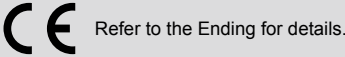




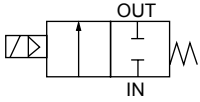
Pilot kick 2-port solenoid valve
(general purpose valve)

APK11 Series

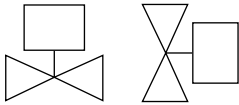
- NC
- Port size: Rc1/4 to Rc1
- Piston drive



JIS symbol



Mounting orientation



Common specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions	Standard specifications	Optional specifications
Working fluid	Air/low vacuum (1.33 x 10 ⁵ Pa (abs))/water/kerosene/oil (20mm ² /s or less)	Steam
Working pressure differential MPa	0 to 1.0 (refer to max. working pressure differential in individual specifications.)	
Max. working pressure MPa	2 (≈290 psi, 20 bar)	1 (≈150 psi, 10 bar)
Proof pressure (water pressure) MPa	4 (≈580 psi, 40 bar)	
Fluid temperature °C	-10 (14°F) to 60 (140°F) (*1)	5 (41°F) to 180 (356°F)
Ambient temperature °C	-10 (14°F) to 60 (140°F)	
Thermal class	Class 130 (B)	Class 180 (H)
Atmosphere	Place free of corrosive gas and explosive gas	
Valve structure	Pilot kick poppet, piston drive	
Valve seat leakage (*2) cm ³ /min(ANR)	0.2 or less (air)	400 or less (air)
Mounting orientation	Limited to the range of vertical orientation with the coil on top to horizontal orientation (*3).	
Body/seal material	Bronze/nitrile rubber	Bronze/PTFE

*1 : No freezing.

*2 : Value at pneumatic pressure of 0.05 to 1.0 MPa. When used at a pressure less than 0.05 MPa, the sealant may be unstable. Contact CKD in this case.

*3 : Limited to vertical orientation when used at a pressure less than 0.05 MPa.

Individual specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Model No.	Port size	Orifice size (mm)	Min. working pressure differential (MPa)	Max. working pressure differential (MPa)							Rated voltage	Apparent power (VA)				Power consump (W)		Weight (kg)
Descriptions				Air		Water/kerosene		Oil (20 mm²/s)		Steam		When holding		When starting		AC	DC	
				AC	DC	AC	DC	AC	DC			AC	50 Hz	60 Hz	50 Hz	60 Hz		
APK11-8A	Rc1/4	12	0	1.0	0.7	1.0	0.7	0.6	1.0	100 VAC 50/60 Hz *5	24	19	61	54	10/8	11	0.7	
APK11-10A	Rc3/8	12								200 VAC 50/60 Hz *5							0.7	
APK11-15A	Rc1/2	16								12 VDC	32	26	123	106	13/11	20	1.0	
APK11-20A	Rc3/4	23			24 VDC	1.3												
APK11-25A	Rc1	28			48 VDC 100 VDC	1.7												

*1 : The model numbers above show the basic port size (Rc). Refer to How to order for other combinations.

*2 : The voltage fluctuation range must be within ±10% of the rated voltage.

*3 : Refer to DC column for the max. working pressure differential of coil with diode.

*4 : When using at low vacuum, vacuum the OUT port side.

*5 : The 100 VAC (50/60 Hz) can be used with 110 VAC (60 Hz). The 200 VAC (50/60 Hz) can be used with 220 VAC (60 Hz). However, this does not apply to coil housings 5A/5M/5N/5I/5J.

Optional specifications

Sealant	Fluoro rubber		PTFE	
Coil (thermal class)	Class 130 (B)	Class 180 (H)	Class 130 (B)	Class 180 (H)
Fluid temperature °C	5 to 60	5 to 90	-10 to 60 (*1)	5 to 180
Ambient temperature °C	-10 to 60			
Valve seat leakage (*2) cm ³ /min (ANR)	0.2 or less (air)		400 or less (air)	

*1 : No freezing.

*2 : Value at pneumatic pressure of 0.05 to 1.0 MPa. When used at a pressure less than 0.05 MPa, the sealant may be unstable. Contact CKD in this case.

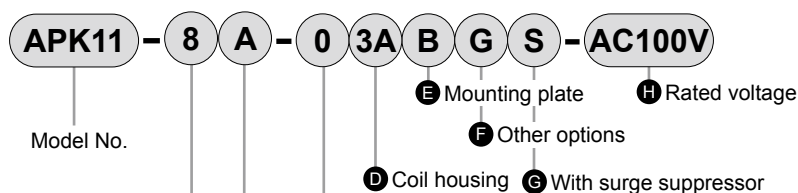
Flow characteristics

Model No.	Port size	Orifice size (mm)	Flow characteristics			
			C[dm ³ /(s·bar)]	b	Cv	S(mm ²)
APK11-8A	Rc1/4	12	9.4	0.41	2.2	-
APK11-10A	Rc3/8	12	15	0.37	2.7	-
APK11-15A	Rc1/2	16	20	0.31	4.5	-
APK11-20A	Rc3/4	23	-	-	8.6	162
APK11-25A	Rc1	28	-	-	12	231

*1 : Effective cross-sectional area S and sonic conductance C are converted as $S \approx 5.0 \times C$.

