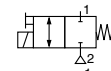




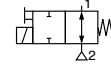
# MINIATURE SOLENOID VALVES

rocker mechanism, fluid isolation  
hose connections

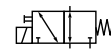
2/2 NC



2/2 NO



3/2 U



2/2  
3/2  
Series  
110

## FEATURES

- Valves for medical analysers, biotechnology, gas analysers
- Can be used to control acids and bases, as well as analytical reagents
- Any application where the fluid may not come into contact with metal parts and with the electromagnetic control section of the solenoid valves
- The valves are ideal for controlling aggressive fluids or when high purity is demanded and have easy to flush internal cavities
- They can also be used as a very small internal volume flow-through sampling valve due to rocker technology
- Hermetic separation of control mechanism and fluid
- Reduced heat exchange between coil and fluid
- Protected manual operator
- The use of first class materials and thorough valve testing ensure high reliability and a lifetime of at least 1 million cycles
- The solenoid valves satisfy all relevant EC directives



## GENERAL

**Differential pressure** -0,7 to +2 bar (usable in 0,3 bar abs. vacuum) [1 bar =100 kPa]  
**Maximum viscosity** 20 cSt (mm<sup>2</sup>/s)  
**Response time** < 20 ms  
**Dead volume** < 0,75 µl (connections not included)

fluids (*)	temperature range (TS)	seal materials (*)
liquids or gases	0°C to + 40°C	EPDM (ethylene-propylene)

## CONSTRUCTION

**Body** PA12  
**Internal parts** Stainless steel

## MATERIALS IN CONTACT WITH FLUID

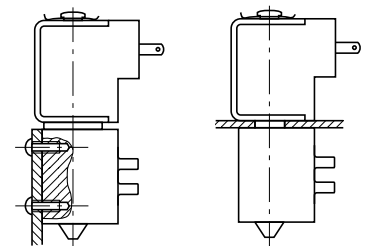
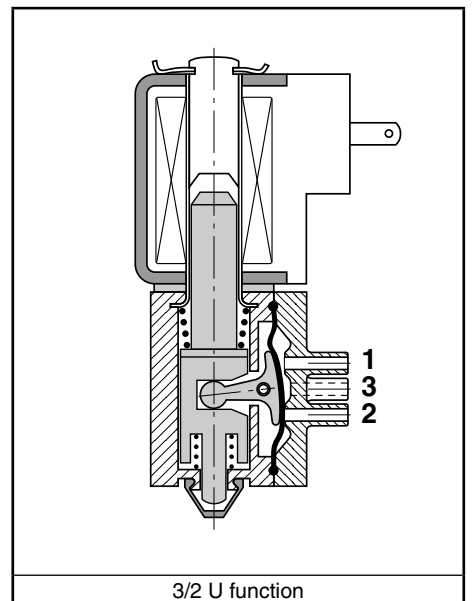
(\*) Ensure that the compatibility of the fluids in contact with the materials is verified  
**Cover** PA12 (transparent), enabling flow of fluid to be seen  
**Diaphragm-poppets** EPDM

## ELECTRICAL CHARACTERISTICS

**Coil insulation class** F  
**Duty cycle** 100 %  
**Coil** Two spade terminals 2.8 x 0.5 mm (DIN 46340)  
**Electrical safety** IEC 335  
**Electrical enclosure protection** IP40 (EN60529)  
**Standard voltages** DC (=) : 12V - 24V  
 (Other voltages on request)

	power ratings			operator ambient temperature range (TS) (C°)	replacement coil		type <sup>(1)</sup>
	inrush ~ (VA)	holding ~ (VA)	hot/cold = (W)		-	=	
-	-	-	-	4 / 5	-	24 V DC	01
-	-	-	-	-5 to + 40	-	43004663	

<sup>(1)</sup> Refer to the dimensional drawings on the following page.

