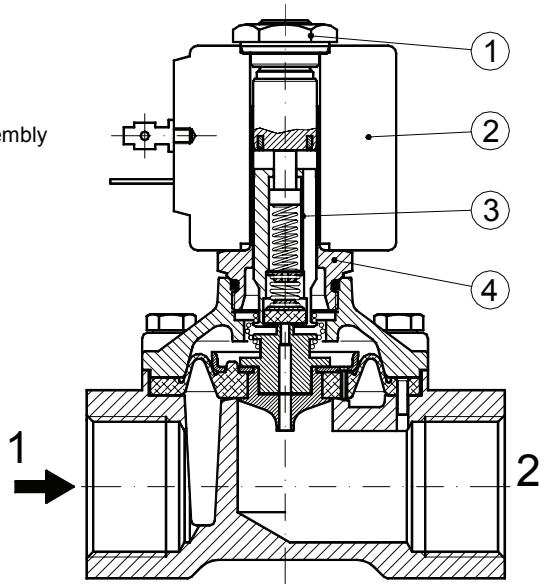
Series 2 Weight 0.12Kg



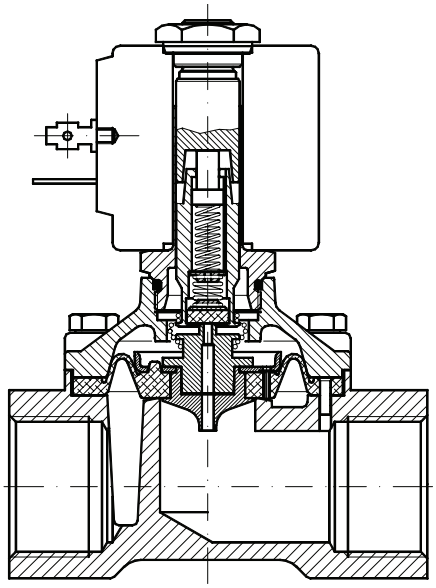
Series 5 Weight 0.2Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger and diaphragm assembly
4. Armature tube with core

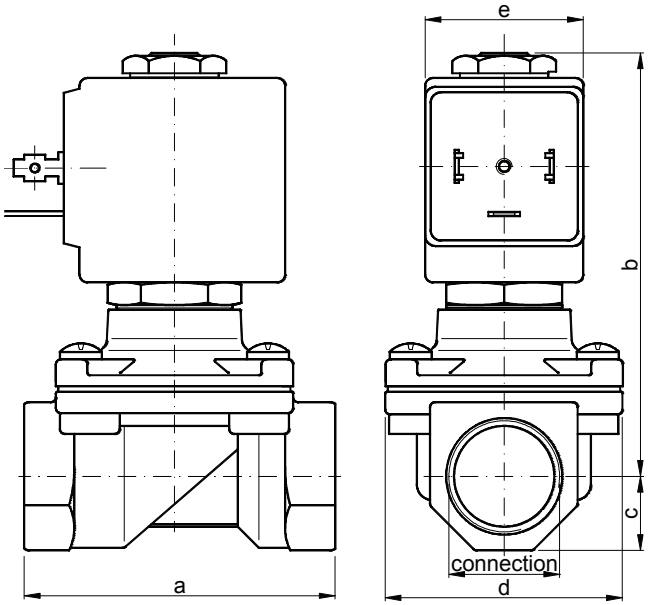
Version "E"



Version "D"



OVERALL DIMENSION



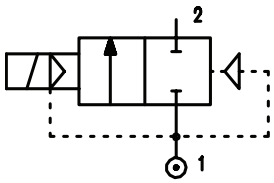
CONNECTION	a	b	c	d	e with series 2	f with series 5	Weight Kg series 2	Weight Kg series 5
G3/8" ∅12	59	83	14	45	30	36	0.50	0.58
G1/2"	59	83	14	45	30	36	0.45	0.53
G3/4"	79	90	18	55	-	36	-	0.75
G1"	96	101	20	72	-	36	-	1.10

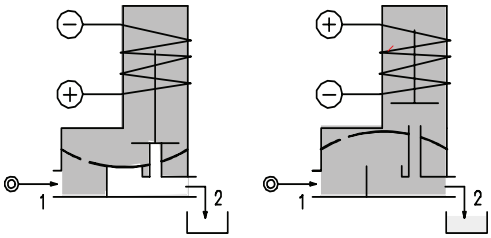
DESCRIPTION

Solenoid valve 2 way with servo-assisted diaphragm bi-stable.
The bi-stable function is achieved by the use of a polarised permanent magnet energising the coil with a DC current for at least 15ms in the reverse direction of the preceding impulse.

CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Magnet	NeFeB
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM





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FEATURES

Minimum differential pressure 0.15 bar
Maximum allowable pressure 25 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above

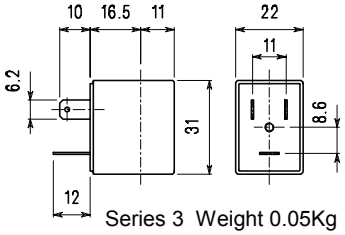
OPTIONS : Special coil powers
Certified versions: WRAS

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
D117B.....10///.....	1/4”	10	1.5	0.15	-	8	-	-	2	3	22	NBR=B	-10 +90
		10	1.5	0.15	-	15	-	-	5				
D117C.....10///.....	3/8”	10	1.7	0.15	-	8	-	-	2				
		10	1.7	0.15	-	15	-	-	5				
D117C.....12///.....	3/8”	12	2.2	0.15	-	8	-	-	2				
		12	2.2	0.15	-	15	-	-	5				
D117D.....12///.....	1/2”	12	2.5	0.15	-	8	-	-	2			EPDM=E	<+120
		12	2.5	0.15	-	15	-	-	5				
D117E.....18///.....	3/4”	18	5.5	0.15	-	8	-	-	2				
		18	5.5	0.15	-	13	-	-	5			FPM=V	-10 +120
D117F.....25///.....	1”	25	10.2	0.15	-	8	-	-	2				
		25	10.2	0.15	-	10	-	-	5				
D117G.....30///.....	1” 1/4	30	15	0.15	-	8	-	-	2				
		30	15	0.15	-	10	-	-	5				

① Seal
② Coil

Example: D117DB12///301120 NBR seal
Coil 24V DC 2W

COIL	DIRECT CURRENT															Electrical connection	Connectors
	3V			6 V			9 V			12 V			24 V				
	2W	5W	6.5W	2W	5W	6.5W	2W	5W	6.5W	2W	5W	6.5W	2W	5W	6.5W		
Series **3** **Width 22** **Code ②**	308120			305120	305150		307120	307150		300120	300150	300	301120	301150	301	**DIN 46244**	**PG9 code 10348000**

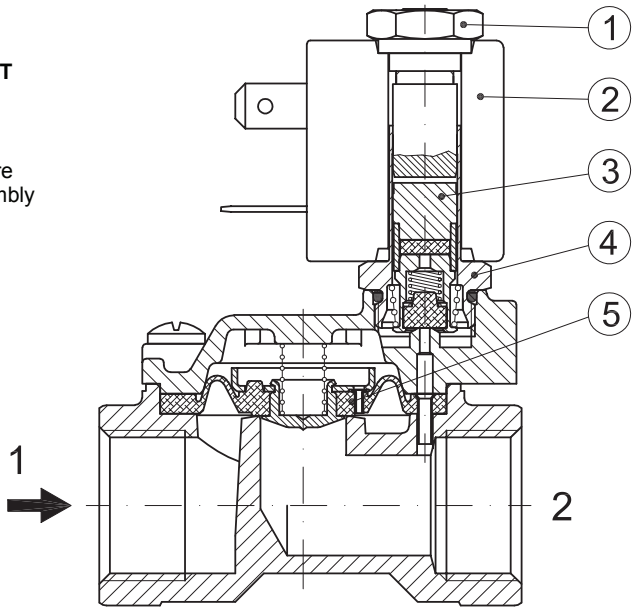


Series 3 Weight 0.05Kg

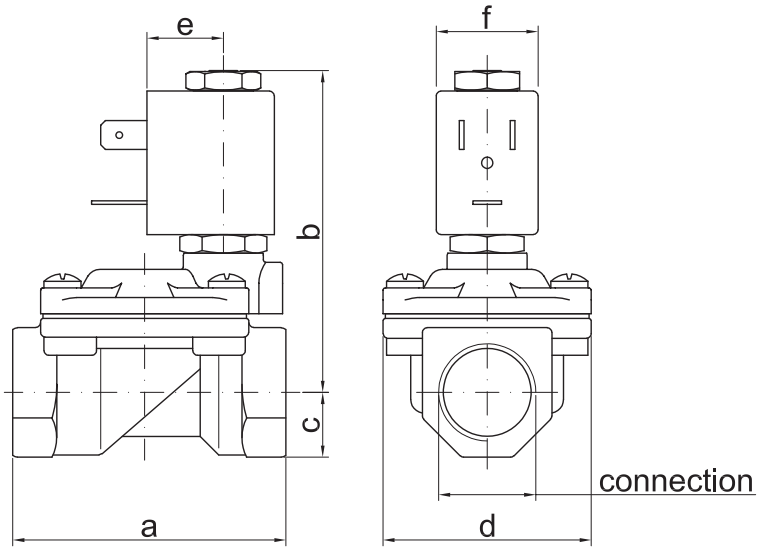
DESCRIPTION
Class F insulation
Voltage tolerance ± 10%
Protection class
IP65 with connector fitted
IP00 without connector

OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature with core
5. Diaphragm assembly



OVERALL DIMENSION



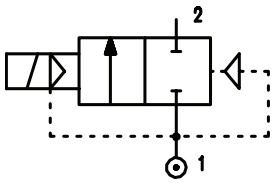
CONNECTION	a	b	c	d	e	f	Weight Kg
G1/4" ∅10	49	65	11	32	16	22	0.25
G3/8" ∅10	49	65	11	32	16	22	0.25
G3/8" ∅12	59	70	14	45	16	22	0.45
G1/2"	59	70	14	45	16	22	0.40
G3/4"	79	74	18	55	16	22	0.66
G1"	96	85	20	72	16	22	1.05
G1"1/4 Ø30	119	92	25	85	16	22	1.80

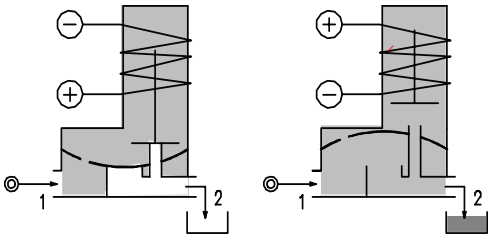
DESCRIPTION

Solenoid valve 2 way with servo-assisted diaphragm bi-stable.
The bi-stable function is achieved by the use of a polarized permanent magnet energising the coil with a DC current for at least 15ms in the reverse direction of the preceding impulse.

CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Magnet	NeFeB
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM





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FEATURES

Minimum differential pressure 0.15÷3 bar
Maximum allowable pressure 20 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above

OPTIONS : Special coil powers

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
D117G.....37///.....	1"1/4	37	18	0.15	-	10	-	-	10	2	30	NBR=B	-10 +90
D117H.....37///.....	1"1/2	37	21	0.15	-	10						EPDM=E	<+120
D117I.....50///.....	2"	50	36	0.15	-	10						FPM=V	-10 +120
D117MB75///.....	2"1/2	75	75	0.3	-	5	-	-	10	2	30	NBR=B	-10 +90
D117RB75///.....	3"	75	84	0.3	-	5							
③D117MB75/W/.....	2"1/2	75	75	3	-	10							
③D117RB75/W/.....	3"	75	84	3	-	10							

① Seal
② Coil
③ Reinforced diaphragm

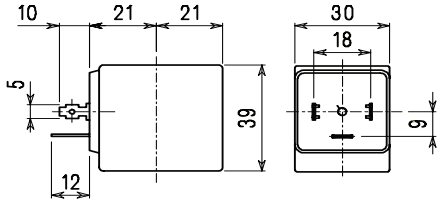
Example: D117IB50///201 NBR seal
Coil 24V DC

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

COIL	Direct Current Volt			Electrical connection	Connectors
	12	24	48		
Series **2** Width 30 Code ②	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

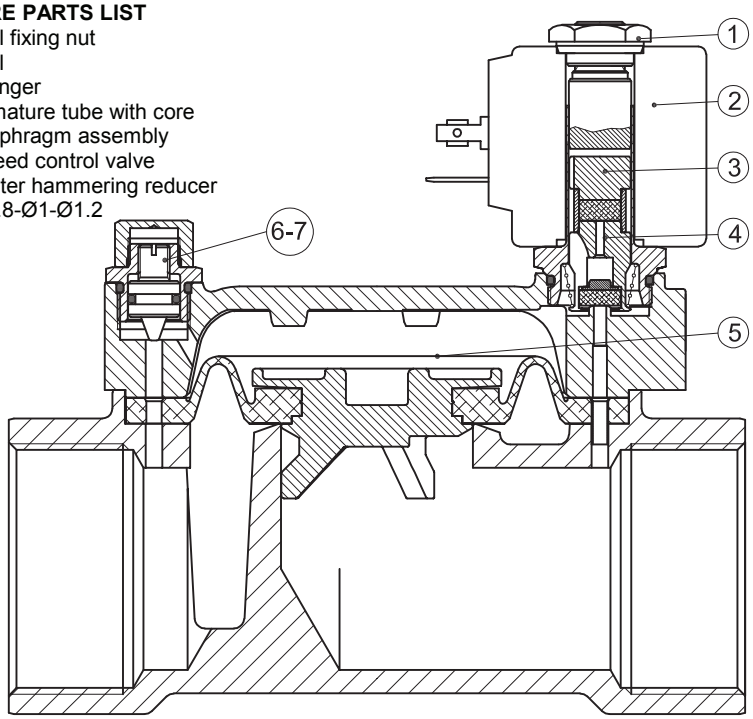
DESCRIPTION
Insulation class F
Voltage tolerance ± 10%
Protection class
IP65 with connector fitted
IP00 without connector

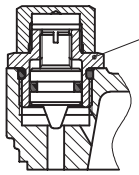
OPTIONS
Class H insulation
Cable attached
Special coil voltages
Special coil powers



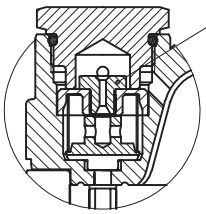
Series 2 Weight 0.12Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Diaphragm assembly
6. Speed control valve
7. Water hammering reducer Ø0.8-Ø1-Ø1.2



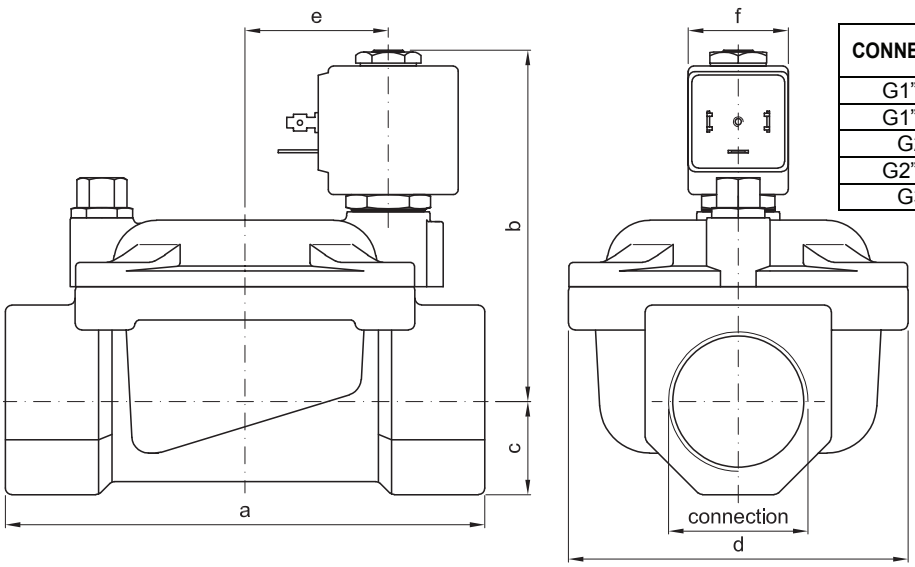


FOR G1”1/4-1”1/2-2”
Speed control valve



FOR G2”1/2-3”
Water hammering reducer

OVERALL DIMENSION



CONNECTION	a	b	c	d	e	f	Weight Kg
G1”1/4	142	107	28	102	21	30	2.95
G1”1/2	142	107	28	102	21	30	2.74
G2”	158	117	35	119	21	30	4.32
G2”1/2	226	134	51	169	21	30	10
G3”	226	134	51	169	21	30	9.65

DESCRIPTION

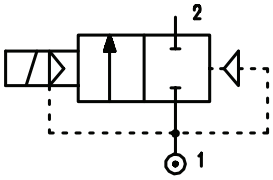
Solenoid valve 2 way normally closed
with servo-assisted piston

CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Piston	Brass
Piston ring	PTFE reinforced
Seal material	Main seal PTFE other FPM

FEATURES

Minimum differential pressure 1 bar
Maximum allowable pressure 40 bar (60 bar version /1)
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above



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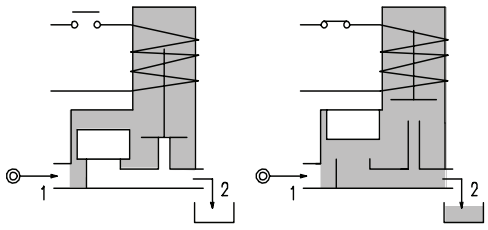
OPTIONS : Electroless nickel plating



CODE ①	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E119BV52///.....	1/4”	5.2	0.47	1.5	50	50	20	15	10	2	30	PTFE/FPM	-10 +130
E119CV12///.....	3/8”	12	2	1	30	30							
E119DV12///.....	1/2”	12	2.2	1	30	30							
②E119CV12/1/.....	3/8”	12	2	1	50	50	40	30	27	5	36		
②E119DV12/1/.....	1/2”	12	2.2	1	50	50							

① Coil
② Maximum allowable pressure 60 bar

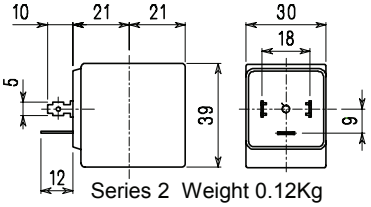
Maximum allowable leakage < 0.2 nL/h

Example: E119DV12/1/521 FPM seal
Coil 24V DC
Maximum differential pressure 50 bar

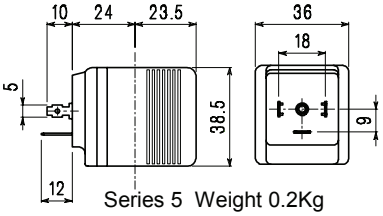
COILS	Alternating Current ~50/60Hz Volt							Direct current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ①	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ①	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