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
SpecFld
Custom
Ending

How to order



Code		Content				
A Port size						
8	1/4					
10	3/8					
15	1/2					
20	3/4					
25	1					
B Thread						
A	Rc					
G	G					
N	NPT					
C Body/sealant combination						
	Body	Valve seal	O-ring	Treatment	Remarks	
0	Std	Bronze	Nitrile rubber	-	Air/water/low vacuum/kerosene/oil (up to 60°C	
B			Fluoro rubber		Fluoro rubber	Air/low vacuum/kerosene/oil (up to 90°C *1)
C			PTFE		Fluoro rubber	Steam (up to 180°C *1)
D	Option	Stainless steel	Nitrile rubber	-	Air/water/low vacuum/kerosene/oil (up to 60°C	
E			Fluoro rubber		Fluoro rubber	Air/low vacuum/kerosene/oil (up to 90°C *1)
F			PTFE		PTFE	Steam (up to 180°C *1)
H	Option	Bronze	Nitrile rubber	Oil free	Air/water/low vacuum/kerosene/oil (up to 60°C	
J			Fluoro rubber		Fluoro rubber	Air/low vacuum/kerosene/oil (up to 90°C *1)
K			PTFE		Fluoro rubber	Steam (up to 180°C *1)
L	Option	Stainless steel	Nitrile rubber	Oil free	Air/water/low vacuum/kerosene/oil (up to 60°C	
M			Fluoro rubber		Fluoro rubber	Air/low vacuum/kerosene/oil (up to 90°C *1)
N			PTFE		PTFE	Steam (up to 180°C *1)
Refer to Intro Page 39 for reference on material combinations.						
D to H						
Refer to the following page for details on the coil housing, other options and voltage, etc.						

[Example of model No. 1]

APK11-20A-02C-AC100V

Model : APK11

- A** Port size : 3/4
B Thread : Rc
C Body/sealant combination : Body - bronze, valve seal - nitrile rubber
 O-ring - nitrile rubber
D Coil housing : Grommet lead wire
F to **I** : None
J Rated voltage : 100 VAC 50/60 Hz, 110 VAC 60 Hz

[Example of model No. 2]

APK11-10G-C4ABS-AC200V

Model : APK11

- A** Port size : 3/8
B Thread : G
C Body/sealant combination : Body - bronze, valve seal - PTFE,
 O-ring - fluoro rubber
D Coil housing : Open frame lead wire (thermal class 180(H) coil)
E Mounting plate : With mounting plate
F Other options : None
G Surge suppressor : With surge suppressor
H Rated voltage : 200 VAC 50/60 Hz, 220 VAC 60 Hz

⚠ Precautions for model No. selection

Notes for **C**

*1 : When Item **C** 4A/4M/4N is selected.

*2 : When using the PTFE valve seal with thermal class 180(H) coil, the O-ring material is fluoro rubber for steam.

For Items ① to ⑨, the combinations indicated with codes are available.
Note that if options for Items ⑤ to ⑥ are not required, they should be left blank.

D Coil housing			E	F Other options					G	H Rated voltage	
Content			Mounting plate	Cable gland			Conduit		With surge suppressor	Content	
				(marine cable gland)			(conduit piping)				
				A-15a	A-15b	A-15c	CTC19	G1/2			
2C	Std 										

Refer to the following cautions for ① to ⑨.

2C		● Grommet lead wire 300 mm
2E 2G 2H		● DIN terminal box
3A 4A 5A		● Open frame Lead wire 300mm ● 4A (Thermal class 180 (H)) ● 5A (diode integrated)
3M 3N 4M 4N 5M 5N		● Open frame HP terminal box ● 4M, 4N (Thermal class 180 (H)) ● 5M, 5N (diode integrated)
3I 3J 5I 5J		● Open frame HP terminal box (IP65 or equivalent) ● 5I, 5J (diode integrated)

Refer to page 249 for coil selection.

G H		● Conduit ● G(CTC19) ● H(G1/2)
--------	--	--------------------------------------

⚠ Precautions for model No. selection

Notes for ①

*3 : Coils for 5A/5M/5N have a diode to convert AC to DC voltage.

Notes for ⑤ to ⑦

- *4 : The mounting plate (Item ⑤ B) can be mounted only on Item ① (port size) 8 (1/4) or 10 (3/8).
- *5 : For Item ⑤, select an option from D, E, F, G and H.
- *6 : The surge suppressor is attached with the lead wire coil. When selecting a coil with a terminal box, the surge suppressor is mounted in the terminal box.
- *7 : Surge suppressor is incorporated as standard in the coil with diode.
- *8 : Tropicalization (rust-proof coating) is available as a measure against rust. Contact CKD for more information.

