

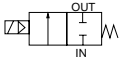


## Pilot kick type 2 port solenoid valve : Normally closed, normally open GENERAL PURPOSE VALVE ADK11-ADK12 SERIES

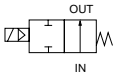
- Diaphragm structure
- Port size : Rc1/4, Rc3/8, RC1/2, RC3/4, RC1

### JIS symbol

- ADK11 (normally closed)



- ADK12 (normally open)



### Common specifications

Descriptions	Standard specifications	Optional specifications
Working fluid	Air, inert gas, low vacu(1.33X10 <sup>5</sup> Pa), water, kero, oil (50mm <sup>2</sup> /s or less)	Other solvent
Working pressure diff. range/MPa	0 to 1.0 (refer to max. working pressure differential on individual specifications)	
Max. working pressure /MPa	2	
Withstanding pressure (water)/MPa	4	
Fluid temperature °C	-10 to 60 (no freezing)	5 to 90 (fluoro rubber sealing)
Ambient temperature °C	-10 to 60	
Insulation class	Class B	Class H
Atmosphere	No corrosive gas and flammable place	
Valve structure	Pilot kick type poppet structure/diaphragm structure	
Valve seat leakage (JIS leakage standard)/cm <sup>3</sup> /min	0 (0.02 to 1MPa for ADK11, while 0.02 to 0.6MPa for ADK12)	
Installation attitude	Free	

### Individual specifications

Descriptions Series	Port size	Orifice (mm)	Cv flow factor	Effec. Sec. Area (mm <sup>2</sup> )	Min. working pressure diff. (MPa)	Max. working pressure diff. (MPa)						Rated voltage	Apparent power (VA)				Power consumption (W)		Mass (kg)
						Air		Water, kero		Oil (20mm <sup>2</sup> /s)			Holding		Starting		AC	DC	
						AC	DC	AC	DC	AC	DC		50Hz	60Hz	50Hz	60Hz	50/60Hz	DC	
<b>Open when energized : NC type</b>																			
ADK11-8A	Rc1/4	12	2.0	32	0	1	0.7	0.7	0.7	0.6	AC100V 50/60Hz AC110V 60Hz AC200V 50/60Hz AC220V 60Hz	24	19	61	54	10/8	11 <sup>-2</sup> (10.4)	0.65	
ADK11-10A	Rc3/8	12	2.4	40														0.65	
ADK11-15A	Rc1/2	16	4.5	88														0.9	
ADK11-20A	Rc3/4	23	8.6	162														1.0	
ADK11-25A	Rc1	28	12.0	231														1.4	
<b>Closed when energized : NO type</b>																			
ADK12-15A	Rc1/2	16	4.5	88	0	0.6	0.6	0.6	0.6	0.5	DC24V DC48V DC100V	30	25	180	150	13/11	14	1.0	
ADK12-20A	Rc3/4	23	8.6	162														1.2	
ADK12-25A	Rc1	28	12.0	231														1.6	

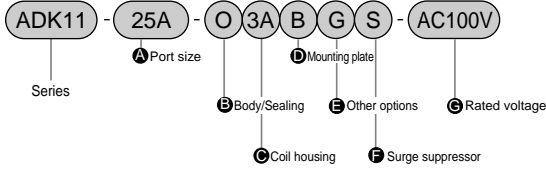
- 1 : Models above show basic port size. See "How to order" about other combinations.
- 2 : ( ) shows power consumption of DIN terminal box.
- 3 : [ ] shows power consumption of coil with diode.
- 4 : Refer to DC column for maximum working pressure differential of coil with diode.
- 5 : Variation of rated voltage should be within ±10%.
- 6 : When the pressure is 0.02MPa or less, AB71 series is recommended.



