

SSR Terminal Block (screwless type)

■ Features

[Common Feature]

- Selectable between independent and load common output with jumper bar
- High tensile force and easy wiring with one-touch screwless type crimp terminal
- Convenient operating status check with operation indicator (blue LED)

[1-point]

- Selectable between independent and power ommon input with jumper bar
- DIN Rail mounting
- SSR: [Fujitsu] SN-24A01C
[Omron] 3GMC-202P
[Panasonic] AQG22124, AQG12124, AQZ202D

[4-point]

- Selectable between NPN common and PNP common common input with jumper bar insulting location
- SSR protection with the cover
- Easy SSR replacement with SSR ejector (except ASL-L04ST0-□□)
- DIN Rail or screw mounting
- SSR: [Fujitsu] SN-24A01C
[Omron] 3GMC-202P
[Panasonic] AQG22124, AQG12124, AQZ202D

[16-point]

- SSR protection with the cover
- Easy SSR replacement with SSR ejector
- DIN Rail mounting
- SSR: [Panasonic] AQZ202D



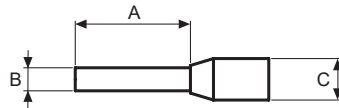
⚠ Please read "Safety Considerations" in instruction manual before using.

CE c UL US LISTED (except ASL-L1ST0-□□, ASL-L4ST0-□□series)

■ Ordering Information

AS	L	-	L	04	SP0	-	U	N			
									Varistor installation	N	Not installed
										Y	Installed
									Input logic	U	Universal
										N	NPN
										P	PNP
									SSR type	MP0	AQZ202D (panasonic)
										SP0	AQG12124 (panasonic)
										SP1	AQG22124 (panasonic)
										SR0	G3MC-202P (omron)
										ST0	SN-24A01C (fujitsu)
									No. of SSR points	01	1-point
										04	4-point
									Connector type	16	16-point
									Terminal type	H	Hirose
										L	Screwless
									Model	L	Screwless
										AS	SSR Terminal Block

■ Crimp Terminal Specification



(unit: mm)

	A	B	C	Applicable wire
End Sleeve (ferrule terminal) crimp terminal	10 to 12.0	≤ 2.0	≤ 4.1	AWG22-16 (0.30 to 1.25mm ²)

※Use cable of copper conductor with temperature class of 60°C.

■ Specifications

○ 1-point, 4-point

Model	1-point	ASL-L01MP0-□N	ASL-L01SP0-□N	ASL-L01SP1-□N	ASL-L01SR0-□N	ASL-L01ST0-□N
		ASL-L01MP0-□Y	ASL-L01SP0-□Y	ASL-L01SP1-□Y	ASL-L01SR0-□Y	ASL-L01ST0-□Y
	4-point	ASL-L04MP0-UN	ASL-L04SP0-UN	—	—	ASL-L04ST0-UN
		ASL-L04MP0-UY※1	ASL-L04SP0-UY※1	—	—	ASL-L04ST0-UY※1
Power supply		24VDC≒±10%				
Rated load voltage & current※2		60VAC~/DC≒50/60Hz 2.7A	75-240VAC~50/60Hz 1A	75-240VAC~50/60Hz 2A	24-240VAC~50/60Hz 2A	24-240VAC~50/60Hz 1A
Current consumption※3		≤ 3mA	≤ 18mA			≤ 10mA
Output type		1a contact SSR output				
Applied SSR		AQZ202D [Panasonic]	AQG12124 [Panasonic]	AQG22124 [Panasonic]	G3MC-202P [Omron]	SN-24A01C [Fujitsu]
Terminal type		Screwless				
Terminal pitch		1-point: 9.0mm (arranging over 2 units)/4-point: 5.0mm				
Operation Indicator		Blue LED				
Applied cable	Solid wire	Ø0.6 to Ø1.25mm (60°C only)				
	Stranded wire※4	AWG22-16 (0.30 to 1.25mm ²) (60°C only)				
Stripped wire length		8 to 10mm				
Insulation resistance		1-point: ≥ 1,000MΩ (at 500VDC megger)/4-point: ≥ 1,000MΩ (at 500VDC megger)				
Insulation resistance	Between coil-contact	2,500VAC 50/60Hz for 1 minute				
	Between same contacts※5	1,000VAC 50/60Hz for 1 minute				
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours				
	Malfunction	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes				
Shock	Mechanical	1,000m/s ² (approx. 100G) in each X, Y, Z direction for 3 times				
	Malfunction	100m/s ² (approx. 10G) in each X, Y, Z direction for 3 times				
Environment	Ambient temp.	-15 to 55°C, storage: -25 to 65°C				
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH				
Material		Terminal block: polyamide 66, conducting plate: brass, case&base: poly phenylene sulfide				
Accessory		Jumper bar: 1, Ejector: 1※6				Jumper bar: 1
Protection structure		IP20 (IEC standard)				
Approval		CE・RoHS				CE
Weight※7	1-point※8	Approx. 130g (approx. 19g)	Approx. 134g (approx. 20g)	Approx. 140g (approx. 22g)	Approx. 148g (approx. 24g)	Approx. 136g (approx. 21g)
	4-point	Approx. 118g (approx. 65g)	Approx. 122g (approx. 69g)	Approx. 128g (approx. 75g)	Approx. 128g (approx. 75g)	Approx. 126g (approx. 72g)

※1: This is for load protection and it is recommend to use at the inductive load.