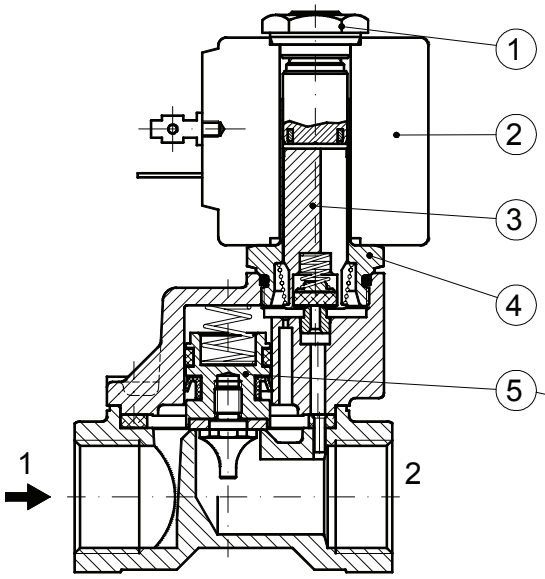


Series 2 Weight 0.12Kg

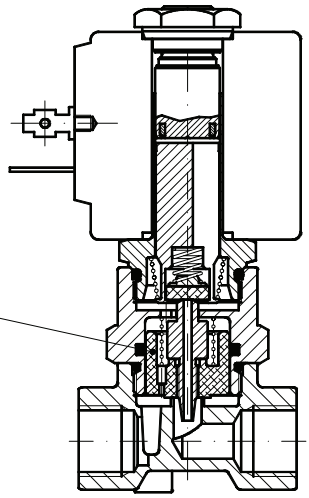


Series 5 Weight 0.2Kg

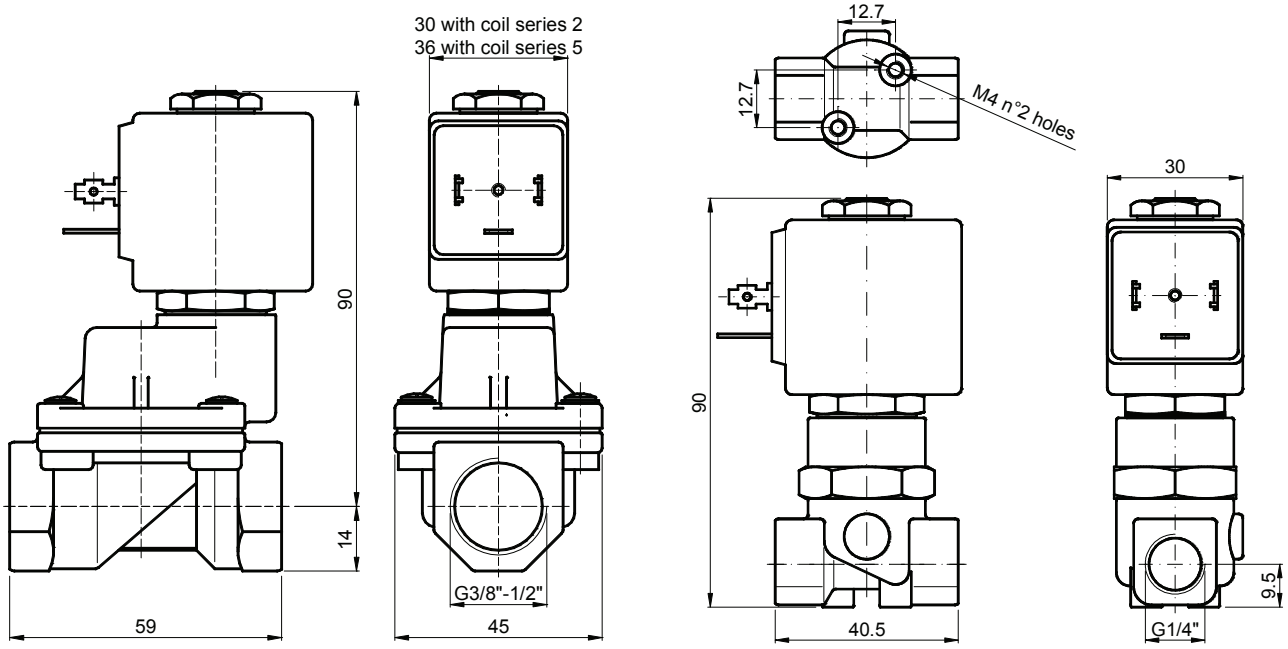
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Piston assembly



E119BV52



OVERALL DIMENSION



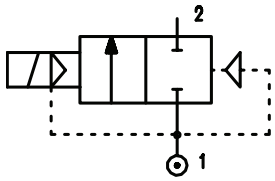
Weight with coil series 2 = 0.63 Kg
Weight with coil series 5 = 0.71 Kg

DESCRIPTION

Solenoid valve 2 way normally closed
with servoassisted piston for use with steam

CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Piston	Stainless steel
Piston ring	PTFE reinforced
Seal material	Main seal PTFE others FPM

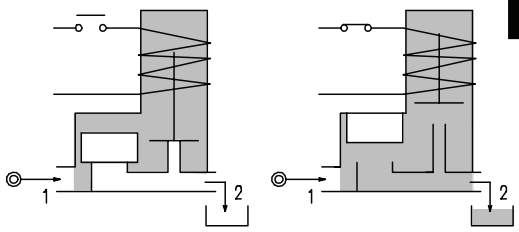


FEATURES

Minimum differential pressure 2.5 bar
Ambient temperature with class H coil only : -10°C +80°C
Preferred mounting position with vertical coil above

4

OPTIONS : Electroless nickel plating



CODE ①	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E119CW12/1/.....	3/8”	12	2	2.5	9	9	20	15	10	2	30	PTFE	-10 +180
E119DW12/1/.....	1/2”	12	2.2	2.5	9	9	20	15	10	2	30		

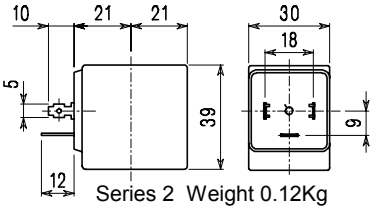
① Coil

Example: E119DW12/1/221 PTFE seal
Coil 24V DC

Maximum allowable leakage < 0.2 nL/h

Series **119W**

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ①	22A	22B	22C	22D	22E	22F	22G	220	221	222	DIN 43650A	PG9 code 10349000

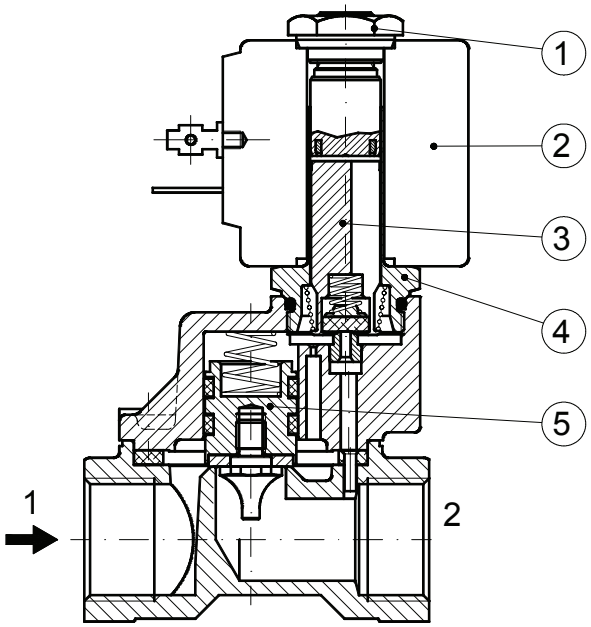


Series 2 Weight 0.12Kg

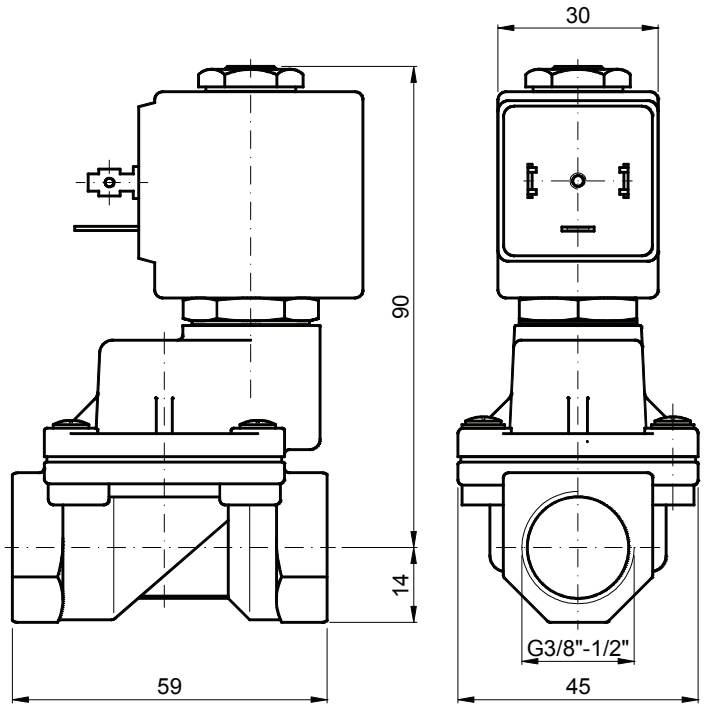
DESCRIPTION
Class H insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Cable attached
Special coil powers
Special coil voltages

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Piston assembly



OVERALL DIMENSION



Weight = 0.63 Kg

DESCRIPTION

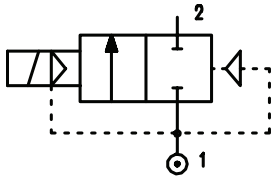
Solenoid valve 2 way normally closed in stainless steel AISI 316 with servoassisted diaphragm

CONSTRUCTION

Body and cover	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Minimum differential pressure 0.15 bar
Maximum allowable pressure 25 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above



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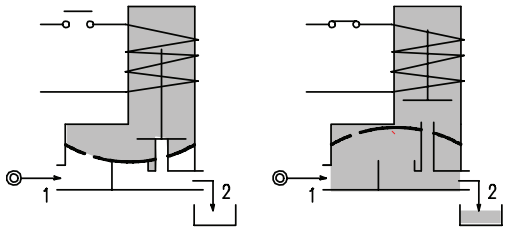
OPTIONS :

Manual override
Explosion proof coil according to ATEX - EExmII Series 7
Food approval seal material
Version with slow closing diaphragm
Version for use with oxygen
Silver shading ring



CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E177C.....12///.....	3/8”	12	2.2	0.15	15	15	12	8	6.5	3	22	NBR=B EPDM=E FPM=V	-10 +90 <+140 -10 +130
E177D.....12///.....	1/2”	12	2.5	0.15	15	15							
E177E.....18///.....	3/4”	18	5.5	0.15	13	13							
E177F.....25///.....	1”	24	10.2	0.15	10	10							

① Seal
② Coil

Example: E177DV12///301 FPM seal
Coil 24V DC

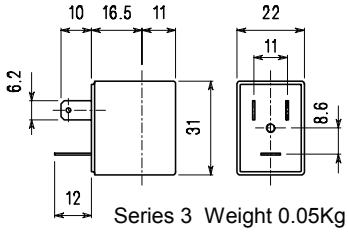
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **177**

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

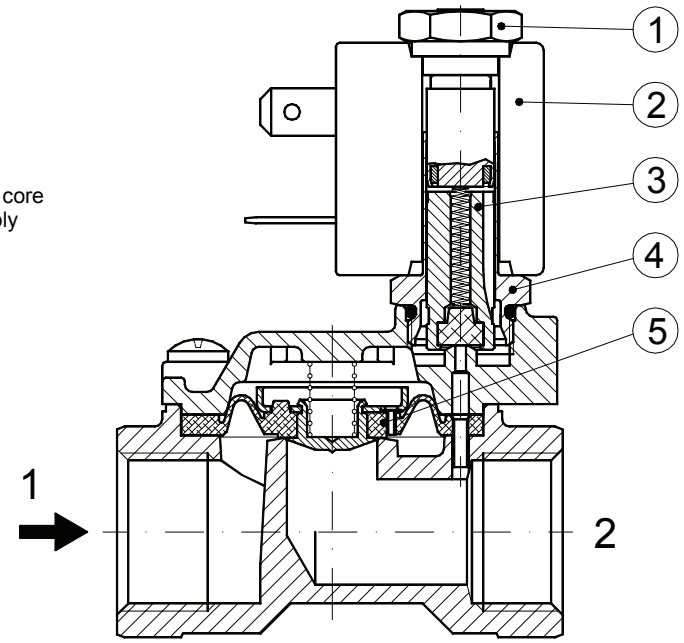
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil powers
Special coil voltages

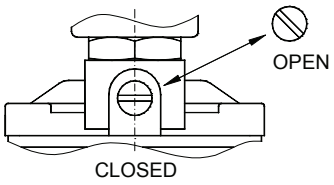


Series 3 Weight 0.05Kg

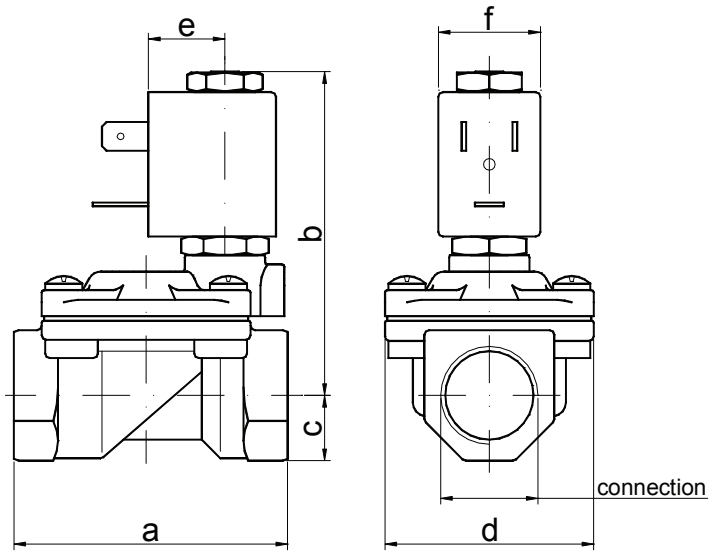
SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Diaphragm assembly



MANUAL OVERRIDE



OVERALL DIMENSION



CONNECTION	a	b	c	d	Weight Kg
G3/8" ∅12	59	70	11	45	0.31
G1/2"	59	70	13	45	0.32
G3/4"	79	74	18	54	0.75
G1"	96	85	20	72	1.35

DESCRIPTION

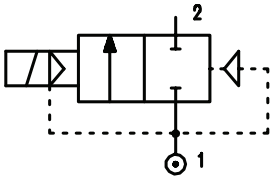
Solenoid valve 2 way normally closed in stainless steel AISI 316 with servo-assisted diaphragm and explosion proof coil certified:
CESI 03 ATEX 344 ExII2G/D EEx “d” IIC T6

VALVE CONSTRUCTION

Body and cover	Stainless steel
Seal material	FPM

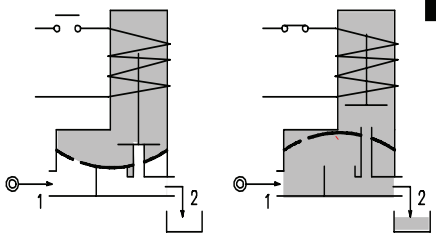
EXPLOSION PROOF CONSTRUCTION

Housing	Red colour alloy
Electrical connection	½” NPT



FEATURES

Minimum differential pressure 0.15 bar
Maximum allowable pressure 25 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : -10°C +40°C
Preferred mounting position with vertical coil above



OPTIONS : Version with slow closing diaphragm

4

NOTE: The solenoid valve is suitable only with media that are **NOT** potentially explosive.

CODE ①	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar			Nominal power		Coil ①	Seal	Temp. range °C
				Min	Max		AC Holding	DC	Series		
					AC	DC					
A177CV12/1/.....	3/8”	12	2.2	0.15	15	15	12VA	8W	A6	FPM=V	-10 +130
A177DV12/1/.....	1/2”	12	2.5	0.15	15	15					
A177EV18/1/.....	3/4”	18	5.5	0.15	13	13					
A177FV25/1/.....	1”	24	10.2	0.15	10	10					

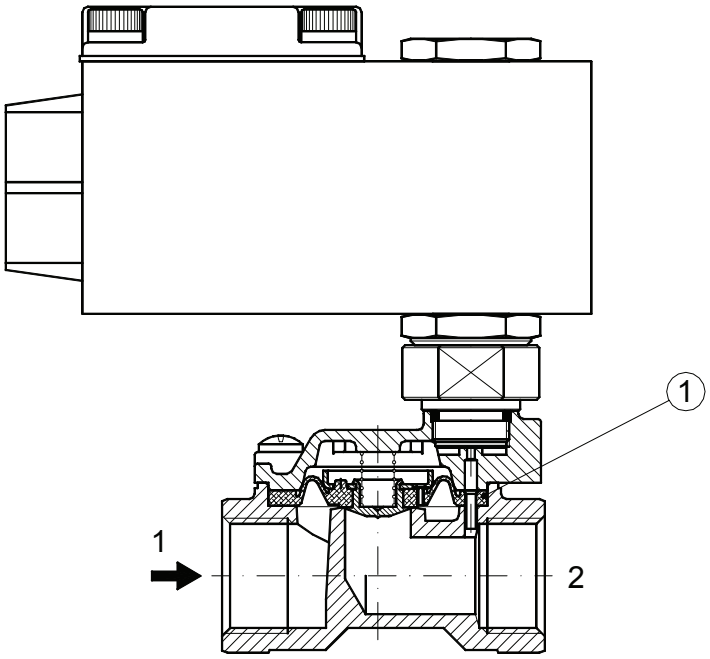
① Coil

Example: A177DV12/1/A6E FPM seal
Coil 230V 50-60Hz

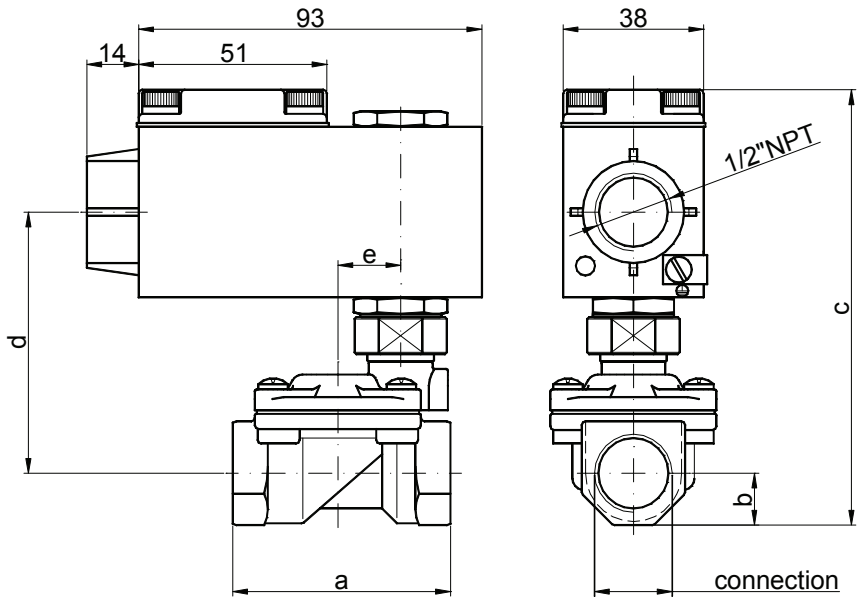
COILS	Alternating Current ~50/60Hz Volt				Direct Current Volt			Electrical connection
	24	48	110	220 230	12	24	48	
Series **A6** Code ①	**A6B**	**A6C**	**A6D**	**A6E**	**A60**	**A61**	**A62**	**1/2" NPT**

DESCRIPTION
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class IP66

SPARE PARTS LIST
1. Diaphragm assembly



OVERALL DIMENSION



CONNECTION	a	b	c	d	e	Weight Kg
G3/8" ∅12	59	11	118	70	17	1.11
G1/2"	59	13	118	70	17	1.12
G3/4"	79	18	127	75.5	22.2	1.55
G1"	96	20	141	88	30.2	2.15

DESCRIPTION

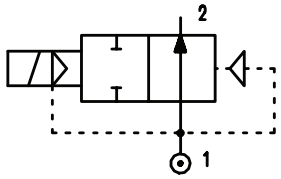
Solenoid valve 2 way normally open
with servoassisted diaphragm

