



3-port solenoid valve with spool position detection

# SNP Series

● Port size: Rc3/8 to Rc3/4



## Specifications

Model	SNP		
	Rc3/8	Rc1/2	Rc3/4
Port size			
Actuation	NC		
Fluid pressure supply port	P-port		
Working fluid	Compressed air		
Proof pressure MPa	1.05 (≈150 psi, 10.5 bar)		
Working pressure range MPa	0.2 (≈29 psi, 2 bar) to 0.7 (≈100 psi, 7 bar)		
Fluid temperature °C	5 (41°F) to 60 (140°F)		
Ambient temperature °C	-5 (23°F) to 60 (140°F)		
Weight kg	0.8(1.7) *1		1.8(3.7) *1
Orifice size mm	14.8 or equiv.		25.4 or equiv.
Valve seat leakage	1 or less (at pneumatic pressure 0.2 (≈29 psi, 2 bar) to 0.7 MPa (≈100 psi, 7 bar))		
Valve structure	Internal pilot balance poppet structure		
Mounting orientation	Unrestricted		

\*1: Values in ( ) are the weight for modules

## Electrical specifications

Rated voltage (*2)	100 VAC (50/60 Hz) · 110 VAC (60 Hz), 200 VAC (50/60 Hz) · 220 V (60 Hz), 24 VDC		
Apparent power (VA)	When holding	3.6 (50 Hz), 2.8 (60 Hz)	
	When starting	11 (50 Hz), 9 (60 Hz)	
Power consumption (W)	AC	1.9 (50 Hz), 1.5 (60 Hz)	
	DC	2.0	
Thermal class	B		
Degree of protection (IEC standards 529)	DIN terminal box (Pg 9)		IPX5
	DIN terminal box (M12-4P connector)		

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

\*3: Contact CKD for details on reliability data (B10).

## SNP Limit switch specifications

Limit switch specifications			
Manufacturer model	D4N-1B31	D4N-9B31	
Terminal	Pg13.5	M12-4P connector	
Contact resistance	25 mΩ or less		
Minimum applicable load	5 VDC 1 mA resistance load		
Rated insulation voltage [1 to 5 V]	300		
Insulation resistance MΩ	100		
Electric shock protection class	Class II		
Pollution degree (working environment)	3 (EN60947-5-1)		
Conditional short-circuit current A	100		

\* Refer to the manufacturer's catalog for details.

## Flow characteristics

Model No.		P→A		A→R	
		C[dm <sup>3</sup> /(s/bar)]	S(mm <sup>2</sup> )	C[dm <sup>3</sup> /(s/bar)]	S(mm <sup>2</sup> )
Single unit	SNP-10A	13	64	14	70
	SNP-15A	15	76	16	80
	SNP-20A	34	170	36	180
2 stations	SNP-10A	10	50	14	70
	SNP-15A	12	59	16	80
	SNP-20A	26	130	36	180

### How to order

**SNP - 1R - 15A - 0 2HS L B3 S1 - 1**

**A** Station No.

**B** Port size

**C** Sealant

**D** Coil option

**E** Limit switch

**F** Bracket  
\*1

**G** Silencer  
\*2

**H** Voltage

### ⚠ Precautions for model No. selection

- \*1 : The bracket can be selected when station No. **A** is "2".
- \*2 : Silencer is attached to the product

[Example of model No.]