※2: This is SSR load capacity when it is resistive load and temperature characteristic curve is satisfied.

※3: The current consumption including LED current by one SSR.

※4: When using stranded wire, use End Sleeve (ferrule terminal) crimp terminals.

※5: ASL-L01□-□Y/ASL-L04□-□Y (varistor installed type), this is 300VAC.


※6: Ejector is supplied only for ASL-L04□-□□ (4-point).

※7: The weight includes packaging. The weight in parenthesis is for unit only.

※8: The weight of 1-point unit is per 4 units with packaging and the weight of parenthesis is per 1.

※Environment resistance is rated at no freezing or condensation.

◎ 16-point

Model		ASL-H16MP0-□N
Input rating voltage		24VDC=
Output rating voltage and current of SSR (ambient temp.) ^{※1※2}		60VAC~ 50/60Hz or 60VDC= 2.4A (25°C) or 1.7A (55°C)
Current consumption ^{※3}		≤4mA
Output type		1a contact SSR output
Applied SSR		AQZ202D [Panasonic]
No. of SSR points		16
Terminal type		Screwless
Terminal pitch		≥ 7.8mm
SSR pitch		10mm
Indicator		Power indicator: red LED, operation indicator: blue LED
Applied cable	Solid wire	Ø0.6 to Ø1.25mm
	Stranded wire ^{※4}	AWG22-16 (0.3 to 1.25mm ²)
Stripped wire length		8 to 10mm
Insulation resistance		≥ 1,000MΩ (at 500VDC megger)
Dielectric strength	Between coil-contact	2,500VAC~ 50/60Hz for 1 minute
	Between same contacts	1,000VAC~ 50/60Hz for 1 minute
Vibration	Mechanical	1.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours
	Malfunction	1.5mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes
Shock	Mechanical	1000m/s ² (approx. 100G) in each X, Y, Z direction for 3 times
	Malfunction	100m/s ² (approx. 10G) in each X, Y, Z direction for 3 times
Environment	Ambient temp.	-15 to 55°C, storage: -25 to 65°C
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH
Material		Terminal block, cover: polycarbonate, case/base: modified polyphenylene oxide
Accessory		Jumper bar: 2, ejector: 1
Protection structure		IP20 (IEC standard)
Approval		CE  LIMITED
Weight ^{※5}		Approx. 377g (approx. 278g)

※1: When connecting loads to output part, please connect loads of same power type.

Connecting loads of different power type may cause safety issues.

※2: This value is rated when using the resistive load. Use proper current for the ambient temperature.
(Refer to the 'Temperature Characteristic Graph'.)

※3: The current consumption including LED current per one SSR.

※4: When using stranded wire, use End Sleeve (ferrule terminal) crimp terminals.

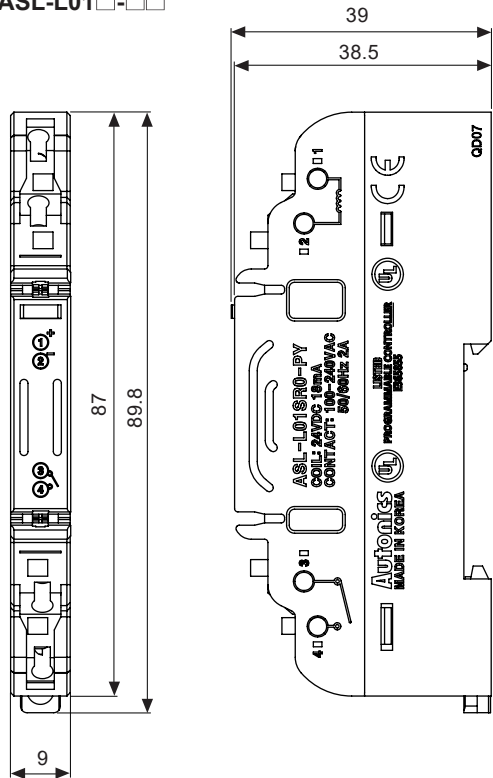
※5: The weight includes packaging. The weight in parenthesis is for unit only.

※Environment resistance is rated at no freezing or condensation.

