

# R32C-E Series 32Points, Mounting Push-typed Screwless Terminal Block

## User's Guide



Thank you for purchasing product of SAMWON ACT.  
Please check model of product that you purchase first, and read this manual prior to use it.

### • Caution for Safety

**Caution** Case that results in serious damage in human body or equipment, and fire if user handles this equipment wrongly

**Warning** Case that results in slight damage in human body or equipment, and fire if user handles this equipment wrongly

### Caution









- Do Not use other voltage except appointed voltage. It may be the cause of fire or damage of equipment.
- Use it within nominal voltage and current which are marked on load.  
It may be the cause of fire or damage of equipment.
- Check COMMON polarity of using controller (PLC, etc) first, and then select proper product.  
It may be the cause of fire or damage of this equipment and user's.  
1) COMMON Polarity of controller is '+' (NPN TYPE) : R32C-YN-□, R32C-NS5A-□  
2) COMMON Polarity of controller is '-' (PNP TYPE) : R32C-YP-□, R32C-PS5A-□
- Please make sure to check the internal wiring diagram of the terminal block and the arrangement of the controller PIN (terminal) when making the connection cable between the controller (PLC etc.).  
It may be the cause of malfunction or damage of this equipment and user's.

※ The connection cable for PLC of various makers is provided by us. Please refer to the catalogue or contact Head or branch office if you need more detail models and specifications.

### Warning

- Plug or unplug power line and/or connector for signal after making sure to shut off power so as that it is prevented to be damaged or malfunctioned.
- Read this user's guide which is attached to product, and check product's performance, specification, operation pattern, signal, and how to handle prior to use. Keep user's guide please.
- When wiring the terminal block, please tighten it with the 0.68~0.78N · m torque using the appropriate tool.  
If it is outside of this range torque, it may cause malfunction due to breakage or looseness of tightening surface terminal.
- Use removal key which is supplemented for replacement. Using other tools may be the cause of damage of relay or relay socket.

### • Model Selection

Model		Installation Relay	IO Point(s)	Coil Rate voltage	Common		Interface		Dimensions (W * Dmm)	Protection circuit for contact				
Standard type	Removal button type				Coil	Contact	Coil	Contact						
R32C-YN-8E	R32C-YN-8E/B	TAKAMISAWA NYP-24W-K	32Point (1a + 1)	24V DC	NPN 	8P/2P Com.	Connector MIL-C-83503 40Pin	44Pole	178.5 + 70 DIN Rail (Channel)	-				
R32C-YN-C	R32C-YN-C/B					Individual Com.		Screw Terminal (Push type) 68Pole						
R32C-YP-8E	R32C-YP-8E/B				PNP 	8P/2P Com.				44Pole	Varistor			
R32C-YP-C	R32C-YP-C/B					Individual Com.								
R32C-YN-8EV	R32C-YN-8EV/B				NPN 	8P/2P Com.		44Pole		-				
R32C-YN-CV	R32C-YN-CV/B					Individual Com.								
R32C-YP-8EV	R32C-YP-8EV/B				PNP 	8P/2P Com.		44Pole		-				
R32C-YP-CV	R32C-YP-CV/B					Individual Com.								
R32C-NS5A-8E	R32C-NS5A-8E/B	PANASONIC APAN3124			NPN 	8P/2P Com.		44Pole		-				
R32C-NS5A-C	R32C-NS5A-C/B					Individual Com.		Screw Terminal (Push type) 68Pole						
R32C-PS5A-8E	R32C-PS5A-8E/B				PNP 	8P/2P Com.				44Pole	Varistor			
R32C-PS5A-C	R32C-PS5A-C/B					Individual Com.								
R32C-NS5A-8EV	R32C-NS5A-8EV/B				NPN 	8P/2P Com.		44Pole		-				
R32C-NS5A-CV	R32C-NS5A-CV/B					Individual Com.								
R32C-PS5A-8EV	R32C-PS5A-8EV/B									PNP 	8P/2P Com.		44Pole	-
R32C-PS5A-CV	R32C-PS5A-CV/B										Individual Com.			

