

Metal-free 2, 3-port solenoid valve

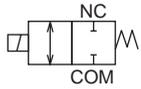
MR16 Series

- NC(open when energized), NO(Closed when energized), universal
- Working fluid: Water, pure water, chemical liquids
- Port size: M6 , 1/4-28UNF

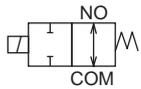


JIS symbol

- 2-port: NC



- 2-port: NO



- 3-port: Universal



Specifications

Item	2-port		3-port
	MR16-2NC	MR16-2NO	MR16-3
Actuation	NC (open when energized)	NO	Universal
Working fluid	Water/pure water/chemical liquids (fluids that do not corrode wetted part materials)		
Proof pressure	MPa 0.45(water pressure)		
Working pressure	MPa -0.08 to 0.3		
Fluid temperature	°C 5 to 40		
Ambient temperature	°C 5 to 45		
Atmosphere	No explosive or corrosive atmospheres		
Valve seat leakage	cm ³ /min 0 (water pressure)		
Port size	M6 , 1/4-28UNF		
Orifice size	mm 1.6		
Cv	0.05		
Volumetric capacity	μℓ 50 (*1)		
Valve structure	Diaphragm direct acting (rocker)		
Mounting orientation	Unrestricted (*2)		
Weight	g 75 (actuator), 85 (direct piping)		
Electrical specifications			
Rated voltage	24 VDC / 12 VDC		
Voltage fluctuation range	±10%		
Power consumption W	When starting	5.3 (*3)	
	When holding	1	
Leakage current	mA	1.0 or less (24VDC) , 2.0 or less (12 VDC) (*4)	
Thermal class	Class 130 (B)		

*1: Volume of wetted parts formed by the body and diaphragm. Note that piping volume is excluded.

*2: Install vertically so that the coil where little fluid accumulates is at the top.

*3: Time from energizing to 100 ms.

*4: The leakage current from the control circuit must be equal to or less than the values shown in the table.

*5: When using sodium hypochlorite (soda), select FKM for the diaphragm material. (EPDM will deteriorate over long-term use even with tap water levels of residual chlorine) For 0.1% or less effective concentration, perform functional testing according to your application before use. Do not use effective chlorine concentration exceeding 0.1%.

*6: As this product has an integrated electronic circuit board, do not use it in very humid atmospheres.

*7: As this product generates noise from incorporating electronic oscillator circuits, use noise countermeasures on the same power line.

*8: Solenoid valve has polarity. Connect the red lead wire to the plus (+) side.

*9: After the solenoid valve is completely switched OFF, set an interval of 1 seconds or more before switching it ON the next time.

*10: For the mounting plate option, slide the product in the piping direction by pulling the lever to remove from the mounting plate.

*11: Make sure to read the safety precautions on pages 3 to 8 before use.

How to order

MR16 - 2NC - M6 - EF L B - A - DC24V

Model No.

A No. of Ports/type

B Port size

C Material combination

D With circuit board option

E With mounting plate option
*1

F Indicator direction
*2

G Voltage

Code	Description	
A No. of Ports/type		
2NC	2-port/NC	
2NO	2-port/NO	
3	3-port/universal	
B Port size		
Blank	Actuator	
M6	M6 (direct piping)	
4U	1/4-28UNF (direct piping)	
C Material combination		
	Body material	Sealant
EF	PEEK	FKM
EE	PEEK	EPDM
D With circuit board option		
L	With lamp/energy saving board	
E With mounting plate option		
Blank	Without mounting plate	
B	With mounting plate	
F Indicator direction		
A	Port A side	
B	Port B side	
G Voltage		
DC24V	24 VDC	
DC12V	12 VDC	

