

Compact metal free 2, 3-port solenoid valve

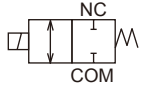
# MR10R Series

- NC (normally closed), NO (normally open), universal
- Working fluid: Water/pure water/chemicals
- Port size: M5, M6, 1/4 - 28UNF

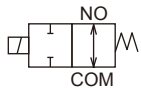


## JIS symbol

- 2 port: NC (normally closed)



- 2 port: NO (normally open)



- 3 port: Universal



## Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions		2-port		3-port
		MR10R-2NC	MR10R-2NO	MR10R-3
Actuation		NC	NO	Universal
Working fluid		Water, pure water, chemical liquids (fluids that do not corrode wetted part materials)		
Proof pressure MPa		0.4 (water pressure)		
Working pressure MPa		-0.08 (≈-11.7 psi, -0.8 bar) to 0.2 (≈29 psi, 2 bar)		
Fluid temperature °C		5 (41°F) to 50 (122°F)		
Ambient temperature °C		5 (41°F) to 50 (122°F)		
Atmosphere		No explosive or corrosive atmospheres		
Valve seat leakage cm <sup>3</sup> /min		0 (water pressure)		
Port size		M5, M6, 1/4-28UNF		
Orifice size mm		1		
Cv		0.03		
Kv (water) m <sup>3</sup> /h		0.026		
Volumetric capacity μl		19 (*1)		
Valve structure		Diaphragm type direct acting (Rocker type)		
Mounting orientation		Unrestricted (*2)		
Weight g		18 (actuator), 22 (direct piping)		
Electrical specifications				
Rated voltage		24 VDC/12 VDC		
Voltage fluctuation range		±5%		
Power consumption W	When starting	3.6 (24 VDC) /4.2 (12 VDC) (*3)		
	When holding	1		
Leakage current mA		1.0 or less (24 VDC)/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 50 ms.

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

\*5: For 0.1% or less effective chlorine concentration of sodium hypochlorite (soda), perform functional testing according to your application before use.

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

\*7: Solenoid valve has polarity. Connect the red lead wire to the plus (+) side.

\*8: After the solenoid valve is completely switched OFF, set an interval of 1 seconds or more before switching it ON the next time.

\*9: Always read the safety precautions on pages 3 to 4 before starting use.

How to order

MR10R - 2NC - M6 - EF - DC24V

Model No.

A No. of ports/type

B Port size

C Material combination

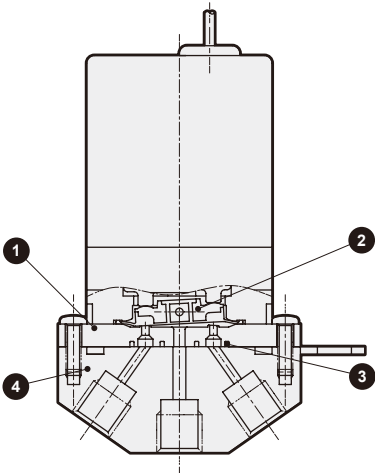
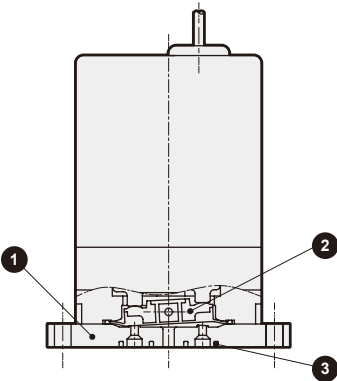
D Voltage

Code	Content	
A No. of ports/type		
2NC	2-port/NC	
2NO	2-port/NO	
3	3-port/universal	
B Port size		
Blank	Actuator	
M5	M5 (Direct piping)	
M6	M6 (Direct piping)	
4U	1/4-28UNF (Direct piping)	
C Material combination		
	Body material	Sealant material
EF	PEEK	FKM
D Voltage		
DC24V	24 VDC	
DC12V	12 VDC	

Internal structure and main part material

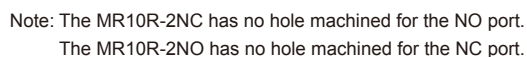
● Actuator

● Direct piping

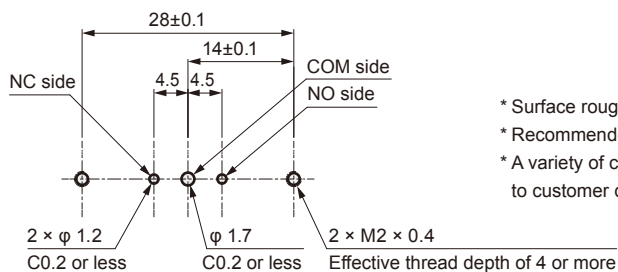


No.	Part name	Material	
1	Body	PEEK	Polyether ether ketone
2	Diaphragm	FKM	Fluoro rubber
3	Packing	FKM	Fluoro rubber
4	Connection adaptor	PEEK	Polyether ether ketone

● Actuator

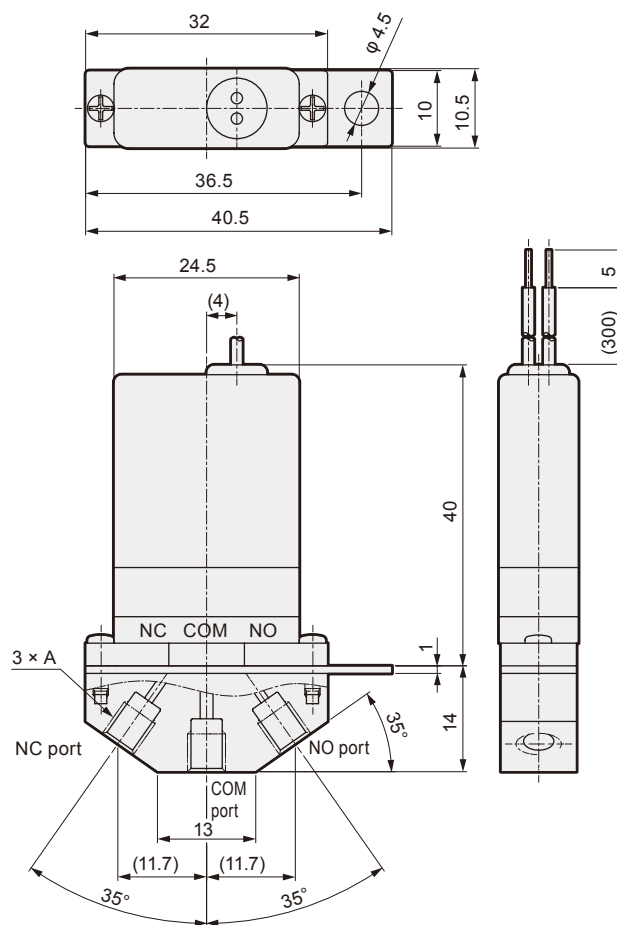


### ● Actuator installation dimensions



- \* Surface roughness Rz: Less than 6.3
- \* Recommended thread size: M2 length 6 mm
- \* A variety of connection adaptors and manifolds are available in response to customer demand. Contact CKD for details.

- Direct piping



Note: The MR10R-2NC NO port is plugged.  
The MR10R-2NO NC port is plugged.

Model No.	A
MR10R-*-M5	M5
MR10R-*-M6	M6
MR10R-*-4U	1/4-28UNF