

# Fluid control valve(2/2way)

## 2SA Series (Direct-acting and normally closed )



### Ordering code

#### Ordering code of valves

**2SA L 030 08 A □ T**

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Pressure condition	③ Size series	④ Port size	⑤ Voltage	⑥ Electrical entry	⑦ Thread type
2SA: 2/2 way direct-acting and normally closed	X: Extra high pressure H: High pressure Blank: Standard L: Large volume T: Extra large volume	030: 030 Series	06: 1/8" 08: 1/4"	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V	Blank: Terminal I: Grommet[Note]	T: NPT
	050: 050 Series	10: 3/8" 15: 1/2"				

[Note] The wire length is 0.5m.

#### Ordering code of accessories

Ordering code of accessories is the same as 2WA series valve's, Please refer to P178 for details of ordering code.

### Specification

Model\Item	Port size [Note1]	Orifice size (Φmm)	Cv	Valid area or section (mm <sup>2</sup> )	Weight [Note2](g)	Max.operating pressure differentia		Proof pressure	
						MPa	psi	MPa	psi
2SAX030	-06 1/8"	1.5	0.10	1.8	245	3.0	450	5.0	750
	-08 1/4"				235				
2SAH030	-06 1/8"	2.0	0.18	3.0	245	2.0	300		
	-08 1/4"				235				
2SA030	-06 1/8"	3.0	0.33	6.0	245	1.0	150		
	-08 1/4"				235				
2SAL030	-06 1/8"	4.0	0.55	10.0	245	0.5	75		
	-08 1/4"				235				
2SAT030	-06 1/8"	6.0	1.10	12.0	245	0.1	15		
	-08 1/4"				235				
2SAX050	-10 3/8"	3.0	0.34	6.1	530	3.0	450		
	-15 1/2"				510				
2SAH050	-10 3/8"	4.0	0.55	10.0	530	2.0	300		
	-15 1/2"				510				
2SA050	-10 3/8"	5.0	0.83	15.0	530	1.0	150		
	-15 1/2"				510				
2SAL050	-10 3/8"	7.0	1.40	25.0	530	0.5	75		
	-15 1/2"				510				
2SAT050	-10 3/8"	10.0	2.20	40.0	530	0.1	15		
	-15 1/2"				510				

[Note1] NPT thread is available.

[Note2] The weight in the table is the terminal valve's weight, 2SA030 series grommet valve's weight is 10g less than terminal's. 2SA050series grommet valve's weight is 20g less than terminal's.

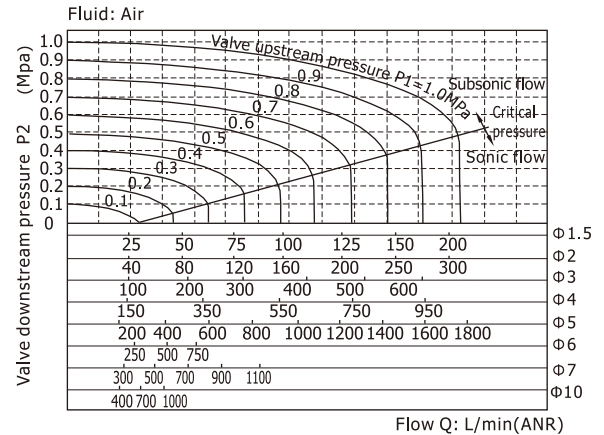
# Fluid control valve(2/2way)

## 2SA Series (Direct-acting and normally closed)

### Product feature

1. Direct acting and normally closed type 2/2 way fluid valve. Its high sensibility allows it to change direction quickly;
2. It has wide pressure range, including extra high pressure (X), high pressure (H), standard, large volume(L) and extra large volume (T);
3. It is compact, small size and light weight. Easy to install and dismantle.
4. The valve body is made of SUS304. Its coil has a Heat resistance classification of Class F. The standard seal material is FPM-F. Please contact us if other seal material are required.
5. The protection class of the coil is IP65 and there is a choice for grommet or terminal electrical entry.