**SNP-1R-15A-02HSLB3S1-1**

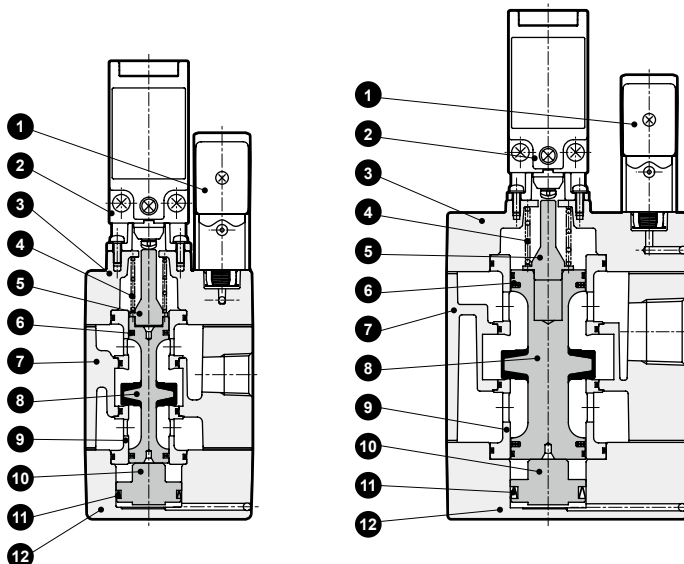
- A** Station No. : Single unit (terminal box right-facing)
- B** Port size : Rc1/2
- C** Sealant : NBR
- D** Coil option : DIN terminal box with lamp/surge suppressor
- E** Limit switch : Pg13.5
- F** Bracket : With bracket
- G** Silencer : Sintered metal
- H** Voltage : 100 VAC 50 Hz/60 Hz

Code	Content			
<b>A Station No.</b>				
<b>1R</b>	Single unit (terminal box right-facing)			
<b>1L</b>	Single unit (terminal box left-facing)			
<b>2</b>	2 modules			
<b>B Port size</b>				
<b>10A</b>	Rc3/8			
<b>15A</b>	Rc1/2			
<b>20A</b>	Rc3/4			
<b>C Sealant</b>				
<b>0</b>	NBR			
<b>D Coil option</b>				
<b>2G</b>	DIN terminal box			
<b>2HS</b>	DIN terminal box with lamp/surge suppressor			
<b>2J</b>	DIN terminal box (M12-4P connector)			
<b>2KS</b>	DIN terminal box with lamp/surge suppressor (M12-4P connector)			
<b>E Limit switch</b>				
<b>L</b>	Pg13.5 (D4N-1B31: OMRON)			
<b>M</b>	M12-4P connector (D4N-9B31: OMRON)			
<b>F Bracket</b> *1				
		<b>10A</b>	<b>15A</b>	<b>20A</b>
<b>Blank</b>	No option	●	●	●
<b>B3</b>	With bracket (2000 Series, 3000 Series)	●	●	
<b>B4</b>	With bracket (4000 Series)	●	●	
<b>B8</b>	With bracket (8000 Series)			●
<b>G Silencer</b>				
<b>Blank</b>	No option			
<b>S1</b>	Sintered metal			
<b>S2</b>	Resin			
<b>H Voltage</b>				
<b>1</b>	100 VAC 50 Hz/60 Hz / 110 VAC 60 Hz			
<b>2</b>	200 VAC 50 Hz/60 Hz / 220 VAC 60 Hz			
<b>3</b>	24 VDC			

### Internal structure and parts list

● SNP-1\*-10A/15A

● SNP-1\*-20A

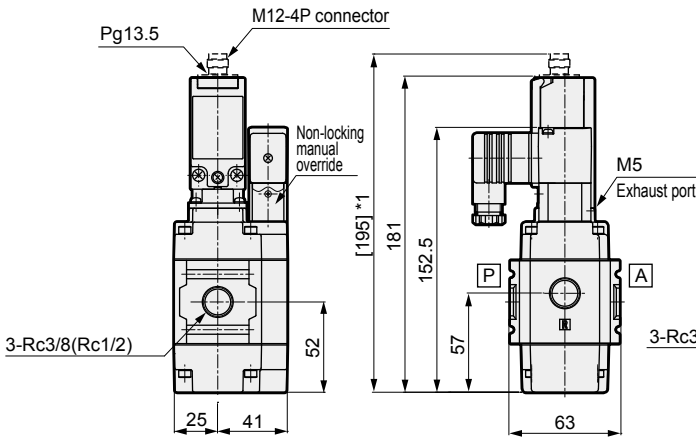


No.	Part name	Material
1	Pilot solenoid valve	-
2	Limit switch	-
3	Body	ADC12 Aluminum die-casting
4	Spring	SWP Piano wire
5	Indicator	A2017 Aluminum
6	PSD packing	NBR Nitrile rubber
7	Body	ADC12 Aluminum die-casting
8	Valve stem	NBR, A2017 Nitrile rubber, aluminum
9	Valve seat	A5056 Aluminum
10	Piston	A2017 Aluminum
11	MY packing	NBR Nitrile rubber
12	Cap	ADC12 Aluminum die-casting

