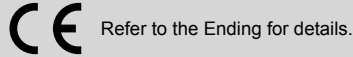




Pilot operated 2-port solenoid valve
General purpose

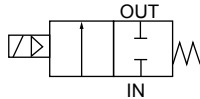
AP11/AP12 Series

- NC (open when energized), NO (closed when energized)
- Port size: Rc1/4 to Rc1
- Piston drive

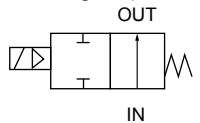


JIS symbol

- AP11: NC (open when energized)



- AP12: NO (closed when energized)



Common specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	Standard specifications	Optional specifications
Working fluid	Air/water/kerosene/oil (50 mm ² /s or less)	Steam
Working pressure differential MPa	0.05 to 1.2 (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	10 (≈1500 psi, 100 bar)	
Fluid temperature (*1) °C	-10 (14°F) to 60 (140°F)	-10 (14°F) to 180 (356°F)
Ambient temperature °C	-20 (-4°F) to 60 (140°F)	-20 (-4°F) to 100 (212°F)
Thermal class	Class 130 (B)	Class 180 (H)
Atmosphere	Place free of corrosive gas and explosive gas	
Valve structure	Pilot operated poppet, piston drive	
Valve seat leakage (*2) cm ³ /min(ANR)	0.2 or less (air)	300 or less (air)
Mounting orientation	Free (within working pressure differential range)	
Body/seal material	Bronze/nitrile rubber	Bronze/PTFE

*1 : No freezing.

*2 : Pneumatic pressure used for measurement is 0.05 to 1.2 MPa for AP11 (NC), 0.05 to 0.9 MPa for AP12-8A/10A (NO [closed when energized]), and 0.05 to 0.5 MPa for AP12-15A/20A/25A (NO).

Individual specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item 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 (50 mm ² /s)		Steam	When holding		When starting		AC	DC			
				AC	DC	AC	DC	AC	DC	AC	50/60 Hz		50/60 Hz	50/60 Hz	DC				
NC (open when energized)																			
AP11-8A	Rc1/4	10	0.05	1.2	0.9	1.0	0.9	0.9	0.9	1.0	100 VAC 50/60 Hz *6	12	10	17	14	5.2/3.8	11 (8.1) ^{*4} (7) ^{*5}	0.9	
AP11-10A	Rc3/8	10		1.2	0.9	1.0	0.9	0.9	0.9	1.0		18	15	29	24	6.7/5.7	11 (10.4) ^{*4} (7) ^{*5}	0.9	
AP11-15A	Rc1/2	15		1.2	0.6	1.0	0.6	0.6	0.6	1.0								1.4	
AP11-20A	Rc3/4	20		1.2	0.6	1.0	0.6	0.6	0.6	1.0								1.8	
AP11-25A	Rc1	25		1.2	0.6	1.0	0.6	0.6	0.6	1.0								2.5	
NO (closed when energized)																			
AP12-8A	Rc1/4	10	0.05	0.9	0.9	0.9	0.9	0.9	0.9	0.9	12 VDC 24 VDC 48 VDC 100 VDC	22	18	35	29	8.7/6.7	15.5 (14) ^{*4}	1.0	
AP12-10A	Rc3/8	10		0.9	0.9	0.9	0.9	0.9	0.9	0.9								1.0	
AP12-15A	Rc1/2	15		0.5	0.5	0.5	0.5	0.5	0.5	0.5								1.4	
AP12-20A	Rc3/4	20		0.5	0.5	0.5	0.5	0.5	0.5	0.5								1.8	
AP12-25A	Rc1	25		0.5	0.5	0.5	0.5	0.5	0.5	0.5								2.5	

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

*2 : Refer to DC column for the max. working pressure differential of AP11 type coil with diode.

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

*4 : Power consumption of coil housings 2E/2G/2H.

*5 : Power consumption of coil housings 6C/6E/6G/6H.

*6 : 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 (*1) °C	-10 to 60	-10 to 90	-10 to 60	-10 to 180
Ambient temperature °C	-20 to 60	-20 to 100 (*3)	-20 to 60	-20 to 100 (*3)
Valve seat leakage (*2) cm ³ /min(ANR)	0.2 or less (air)		300 or less (air)	

*1 : No freezing.

*2 : Pneumatic pressure used for measurement is 0.05 to 1.2 MPa for AP11 (NC), 0.05 to 0.9 MPa for AP12-8A/10A (NO), and 0.05 to 0.5 MPa for AP12-15A/20A/25A (NO).

*3 : -20 to 80°C when coil housing is HP terminal box with lamp.

Flow characteristics

Model No.	Port size	Orifice size (mm)	Flow characteristics			
			C[dm ³ /(s·bar)]	b	Cv	S(mm ²)
NC (open when energized)						
AP11- 8A	Rc1/4	10	8.1	0.17	1.4	-
AP11-10A	Rc3/8	10	10	0.19	1.8	-
AP11-15A	Rc1/2	15	21	0.22	4.5	-
AP11-20A	Rc3/4	20	-	-	9.3	162
AP11-25A	Rc1	25	-	-	12.0	231
NO (closed when energized)						
AP12- 8A	Rc1/4	10	8.1	0.17	1.4	-
AP12-10A	Rc3/8	10	10	0.19	1.8	-
AP12-15A	Rc1/2	15	21	0.22	4.5	-
AP12-20A	Rc3/4	20	-	-	9.3	162
AP12-25A	Rc1	25	-	-	12.0	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
Outdoor
SpecFld
Custom
Ending

AP11/AP12 Series

How to order

Model No. **AP1 1 - 8 A - 0 3A A B H S - AC100V**

- E** Coil housing
- H** Other options
- F** Manual override (locking)
- I** With surge suppressor
- G** Mounting plate
- J** Rated voltage

A Actuation

B Port size

C Thread

D Body/sealant combination

- *1
- *2
- *3

Code	Description
A Actuation	
1	NC (open when energized)
2	NO (closed when energized)
B Port size	
8	1/4
10	3/8
15	1/2
20	3/4
25	1
C Thread	
A	Rc
G	G
N	NPT

D Body/sealant combination					
	Body	Seal	O-ring	Treatment	Remarks
Std.	Bronze	Nitrile rubber	Nitrile rubber	-	Air/water/kerosene/oil (up to 60°C)
		Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)
		PTFE	Fluoro rubber (*1)		Steam (When 4A/4M/4N is selected)
Option	Stainless steel	Nitrile rubber	Nitrile rubber	Oil-prohibited	Air/water/kerosene/oil (up to 60°C)
		Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)
		PTFE	PTFE (*1)		Steam (When 4A/4M/4N is selected)
	Bronze	Nitrile rubber	Nitrile rubber		Air/water/kerosene/oil (up to 60°C)
		Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)
		PTFE	Fluoro rubber (*1)		Steam (When 4A/4M/4N is selected)
Stainless steel	Nitrile rubber	Nitrile rubber	Oil-prohibited	Air/water/kerosene/oil (up to 60°C)	
	Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)	
	PTFE	PTFE (*1)		Steam (When 4A/4M/4N is selected)	

[Example of model No. 1]
AP11-15A-03A-AC100V

Model : AP11

- A** Actuation : NC (open when energized)
- B** Port size : 1/2
- C** Thread : Rc
- D** Body/sealant combination : Body - bronze, sealant - nitrile rubber
O-ring - nitrile rubber

- E** Coil housing : Open frame lead wire
- F** to **I** : None
- J** Rated voltage : 100 VAC 50/60 Hz,
110 VAC 60 Hz

[Example of model No. 2]
AP12-25N-E3MAD-AC200V

Model : AP12

- A** Actuation : NO (closed when energized)
- B** Port size : 1
- C** Thread : NPT
- D** Body/sealant combination : Body - stainless steel, sealant - fluoro rubber
O-ring - fluoro rubber

- E** Coil housing : Open frame + HP terminal box (G1/2)
- F** Manual override (locking) : Selected
- G** Mounting plate : None
- H** Other options : Cable gland A-15a
- I** Surge suppressor : None
- J** Rated voltage : 200 VAC 50/60 Hz, 220 VAC 60 Hz

Refer to Intro Page 39 for reference on material combinations.

E to J

Refer to page 255 for details on the coil housing, other options and voltage, etc.

⚠ Precautions for model No. selection


Notes for **D**


- *1 : When using the PTFE valve seal with thermal class 180(H) coil, the O-ring material is fluoro rubber for steam.
- *2 : For Item **Ⓟ** (port size) 8 (1/4) and 10 (3/8), the standard body material is copper alloy.
- *3 : When Item **Ⓧ** is C, F, K or N, Item **Ⓧ** Coil housings 6C, 6E, 6G and 6H cannot be selected.


For Items ⑤ to ⑪, the combinations indicated with codes are available.
Note that if options for Items ⑤ to ⑪ are not required, they should be left blank.


