



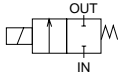
Direct acting 2 port solenoid valve  
(general purpose valve)

# 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. (ANR)	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	110 VAC 60 Hz						
<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	220 VAC 60 Hz						
<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  $S = 5.0 \times C$ .

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

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

CVB/  
CVSE

CPE/  
CPD

Medical  
analysis

Custom  
order

## <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

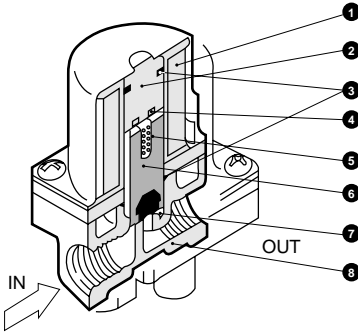
- \*1: For **B** 1 (orifice ø1.5), only **A** or **B** is available.
- \*2: When using for water, select the brass (option symbol: A or B) body.
- \*3: The voltage fluctuation must be within ±10% of the rated voltage.
- \*4: Leave **C** blank for standard. However, to select 00B for **C**, indicate 0 for **C**.

General purpose valve  
Direct acting 2 Port solenoid valve

# AB21 Series

## Internal structure and parts list

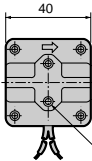
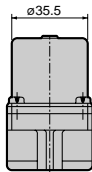
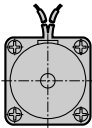
● AB21 Series



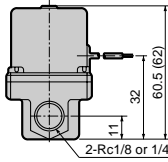
No.	Parts name	Material
1	Coil	—
2	Core assembly	Stainless steel
3	O ring	Fluoro rubber
4	Shading coil	Copper
5	Plunger spring	Stainless steel
6	Plunger	Stainless steel
7	Sealant	Nitrile or fluoro rubber
8	Body	Aluminum or brass

## Dimensions

● AB21-01/02-1 to 5-\*

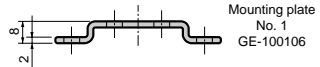
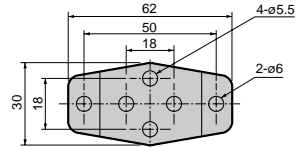


\* Lead wire length 250 mm



Dimensions shown in ( ) are for brass body.

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



Mounting plate  
No. 1  
GE-100106