



3-port solenoid valve with spool position detection

SNP Series

● Port size: Rc3/8 to Rc3/4



Specifications

Model	SNP		
Port size	Rc3/8	Rc1/2	Rc3/4
Actuation	NC (normally closed) type		
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 to 0.7 MPa)		
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 Standard 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).

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	5VDC 1 mA resistance load	
Rated insulation voltage 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 ³ /(s/bar)]	S(mm ²)	C[dm ³ /(s/bar)]	S(mm ²)
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

G Silencer

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

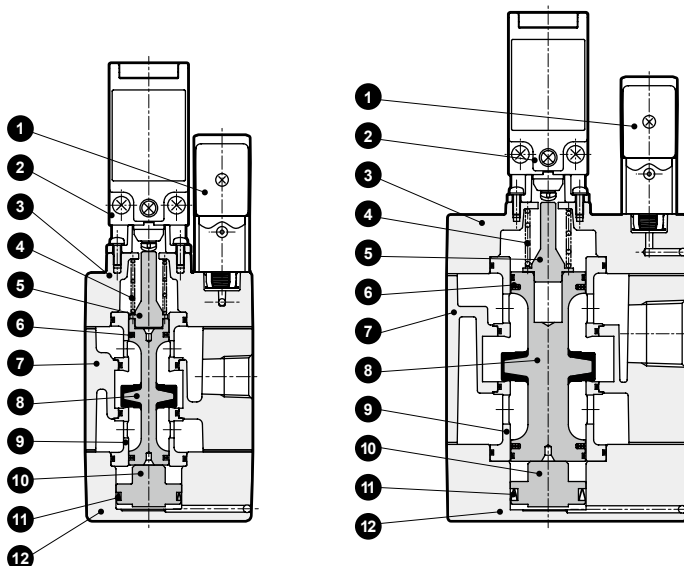
- A** Station No. : Single unit (terminal box right-facing)
- B** Port size : Rc1/2
- C** Sealant : NBR
- D** Coil option : DIN terminal box with light/surge suppressor
- E** Limit switch : Pg13.5
- F** Bracket : With bracket
- G** Silencer : Sintered metal
- H** Voltage : 100 VAC 50 Hz/60 Hz

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

Internal structure and parts list

● SNP-1*-10A/15A

● SNP-1*-20A



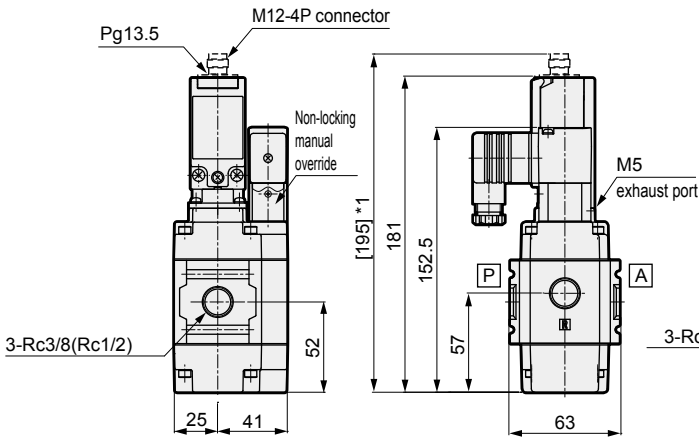
No.	Part name	Material
1	Pilot solenoid valve	-
2	Limit switch	-
3	Body	ADC12 Aluminum die-casting
4	Spring	SWP Piano wire
5	Indicator	A2017 Aluminum
6	PSD packing	NBR Nitrile rubber
7	Body	ADC12 Aluminum die-casting
8	Valve stem	NBR, A2017 Nitrile rubber, aluminum
9	Valve seat	A5056 Aluminum
10	Piston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