⑤ Coil housing		⑥	⑦	⑧ Other options					⑨	⑩ Rated voltage	
Description	Option	Manual override (Locking)	Mounting plate	Cable gland (marine cable gland)			Conduit (conduit piping)		With surge suppressor	Description	
				A-15a	A-15b	A-15c	CTC19	G1/2			
				3A	Open frame lead wire (IP65 equivalent)	A *8	B *7				
2C	Grommet lead wire									100 VAC, 200 VAC	
2E	With DIN terminal box (G1/2)	A	B						S	100 VAC, 200 VAC	
2G	With DIN terminal box (Pg11)	*8	*9							12 VDC, 24 VDC, 48 VDC, 100 VDC	
2H	DIN terminal box with small lamp (Pg11)							H		100 VAC, 200 VAC, 24 VDC	
3M	Open frame									100 VAC, 200 VAC, 12 VDC, 24 VDC, 48 VDC, 100 VDC	
3N	With HP terminal box (G1/2)	A	B						S	100 VAC, 200 VAC, 12 VDC, 24 VDC, 100 VDC	
3I	HP terminal box (IP65, equiv) (G1/2)	*8	*9	D	E	F				100 VAC, 200 VAC, 12 VDC, 24 VDC, 48 VDC, 100 VDC	
3J	HP term box, lamp (IP65, equiv) (G1/2)									100 VAC, 200 VAC, 12 VDC, 24 VDC, 100 VDC	
4A	Open frame									100 VAC, 200 VAC	
4M	Lead wire	A	B				G	H	S		
4N	With HP terminal box (G1/2)	*8	*9	D	E	F				100 VAC, 200 VAC	
5A	Open frame									100 VAC, 200 VAC	
5M	Lead wire (IP65 or equivalent)	A	B				G	H			
5N	With HP terminal box (G1/2)	*8	*9	D	E	F				100 VAC, 200 VAC	
5I	HP terminal box with lamp (G1/2)										
5J	HP term box (IP65, equiv) (G1/2)										
6C	Open frame (diode integrated)									100 VAC, 200 VAC	
6E	HP term box, lamp (IP65, equiv) (G1/2)										
6G	Grommet lead wire 7W	A	B						S	12 VDC, 24 VDC	
6H	With DIN terminal box (G1/2) 7W	*8	*9							24 VDC	
								H		24 VDC	


Refer to the following cautions for ⑤ to ⑪.


2C 6C		● Grommet lead wire 300 mm
----------	---	----------------------------

G H		<ul style="list-style-type: none"> ● Conduit ● G(CTC19) ● H(G1/2)
--------	--	--

2E 2G 2H 6E 6G 6H		● DIN terminal box
----------------------------------	---	--------------------

3A 4A 5A		<ul style="list-style-type: none"> ● Open frame Lead wire 300mm ● 4A (Thermal class 180 (H)) ● 5A (diode integrated)
----------------	---	---

3M 3N 4M 4N 5M 5N		<ul style="list-style-type: none"> ● Open frame HP terminal box ● 4M, 4N (Thermal class 180 (H)) ● 5M, 5N (diode integrated)
----------------------------------	---	---

3I 3J 5I 5J		<ul style="list-style-type: none"> ● Open frame HP terminal box (IP65 or equivalent) ● 5I, 5J (diode integrated)
----------------------	---	--

Refer to page 248 for coil selection.

⚠ Precautions for model No. selection

Notes for ⑤

- *4 : Coils for 5A/5M/5N/5I/5J have a diode to convert AC to DC voltage.
- *5 : DC coil for steam is available for AP11. Contact CKD for more information.
* For 6C/6E/6G/6H, only AP11 is available.
- *6 : The coil housings 6C, 6E and 6G are 12 VDC and 24 VDC dedicated. 6H is 24 VDC dedicated.

Notes for Items ⑥ to ⑩

- *7 : The mounting plate (Item ⑦ B) can be mounted only on Item ⑥ (port size) 8 (1/4) or 10 (3/8).
- *8 : When Item ⑧ is C, F, K or N, the manual override (Item ⑥ A) is not available.
- *9 : For Item ⑧, select an option from D, E, F, G and H.
- *10: 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.
- *11: As standard, the surge suppressor is built into the coil with diode and the 24 VDC coil (Item ⑤ 2H, 6H), so surge suppressor code S cannot be selected.
- *12: Tropicalization (rust-proof coating) is available as a measure against rust. Contact CKD for more information.
Note that tropicalization is not available when the manual override option (A) and the coil option 6C/6E/6G/6H are selected.

Notes for ⑪

- *13: 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 ⑤ 5A/5M/5N/5I/5J can be used with 100 VAC 50/60 Hz and 200 VAC 50/60 Hz only.
- *14: For voltages other than above, contact CKD.
- *15: 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.

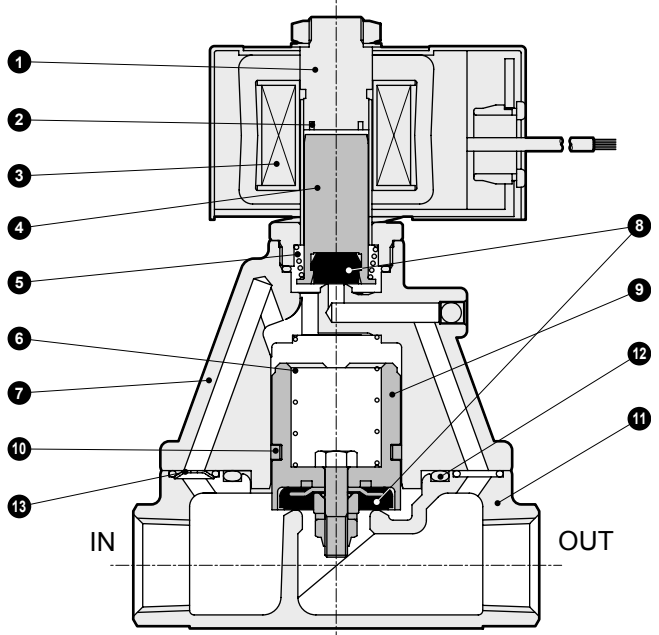
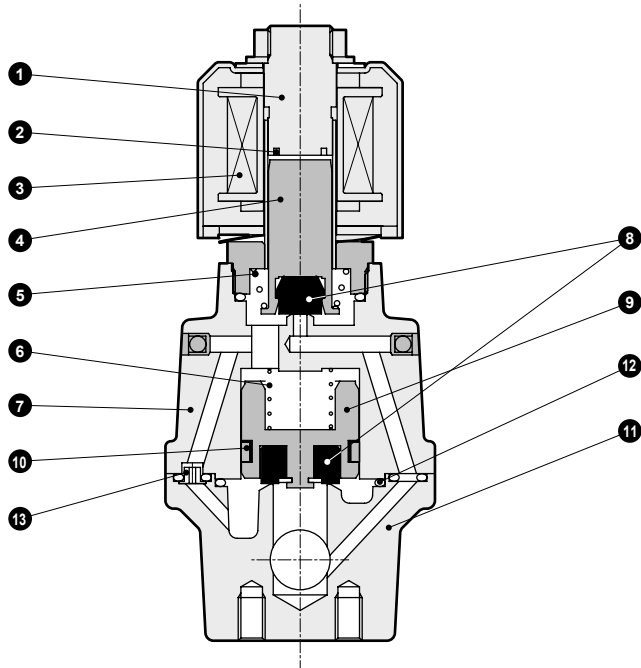
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/AD
APK/ADK
DryAir
EX-XPLNprf
XPLNprf
HVB/HVL
S/B/NAB
LAD/NAD
Water-Rela
NP/NAP/NVP
SNP
CHB/G
MXB/G
Other valves
SWD/MWD
DustColl
CVE/CVSE
CCH/CPE/D
LifeSci
Gas-Combus
Auto-Water
Outdoor
SpecFld
Custom
Ending

AP11/AP12 Series

Internal structure and parts list

● AP11-8A/10A

● AP11-15A/20A/25A



(The figure shows the closing operation)

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

() shows options.

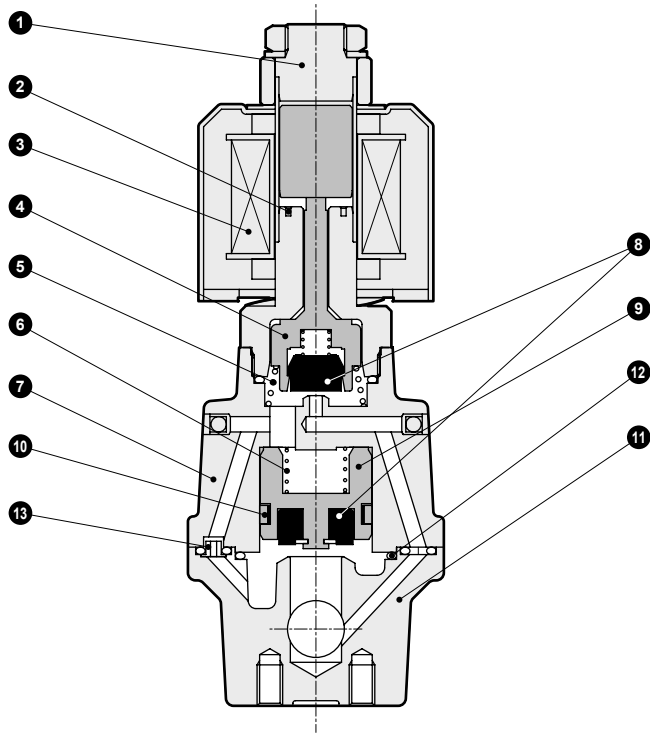
*1 : When the body/sealant combination code is other than O and H, or the coil housing code is 6C, 6E, 6G or 6H, the material is SUS405 or equivalent/SUS316L/SUS430.