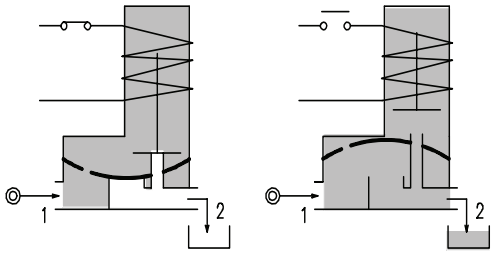
COSNTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal	NBR
	FPM
	EPDM

FEATURES

Minimum differential pressure 0.15 bar
Maximum allowable pressure* : 25 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature: with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above





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OPTIONS: Electroless nickel plating
Explosion proof coil according
to ATEX - EExmII Series 7

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E207B.....10///.....	1/4”	10	1.5	0.15	15	15							
E207C.....10///.....	3/8”	10	1.7	0.15	15	15						NBR=B	-10 +90
E207C.....12///.....	3/8”	12	2.2	0.15	15	15							
E207D.....12///.....	1/2”	12	2.5	0.15	15	15	12	8	6.5	3	22	EPDM=E	<+140
E207E.....18///.....	3/4”	18	5.5	0.15	13	13							
E207F.....25///.....	1”	24	10.2	0.15	10	10						FPM=V	-10 +130
E207G.....30///.....	1”1/4	30	15	0.15	10	10							

① Seal
② Coil

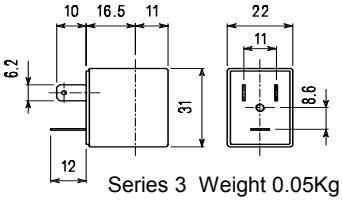
Example: E207DB12///301 NBR seal
Coil 24V DC

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

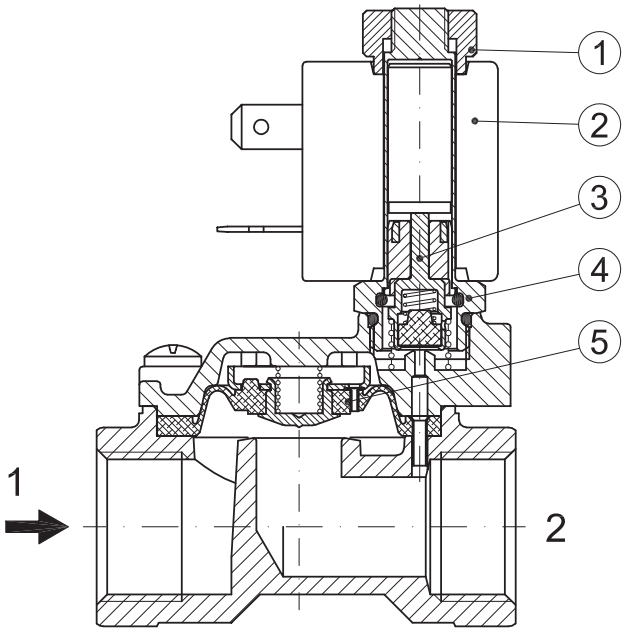
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil voltage
Special coil powers

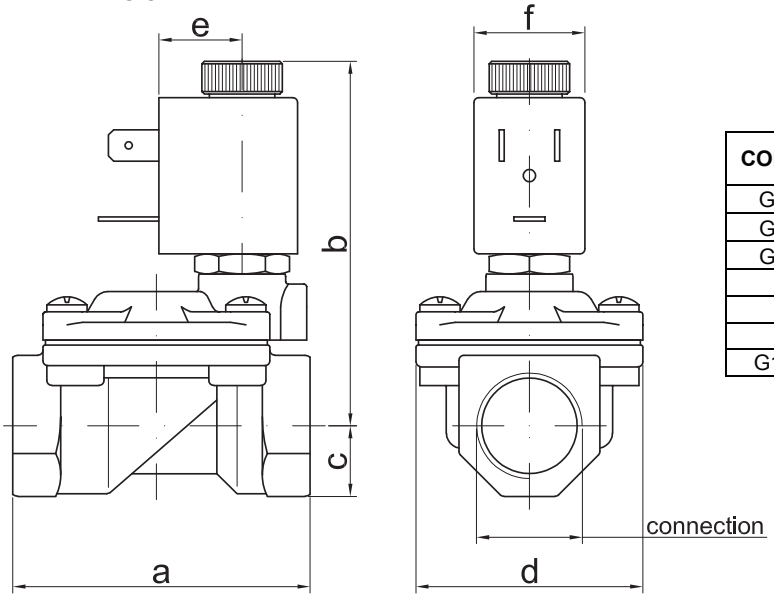


Series 3 Weight 0.05Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube with core
5. Diaphragm assembly



OVERALL DIMENSION



CONNECTION	a	b	c	d	e	f	Weight Kg
G1/4" ∅10	49	64	11	32	16	22	0.25
G3/8" ∅10	49	64	11	32	16	22	0.25
G3/8" ∅12	59	73	14	45	16	22	0.45
G1/2"	59	73	14	45	16	22	0.45
G3/4"	79	75	18	55	16	22	0.66
G1"	96	85	20	72	16	22	1.05
G1"1/4 Ø30	119	96	25	85	16	22	1.80

DESCRIPTION

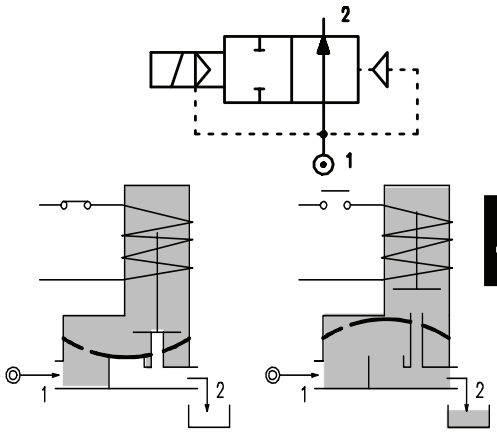
Solenoid valve 2 way normally open
with servo-assisted diaphragm

CONSTRUCTION

Body and cover	Brass
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal	NBR
	FPM
	EPDM

FEATURES

Minimum differential pressure 0.15÷3 bar
Maximum allowable pressure* : 20 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature: with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above



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OPTIONS: Electroless nickel plating
Stainless steel armature tube

CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E207G.....37///.....	1”1/4	37	18	0.15	10	10	20	15	10	2	30	NBR=B	-10 +90
E207H.....37///.....	1”1/2	37	21	0.15	10	10						EPDM=E	<+140
E207I.....50///.....	2”	50	36	0.15	10	10						FPM=V	-10 +130
E207MB75///.....	2”1/2	75	75	0.3	5	5	20	15	10	2	30	NBR=B	-10 +90
E207RB75///.....	3”	75	84	0.3	5	5							
③ E207MB75/W/...	2”1/2	75	75	3	15	15	40	30	27	5	36		
③ E207RB75/W/...	3”	75	84	3	15	15							

① Seal
② Coil
③ Reinforced diaphragm

Example: E207IB50///201 NBR seal
Coil 24V DC

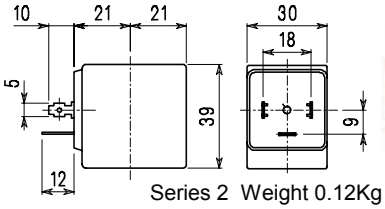
* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

Series **207**

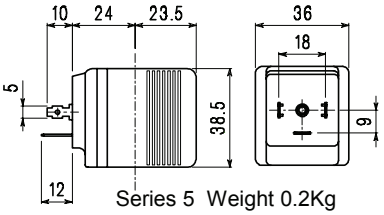
COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ②	20A	20B	20C	20D	20E	20F	20G	200	201	202	DIN 43650A	PG9 code 10349000
Series **5** Width 36 Code ②	52A	52B	52C	52D	52E	52F	52G	520	521	522	DIN 43650A	PG11 code 10349001

DESCRIPTION
Insulation class
Series 2=F Series 5=H
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation (series 2)
Cable attached
Special coil voltages
Special coil powers

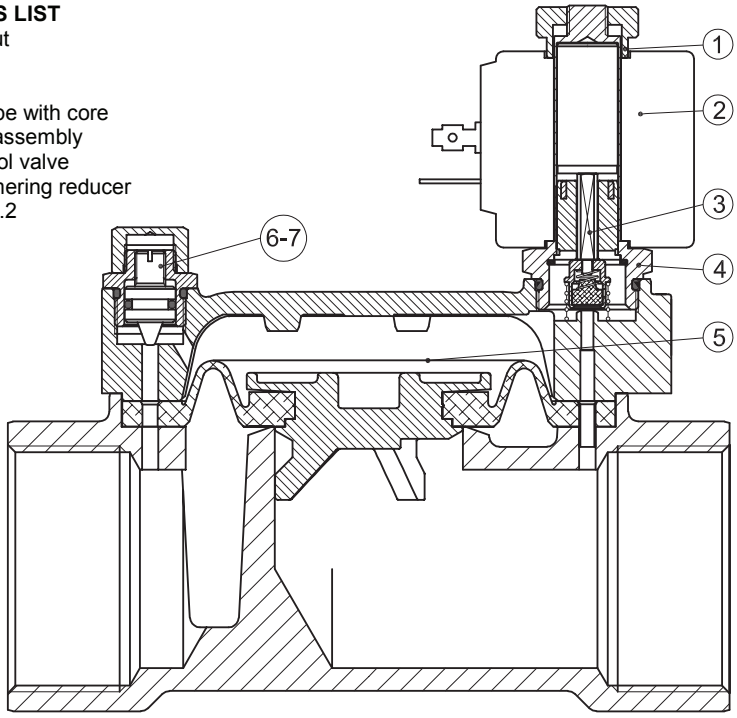


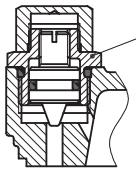
Series 2 Weight 0.12Kg



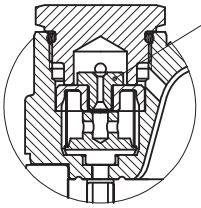
Series 5 Weight 0.2Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Plunger
4. Armature tube with core
5. Diaphragm assembly
6. Speed control valve
7. Water hammering reducer
   Ø0.8-Ø1-Ø1.2



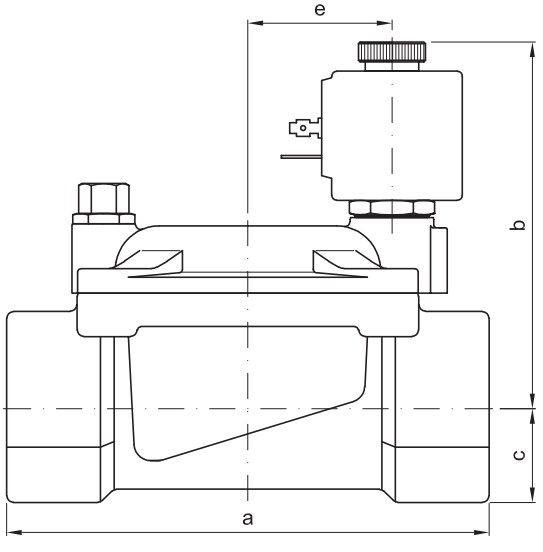


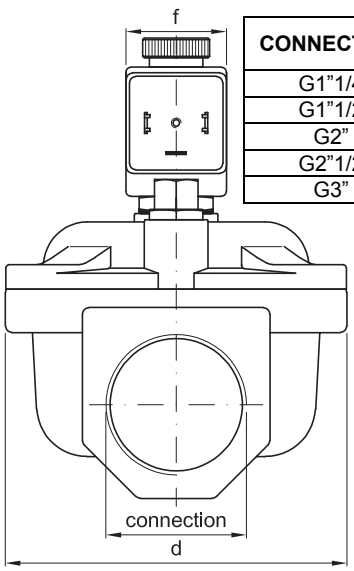
FOR G1”1/4-1”1/2-2”
Speed control valve



FOR G2”1/2-3”
Water hammering reducer

OVERALL DIMENSION





CONNECTION	a	b	c	d	e	f	Weight Kg
G1”1/4	142	105	28	102	21	30	2.95
G1”1/2	142	105	28	102	21	30	2.74
G2”	158	119	35	119	21	30	4.32
G2”1/2	226	135	51	169	21	30	10
G3”	226	135	51	169	21	30	9.65

DESCRIPTION

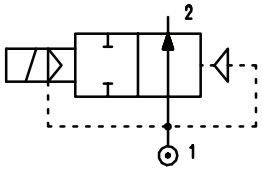
Solenoid valve 2 way normally open
with servo-assisted piston

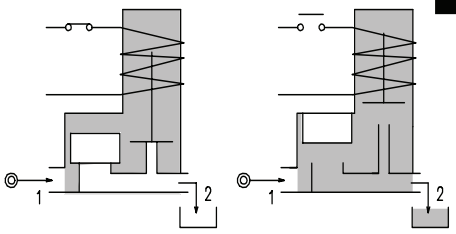
CONSTRUCTION

Body and cover	Brass
Armature tube	Brass
Plunger and core	Stainless steel
Springs	Stainless steel
Piston	Brass
Piston ring	PTFE reinforced
Seal material	Main seal PTFE others FPM

FEATURES

Minimum differential pressure 1 bar
Maximum allowable pressure 40 bar
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above





OPTIONS : Electroless nickel-plating
Stainless steel armature tube

CODE ①	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar			Nominal power			Coil		Seal	Temp. range °C
				Min	Max		AC	VA	DC	Series	Width		
					AC	DC	Inrush	Holding	Watt				
E219CV12///.....	3/8”	12	2	1	25	25	20	15	10	2	30	PTFE/FPM	-10 +130
E219DV12///.....	1/2”	12	2.2	1	25	25	20	15	10	2	30		

① Coil

Example: E219DV12///20B FPM seal
Coil 24V 50/60Hz

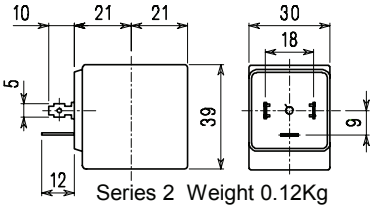
Maximum allowable leakage < 0.2 nL/h

Series **219**

COILS	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **2** Width 30 Code ①	**20A**	**20B**	**20C**	**20D**	**20E**	**20F**	**20G**	**200**	**201**	**202**	**DIN 43650A**	**PG9 code 10349000**

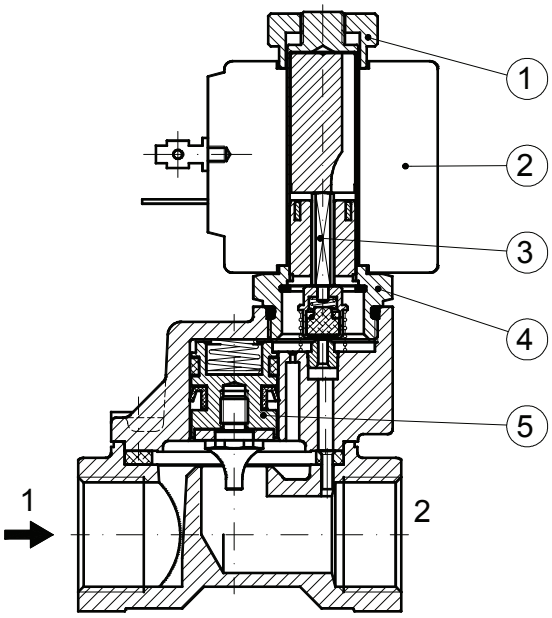
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil powers
Special coil voltages

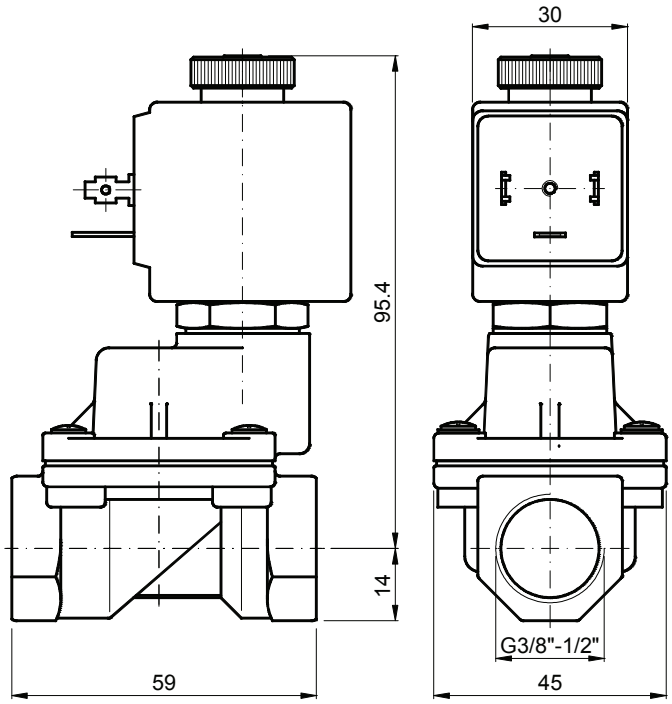


Series 2 Weight 0.12Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube with core
5. Piston assembly



OVERALL DIMENSION



Weight 0.63 Kg

DESCRIPTION

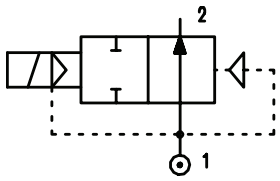
Solenoid valve 2 way normally open in stainless steel AISI 316 with servoassisted diaphragm

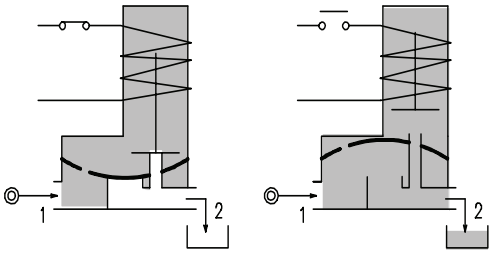
CONSTRUCTION

Body and cover	Stainless steel
Armature tube	Stainless steel
Plunger and core	Stainless steel
Springs	Stainless steel
Seal material	NBR
	FPM
	EPDM

FEATURES

Minimum differential pressure 0.15 bar
Maximum allowable pressure 25 bar *
Maximum fluid viscosity 25cSt (mm ²/s)
Ambient temperature : with class F coil -10°C +55°C
with class H coil -10°C +80°C
Preferred mounting position with vertical coil above





OPTIONS : Explosion proof coil according to ATEX - EExmII Series 7
Food approval seal material
Silver shading ring

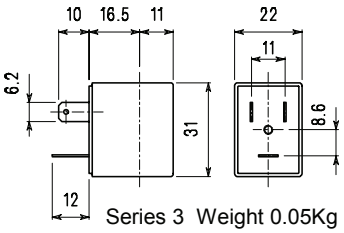
CODE ① ②	Connection G ISO 228	Orifice mm	KV m³/h	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	VA Holding	DC Watt	Coil Series	Coil Width	Seal ①	Temp. range °C
E277C.....12///.....	3/8"	12	2.2	0.15	15	15	12	8	6.5	3	22	NBR=B	-10 +90
E277D.....12///.....	1/2"	12	2.5	0.15	15	15						EPDM=E	<+140
E277E.....18///.....	3/4"	18	5.5	0.15	13	13						FPM=V	-10 +130
E277F.....25///.....	1"	24	10.2	0.15	10	10							

① Seal
② Coil

Example: E277DB12///301 NBR seal
Coil 24V DC

* REMARK: The maximum allowable pressure PS for steam is 2,5bar (gauge pressure)

COIL	Alternating Current ~50/60Hz Volt							Direct Current Volt			Electrical connection	Connectors
	12	24	48	110	220 230	240	380	12	24	48		
Series **3** Width 22 Code ②	**30A**	**30B**	**30C**	**30D**	**30E**	**30F**	**30G**	**300**	**301**	**302**	**DIN 46244**	**PG9 code 10348000**