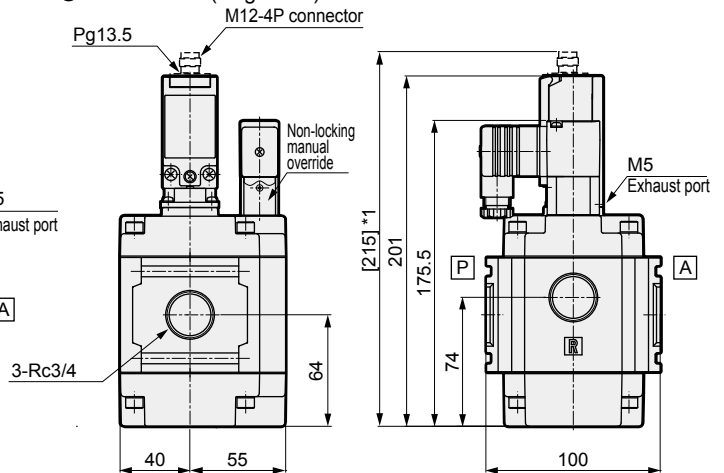
EXA  
FWD  
HNB/G  
USB/G  
FAB/G  
FGB/G  
FVB  
FWB/G  
FHB  
FLB  
AB  
AG  
AP/  
AD  
APK/  
ADK  
DryAir  
EX-  
XPLNprf  
XPLNprf  
HVB/  
HVL  
S/B/  
NAB  
LAD/  
NAD  
Water-  
Rela  
NP/NAP/  
NVP  
**SNP**  
CHB/G  
MXB/G  
Other  
valves  
SWD/  
MWD  
DustColl  
CVE/  
CVSE  
CCH /  
CPE/D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

## Dimensions

### ● SNP-1L-10A/15A (single unit)



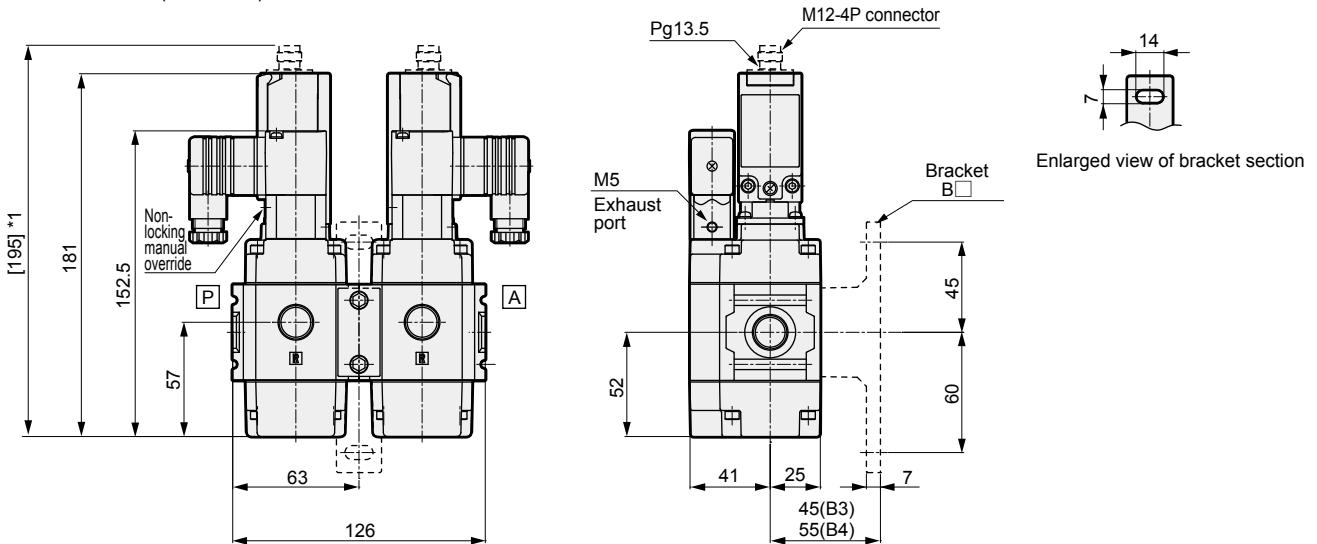
### ● SNP-1L-20A (single unit)