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

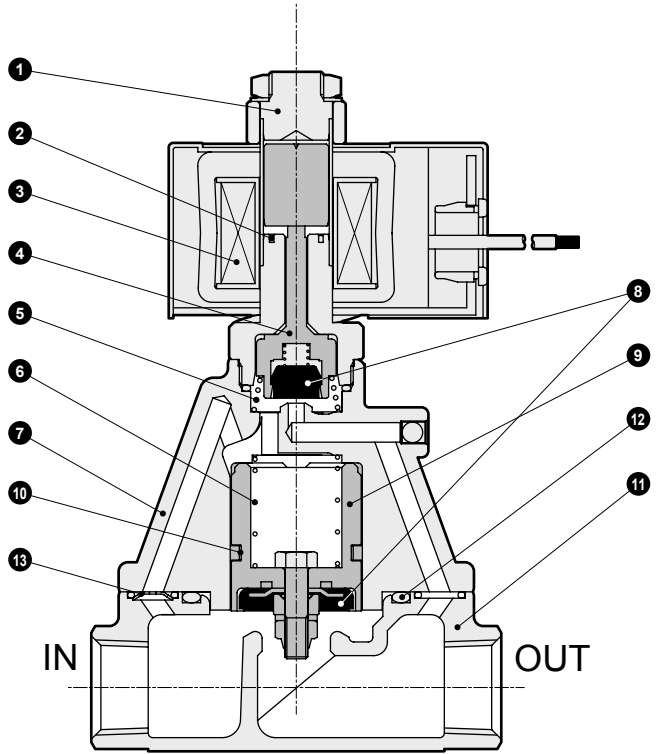
*3 : For port size 8 (1/4) and 10 (3/8), the body material is C3771 (copper alloy) as standard, and the orifice plate material is SUS303 (stainless steel) for both the standard and options.

Internal structure and parts list

● AP12-8A/10A



● AP12-15A/20A/25A



(The figure shows the opening operation)

No.	Part name	Material	
1	Plunger/core assembly	SUS405 or equiv./SUS316L/SUS304	Stainless steel
2	Shading coil	Cu (Ag for stainless steel body)	Copper (silver for stainless steel body)
3	Coil	-	-
4	NO Valve	POM(PPS/SUS303/PFA)	Body/sealant combination When O/D/H/L: Polyacetal resin When B/E/J/M: Polyphenylene sulfide resin When C/F/K/N: Stainless steel/perfluoroalkoxy resin
5	Spring	SUS304	Stainless steel
6	Valve spring	SUS304	Stainless steel
7	Body	CAC408(SCS13) *1	Bronze casting (stainless steel casting)
8	Seal	NBR(FKM, PTFE)	Nitrile rubber (fluoro rubber, tetrafluoroethylene resin)
9	Main valve assembly	C3604/SUS303/SUS304 (SUS303/SUS304)	Stainless steel/copper alloy (stainless steel)
10	Piston ring	SUS304/PTFE	Stainless steel/tetrafluoroethylene resin
11	Body	CAC408(SCS13) *1	Bronze casting (stainless steel casting)
12	O-ring	NBR(FKM, PTFE)	Nitrile rubber (fluoro rubber, tetrafluoroethylene resin)
13	Orifice plate	SUS304(SUS303) *1	Stainless steel

() shows options.

*1 : For port size 8 (1/4) and 10 (3/8), the standard body material is C3771 (copper alloy) and the standard orifice plate material is SUS303 (stainless steel) for both standard and options.

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
Outdoor
SpecFld
Custom
Ending

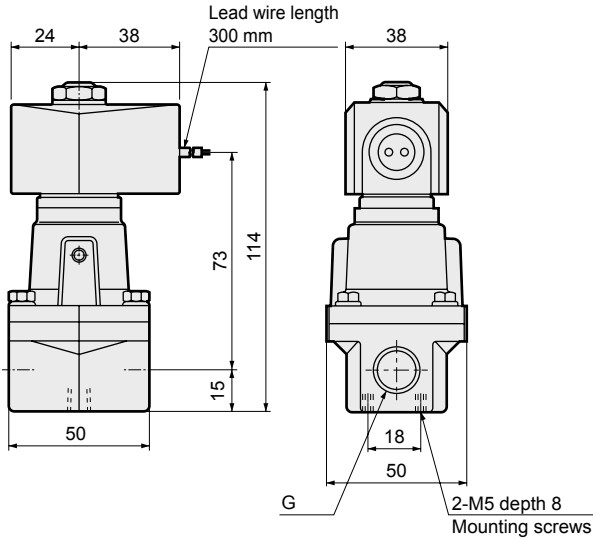
AP11/AP12 Series

Dimensions: AP11 Series



- Open frame lead wire
AP11-8A/10A-*

3A
4A
5A

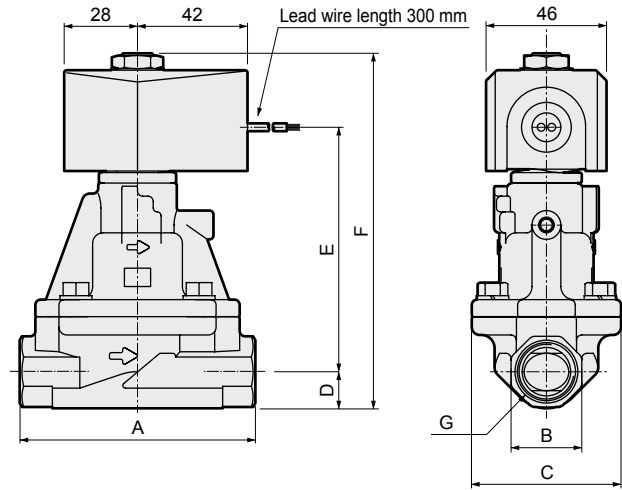


*1: The dimensions are the same for port sizes of G and NPT threads.

Model No.	G
AP11-8A-*□A	Rc1/4
AP11-10A-*□A	Rc3/8

- Open frame lead wire
AP11-15A/20A/25A-*

3A
4A
5A



Model No.	A	B	C	D	E	F	G
AP11-15A-*□A	90	27	57	14	92.5	135.5	Rc1/2
AP11-20A-*□A	100	32	65	17	100.5	146.5	Rc3/4
AP11-25A-*□A	110	41	76	20.5	116	165.5	Rc1

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

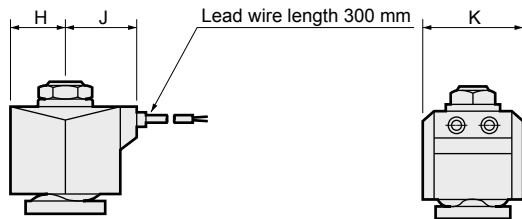
Optional dimensions: AP11 Series



- Grommet lead wire

AP11-8A to 25A-*

2C
6C



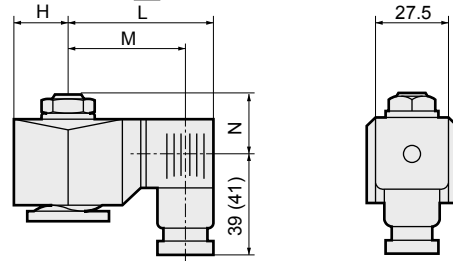
Model No.	H	J	K
AP11-8A to 10A-*2C	20	27	34
AP11-15A to 25A-*2C	23.5	30.5	38
AP11-8A to 25A-*6C	24	30.5	39

* Refer to the open frame lead wire dimensions above for common dimensions.

- With DIN terminal box

AP11-8A to 25A-*

2E
6G
H



Dimensions shown in () are for G1/2.

