

Relay terminal block

■Features

- Suitable to drive various loads using output signals of PLC
- Easy check for operation status and for cable break by adopting LED signal
- Available 2 types of relay[TAKAMISAWA(Fujitsu) NYP/ MATSUSHITA(Panasonic) PA]
  - Supports TWO WAY EJECTOR(for relay replacement)
- Two ways of mounting(DIN Rail, bolt fix)



(A)  
I/O  
Terminal

(B)  
I/O Cable

■Ordering information

AB

S

-

H

16

PA

-

N

N

Varistor installation

Input logic

Relay type

Number of relays

Connector type

Terminal type

Item

N	No install
C	Non-COM
N	NPN (COM+)
P	PNP (COM-)
TN	TAKAMISAWA (Fujitsu) <b>NYP</b>
PA	MATSUSHITA (Panasonic) <b>PA</b>
04	04pcs
16	16pcs
32	32pcs
S	Screw
H	Hirose connector
S	Screw
AB	Relay terminal block

AFS

ACS

AFE

**ABS**

Relay

■Applicable crimp terminal

B

A

<Forked>

B

A

<Round>

(Unit:mm)

	A	B	C	D	Applicable wires
Forked	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	AWG 22-16 (0.30 to 1.25mm <sup>2</sup> )
Round	Min. 4.1	Max. 16.0	Min. 3.0	Max. 5.9	

# ABS Series

## Specifications

Model		ABS-S04PA-CN ABS-S04TN-CN	ABS-H16PA-NN(PN) ABS-H16TN-NN(PN)	ABS-H32PA-NN(PN) ABS-H32TN-NN(PN)
Rated voltage		24VDC ±10%		
Rated load voltage & current		250VAC 3A, 30VDC 3A <sup>*1</sup>		250VAC 2A, 30VDC 2A <sup>*1</sup> (2A/1point, 8A/1COM)
Power consumption	PA type	Max. 10.5mA <sup>*2</sup>	Max. 10.5mA <sup>*1</sup> /Max. 15.5mA <sup>*3</sup>	
	TN type	Max. 8.5mA <sup>*2</sup>	Max. 8.5mA <sup>*1</sup> /Max. 13.5mA <sup>*3</sup>	
Output type		1a contact relay output		
Number of output		4point	16point	32point (8point/1COM)
Number of connectors		—	20pin	40pin
Number of terminals		8ea	34ea	40ea
Terminal pitch		7.62mm		
Applicable wire		Min. 1.25mm <sup>2</sup>		
Insulation resistance		Min. 1,000MΩ (at 500VDC megger)		
Dielectric strength		2000VAC 50/60Hz for 1 minute (coil and contacts) 1000VAC (Fujitsu relay: 750VAC) 50/60Hz for 1 minute (open contacts) <sup>*4</sup>		
Vibra- tion	Vibration resistance	0.75mm amplitude at frequency of 10 to 55Hz in each X,Y,Z direction for 2 hour		
	Malfunction	0.75mm amplitude at frequency of 10 to 55Hz in each X,Y,Z direction for 10 minutes		
Shock	Shock resistance	500m/s <sup>2</sup> (50G) in X, Y, Z directions for 3 times		
	Malfunction	147m/s <sup>2</sup> (15G) in X, Y, Z directions for 3 times		
Environ- ment	Ambient temperature	-15 to 55℃, Storage: -25 to 65℃		
	Ambient humidity	35 to 85%RH, Storage: 35 to 85%RH		
Material		CASE & BASE: MPPO, TERMINAL PIN: Brass	CASE: MPPO, BASE: PA66 (G25%) TERMINAL PIN: Brass	
Tightening torque		0.4 to 0.6 N·m		
Accessory <sup>*5</sup>		Jumper Bar: 2EA (Model No: JB-7.62-04)	Jumper Bar: 2EA (Model No: JB-7.62-08)	—
Unit weight		PA: Approx. 68g, TN: Approx. 71g	PA: Approx. 224g, TN: Approx. 235g	PA: Approx. 345g, TN: Approx. 370g

※1: Relay contact capacity for resistive load.

※2: The power consumption including LED current by one relay.

※3: The power consumption including LED current of power.