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## How to order

· Open when energized (NC type)



Symbol	Description
<b>A</b> 8A	Rc1/4
10A	Rc3/8
15A	Rc1/2
20A	Rc3/4
25A	Rc1

Body/Sealing	Body	Seal	Treat	Remarks
O	Bronze	Nitrile rubber	-	Air, inert gas, low vacuum, water, kerosene
B		Fluoro rubber	-	Solvent
P		Ethylene propylene rubber	Oil-prohibit	Hot water
D	Stainless steel	Nitrile rubber	-	Air, inert gas, low vacuum, water, kerosene
E		Fluoro rubber	-	Solvent
R		Ethylene propylene rubber	-	-
H	Bronze	Nitrile rubber	-	-
J		Fluoro rubber	Oil-prohibit	-
L		Nitrile rubber	-	-
M	Stainless steel	Fluoro rubber	-	-

C Coil housing		D Mounting plate			E Other options		F Surge suppressor	G Rated voltage
Descriptions		(Marine cable gland)			(Conduit pipe)		S	Descriptions
		A-15a	A-15b	A-15c	CTC 19	G1/2		
2C	STD	Grommet lead wire						AC 100V, AC 200V
2E	Option	DIN terminal box (G1/2)						AC 100V, AC 200V DC12V, DC24V, DC48V, DC100V
2G		DIN terminal box (Pg11)						AC 100V, AC 200V, DC 24V
2H	Option	DIN terminal box + small light (Pg11)						AC 100V, AC 200V, DC100V
3A		Lead wire						AC 100V, AC 200V, DC24V, DC48V, DC100V
3K		Square terminal box (G1/2)						AC 100V, AC 200V, DC 24V, DC 100V
3H	(Class H coil)	Square terminal box + light (G1/2)						AC 100V, AC 200V
4A		Lead wire						AC 100V, AC 200V
4K		Square terminal box (G1/2)						
4H	Option	Square terminal box + light (G1/2)						AC 100V, AC 200V
5A		Lead wire						AC 100V, AC 200V
5K		Square terminal box (G1/2)						
5H	(Diode)	Square terminal box + light (G1/2)						AC 100V, AC 200V

- 6 : See P.120 about coil selection.
- 7 : 5A, 5K and 5H are diode rectification coils.
- 8 : Water proof is available for square terminal box coil (except Class H).
- 9 : When fluid temperature is 60°C over, select "C" from 4A, 4K or 4H.
- 10: Blank when no item selected from "D", "E" and "F".
- 11: Select one among D, E, F, G and H for "E".
- 12: When lead wire coil, surge suppressor is attached, while terminal box coil, mounted in the terminal box.
- 13: Surge suppressor is incorporated in coil with diode and "C" 2H DC24V coil as standard.
- 14: AC100V coil is compatible with AC100V50/60Hz, AC110V60Hz, while AC200V coils compatible with AC200V50/60Hz, AC220V60Hz. Use "C" 5A, 5K, 5H coils only for AC100V50/60Hz, AC200V50/60Hz.
- 15: Consult with CKD about other than above voltage.
- 16: When lead wire length exceeding standard 300mm, custom length is available per 500mm increment.

## Example 1 of model number

**ADK11-15A-02C-AC100V**

Series : ADK11

- Ⓐ Port size : Rc1/2
- Ⓑ Body/Sealing : Body - bronze, Seal - nitrile rubber
- Ⓒ Coil housing : Grommet lead wire
- Ⓓ to Ⓕ Blank
- Ⓖ Rated voltage : AC 100V 50/60Hz, AC 110V 60Hz

## Example 2 of model number

**ADK11-20A-B4ABS-AC200V**

Series : ADK11

- Ⓐ Port size : Rc3/4
- Ⓑ Body/Sealing : Body - bronze, Seal - fluorom rubber
- Ⓒ Coil housing : Open frame lead wire (Class H coil)
- Ⓓ Mounting plate : Selected
- Ⓔ Other options : Blank
- Ⓕ Surge suppressor : Selected
- Ⓖ Rated voltage : AC 200V 50/60Hz, AC 220V 60Hz

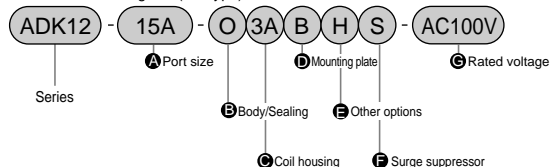
- 1 : See P.45 to 50 in introduction to check compatibility.
- 2 : G and NPT are available for port thread.
- 3 : "B" P or R is available only for "A" (port size) 15A/20A/25A.
- 4 : When combination with ethylene propylene diene rubber seal ("B" P or R), the maximum working pressure differential is 0.6MPa.
- 5 : Tropic care treatment (rust proof coating) is available.