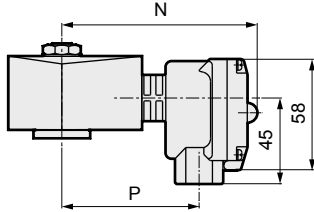
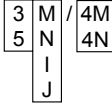
Model No.	H	L	M	N	Model No.	H	L	M	N
AP11-8A to 10A-*2□-AC	20	62	30.5 (30)	20.5	AP11-15A to 25A-*2□-AC	23.5	65.5	34 (33.5)	22
AP11-8A to 10A-*2□-DC	21	63.5	32 (31.5)	20.5	AP11-15A to 25A-*2□-DC	23.5	66	34.5 (34)	22
AP11-8A to 25A-*6□-DC	24	68	36.5 (36)	22					

Optional dimensions: AP11 Series



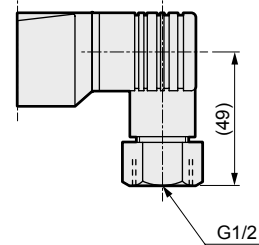
* Refer to the open frame lead wire dimensions on page 258 for common dimensions.

- Open frame + HP terminal box
AP11-8A to 25A-*

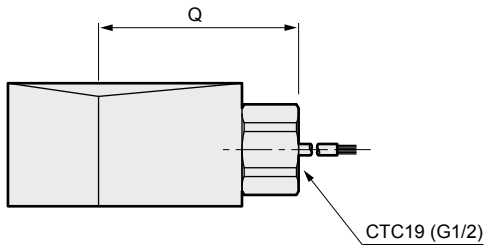


Model No.	N	P
AP11-8A to 10A-*□□	99	68
AP11-15A to 25A-*□□	103	72

- DIN terminal box with small lamp + conduit (G1/2)
AP11-8A to 25A-*



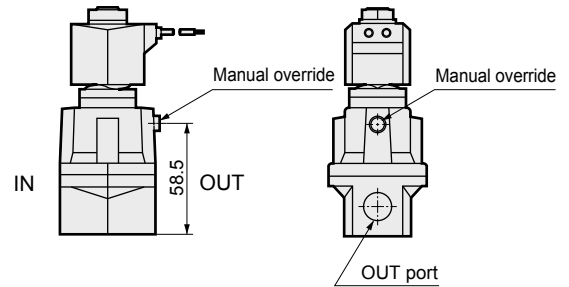
- Open frame + conduit
AP11-8A to 25A-*



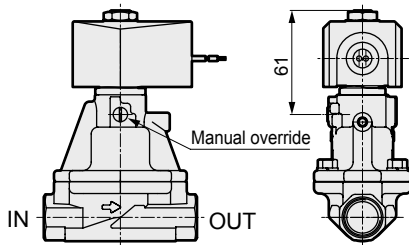
Dimensions shown in () are for G1/2.

Model No.	Q
AP11-8A to 10A	53(56)
AP11-15A to 25A	57(60)

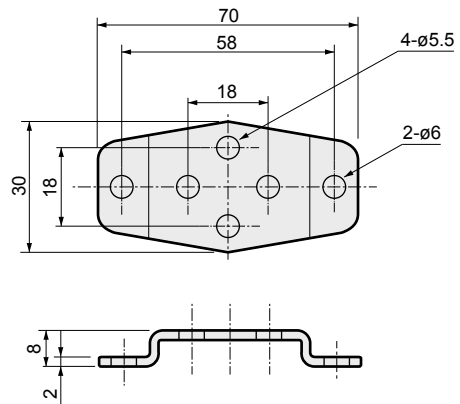
- Manual override (locking)
AP11-8A/10A-***



- Manual override (locking)
AP11-15A/20A/25A-***



- Mounting plate
AP11-8A/10A-***



Mounting plate model	Compatibility
AP11-8A-MOUNT-PLATE-KIT	● AP11-8A Series
AP11-10A-MOUNT-PLATE-KIT	● AP11-10A Series

* Material: Steel/Zinc plated

* Mounting plate is not available for port size 15 (1/2) to 25 (1).

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
SøB/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
Outdoor
SpecFld
Custom
Ending

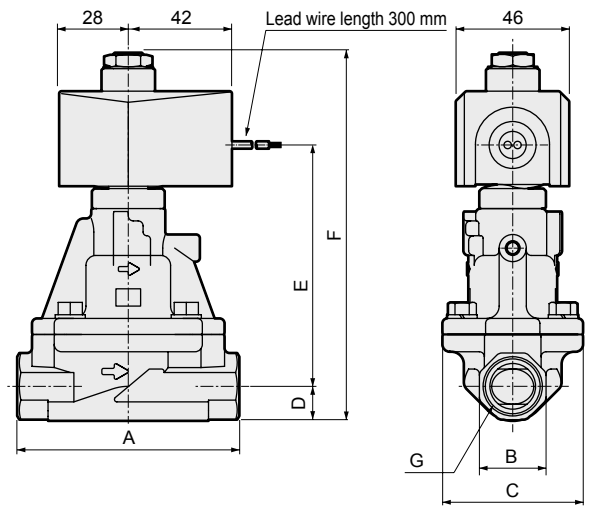
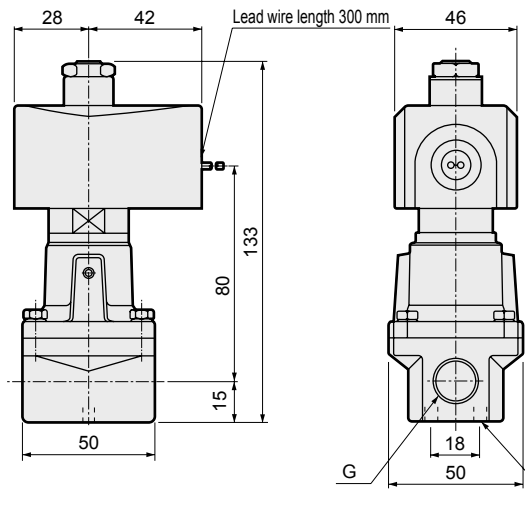
AP11/AP12 Series

- 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-Combus
- Auto-Water
- Outdoor
- SpecFld
- Custom
- Ending

Dimensions: AP12 Series

● Open frame lead wire
AP12-8A/10A-* 3A
4A
5A

● Open frame lead wire
AP12-15A/20A/25A-* 3A
4A
5A



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

Model No.	G
AP12-8A-*□A	Rc1/4
AP12-10A-*□A	Rc3/8

Model No.	A	B	C	D	E	F	G
AP12-15A-*□A	90	27	57	14	96.5	148.5	Rc1/2
AP12-20A-*□A	100	32	65	17	104.5	159.5	Rc3/4
AP12-25A-*□A	110	41	76	20.5	120	178.5	Rc1

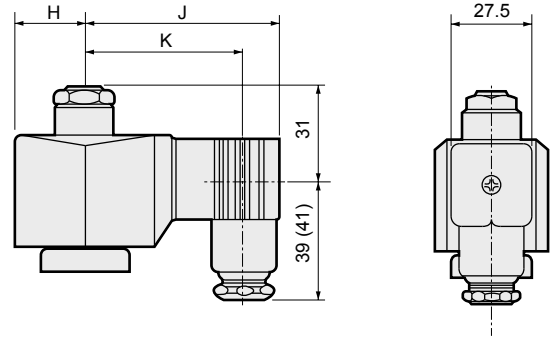
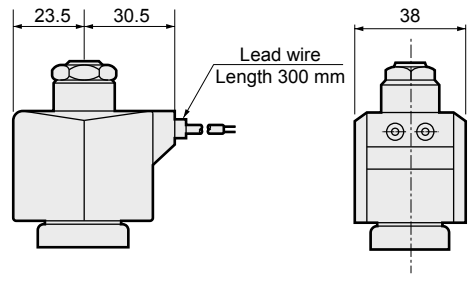
*1: The dimensions are the same for port sizes of G and NPT threads.

Optional dimensions: AP12 Series

● Grommet lead wire
AP12-8A to 25A-* 2C

* Refer to the open frame lead wire dimensions above for common dimensions.

● With DIN terminal box
AP12-8A to 25A-* 2E
2G
2H



Dimensions shown in () are for G1/2.

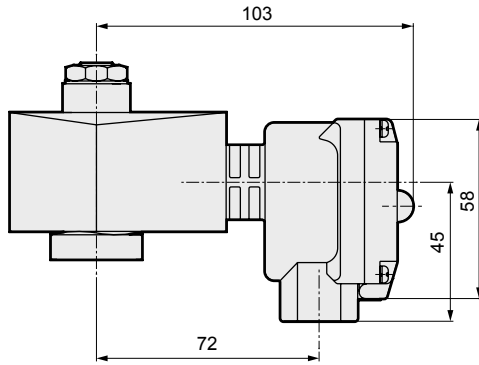
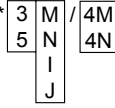
Voltage	H	J	K
AC	23.5	65.5	54 (53.5)
DC	28	72	60.5 (60)

Optional dimensions: AP12 Series

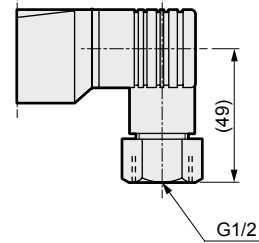


* Refer to the open frame lead wire dimensions on page 260 for common dimensions.