### Flow chart

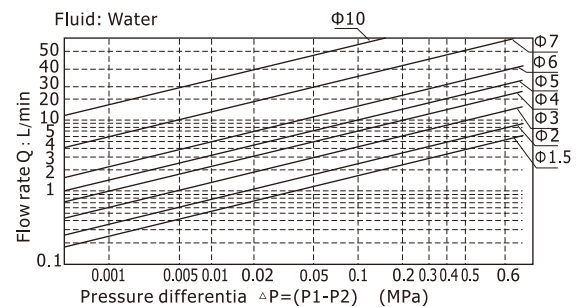


### Valve's specification

Acting	Direct acting				
Initial state	Normally closed				
Adaptable fluid	Air, Water, Oil				
Viscosity limit	Under 20CST				
Ambient and fluid temperature(°C)		Water	Air	Oil	Ambient
	Max.	80	90	80	70
	Min.	1	-20 [Note1]	-10 [Note2]	-20

[Note1] Dew point: -20(°C) or less.

[Note2] 50CST or less.

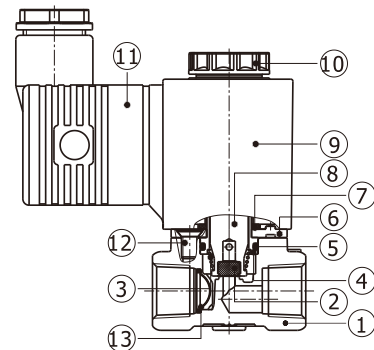


### Inner structure

#### 2SA030(Terminal)

No.	Item	No.	Item	No.	Item
1	Body	6	Fixed plate	11	Airtight bush
2	Airtight ring	7	O-ring	12	Screw
3	Spring	8	Movable core	13	Filter [Note]
4	Steel bushing	9	Coil assembly		
5	O-ring	10	Coil nut		

[Note] Extra large volume type has no filter element.



### Specification of coil

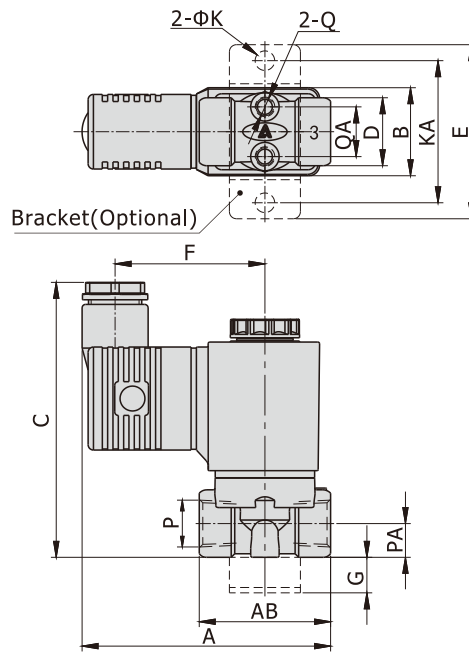
Valve type	Coil type	Power type	Frequency (Hz)	Voltage range	Electrical entry	Power Consumption (VA/W)	Insulation	Temp. rise(°C)		
2SA□030	CDA110 CLA110	AC	50	±15%	Terminal (CDA)	10.0VA	Class F	35		
			60			8.0VA		30		
		DC	-	±10%		6.5W		30		
2SA□050	CDA160 CLA160	AC	50	±15%		Grommet (CLA)		25.0VA	Class F	60
			60					±10%		22.0VA
		DC	-	±10%				12.0W		40

# Fluid control valve(2/2way)

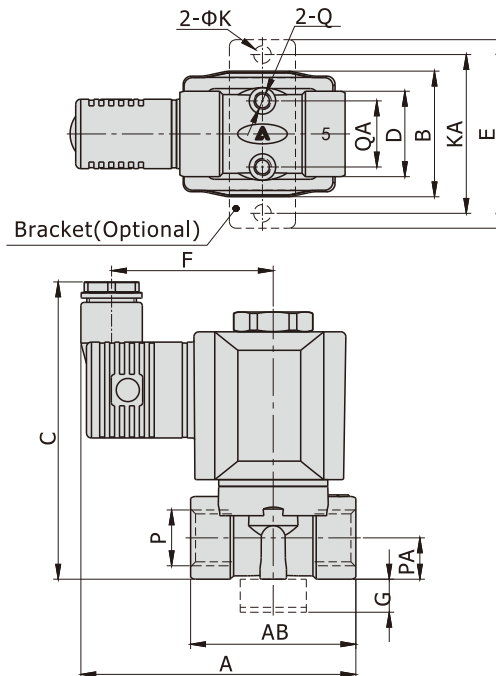
## 2SA Series (Direct-acting and normally closed )