General purpose valve

# ADK11-ADK12 Series

## How to order

· Closed when energized (NO type)



## Example 1 of model number

### ADK12-20A-03A-DC24V

Series : ADK12

- A Port size : Rc3/4
- B Body/Sealing : Body - bronze, Seal - nitrile rubber
- C Coil housing : Open frame lead wire
- D to F Blank
- G Rated voltage : DC 24V

## Example 2 of model number

### ADK12-15A-B3HBD-AC100V

Series : ADK12

- A Port size : Rc1/2
- B Body/Sealing : Body - bronze, Seal - fluoro rubber
- C Coil housing : Open frame Square terminal box + light(G1/2)
- D Mounting plate : Selected
- E Other options : Cable gland A-15a
- F Surge suppressor : Blank
- G Rated voltage : AC 100V 50/60Hz, AC 110V 60Hz

· 1: See P.45 to 50 in introduction to check compatibility.

· 2: G and NPT are available for port thread.

· 3: Tropic care treatment (rust proof coating) is available.

Symbol	Description						
A Port size	15A	Rc1/2					
	20A	Rc3/4					
	25A	Rc1					
B Body/Sealing	O	STD Bronze	Nitrile rubber	-	Air, inert gas, low vacuum, water, kerosene		
			Fluoro rubber			Solvent	
			Ethylene propylene rubber			Oil-prohibit	Hot water
			Nitrile rubber			Air, inert gas, low vacuum, water, kerosene	
			Fluoro rubber			-	Solvent
			Fluoro rubber				
	R	Stainless steel	Ethylene propylene rubber	Oil-prohibit			
			Nitrile rubber				
			Fluoro rubber				
			Nitrile rubber				
			Fluoro rubber				
			Fluoro rubber				

C Coil housing			D E Other options					F	G Rated voltage	
Descriptions			Mounting plate	Cable gland (Marine cable gland)			Conduit (Conduit pipe)		Surge suppressor	Descriptions
				A-15a	A-15b	A-15c	CTC19	G1/2		
3A	STD Open frame	Lead wire	B				G	H	S	AC 100V, AC 200V DC12V, DC24V, DC48V, DC100V
3K		Square terminal box (G1/2)								AC 100V, AC 200V, DC 24V, DC100V
3H		Square terminal box + light(G1/2)								
4A	Option Open frame (Class H coil)	Lead wire	B				G	H		AC 100V, AC 200V
4K		Square terminal box (G1/2)								
4H		Square terminal box + light(G1/2)								
5A	Open frame (Diode)	Lead wire	B				G	H		AC 100V, AC 200V
5K		Square terminal box (G1/2)								
5H		Square terminal box + light(G1/2)								

· 4 : See P.120 about coil selection.

· 5 : 5A,5K and 5H are diode rectification coils.

· 6 : Water proof is available for square terminal box coil (except Class H).

· 7 : When fluid temperature is 60 °C over, select "C" from 4A,4K or 4H.

· 8 : Blank when no item selected from "D", "E" and "F".

· 9 : Select one among D, E, F, G and H for "E".

· 10 : When lead wire coil, surge suppressor is attached, while terminal box coil, mounted in the terminal box.

· 11 : Surge suppressor is incorporated in coil with diode as standard.

· 12 : AC100V coil is compatible with AC100V50/60Hz, AC110V60Hz, while AC200V coils compatible with AC200V50/60Hz, AC220V60Hz. \*C 5A,5K,5H coils are available only for AC100V50/60Hz, AC200V50/60Hz.

· 13 : Consult with CKD about other than above voltage.

· 14 : When lead wire length exceeding standard 300mm, custom length is available per 500mm increment.