■ Dimensions

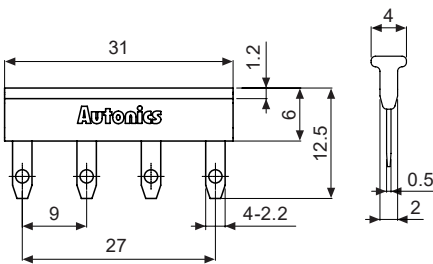
(unit: mm)

○ ASL-L01 □ □ □

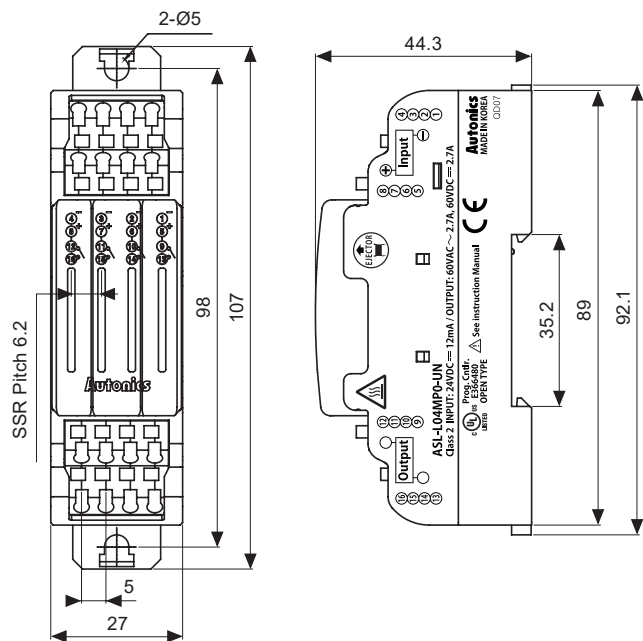


• Jumper bar (model: JB-9.0-04L)

※For the desired application (Power/Load common), the jumper bar is sold separately.

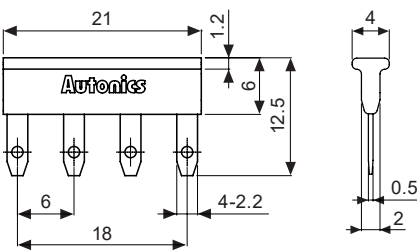


○ ASL-L04 □ □ □



• Jumper bar (model: JB-6.0-04L)

※For the desired application (NPN/PNP/Load common), the jumper bar is sold separately.



High Temperature Caution

Make sure do not touch the heat sink or the unit body while power is supplied or right after load power is turned off. If not, it may cause a burn.