\*1 : [ ] shows dimensions when M12-4P connector (M) is selected

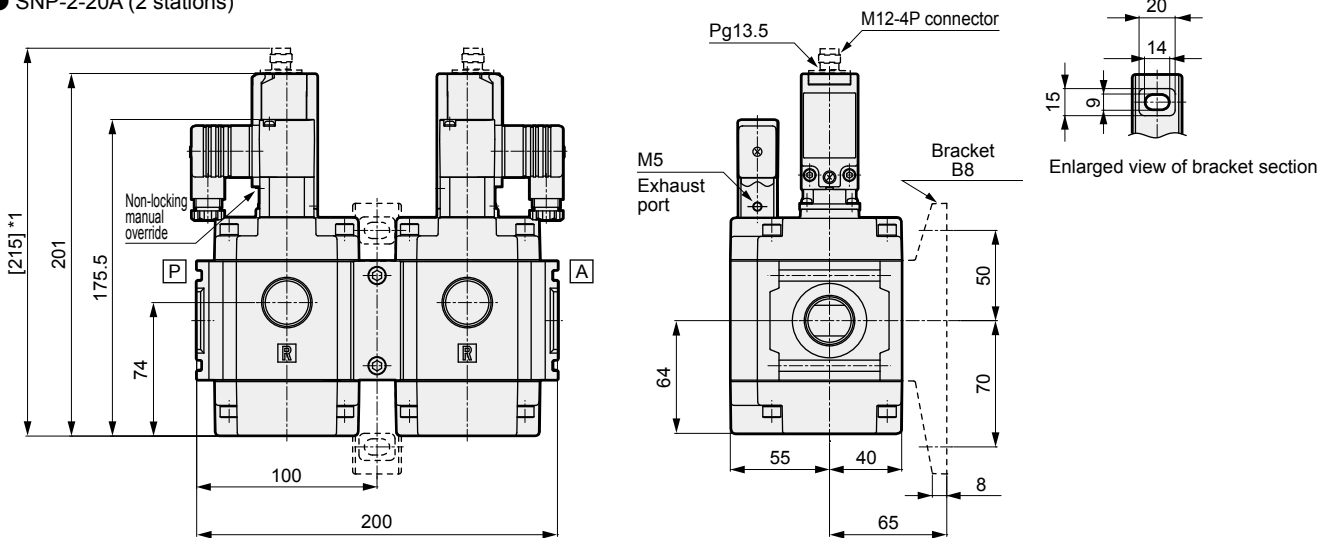
\*2 : For 1R, the wiring of the terminal box and limit switch is positioned to the right.