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

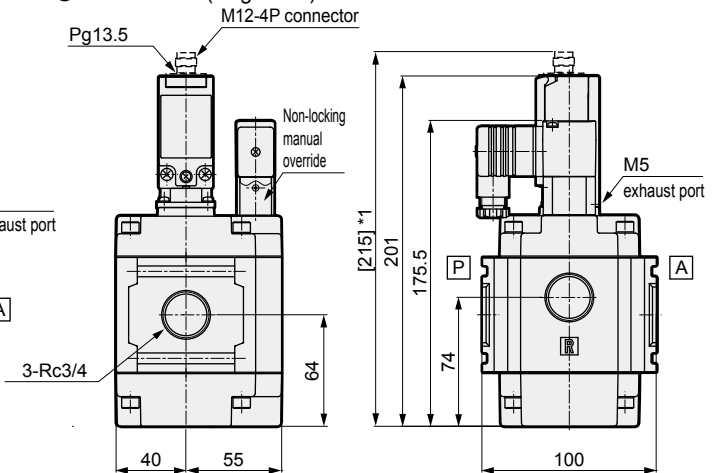
F.R.L. Dimensions

- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filt
- Film Resist FR
- Oil-Prohr
- Med Press FR
- No Cu/ PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneUR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/ other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

● SNP-1L-10A/15A (single unit)



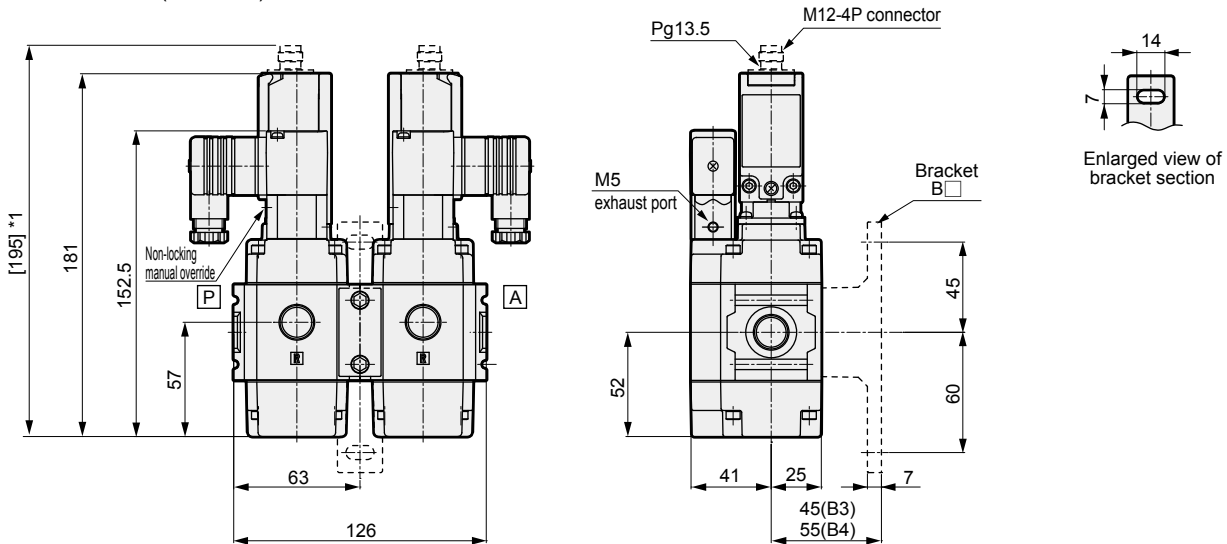
● SNP-1L-20A (single unit)



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

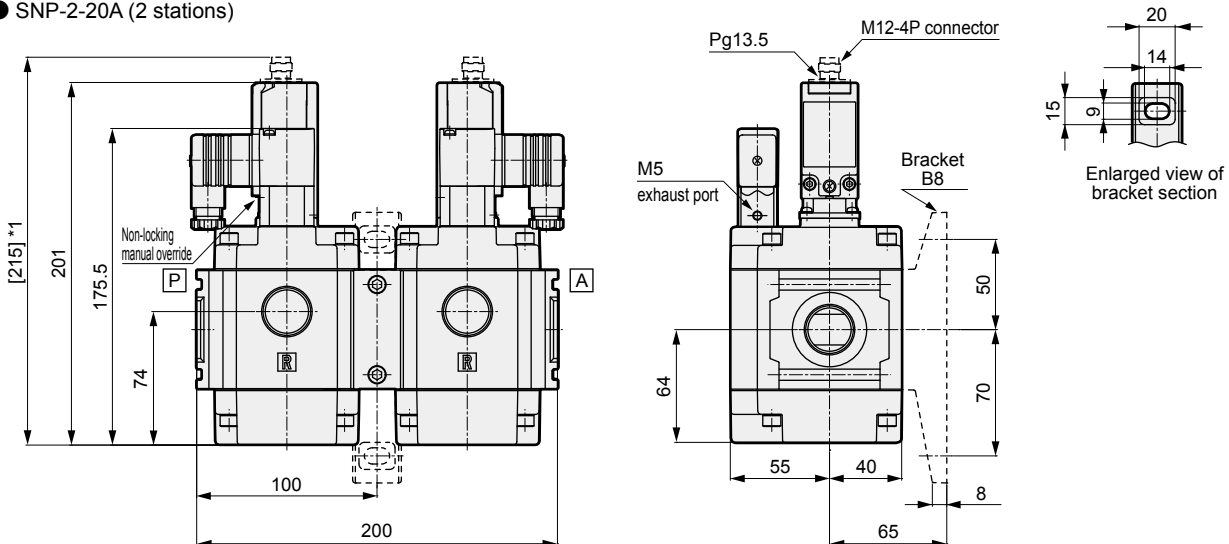
*2: For 1R, the wiring of the terminal box and limit switch is positioned to the right.

