

Internal pilot 3-port solenoid valve

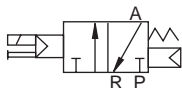
NP13/NP14 Series

- NC (Open when energized), NO (Closed when energized)
- Port size: Rc3/8 to Rc2

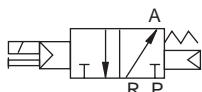


JIS symbol

- NC (open when energized)



- NO (closed when energized)



Common specifications

Item	NP13	NP14
Actuation	NC (Open when energized)	NO (Closed when energized)
Fluid pressure supply port	Port P	Port R
Working fluid	Compressed air	
Proof pressure MPa	1.2	
Working pressure MPa	0.2 to 0.8	
Fluid temperature °C	5 to 60	
Ambient temperature °C	10 A to 25 A: -5 to 60 and 32 A to 50 A: -5 to 40 for both NP13/NP14	
Thermal class	Class 130 (B)	
Lubrication	No lubrication (Use turbine oil Class 1 ISO VG32 for lubrication.)	
Valve seat leakage cm ³ /min	1 or less (at pneumatic pressure 0.2 to 0.8MPa)	
Valve structure	Internal pilot balance poppet structure	
Mounting orientation	Unrestricted	

Individual specifications

Item Model No.	Port size		Orifice size (mm)	Response time (ms)	Rating Voltage	Power consumption (W)	Weight (kg)
	P, A Port	Port R				DC	
NC (port P pressurization)							
NP13-10A	Rc3/8	Rc1/2	14.8 or equiv.	30 or less (*1)	24 VDC	4	0.7
NP13-15A	Rc1/2						0.7
NP13-20A	Rc3/4	Rc 1	25.4 or equiv.	60 or less (*1)			1.5
NP13-25A	Rc 1					1.5	
NP13-32A	Rc1 1/4	Rc 2	41.4 or equiv.	120 or less (*1)	24 VDC	8	4.5
NP13-40A	Rc1 1/2						4.5
NP13-50A	Rc 2						4.4
NO (port R pressurization)							
NP14-10A	Rc3/8	Rc1/2	14.8 or equiv.	30 or less (*1)	24 VDC	4	0.7
NP14-15A	Rc1/2						0.7
NP14-20A	Rc3/4	Rc 1	25.4 or equiv.	60 or less (*1)			1.5
NP14-25A	Rc 1					1.5	
NP14-32A	Rc1 1/4	Rc 2	41.4 or equiv.	120 or less (Note1)	24 VDC	8	4.5
NP14-40A	Rc1 1/2						4.5
NP14-50A	Rc 2						4.4

*1: The response times are values with supply pressure of 0.5MPa, without lubrication, and with the power ON. They depend on the pressure and the lubricant quality.

*2: Use the product within $\pm 10\%$ of the rated voltage.

Flow characteristics

Model No.	P→A				A→R			
	C[dm ³ /(s.bar)]	b	Cv	S(mm ²)	C[dm ³ /(s.bar)]	b	Cv	S(mm ²)
NC (port P pressurization)								
NP13-10A	15	0.31	3.4	-	16	0.28	3.4	-
NP13-15A	18	0.29	3.6	-	17	0.26	3.6	-
NP13-20A	35	0.27	8.4	-	41	0.21	8.6	-
NP13-25A	-	-	8.6	200	-	-	9.0	210
NP13-32A	-	-	25.8	600	-	-	26.2	610
NP13-40A	-	-	27.0	630	-	-	26.6	620
NP13-50A	-	-	28.2	660	-	-	27.0	630
Model No.	R→A				A→P			
	C[dm ³ /(s.bar)]	b	Cv	S(mm ²)	C[dm ³ /(s.bar)]	b	Cv	S(mm ²)
NO (port R pressurization)								
NP14-10A	15	0.31	3.4	-	15	0.33	3.4	-
NP14-15A	17	0.30	3.6	-	18	0.31	3.6	-
NP14-20A	41	0.21	8.6	-	35	0.27	8.4	-
NP14-25A	-	-	9.0	210	-	-	8.6	200
NP14-32A	-	-	26.2	610	-	-	25.8	600
NP14-40A	-	-	26.6	620	-	-	27.0	630
NP14-50A	-	-	27.0	630	-	-	28.2	660

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

Compatibility table by variation

	NP13/NP14
Bore size	Rc3/8 to Rc1
P4	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

*1: Coil option is 2G, 2H, 2GS, 2HS only.