### ● SNP-2-10A/15A (2 stations)



\*1 : [ ] shows dimensions when M12-4P connector (M) is selected

### ● SNP-2-20A (2 stations)

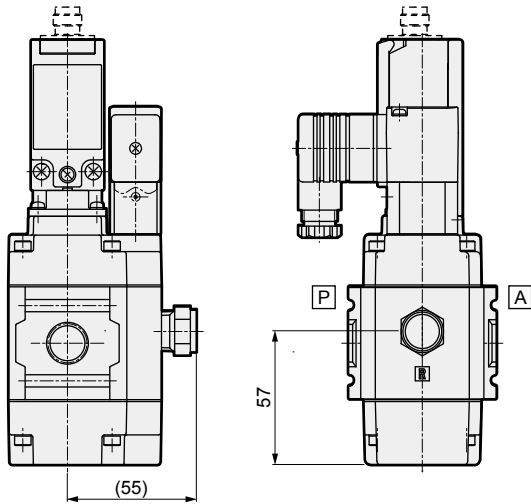


\*1 : [ ] shows dimensions when M12-4P connector (M) is selected

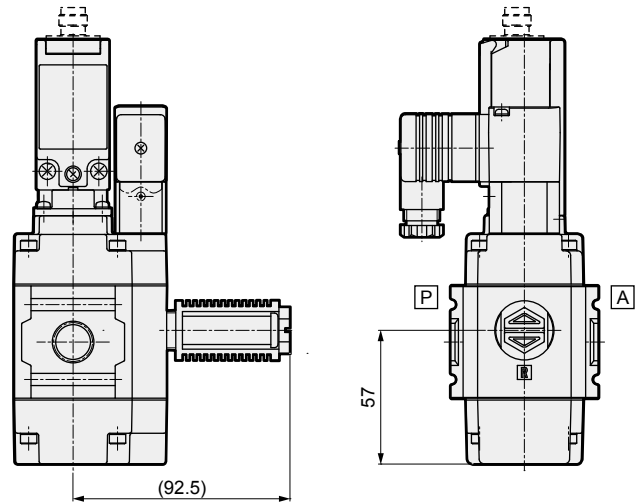
## Optional dimensions with silencer

\* Silencer is attached with the product.