I/O Terminal Blocks

Interface Terminal Blocks

Common Terminal Blocks

Sensor Connector Terminal Blocks

Relay Terminal Blocks

I/O Cables

Connector Type Cables

Open Type Cables

Others

ABS Series

ABL Series

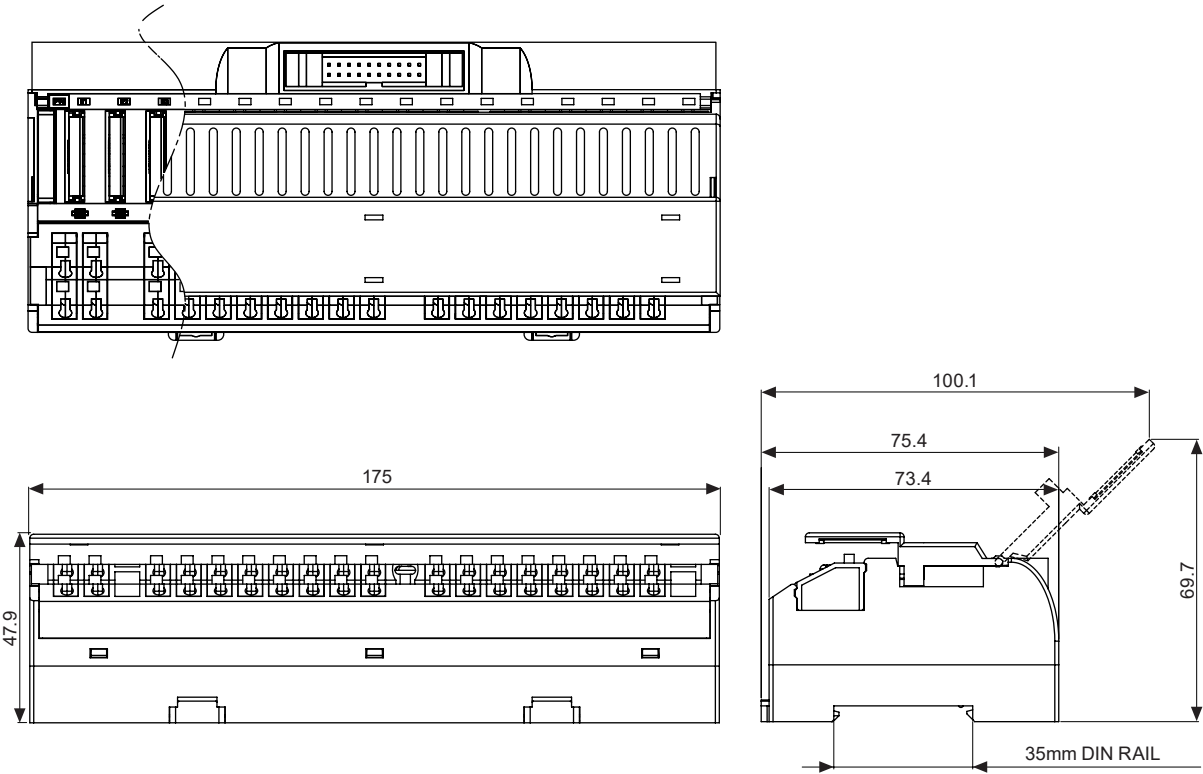
ASL Series

Power Relay

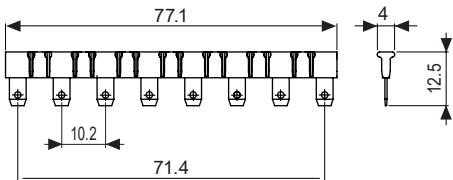
SSR

(unit: mm)

◎ ASL-H16MP0-□N



● Jumper bar (model: JB-10.2-08L)

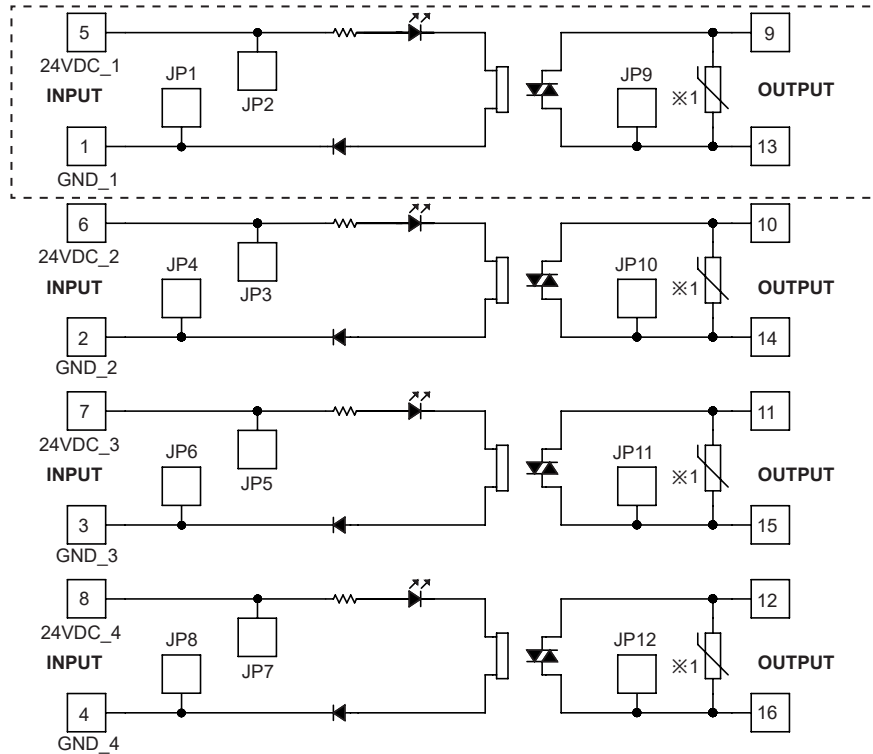


※For the desired application (Load common),
the jumper bar is sold separately.

Wire Connections

※ NPN, PNP, LOAD common are operated by the inserting position of the Jumper bar.
Please refer to '● Using jumper bars' of '■ Replacing SSR and Using Jumper Bar'.