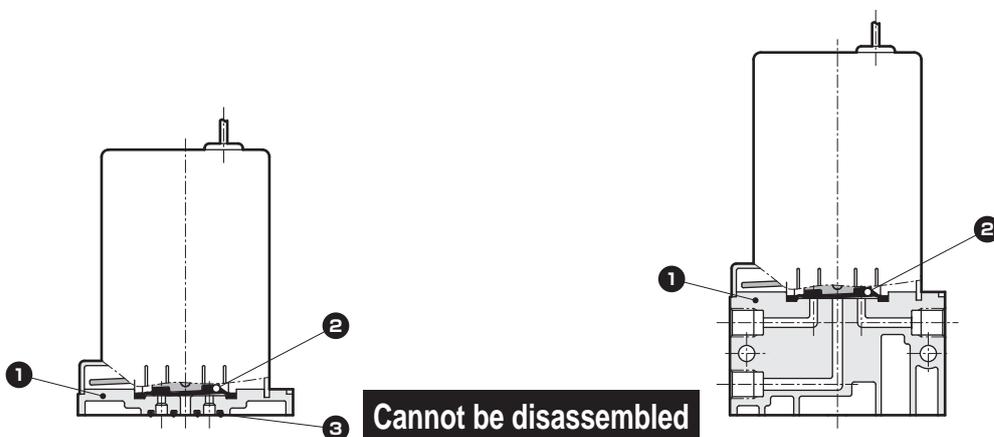
*1: "B" can be selected only for port size "M6" and "4U".

*2: If No. of Ports/type is "2NC", only "A" can be selected, and if "2NO", only "B" can be selected. If it is "3", either A or B can be selected.

Internal structure and main part material

● Actuator

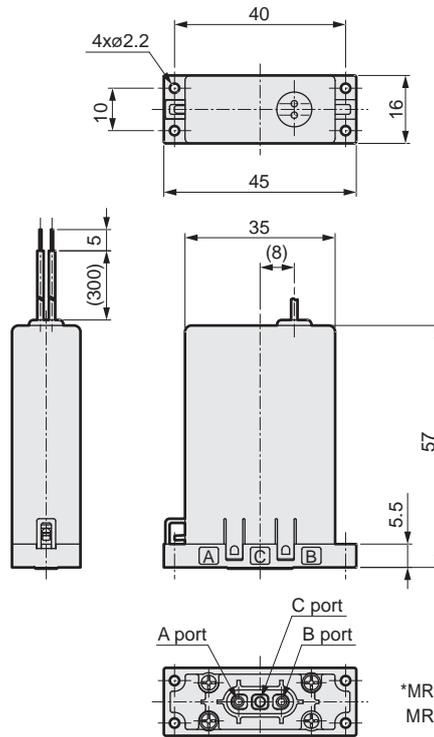
● Direct piping



Part No.	Part name	Material	
1	Body	PEEK	Polyether ether ketone
2	Diaphragm	FKM, EPDM	Fluoro rubber, ethylene propylene rubber
3	Gasket	FKM, EPDM	Fluoro rubber, ethylene propylene rubber