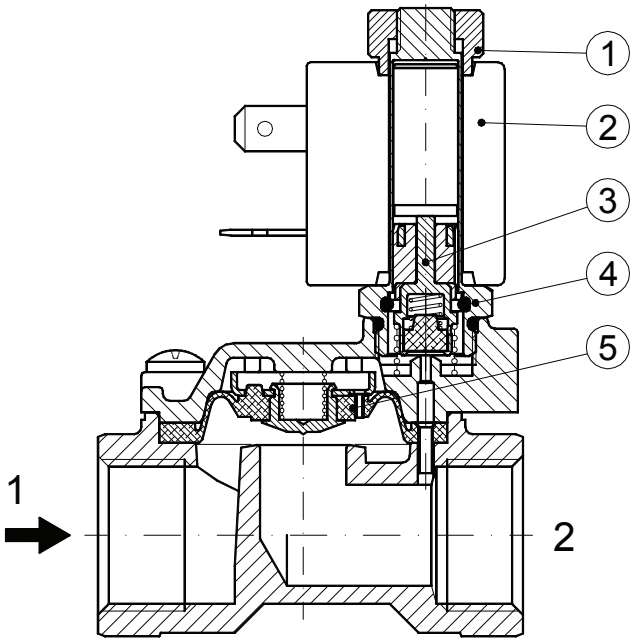


Series 3 Weight 0.05Kg

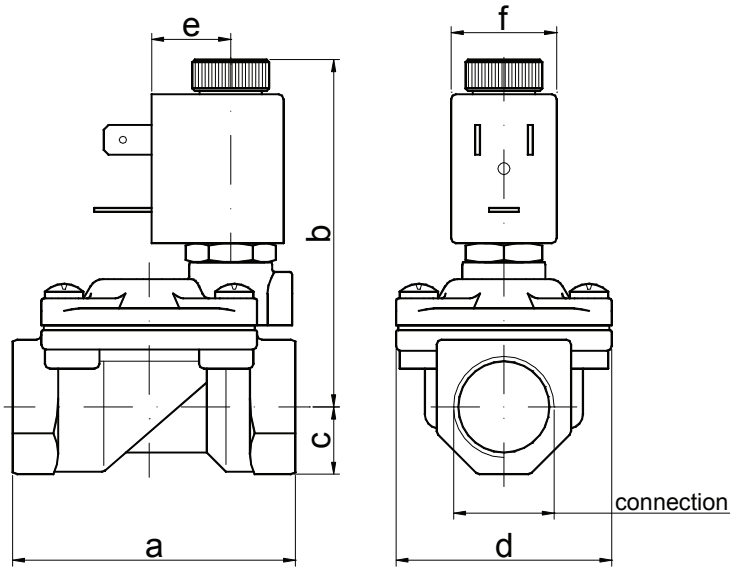
DESCRIPTION
Class F insulation
Voltage tolerance
AC +15% -10%
DC ± 10%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Class H insulation
Cable attached
Special coil powers
Special coil voltages

SPARE PARTS LIST
1. Coil fixing nut
2. Coil
3. Seal assembly
4. Armature tube with core
5. Diaphragm assembly



OVERALL DIMENSION



CONNECTION	a	b	c	d	Weight Kg
G3/8" ∅12	59	73	11	45	0.31
G1/2"	59	73	13	45	0.32
G3/4"	79	75	18	55	0.75
G1"	96	85	20	72	1.35

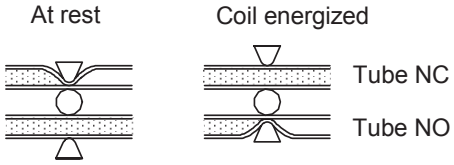
DESCRIPTION

Solenoid operated pinch valve with dry armature.
The tube is the only part in contact with the fluid.
The internal diameter determines the flow.
Elimination of dirt traps. Maximisation of valve coefficient.
Fluid flow can be bi-directional.
Use soft tube (not supply by us) hardness 50°Sh A ±3°

CONSTRUCTION

Body	Anodized aluminium
Yoke	Acetal copolymer
Armature tube	Nickel plated brass
Plunger and core	Stainless steel
Springs	Stainless steel
Flange	Stainless steel

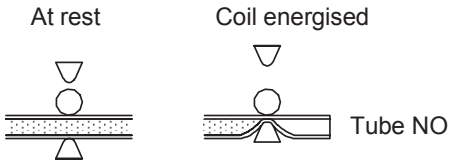
2 tubes type



FEATURES

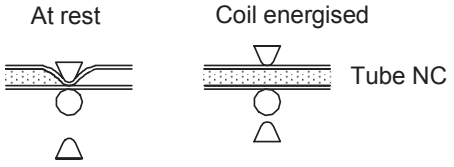
Ambient temperature : -10°C +40°C
Maximum fluid viscosity 65 cSt (mm ²/s)
Preferred mounting position with vertical coil above

1 tube type NO



NOTE : the right operating of the solenoid valve is bound by a correct choice of the soft tube

1 tube type NC



5

CODE	Tube Øext. +0.2 0	Tube Min thickness wall	Pinch force grams	Version	Coil Width	Coil Series	Nominal Power Watt
① D730/30/.....	3	0,7	250	2tubes 1NC-1NO	16	6	8
D710/30/.....	3	0,7	250	1tube NC	16	6	4
D720/30/.....	3	0,7	250	1tube NO	16	6	4

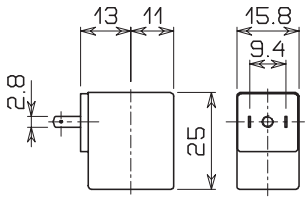
① Coil

Example: D730/30/60048
Version with 2 tubes 12V DC 8W ED25%

COIL	Direct Current				Electrical connection	Connector
	12V		24V			
	4W	8W	4W	8W		
Series **6** **CODE** **Width 16** ①	**60014**	**60048**	**60114**	**60148**	**AMP 2.8X0.5**	**PG7 10348040**

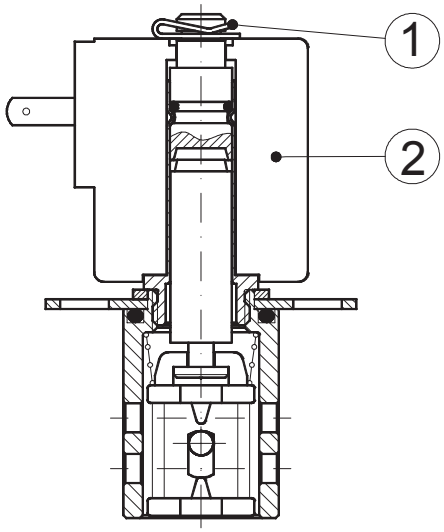
DESCRIPTION
Class F insulation
Voltage tolerance ± 5%
Protection class
IP65 with connector fitted
IP00 without connector
Continuous service ED100%

OPTIONS
Cable attached
Special coil powers
Special coil voltages

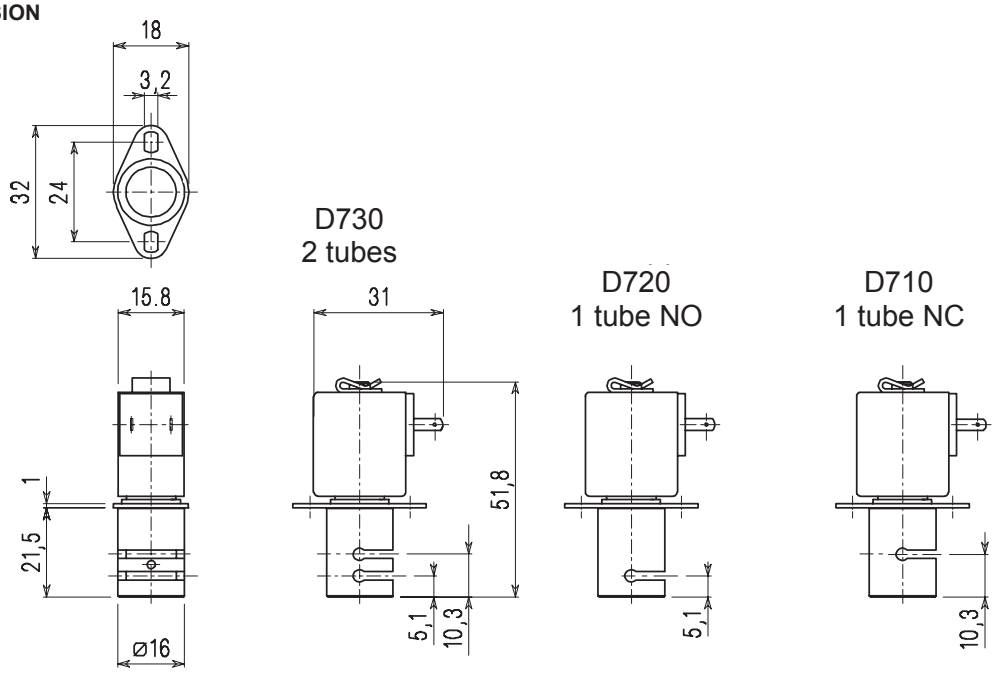


Series 6 Weight 0.02Kg

SPARE PARTS LIST
1. Coil fixing nut
2. Coil



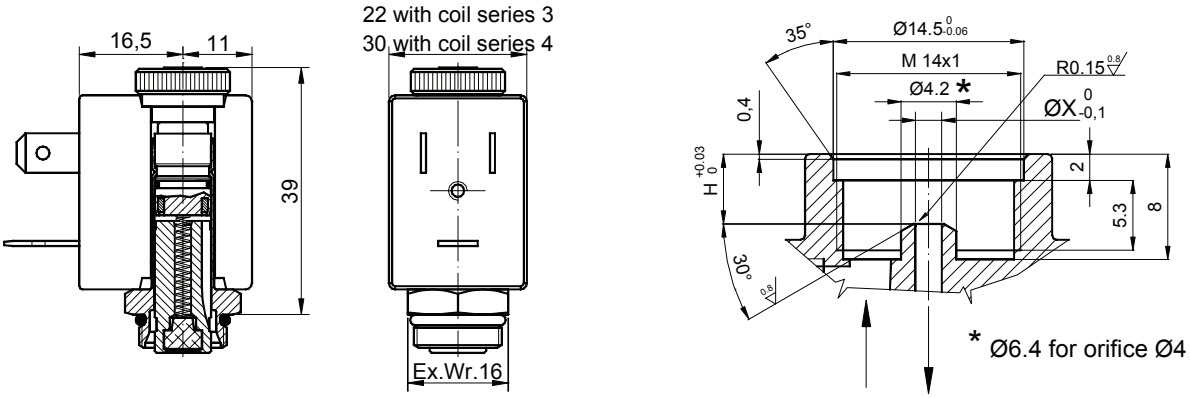
OVERALL DIMENSION



Weight = 0.04 Kg

DESCRIPTION

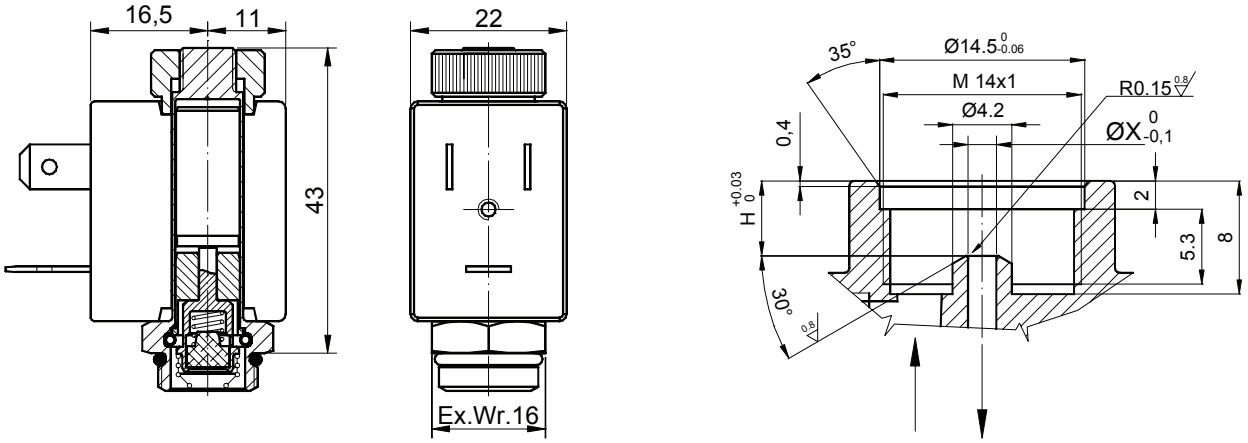
Solenoid pilot 2 way normally closed. Tube Ø10.



CODE Brass Tube	CODE S.Steel Tube	Ø X mm	H mm	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E510	E512.....	1.2	5	0	25	25	12	8	6.5	3	22	NBR=B	-10 +90
		1.5	5.1	0	16	16							
		2	5.2	0	12	10							
		2.5	5.4	0	8	5.5							
		3.1	5.5	0	5	2						EPDM=E	<140
E510...40	E512...40	4	5.6	0	4	1.5							
E510	E512.....	2	5.2	0	25	15	15	11	5	4	30	FPM=V	-10 +130
		2.5	5.4	0	16	8							
		3.1	5.5	0	8	4							
E510...40	E512...40	4	5.6	0	5	2.5							

DESCRIPTION

Solenoid pilot 2 way normally open. Tube Ø10.

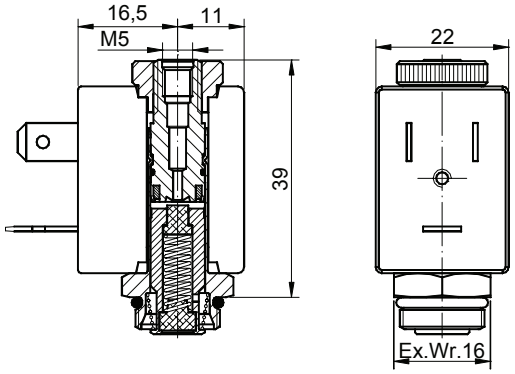


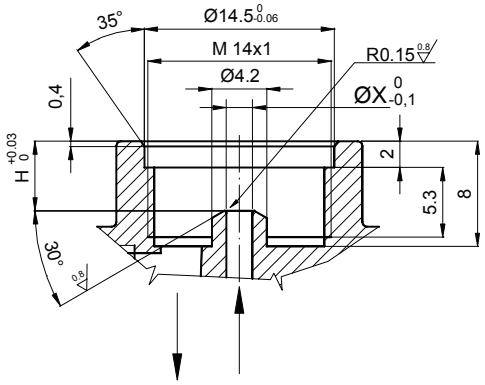
CODE Brass Tube	CODE S.Steel Tube	Ø X mm	H mm	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E520	E522.....	1.2	5	0	19	19	12	8	6.5	3	22	NBR=B	-10 +90
		1.5	5.1	0	14	14						EPDM=E	<+140
		2	5.2	0	8	8						FPM=V	-10 +130
		2.5	5.4	0	4.5	4.5							
		3.1	5.5	0	2.5	2.5							

6

DESCRIPTION

Solenoid pilot 3 way normally closed. Tube Ø10.



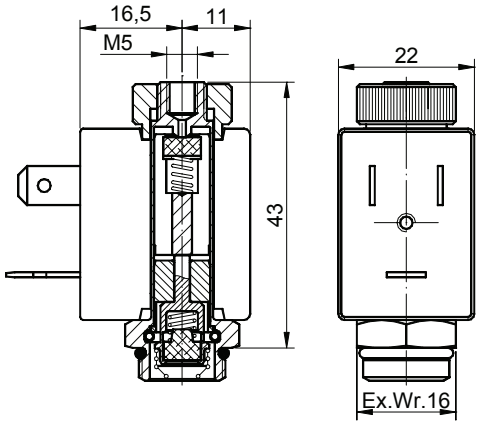


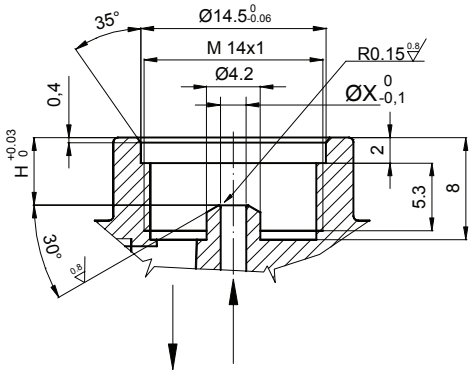
Hosetail exhaust on request

CODE Brass Tube	CODE S.Steel Tube	Ø X mm	Ø exh. mm	H mm	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E530	E532.....	1.2	1.5	5	0	15	15	12	8	6.5	3	22	NBR=B	-10 +90
		1.5	1.5	5.1	0	10	10						EPDM=E	<140
		2	1.7	5.2	0	6	6						FPM=V	-10 +130

DESCRIPTION

Solenoid pilot 3 way normally open. Tube Ø10.

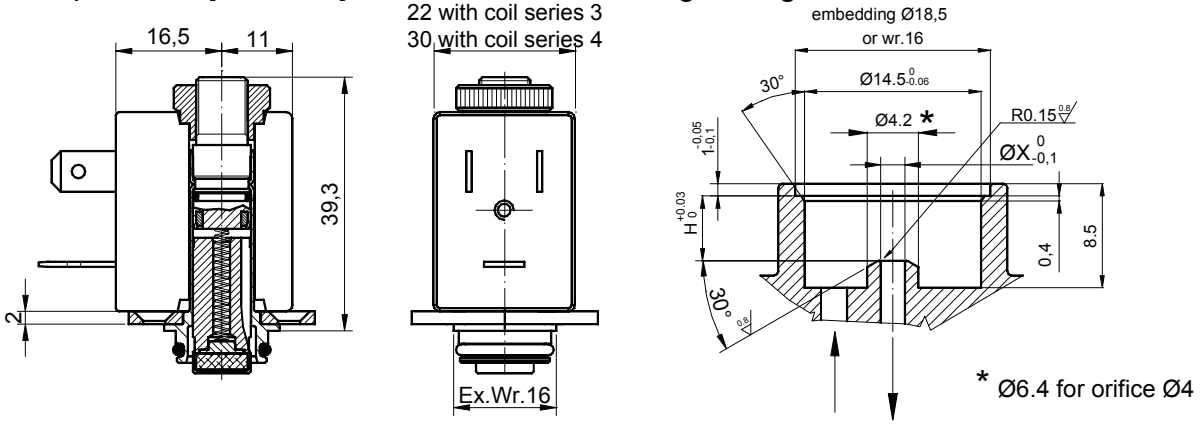




CODE Brass Tube	Ø X mm	Ø exh. mm	H mm	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E540	1.2	1.5	5	0	12	8	12	8	6.5	3	22	NBR=B	-10 +90
	1.5	1.5	5.1	0	9	6						EPDM=E	<140
												FPM=V	-10 +130

DESCRIPTION

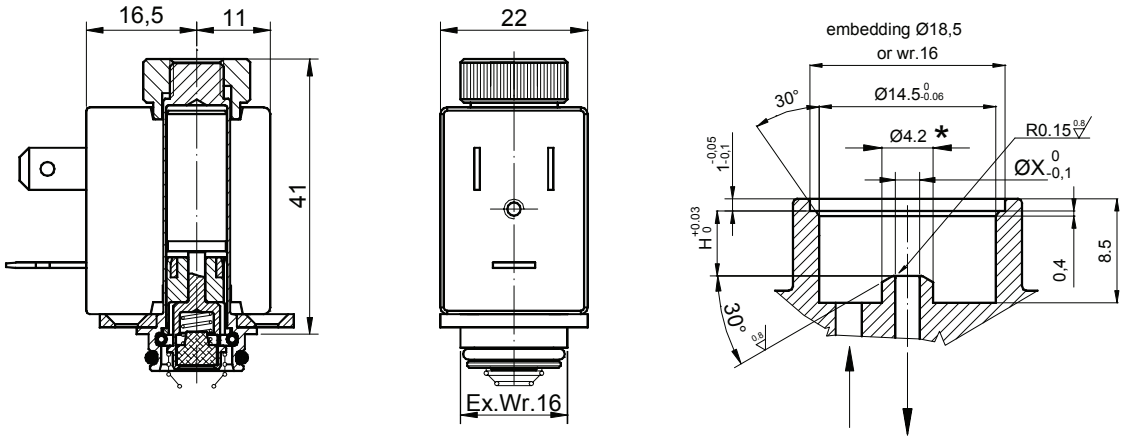
Solenoid pilot 2 way normally closed. Tube Ø10 flange fixing.