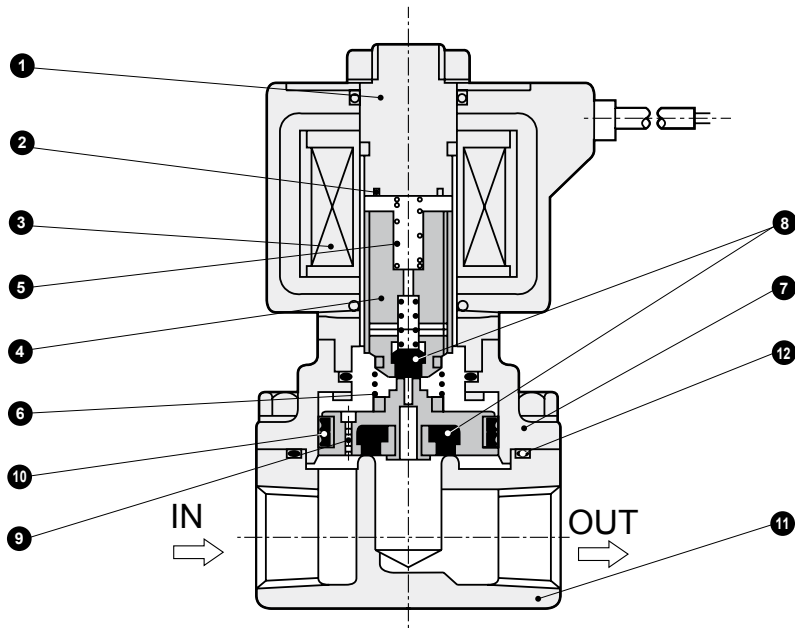
Notes for ⑧

- *9 : 100 VAC coil is compatible with 100 VAC 50/60 Hz and 110 VAC 60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz and 220 VAC 60 Hz. However, coils for Item ① 5A/5M/5N can be used with 100 VAC 50/60 Hz and 200 VAC 50/60 Hz only.
- *10 : For voltages other than above, contact CKD.
- *11 : The lead wire is available in the standard 300 mm length, and 500 mm, 1000 mm, 2000 mm and 3000 mm lengths. Contact CKD for more information.

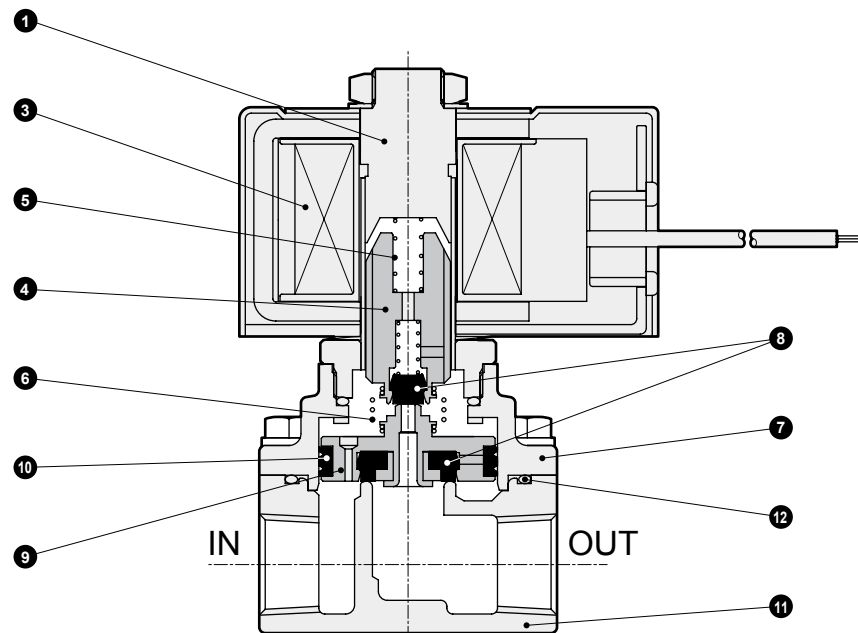
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S ∇ B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH / CPE/D
LifeSci
Gas- Combus
Auto- Water
SpecFld
Custom
Ending

Internal structure and parts list

● APK11-8A/10A (AC)



● APK11-8A/10A (DC/diode integrated)



No.	Part name	Material
1	Core assembly	SUS405 or equiv./SUS316L/SUS403 *1
2	Shading coil *2	Cu (Ag for stainless steel body)
3	Coil	-
4	Plunger assembly	SUS405 or equiv./SUS304/NBR (SUS405 or equiv./SUS304/FKM, PFA or PTFE)
5	Plunger spring	SUS304
6	Kick spring	SUS304
7	Body	CAC408(SCS13)
8	Seal	NBR(FKM, PTFE)
9	Main valve assembly	SUS303/SUS304/NBR (SUS303/SUS304/FKM or PTFE)
10	Seal ring set	SUS304/PTFE
11	Body	CAC408(SCS13)
12	O-ring	NBR(FKM, PTFE)

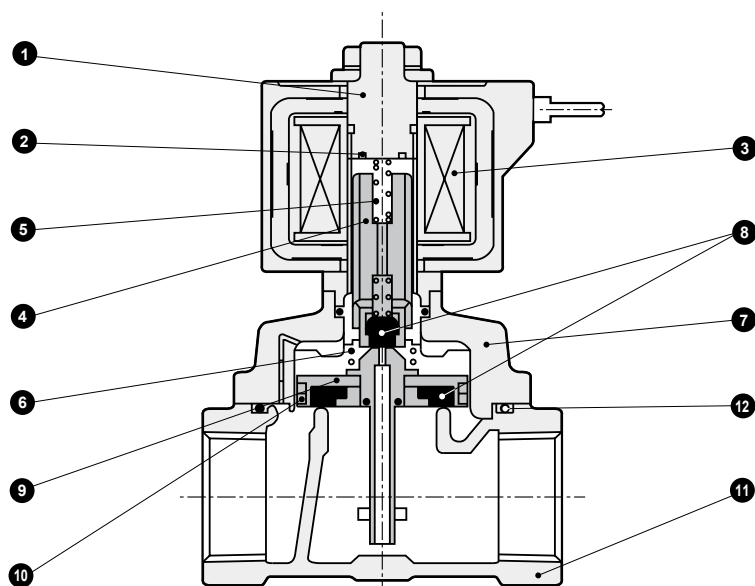
() shows options.

*1 : When the body/sealant combination is other than O and H: SUS405 or equivalent/SUS316L/SUS430.