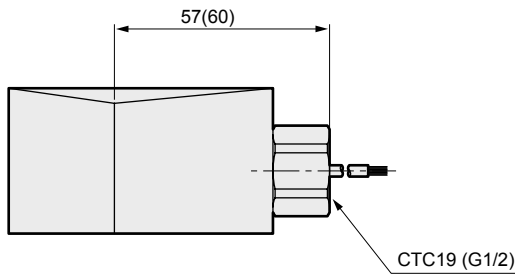
- Open frame + HP terminal box
AP12-8A to 25A-*



- DIN terminal box with small lamp + conduit (G1/2)
AP12-8A to 25A-*

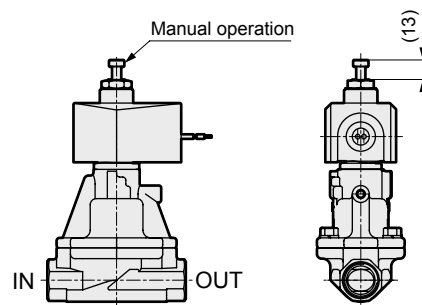


- Open frame + conduit
AP12-8A to 25A-*

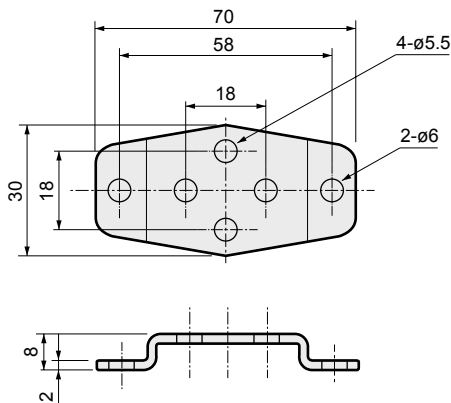


Dimensions shown in () are for G1/2.

- Manual override (locking)
AP12-15A/20A/25A-***



- Mounting plate
AP12-8A/10A-***



Mounting plate model	Compatibility
AP12-8A-MOUNT-PLATE-KIT	● AP12-8A Series
AP12-10A-MOUNT-PLATE-KIT	● AP12-10A Series

* Material: Steel/Zinc plated

* Mounting plate is not available for port size 15 (1/2) to 25 (1).

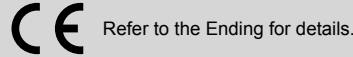
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/AD
APK/ADK
DryAir
EX-XPLNprf
XPLNprf
HVB/HVL
S/B/NAB
LAD/NAD
Water-Rela
NP/NAP/NVP
SNP
CHB/G
MXB/G
Other valves
SWD/MWD
DustColl
CVE/CVSE
CCH/CPE/D
LifeSci
Gas-Combus
Auto-Water
Outdoor
SpecFld
Custom
Ending



Pilot operated 2-port solenoid valve
General purpose

AP21/AP22 Series

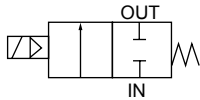
- NC (open when energized), NO (closed when energized)
- Port size: Rc1¹/₄ to Rc2, 32 to 50 flange
- Piston drive



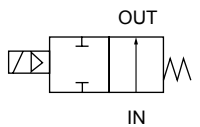
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/
AD
APK/
ADK
DryAir
EX-
XPLNprf
XPLNprf
HVB/
HVL
S ◇ B/
NAB
LAD/
NAD
Water-
Rela
NP/NAP/
NVP
SNP
CHB/G
MXB/G
Other
valves
SWD/
MWD
DustColl
CVE/
CVSE
CCH/
CPE/D
LifeSci
Gas-
Combust
Auto-
Water
Outdoor
SpecFld
Custom
Ending

JIS symbol

- AP21: NC (open when energized)



- AP22: NO (closed when energized)



Common specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	Standard specifications	Optional specifications
Working fluid	Air/water/kerosene/oil (50 mm ² /s or less)	Steam
Working pressure differential MPa	0.05 to 1.2 (refer to max. working pressure differential in individual specifications.)	
Max. working pressure MPa	1.6 (≈230 psi, 16 bar)	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 operated poppet, piston drive	
Valve seat leakage (*2) cm ³ /min(ANR)	1 or less (air)	400 or less (air)
Mounting orientation	Free (within working pressure differential range)	
Body/seal material	Bronze/nitrile rubber	Bronze/PTFE

*1 : No freezing.

*2 : Pneumatic pressure used for measurement is 0.05 to 1.2 MPa for AP21 (NC [open when energized]), and 0.05 to 0.5 MPa for AP22 (NO [closed when energized]).

Individual specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	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 (50 mm ² /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		
NC (open when energized)																			
AP21-32A	Rc1 ¹ / ₄	35									100 VAC 50/60 Hz *6	18	15	29	24	6.7/5.7	11	3.5	
AP21-32F	32 flange																	7	
AP21-40A	Rc1 ¹ / ₂	43	0.05	1.2	0.6	1.0	0.6	0.6	0.6	1.0	200 VAC 50/60 Hz *6	18	15	29	24	6.7/5.7	*4	4.5	
AP21-40F	40 flange																	8	
AP21-50A	Rc2	53									12 VDC	18	15	29	24	6.7/5.7	*5	6	
AP21-50F	50 flange																	10	
NO (closed when energized)																			
AP22-32A	Rc1 ¹ / ₄	35									100 VAC 50/60 Hz *6	22	18	35	29	8.7/6.7	15.5	3.5	
AP22-32F	32 flange																	7	
AP22-40A	Rc1 ¹ / ₂	43	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	200 VAC 50/60 Hz *6	22	18	35	29	8.7/6.7	*4	4.5	
AP22-40F	40 flange																	8	
AP22-50A	Rc2	53									12 VDC	22	18	35	29	8.7/6.7	*4	6	
AP22-50F	50 flange																	10	

*1 : The model numbers above show 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 : Power consumption of coil housings 2E/2G/2H.

*5 : Power consumption of coil housings 6C/6E/6G/6H.

*6 : 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/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	-10 to 60 (*1)	-10 to 90 (*1)	-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)		400 or less (air)	

*1 : No freezing.

*2 : Pneumatic pressure used for measurement is 0.05 to 1.2 MPa for AP21 (NC [open when energized]), and 0.05 to 0.5 MPa for AP22 (NO [closed when energized]).

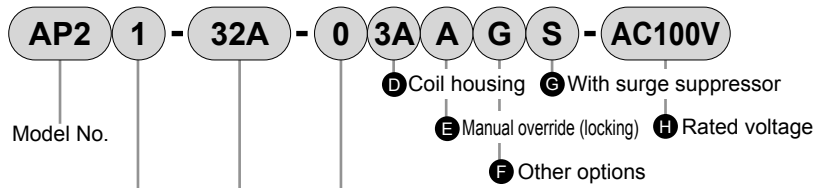
Flow characteristics

Model No.	Port size	Orifice size (mm)	Cv	Effective cross-sectional area (mm ²)
NC (open when energized)				
AP21-32A	Rc1 ¹ / ₄	35	25	460
AP21-32F	32 flange			
AP21-40A	Rc1 ¹ / ₂	43	34	625
AP21-40F	40 flange			
AP21-50A	Rc2	53	53	975
AP21-50F	50 flange			
NO (closed when energized)				
AP22-32A	Rc1 ¹ / ₄	35	25	460
AP22-32F	32 flange			
AP22-40A	Rc1 ¹ / ₂	43	34	625
AP22-40F	40 flange			
AP22-50A	Rc2	53	53	975
AP22-50F	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
Outdoor
SpecFld
Custom
Ending

AP21/AP22 Series

How to order



Code	Description
A Actuation	
1	NC (open when energized)
2	NO (closed when energized)
B Port size	
32A	Rc1 ¹ / ₄
32F	32 flange
40A	Rc1 ¹ / ₂
40F	40 flange
50A	Rc2
50F	50 flange

C Body/sealant combination					
	Body	Seal	O-ring	Treatment	Remarks
Std	Bronze	Nitrile rubber	Nitrile rubber	-	Air/water/kerosene/oil (up to 60°C)
		Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)
		PTFE	Fluoro rubber (*3)		Steam (When 4A/4M/4N is selected)
Option	Stainless steel	Nitrile rubber	Nitrile rubber		Air/water/kerosene/oil (up to 60°C)
		Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)
		PTFE	PTFE (*3)		Steam (When 4A/4M/4N is selected)
Option	Bronze	Nitrile rubber	Nitrile rubber	Oil-prohibited	Air/water/kerosene/oil (up to 60°C)
		Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)
		PTFE	Fluoro rubber (*3)		Steam (When 4A/4M/4N is selected)
	Stainless steel	Nitrile rubber	Nitrile rubber		Air/water/kerosene/oil (up to 60°C)
		Fluoro rubber	Fluoro rubber		Air/kerosene/oil (When 4A/4M/4N is selected)
	PTFE	PTFE (*3)	Steam (When 4A/4M/4N is selected)		

Refer to Intro Page 39 for reference on material combinations.