*2: Voltage: 24 VDC only.

*3: Rc1 1/4 to Rc2 is a made-to-order product.

How to order

NP1 3 - 15A - 1 2G S - 3 - P4

Model No.

A Actuation

B Port size

C Body/sealant combination

D Coil housing

*1

E Other Option

*2

F Rated voltage

Code		Description
A Actuation		
3	NC (Normally Closed)	
4	NO (closed when energized)	
B Port size		
10 A	Rc 3/8	
15 A	Rc 1/2	
20A	Rc 3/4	
25 A	Rc 1	
32 A	Rc 1 1/4	(Made-to-order product)
40 A	Rc 1 1/2	(Made-to-order product)
50 A	Rc 2	(Made-to-order product)
C Body/sealant combination		
	Body	Seal
1	Aluminum	Nitrile rubber
D Coil housing		
2G	Option	DIN terminal box (Pg thread)
2H		DIN terminal box with lamp (Pg thread)
E Other options		
Blank	No option	
S	With surge suppressor	
F Rated voltage		
3	24 VDC	

⚠ Precautions for model No. selection

*1: Pg thread of the DIN terminal box is Pg9 for port size 10A to 25A, and Pg11 for 32A to 50A.

*2: The surge suppressor is mounted in the terminal box when the coil is with terminal box.

*3: Manual override (non-locking) is provided as standard.

P4
Series

Pneumatic actuator
Pneumatic cylinders
Hand/Chuck
Related products
Cylinder Switch

Vacuum components
Pneumatic valves

Clean air components
controller

Speed
Fitting

Auxiliary valve
Silencer
Tube

Gas generator

Fluid control components

Electric actuator
Motor specification
Motorless specifications

General Purpose Valves
Catalog No. CB-03-1SA

Air operated 3-port valve

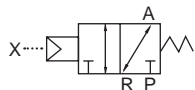
NAP11 Series

- Universal
- Port size: Rc3/8 to Rc2



JIS symbol

- Universal



Common specifications

Item	NAP11
Actuation	Universal
Working fluid	Compressed air, low vacuum
Proof pressure MPa	1.2
Working pressure MPa	0 to 0.8 (when using with vacuum, 1.3×10^2 to 8×10^5 Pa(abs))
Fluid temperature °C	5 to 60
Ambient temperature °C	-5 to 60
Lubrication	No lubrication (use turbine oil Class 1 ISO VG32 for lubrication.)
Valve seat leakage cm ³ /min	1 or less (at pneumatic pressure 0.02 to 0.8 MPa)
Valve structure	External pilot balance poppet structure
Mounting orientation	Unrestricted
Pilot fluid	Air
Pilot pressure MPa	0.35 to 0.7
Pilot port size (port X)	Rc1/8

Individual specifications

Item Model No.	Port size		Orifice size (mm)	Response time (ms)	Weight (kg)
	P, A Port	Port R			
NAP11-10A	Rc3/8	Rc1/2	14.8 or equiv.	30 or less	0.6
NAP11-15A	Rc1/2			(*1)	0.6
NAP11-20A	Rc3/4	Rc 1	25.4 or equiv.	60 or less	1.4
NAP11-25A	Rc 1			(*1)	1.4
NAP11-32A	Rc1 1/4	Rc 2	41.4 or equiv.	120 or less (*1)	4.2
NAP11-40A	Rc1 1/2				4.2
NAP11-50A	Rc 2				4.1

*1: The response times are values with supply pressure of 0.5 MPa, without lubrication, and with the power ON. They depend on the pressure and the lubricant quality.

How to order

NAP1 1 - **15A** - 1 - P4

Model No.

