



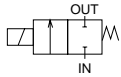
Direct acting 2 port solenoid valve  
(general purpose valve)

# AB21 Series

- NC (normally closed) type
- Port size: Rc1/8, Rc1/4



JIS symbol



Common specifications

Item	AB21
Working fluid	Air, water, kerosene, oil (50 mm <sup>2</sup> /s or less)
Working pressure differential range MPa	0 to 1.5 (refer to max. working pressure differential in individual specifications.)
Max. working pressure MPa	1.5
Withstanding pressure (water) MPa	3
Fluid temperature °C	-10 to 40 (no freezing)
Ambient temperature °C	-20 to 50
Heat proof class	B
Atmosphere	Place free of corrosive gas and explosive gas
Valve structure	Direct acting poppet structure
Valve seat leakage cm <sup>3</sup> /min. (AIR)	0.2 or less
Mounting attitude	Free

Individual specifications

Item Model no.	Port size	Orifice (mm)	Max. working pressure differential (MPa)						Rated voltage	Apparent power (VA)				Power consumption (W)	
			Air		Water, kerosene		Oil (50 mm <sup>2</sup> /s)			Holding		Starting		AC 50/60 Hz	DC
			AC	DC	AC	DC	AC	DC		50 Hz	60 Hz	50 Hz	60 Hz		
<b>AB21-01-1</b>	Rc1/8	1.5	1.5	1.0	1.5	1.0	0.9	1.0	100 VAC 50/60 Hz	11	9	15.4	12.6	5.5/4.2	7
<b>AB21-01-2</b>		2.0	1.0	0.6	1.0	0.6	0.5	0.6							
<b>AB21-01-3</b>		3.0	0.7	0.2	0.4	0.2	0.25	0.2							
<b>AB21-01-5</b>		4.0	0.4	0.1	0.2	0.1	0.1	0.1							
<b>AB21-02-1</b>	Rc1/4	1.5	1.5	1.0	1.5	1.0	0.9	1.0	200 VAC 50/60 Hz	11	9	15.4	12.6	5.5/4.2	7
<b>AB21-02-2</b>		2.0	1.0	0.6	1.0	0.6	0.5	0.6							
<b>AB21-02-3</b>		3.0	0.7	0.2	0.4	0.2	0.25	0.2							
<b>AB21-02-5</b>		4.0	0.4	0.1	0.2	0.1	0.1	0.1							

Flow characteristics

Model no.	Port size	Orifice (mm)	Flow characteristics		
			C [dm <sup>3</sup> /(s·bar)]	b	Cv flow factor
NC (normally closed) type					
<b>AB21-01-1</b>	Rc1/8	1.5	0.29	0.51	0.1
<b>AB21-01-2</b>		2.0	0.53	0.55	0.15
<b>AB21-01-3</b>		3.0	1.1	0.52	0.3
<b>AB21-01-5</b>		4.0	1.8	0.35	0.4
<b>AB21-02-1</b>	Rc1/4	1.5	0.29	0.51	0.1
<b>AB21-02-2</b>		2.0	0.53	0.55	0.15
<b>AB21-02-3</b>		3.0	1.1	0.52	0.3
<b>AB21-02-5</b>		4.0	1.8	0.35	0.4

\*1: Effective sectional area S and sonic conductance C are converted as S = 5.0 x C.

## How to order

AB21 - 01 - 1 - A - 00B - AC100V

Model no.

**A** Port size

**B** Orifice

**C** Body/sealant combination

\*1

\*2

**D** Option

**E** Rated voltage

\*3

Symbol	Descriptions		
<b>A Port size</b>			
01	Rc1/8		
02	Rc1/4		
<b>B Orifice</b>			
1	ø1.5		
2	ø2		
3	ø3		
5	ø4		
<b>C Body/sealant combination</b>			
	Body	Sealant	Remarks
Blank	Aluminum	Nitrile rubber	Air, kerosene, oil
		Fluoro rubber	Air, kerosene, oil
Option	Brass	Nitrile rubber	Air, water, kerosene, oil
		Fluoro rubber	Air, water, kerosene, oil
Refer to page 36 in the Introduction for details on the material combinations.			
<b>D Option</b>			
Blank	None		
00B	Mounting plate		
<b>E Rated voltage</b>			
AC100V	100 VAC 50/60 Hz, 110 VAC 60 Hz	Consult with CKD for	
AC200V	200 VAC 50/60 Hz, 220 VAC 60 Hz	other optional voltages.	

HNB/G

USB/G

FAB/G

FGB/G

FVB

FWB/G

FHB

FLB

AB

AG

AP/AD

APK/ADK

For dry air

Explosion proof

HVB/HVL

SAB/SVB

NP/NAP/NVP

CHB/G

MXB/G

Other G.P. systems

PD/FAD/PJ

CVE/CVSE

CPE/CPD

Medical analysis

Custom order

General purpose valve  
Direct acting 2 port solenoid valve

## <Example of model number>

**AB21-01-1-A00B-AC100V**

Model no.: AB21

**A** Port size: Rc1/8

**B** Orifice: ø1.5

**C** Body/sealant combination:

: Body - brass, sealant - nitrile rubber

**D** Option: Mounting plate

**E** Rated voltage: 100 VAC 50/60 Hz, 110 VAC 60 Hz

## ⚠ Note on model no. selection

\*1: For **B** 1 (orifice ø1.5), only **C** A or B is available.

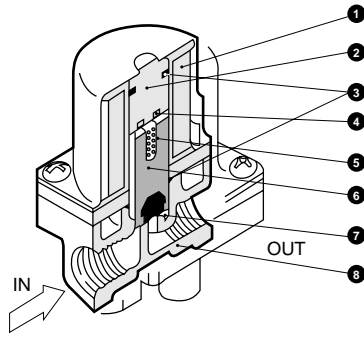
\*2: When using for water, select the brass (option symbol: A or B) body.

\*3: The voltage fluctuation must be within ±10% of the rated voltage.

\*4: Leave **C** blank for standard. However, to select 00B for **C**, indicate 0 for **C**.

## Internal structure and parts list

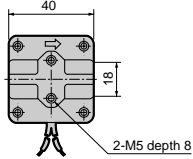
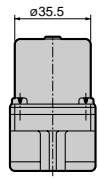
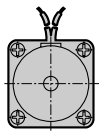
● AB21 Series



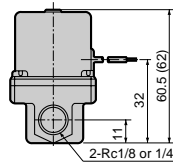
No.	Parts name	Material
1	Coil	—
2	Core assembly	Stainless steel
3	O ring	Fluoro rubber
4	Shading coil	Copper
5	Plunger spring	Stainless steel
6	Plunger	Stainless steel
7	Sealant	Nitrile or fluoro rubber
8	Body	Aluminum or brass

## Dimensions

● AB21-01/02-1 to 5-\*

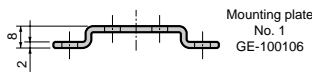
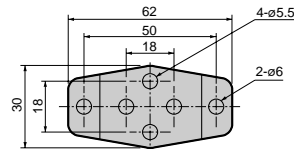


\* Lead wire length 250 mm



Dimensions shown in ( ) are for brass body.

● Mounting plate  
AB21-01/02-1 to 5-\*(00)□



Mounting plate  
No. 1  
GE-100106