D to H
Refer to page 265 for details on the coil housing, other options and voltage, etc.

[Example of model No. 1] AP21-32A-02C-AC100V

Model : AP21

- A** Actuation : NC (open when energized)
- B** Port size : Rc1¹/₄
- C** Body/sealant combination : Body - bronze, sealant - nitrile rubber, O-ring - nitrile rubber
- D** Coil housing : Grommet lead wire
- E** to **G** : None
- H** Rated voltage : 100 VAC 50/60 Hz, 110 VAC 60 Hz

[Example of model No. 2] AP22-40F-H3AAS-AC200V

Model : AP22

- A** Actuation : NO (closed when energized)
- B** Port size : 40 flange
- C** Body/sealant combination : Body - bronze, sealant - nitrile rubber, O-ring - nitrile rubber (oil-prohibited)
- D** Coil housing : Open frame lead wire
- E** Manual override (locking) : Selected
- 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

- *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 **C**

- *3 : When using the PTFE valve seal with thermal class 180(H) coil, the O-ring material is fluoro rubber for steam.
- *4 : When Item **C** is C, F, K or N, Item **D** Coil housings 6C, 6E, 6G and 6H cannot be selected.


For Items ① to ④, the combinations indicated with codes are available.
 Note that if options for Items ⑤ to ⑧ are not required, they should be left blank.

① Coil housing		②	③ Other options					④	⑤ Rated voltage	
Description	Manual override (Locking)	Cable gland (marine cable gland)			Conduit (conduit piping)		With surge suppressor	Description		
		A-15a	A-15b	A-15c	CTC19	G1/2				
		3A	Open frame lead wire (IP65 equivalent)	A *9						
2C	Grommet lead wire	A						S	100 VAC, 200 VAC	
2E	With DIN terminal box (G1/2)	*9						S	100 VAC, 200 VAC	
2G	With DIN terminal box (Pg11)							S	12 VDC, 24 VDC, 48 VDC, 100 VDC	
2H	DIN terminal box with small lamp (Pg11)						H	S	100 VAC, 200 VAC, 24 VDC	
3M	With HP terminal box (G1/2)	A						S	100 VAC, 200 VAC, 12 VDC, 24 VDC, 48 VDC, 100 VDC	
3N	Open frame HP terminal box with lamp (G1/2)	*9	D	E	F			S	100 VAC, 200 VAC, 12 VDC, 24 VDC, 100 VDC	
3I	HP terminal box (IP65 or equivalent) (G1/2)							S	100 VAC, 200 VAC, 12 VDC, 24 VDC, 48 VDC, 100 VDC	
3J	HP term box, lamp (IP65, equiv) (G1/2)							S	100 VAC, 200 VAC, 12 VDC, 24 VDC, 100 VDC	
4A	Open frame Lead wire	A				G	H	S	100 VAC, 200 VAC	
4M	With HP terminal box (G1/2)	*9	D	E	F			S	100 VAC, 200 VAC	
4N	Open frame (Thermal class 180 (H)) HP terminal box with lamp (G1/2)							S	100 VAC, 200 VAC	
5A	Open frame Lead wire (IP65 or equivalent)	A				G	H	S	100 VAC, 200 VAC	
5M	With HP terminal box (G1/2)	*9	D	E	F			S	100 VAC, 200 VAC	
5N	Open frame (diode integrated) HP terminal box with lamp (G1/2)							S	100 VAC, 200 VAC	
5I	HP terminal box (IP65 or equivalent) (G1/2)							S	100 VAC, 200 VAC	
5J	Open frame (diode integrated) HP term box, lamp (IP65, equiv) (G1/2)							S	100 VAC, 200 VAC	
6C	Grommet lead wire 7W	A						S	12 VDC, 24 VDC	
6E	With DIN terminal box (G1/2) 7W	*9						S	12 VDC, 24 VDC	
6G	With DIN terminal box (Pg11) 7W							S	12 VDC, 24 VDC	
6H	DIN terminal box with small lamp (Pg11) 7W						H	S	24 VDC	

Refer to the following cautions for ① to ④.

2C 6C		● Grommet lead wire 300 mm
2E 2G 2H 6E 6G 6H		● DIN terminal box
3A 4A 5A		● Open frame Lead wire 300 mm ● 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 248 for coil selection.

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

⚠ Precautions for model No. selection

Notes for ①

- *5 : Coils for 5A/5M/5N/5I/5J have a diode to convert AC to DC voltage.
- *6 : A DC coil for steam is available for AP21. Contact CKD for more information.
- *7 : For 6C/6E/6G/6H, only AP21 is available.
- *8 : The coil housings 6C, 6E and 6G are 12 VDC and 24 VDC dedicated. 6H is 24 VDC dedicated.

Notes for ② to ④

- *9 : When Item ② is C, F, K or N, the manual override (Item ② A) is not available.
- *10 : For Item ③, select an option from D, E, F, G and H.
- *11 : 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.
- *12 : As standard, the surge suppressor is built into the coil with diode and the 24 VDC coil (Item ② 2H, 6H), so surge suppressor code S cannot be selected.
- *13 : Tropicalization (rust-proof coating) is available as a measure against rust. Contact CKD for more information.
 Note that tropicalization is not available when the manual override option (A) and the coil option 6C/6E/6G/6H are selected.

Notes for ⑤

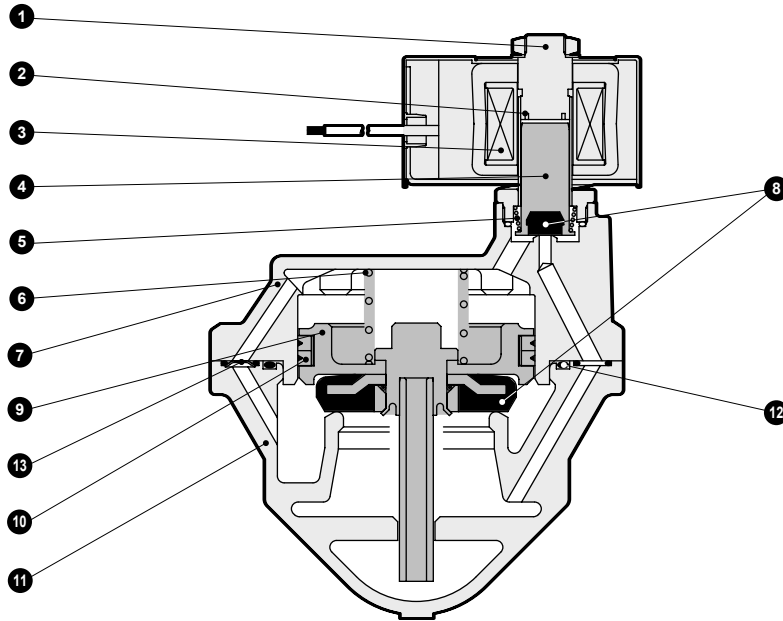
- *14 : 100 VAC coil is compatible with 100 VAC 50/60 Hz and 110 VAC 60 Hz, and 200 VAC coil is compatible with 200 VAC 50/60 Hz and 220 VAC 60 Hz. However, coils for Item ① 5A/5M/5N/5I/5J can be used with 100 VAC 50/60 Hz and 200 VAC 50/60 Hz only.
- *15 : For voltages other than above, contact CKD.
- *16 : 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
Outdoor
SpecFld
Custom
Ending

AP21/AP22 Series

Internal structure and parts list

● AP21 Series



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

() shows options.

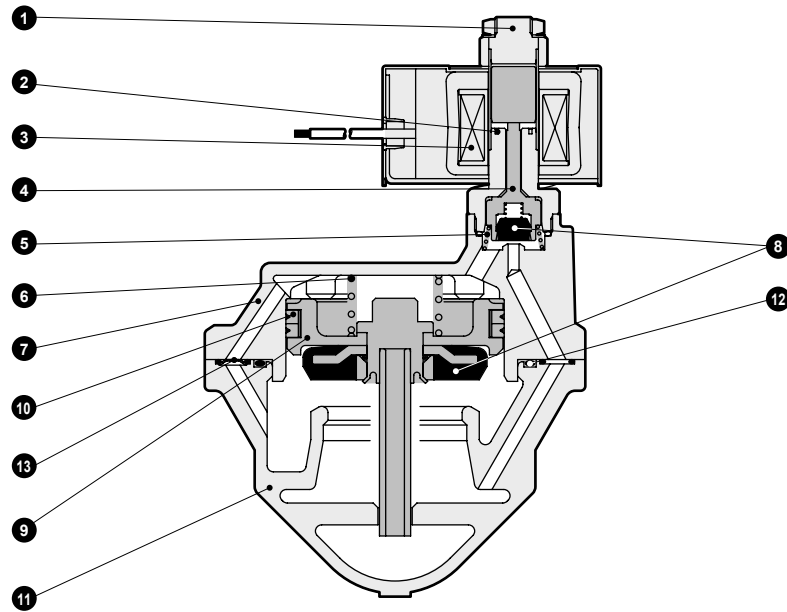
*1 : When the body/sealant combination code is other than O and H, or the coil housing code is 6C, 6E, 6G or 6H, the material is SUS405 or equivalent/SUS316L/SUS430.

