



Safety precautions

Fluid Control Components: Warnings and Cautions

Be sure to read this section before use.

Precautions for each model series: product-specific cautions

Compact direct acting 2, 3 port solenoid valve HN_G^B1/US_G^B2/US_G^B3

Design/selection

⚠ WARNING

1 Working fluids

- (1) When using this valve for dry air, the life can be shortened considerably due to wear. Use a valve intended for dry air.
- (2) This valve cannot be used for maintaining vacuum. Consult with CKD when the vacuum needs to be maintained.

⚠ CAUTION

1 Continuous energizing

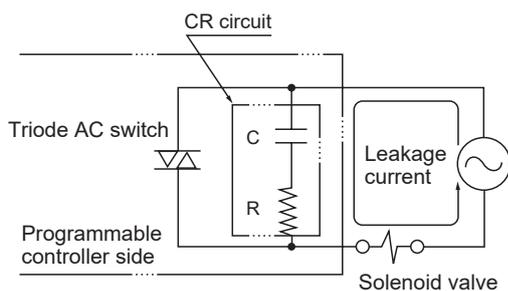
Consult with CKD when using the 3-port valve in a continuously energized state.

2 Fluid viscosity

The fluid viscosity must be 50 mm²/s or less. Malfunctions could occur if the viscosity is higher than 50 mm²/s.

3 Leakage current from other fluid control components

When operating the solenoid valve with a programmable controller, etc., check that the output leakage current from the programmable controller is within the following specifications. This may result in malfunction. Failure to observe this could lead to malfunctions.



Model No.	Voltage		AC diode		DC	
	100 V	200 V	100 V	200 V	12 V	24 V
USB,USG	-	-	0.2 mA or less	0.1 mA or less	2 mA or less	1 mA or less
HNB,HNG	-	-	-	-	1 mA or less	1 mA or less

Mounting, piping and wiring

⚠ CAUTION

1 Piping

Always hold the socket with a wrench, etc., if the NO side is a socket.

Maintenance

⚠ CAUTION

1 In the case of USB/USG

When disassembling or assembling, tighten the core assembly and socket with the following tightening torques.

Model No.	Core assembly tightening torque	Socket tightening torque
USB2	10 to 22 Nm	-
USG2	10 to 22 Nm	-
USB3	18 to 32 Nm	-
USG3	18 to 32 Nm	4 to 8 Nm

[Precautions for each model]

USB/USG (resin body)

⚠ CAUTION

- 1 Metal comes into contact with the fluid. (Not a metal-free valve)
- 2 When coupling pipes to a solenoid valve, ensure that the valve does not become bent. Do not use metal fittings because they could damage the port. Use a PP or fluorine resin fitting. Do not apply external force to the coil. Refer to the recommended fitting tightening torque below. Recommended tightening torque: 0.15 N·m or below
- 3 When connecting tubes to a solenoid valve, ensure that the tube is inserted straight into the barbed fitting. At this time, ensure that the valve does not become bent. Do not apply external force to the coil. The mounting force (holding force) differs according to the material and dimensions of the tube. Always make sure that there are no problems regarding leakage or attachment before use. If necessary, take measures such as using a tube retainer.

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