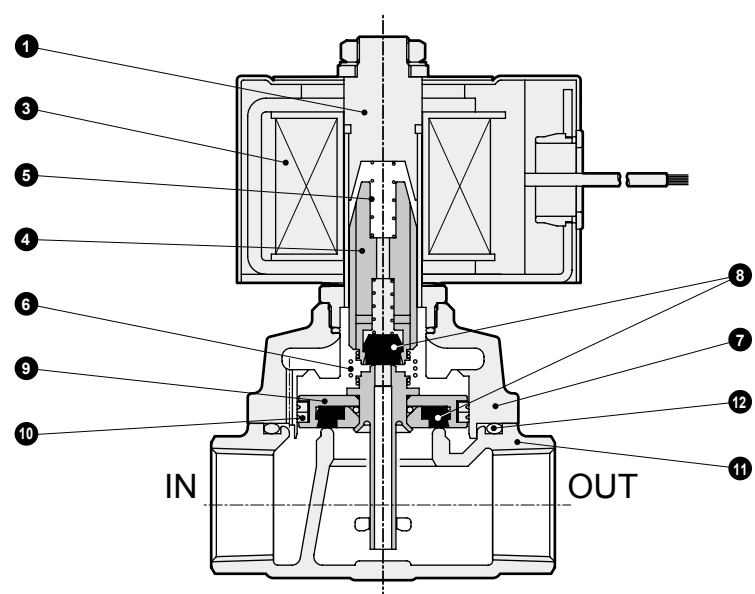
*2 : No shading coil is used for DC coil or coil with diode.

Internal structure and parts list

● APK11-15A/20A/25A (AC)



● APK11-15A/20A/25A (DC/diode integrated)



No.	Part name	Material
1	Core assembly	SUS405 or equiv./SUS316L/SUS403 *1
2	Shading coil *2	Cu (Ag for stainless steel body)
3	Coil	-
4	Plunger assembly	SUS405 or equiv./SUS304/NBR (SUS405 or equiv./SUS304/FKM, PFA or PTFE)
5	Plunger spring	SUS304
6	Kick spring	SUS304
7	Body	CAC408(SCS13)
8	Seal	NBR(FKM, PTFE)
9	Main valve assembly	SUS303/SUS304/NBR (SUS303/SUS304/FKM or PTFE)
10	Seal ring set	SUS304/PTFE
11	Body	CAC408(SCS13)
12	O-ring	NBR(FKM, PTFE)

() shows options.

*1 : When the body/sealant combination is other than O and H: SUS405 or equivalent/SUS316L/SUS430.

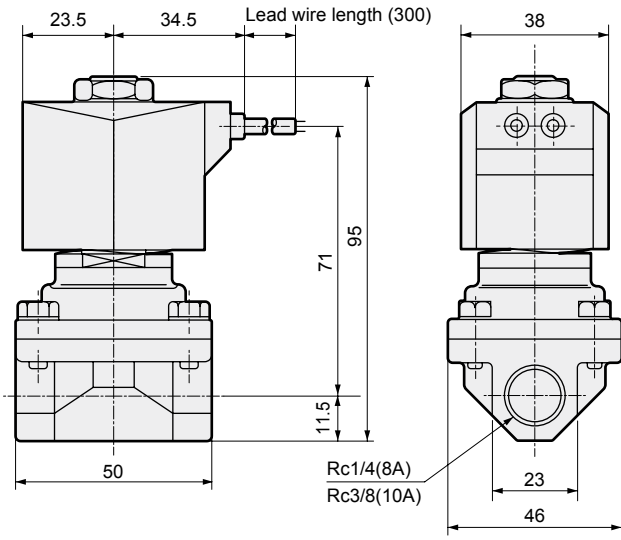
*2 : No shading coil is used for DC coil or coil with diode.

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 $\diamond$ 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- Combust
Auto- Water
SpecFld
Custom
Ending



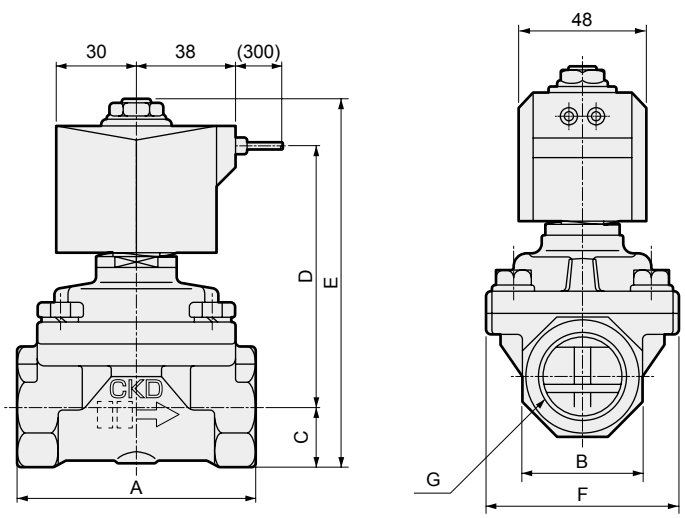
Dimensions

● Grommet lead wire
APK11-8A/10A-*2C



*1 : The dimensions are the same for port sizes of G and NPT threads.

● Grommet lead wire
APK11-15A/20A/25A-*2C



Model No.	A	B	C	D	E	F	G
APK11-15A-*2C	71	27(29)	14.5	89	119.5	50	Rc1/2
APK11-20A-*2C	80	32(35)	17.5	93	126.5	60	Rc3/4
APK11-25A-*2C	90	41(45)	21.5(22.5)	99	136.5(137.5)	71	Rc1

*1 : The dimensions are the same for port sizes of G and NPT threads.
*2 : Dimensions shown in () are for stainless steel body.