### Dimensions

#### 2SA□030 (Terminal)



#### 2SA□050 (Terminal)

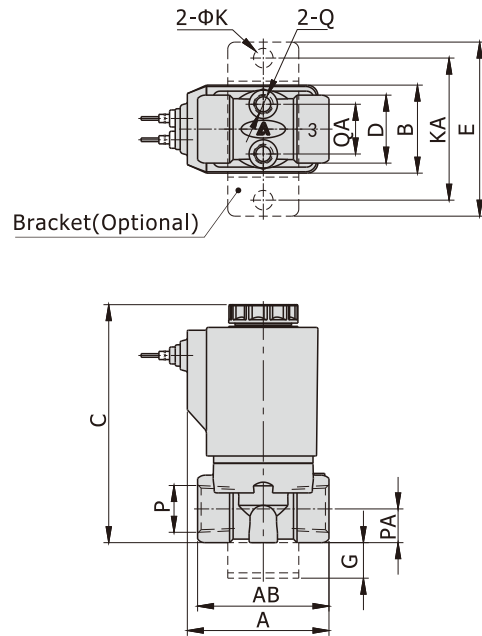


Model\Item	A	AB	B	C	D	E	F	G	K	KA	P	PA	Q	QA
2SA□030-06	70	37	25	77.5	19	49	42	10	5.5	40	1/8"	9.5	M5	13.5
2SAT□030-06	71.5	39.5	25	77.5	19	49	42	10	5.5	40	1/8"	9.5	M5	13.5
2SA□030-08	70	37	25	77.5	19	49	42	10	5.5	40	1/4"	9.5	M5	13.5
2SAT□030-08	71.5	39.5	25	77.5	19	49	42	10	5.5	40	1/4"	9.5	M5	13.5
2SA□050-10	83	50	38	90	26	57	49	10	5.5	48	3/8"	12.5	M5	19.5
2SAT□050-10	84	51	38	90	26	57	49	10	5.5	48	3/8"	12.5	M5	19.5
2SA□050-15	83	50	38	90	26	57	49	10	5.5	48	1/2"	12.5	M5	19.5
2SAT□050-15	84	51	38	90	26	57	49	10	5.5	48	1/2"	12.5	M5	19.5

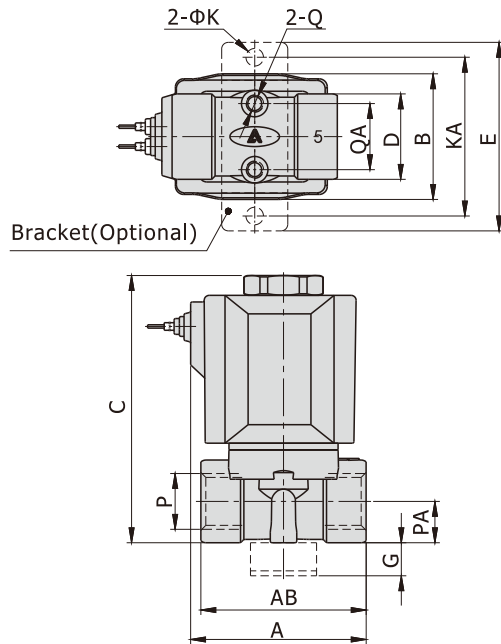
# Fluid control valve(2/2way)

## 2SA Series (Direct-acting and normally closed )

### 2SA□030(Grommet)



### 2SA□050(Grommet)



Model\Item	A	AB	B	C	D	E	G	K	KA	P	PA	Q	QA
2SA□030-06	40	37	25	67	19	49	10	5.5	40	1/8"	9.5	M5	13.5
2SAT□030-06	41.5	39.5	25	67	19	49	10	5.5	40	1/8"	9.5	M5	13.5
2SA□030-08	40	37	25	67	19	49	10	5.5	40	1/4"	9.5	M5	13.5
2SAT□030-08	41.5	39.5	25	67	19	49	10	5.5	40	1/4"	9.5	M5	13.5
2SA□050-10	53	50	38	81	26	57	10	5.5	48	3/8"	12.5	M5	19.5
2SAT□050-10	54	51	38	81	26	57	10	5.5	48	3/8"	12.5	M5	19.5
2SA□050-15	53	50	38	81	26	57	10	5.5	48	1/2"	12.5	M5	19.5
2SAT□050-15	54	51	38	81	26	57	10	5.5	48	1/2"	12.5	M5	19.5

# Fluid control valve(2/2way)

## 2SA Series (Internally piloted and normally closed)



### Ordering code

#### Ordering code of valves

**2SA 150 15 A □ T**

① ② ③ ④ ⑤ ⑥

① Model	② Orifice size	③ Port size	④ Voltage	⑤ Electrical entry	⑥ Thread type
2SA: 2/2 way internally piloted and normally closed	150: Φ15mm	15: 1/2"	A: AC220V B: DC24V	Blank: Terminal I: Grommet [Note]	T: NPT
	200: Φ20mm	20: 3/4"	C: AC110V E: AC24V		
	250: Φ25mm	25: 1"	F: DC12V		

[Note] The wire length is 0.5m.

