- **2/2, 3/2 NC/NO; Cartridge mounting**
- **Very compact design (ø 8 x 19 mm)**
- **Low power consumption (0,5 W)**
- **Long life up to 100 million cycles**
- **High flow to size ratio**

Technical features

Medium:
Air, oxygen, neutral gases (10 % ... 95 % humidity, non condensing), 40 µm filtered
Operation:
Direct acting 2-way and 3-way valves
Normally closed and normally opened
Operating pressure:
0 ... 8 bar (0 ... 116 psi)

Mounting:
Cartridge
Size:
8 mm
Orifice:
0,5 ... 1 mm
Response time:
5 ... 10 ms
Response time measured according to ISO 12238
Life expectancy:
≥100 Mio. cycles

Mounting instruction:
The valve must be assembled in its housing with a lubricant that is compatible with the seals.
Max axial force supported by the valve: 75 (N).
Ambient/media temperature:
-10 ... +50 °C (+14 ... +122°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2 °C (+35°F).

Materials:
Body: PPS
Seat seals: HNBR
Internal parts: stainless steel

Electrical details

Voltage:	24 V d.c.
Rating:	100 % E.D.
Voltage tolerance	± 10%
Power consumption:	0,5 W
Electrical insulation	500 V a.c.
Insulation class	F (155°C)

Following options on request

kv
Operating pressure
Medium temperature
Ambient temperature
Power consumption
Body
Seal
Electric connection
Voltage (3, 5, 6 or 12 V d.c.)
Degreased for oxygen use

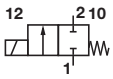
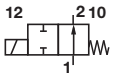
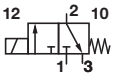
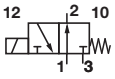
Pulse width modulation (PWM) control

A PWM can be used to control the valve and should be set as follows:

	Definition	Value to be applied
Hit voltage	Voltage used for he valve to commute	Valve nominal voltage
Holding voltage	Voltage applied to he valve after commutation	Set duty cycle to guarantee specified holding voltage. 50% of nominal voltage can be used if no value specified.
Hit time	Maximum time required to ensure full valve commutation	25 ms *1)
PWM frequency		20 kHz

*1) Note: There is no temperature restriction in the case of CHIPSOL

Technical data - standard models - 24 V d.c.

Symbol	Operation	Function	Orifice	kv factor *1)	Operating pressure (bar)		Seal Material	Drawing No.	Model
	2/2	NC	0,5	0,11	0 ... 8	0 ... 116	HNBR	1	14-211CA00-HH++AYJ
			0,8	0,2	0 ... 5	0 ... 72	HNBR	1	14-211CA01-HH++AYJ
			1	0,3	0 ... 1,5	0 ... 21	HNBR	1	14-211CA010HH++AYJ
	2/2	NO	0,6	0,11	0 ... 8	0 ... 116	HNBR	2	14-221CA060HH++AYJ
			0,7	0,2	0 ... 5	0 ... 72	HNBR	2	14-221CA070HH++AYJ
	3/2	NC	0,5	0,11	0 ... 8	0 ... 116	HNBR	3	14-311CA00-HH++AYJ
			0,8	0,22	0 ... 3	0 ... 43	HNBR	3	14-311CA01-HH++AYJ
			1	0,3	0 ... 0,5	0 ... 7	HNBR	3	14-311CA010HH++AYJ
	3/2	NO	0,6	0,12	0 ... 4	0 ... 58	HNBR	4	14-321CA060HH++AYJ

*1) Cv = 0,07 kv

Accessories

Test manifold with M3 ports, 1 position

Page 4

S141.0387 *1)

Test manifold with M3 ports, multiple channels up to 10 positions

Page 4

Available on request

Barbs mounting interface for Ø 2,5 mm ID tubing (up to 1 bar)