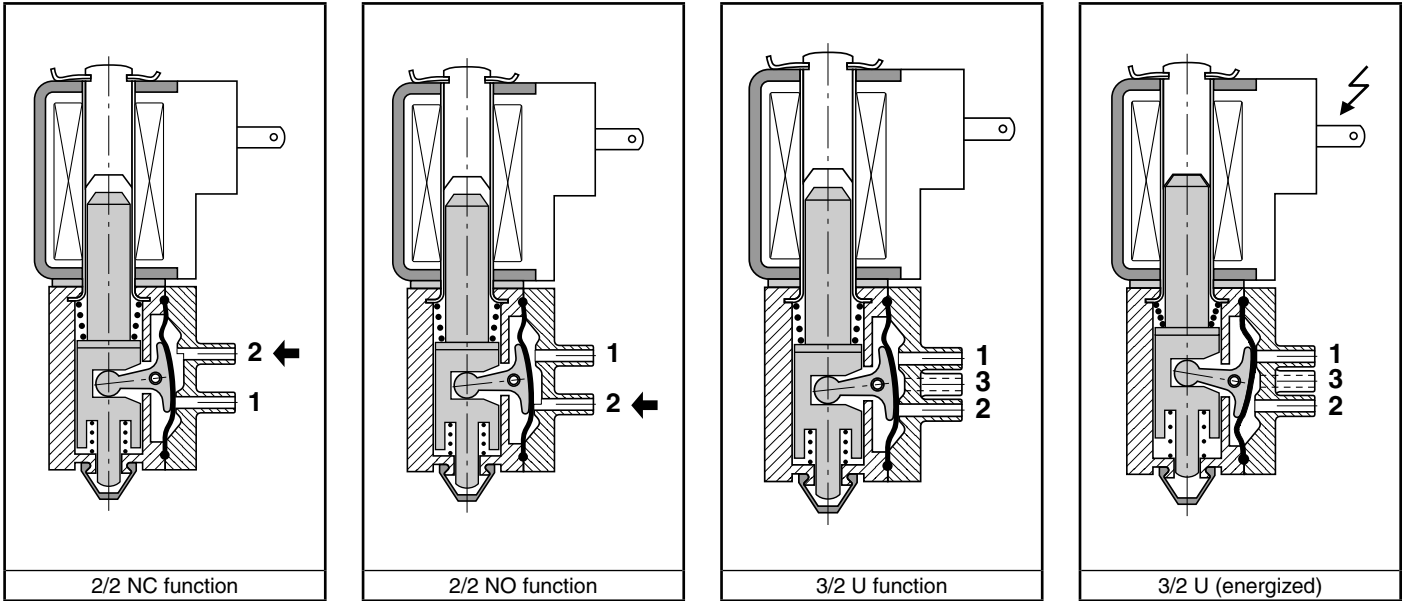


## SPECIFICATIONS

pipe size	orifice size (mm)	flow coefficient Kv (m <sup>3</sup> /h) (l/min)		operating pressure differential (bar)				power coil (W)		catalogue number (protected impulse manual operator)	
				min.	max. (PS)		rear mounting			control support plate mounting	
					gases (*)	liquids (*)					=
<b>2/2 NC - Normally closed / 2 connections</b>											
<sup>(2)</sup>	1,5	0,05	0,75	-0,7	2	2	-	5	11000006	11000010	
<b>2/2 NO - Normally open / 2 connections</b>											
<sup>(2)</sup>	1,5	0,05	0,75	-0,7	2	2	-	5	11000005	11000009	
<b>3/2 U - Universal / 3 connections</b>											
<sup>(2)</sup>	1,5	0,05	0,75	-0,7	2	2	-	5	11000007	11000011	
<b>3/2 U - Universal / 4 connections</b>											
<sup>(2)</sup>	1,5	0,05	0,75	-0,7	2	2	-	5	11000008	11000012	

<sup>(2)</sup> Hose connection to ID 1,5 mm flexible tubing.