#### Ordering code of accessories

Ordering code of accessories is the same as 2WA series valve's, Please refer to P181 for details of ordering code.

### Specification

Model\Item	Port size [Note1]	Orifice size (Φmm)	Cv	Valid area or section (mm <sup>2</sup> )	Weight [Note2](g)	Operating pressure differentia		Proof pressure	
						MPa	psi	MPa	psi
2SA150-15	1/2"	15.0	5.50	100.0	575	Max: 1.0 Min: 0.05	Max: 150 Min: 10	1.5	220
2SA200-20	3/4"	20.0	9.50	170.0	735				
2SA250-25	1"	25.0	12.50	220.0	1035				

[Note1] NPT thread is available.

[Note2] The weight in the table is the terminal valve's weight,  
Grommet valve's weight is 10g less than terminal's.

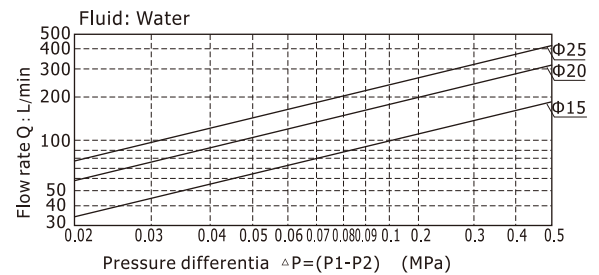
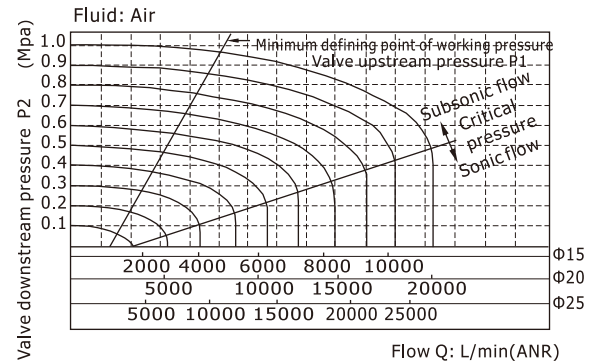
# Fluid control valve(2/2way)

## 2SA Series (Internally piloted and normally closed)

### Product feature

1. Indirect acting (Internal pilot) and normally closed type 2/2 way fluid valve. Its can change direction quickly and has large flow.
2. It is compact, small and light weight. Easy to install and dismantle;
3. The valve body is made of SUS304 . The coil has a Heat resistance classification of Class F. The standard seal material is FPM-F. Please contact us if other seal material are required.
4. The protection class of the coil is IP65 and there is a choice for grommet or terminal electrical entry .

### Flow chart



### Valve's specification

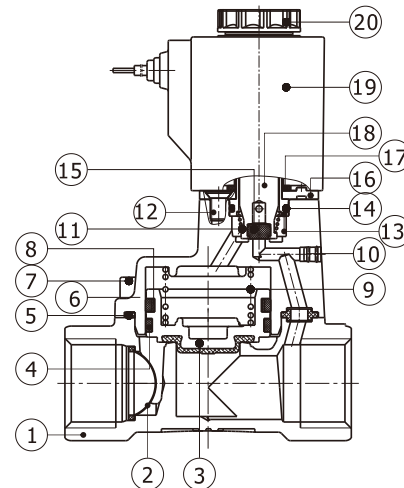
Acting		Direct acting			
Initial state		Normally closed			
Adaptable fluid		Air, Water, Oil			
Viscosity limit		Under 20CST			
Ambient and fluid temperature(°C)		Water	Air	Oil	Ambient
	Max.	80	90	80	70
	Min.	1	-20 [Note1]	-10 [Note2]	-20

[Note1] Dew point: -20(°C) or less. [Note2] 50CST or less.