A Actuation

B Port size

C Body/sealant combination

Compatibility table by variation

	NAP11
Port size	Rc3/8 to 2
P4	●

●: Applicable models ○: Semi-applicable models ▲: Contact CKD for details. □: Not applicable

Code	Description	
A Actuation		
1	Universal	
B Port size		
10A	Rc 3/8	
15A	Rc 1/2	
20A	Rc 3/4	
25A	Rc 1	
32A	Rc 1 1/4	
40A	Rc 1 1/2	
50A	Rc 2	
C Body/Sealant combination		
	Body	Seal
1	Aluminum	Nitrile rubber



Air operated 3-port solenoid valve

NVP11 Series

- Universal
- Port size: Rc3/8 to Rc2



P4
Series

Pneumatic actuator
Pneumatic cylinders
Hand/Chuck
Related products
Cylinder Switch

Vacuum components
Pneumatic valves

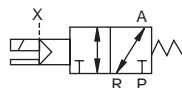
Pneumatic auxiliary components
Clean air components
Speed controller
Fitting
Auxiliary valve
Silencer
Tube

Gas generator
Fluid control components

Electric actuator
Motor
Motorless specifications

JIS symbol

- Universal



Common specifications

Item	NVP11
Actuation	Universal
Working fluid	Compressed air, low vacuum
Proof pressure MPa	1.2
Working pressure MPa	0 to 0.8 (when using with vacuum, 1.3×10^2 to 8×10^5 Pa(abs))
Fluid temperature °C	5 to 60
Ambient temperature °C	10 A to 25 A: -5 to 60 and 32 A to 50 A: -5 to 40
Thermal class	Class 130 (B)
Lubrication	No lubrication (Use turbine oil Class 1 ISO VG32 for lubrication.)
Valve seat leakage cm ³ /min	1 or less (at pneumatic pressure 0.02 to 0.8 MPa)
Valve structure	External pilot balance poppet structure
Mounting orientation	Unrestricted
Pilot fluid	Air
Pilot pressure MPa	0.35 to 0.7
Pilot port size (port X)	Rc1/8

Individual specifications

Item	Port size		Orifice size (mm)	Response time (ms)	Rated voltage	Power consumption (W)	Weight (kg)
Model No.	P, A Port	Port R				DC	
NVP11-10A	Rc3/8	Rc1/2	14.8 or equiv.	30 or less (*1)	24 VDC	4	0.7
NVP11-15A	Rc1/2						0.7
NVP11-20A	Rc3/4	Rc 1	25.4 or equiv.	60 or less (*1)			1.5
NVP11-25A	Rc 1						1.5
NVP11-32A	Rc1 1/4	Rc 2	41.4 or equiv.	120 or less (*1)		8	4.5
NVP11-40A	Rc1 1/2						4.5
NVP11-50A	Rc 2						4.4

*1: The response times are values with supply pressure of 0.5 MPa, without lubrication, and with the power ON. They depend on the pressure and the lubricant quality.

*2: Use the product within $\pm 10\%$ of the rated voltage.

How to order

NVP1 1 - **15A** - 1 **2G** **S** - 3 - **P4**

Model No.

A Actuation

B Port size

C Body/sealant combination

D Coil housing

*1

E Other options

*2

F Rated voltage



Precautions for model No. selection

*1: Pg thread of the DIN terminal box is Pg9 for a port size of 10A to 25A and Pg11 for 32A to 50A.

*2: The surge suppressor is mounted in the terminal box when the coil is with terminal box.

*3: Manual override (non-locking) is provided as standard.

Compatibility table by variation

	NVP11
Port size	Rc3/8 to 2
P4	●

- : Applicable models
- : Semi-applicable models
- ▲: Contact CKD for details.
- : Not applicable

*1: Coil option is 2G, 2H, 2GS, 2HS only.

*2: Voltage: 24 VDC only.

*3: Rc1 1/4 to Rc2 is a made-to-order product.

Code	Description	
A Actuation		
1	Universal	
B Port size		
10A	Rc 3/8	
15A	Rc 1/2	
20A	Rc 3/4	
25A	Rc 1	
32A	Rc 1 1/4	(Made-to-order product)
40A	Rc 1 1/2	(Made-to-order product)
50A	Rc 2	(Made-to-order product)
C Body/sealant combination		
	Body	Seal
1	Aluminum	Nitrile rubber
D Coil housing		
2G	Option	DIN terminal box (Pg thread)
2H		DIN terminal box with lamp (Pg thread)
E Other options		
Blank	No option	
S	With surge suppressor	
F Rated voltage		
3	Standard	24 VDC