CODE Brass Tube	CODE S.Steel Tube	Ø X mm	H mm	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E570	E572.....	1.2	5	0	25	25	12	8	6.5	3	22	NBR=B	-10 +90
		1.5	5.1	0	16	16							
		2	5.2	0	12	10						EPDM=E	<140
		2.5	5.4	0	8	5.5							
		3.1	5.5	0	5	2							
E570...40	E572...40	4	5.6	0	4	1.5							
E570	E572.....	2	5.2	0	25	15	15	11	5	4	30	FPM=V	-10 +130
		2.5	5.4	0	16	8							
		3.1	5.5	0	8	4							
E570...40	E572...40	4	5.6	0	5	2.5							

DESCRIPTION

Solenoid pilot 2 way normally open. Tube Ø10 flange fixing.

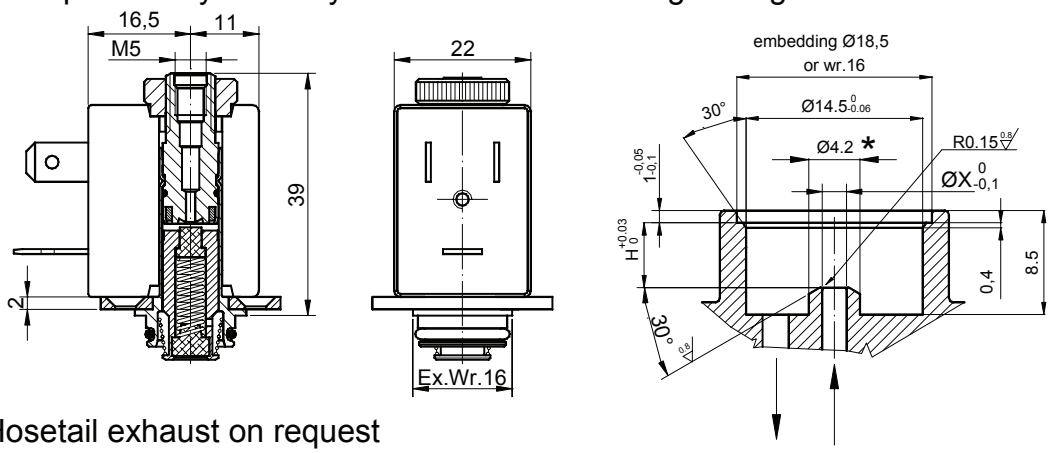


CODE Brass Tube	Ø X mm	H mm	Differential pressure bar Min	Max AC	Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E575	1.2	5	0	19	19	12	8	6.5	3	22	NBR=B	-10 +90
	1.5	5.1	0	14	14						EPDM=E	<+140
	2	5.2	0	8	8						FPM=V	-10 +130
	2.5	5.4	0	4.5	4.5							
	3.1	5.5	0	2.5	2.5							

6

DESCRIPTION

Solenoid pilot 3 way normally closed. Tube Ø10 flange fixing.

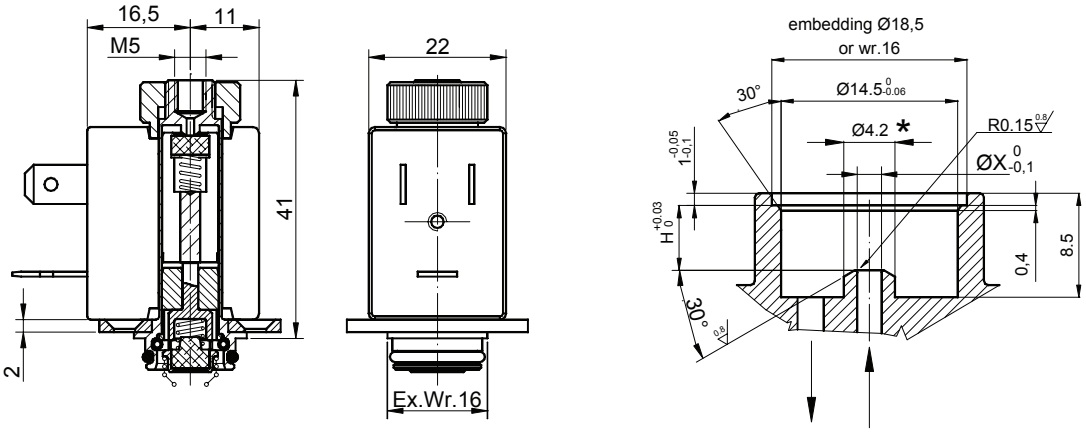


Hosetail exhaust on request

CODE Brass Tube	CODE S.Steel Tube	Ø X mm	Ø exh. mm	H mm	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. Range °C
E580	E582.....	1.2	1.5	5	0	15	15	12	8	6.5	3	22	NBR=B	-10 +90
		1.5	1.5	5.1	0	10	10						EPDM=E	<140
		2	1.7	5.2	0	6	6						FPM=V	-10 +130

DESCRIPTION

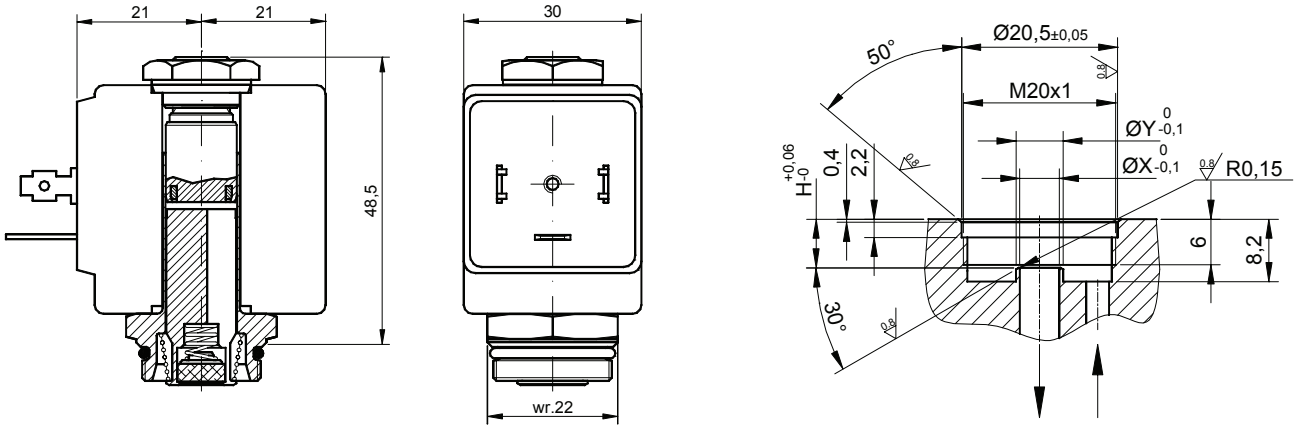
Solenoid pilot 3 way normally open. Tube Ø10 flange fixing.



CODE Brass Tube	Ø X mm	Ø exh. mm	H mm	Differential pressure bar Min	Differential pressure bar Max AC	Differential pressure bar Max DC	Nominal power AC Inrush	Nominal power VA Holding	Nominal power DC Watt	Coil Series	Coil Width	Seal	Temp. range °C
E585	1.2	1.5	5	0	12	8	12	8	6.5	3	22	NBR=B	-10 +90
	1.5	1.5	5.1	0	9	6						EPDM=E	<140
												FPM=V	-10 +130

DESCRIPTION

Solenoid pilot 2 way normally closed. Tube Ø13.

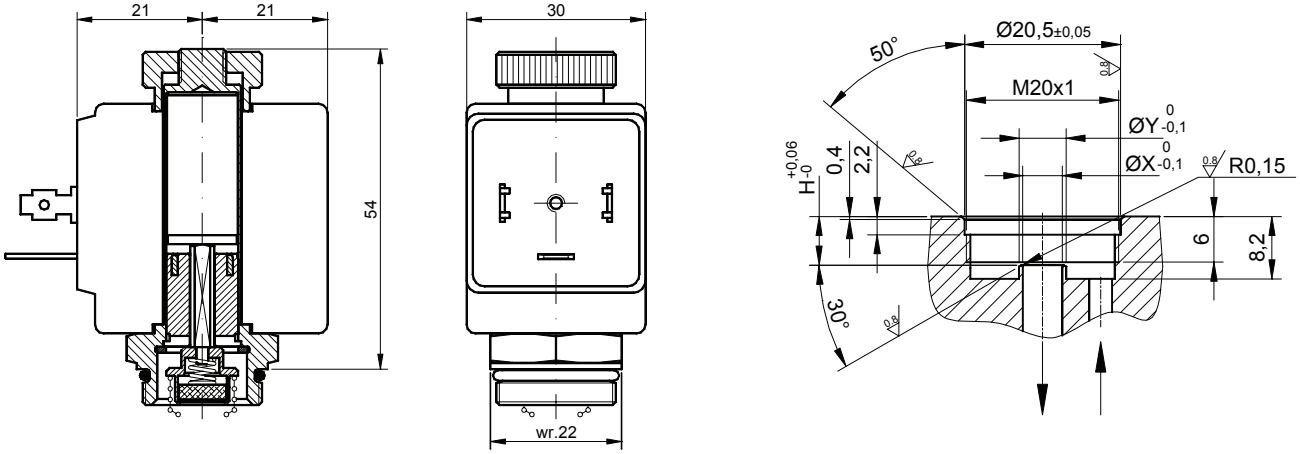


Available version for X=Ø6.4mm

CODE S.Steel Tube	Ø X mm	H mm	ØY mm	Differential pressure bar			Nominal power			Coil		Seal	Temp. range °C
				Min	Max		AC Inrush	VA Holding	DC Watt	Series	Width		
					AC	DC							
E610.....	1.5	6.2	4.2	0	30	26	20	15	10	2	30	NBR=B	-10 +90
	2	6.2	4.2	0	22	20						EPDM=E	<+140
	2.5	6.2	4.2	0	16	14						FPM=V	-10 +130
	3.5	6.2	6.2	0	10	8							
	4.5	6.4	6.2	0	6.5	3.5							
	5.2	6.4	6.2	0	4	1.8							

DESCRIPTION

Solenoid pilot 2 way normally open. Tube Ø13.



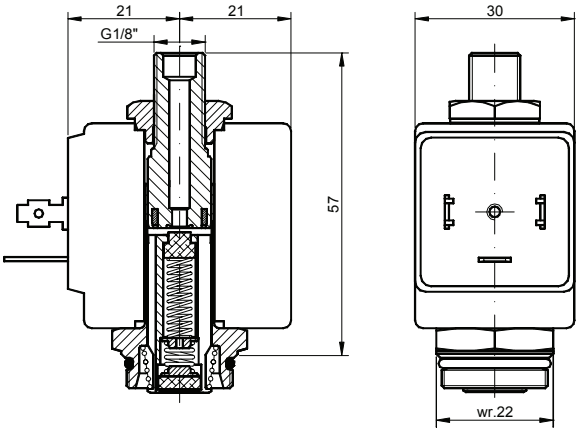
CODE S.Steel Tube	CODE Brass Tube	Ø X mm	H mm	ØY mm	Differential pressure bar			Nominal power			Coil		Seal	Temp. range °C
					Min	Max		AC Inrush	VA Holding	DC Watt	Series	Width		
						AC	DC							
E620	E622	1.5	6.2	4.2	0	23	23	20	15	10	2	30	NBR=B	-10 +90
		2	6.2	4.2	0	17	17						EPDM=E	<+140
		2.5	6.2	4.2	0	12	12						FPM=V	-10 +130
		3.5	6.2	6.2	0	7	4 ③							
		4.5	6.4	6.2	0	4.5	3 ③							
		5.2	6.4	6.2	0	3	2.2③							

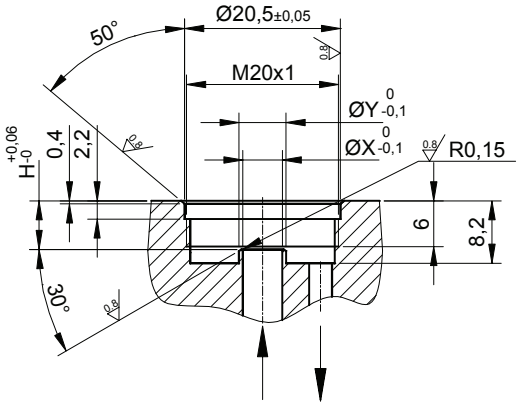
③ Only for the DC on the orifices Ø 3,5 - 4,5 - 5,2 the code is D620 or D622

ØX must be specified in the order

DESCRIPTION

Solenoid pilot 3 way normally closed. Tube Ø13.

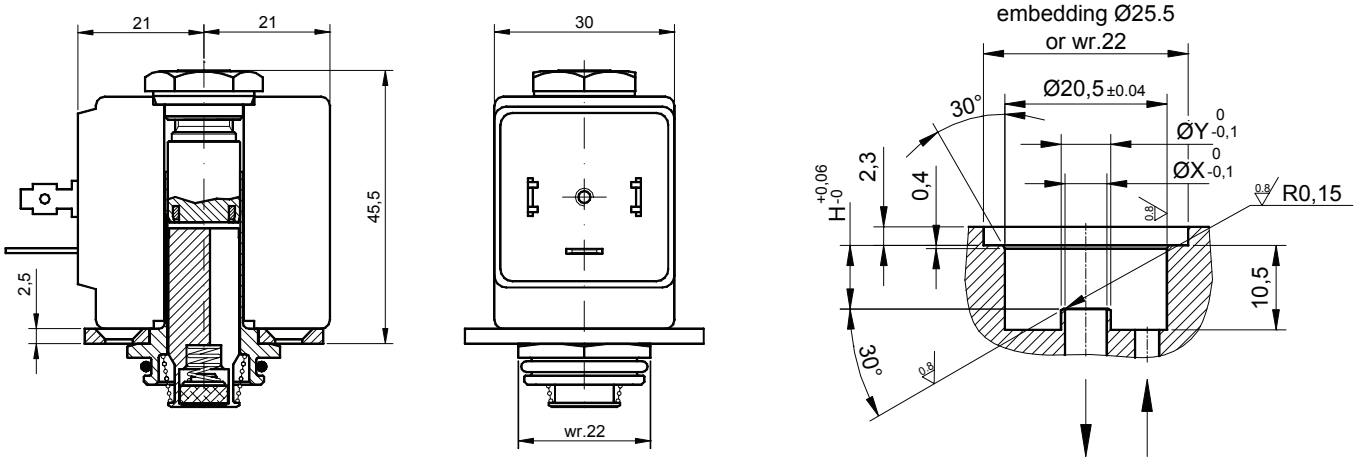




CODE S.Steel Tube	Ø X mm	H mm	Ø exh. mm	ØY mm	Differential pressure bar			Nominal power			Coil		Seal	Temp. range °C
					Min	Max		AC Inrush	VA Holding	DC Watt	Series	Width		
						AC	DC							
E630	1.5	6.2	2.4	4.2	0	20	20	20	15	10	2	30	NBR=B	-10 +90
	2	6.2	2.4	4.2	0	13	13						EPDM=E	<140
	2.5	6.2	2.4	4.2	0	10	10						FPM=V	-10 +130

DESCRIPTION

Solenoid pilot 2 way normally closed. Tube Ø13 flange fixing.



CODE S.Steel Tube	Ø X mm	H mm	ØY mm	Differential pressure bar			Nominal power			Coil		Seal	Temp. range °C
				Min	Max		AC Inrush	VA Holding	DC Watt	Series	Width		
					AC	DC							
E670.....	1.5	7.7	4.2	0	30	26	20	15	10	2	30	NBR=B	-10 +90
	2	7.7	4.2	0	22	20						EPDM=E	<+140
	2.5	7.7	4.2	0	16	14						FPM=V	-10 +130
	3.5	7.7	6.2	0	10	8							
	4.5	7.9	6.2	0	6.5	3.5							
	5.2	7.9	6.2	0	4	1.8							

6

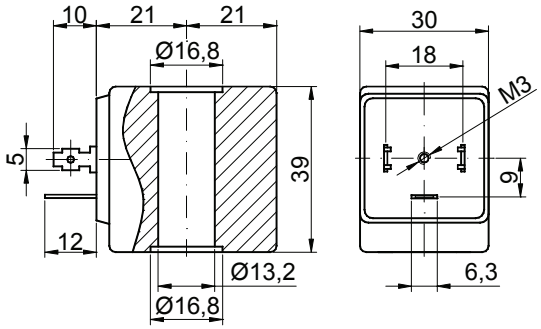
DESCRIPTION

Encapsulated coil incorporating the magnetic circuit.
Fixing by means of a central nut.
Electrical connection according to DIN 43650 A.

CONSTRUCTION

Encapsulation:

Class F	Fibre-glass Nylon
Class H	Fibre-glass Polyarylamide
Magnetic circuit:	Zinc-plated steel
Windings:	Copper covered with class H insulation



OPTIONS : Electrical connection through cable
Special powers and voltages
Self-extinguish

Certified version

CODE		Alternating Current Frequency 50/60Hz Voltage Volt	Direct Current Voltage Volt	Power ①		Voltage tolerance		Connector	Service ED
Insulation class F	Insulation class H			Alternating Current VA	Direct Current Watt	Alternating Current	Direct Current		
20A	22A	12	---	15	10	+15% -10%	±10%	10349000 10349060 10349001	100%
20B	22B	24	---						
20C	22C	48	---						
20D	22D	110	---						
20E	22E	220/230	---						
20F	22F	240	---						
20G	22G	380	---						
200	220	---	12						
201	221	---	24						
202	222	---	48						
/	U25D	120V 60Hz							
/	U25E	230V 60Hz							

① Considering nominal voltage and an ambient temperature of 20°C

7

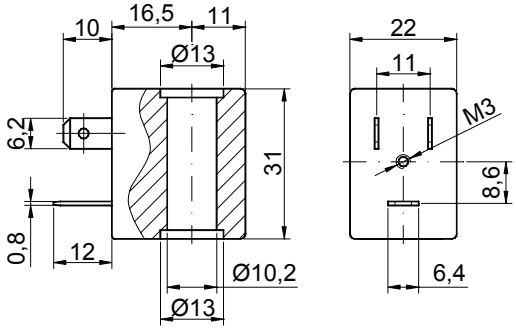
DESCRIPTION

Encapsulated coil incorporating the magnetic circuit.
Fixing by means of central nut.
Electrical connection DIN 43650 B.