*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◇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
- Outdoor
- SpecFld
- Custom
- Ending

Internal structure and parts list

● AP22 Series



No.	Part name	Material	
1	Plunger/core assembly	SUS405 or equiv./SUS316L/SUS304	Stainless steel
2	Shading coil	Cu (Ag for stainless steel body)	Copper (silver for stainless steel body)
3	Coil	-	-
4	NO valve	POM(PPS/SUS303/PFA)	Body/sealant combination When O/D/H/L: Polyacetal resin When B/E/J/M: Polyphenylene sulfide resin When C/F/K/N: Stainless steel/perfluoroalkoxy resin
5	Spring	SUS304	Stainless steel
6	Valve spring	SUS304	Stainless steel
7	Body	CAC408(SCS13)	Bronze casting (stainless steel casting)
8	Seal	NBR (FKM or PTFE)	Nitrile rubber (fluoro rubber or tetrafluoroethylene resin)
9	Main valve assembly	C3604/SUS303/SUS304 (SUS303/SUS304)	Stainless steel/copper alloy (stainless steel)
10	Seal ring set	SUS304/PTFE	Stainless steel/tetrafluoroethylene resin
11	Body	CAC408(SCS13)	Bronze casting (stainless steel casting)
12	O-ring	NBR(FKM, PTFE)	Nitrile rubber (fluoro rubber or tetrafluoroethylene resin)
13	Orifice plate	SUS304	Stainless steel

() shows options.

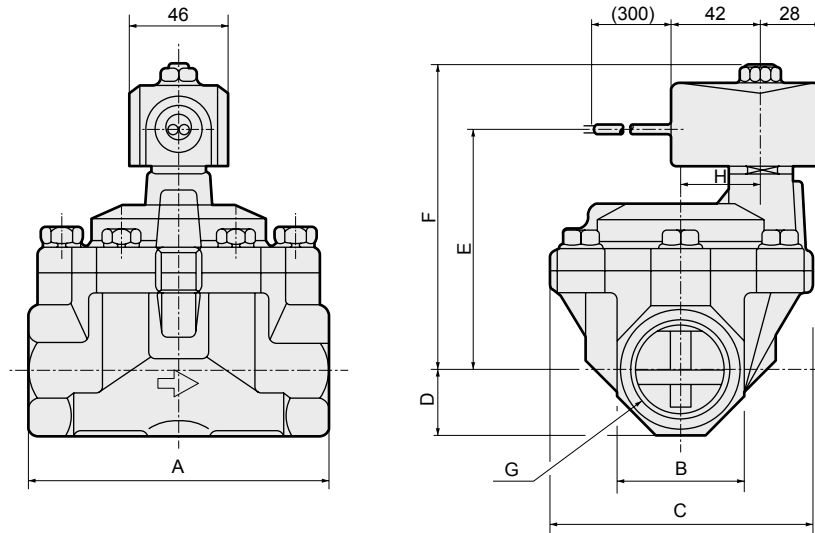
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S ♂ B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH/ CPE/D
LifeSci
Gas- Combus
Auto- Water
Outdoor
SpecFld
Custom
Ending

AP21/AP22 Series

- 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-
Combus
- Auto-
Water
- Outdoor
- SpecFld
- Custom
- Ending

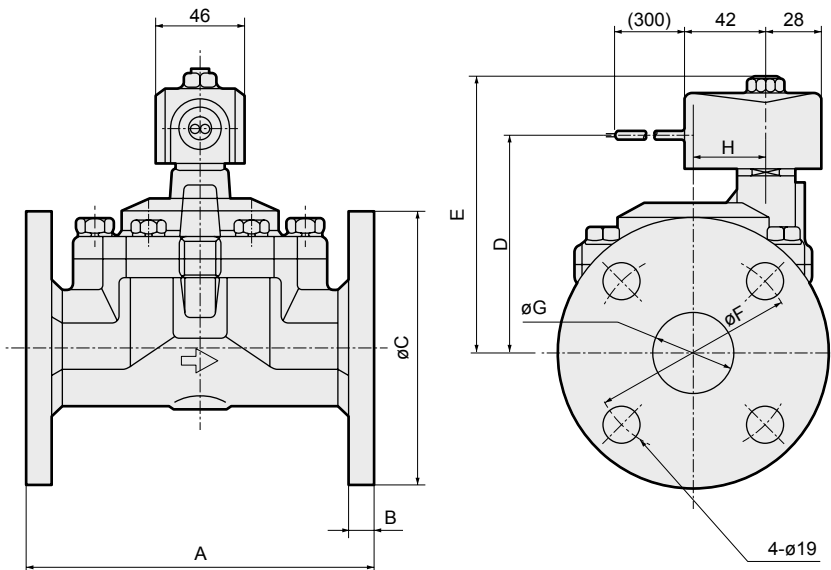
Dimensions: AP21 Series

- Open frame lead wire (Rc screw-in)
- AP21-32A/40A/50A-* 3A
4A
5A



Model No.	A	B	C	D	E	F	G	H
AP21-32A-*□A	125	54	112	27	106.5	135.5	Rc1 $\frac{1}{4}$	32
AP21-40A-*□A	140	60	122	30	112.5	141.5	Rc1 $\frac{1}{2}$	38
AP21-50A-*□A	160	74	132	37	120.5	149.5	Rc2	45

- Open frame lead wire (flange)
- AP21-32F/40F/50F-* 3A
4A
5A



Model No.	A	B	C	D	E	F	G	H
AP21-32F-*□A	170	12	135	106.5	135.5	100	36(35)	32
AP21-40F-*□A	180	14	140	112.5	141.5	105	42	38
AP21-50F-*□A	180	14	155	120.5	149.5	120	53(52)	45

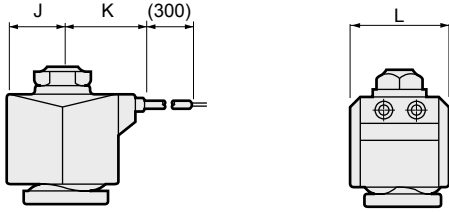
Dimensions shown in () are for stainless steel body.

Optional dimensions: AP21 Series



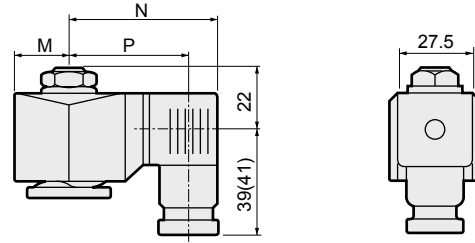
* Refer to the open frame lead wire dimensions on page 268 for common dimensions.

- Grommet lead wire
AP21-32[Ⓐ] to 50[Ⓐ] -* **2C** / **6C**



Model No.	J	K	L
AP21-32 [Ⓐ] to 50 [Ⓐ] -*2C	23.5	34.5	38
AP21-32 [Ⓐ] to 50 [Ⓐ] -*6C	24	30.5	39

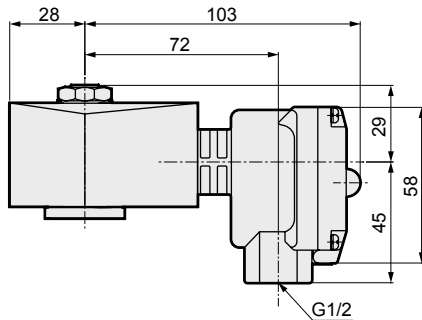
- With DIN terminal box
AP21-32[Ⓐ] to 50[Ⓐ] -* **2E** / **6G** / **H**



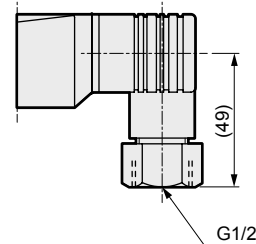
Dimensions shown in () are for G1/2.