Page 4

S140.0226

*1) Two valve mounting screws are in scope of delivery

Electrical connection

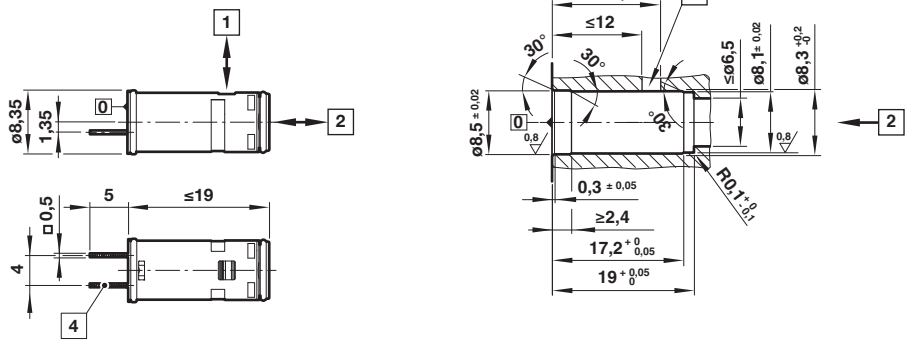
300 mm flying leads mounted with 4 mm (or 2 x 2 mm) pitch SIL socket housing (Harwin M22-3010300)