CONSTRUCTION

Encapsulation:

Class F	Fibre-glass Nylon
Class H	Fibre-glass Polyarylamide
Magnetic circuit:	Zinc-plated steel
Windings:	Copper covered with class H insulation



OPTIONS : Electrical connection through cable
Special coil powers
Special coil voltages
Self-extinguish

Certified versions

CODE		Alternating Current Frequency 50/60Hz Voltage Volt	Direct Current Voltage Volt	Power ①		Voltage tolerance		Connector	Service ED
Insulation class F	Insulation class H			Alternating Current VA	Direct Current Watt	Alternating Current	Direct Current		
30A	32A	12	---	8	6.5	+15% -10%	±10%	10348000	100%
30B	32B	24	---						
30C	32C	48	---						
30D	32D	110	---						
30E	32E	220/230	---						
30F	32F	240	---						
30G	32G	380	---						
300	320	---	12						
301	321	---	24						
302	322	---	48						
/	U35D	120V 60Hz	c UL us						
/	U35E	230V 60Hz							
/	V32E	220/230	VDE						

① Considering nominal voltage and an ambient temperature of 20°C

7

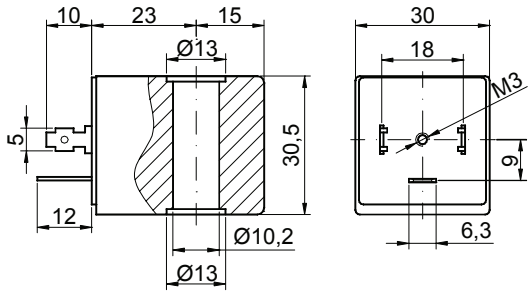
DESCRIPTION

Encapsulated coil incorporating the magnetic circuit.
Fixing by means of a central nut.
Electrical connection according to DIN 43650 A.

CONSTRUCTION

Encapsulation:

Class F	Fibre-glass Nylon
Class H	Fibre-glass Polyarylamide
Magnetic circuit:	Zinc-plated steel
Windings:	Copper covered with class H insulation



OPTIONS : Electrical connection through cable
Special powers and voltages
Self-extinguish

CODE		Alternating Current Frequency 50/60Hz Voltage Volt	Direct Current Voltage Volt	Power ①		Voltage tolerance		Connector	Service ED
Insulation class F	Insulation class H			Alternating Current VA	Direct Current Watt	Alternating Current	Direct Current		
40A	42A	12	---	11	5	+15% -10%	±10%	10349000 10349001 10349060	100%
40B	42B	24	---						
40C	42C	48	---						
40D	42D	110	---						
40E	42E	220/230	---						
40F	42F	240	---						
40G	42G	380	---						
400	420	---	12						
401	421	---	24						
402	422	---	48						

① Considering nominal voltage and an ambient temperature of 20°C

7

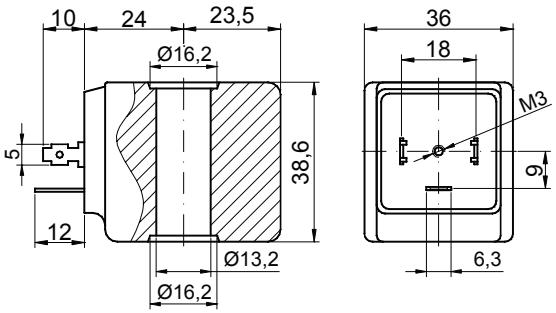
DESCRIPTION

Encapsulated coil incorporating the magnetic circuit.
Fixing by means of a central nut.
Electrical connection according to DIN 43650 A.

CONSTRUCTION

Encapsulation:
Class H — Fibre-glass Polyarylamide

Magnetic circuit: Zinc-plated steel
Windings: Copper covered with class H insulation



OPTIONS : Electrical connection through cable
Special coil powers
Special coil voltages
Self-extinguish

CODE Insulation class H	Alternating Current Frequency 50/60Hz Voltage Volt	Direct Current Voltage Volt	Power ①		Voltage tolerance		Connector	Service ED
			Alternating Current VA	Direct Current Watt	Alternating Current	Direct Current		
52A	12	---	30	27	+15% -10%	±10%	10349000 10349001 10349060	100%
52B	24	---						
52C	48	---						
52D	110	---						
52E	220/230	---						
52F	240	---						
52G	380	---						
520	---	12						
521	---	24						
522	---	48						

① Considering nominal voltage and an ambient temperature of 20°C

7

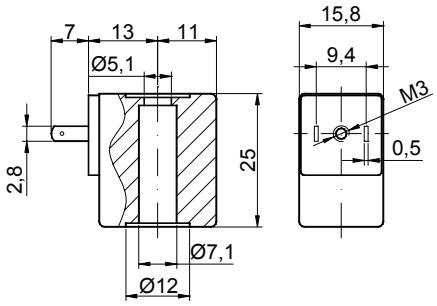
DESCRIPTION

Encapsulated coil incorporating magnetic circuit.
Fixing by means of a central nut.
Electrical connection according to AMP 2.8x0.5 .

CONSTRUCTION

Encapsulation:
Class F — Fibre-glass Nylon

Magnetic circuit: Zinc-plated steel
Windings: Copper covered with class H insulation



OPTIONS : Electrical connection through cable
Special coil powers
Special coil voltages
Self-extinguish

CODE Insulation Class F	Direct Current Voltage Volt	Power ① Direct Current Watt	Voltage tolerance	Connector	Service ED
60014	12	4	±5%	10348040	100%
60048	12	8			25%
60114	24	4			100%
60148	24	8			25%
60012	12	2			100%
60112	24	2			100%

① Considering nominal voltage and an ambient temperature of 20°C

7

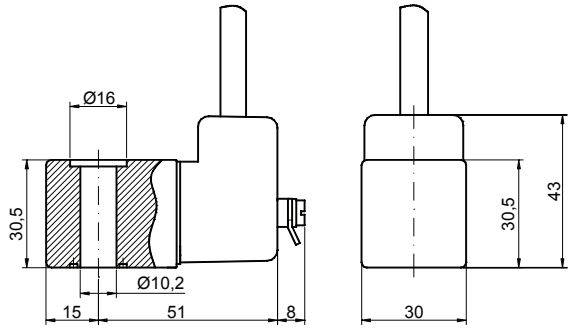
DESCRIPTION

Encapsulated coil with self-extinguish nylon
and incorporating a thermal resistor and a thermal fuse.
This design prevents any problems of overheating
or sparking occurring making it particularly suitable
for use in potentially explosive ambient.

COSTRUZIONE

Encapsulation:

Class F	Self-extinguish Nylon
Magnetic circuit:	Zinc-plated steel
Windings:	Copper covered with class H insulation



ELECTRICAL CONNECTION

3-core cable 300 cm.

AMBIENT TEMPERATURE

-20°C +40°C

CERTIFICATE

Conforms with the European standards for the manufacturing of electrical components for use in potentially explosive atmospheres.

EN 50014-1997+ A1…A2

E50025-1997, IEC 60079-18:2002

European Community Standard 97/9/CE

EEx m II T4 INERIS 06ATEX0002X
CE 0080 Ex II 2 GD

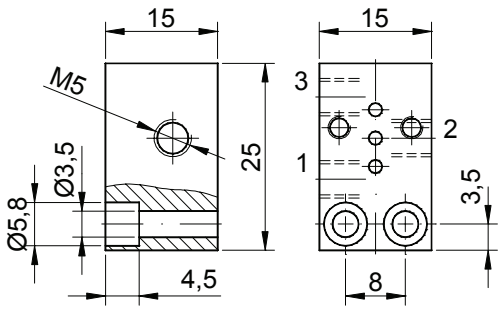
CODE	VOLTAGE	FREQUENCY	POWER ①
75BD	24	50-60 Hz	5.3 W
75CD	48	50-60 Hz	5.3 W
75DD	110	50-60 Hz	5.2 W
75ED	230	50-60 Hz	5.2 W
751D	24 DC	---	5.4 W

T5 and T6 temperature class version available on request

① Considering nominal voltage and an ambient temperature of 20°C

SINGLE BASE

Code:
B01/340/M5



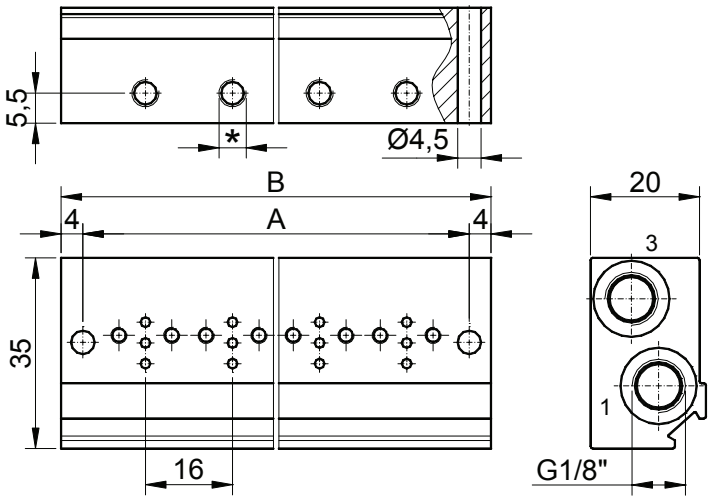
MULTIPLE BASES

Code:
B...../340/M5
N° PLACES

B...../340/R4
N° PLACES

***= M5 Thread**

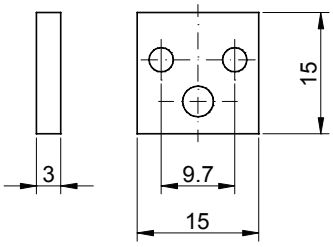
***= quick connection for pipes Øext 4**



N° PLACES	2	3	4	5	6	7	8	9	10
A	39	55	71	87	103	119	135	151	167
B	47	63	79	95	111	127	143	159	175

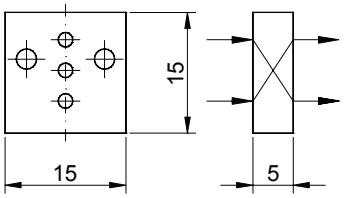
BLANKING PLATE

Code:
PC/340



REVERSING PLATE FOR N.O. (341)

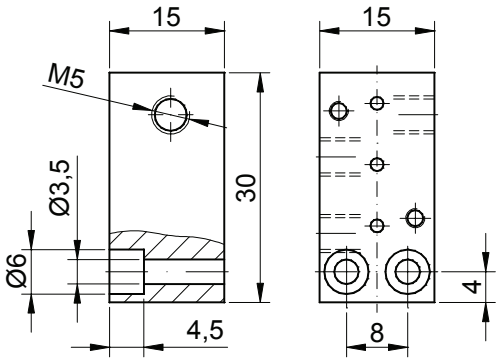
Code:
PA/340



8

SINGLE BASE

Code:
B01/345/M5



MULTIPLE BASES

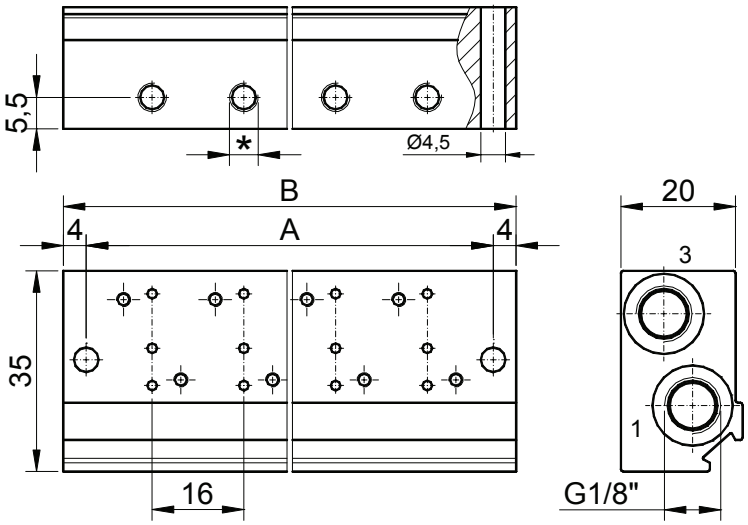
Code:

B...../345/M5
N° PLACES

B...../345/R4
N° PLACES

***= M5 Thread**

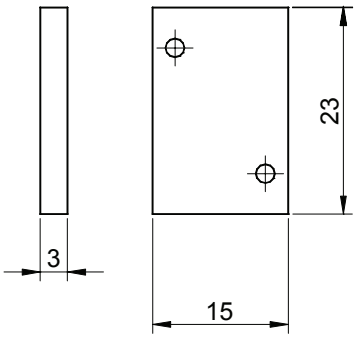
***= quick connection for pipes Øext 4**



N° PLACES	2	3	4	5	6	7	8	9	10
A	39	55	71	87	103	119	135	151	167
B	47	63	79	95	111	127	143	159	175

BLANKING PLATE

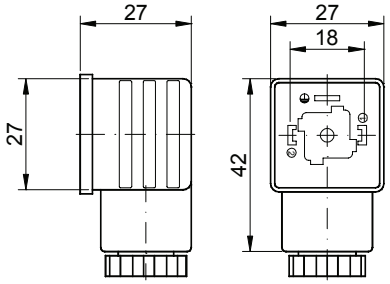
Code:
PC/345



Connector code 103490...

DIN 43650 Form A connector

Contacts distance :	18 mm
Protection class :	IP 65
Working temperature :	-40°C +90°C
Fixing method :	M3 central screw
Gland size :	PG9 cable Ø 6-8mm code 10349000 (n°2 poles+earth)
	PG11 cable Ø 8-10mm code 10349001 (n°2 poles+earth)
On request :	PG9 cable Ø 6-8mm code 10349060 (n°3 poles+earth)



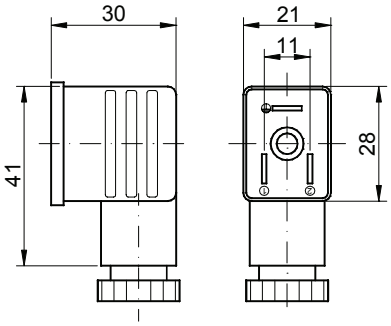
Weight 0.023Kg

Connector code 10348000

DIN 46244 Form B (43650 B) connector

Contacts distance :	11 mm
Protection class :	IP 65
Working temperature :	-40°C +90°C
Fixing method :	M3 central screw
Gland size :	PG9 cable Ø 6-8mm

n°2 poles+earth



Weight 0.019Kg

8

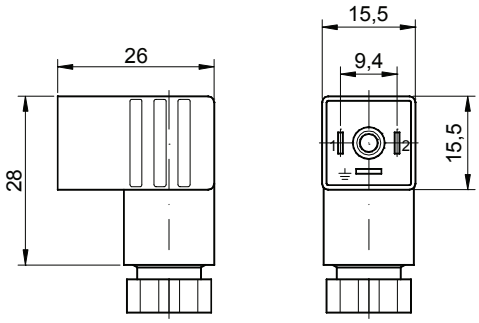
Connector code 10348040

AMP 2,8x0,5 connector

Contacts distance :	9,4 mm
Protection class :	IP 65
Working temperature :	-40°C +90°C
Fixing method :	M3 central screw
Gland size :	PG7 cable Ø 4-6mm

n°2 poles+earth

Weight 0.010Kg



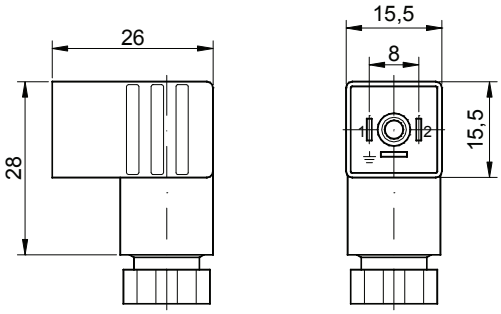
Connector code 10348060

DIN 43650 Form C connector

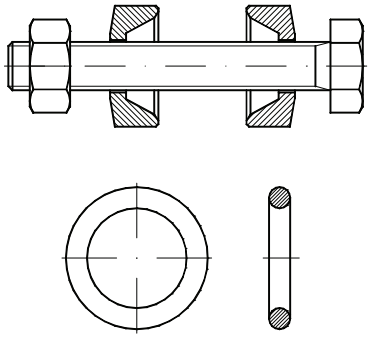
Contacts distance :	8 mm
Protection class :	IP 65
Working temperature :	-40°C +90°C
Fixing method :	M2,5 central screw
Gland size :	PG7 cable Ø 4-6mm

n°2 poles+earth

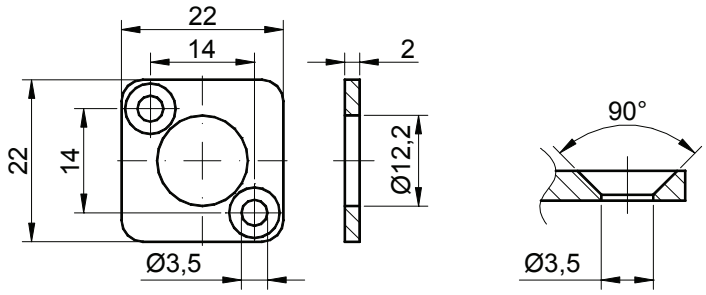
Weight 0.010Kg



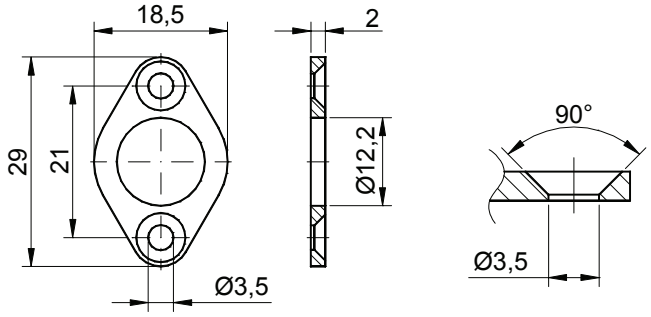
Fixing kit for solenoid valves series 350-351
Code 11255000



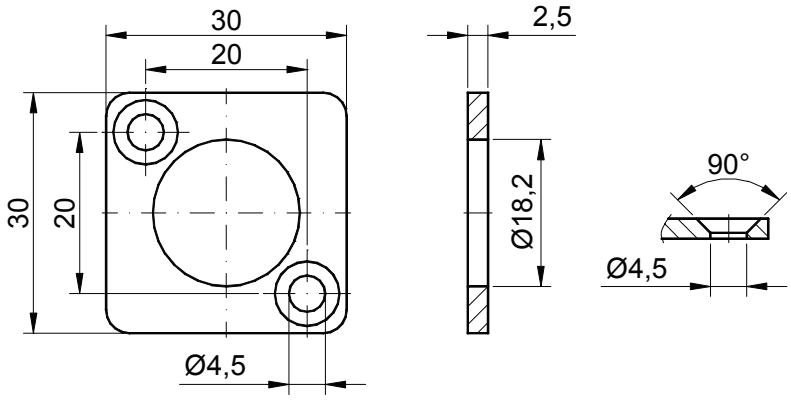
Fixing flange for pilots series 570-580
Code 11092000



Fixing flange for pilots series 570-580
Code 10984000



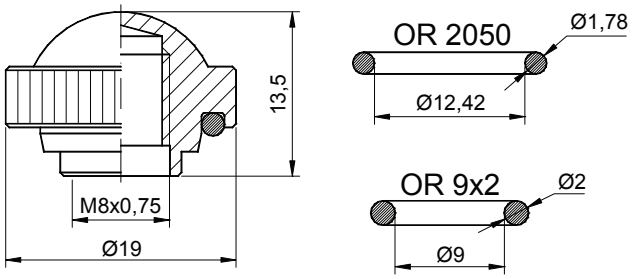
Fixing flange for pilots series 670-680
Code 11260000



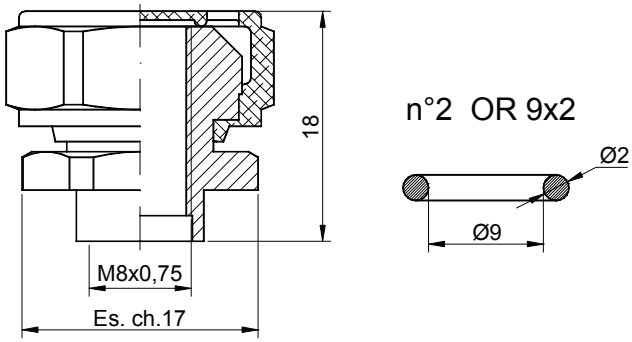
8

Wet-proof coil fixing nut

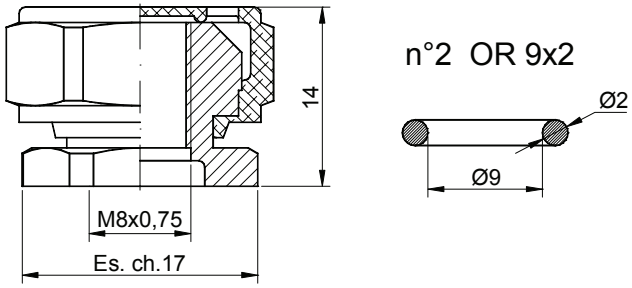
For coil series 3 and 4 (solenoid valves 2/2NC)
Code 11003000