### PRINCIPLE OF OPERATION

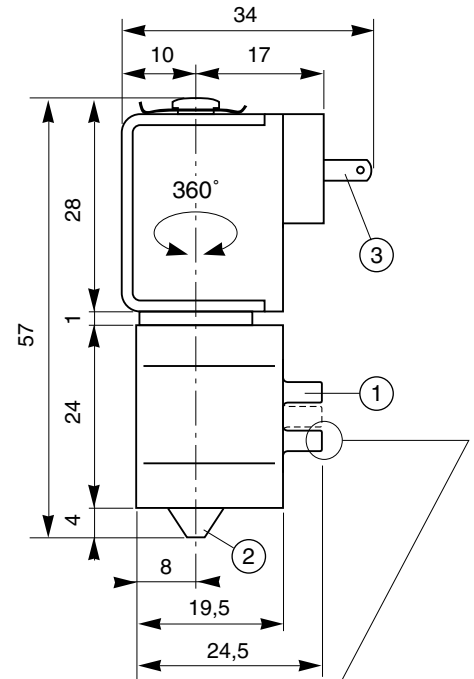
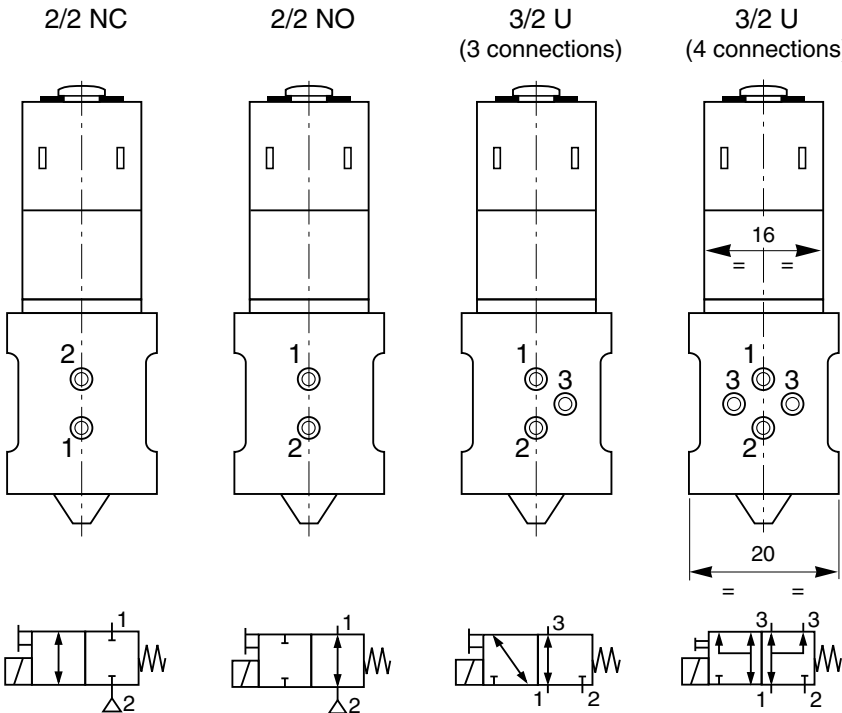


### DIMENSIONS (mm), WEIGHT (kg)

**TYPE 01**  
Prefix "SC" Solenoid  
DIN 43340

11000005..12

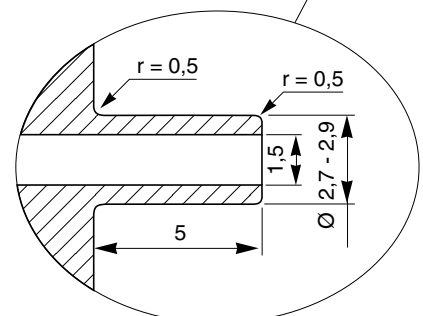
Scale: 1



- ① Hose bibs for connection of ID 1,5 mm flexible tubing
- ② Protected impulse type manual operator
- ③ Coil with two spade terminals 2,8 x 0,5 (DIN 46340)

type	prefix option	weight <sup>(1)</sup>
01	SC	0,46

<sup>(1)</sup> Incl. coil.



Details of hose bib

### OPTIONS

- Stainless steel support plate for mounting between body and coil for:
    - 1 solenoid valve, catalogue number **88211001**
    - 2 solenoid valves, catalogue number **88211002**
    - 3 solenoid valves, catalogue number **88211003**
    - 4 solenoid valves, catalogue number **88211004**
    - 5 solenoid valves, catalogue number **88211005**
  - FPM (fluoroelastomer) diaphragm
- For more, contact us

