

**Description:**

- High operating pressure
- Interchangeable magnetic heads, direct current or alternating current (10,1 W/11,6 W or 17,1 W/22,6 W) on request
- The valves do not require a minimum working pressure
- Large choice of chemically resistant sealing materials

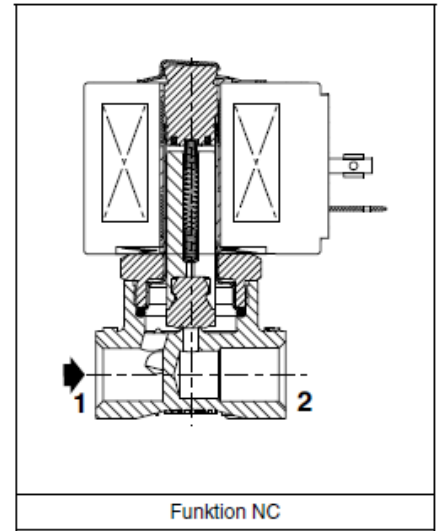
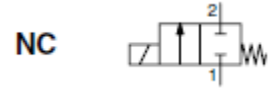
**General:**

Medium*	Air, neutral gases, water, oil
Operating pressure	See characteristics valve body [1 bar = 100 kPa]
Maximum viscosity	65 cSt (mm <sup>2</sup> /s)
Response time	5 to 25 ms
Housing	Stainless steel 1.4301

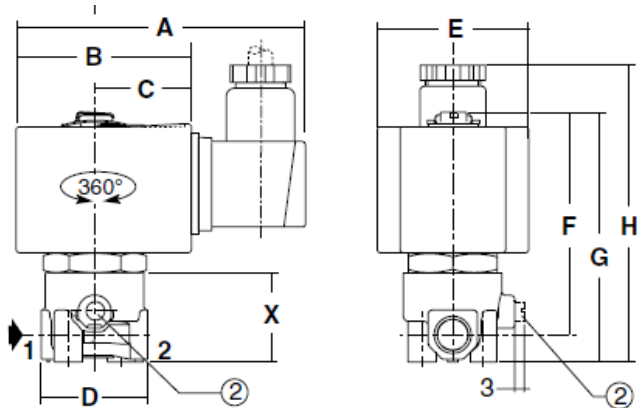
**Parts in contact with the medium:\***

Housing	Stainless steel 1.4301
Guide pipe	Stainless steel 1.4303
Armature of magnet and counter-armature	Stainless steel 1.4104
Springs	Stainless steel 1.4310
Valve seat	Stainless steel
End ring	Silver
Insulation class (coil)	F (AC) or H (DC)
Electrical connection	ISO 4400; EN 175301-803, Type A
Electrical design	IEC 335

\* The resistance of the parts in contact with the medium must be checked separately.



Type 1



**Solenoid valve normally closed, 230 V, 50 to 60 Hz, directly operated**

Art. No.	Type No.	Thread	DN	A	B	C	D	E	F	G	H	X	Weight *
				mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
102969	MV 100 ES	NPT 1/8	2.4	91.0	51.0	30.0	30.0	43.0	62.0	71.0	88.0	26.0	0.30
102970	MV 120 ES	NPT 1/8	2.4	91.0	51.0	30.0	30.0	43.0	62.0	71.0	88.0	26.0	0.30
102971	MV 101 ES	G 1/4	4	95.0	57.0	33.0	40.0	50.0	69.0	78.0	96.0	30.0	0.50
102972	MV 121 ES	G 1/4	4	95.0	57.0	33.0	40.0	50.0	69.0	78.0	96.0	30.0	0.50