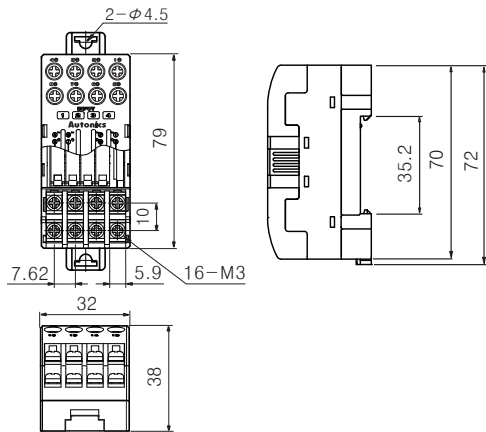
※4: For TN type (Fujitsu relay), dielectric strength is 750VAC.

※5: ABS-H32□□-NN(PN) does not provide Jumper Bar.

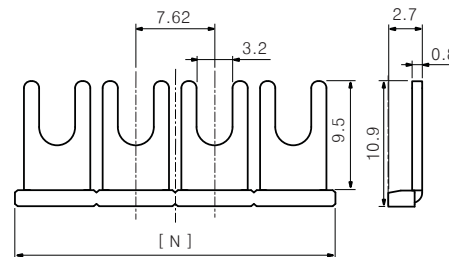
※Environment resistance is rated at no freezing or condensation.

## Dimensions

### ●ABS-S04PA-CN / ABS-S04TN-CN

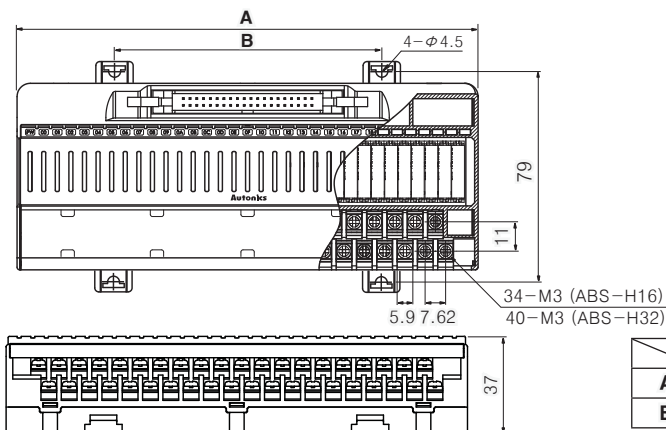


### ●Jumper Bar

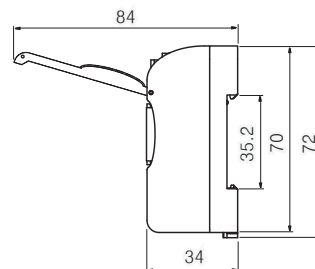


Model	JB-7.62-04	JB-7.62-08
Number of pins	4ea	8ea
[ N ] Size	29.5	60.0

### ●ABS-H16PA-□N / ABS-H16TN-□N



### ●ABS-H32PA-□N / ABS-H32TN-□N



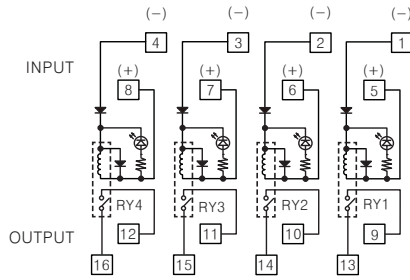
	ABS-H16 type	ABS-H32 type
A	140	173
B	70	100

(Unit:mm)