### Inner structure

#### 2SA150(Grommet)

No.	Item	No.	Item	No.	Item
1	Body	8	Spring	15	Airtight ring
2	Filter	9	Spring	16	Fixed plate
3	Piston	10	Spacer	17	O-ring
4	Wear ring	11	Spring	18	Movable core
5	O-ring	12	Screw	19	Coil assembly
6	Cover	13	Steel bushing	20	Coil nut
7	Screw	14	O-ring		



### Specification of coil

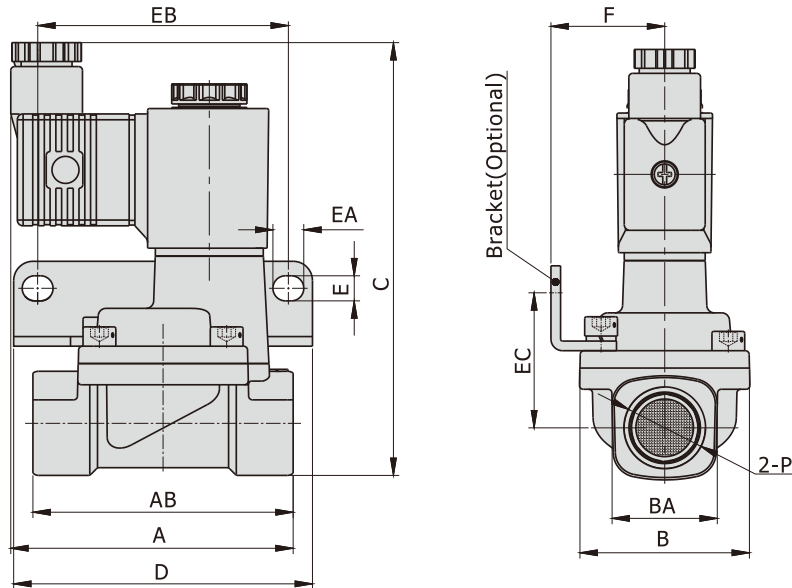
Valve type	Coil type	Power type	Frequency (Hz)	Voltage range	Electrical entry	Power Consumption (VA/W)	Insulation	Temp. rise(°C)
2SA150 2SA200 2SA250	CDA110 CLA110	AC	50	±15%	Terminal(CDA) Grommet(CLA)	10.0VA	Class F	35
			60			8.0VA		30
		DC	-	±10%		6.5W		30

# Fluid control valve(2/2way)

## 2SA Series (Internally piloted and normally closed)

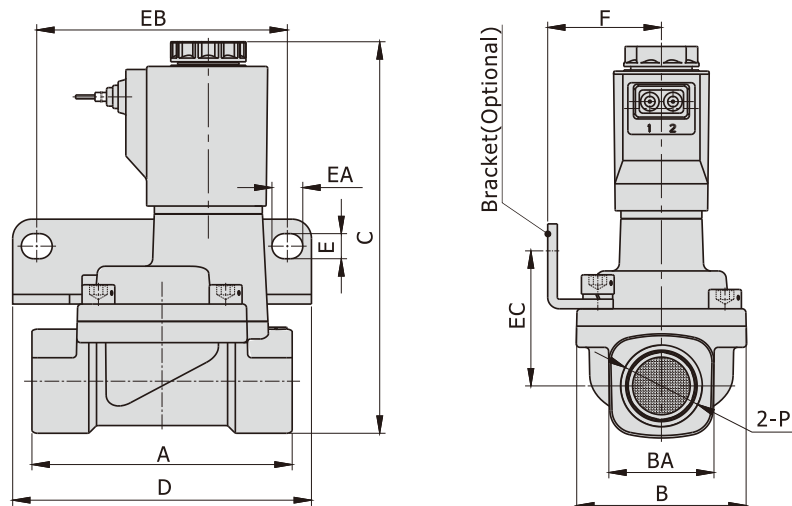
### Dimensions

#### Terminal



Model\Item	A	AB	B	BA	C	D	E	EA	EB	EC	F	P
2SA150-15	73.5	67.5	44	27.5	112	77.5	6.5	8	65	35	29.5	1/2"
2SA200-20	75.5	79.5	51	33.5	119	87.5	6.5	8	75	38	33	3/4"
2SA250-25	77.5	90	57	40.5	126	93	6.5	8	80	42	35	1"

#### Grommet



Model\Item	A	B	BA	C	D	E	EA	EB	EC	F	P
2SA150-15	67.5	44	27.5	102	77.5	6.5	8	65	35	29.5	1/2"
2SA200-20	79.5	51	33.5	109	87.5	6.5	8	75	38	33	3/4"
2SA250-25	90	57	40.5	116	93	6.5	8	80	42	35	1"