

Metal-free 2, 3-port solenoid valve

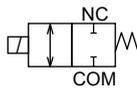
MR16 Series

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

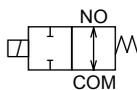


JIS symbol

- 2-port: NC (open when energized)



- 2-port: NO (closed when energized)



- 3-port: Universal



Specifications

Item	2-port		3-port
	MR16-2NC	MR16-2NO	MR16-3
Actuation	NC (open when energized)	NO (closed when energized)	Universal
Working fluid	Water/pure water/chemical liquids (fluids that do not corrode wetted part materials)		
Proof pressure MPa	0.45 (≈65 psi, 4.5 bar) (water pressure)		
Working pressure MPa	-0.08 (≈-12 psi, -0.8 bar) to 0.3 (≈44 psi, 3 bar)		
Fluid temperature °C	5 (41°F) to 40 (104°F)		
Ambient temperature °C	5 (41°F) to 45 (113°F)		
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 (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 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 attempt to 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 one second 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.

- EXA
- FWD
- HNB/G
- USB/G
- FAB/G
- FGB/G
- FVB
- FWB/G
- FHB
- FLB
- AB
- AG
- AP/AD
- APK/ADK
- DryAir
- EX-XPLNprf
- XPLNprf
- HVB/HVL
- S◇B/NAB
- LAD/NAD
- Water-Rela
- NP/NAP/NVP
- SNP
- CHB/G
- MXB/G
- Other valves
- SWD/MWD
- DustColl
- CVE/CVSE
- CCH/CPE/D
- LifeSci
- Gas-Combus
- Auto-Water
- Outdoor
- SpecFld
- Custom
- Ending

How to order

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

Model No.

A Number 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

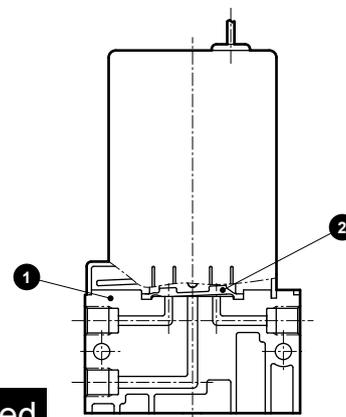
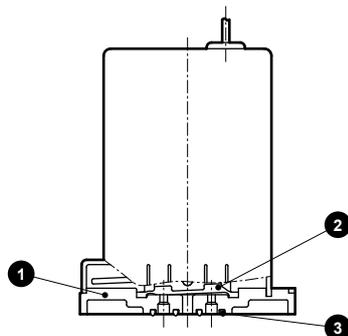
Code	Description	
A Number of ports/type		
2NC	2-port/NC (open when energized)	
2NO	2-port/NO (closed when energized)	
3	3-port/universal	
B Port size		
Blank	Actuator	
M6	M6 (direct piping)	
4U	1/4-28UNF (direct piping)	
C Material combination		
	Body material	Sealant
EF	PEEK	FKM
EE	PEEK	EPDM
D With 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"/"4U".
*2 : If Number 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



Cannot be disassembled

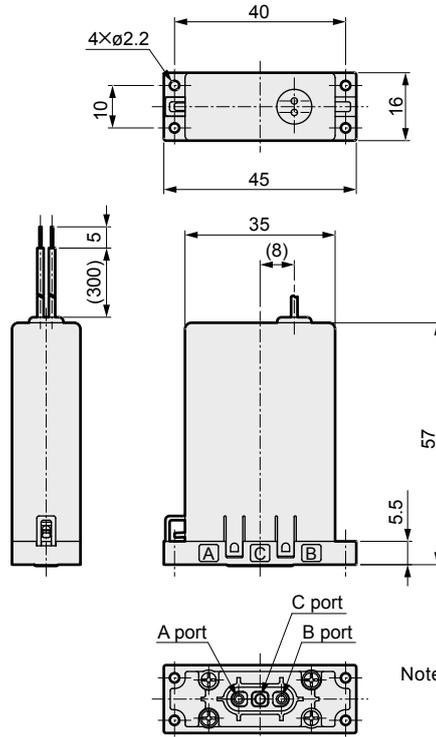
No.	Part name	Material	
1	Body	PEEK	Polyether ether ketone
2	Diaphragm	FKM, EPDM	Fluoro rubber, ethylene propylene rubber
3	Gasket	FKM, EPDM	Fluoro rubber, ethylene propylene rubber

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/
AD
APK/
ADK
DryAir
EX-
XPLNprf
XPLNprf
HVB/
HVL
S B/
NAB
LAD/
NAD
Water-
Rela
NP/NAP/
NVP
SNP
CHB/G
MXB/G
Other
valves
SWD/
MWD
DustColl
CVE/
CVSE
CCH/
CPE/D
LifeSci
Gas-
Combus
Auto-
Water
Outdoor
SpecFld
Custom
Ending