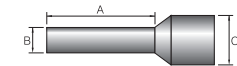
### • Relay Specification

Item		NYP-24W-K	APAN3124
Contact	Arrangement	1a	1 Form A (Bifurcated)
	Nominal switching capacity (resistive load)	5A 250V AC / 5A 30V DC	5A 250V AC/5A 30V DC
	Max. switching current	5A	5A
	Max. switching voltage	270V AC / 150V DC	250V AC/110V DC (0.4A)
	Nominal voltage	24V DC	24V DC
Coil	Pick-up voltage	16.1V DC	70% max. of Rated voltage
	Drop-out voltage	2.4V DC	5% min. of Rated voltage
	Coil resistance	4,800 $\Omega$	5,236 $\Omega$
	Coil inductance	120mH	110mH
	Nominal operation power	5,080V	6,000V
Surge voltage between contact and coil		3,000V AC 1min	3,000V rms for 1min
Initial breakdown voltage between contact and coil		3,000V AC 1min	3,000V rms for 1min
Country of origin		JAPAN	CHINA

### • Material/Specification

Terminal	PA6	
Pin header	Copper, Tin plated	
Wire guard	Stainless steel	
Cover	Modified PPO	
P.C.B	Epoxy 1.6t / 2oz	
Applicable wire	Single wire	0.5~1.5mm <sup>2</sup>
	Twisted wire	UL : 17~22AWG / IEC : 1.0mm <sup>2</sup>
Wire stripping length		9~10mm

### • Ferrule Selection



AWG/(mm <sup>2</sup> )	DIN46228	Other	A(mm)	B(mm)	C(mm)
20/0.5	White	White/Orange	10.0	1.3	3.2
18/0.75	Gray	Blue/White	10.0	1.5	3.4
17/1.0	Red	Red/Yellow	10.0	1.7	3.6

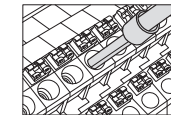
### • Appropriate tool

\*  $\ominus$  Driver

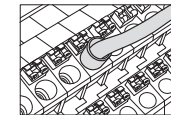


$\ominus$  2.6mm\*0.35t

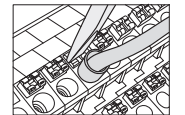
### • Method of removal wire



When using a stranded wire, use a ferrule or a round type terminal. In case of a solid wire, use it without crimping tool.

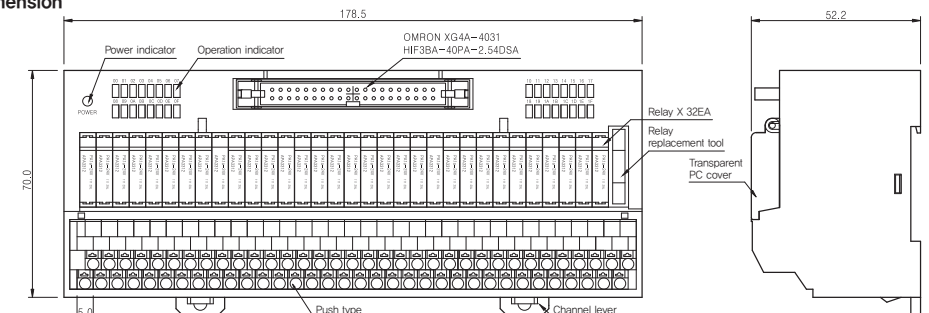


Insert into the terminal block without using a separate tool.



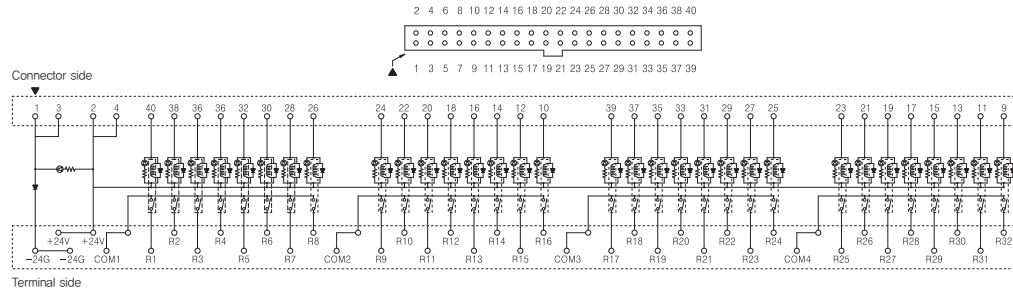
When disconnecting the wires, keep the disconnect button pressed with the driver (-type) and disconnect the wires.