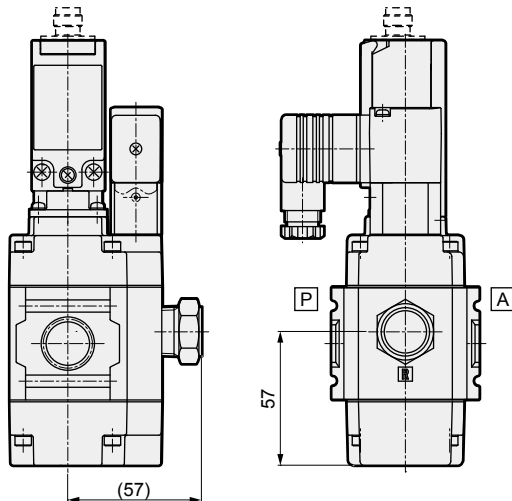
● SNP-1L-10A-\*S1



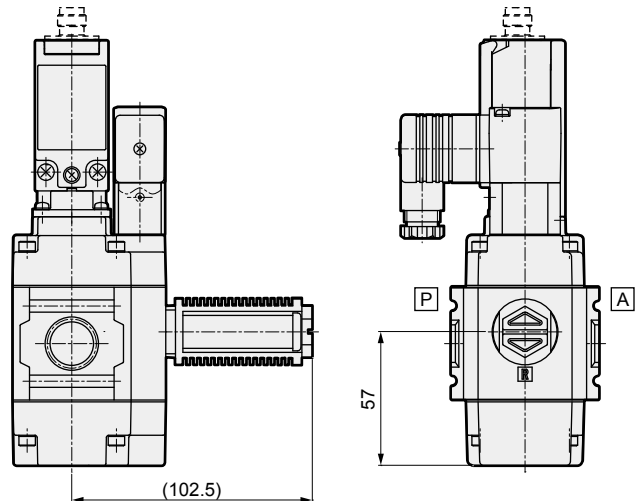
● SNP-1L-10A-\*S2



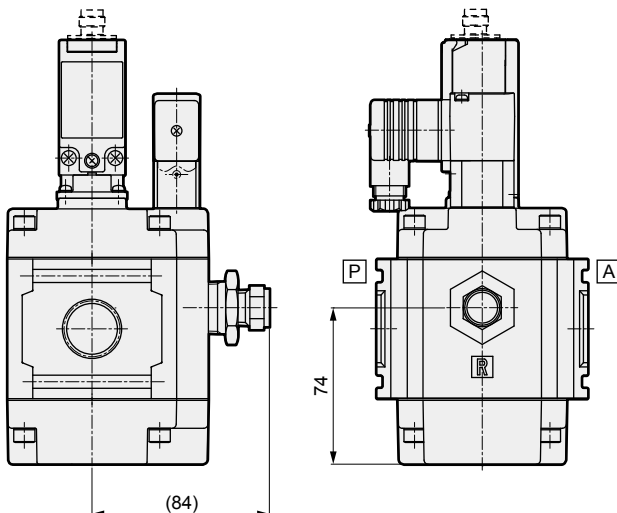
● SNP-1L-15A-\*S1



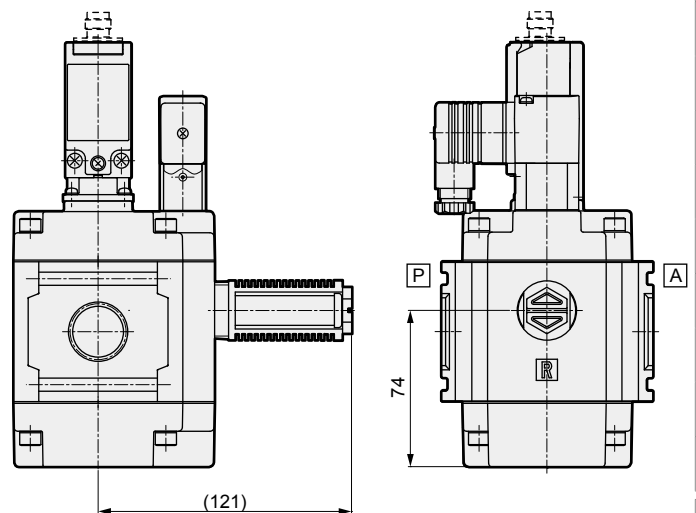
● SNP-1L-15A-\*S2



● SNP-1L-20A-\*S1



● SNP-1L-20A-\*S2



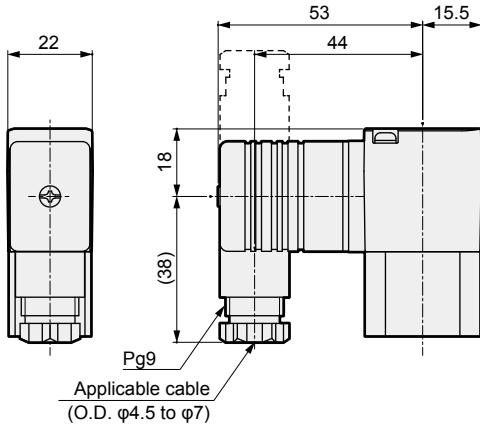
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S $\nabla$ B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
<b>SNP</b>
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH / CPE/D
LifeSci
Gas- Combus
Auto- Water
SpecFld
Custom
Ending

- 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
- NPNAP/  
NVP
- SNP**
- CHB/G
- MXB/G
- Other  
valves
- SWD/  
MWD
- DustColl
- CVE/  
CVSE
- CCH /  
CPE/D
- LifeSci
- Gas-  
Combus
- Auto-  
Water
- SpecFld
- Custom
- Ending

## Coil optional dimensions

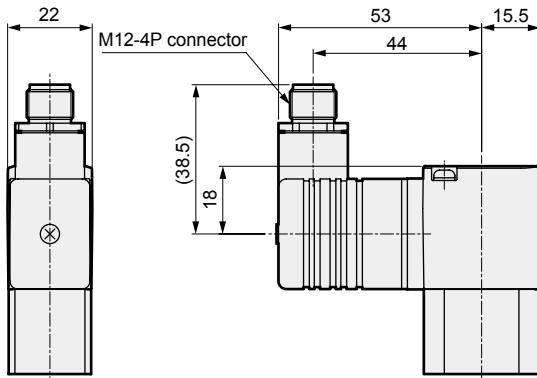
- DIN terminal box (Pg9)
- DIN terminal box with lamp/surge suppressor (Pg9)

SNP-\* 2G  
2HS

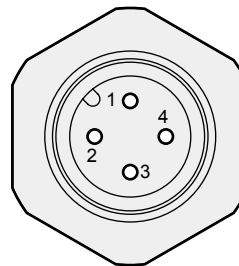


- DIN terminal box (M12-4P connector)
- DIN terminal box with lamp/surge suppressor (M12-4P connector)

SNP-\* 2J  
2KS



Connector pin array



PIN No.	Applications
1PIN	Ground
2PIN	(Not used)
3PIN	Power supply -
4PIN	Power supply +

\* As it is a screw-in, the connector pin positions may not be the same as those shown above.


### How to connect limit switch

Applicable to products with the limit switch option code "L" and "M".