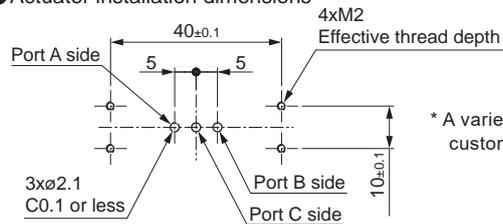
Dimensions

● Actuator



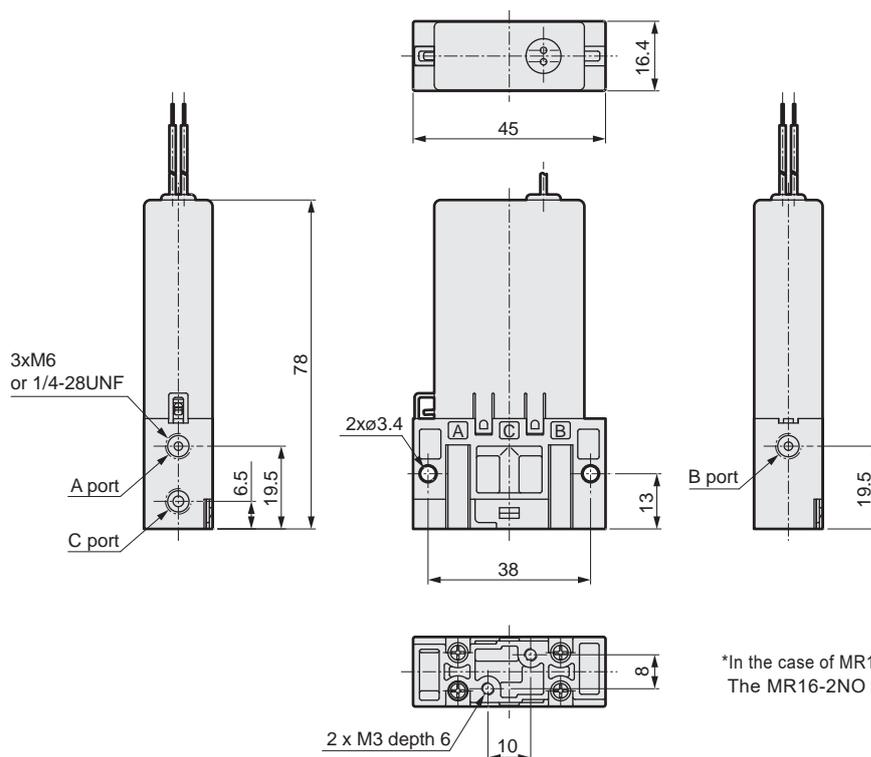
*MR16-2NC has no hole machined for port B and "B" is not indicated.
 MR16-2NO has no hole machined for port A and "A" is not indicated.

● Actuator installation dimensions



* A variety of manifolds are available in response to customer demand. Contact CKD for details.

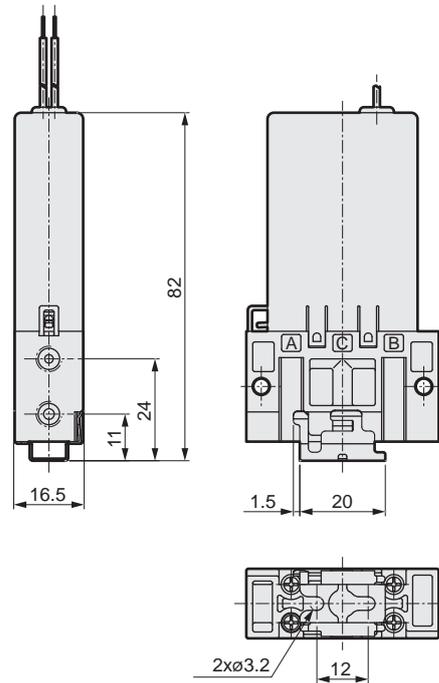
● Direct piping



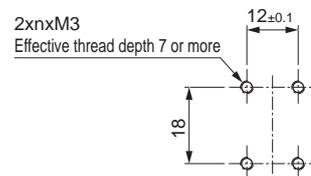
*In the case of MR16-2NC, port B is plugged and "B" is not indicated.
 The MR16-2NO port A is plugged and "A" is not indicated.

Dimensions

● Direct piping (with mounting plate)

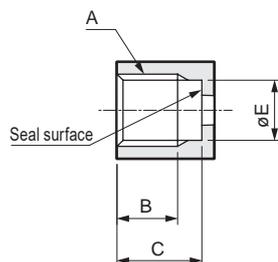


● Direct piping (with mounting plate) installation dimensions



● Machining drawing when installing MR16 in parallel. (n: Station No.)

● Port size dimensions



Model No.	A	B	C	E
MR16*-M6	M6	5	7	4.9
MR16*-4U	1/4-28UNF	5	7	5.36