### INSTALLATION

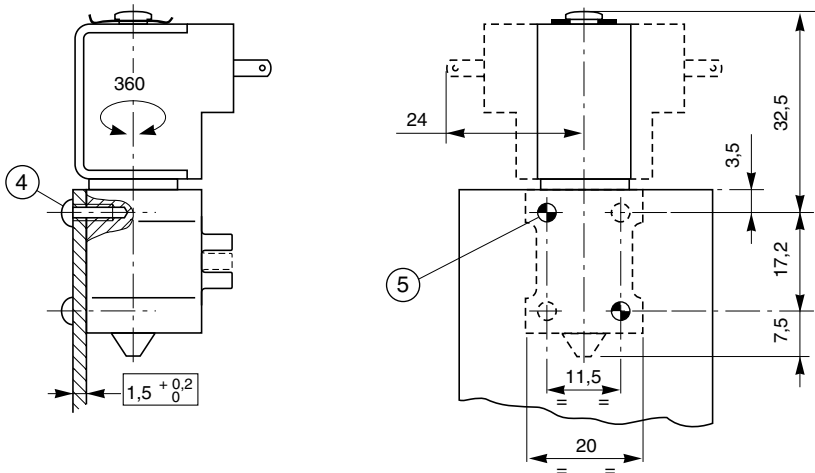
- The solenoid valves can be mounted in any position without affecting operation
- Rear or control support plate mounting possible (see below)
- Hose connection of flexible tubing  $\varnothing$  1.5 mm ID
- Compact size and simple tubing (see following page)
- Replacement coils are available
- Installation/maintenance instructions are included with each valve

### ORDERING EXAMPLES:

	11000006	12V / DC
	11000010	24V / DC
catalogue number	_____	_____ voltage

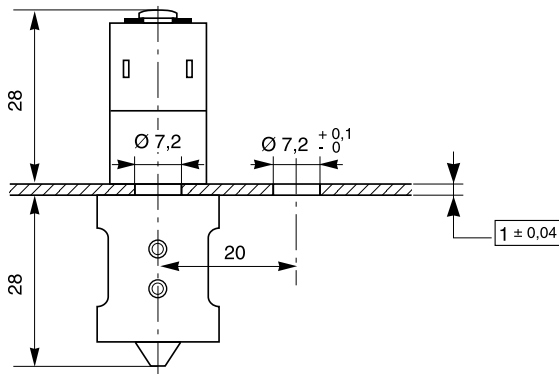
### DIMENSIONS (mm), WEIGHT (kg)

#### REAR MOUNTING



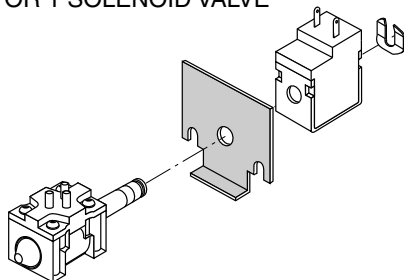
- ④ 2 self thread cutting «Torx» screws K 22 x 6 - A2 stainless steel (screws delivered)
  - use these screws only
  - use plate with correct thickness
  - max. torque: 0,3 Nm
- ⑤ Two mounting holes 2.5 mm dia. Solenoid valve body has four holes for mounting purpose

#### CENTRAL SUPPORT PLATE MOUNTING (For solenoid valve of corresponding type)

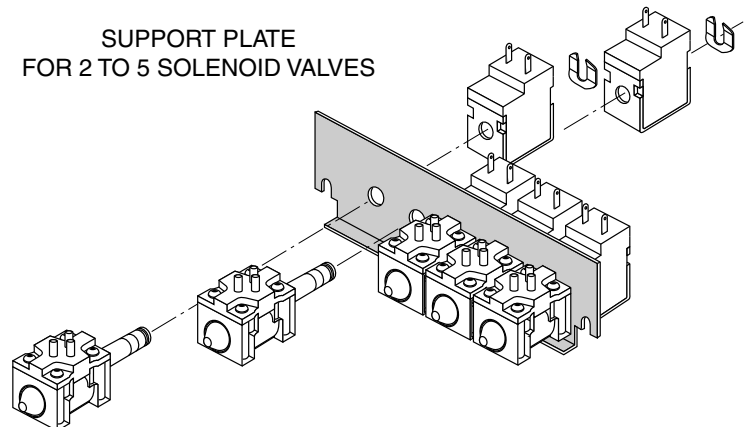



- The panel must be of non-magnetic material.
- To fit to panel, remove the clip and the solenoid valve coil and install as indicated below.