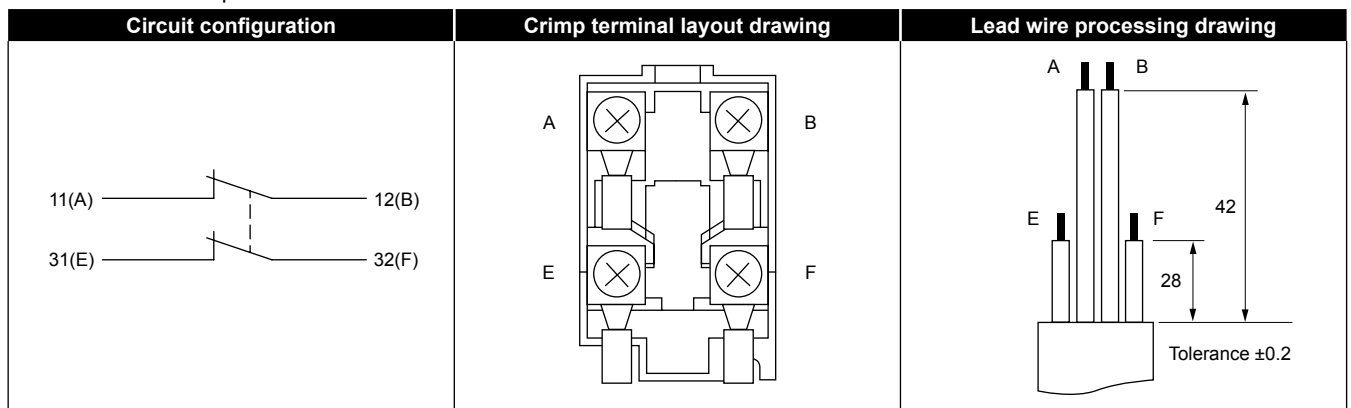
(1) When connecting to the terminal via insulating tube and M3.5 crimp terminal, place the crimp terminals as shown in Figure 2-7 so as not to ride over the case or cover.

(2) The applicable lead wire size is AWG 20 to 18 (0.5 to 0.75 mm<sup>2</sup>).

The lead wire should be processed in accordance with the length in Figure 2-7. The excess lead wire may come into contact with the cover and cause it to be lifted.

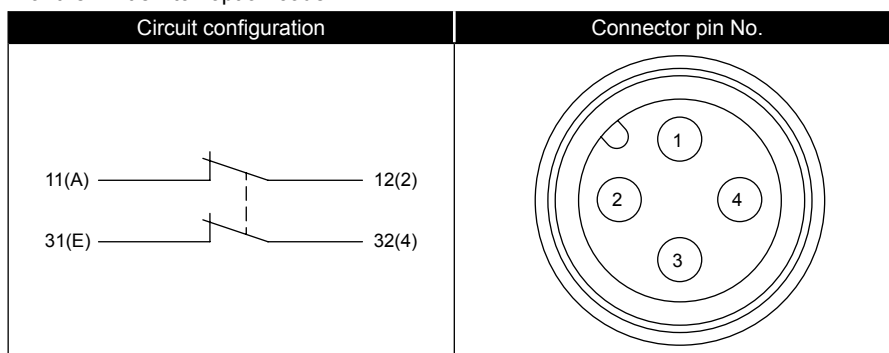
 <b>CAUTION</b>	<p>Do not push a crimp terminal or the like into the gap of the pipe case, as it may cause the case to be damaged or deformed.</p> <p>Be sure to use the crimp terminal with the thickness of 0.5 mm or less to avoid interference with the inside of the switch case.</p>
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·For the limit switch option code "L"



(Figure 2-7)

·For the limit switch option code "M"



(Figure 2-8)

(3) When mounting a connector to the conduit port, be sure to use a connector with the thread length of 9 mm or less so as not to interfere with the built-in switch.

Recommended connector : ST-13.5 5301-5030 (LAPP)

Recommended seal packing : JPK-16, GP-13.5 or GPM20

(4) For the tightening torque of each part, please refer to Table 2-3.

Table 2-3 Applicable tightening torque

Screw tightening point	Recommended tightening torque values
Terminal thread	0.6 to 0.8 [N m]
Cover set screw	0.5 to 0.7 [N m]
Connector	1.8 to 2.2 [N m]

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 <sup>Δ</sup> B/NAB
LAD/NAD
Water-Rela
NP/NAP/NVP
<b>SNP</b>
CHB/G
MXB/G
Other valves
SWD/MWD
DustColl
CVE/CVSE
CCH/CPE/D
LifeSci
Gas-Combus
Auto-Water
SpecFld
Custom
Ending