◎ ASL-L01MP0-□□/ASL-L04MP0-□□

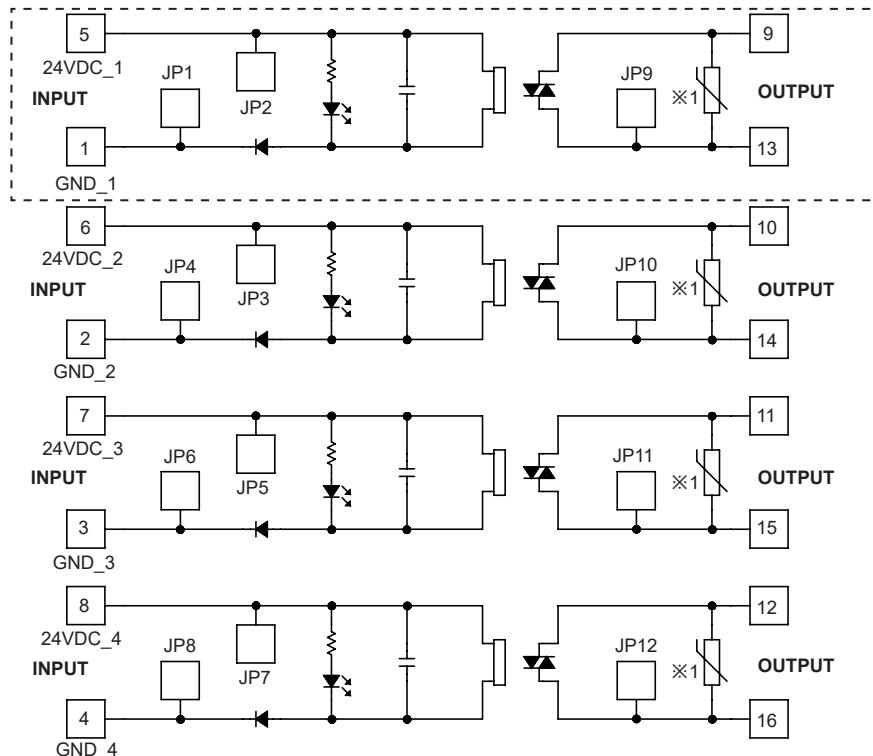


※ □ part is only for 1-point model.

In 1-point model, NPN or PNP is designated, so that it is not available to select NPN or PNP with the jumper bar.

※ 1: Only for ASL-L01(04) □ -UY (varistor installed type).

◎ ASL-L01SP0(SP1/SR0/ST0)-□□/ASL-L04SP0(SP1/SR0/ST0)-□□



※ □ part is only for 1-point model.

In 1-point model, NPN or PNP is designated, so that it is not available to select NPN or PNP with the jumper bar.

※ There is no condenser for ASL-L□ SR0-□□ model.

※ 1: Only for ASL-L01(04) □ -UY (varistor installed type).