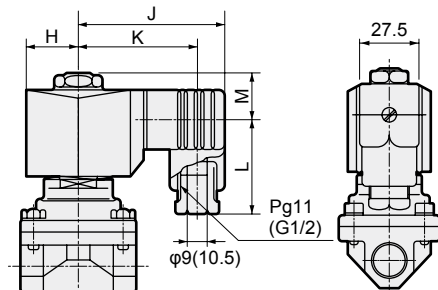
Optional dimensions



* Refer to the dimensions of grommet lead wire on the left page for common dimensions.

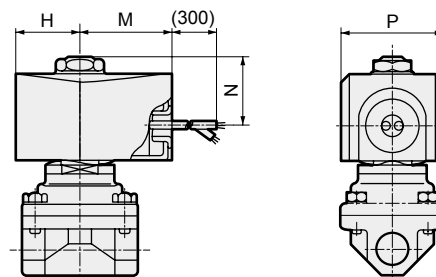
- With DIN terminal box

APK11-8A to 25A-
2E
2G
2H



- Open frame lead wire

APK11-8A to 25A-
3A
4A
5A



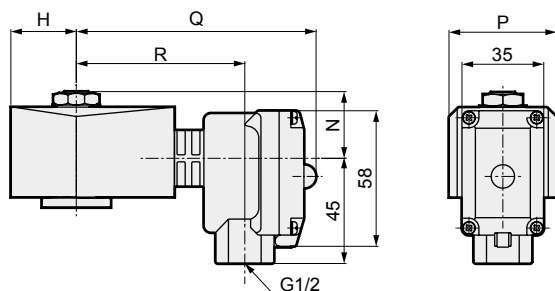
Dimensions shown in () are for G1/2.

Model No.	H	J	K	L	M
APK11-8A/10A	23.5	65.5	54(53.5)	39(41)	22
APK11-15A/20A/25A	30	73	61.5(61)	39(41)	24

Model No.	H	M	N	P
APK11-8A/10A	28	42	29	46
APK11-15A/20A/25A	34	46	33	56

- Open frame + HP terminal box

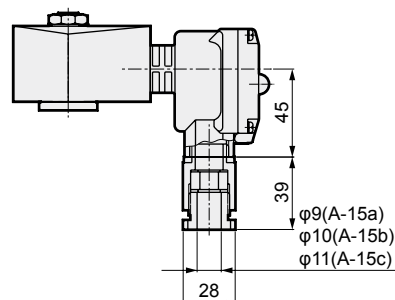
APK11-8A to 25A-
3M
4N
5



Model No.	H	N	P	Q	R
APK11-8A/10A	28	29	46	103	72
APK11-15A/20A/25A	34	33	56	98	68

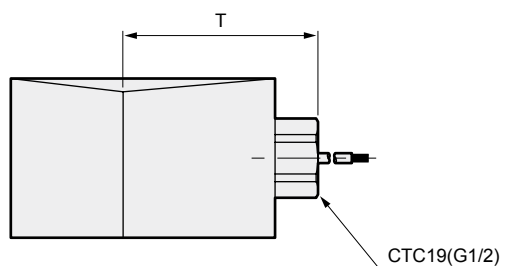
- Open frame + cable gland

APK11-8A to 25A-
3M
4N
5



- Open frame + conduit

APK11-8A to 25A-
3A
4A
5A



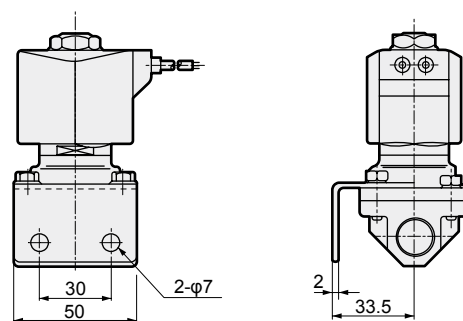
Dimensions shown in () are for G1/2.

Model No.	T
APK11-8A/10A	57(60)
APK11-15A to 25A	59(62)

- Mounting plate

APK11-8A/10A-***
B

Material: Steel
Zinc plated



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
SpecFld
Custom
Ending

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
SAB/
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
SpecFld
Custom
Ending



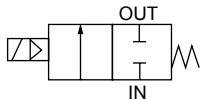
Pilot kick 2-port solenoid valve
(general purpose valve)

APK21 Series

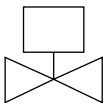
- NC
- Port size: Rc1¹/₄ to Rc2, 32 to 50 flange
- Piston drive



JIS symbol



Mounting orientation



Common specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions	Standard specifications		Optional specifications
Working fluid	Air/low vacuum (1.33 x 10 ⁵ Pa (abs))/water/kerosene/oil (20mm ² /s or less)		Steam
Working pressure differential MPa	0 to 0.7 (refer to max. working pressure differential in individual specifications.)		
Max. working pressure MPa	1 (≈150 psi, 10 bar)		
Proof pressure (water pressure) MPa	3.2 (≈460 psi, 32 bar)		
Fluid temperature °C	-10 (14°F) to 60 (140°F) (*1)		5 (41°F) to 180 (356°F)
Ambient temperature °C	-10 (14°F) to 60 (140°F)		
Thermal class	Class 130 (B)		Class 180 (H)
Atmosphere	Place free of corrosive gas and explosive gas		
Valve structure	Pilot kick poppet, piston drive		
Valve seat leakage (*2) cm ³ /min(ANR)	1 or less (air)		800 or less (air)
Mounting orientation	Limited to vertical orientation with the coil on top		
Body/seal material	Bronze/nitrile rubber		Bronze/PTFE

*1 : No freezing.