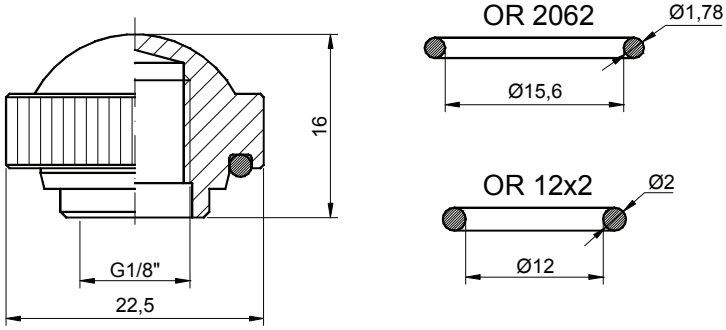
For coil series 3 and 4 (solenoid valves 3/2NC)
Code 11586N00



For coil series 3 and 4 (solenoid valves 3/2NO)
Code 11587N00



For coil series 2 and 5 (solenoid valves 2/2NC)
Code 11002000



Repeat cycle timer for solenoid valve

Code 11303000 (output DIN 43650 A)
Code 11304000 (output DIN 46244)

FEATURES :

Electrical connection in/out :	DIN 43650 A / DIN 43650 A DIN 43650 A / DIN 46244
Time scales :	Time ON 0,5-10 sec Time OFF 0,5-45 min

(other time scales available on request)
Reset/Test by manual touch switch
ON and OFF LED indicators
Operating temperature : -10°C +50°C

ELECTRICAL CONNECTION :

Supply voltage :	24-240V AC/DC 50/60Hz
Switch capacity :	1 A
Inrush current :	10 A for 10 msec
Current consumption :	4 mA
Protection class :	IP65

FILTER BALL VALVE

Code 11322000 1/2”-1/2”
Code 11322010 1/2”-3/8”

CONSTRUCTION

Body	Brass chromium plated
Actuator	Nylon 6.6
Filter	Stainless steel
O-ring	NBR

FEATURES

Connections 1/2”-1/2” and 1/2”-3/8”
Maximum working temperature : Water +70°C
Air +90°C

Multiple electrical connection unit

DESCRIPTION

Multiple electrical connection unit with LED indicators and safety circuit.
The unit can be equipped with solenoid valves series 340, 3/2NC and 3/2NO.
The solenoid valves can be assembled and tested on unit from 4 to 14 places.
The base has mutual inlets and mutual exhaust.
The user ports have quick connection for pipes $Ø_{ext}$ 4mm.
The energizing and de-energizing of the solenoid valves is showed by a LED indicator.

FEATURES

Media :	Clean compressed air 20µm with or without lubricant	
Fixing method :	M4 screws	
Pneumatic connections :	G1/8" for inlet and exhaust, user ports by Ø4 quick connections	
Working pressure :	3/2NC	0,5÷10 bar
	3/2NA	0,5÷8 bar
Ambient temperature :	-10°C +50°C	
Protection class :	IP50	
Electrical connection :	9 poles SUB-D connector for units from 4 to 8 positions 15 poles SUB-D connector for units from 9 to 14 positions	

CODE:

BM...../.....

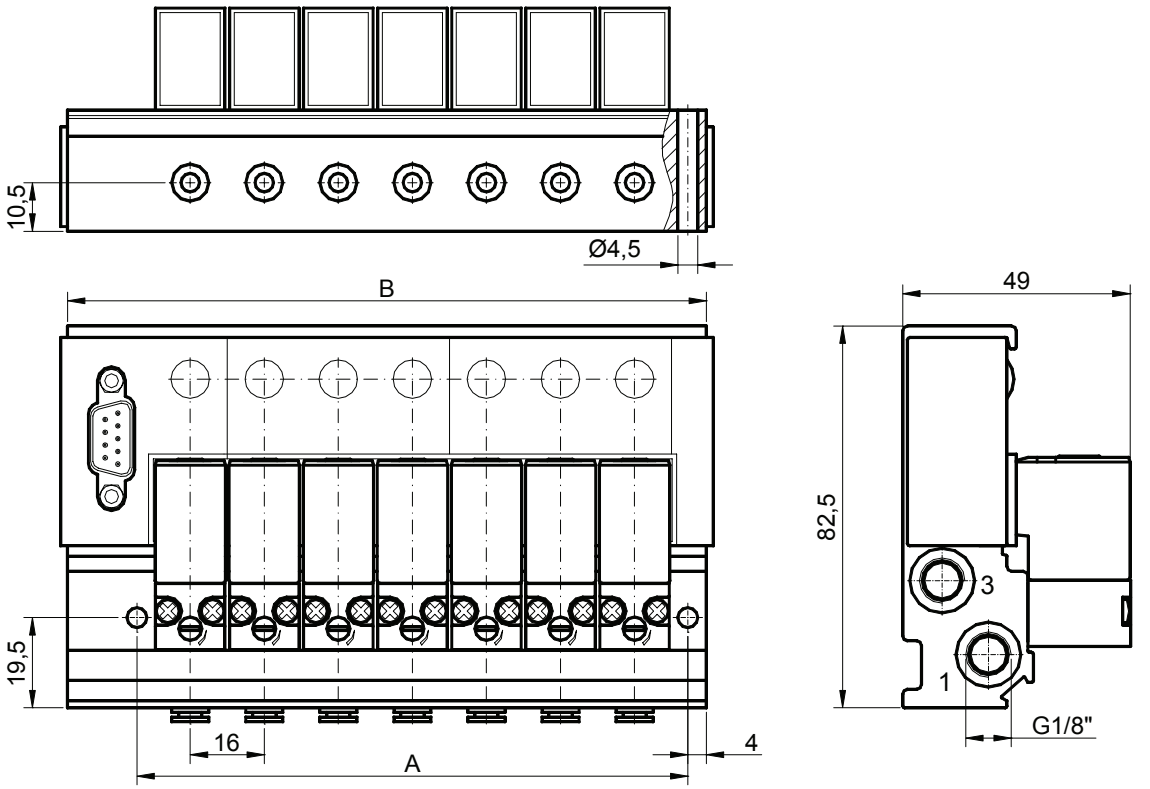
N° PLACES — ACL P.N.

8

NOTE: This product isn't standard. Please contact the manufacturer for any question

Multiple electrical connection unit

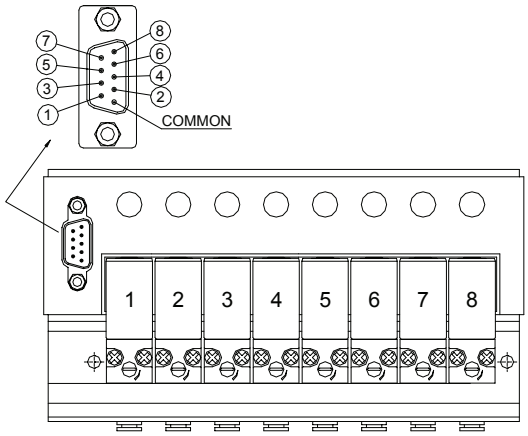
OVERALL DIMENSIONS



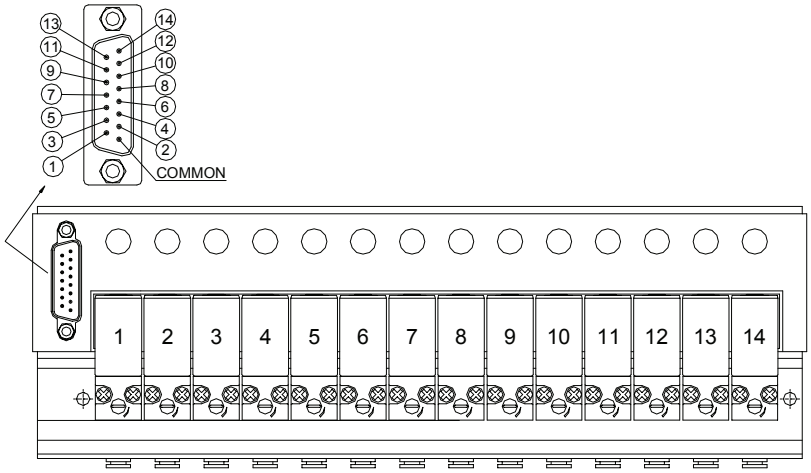
N° PLACES	4	5	6	7	8	9	10	11	12	13	14
A	71	87	103	119	135	151	167	183	199	215	231
B	93	109	125	141	157	173	189	205	221	237	253

ELECTRICAL CONNECTION

4÷8 POSITIONS UNIT

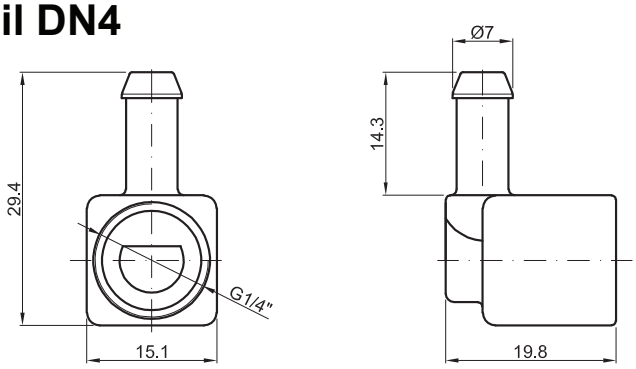


9 ÷14 POSITIONS UNIT

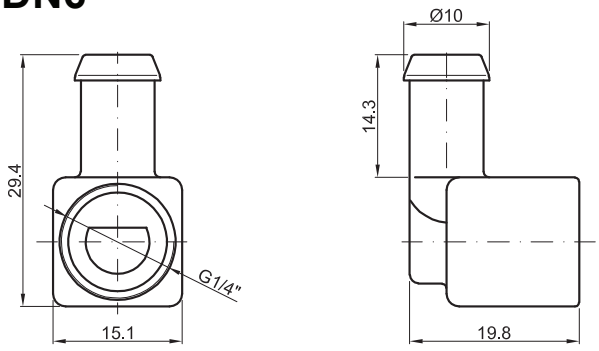


Accessories for solenoid valve series 151

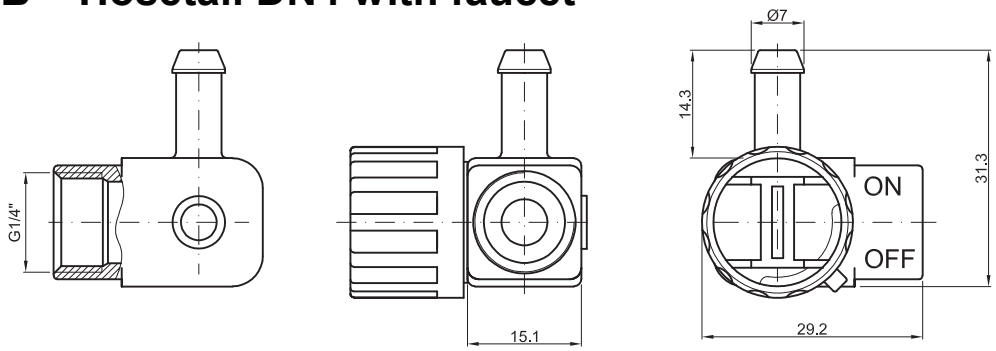
Cod. P40B – Hosetail DN4



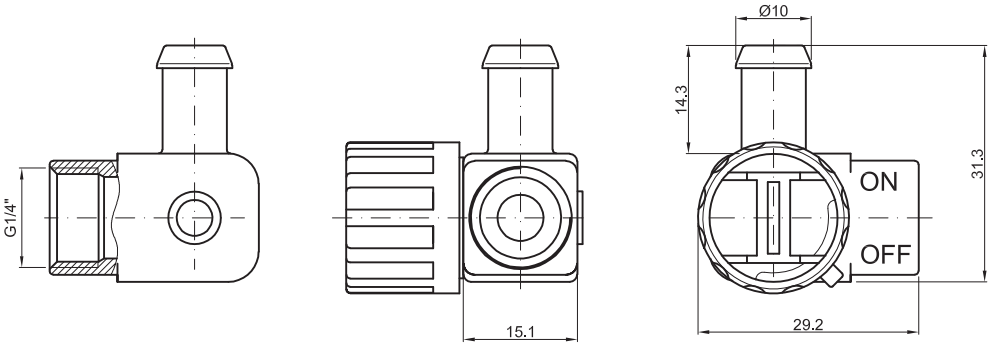
Cod. P60B – Hosetail DN6



Cod. VP40B – Hosetail DN4 with faucet



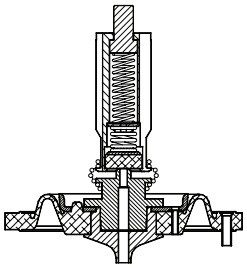
Cod. VP60B – Hosetail DN6 with faucet



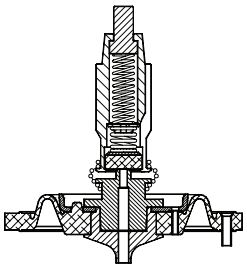
8

2/2 NC assisted lift diaphragm assembly

CODE	SEAL	VALVE SERIES
13428010 13428040 13428020	NBR EPDM FPM	E108C E108D
13429010 13429040 13429020	NBR EPDM FPM	E108E
13430010 13430040 13430020	NBR EPDM FPM	E108F

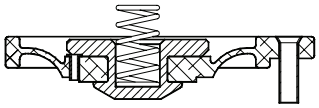


CODE	SEAL	VALVE SERIES
13431010 13431040 13431020	NBR EPDM FPM	D108E
13432010 13432040 13432020	NBR EPDM FPM	D108F

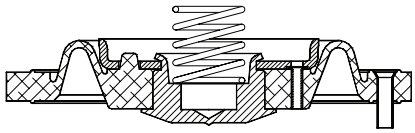


2/2 NC and NO servo-assisted diaphragm assembly

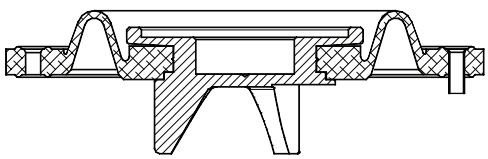
CODE	SEAL	VALVE SERIES
11030010 11030040 11030020	NBR EPDM FPM	107B…10 107C…10 207B…10 207C…10



13386010 13386040 13386020	NBR EPDM FPM	107C…12 107D…12 207C…12 207D…12
13850010	NBR	107CB12/W 107DB12/W
13395010 13395040 13395020	NBR EPDM FPM	107E 207E
13402010 13402040 13402020	NBR EPDM FPM	107F 207F

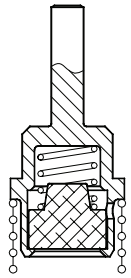


11266010 11266040 11266020	NBR EPDM FPM	107G 107H 207G 207H
11267010 11267040 11267020	NBR EPDM FPM	107I 207I
12669010	NBR	107M 107R 207M 207R
13744010	NBR	107M…/W 107R…/W 207M…/W 207R…/W



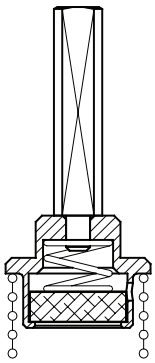
2/2 NO seal assembly for tube Ø10

CODE		SEAL	VALVE SERIES	
BRASS	S.STEEL		BRASS	S.STEEL
11166010 11166040 11166020	12104010 12104040 12104020	NBR EPDM FPM	205A 207C 207D 207E 207F 212X 216X 218C 218D	277C 277D 277E 277F



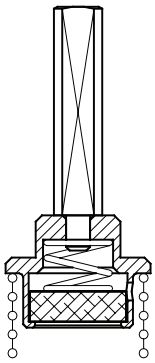
2/2 NO seal assembly for tube Ø13 (alternating current versions)

CODE		SEAL	VALVE SERIES	
BRASS	S.STEEL		BRASS	S.STEEL
11167010 11167040 11167020	12916010 12916040 12916020	NBR EPDM FPM	E206…15 E206…20 E206…25 207G 207H 207I 207M 207R E214X…15 E214X…20 E214X…25 219C… 219D…	210…15 210…20 210…25
11176010 11176040 11176020	12003010 12003040 12003020	NBR EPDM FPM	E206…35 E206…45 E206…52 E214X…35 E214X…45 207M…/W 207R../W	E210…35 E210…45 E210…52
12430010 12430040 12430020	13130010 13130040 13130020	NBR EPDM FPM	206…64	210…64



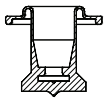
2/2 NO seal assembly for tube Ø13 (direct current versions)

CODE		SEAL	VALVE SERIES	
BRASS	S.STEEL		BRASS	S.STEEL
13754010 13754020 13754040	12916010 12916040 12916020	NBR EPDM FPM	D206…15/3 D206…20/3 D206…25/3 D214X…15/5 D214X…20/5 D214X…25/5	D210…15 D210…20 D210…25
13755010 13755020 13755040	13756010 13756020 13756040	NBR EPDM FPM	D206…35/3 D206…45/3 D206…52/3 D214X…35/5 D214X…45/5	D210…35/3 D210…45/3 D210…52/3

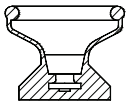


2/2 NC with dry armature diaphragm

CODE	SEAL	VALVE SERIES
10402030	SILICONE	150

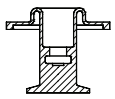


CODE	SEAL	VALVE SERIES
11315030	SILICONE	160 161



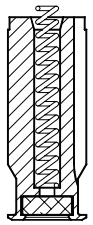
Diverting valve with dry armature diaphragm

CODE	SEAL	VALVE SERIES
10644010	NBR	330



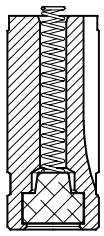
Ø6.35 2/2 NC plunger

CODE	SEAL	VALVE SERIES
1046301A 1046304A 1046302A	NBR EPDM FPM	121



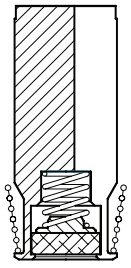
Ø9 2/2 NC plunger

CODE	SEAL	VALVE SERIES
11799010 11799040 11799020 11799090 11799340	NBR EPDM FPM NBR DVGW EPDM WRC	105 135 107C – 107D – 107E – 107F 111 112 116
*11800010 *11800040 *11800020 *11800090 *11800340	NBR EPDM FPM NBR DVGW EPDM WRC	118 510 512 *105/135 (only Ø4)



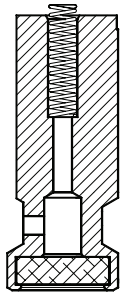
2/2 NC Ø11.85 plunger (up to orifice Ø5.2)

CODE	SEAL	VALVE SERIES
10120010 10120040 10120020 10120050	NBR EPDM FPM PTFE	106A – 106B – 106C – 106D 107G – 107H – 107I 114X 119C – 119D 610
10120N10 10120N40 10120N20	NBR EPDM FPM	110B – 110C – 110D



2/2 NC Ø11.85 plunger (orifice Ø6.4)

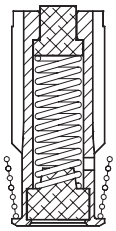
CODE	SEAL	VALVE SERIES
11035010 11035040 11035020 12004050	NBR EPDM FPM PTFE	106B – 106C – 106D 110B – 110C – 110D