I/O Terminal Blocks

Interface Terminal Blocks

Common Terminal Blocks

Sensor Connector Terminal Blocks

Relay Terminal Blocks

I/O Cables

Connector Type Cables

Open Type Cables

Others

ABS Series

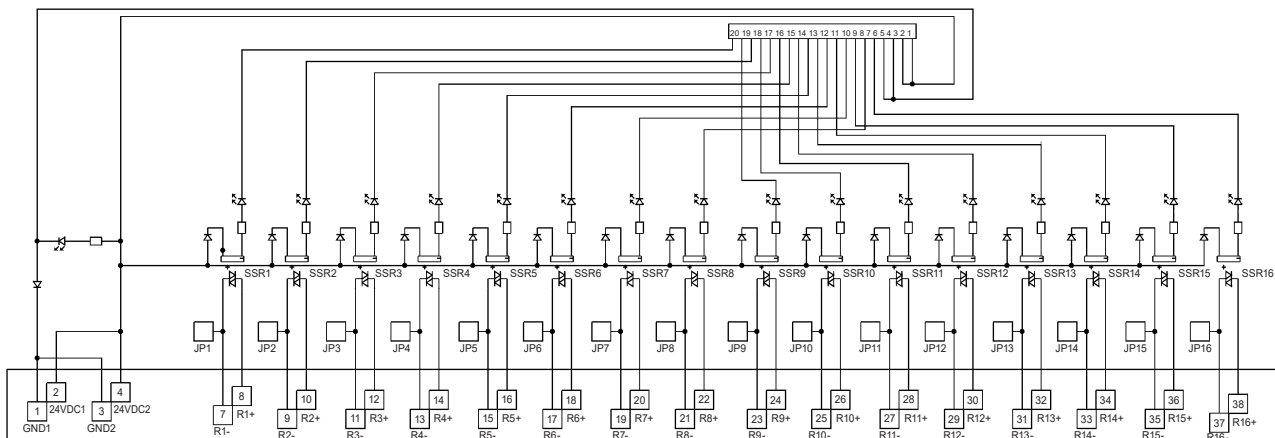
ABL Series

ASL Series

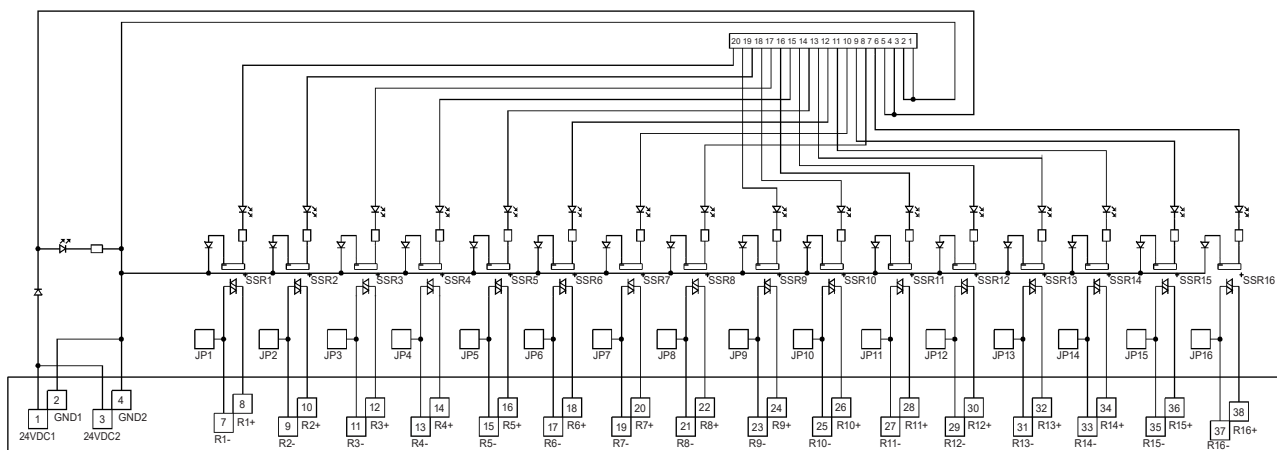
Power Relay

SSR

○ ASL-H16MP0-NN



○ ASL-H16MP0-PN



■ Connecting Crimp Terminals

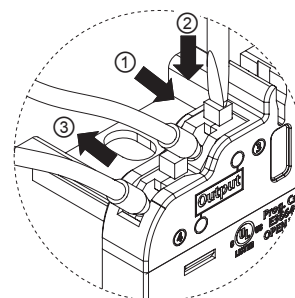
○ Connecting and removing end sleeve (ferrule terminal) crimp terminal at screwless type terminal block

● Connecting

- 1) Push the end sleeve (ferrule terminal) crimp terminal towards direction ① to complete the connection.

● Removing

- 1) Press and hold the catch above the terminal in direction ② with a flathead screwdriver.
- 2) Pull and remove the end sleeve (ferrule terminal) crimp terminal towards direction ③.



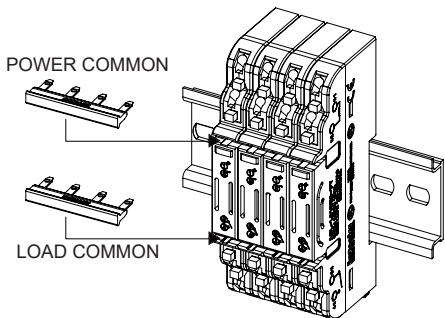
■ Replacing SSR and Using Jumper Bar

◎ ASL-L01□-□□

※ASL-L01□-□□ model is integrated SSR type. The unit cannot replace only SSR.

● Using jumper bar

The right figure example is for 4 ASL-L01□-□□ units with jumper bar.
For power common, insert a jumper bar to top (below 1, 2 terminals).
For load common, insert a jumper bar to bottom (above 3, 4 terminals).

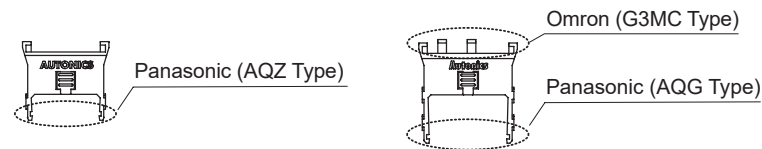


◎ ASL-L04□-□□

● Replacing SSR

- 1) Pull the protection cover towards direction ①.
- 2) Insert the ejector as proper side to ② direction and pull it to ③ direction to remove.
- 3) Insert a new SSR to the case.

※1: Two way ejector position for SSR replacement
(there is no ejector for SSR SN-24A01C model)



● Using jumper bars

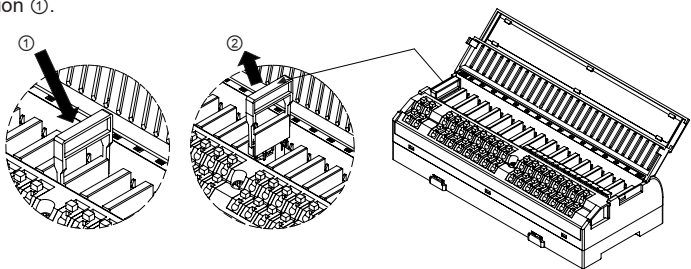
Remove the protection cover and use the jumper bars accordingly.

NPN COMMON	PNP COMMON	LOAD COMMON
Insert the jumper bar to the far left towards terminals 4 and 8.	Insert the jumper bar to the far right towards terminals 1 and 5.	Insert the jumper bar above terminals 12, 11, 10, 9.