*2 : Value at pneumatic pressure of 0.05 to 0.7 MPa. When used at a pressure less than 0.05 MPa, the sealant may be unstable. Contact CKD in this case.

Individual specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions Model No.	Port size	Orifice size (mm)	Min. working pressure differential (MPa)	Max. working pressure differential (MPa)								Rated voltage	Apparent power (VA)				Power consump (W)		Weight (kg)
				Air		Water/kerosene		Oil (20 mm²/s)		Steam	When holding		When starting		AC	DC			
				AC	DC	AC	DC	AC	DC	AC	50 Hz		60 Hz	50 Hz	60 Hz	50/60 Hz	DC		
APK21-32A	Rc1¼	35	0								100 VAC 50/60 Hz							4.5	
APK21-32F	32 flange											200 VAC 50/60 Hz							8
APK21-40A	Rc1½	43		0.7	0.6	0.7	0.6	0.5	0.5	0.7	12 VDC	64	69	274	289	44/48	20	5.5	
APK21-40F	40 flange										24 VDC							9	
APK21-50A	Rc2	53									48 VDC							7	
APK21-50F	50 flange										100 VDC							11.5	

*1 : The model numbers above are for the basic port size. Refer to How to order for other combinations.

*2 : Refer to DC column for the max. working pressure differential of coil with diode.

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

*4 : When using at low vacuum, vacuum the OUT port side.

Optional specifications

Sealant	Fluoro rubber		PTFE	
Coil (thermal class)	Class 130 (B)	Class 180 (H)	Class 130 (B)	Class 180 (H)
Fluid temperature °C	5 to 60	5 to 90	-10 to 60 (*1)	5 to 180
Ambient temperature °C	-10 to 60			
Valve seat leakage (*2) cm ³ /min (ANR)	1 or less (air)		800 or less (air)	

*1 : No freezing.

*2 : Value at pneumatic pressure of 0.05 to 0.7 MPa. When used at a pressure less than 0.05 MPa, the sealant may be unstable. Contact CKD in this case.

Flow characteristics

Model No.	Port size	Orifice size (mm)	Cv	Effective cross-sectional area (mm ²)
APK21-32A	Rc1 ¹ / ₄	35	25	460
APK21-32F	32 flange			
APK21-40A	Rc1 ¹ / ₂	43	34	625
APK21-40F	40 flange			
APK21-50A	Rc2	53	53	975
APK21-50F	50 flange			

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
SpecFld
Custom
Ending

APK21 Series

How to order

APK21 - 32A - 0 3A H S - AC100V

Model No.

Other options

With surge suppressor

Coil housing

Rated voltage

Port size

*1

*2

Body/sealant combination

*3

*4

Code	Content
A Port size	
32A	Rc1 ¹ / ₄
32F	32 flange
40A	Rc1 ¹ / ₂
40F	40 flange
50A	Rc2
50F	50 flange

B Body/sealant combination						
		Body	Valve seal	O-ring	Treatment	Remarks
0	Std	Bronze	Nitrile rubber	Nitrile rubber	-	Air/water/low vacuum/kerosene/oil (up to 60°C)
B			Fluoro rubber	Fluoro rubber		Air/low vacuum/kerosene/oil (up to 90°C *3)
C			PTFE	Fluoro rubber		Steam (up to 180°C *3)
D	Option	Stainless steel	Nitrile rubber	Nitrile rubber	-	Air/water/low vacuum/kerosene/oil (up to 60°C)
E			Fluoro rubber	Fluoro rubber		Air/low vacuum/kerosene/oil (up to 90°C *3)
F			PTFE	PTFE		Steam (up to 180°C *3)
H	Option	Bronze	Nitrile rubber	Nitrile rubber	Oil free	Air/water/low vacuum/kerosene/oil (up to 60°C)
J			Fluoro rubber	Fluoro rubber		Air/low vacuum/kerosene/oil (up to 90°C *3)
K			PTFE	Fluoro rubber		Steam (up to 180°C *3)
L	Option	Stainless steel	Nitrile rubber	Nitrile rubber	-	Air/water/low vacuum/kerosene/oil (up to 60°C)
M			Fluoro rubber	Fluoro rubber		Air/low vacuum/kerosene/oil (up to 90°C *3)
N			PTFE	PTFE		Steam (up to 180°C *3)
Refer to Intro Page 39 for reference on material combinations.						

C to F

Refer to the following page for details on the coil housing, other options and voltage, etc.

[Example of model No. 1]

APK21-32F-03A-DC24V

Model : APK21

A Port size : 32 flange

B Body/sealant combination

: Body - bronze, valve seal - nitrile rubber

O-ring - nitrile rubber

C Coil housing : Open frame lead wire

D E : None

F Rated voltage : 24 VDC

[Example of model No. 2]

APK21-50F-B4MD-AC100V

Model : APK21

A Port size : 50 flange

B Body/sealant combination

: Body - bronze, valve seal - fluoro rubber

O-ring - fluoro rubber

C Coil housing : Open frame
(Thermal class 180 (H) coil)
HP terminal box (G1/2)

D Other options : Cable gland A-15a

E Surge suppressor : None

F Rated voltage : 100 VAC 50/60 Hz

⚠ Precautions for model No. selection

*1 : The companion flange is JIS B2210 10K. (Flange is not enclosed with the product and must be purchased separately.)

*2 : As G and NPT threads can also be used for piping port threads, contact CKD for details.

Notes for **B**

*3 : When Item **B** 4A/4M/4N is selected.