Voltage	M	N	P
AC (2E/2G/2H)	23.5	65.5	54(53.5)
DC (2E/2G/2H)	23.5	66	54.5(54)
DC (6E/6G/6H)	24	68	56.5(56)

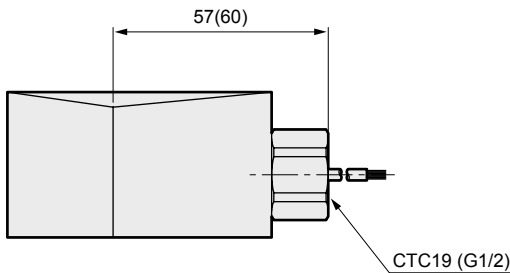
- Open frame + HP terminal box
AP21-32[Ⓐ] to 50[Ⓐ] -* **3M** / **4M** / **5N** / **4N** / **I** / **J**



- DIN terminal box with small lamp + conduit (G1/2)
AP21-32[Ⓐ] to 50[Ⓐ] -* **2H** / **H**

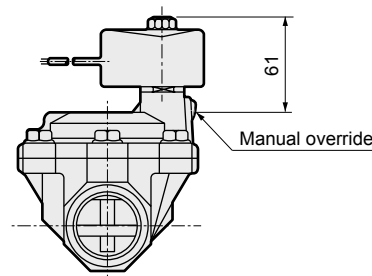


- Open frame + conduit
AP21-32[Ⓐ] to 50[Ⓐ] -* **3A** / **4A** / **5A** / **G** / **H**

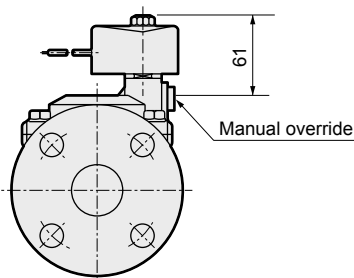


Dimensions shown in () are for G1/2.

- Manual override (locking, Rc screw-in)
AP21-32A/40A/50A-*** **A**



- Manual override (locking, flange)
AP21-32F/40F/50F-*** **A**



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
Outdoor
SpecFld
Custom
Ending

AP21/AP22 Series

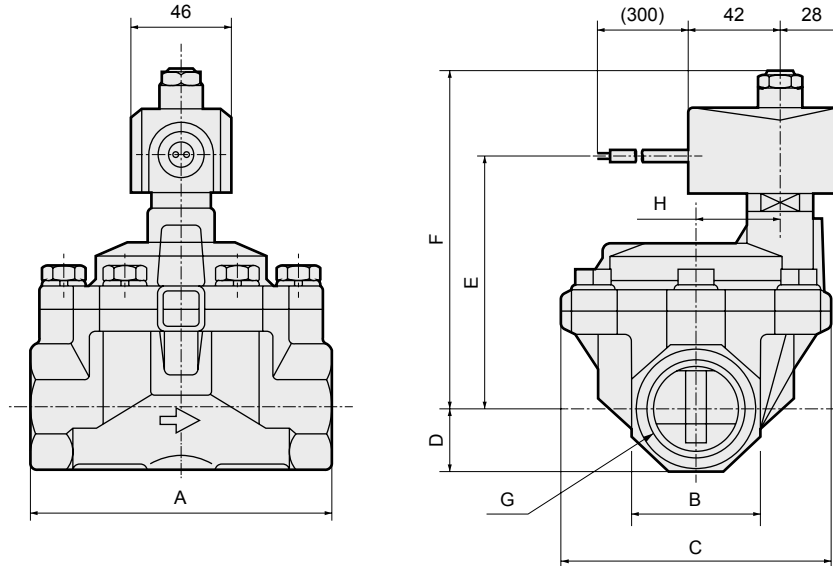


Dimensions: AP22 Series

- 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
- Outdoor
- SpecFld
- Custom
- Ending

● Open frame lead wire (Rc screw-in)
AP22-32A/40A/50A-*

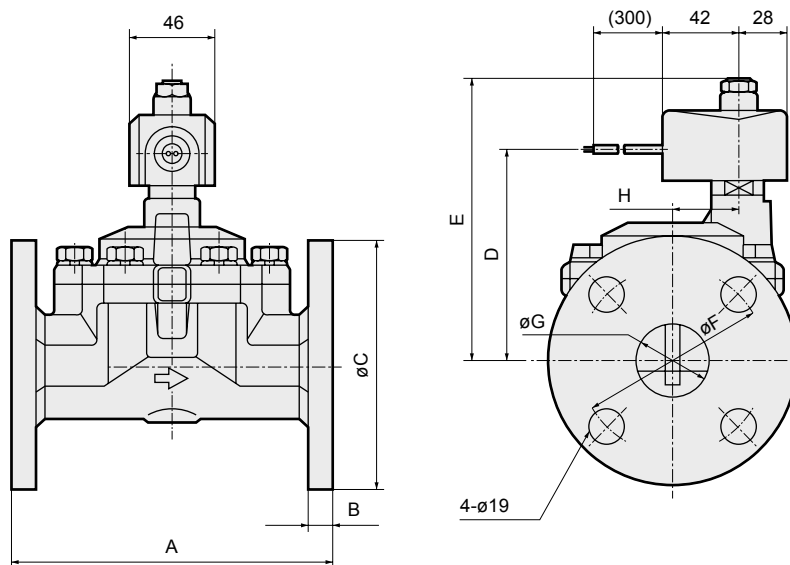
- 3A
- 4A
- 5A



Model No.	A	B	C	D	E	F	G	H
AP22-32A-*□A	125	54	112	27	110.5	149	Rc1 $\frac{1}{4}$	32
AP22-40A-*□A	140	60	122	30	116.5	155	Rc1 $\frac{1}{2}$	38
AP22-50A-*□A	160	74	132	37	124.5	163	Rc2	45

● Open frame lead wire (flange)
AP22-32F/40F/50F-*

- 3A
- 4A
- 5A



Model No.	A	B	C	D	E	F	G	H
AP22-32F-*□A	170	12	135	110.5	149	100	36(35)	32
AP22-40F-*□A	180	14	140	116.5	155	105	42	38
AP22-50F-*□A	180	14	155	124.5	163	120	53(52)	45

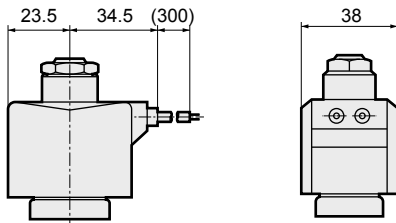
Dimensions shown in () are for stainless steel body.

Optional dimensions: AP22 Series

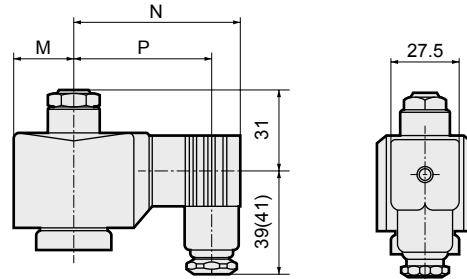


* Refer to the open frame lead wire dimensions on page 270 for common dimensions.

- Grommet lead wire
AP22-32^A to 50^A - * **2C**



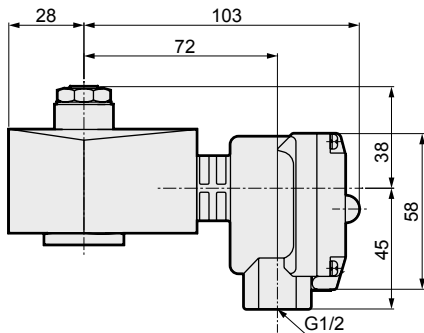
- With DIN terminal box
AP22-32^A to 50^A - * **2E**
2G
2H



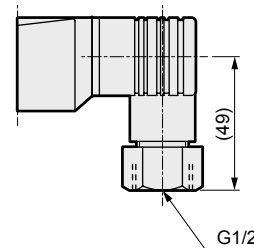
Dimensions shown in () are for G1/2.

Voltage	M	N	P
AC	23.5	65.5	54(53.5)
DC	28	72	60.5(60)

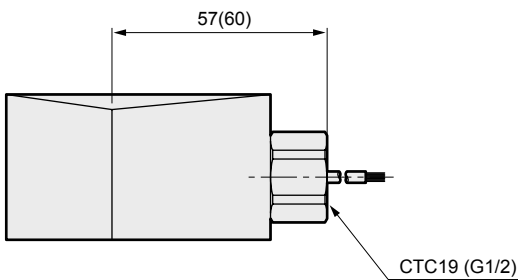
- Open frame + HP terminal box
AP22-32^A to 50^A - * **3 M** / **4M**
5 N / **4N**
I
J



- DIN terminal box with small lamp + conduit (G1/2)
AP22-32^A to 50^A - * **2H** **H**

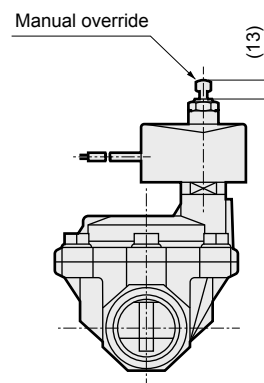


- Open frame + conduit
AP22-32^A to 50^A - * **3A** **G**
4A **H**
5A

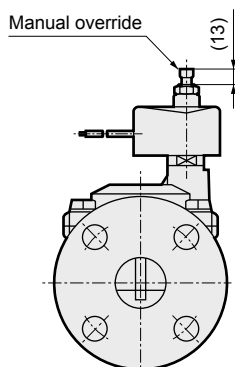


Dimensions shown in () are for G1/2.

- Manual override (locking, Rc screw-in)
AP22-32A/40A/50A-*** **A**



- Manual override (locking, flange)
AP22-32F/40F/50F-*** **A**



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
Outdoor
SpecFld
Custom
Ending