**Solenoid valve normally closed, 24 V DC (direct current), directly operated**

Art. No.	Type No.	Thread	DN	A	B	C	D	E	F	G	H	X	Weight *
				mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
102973	MV 100 ES-G	NPT 1/8	2.4	91.0	51.0	30.0	30.0	43.0	62.0	71.0	88.0	26.0	0.30
102974	MV 120 ES-G	NPT 1/8	2.4	91.0	51.0	30.0	30.0	43.0	62.0	71.0	88.0	26.0	0.30
102975	MV 101 ES-G	G 1/4	4	95.0	57.0	33.0	40.0	50.0	69.0	78.0	96.0	30.0	0.50
102976	MV 121 ES-G	G 1/4	4	95.0	57.0	33.0	40.0	50.0	69.0	78.0	96.0	30.0	0.50

\* Inkl. Solenoid and connector

### Solenoid valve normally closed, 230 V, 50 to 60 Hz, directly operated

Art. No.	Type No.	Thread	Sealant	Operating pressure		Medium temperature		Insulation class
				min. / max. (1)	bar	min. / max. (2)	°C	
102969	MV 100 ES	NPT 1/8	NBR	0 / 25		-25 / 80		F
102970	MV 120 ES	NPT 1/8	FPM	0 / 25		-15 / 100		F
102971	MV 101 ES	G 1/4	NBR	0 / 14		-25 / 80		F
102972	MV 121 ES	G 1/4	FPM	0 / 14		-15 / 100		F

### Solenoid valve normally closed, 24 V DC (direct current), directly operated

Art. No.	Type No.	Thread	Sealant	Operating pressure		Medium temperature		Insulation class
				min. / max. (1)	bar	min. / max. (2)	°C	
102973	MV 100 ES-G	NPT 1/8	NBR	0 / 14		-25 / 80		H
102974	MV 120 ES-G	NPT 1/8	FPM	0 / 14		-15 / 120		H
102975	MV 101 ES-G	G 1/4	NBR	0 / 3.5		-25 / 80		H
102976	MV 121 ES-G	G 1/4	FPM	0 / 3.5		-15 / 120		H

(1) For detailed pressure information each medium, please see characteristics valve body.

(2) At temperatures below zero the medium may freeze and damage the valve.

**Characteristics valve body:**

Conne- ction	Nom. width	Flow coefficient (Kv)		Working pressure difference (bar)						Coil Type No.	Coil Type No.	Solenoid valve Art. No.		
				min.	max.			Oil<65cSt						
					Air/gas	Water								
(mm)	(m³/h)	(l/min)	~	=	~	=	~	=	~	=	~	=		
NPT 1/8	2.4	0.18	3.0	0	25	14	22	10	13	10	400-238-117-057 + 400-238-101-006-M6	400-238-142-006-M6	102969 102970	102973 102974
G 1/4	4.0	0.45	7.5	0	14	3.5	13	3.5	10	3.5	400-238-117-059 + 400-238-101-006	400-238-142-006-M6	102971 102972	102975 102976

**Electrical data:**

Coils (2) DC (=) 12V - 24V → Please use the suffix »G« to order **DC valves**  
AC (~) 24V/50Hz - 110V/50Hz - 230V/50Hz

- (1) At temperatures below zero the medium may freeze and damage the valve.
- (2) Other voltages and 60 Hz frequency on request.

Coil Type No.	Power				Ambient temperature (1)	Max. perm. operating temperatur e	Max. perm. temperature rise	Insulation class	Degree of protection (with socket connector fitted)
	Pickup ~	Holding ~		hot / cold =					
	(VA)	(VA)	(W)	(W)					
400-238-xxx	30	16	8.1	7.7 / 10.6	-25 to 55 (NBR)	135	80	F	IP 65
	50	25	10.1	8.5 / 11.6	-15 to 55 (FPM)				

\* Coil temperature after energising  
\*\* Additional effect of the medium temperature within the value range stated in the catalogue  
\*\*\* At 100 % ED

**Installation:**

- Any mounting position
- Valve bodies supplied with two mounting holes
- Threaded connections: G 1/4 acc. to DIN EN ISO 228-1 + ISO 7/1; G 1/8 acc. to ISO 228/1
- Assembly and servicing instructions enclosed with each valve