◎ ASL-H16MP0-□N

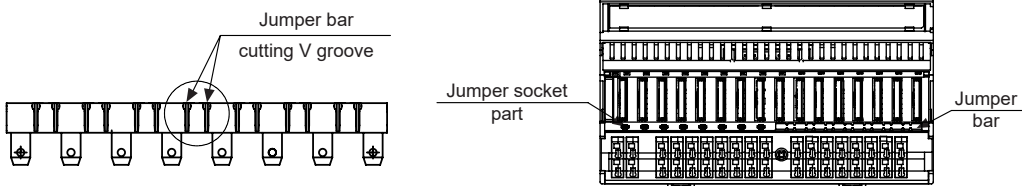
● Replacing SSR

- 1) Insert the SSR ejector at both ends of the installed SSR to direction ①.
- 2) Pull the SSR ejector to direction ② for removing the SSR.



● Using jumper bars

- 1) Cut the jumper bar to the user's desired length by cutting at the V dent (two) using a nipper.
- 2) Insert the cut jumper bar to the desired jumper bar socket position.



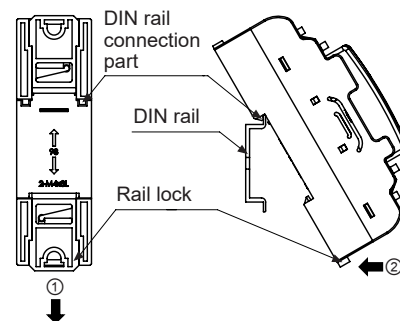
■ Installation

※When installing the unit, keep the interval between the units.
(refer to the '■ Example Of Installation'.)

1. Mounting and removal at DIN rail

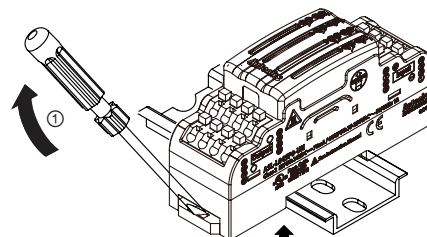
● Mounting

- 1) Pull the rail lock towards direction ①.
- 2) Attach the DIN rail connection part onto the DIN rail.
- 3) Push the unit towards direction ②, then push the rail lock in to lock toward the unit.



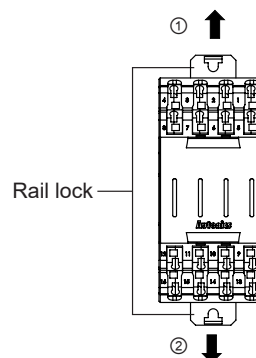
● Removal

- 1) Insert a screwdriver into the rail lock hole and push it towards direction ①.
- 2) Remove the unit by pulling the unit towards direction ②.



2. Mounting with screws (only for ASL-L04□-□□)

- 1) The unit can be mounted on panels using the rear rail locks.
- 2) Pull the rail locks towards ①/② directions.
- 3) M4×10mm spring washer screws are recommended for installation.
When using flat washers, use Ø9mm diameter washers. The tightening torque should be between 1.0 and 1.5N·m.

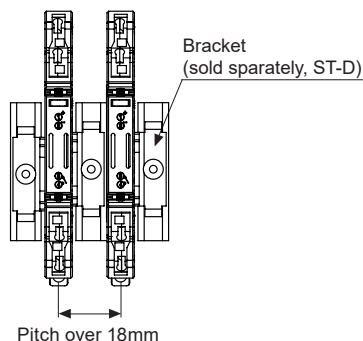


■ Example of Installation

● ASL-L01□-□□

1 unit individual installation

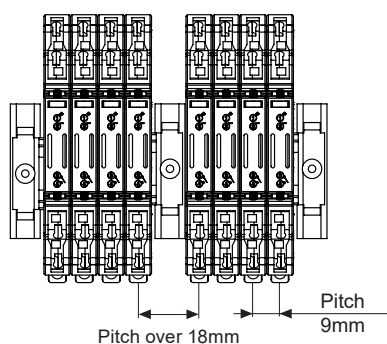
(pitch between each SSR: over 18mm)



● ASL-L01□-□□

4 units arranging installation

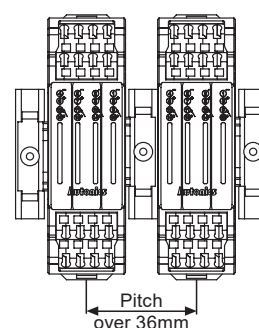
(pitch between each SSR: 9mm)



● ASL-L04□-□□

individual installation

(pitch between each SSR: 6.2mm)

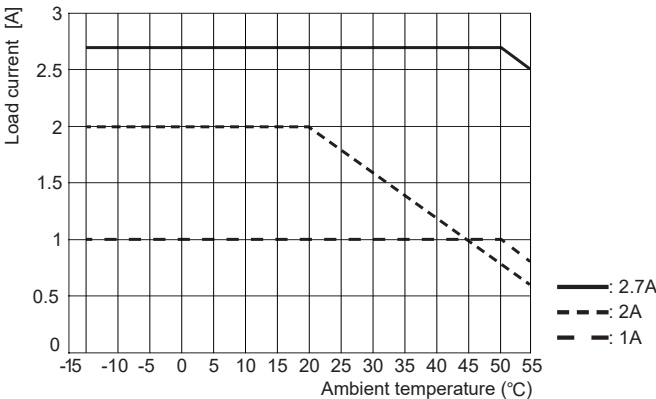


※Pitch is interval between SSRs.