S141.0466

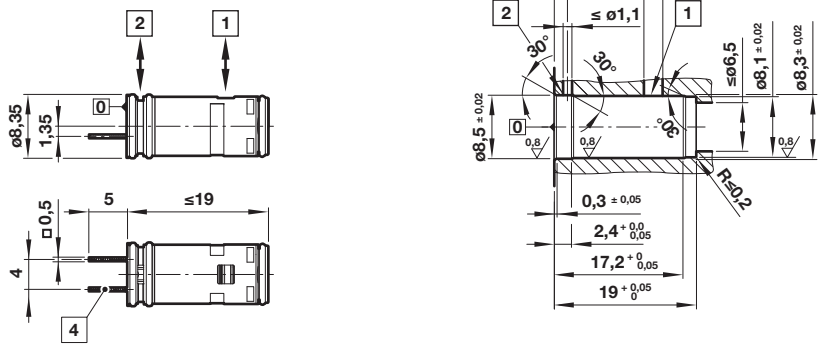
Dimensions

Dimensions shown in mm
Projection/First angle

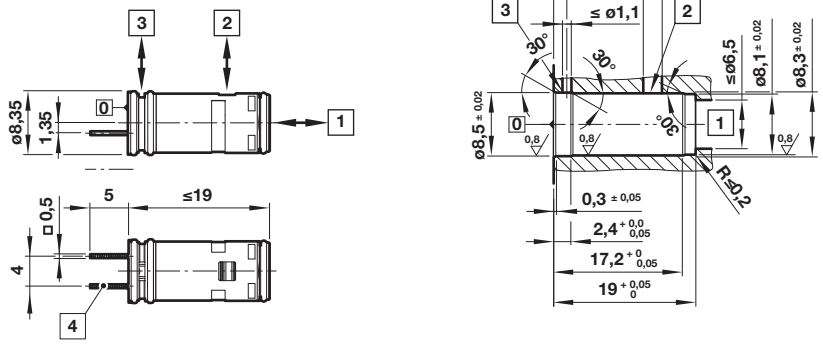
1 CHIPSOL 2/2 NC



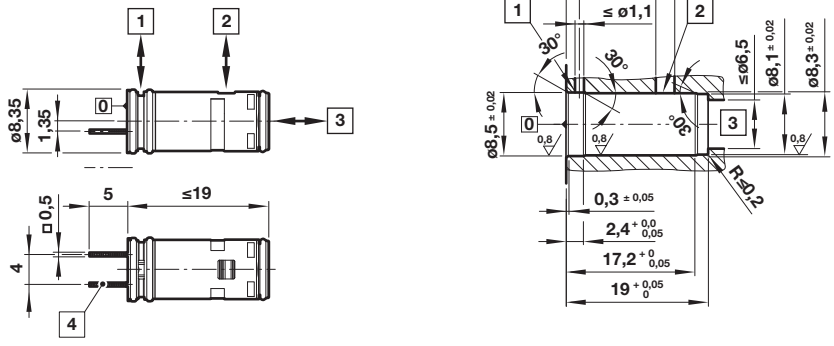
2 CHIPSOL 2/2 NO



3 CHIPSOL 3/2 - NC



4 CHIPSOL 3/2 - NO

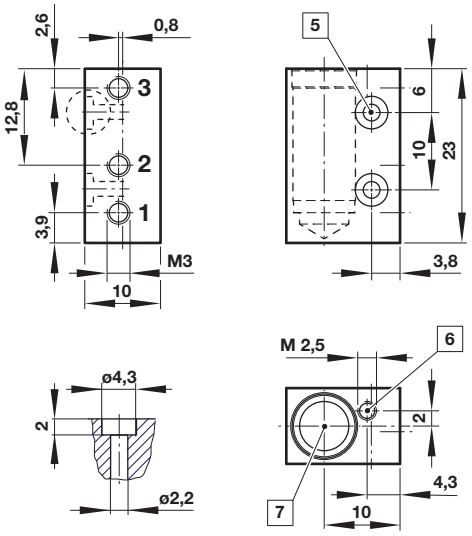


0 Faces to be aligned by retaining means
1 Inlet port
2 Outlet port
3 Exhaust port
4 Do not weld

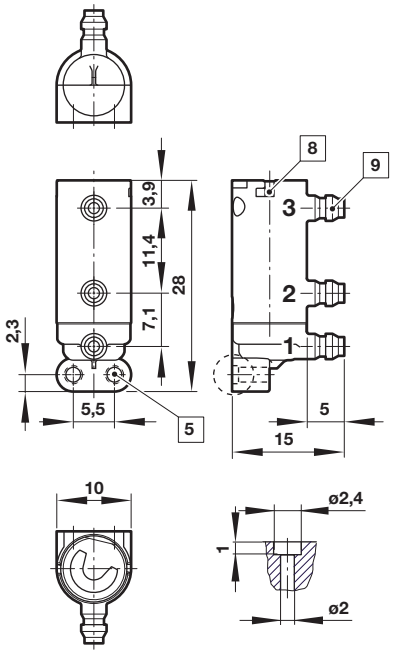
Dimensions

Dimensions shown in mm
Projection/First angle

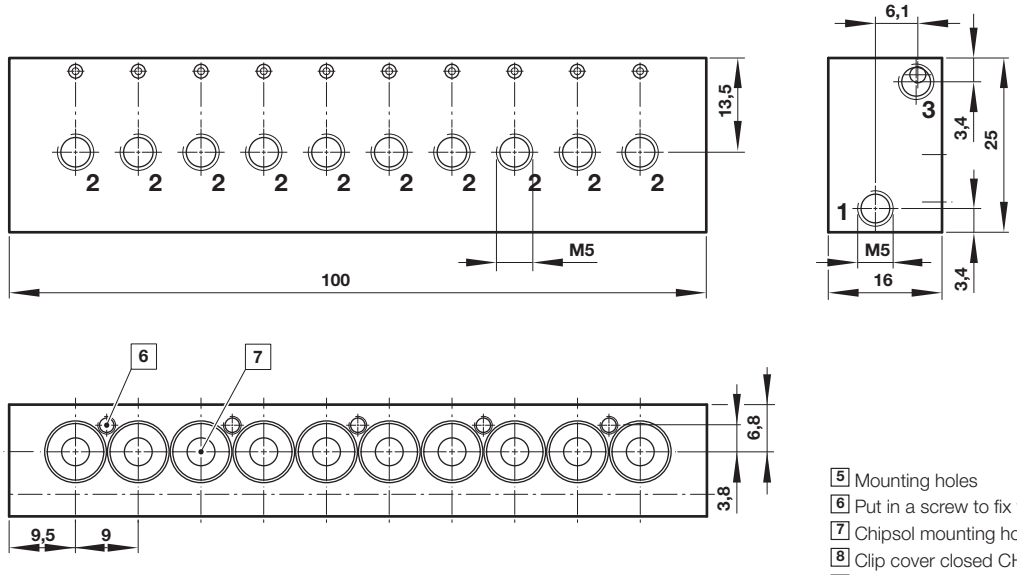
Test manifold, 1 position
(Aluminium)



Barbs mounting interface
(Plastic, maximum operating pressure 1 bar)



Test manifold, up to 10 positions
(Brass)



5 Mounting holes
6 Put in a screw to fix valve position
7 Chipsol mounting hole
8 Clip cover closed CHIPSOL mounting hole
9 Tubing ID 2,5 mm

Warning

These products are intended for use in air, oxygen and neutral gas systems only. Do not use these products where pressures and temperatures can exceed those listed under **»Technical features«**.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult IMI FAS.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.