### • Dimension

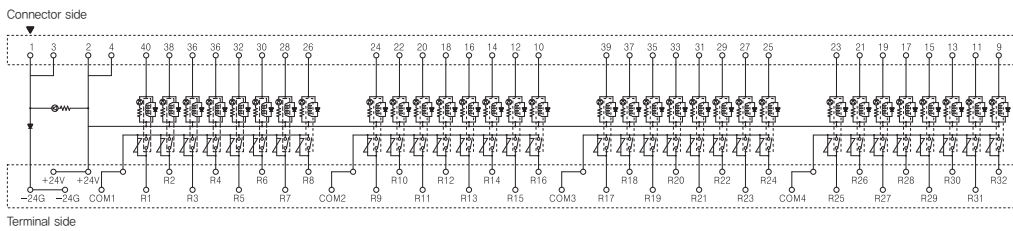


## Wiring Diagram

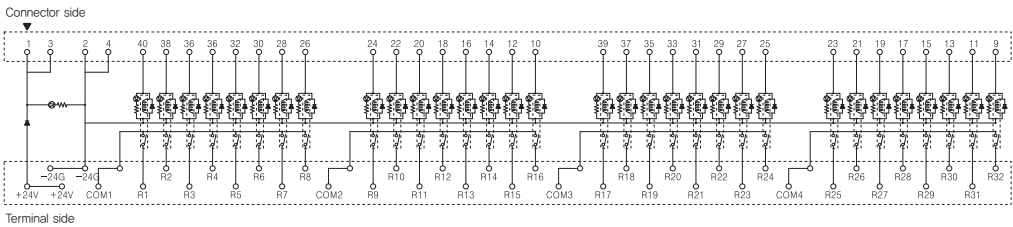
• R32C-NS5A-8E / R32C-YN-8E (NPN) (+COM)



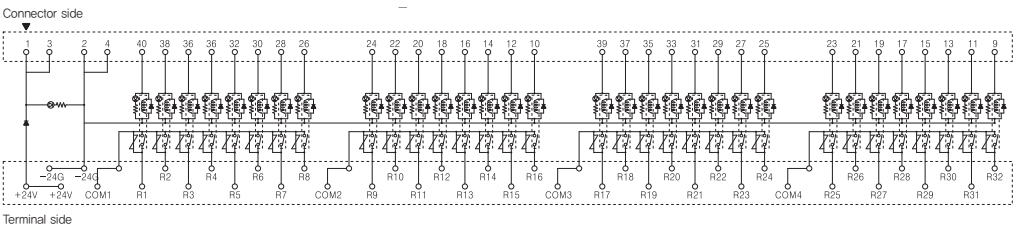
• R32C-NS5A-8EV / R32C-YN-8EV (NPN) (+COM)



• R32C-PS5A-8E / R32C-YP-8E (PNP) (-COM)