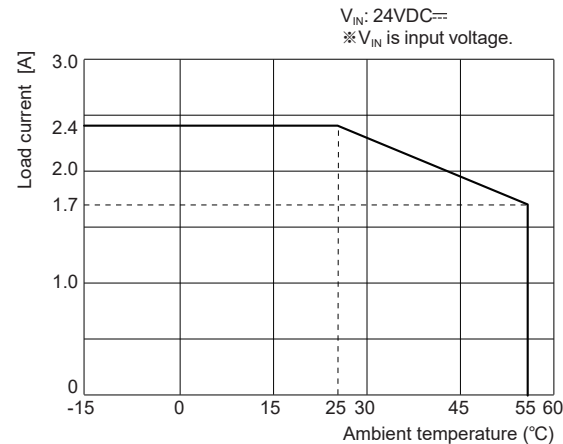
Temperature Derating Graph

○ Load current by ambient temperature for each rated current

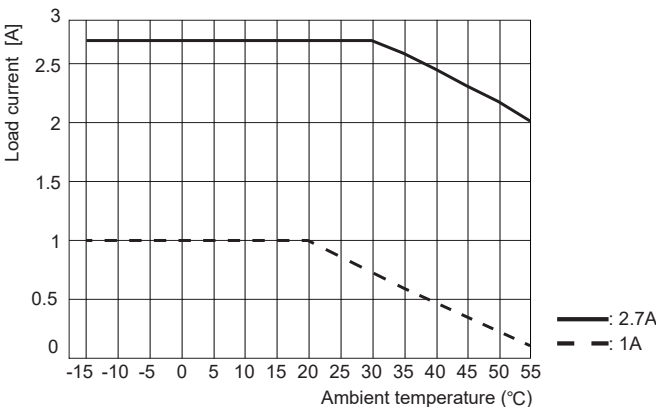
● ASL-L01□□□, ASL-L04□□□



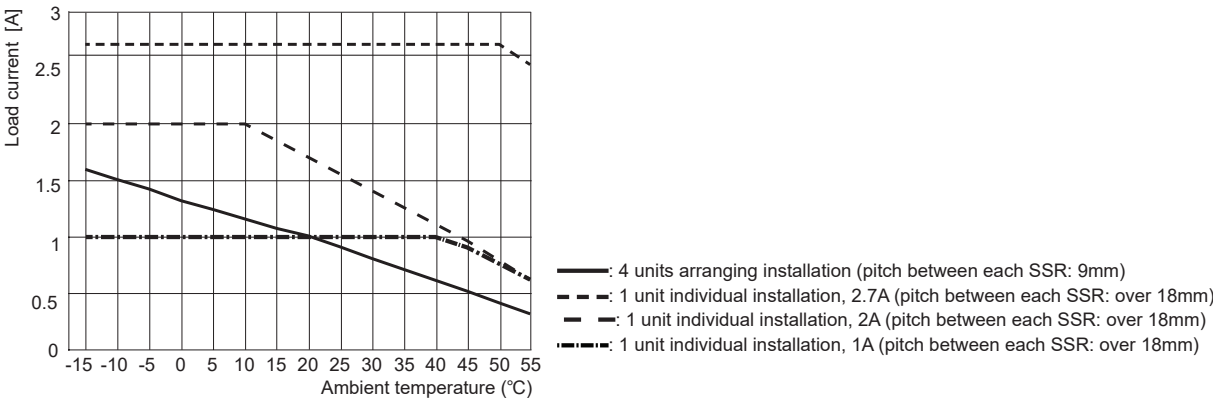
● ASL-H16MP0□□N



○ When installing ASL-L04□□□ individually, load current by ambient temperature for SSRs interval



○ When installing ASL-L01□□□, load current by ambient temperature for SSRs interval



■ Cautions during Use

1. Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
2. Check the polarity of power or COMMON before connecting PLC or other controllers.
3. Do not touch the unit immediately after the load power is supplied or cut.
It may cause burn by high temperature.
4. 24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
5. Wire as short as possible and keep away from high voltage lines or power lines, to prevent surge and inductive noise.
Do not use near the equipment which generates strong magnetic force or high frequency noise (transceiver, etc.).
In case installing the product near the equipment which generates strong surge (motor, welding machine, etc.), use diode or varistor to remove surge.
6. This unit may be used in the following environments.
 - ① Indoors(in the environment condition rated in 'Specifications')
 - ② Altitude max. 2,000m
 - ③ Pollution degree 2
 - ④ Installation category II