● SNP-2-10A/15A (2 stations)



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

● SNP-2-20A (2 stations)

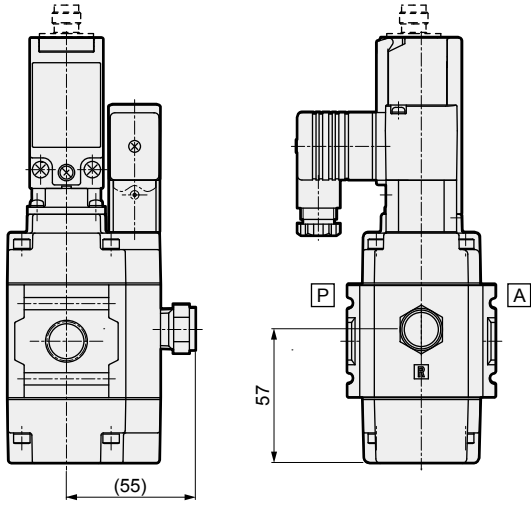


*1: [] shows dimensions when M12-4P connector (M) is selected

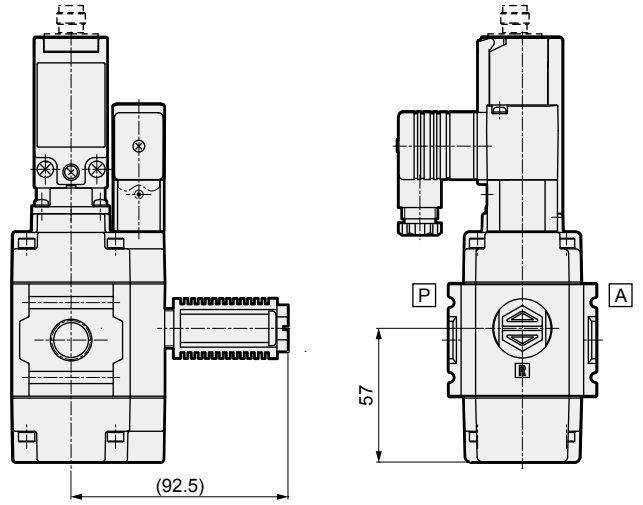
Option dimensions with silencer

* Silencer is provided with the product.