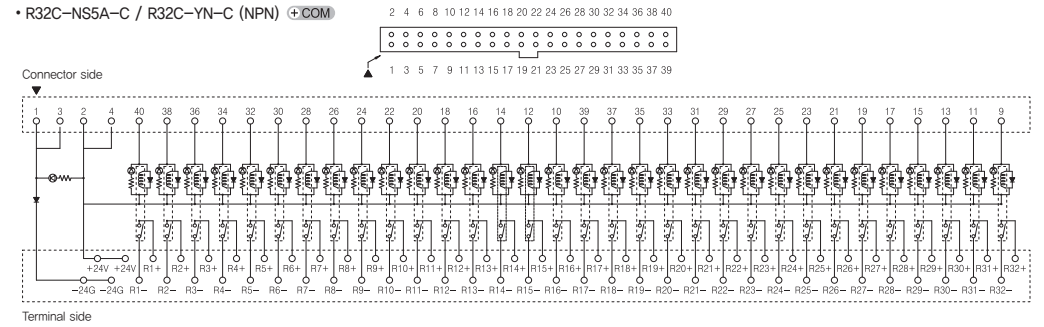
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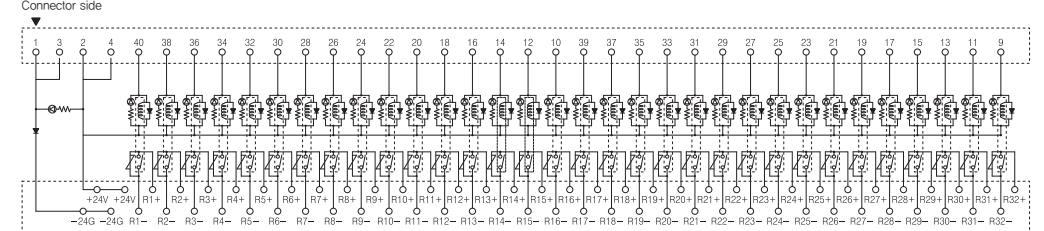
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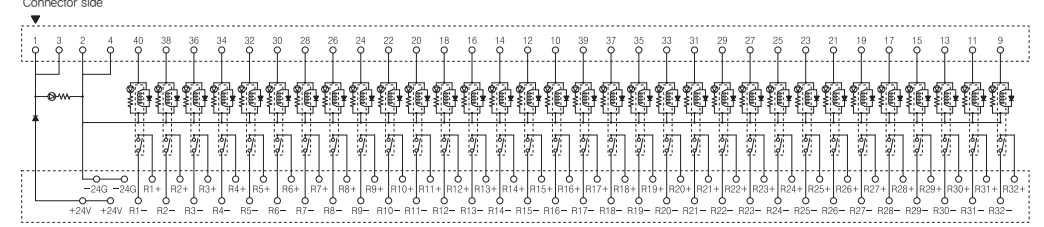
• R32C-NS5A-C / R32C-YN-C (NPN) (+COM)



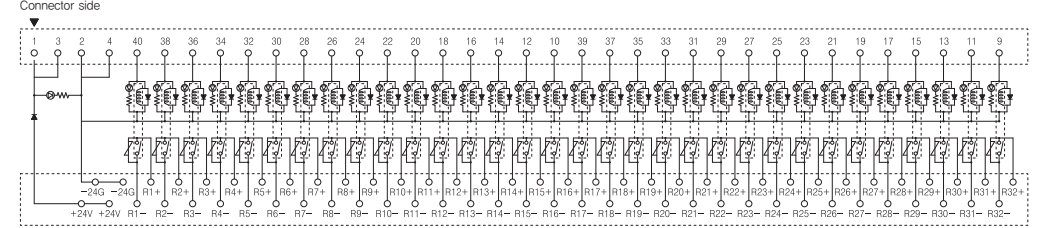
• R32C-NS5A-CV / R32C-YN-CV (NPN) (+COM)



• R32C-PS5A-C / R32C-YP-C (PNP) (-COM)



• R32C-PS5A-CV / R32C-YP-CV (PNP) (-COM)



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### Caution



- Do Not use other voltage except appointed voltage. It may be the cause of fire or damage of equipment.
- Use it within nominal voltage and current which are marked on load.  
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- Check COMMON polarity of using controller (PLC, etc) first, and then select proper product.  
It may be the cause of fire or damage of this equipment and user's.  
1) COMMON Polarity of controller is '+' (NPN TYPE) : R32C-YN-□, R32C-NS5A-□  
2) COMMON Polarity of controller is '-' (PNP TYPE) : R32C-YP-□, R32C-PS5A-□
- Make controller and connection cable between relay boards after checking internal wiring of relay board and PIN (terminal or socket) array of controller if you want to make it for yourself.  
It may be the cause of fire, and malfunction or damage of this equipment and user's.

※ The connection cable for PLC of various makers is provided by us. Please refer to the catalogue or contact Head or branch office if you need more detail models and specifications.

### Warning

- Plug or unplug power line and/or connector for signal after making sure to shut off power so as that it is prevented to be damaged or malfunctioned.
- Read this user's guide which is attached to product, and check product's performance, specification, operation pattern, signal, and how to handle prior to use. Keep user's guide please.
- When wiring the terminal block, please tighten it with the 0.68~0.78N · m torque using the appropriate tool.  
If it is outside of this range torque, it may cause malfunction due to breakage or looseness of tightening surface terminal.
- Use removal key which is supplemented for replacement. Using other tools may be the cause of damage of relay or relay socket.