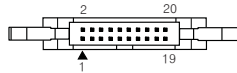
# Relay Terminal Block

## ■ Wire connections

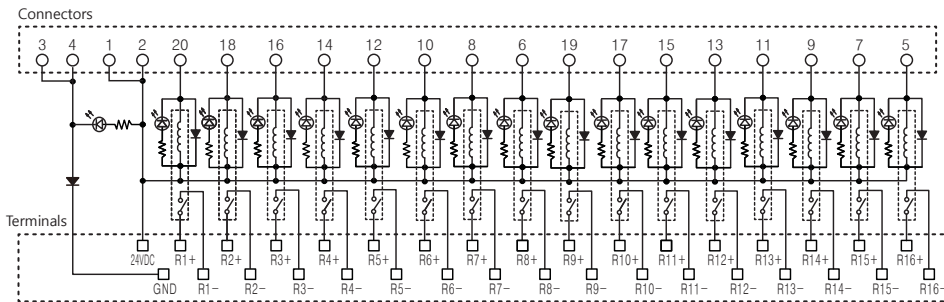
### ●ABS-S04PA-CN / ABS-S04TN-CN



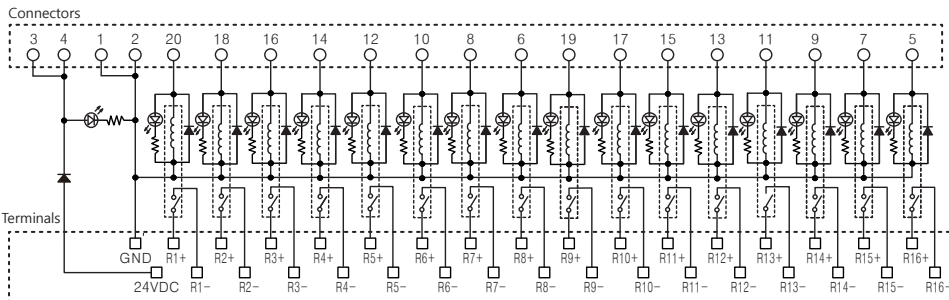
### ●ABS-H16□-NN



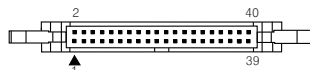
※Hirose connector model no.  
: HIF3BA-20PA-2.54DSA



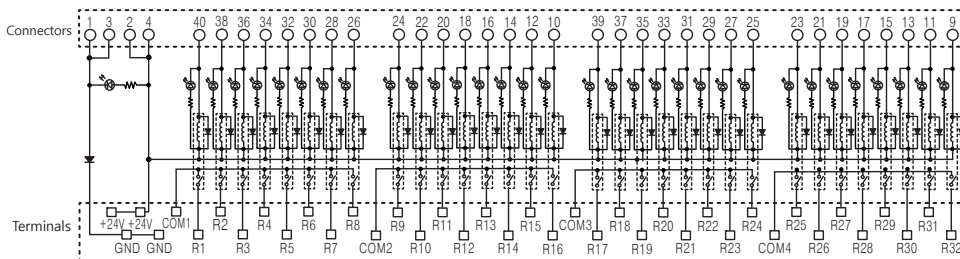
### ●ABS-H16□-PN



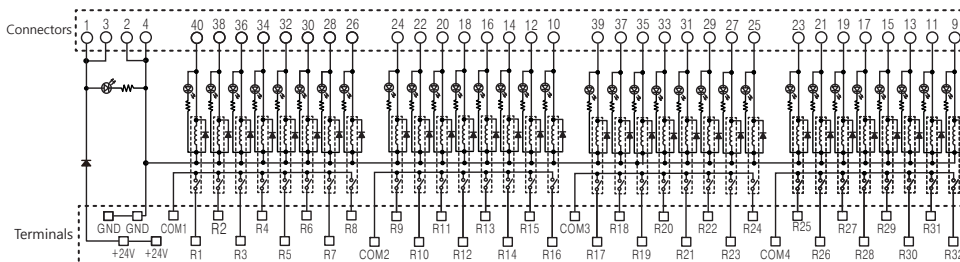
### ●ABS-H32□-NN



※Hirose connector model no.  
: HIF3BA-40PA-2.54DSA



### ●ABS-H32□-PN



(A)  
I/O  
Terminal

(B)  
I/O Cable

AFS

ACS

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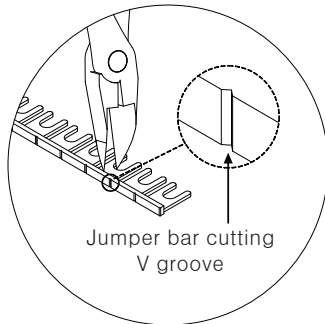
ABS

Relay

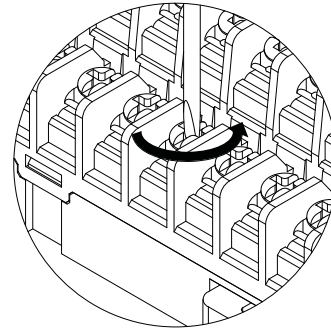
# ABS Series

## ■How to install jumper bar

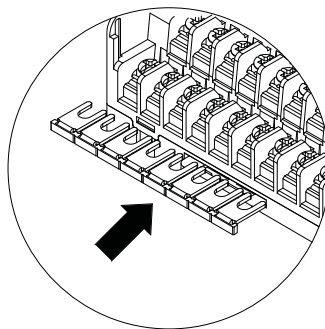
1)Cut the jumper bar for the desired length to fit cutting V groove with nipper, etc.



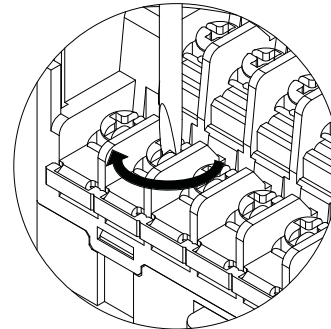
2)Unfasten the terminal screws for common.