*4 : When using the PTFE valve seal with thermal class 180(H) coil, the O-ring material is fluoro rubber for steam.

For Items © to ƒ, the combinations indicated with codes are available.
Note that if options for Items ƒ and ƒ are not required, they should be left blank.

C Coil housing				D Other options				E	F Rated voltage
Content				Cable gland		Conduit		With surge suppressor	Content
				(marine cable gland)		(conduit piping)			
				A-15a	A-15b	A-15c	G1/2		
3A	Std	Open frame	Lead wire (IP65 or equivalent)				H	S	100 VAC, 200 VAC, 12 VDC, 24 VDC, 48 VDC, 100 VDC
3M			With HP terminal box (G1/2)	D	E	F			
3N			HP terminal box with lamp (G1/2)						
4A	Option	Open frame (Thermal class 180 (H))	Lead wire				H	S	100 VAC, 200 VAC
4M			With HP terminal box (G1/2)	D	E	F			
4N			HP terminal box with lamp (G1/2)						
5A	Option	Open frame (diode integrated)	Lead wire (IP65 or equivalent)				H		100 VAC, 200 VAC
5M			With HP terminal box (G1/2)	D	E	F			
5N			HP terminal box with lamp (G1/2)						

Refer to the following cautions for © to ƒ.

3A 4A 5A		- Open frame lead wire 300 mm - With CTC19 thread for direct conduit piping
3M 3N 4M 4N 5M 5N		- Open frame HP terminal box 4M, 4N (Thermal class 180 (H)) 5M, 5N (diode integrated)

H		Conduit (G1/2)
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Refer to page 250 for coil selection.

Precautions for model No. selection

Notes for ©

*5 : Coils for 5A/5M/5N have a diode to convert AC to DC voltage.

Notes for ƒ/ƒ

- *6 : For Item ƒ, select an option from D, E, F and H.
- *7 : The surge suppressor is attached with the lead wire coil. When selecting a coil with a terminal box, the surge suppressor is mounted in the terminal box.
- *8 : Surge suppressor is incorporated as standard in the coil with diode.
- *9 : Tropicalization (rust-proof coating) is available as a measure against rust. Contact CKD for more information.

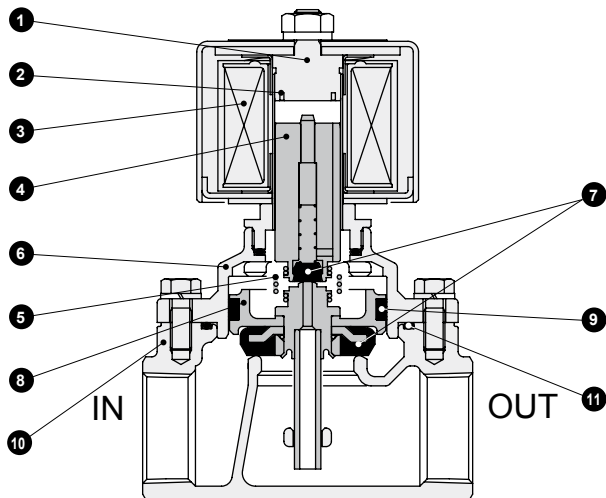
Notes for ƒ

- *10 : For voltages other than above, contact CKD.
- *11 : The lead wire is available in the standard 300 mm length, and 500 mm, 1000 mm, 2000 mm and 3000 mm lengths. Contact CKD for more information.

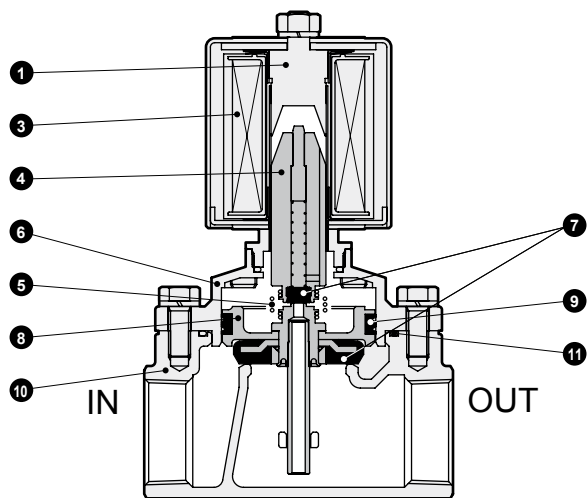
APK21 Series

Internal structure and parts list

● APK21-32A/40A/50A (AC)



● APK21-32A/40A/50A (DC/diode integrated)



No.	Part name	Material
1	Core assembly	SUS405 or equiv./SUS316L/SUS403 ; Stainless steel
2	Shading coil *1	Cu (Ag for stainless steel body) ; Copper (silver for stainless steel body)
3	Coil	- ; -
4	Plunger assembly	SUS405 or equiv./SUS304/C3604/NBR (SUS405 or equiv./SUS304/FKM, PFA or PTFE) ; Stainless steel
5	Kick spring	SUS304 ; Stainless steel
6	Body	CAC408(SCS13) ; Bronze casting (stainless steel casting)
7	Seal	NBR(FKM, PTFE) ; Nitrile rubber (fluoro rubber or tetrafluoroethylene resin)
8	Main valve assembly	SUS303/SUS304/C3604/NBR (SUS303/SUS304/FKM or PTFE) ; Stainless steel/copper alloy (stainless steel)
9	Seal ring set	SUS304/PTFE ; Stainless steel/tetrafluoroethylene resin
10	Body	CAC408(SCS13) ; Bronze casting (stainless steel casting)
11	O-ring	NBR(FKM, PTFE) ; Nitrile rubber (fluoro rubber or tetrafluoroethylene resin)

() shows options.