Dimensions

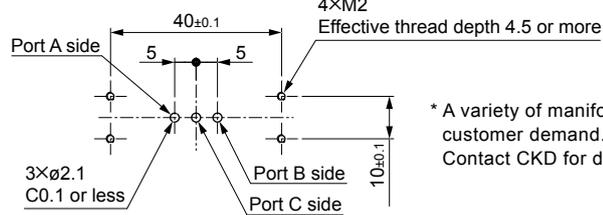
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/AD
APK/ADK
DryAir
EX-XPLNprf
XPLNprf
HVB/HVL
S \diamond B/NAB
LAD/NAD
Water-Rela
NP/NAP/NVP
SNP
CHB/G
MXB/G
Other valves
SWD/MWD
DustColl
CVE/CVSE
CCH/CPE/D
LifeSci
Gas-Combust
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SpecFld
Custom
Ending

● Actuator



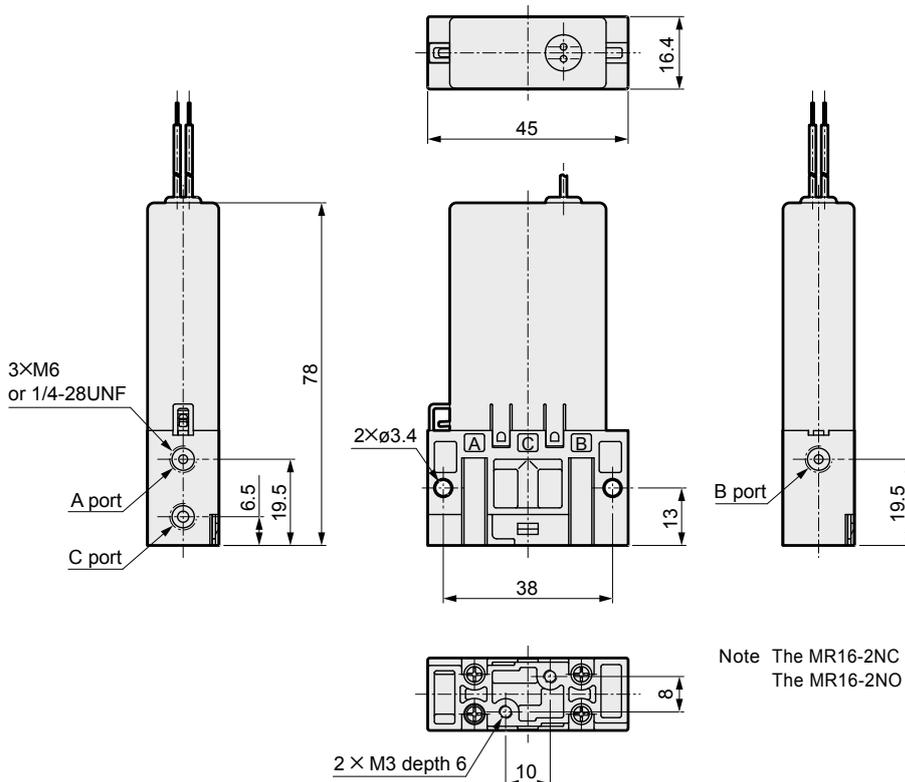
Note MR16-2NC has no hole machined for B port and "B" is not indicated. MR16-2NO has no hole machined for A port and "A" is not indicated.

● Actuator installation dimensions



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

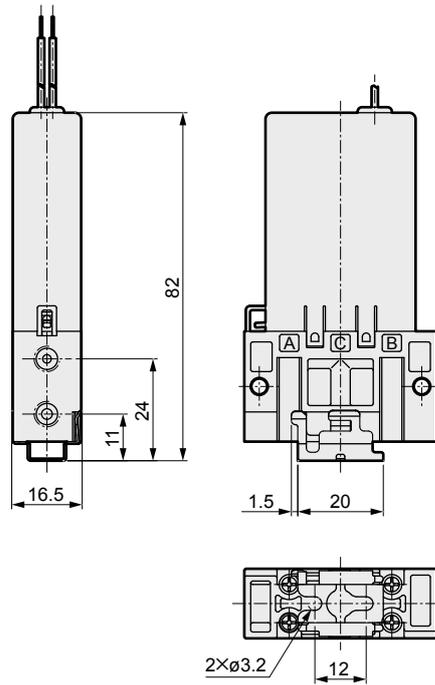
● Direct piping



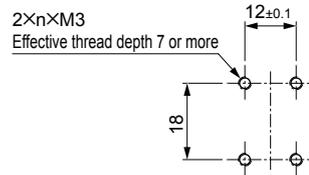
Note The MR16-2NC B port is plugged and "B" is not indicated. The MR16-2NO A port is plugged and "A" is not indicated.

Dimensions

● Direct piping (with mounting plate)



● Direct piping (with mounting plate) installation dimensions



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

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S ⚡ B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH/ CPE/D
LifeSci
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