3/2 NC Ø9 plunger

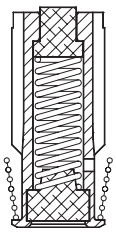
CODE	SEAL	VALVE SERIES
10492010	NBR	305A DN1,2
10492040	EPDM	311A DN1,2
10492020	FPM	312X DN1,2

10519010 10519040 10519020	NBR EPDM FPM	218B 305A 335 311A 312X 316X 530 532



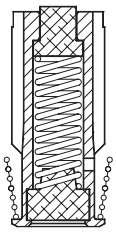
3/2 NO Ø9 plunger
(inlet from the core)

CODE	SEAL	VALVE SERIES
11289010	NBR	305A
11289040	EPDM	311A
11289020	FPM	312X



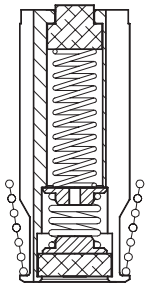
3/2 Ø9 plunger
Universal Service (NC and NO)

CODE	SEAL	VALVE SERIES
11291010 11291040 11291020	NBR EPDM FPM	305A 311A 312X 316X



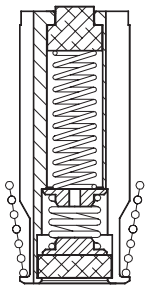
3/2 NC Ø11.85 plunger

CODE	SEAL	VALVE SERIES
10966010 10966040 10966020	NBR EPDM FPM	203A 306A 306B 314X 630
10966N10 10966N40 10966N20	NBR EPDM FPM	310B 310C 310D



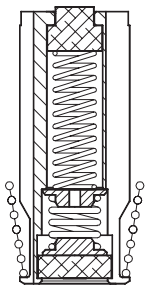
3/2 NO Ø11.85 plunger (inlet from the core)

CODE	SEAL	VALVE SERIES
11045010 11045040 11045020	NBR EPDM FPM	306A 306B 314X
11045N10 11045N40 11045N20	NBR EPDM FPM	310B 310C 310D



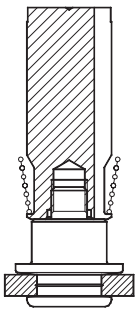
3/2 Ø11.85 plunger Universal Service (NC and NO)

CODE	SEAL	VALVE SERIES
11044010 11044040 11044020	NBR EPDM FPM	306A 306B 314X
11044N10 11044N40 11044N20	NBR EPDM FPM	310B 310C 310D



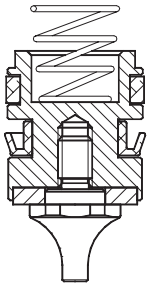
2/2 NC Ø11.85 plunger

CODE	SEAL	VALVE SERIES
10343010 10343040 10343020	NBR EPDM FPM	109C 109D
10344010 10344040 10344020	NBR EPDM FPM	109E



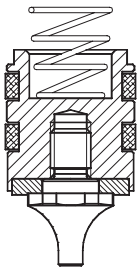
2/2 NC and NO piston assembly

CODE	SEAL	VALVE SERIES
12735000	FPM / PTFE	118C 118D 119C 119D 218C 218D 219C 219D



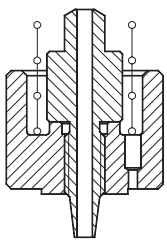
2/2 NC for steam up to 180°C piston assembly

CODE	SEAL	VALVE SERIES
11910000	PTFE	119W



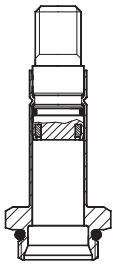
2/2 NC series 118-119 G1/4” piston assembly

CODE	SEAL	VALVE SERIES
11909000	PTFE	118B 119B



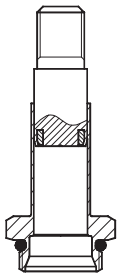
2/2 NC Ø10 brass armature tube for AC and DC

CODE	SEAL	VALVE SERIES
10128010	NBR	E105A
10128040	EPDM	E112X
10128020	FPM	E116X



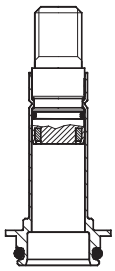
2/2 NC Ø10 stainless steel armature tube for AC and DC

CODE	SEAL	VALVE SERIES
10128SI10 10128SI40 10128SI20	NBR EPDM FPM	E107C - E177C E107D - E177D E107E - E177E E107F - E177F E111A E118C E118D



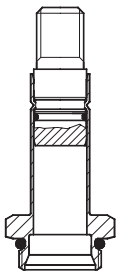
2/2 NC Ø10 electroless nickel-plated brass armature tube for AC and DC, flange fixing

CODE	SEAL	VALVE SERIES
11762K10 11762K40 11762K20	NBR DVGW EPDM WRC FPM	E135



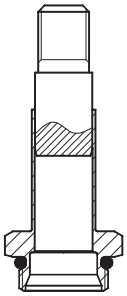
2/2 NC Ø10 brass armature tube for DC

CODE	SEAL	VALVE SERIES
10219010	NBR	D105A
10219040	EPDM	D112X
10219020	FPM	D116X



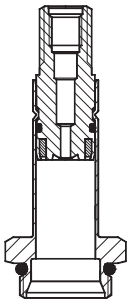
2/2 NC Ø10 stainless steel armature tube for DC

CODE	SEAL	VALVE SERIES
10219SI10 10219SI40 10219SI20	NBR EPDM FPM	D107C - D177C D107D - D177D D107E - D177E D107F - D177F D111A D118C D118D



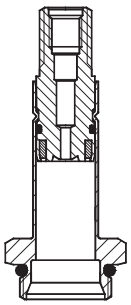
3/2 NC Ø10 brass armature tube for AC and DC
Hole Ø1

CODE	SEAL	VALVE SERIES
10340210	NBR	E305A
10340240	EPDM	E312X
10340220	FPM	E316X



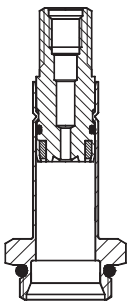
3/2 NC Ø10 brass armature tube for AC and DC
Hole Ø1.5

CODE	SEAL	VALVE SERIES
10340010	NBR	E305A
10340040	EPDM	E312X
10340020	FPM	E316X



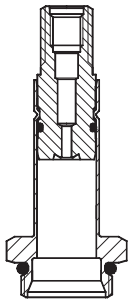
3/2 NC Ø10 brass armature tube for AC and DC
Hole Ø1.7

CODE	SEAL	VALVE SERIES
10340110	NBR	E305A
10340140	EPDM	E312X
10340120	FPM	E316X



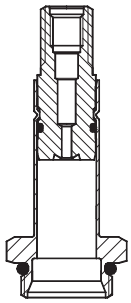
3/2 NC Ø10 brass armature tube for DC
Hole Ø1

CODE	SEAL	VALVE SERIES
10341210	NBR	D305A
10341240	EPDM	D312X
10341220	FPM	D316X



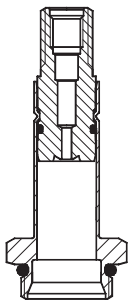
3/2 NC Ø10 brass armature tube for DC
Hole Ø1.5

CODE	SEAL	VALVE SERIES
10341010	NBR	D305A
10341040	EPDM	D312X
10341020	FPM	D316X

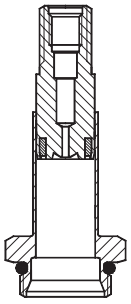


3/2 NC Ø10 brass armature tube for DC
Hole Ø1.7

CODE	SEAL	VALVE SERIES
10341110	NBR	D305A
10341140	EPDM	D312X
10341120	FPM	D316X



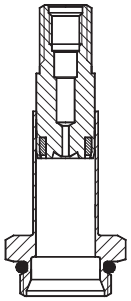
3/2 NC Ø10 stainless steel armature tube for AC and DC Hole Ø1



CODE	SEAL	VALVE SERIES
10340SI210 10340SI240 10340SI220	NBR EPDM FPM	E305A E311A * E312X E316X

* For silver shading ring versions contact the manufacturer

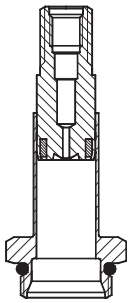
3/2 NC Ø10 stainless steel armature tube for AC and DC Hole Ø1.5



CODE	SEAL	VALVE SERIES
10340SI010 10340SI040 10340SI020	NBR EPDM FPM	E305A E311A * E312X E316X

* For silver shading ring versions contact the manufacturer

3/2 NC Ø10 stainless steel armature tube for AC and DC Hole Ø1.7

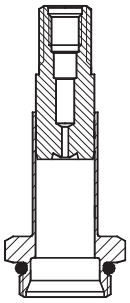


CODE	SEAL	VALVE SERIES
10340SI110 10340SI140 10340SI120	NBR EPDM FPM	E305A E311A * E312X E316X

* For silver shading ring versions contact the manufacturer

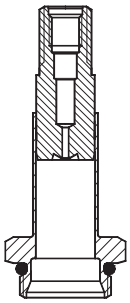
3/2 NC Ø10 stainless steel armature tube for DC
Hole Ø1

CODE	SEAL	VALVE SERIES
10341SI210 10341SI240 10341SI220	NBR EPDM FPM	D305A D311A D312X D316X



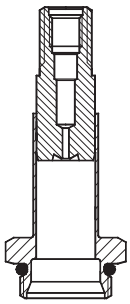
3/2 NC Ø10 stainless steel armature tube for DC
Hole Ø1.5

CODE	SEAL	VALVE SERIES
10341SI10 10341SI40 10341SI20	NBR EPDM FPM	D305A D311A D312X D316X



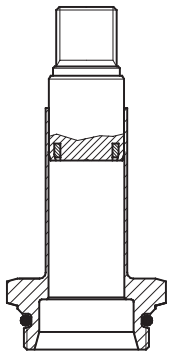
3/2 NC Ø10 stainless steel armature tube for DC
Hole Ø1.7

CODE	SEAL	VALVE SERIES
10341SI110 10341SI140 10341SI120	NBR EPDM FPM	D305A D311A D312X D316X



2/2 NC Ø13 stainless steel armature tube for AC and DC

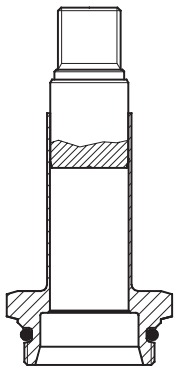
CODE	SEAL	VALVE SERIES
12456010 12456040 12456020	NBR EPDM FPM	E106A E106B E107G E107H E107I E107M E107R E108 E109 E110 * E114 E119 E320



* For silver shading ring versions contact the manufacturer

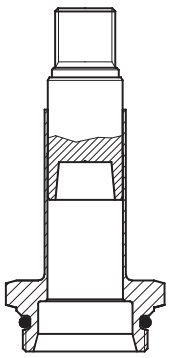
2/2 NC Ø13 stainless steel armature tube for DC

CODE	SEAL	VALVE SERIES
12457010 12457040 12457020	NBR EPDM FPM	D106A D106B D107G D107H D107I D107M D107R D108C D108D D109 D110 D114 D119 D320



2/2 NC Ø13 stainless steel armature tube for 108 G3/4” and G1” DC

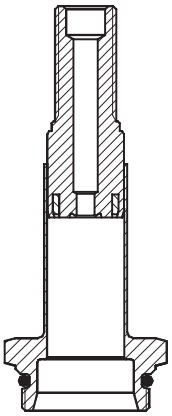
CODE	SEAL	VALVE SERIES
12465010 12465040 12465020	NBR EPDM FPM	D108E D108F



3/2 NC Ø13 stainless steel armature tube for AC and DC Hole Ø2

CODE	SEAL	VALVE SERIES
12464110 12464140 12464120	NBR EPDM FPM	E306A E306B E310 * E314X

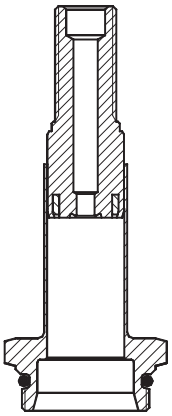
* For silver shading ring versions contact the manufacturer



3/2 NC Ø13 stainless steel armature tube for AC and DC Hole Ø2.4

CODE	SEAL	VALVE SERIES
12464010 12464040 12464020	NBR EPDM FPM	E306A E306B E310 * E314X

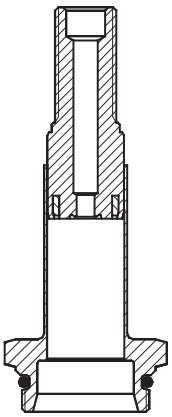
* For silver shading ring versions contact the manufacturer



3/2 NC Ø13 stainless steel armature tube for AC and DC Hole Ø2.8

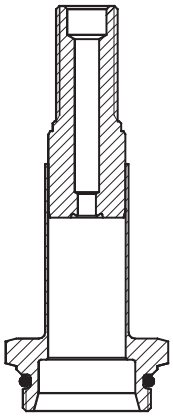
CODE	SEAL	VALVE SERIES
12464210 12464240 12464220	NBR EPDM FPM	E306A E306B E310 * E314X

* For silver shading ring versions contact the manufacturer



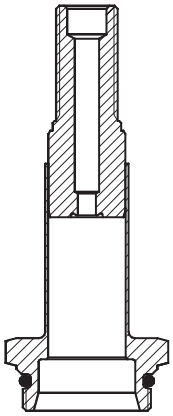
3/2 NC Ø13 stainless steel armature tube for DC Hole Ø2

CODE	SEAL	VALVE SERIES
12462110 12462140 12462120	NBR EPDM FPM	D306A D306B D310 D314X



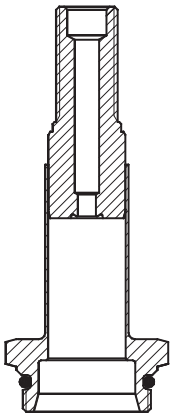
3/2 NC Ø13 stainless steel armature tube for DC Hole Ø2.4

CODE	SEAL	VALVE SERIES
12462010 12462040 12462020	NBR EPDM FPM	D306A D306B D310 D314X



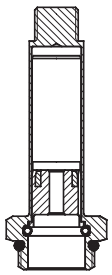
3/2 NC Ø13 stainless steel armature tube for DC Hole Ø2.8

CODE	SEAL	VALVE SERIES
12462210 12462240 12462220	NBR EPDM FPM	D306A D306B D310 D314X



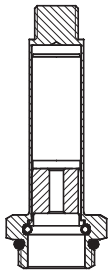
2/2 NO Ø10 brass armature tube for AC and DC

CODE	SEAL	VALVE SERIES
11170010 11170040 11170020	NBR EPDM FPM	E205A E212X E216X E218C E218D



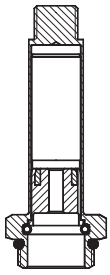
2/2 NO Ø10 brass armature tube for DC

CODE	SEAL	VALVE SERIES
11171010 11171040 11171020	NBR EPDM FPM	D205A D212X D216X D218C D218D



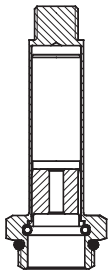
2/2 NO Ø10 stainless steel armature tube for AC and DC

CODE	SEAL	VALVE SERIES
11170SI10 11170SI40 11170SI20	NBR EPDM FPM	E205A E207C - E277C E207D - E277D E207E - E277E E207F - E277F E212X E216X E218C E218D



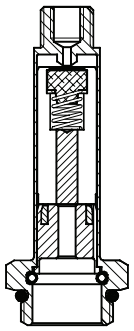
2/2 NO Ø10 stainless steel armature tube for DC

CODE	SEAL	VALVE SERIES
11171SI10 11171SI40 11171SI20	NBR EPDM FPM	D205A D207C - D277C D207D - D277D D207E - D277E D207F - D277F D212X D216X D218C D218D



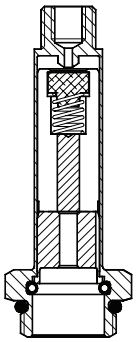
3/2 NO Ø10 brass armature tube for AC and DC

CODE	SEAL	VALVE SERIES
11174010	NBR	E307A
11174040	EPDM	E312X
11174020	FPM	E317X



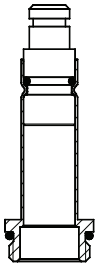
3/2 NO Ø10 brass armature tube for DC

CODE	SEAL	VALVE SERIES
11175010	NBR	D307A
11175040	EPDM	D312X
11175020	FPM	D317X



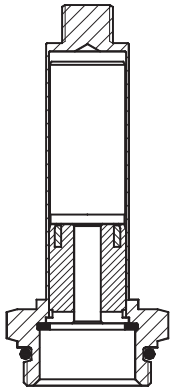
2/2 NC Ø7 brass armature tube for DC

CODE	SEAL	VALVE SERIES
10448010	NBR	
10448040	EPDM	D121L
10448020	FPM	



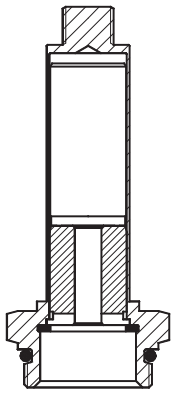
2/2 NO Ø13 brass armature tube for AC and DC

CODE	SEAL	VALVE SERIES
11172010 11172040 11172020	NBR EPDM FPM	E206A E206B E214X E207G E207H E207I E207M E207R E219C E219D



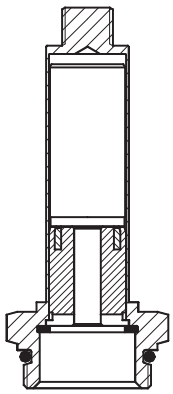
2/2 NO Ø13 brass armature tube for DC

CODE	SEAL	VALVE SERIES
11173010 11173040 11173020	NBR EPDM FPM	D206A D206B D214X D207G D207H D207I D207M D207R D219C D219D



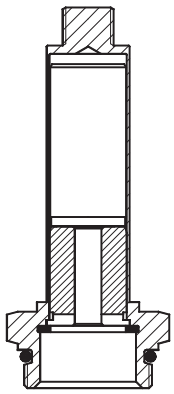
2/2 NO Ø13 stainless steel armature tube for AC and DC

CODE	SEAL	VALVE SERIES
11172SI10 11172SI40 11172SI20	NBR EPDM FPM	E206A E206B E210 E214X E207G E207H E207I E207M E207R E219C E219D



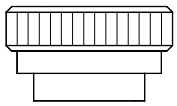
2/2 NO Ø13 stainless steel armature tube DC

CODE	SEAL	VALVE SERIES
11173SI10 11173SI40 11173SI20	NBR EPDM FPM	D206A D206B D210 D214X D207G D207H D207I D207M D207R D219C D219D

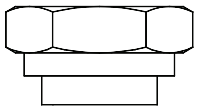


COIL FIXING NUT

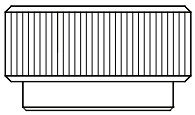
Code 10203000
Coil fixing nut for series 3 and series 4
2/2NC and 3/2NC solenoid valves
with brass tube



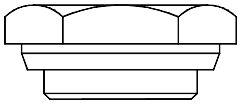
Code 11643K0A
Coil fixing nut for series 3 and series 4
2/2NC and 3/2NC solenoid valves
with stainless steel tube



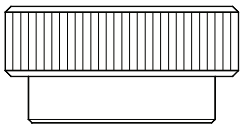
Code 1012600B
Coil fixing nut for series 3 and series 4
2/2NO and 3/2NO solenoid valves



Code 10097000
Coil fixing nut for series 2 and series 5
2/2NC and 3/2NC solenoid valves



Code 10293000
Coil fixing nut for series 2 and series 5
2/2NO solenoid valves



Code 10464000
Coil fixing nut for series 6

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