### Model Selection

Model		Installation Relay	IO Point(s)	Coil Rate voltage	Common		Interface		Dimensions (W* Dmm)	Protection circu for contact				
Standard type	Removal button type				Coil	Contact	Coil	Contact						
R32C-YN-4C	R32C-YN-4C/B	TAKAMISAWA NYP-24W-K	32Point (1a + 1)	24V DC	NPN 	4P/4P Com.	Connector MIL-C-83503 40Pin	Screw Terminal (Push type) 68Pole	178.5 * 70 DIN Rail (Channel)	-				
R32C-YN-8C	R32C-YN-8C/B					8P/8P Com.								
R32C-YP-4C	R32C-YP-4C/B				4P/4P Com.									
R32C-YP-8C	R32C-YP-8C/B				8P/8P Com.									
R32C-YN-4CV	R32C-YN-4CV/B				4P/4P Com.									
R32C-YN-8CV	R32C-YN-8CV/B				8P/8P Com.									
R32C-YP-4CV	R32C-YP-4CV/B				4P/4P Com.									
R32C-YP-8CV	R32C-YP-8CV/B				8P/8P Com.									
R32C-NS5A-4C	R32C-NS5A-4C/B	PANASONIC APAN3124			32Point (1a + 1)	24V DC			NPN 	4P/4P Com.	Connector MIL-C-83503 40Pin	Screw Terminal (Push type) 68Pole	178.5 * 70 DIN Rail (Channel)	-
R32C-NS5A-8C	R32C-NS5A-8C/B									8P/8P Com.				
R32C-PS5A-4C	R32C-PS5A-4C/B								4P/4P Com.					
R32C-PS5A-8C	R32C-PS5A-8C/B								8P/8P Com.					
R32C-NS5A-4CV	R32C-NS5A-4CV/B								4P/4P Com.					
R32C-NS5A-8CV	R32C-NS5A-8CV/B								8P/8P Com.					
R32C-PS5A-4CV	R32C-PS5A-4CV/B								4P/4P Com.					
R32C-PS5A-8CV	R32C-PS5A-8CV/B								8P/8P Com.					

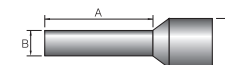
### NYP/PA Relay Specification

Item		NYP-24W-K	APAN3124
Contact	Arrangement	1a	1 Form A (Bifurcated)
	Nominal switching capacity(resistive load)	5A 250V AC/5A 30V DC	5A 250V AC/5A 30V DC
	Max. switching current	5A	5A
	Max. switching voltage	270V AC/150V DC	250V AC/110V DC (0.4A)
	Nominal voltage	24V DC	24V DC
Coil	Pick-up voltage	16.1V DC	70% max. of Rated voltage
	Drop-out voltage	2.4V DC	5% min. of Rated voltage
	Coil resistance	4,800Ω	5,236Ω
	Nominal operation power	120mW	110mW
	Surge voltage between contact and coil	5,080V	6,000V
Initial breakdown voltage between contact and coil		3,000V AC 1min	3,000V rms for 1min
Country of origin		JAPAN	CHINA

### Material/Specification

Terminal	PA6	
Pin header	Copper, Tin plated	
Wire guard	Stainless steel	
Cover	Modified PPO	
P.C.B	Epoxy 1.6t / 2oz	
Applicable wire	Single wire	0.5~1.5mm <sup>2</sup>
	Twisted wire	UL : 17~22AWG / IEC : 1.0mm <sup>2</sup>
Wire stripping length		9~10mm

### Ferrule Selection



AWG/(mm <sup>2</sup> )	DIN46228	Other	A(mm)	B(mm)	C(mm)
20/0.5	White	White/Orange	10.0	1.3	3.2
18/0.75	Gray	Blue/White	10.0	1.5	3.4
17/1.0	Red	Red/Yellow	10.0	1.7	3.6

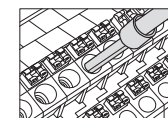
### Appropriate tool

\* ⊖ Driver

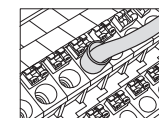


⊖ 2.6mm\*0.35t

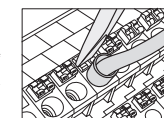
### Method of removal wire



When using a stranded wire, use a ferrule or a round type terminal. In case of a solid wire, use it without crimping tool.