SUPPORT PLATE FOR 1 SOLENOID VALVE



SUPPORT PLATE FOR 2 TO 5 SOLENOID VALVES



DIMENSIONS (mm), WEIGHT (kg) 

### SUPPORT PLATE FOR 1 TO 5 SOLENOID VALVES

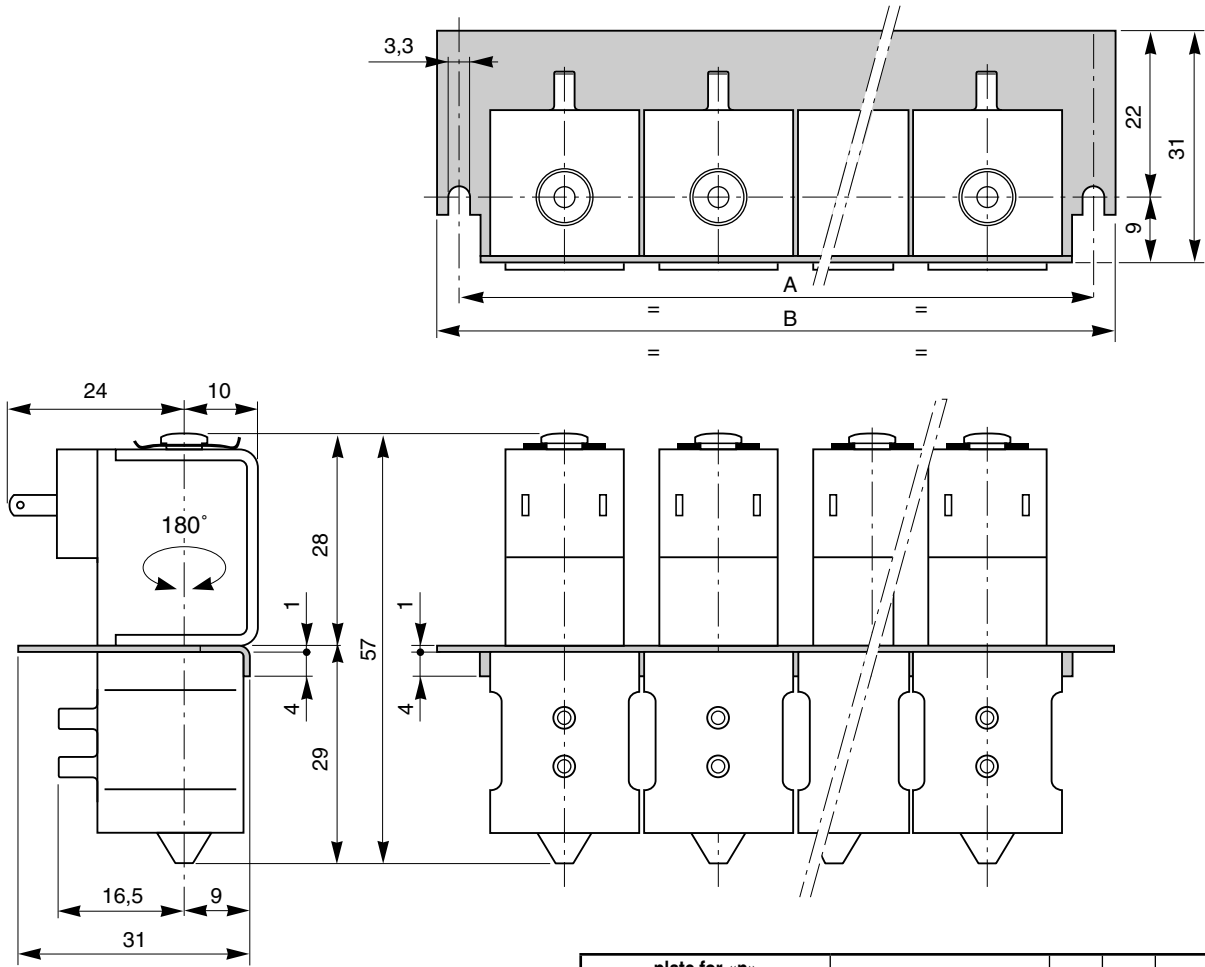


plate for «n» solenoid valves	plate catalogue number	A	B	weight <sup>(1)</sup>
1	<b>88211001</b>	31	40	0,1
2	<b>88211002</b>	51	60	0,15
3	<b>88211003</b>	72	80	0,2
4	<b>88211004</b>	92	100	0,25
5	<b>88211005</b>	113	121	0,3

<sup>(1)</sup> Plate only.

### SIMPLE TUBING

When valves mounted side by side on a support plate, an area is left open so that tubes pass between valve bodies