*1 : No shading coil is used for DC coil or coil with diode.

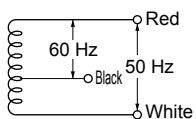
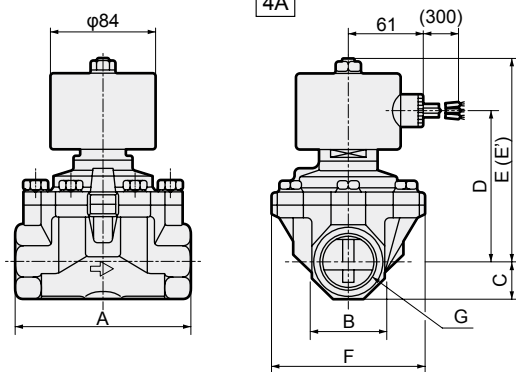
Dimensions



● Open frame lead wire (Rc screw-in)

APK21-32A/40A/50A-*

3A
4A



- Conduit size
Thin steel conduit thread
JIS B 0204 CTC19
- Lead wire

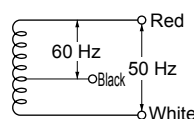
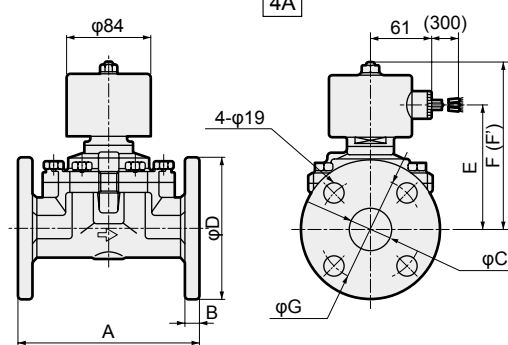
30/0.18(0.75 mm²)

Length 300 mm

● Open frame lead wire (flange)

APK21-32F/40F/50F-*

3A
4A



- Conduit size
Thin steel conduit thread
JIS B 0204 CTC19
- Lead wire

30/0.18(0.75 mm²)

Length 300 mm

The dimension (E') applies only to the APK21-32A/40A/50A-*3A DC specifications.

Model No.	A	B	C	D	E	E'	F	G
APK21-32A-*□A	125	54	27	116.5	158.5	183.5	112	Rc1 ¹ / ₄
APK21-40A-*□A	140	60	30	123.5	165.5	190.5	122	Rc1 ¹ / ₂
APK21-50A-*□A	160	74	37	132.5	174.5	199.5	132	Rc2

The dimension (F') applies only to the APK21-32F/40F/50F-*3A DC specifications.

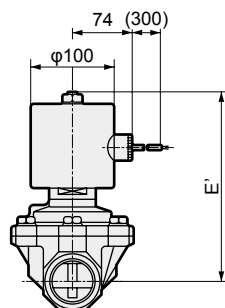
Model No.	A	B	C	D	E	F	F'	G
APK21-32F-*□A	170	12	36	135	116.5	158.5	183.5	100
APK21-40F-*□A	180	14	42	140	123.5	165.5	190.5	105
APK21-50F-*□A	180	14	53	155	132.5	174.5	199.5	120

Optional dimensions



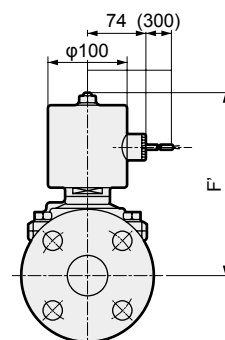
* Refer to the open frame lead wire dimensions on the left page for common dimensions.

- Open frame diode integrated lead wire (Rc screw-in)
APK21-32A/40A/50A-***5A**



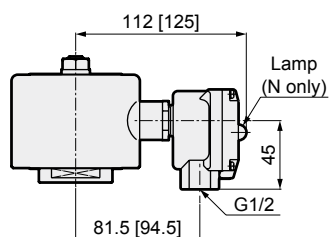
Model No.	E'
APK21-32A-*5A	183.5
APK21-40A-*5A	190.5
APK21-50A-*5A	199.5

- Open frame diode integrated lead wire (flange)
APK21-32F/40F/50F-***5A**

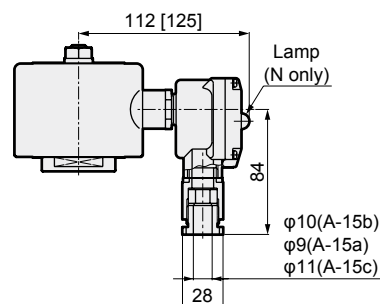


Model No.	F'
APK21-32F-*5A	183.5
APK21-40F-*5A	190.5
APK21-50F-*5A	199.5

- Open frame + HP terminal box
APK21-32^A to 50^A -***3M**
4**N**
5



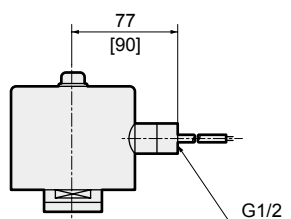
- Open frame + cable gland
APK21-32^A to 50^A -***3M**
4**N**
5



[] shows APK21-32^A to 50^A -***5M** type.

[] shows APK21-32^A to 50^A -***5M** type.

- Open frame + conduit
APK21-32^A to 50^A -***3A**
4**A**
5**A**



[] shows APK21-32^A to 50^A -***5M** type.

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 ^Δ 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
SpecFld
Custom
Ending