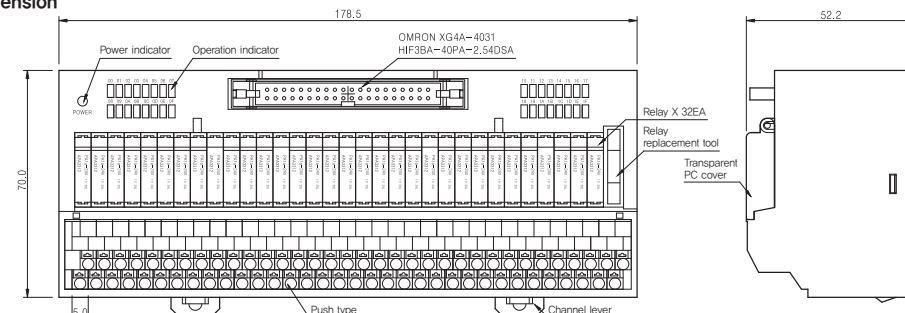


Insert into the terminal block without using a separate tool.



When disconnecting the wires, keep the disconnect button pressed with the driver (-type) and disconnect the wires.

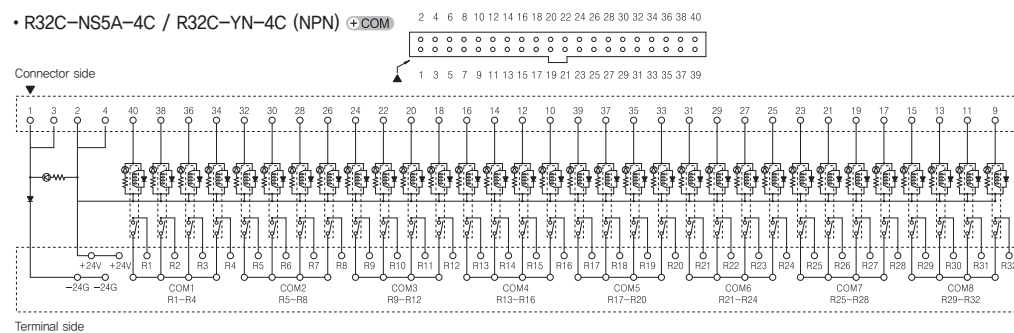
### Dimension



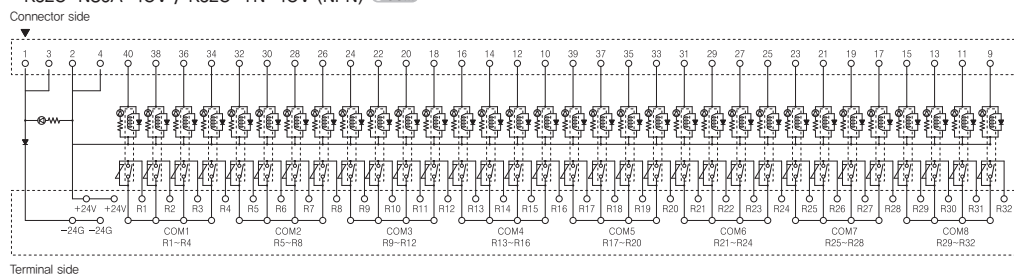


## Wiring Diagram

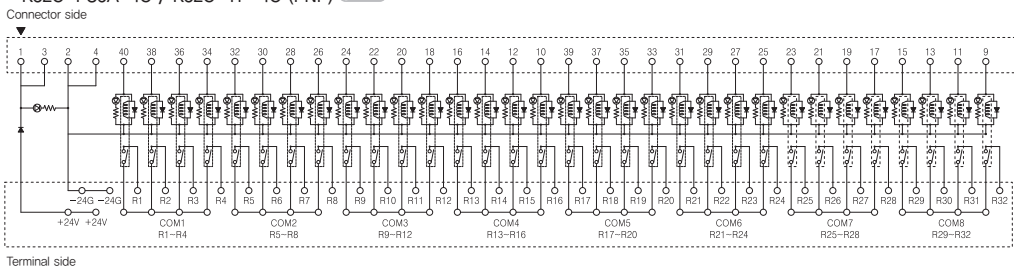
• R32C-NS5A-4C / R32C-YN-4C (NPN) (+COM)