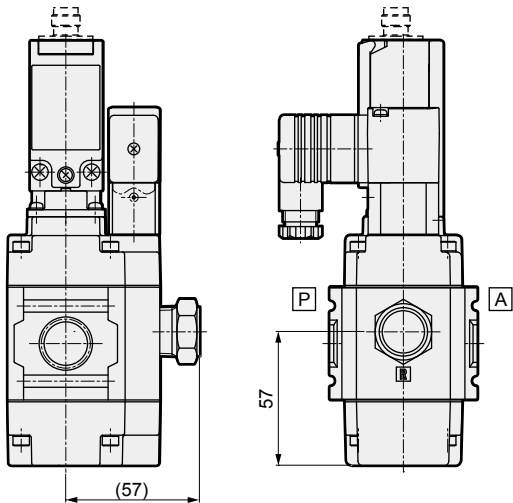
● SNP-1L-10A-*S1



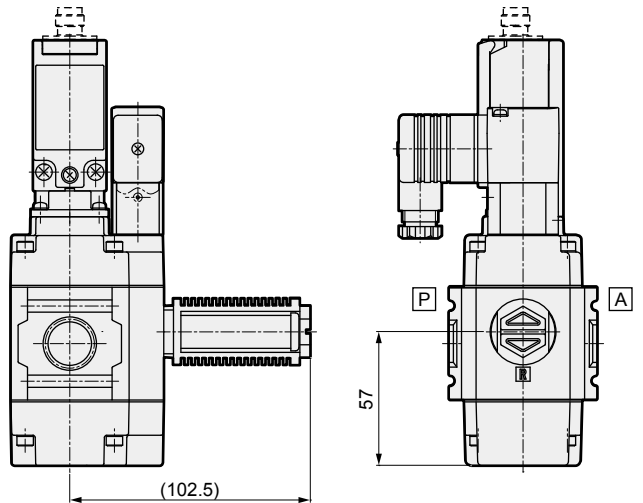
● SNP-1L-10A-*S2



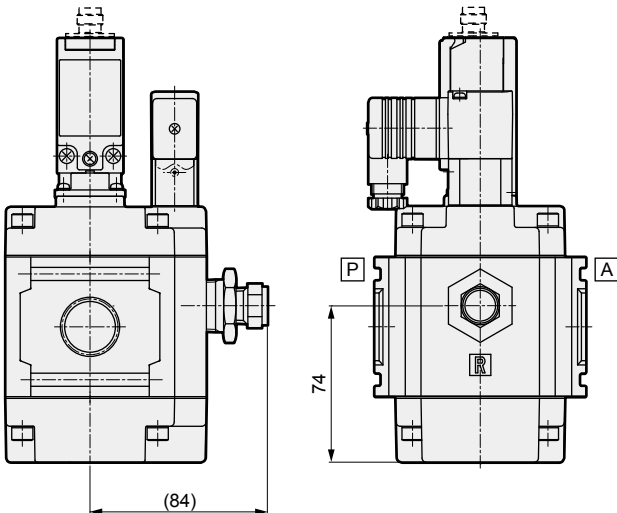
● SNP-1L-15A-*S1



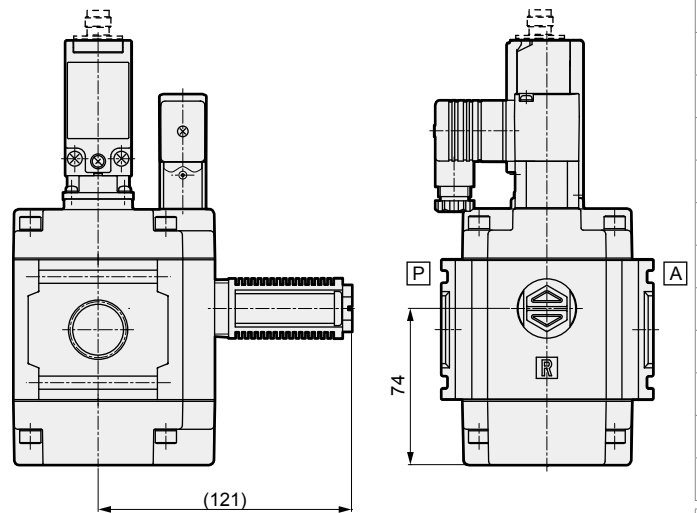
● SNP-1L-15A-*S2



● SNP-1L-20A-*S1



● SNP-1L-20A-*S2

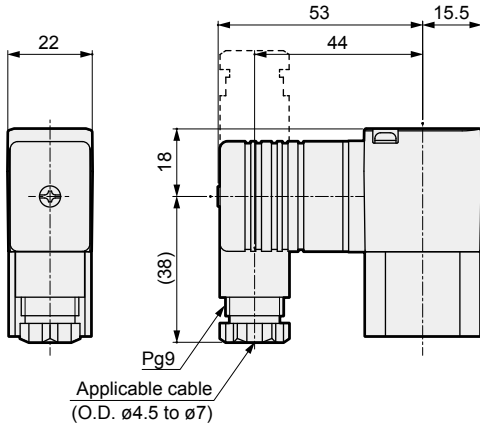


F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr Dischrg etc
Ending

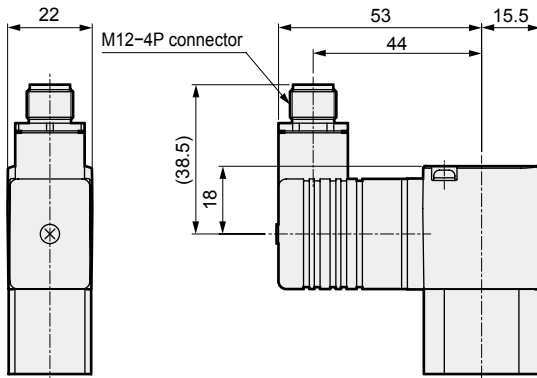
F.R.L. Coil option dimensions

- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
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- DesicDry
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- MainFiltr
- Dischrg etc
- Ending