3)Put jumper bar under the unfastened terminal screws.

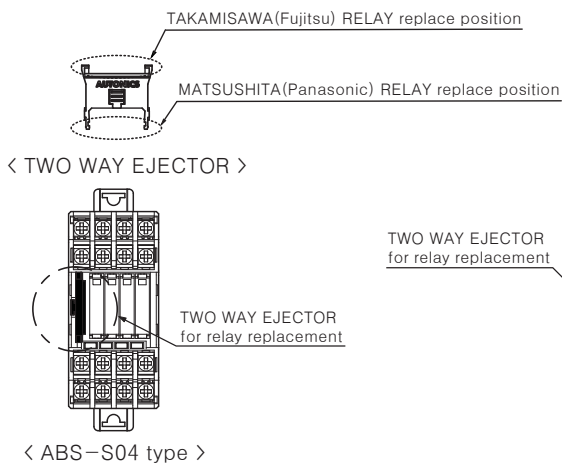


4)Tighten all of screws upside the jumper bar.

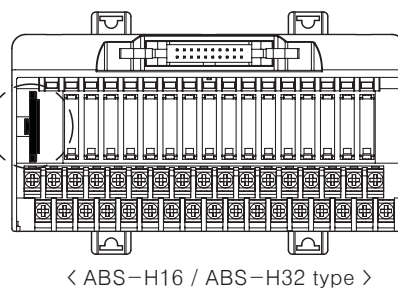


## ■How to replace relay

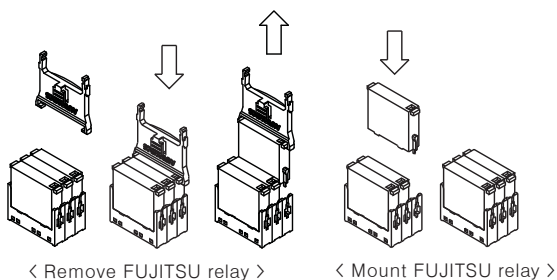
●The position of Two way ejector for relay replacement



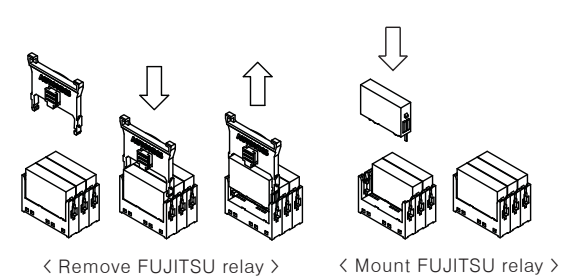
TWO WAY EJECTOR for relay replacement



●Mount and Remove TAKAMISAWA(Fujitsu) relay



●Mount and Remove MATSUSHITA(Panasonic) relay



※Relay socket can be used both TAKAMISAWA(Fujitsu) relay (NYP24W-K) and MATSUSHITA(Panasonic) relay (PA1a-24V).

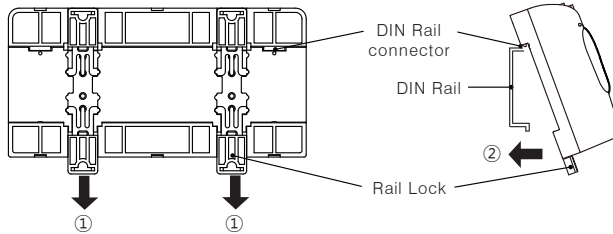
# Relay Terminal Block

## ■ Installation

### ◎ Mounting to and Removing from DIN Rail

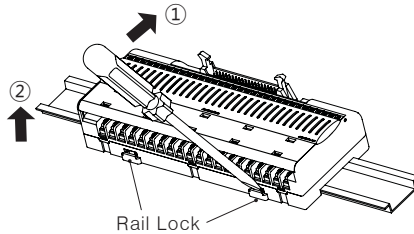
#### ● Mounting

- 1) Push Rail Lock to the direction “①”.
- 2) Hook DIN Rail connector onto DIN Rail.
- 3) Push the unit down to the direction “②” and then push up the Rail Lock to the opposite direction “①”.



#### ● Removing

- 1) Insert a screwdriver into hole of Rail Lock and pull the lock out to the direction “①”.
- 2) Remove the unit by pulling to the direction “②”.



### ◎ Fixing with bolt

- 1) Screw insertion holes are used for mounting the unit on panel.
- 2) It is recommended to use M4×15mm of spring washer screws and to use flat washers which are diameter Ø6.  
The tightening torque should be 0.7 to 1.0N·m.

(A)	I/O
Terminal	
(B)	I/O Cable

## ■ Caution for using

1. Use the product within the specified ratings for operating temperature and humidity.
2. Maintain voltage fluctuations in the power supply within specified range.
3. Check the polarity of power and wrong wiring.
4. Use AWG 16(1.25mm<sup>2</sup>) wire and applicable crimp terminals to the terminal block.
5. Always turn OFF the power supply before wiring or removing connectors.
6. Power shall be disconnected before replacing relay.
7. Do not use this unit at below places.
  - (1) Place where there is severe vibration or impact.
  - (2) Place where strong alkalis or acids are used.
  - (3) Place where there are direct ray of the sun.
  - (4) Place where strong magnetic field or electric noise are generated.
8. Installation environment.
  - (1) It shall be used indoor
  - (2) Altitude Max. 2000m
  - (3) Pollution Degree 2
  - (4) Installation Category II

AFS
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<b>ABS</b>
Relay



## MATSUSHITA(Panasonic) Power relay 1 POLE-5A PA1a-24V

### ■ Features

- Slim type with 5mm thickness (Enable to density mounting)
- Excellent durability resistance against vibration and shock
- Semipermanent life cycle (Suitable for a lot of switching frequency)



(A)  
I/O  
Terminal

(B)  
I/O Cable

### ■ Coil ratings

Model	Nominal voltage	Must operate voltage	Must release voltage	Nominal current	Coil resistance	Power consumption
<b>PA1a-24V</b>	24VDC	70% max. of Nominal voltage	5% min. of Nominal voltage	7.5mA	3,200Ω	180mW

※All values in the table are measured at 20℃ with a tolerance of ±20%

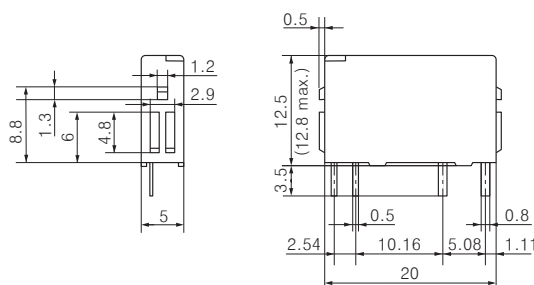
### ■ Contact ratings

Maker		MATSUSHITA(Panasonic)	
Model		<b>PA1a-24V</b>	
Contact	Arrangement	1 Form A (SPST-1a)	
	Material	Au-clad AgNi type	
	Resistance(initial)	30mΩ (6VDC 1A)	
Rating	Rating (resistive)	5A 250VAC	5A 30VDC
	Max. switching power	1,250VA	150W
	Min. switching capacity	100mVDC 100uA	
	Max. switching voltage	250VAC	110VDC
	Max. switching currnt	5A	
Electrical character-istics	Insulation resistance		Min. 1,000MΩ (at 500VDC megger)
	Dielectric strength	coil and contacts	2,000VAC 50/60Hz for 1 minute
		open contacts	1,000VAC 50/60Hz for 1 minute
	Surge voltage		4,000V
	Operate time		Max. 10ms
Mechanical character-istics	Vibration	Vibration resistance	13.5mm amplitude at frequency of 10 to 55Hz in each X,Y,Z direction for 1 hour
		Malfunction	2.5mm amplitude at frequency of 10 to 55Hz in each X,Y,Z direction for 10 minutes
	Shock	Shock resistance	980m/s <sup>2</sup> (100G) in X, Y, Z directions for 3 times
		Malfunction	147m/s <sup>2</sup> (15G) in X, Y, Z directions for 3 times
Expected life	Mechanical		20,000,000 operations min. (at 180 times/min)
	Electrical <sup>※1</sup>		100,000 operations min. (3A 250VAC, 30VDC resistive load)
Environment	Ambient temperature		-40 to 70℃
	Ambient humidity		5 to 85%RH
Unit weight		Approx.3g	

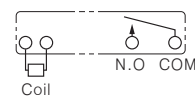
※1: 50,000 operations min.-5A 250VAC, 30VDC resistive load.(at 20times/min)

※Environment resistance is rated at no freezing or condensation.

### ■ Dimensions



#### ● Schematic (Bottom view)



※Allowance : ±0.3

(Unit:mm)