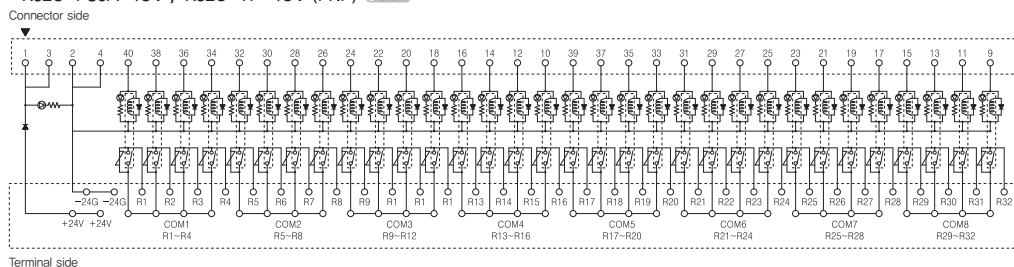
• R32C-NS5A-4CV / R32C-YN-4CV (NPN) (+COM)



• R32C-PS5A-4C / R32C-YP-4C (PNP) (-COM)



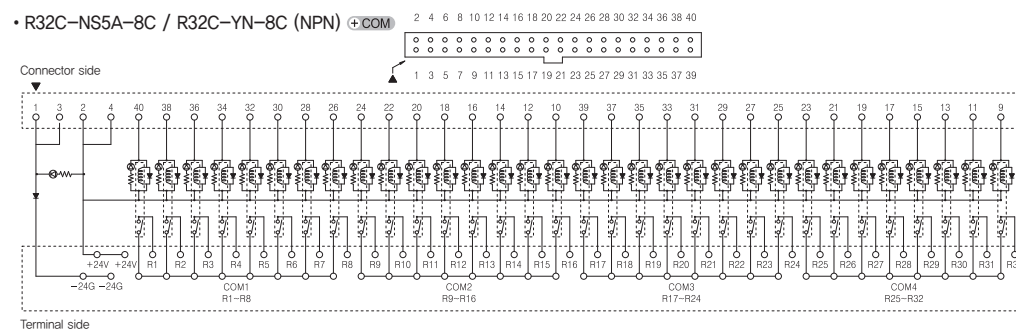
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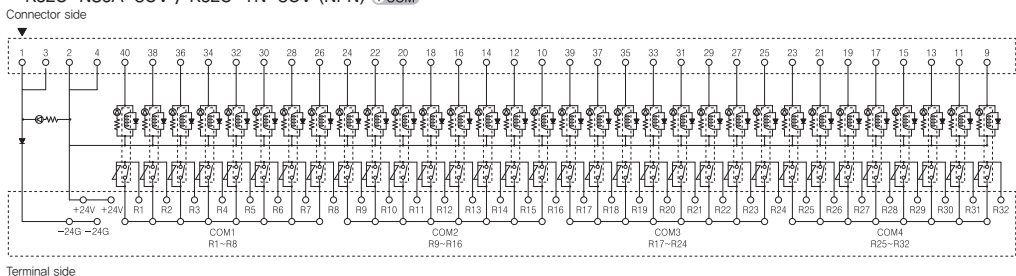
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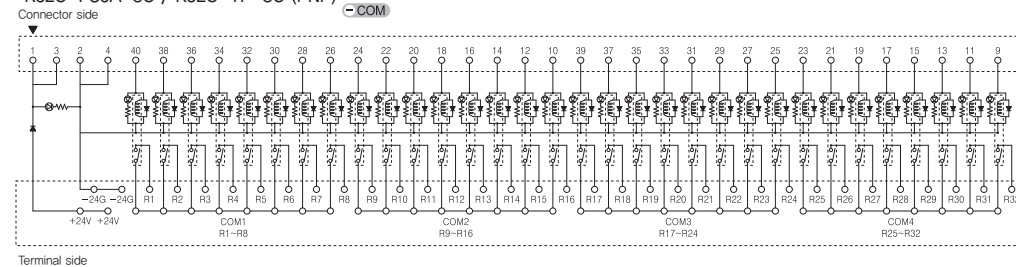
• R32C-NS5A-8C / R32C-YN-8C (NPN) (+COM)



• R32C-NS5A-8CV / R32C-YN-8CV (NPN) (+COM)



• R32C-PS5A-8C / R32C-YP-8C (PNP) (-COM)



• R32C-PS5A-8CV / R32C-YP-8CV (PNP) (-COM)