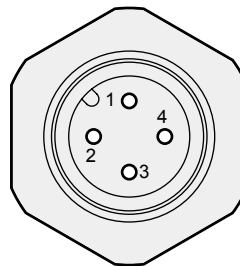
- DIN terminal box (Pg9)
- DIN terminal box with lamp/surge suppressor (Pg9)
- SNP-* 2G
2HS



- 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.

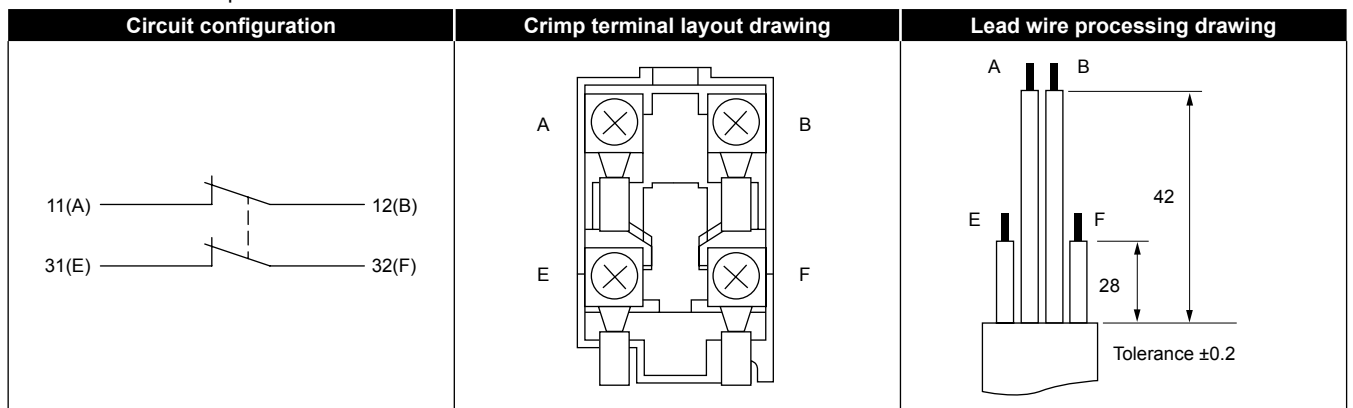
How to connect limit switch

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 mm²).
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.

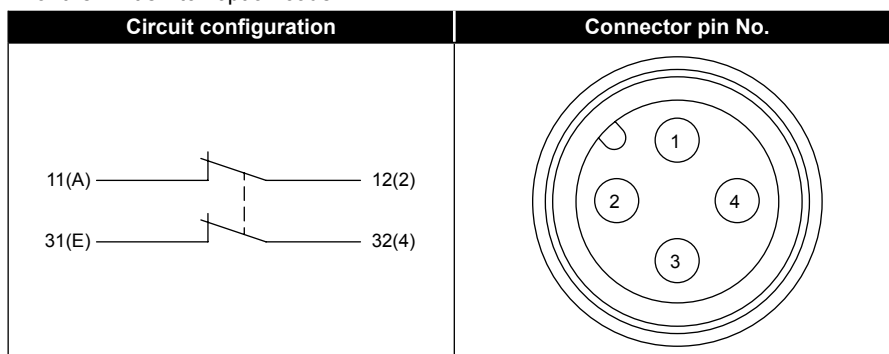
 CAUTION	Do not push a crimp terminal or the like into the gap of the pipe case, as it may cause the case to be damaged or deformed. Be sure to use the crimp terminal with the thickness of 0.5 mm or less to avoid interference with the inside of the switch case.
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· 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 mounting screw	0.5 to 0.7 [N·m]
Connector	1.8 to 2.2 [N·m]

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Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
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VacF/R
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Speed Ctrl
Silncr
CheckV/ other
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Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending