I/O Terminal Blocks

A New Standard for I/O Terminal Blocks

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I/O Terminal Blocks

Electrical devices generally require connection with other machinery for operation in most industries. In order to connect machines cables and terminals are required, and I/O terminal blocks allow connection between multiple devices simultaneously.

I/O terminal blocks allow effective wiring between electrical devices by offering stable connection with the use of insulating substrates. These connectivity devices offer easier installation and maintenance with simple connection methods. I/O terminal blocks are installed in control panels or switchboards to easily connect and disconnect various devices.

Autonics offers a diverse lineup of I/O terminal blocks for various applications. Users can select I/O terminal blocks depending on the required usage or environments. Various terminal blocks are available including different number of terminals, terminal pitch size, installation methods and more.

Make connection easy with Autonics I/O terminal blocks and cables.

Certifications

I/O Terminal Block Line-up

Common Terminal Blocks

ACS Series
20, 40 (1-line, 2-line), 50 point
ACL Series
20, 40 (1-line, 2-line), 50 point
ACR Series
20, 40 (1-line, 2-line), 50 point

Interface Terminal Blocks

AFS Series
20, 26, 40 (1-line, 2-line), 50 point
AFL Series
16, 20, 26 32, 40, 50 point
AFR Series
16, 20, 26 32, 40, 50 point

Sensor Connector Terminal Blocks

AFE Series
16, 32 connectors

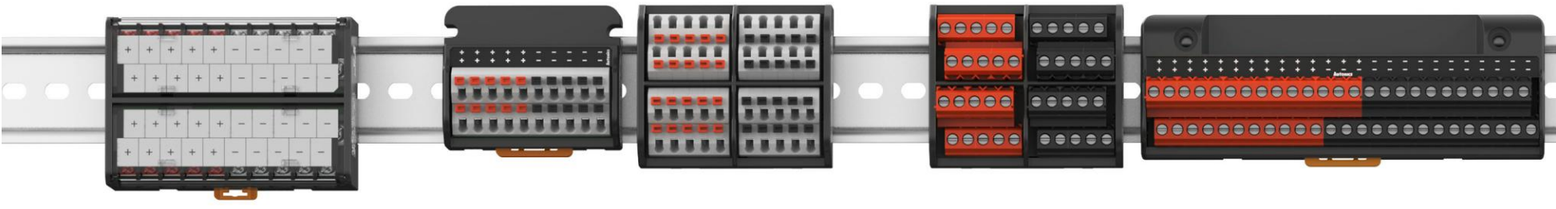
Relay Terminal Blocks

ABS Series
1, 4, 16, 32 point
ABL Series
1, 4, 16, 32 point

SSR Terminal Blocks

ASS Series
16, 32 point
ASL Series
1, 4, 16, 32 point

Common Terminal Blocks



ACS Series (Screw Type)
20, 40 (1-line, 2-line), 50 point

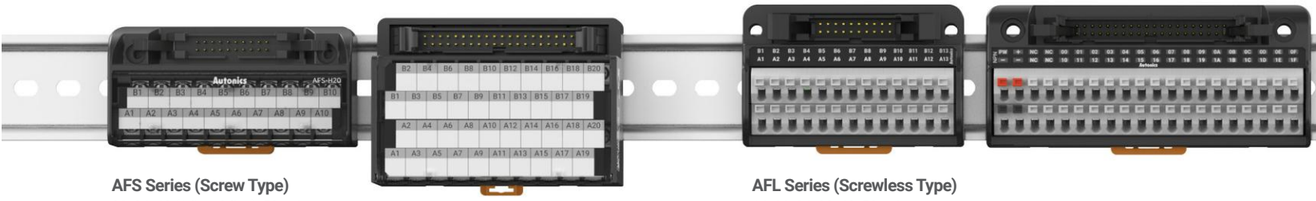
ACL Series (Screwless Type)
20, 40 (1-line, 2-line), 50 point

ACR Series (Rising Clamp Type)
20, 40 (1-line, 2-line), 50 point

Sensor Connector Terminal Blocks

AFE Series (Connector Type)
16, 32 connectors

Interface Terminal Blocks



AFS Series (Screw Type)
20, 26, 40 (1-line, 2-line), 50 point

AFL Series (Screwless Type)
16, 20, 26, 32, 40, 50 point

AFR Series (Rising Clamp Type)
16, 20, 26, 32, 40, 50 point

Relay Terminal Blocks

ABS Series (Screw Type)
1, 4, 16, 32 point

* For ABS/ABL Series 16, 32 point model, independent and comprehensive connection are provided.

ABL Series (Screwless Type)
1, 4, 16, 32 point

SSR Terminal Blocks

ASS Series (Screw Type)
16, 32 point

* For ASS/ASL series 16, 32 point models, independent and comprehensive connection are provided.

ASL Series (Screwless Type)
1, 4, 16, 32 point

Common Terminal Blocks

ACS / ACL / ACR Series

Common terminal blocks allow power supply and distribution to various field instruments.

Available common terminal blocks include screw connection type ACS series, screwless connection type ACL series, and rising clamp type ACR series.

Common terminal blocks are equipped with common wiring on the PCB, not requiring jumper bars. Common terminal blocks are available in various number of terminal points for application in diverse environments.

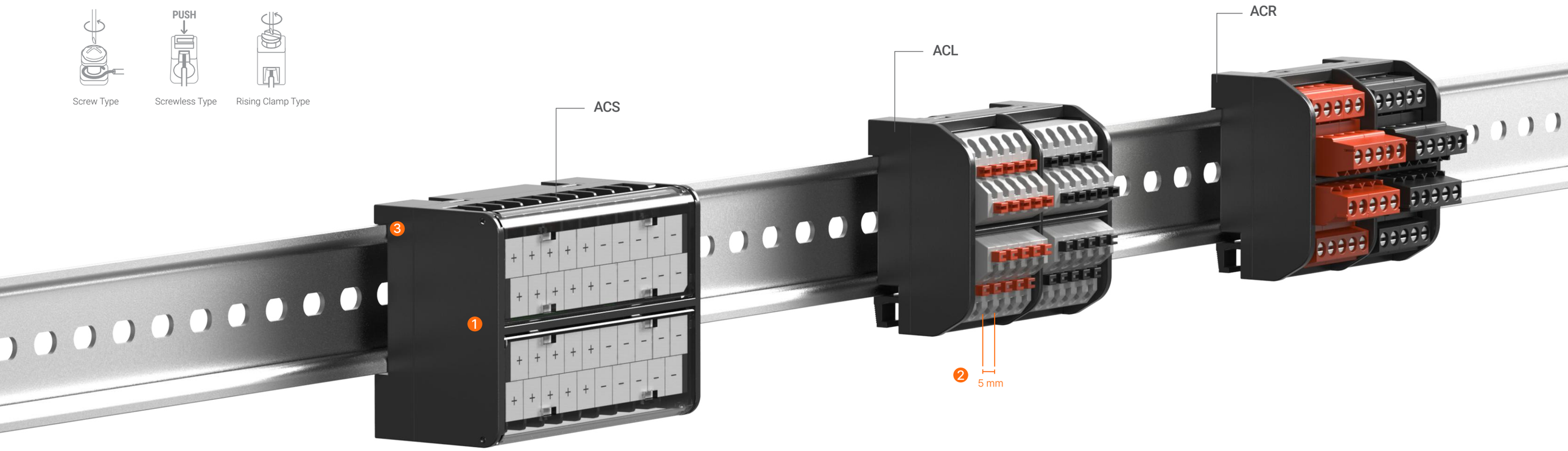
- **Screw Type** | ACS Series
- **Screwless Type** | ACL Series
- **Rising Clamp Type** | ACR Series

Common Terminal Blocks

ACS / ACL / ACR Series

Connection Type

Screw Type | Screwless Type | Rising Clamp Type



1 2-line Arrangement

Compact size with 2-line arrangement (40 point model)

2 5 mm Terminal Pitch

Space-saving design with 5 mm pitch between terminals (ACL/ACR series)

3 DIN Rail Mount and Screw Mount Installation

For application in various environments.

Series	Type	The number of terminal points	Terminal arrangement	Mounting	Model
ACS	Screw	20 point	1-line	DIN Rail/ Screw mount	ACS-20L, ACS-20T
		40 point	1-line		ACS-40L, ACS-40T ACS-B40L, ACS-B40T
			2-line		
		50 point	1-line		ACS-50L, ACS-50T
ACL	Screw less	20 point	1-line	DIN Rail/ Screw mount	ACL-20L ACL-20T
		40 point	1-line		ACL-40L, ACL-40T ACL-B40L, ACL-B40T
			2-line		
		50 point	1-line		ACL-50L, ACL-50T
ACR	Rising Clamp	20 point	1-line	DIN Rail/ Screw mount	ACR-20L, ACR-20T
		40 point	1-line		ACR-40L, ACR-40T ACR-B40L, ACR-B40T
			2-line		
		50 point	1-line		ACR-50L, ACR-50T

Common Terminal Blocks

Screw Type

ACS Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ACS - ❶ ❷ ❸

❶ Terminal block arrangement
No-mark: single line
B: double line

❷ Number of terminal
20: 20-point
40: 40-point
50: 50-point

❸ Common type
L: Left + COM, Right - COM
T: Top + COM, Bottom - COM

Specifications

Model	ACS-20□	ACS-40□	ACS-B40□	ACS-50□
No. of terminals	20	40	40	50
Terminal type	Screw	Screw	Screw	Screw
Terminal block arrangement	Single line	Single line	Double line	Single line
Terminal pitch	7.0 mm	7.0 mm	7.2 mm	7.0 mm
Material	Case, Base: MPPO, terminal: brass	Case, Base: MPPO, terminal: brass	Case, Base: PC, terminal: brass	Case, Base: MPPO, terminal: brass
Certification	CE UK CA cULus LISTED EAC	CE UK CA cULus LISTED EAC	CE UK CA cULus LISTED	CE UK CA cULus LISTED EAC
Unit weight (packaged)	≈ 61 g (≈ 92 g)	≈ 115 g (≈ 157 g)	≈ 120 g (≈ 149 g)	≈ 141 g (≈ 189 g)

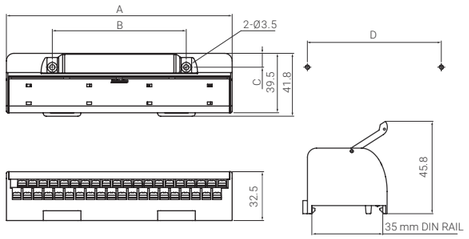
Rated voltage	≤ 125 VDC⎓, 125 VAC~ 50/60 Hz
Rated current	≤ 10 A
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength	2,700 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	150 m/s^2 (≈ 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s^2 (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

Applicable wire - solid	Ø 0.3 to 1.2 mm
Applicable wire - stranded	AWG 22-16 (0.30 to 1.25 mm²)
Crimp terminal connection tensile strength	≥ 30 N
Tightening torque	0.5 to 0.6 N·m

Dimensions

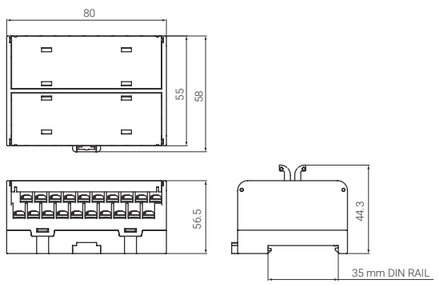
Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ Single line



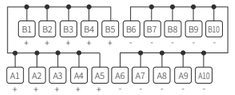
	A	B	C	D
20-point	80	62.5	9.3	62.5
40-point	150	89	9.3	89
50-point	184	104	8.8	104

■ Double line

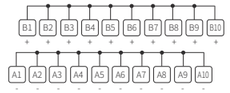


Wire Connection

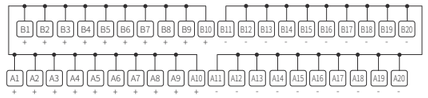
■ ACS-20L



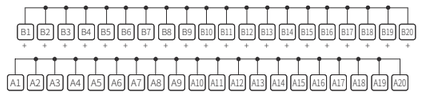
■ ACS-20T



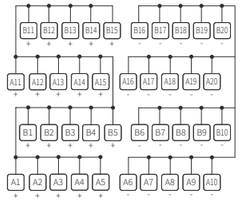
■ ACS-40L



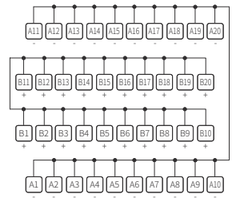
■ ACS-40T



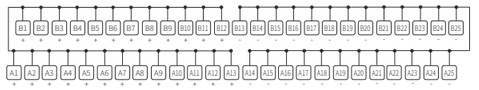
■ ACS-B40L



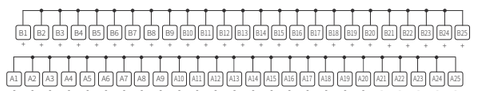
■ ACS-B40T



■ ACS-50L



■ ACS-50T



Common Terminal Blocks

Screwless Type

ACL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ACL - ❶ ❷ ❸

❶ Terminal block arrangement
No-mark: single line
B: double line

❷ Number of terminal
20: 20-point
40: 40-point
50: 50-point

❸ Common type
L: Left + COM, Right - COM
T: Top + COM, Bottom - COM

Specifications

Model	ACL-20□	ACL-40□	ACL-B40□	ACL-50□
No. of terminals	20	40	40	50
Terminal type	Screwless	Screwless	Screwless	Screwless
Terminal block arrangement	Single line	Single line	Double line	Single line
Terminal pitch	5.0 mm	5.0 mm	5.0 mm	5.0 mm
Material	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC
Certification	CE UK CA cULus LISTED EAC	CE UK CA cULus LISTED EAC	CE UK CA cULus LISTED	CE UK CA cULus LISTED EAC
Unit weight (packaged)	≈ 42 g (≈ 71 g)	≈ 79 g (≈ 146 g)	≈ 67 g (≈ 96 g)	≈ 97 g (≈ 164 g)

Rated voltage	≤ 250 VDC⎓, 250 VAC~ 50/60 Hz
Rated current	≤ 10 A
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength	3,000 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

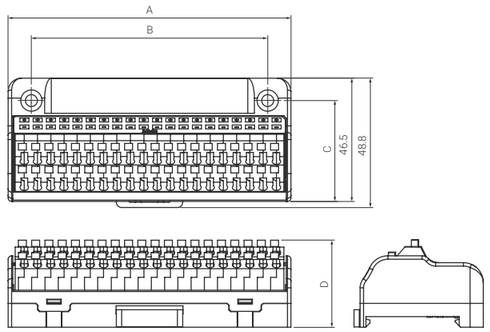
Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Wire ferrule connection tensil strength	≥ 30 N
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

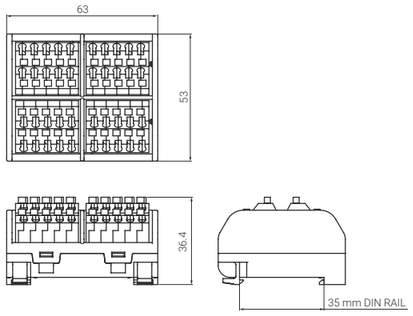
Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ **Single line**



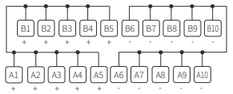
	A	B	C	D
20-point	57.5	53	38	33.1
40-point	106.5	89	38.1	32.9
50-point	131.5	102	38.1	32.9

■ **Double line**

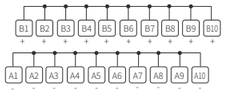


Wire Connection

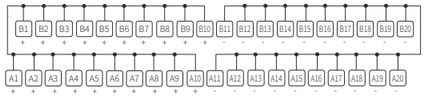
■ **ACL-20L**



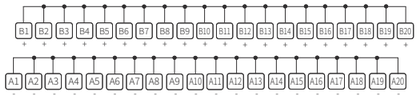
■ **ACL-20T**



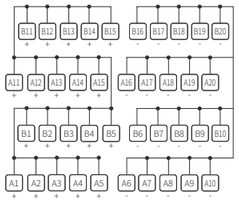
■ **ACL-40L**



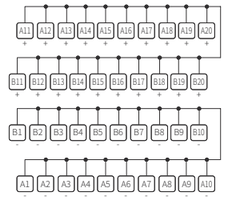
■ **ACL-40T**



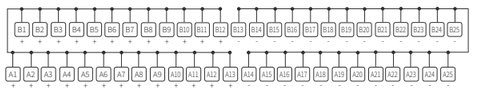
■ **ACL-B40L**



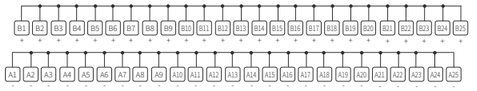
■ **ACL-B40T**



■ **ACL-50L**



■ **ACL-50T**



Common Terminal Blocks

Rising Clamp Type

ACR Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ACR - ❶ ❷ ❸

❶ Terminal block arrangement
No-mark: single line
B: double line

❷ Number of terminal
20: 20-point
40: 40-point
50: 50-point

❸ Common type
L: Left + COM, Right - COM
T: Top + COM, Bottom - COM

Specifications

Model	ACR-20□	ACR-40□	ACR-B40□	ACR-50□
No. of terminals	20	40	40	50
Terminal type	Rising Clamp	Rising Clamp	Rising Clamp	Rising Clamp
Terminal block arrangement	Single line	Single line	Double line	Single line
Terminal pitch	5.0 mm	5.0 mm	5.0 mm	5.0 mm
Material	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC
Certification	(ACR-20T)	(ACR-40T)		(ACR-50T)
Unit weight (packaged)	≈ 55 g (≈ 84 g)	≈ 105 g (≈ 172 g)	≈ 92 g (≈ 121 g)	≈ 130 g (≈ 197 g)

Rated voltage [01]	≤ 250 VDC⎓, 250 VAC~ 50/60 Hz
Rated current	≤ 10 A
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength	3,000 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

01) UL approved rated voltage of ACR-□L (single line) model is 30 VDC⎓. 30 VAC~ which excludes the field wire.

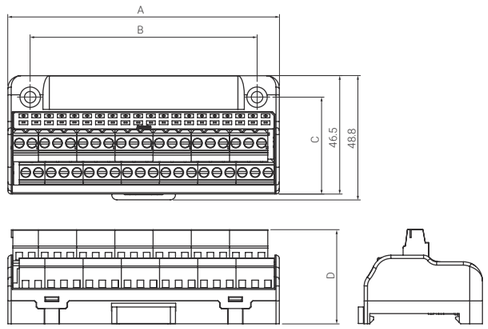
Applicable wire - solid [01]	Ø 0.6 to 1.25 mm
Applicable wire - stranded [01] [02]	AWG 22-16 (0.30 to 1.25 mm²)
Wire ferrule connection tensile strength	≥ 30 N
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

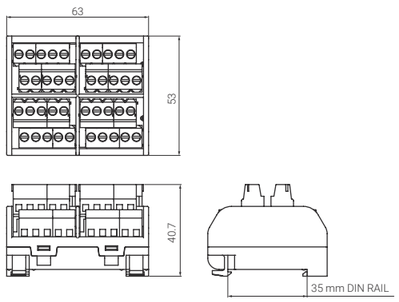
Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ **Single line**



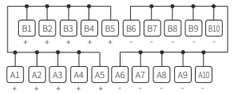
	A	B	C	D
20-point	57.5	53	38	37.2
40-point	106.5	89	38.1	37
50-point	131.5	102	38.1	37

■ **Double line**

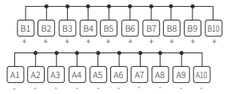


Wire Connection

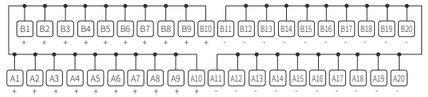
■ **ACR-20L**



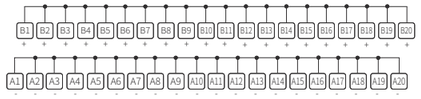
■ **ACR-20T**



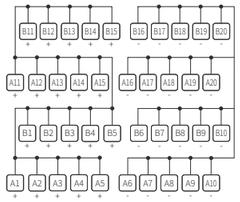
■ **ACR-40L**



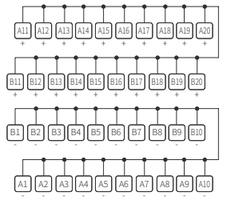
■ **ACR-40T**



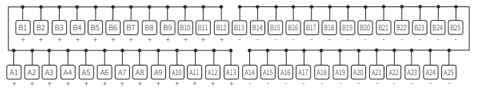
■ **ACR-B40L**



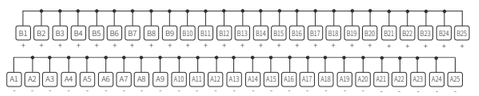
■ **ACR-B40T**



■ **ACR-50L**



■ **ACR-50T**



Interface Terminal Blocks

AFS / AFL / AFR Series

Interface terminal blocks allow delivery of input/output signals between control systems (PLCs) and field instruments.

Available interface terminal blocks include screw connection type AFS series, screwless connection type AFL series, and rising clamp type AFR series.

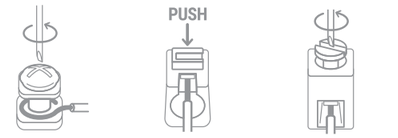
Interface terminal blocks are available in various number of terminal points for application in diverse environments.

- **Screw Type** | ACS Series
- **Screwless Type** | ACL Series
- **Rising Clamp Type** | ACR Series

Interface Terminal Blocks

AFS / AFL / AFR Series

Connection Type



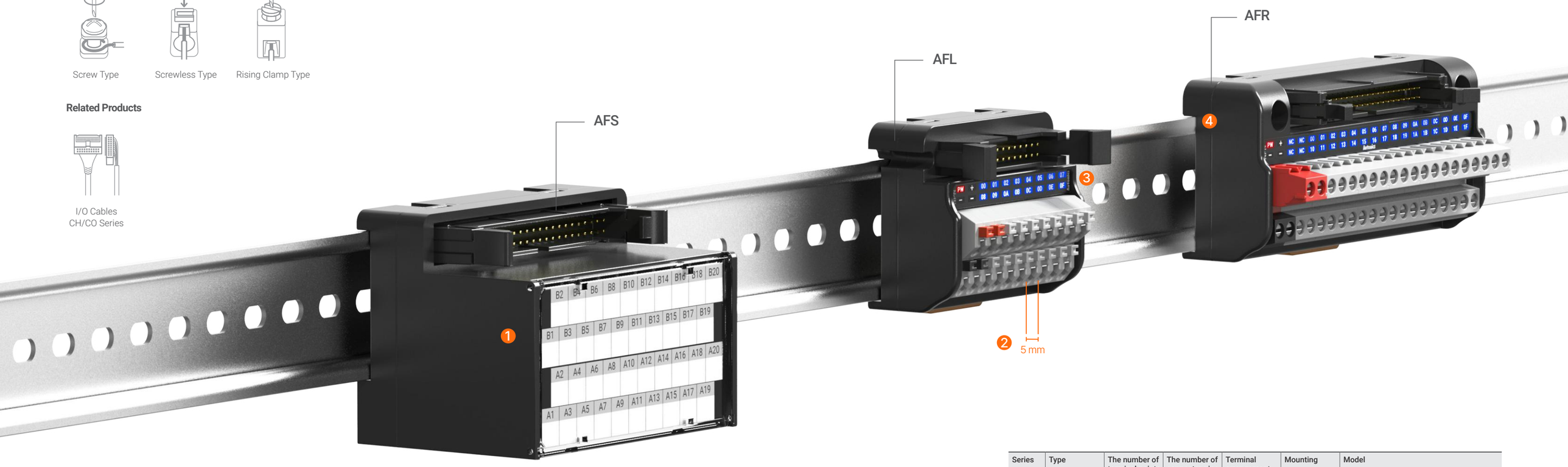
Screw Type

Screwless Type

Rising Clamp Type

Related Products

I/O Cables
CH/CO Series



1 2-line Arrangement

Compact size with 2-line arrangement
(AFS series 40 point model)

2 5 mm Terminal Pitch

Space-saving design with 5 mm pitch between terminals
(AFL/AFR series)

3 Operation Status Indicators

Checking the status with red LED (power on) and blue LED (operation) (AFL-H20/40-LN(P), AFR-H20/40-LN(P)model)

4 DIN Rail Mount and Screw Mount Installation

For application in various environments.

Series	Type	The number of terminal points	The number of connector pins	Terminal arrangement	Mounting	Model
AFS	Screw	20 point	20 pin	1-line	DIN Rail/ Screw mount	AFS-H20
		26 point	26 pin			AFS-H26
		40 point	40 pin			AFS-H40
				2-line		AFS-HB40
		50 point	50 pin	1-line		AFS-H50
AFL	Screw less	20 point	20 pin	1-line	DIN Rail/ Screw mount	AFL-H20
		16 point [01]				AFL-H20-LN, AFL-H20-LP
		26 point	26 pin			AFL-H26
		40 point	40 pin			AFL-H40
		32 point [02]				AFL-H40-LN, AFL-H40-LP
		50 point	50 pin			AFL-H50, AFL-H50B
AFR	Rising Clamp	20 point	20 pin	1-line	DIN Rail/ Screw mount	AFR-H20
		16 point [01]				AFR-H20-LN, AFR-H20-LP
		26 point	26 pin			AFR-H26
		40 point	40 pin			AFR-H40
		32 point [02]				AFR-H40-LN, AFR-H40-LP
		50 point	50 pin			AFR-H50, AFR-H50B

01) Among 20 terminals, 4 are used as LED power.
02) Among 40 terminals, 8 are used as LED power or N.C (Not Connected).

Interface Terminal Blocks

Screw Type

AFS Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

AFS - ❶ ❷ ❸

❶ Connector type
H: Hirose connector

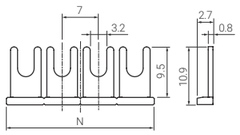
❷ Terminal block arrangement
No-mark: Single line
B: Double line

❸ Number of connector
20: 20-pin
26: 26-pin
40: 40-pin
50: 50-pin

Sold Separately

[7 mm Pitch Jumper Bar]
4-pin: JB-7-04, 10-pin: JB-7-10

1. Using a nipper, cut the notches on the jumper bar as much as you need.
2. Loosen the screws which are needed to be common.
3. Insert the jumper bar under the loosen screws.
4. Tighten the screws.



Model	Number of jumper pins	N
JB-7-04	4	27.5
JB-7-10	10	69.5

7.2 mm pitch jumper bar is not sold from Autonics. If it is needed, purchase jumper bar of 7.2 mm pitch from other manufacturer.

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	AFS-H20	AFS-H26	AFS-H40	AFS-HB40	AFS-H50
No. of connector pins	20	26	40	40	50
No. of terminal points	20	26	40	40	50
Terminal type	Screw	Screw	Screw	Screw	Screw
Terminal block arrangement	Single line	Single line	Single line	Double line	Single line
Terminal pitch	7.0 mm	7.1 mm	7.0 mm	7.2 mm	7.0 mm
Connector for controller side	20-pin Hirose (HIF3BA-20PA-2.54DSA)	26-pin Omron (XG4A-2631)	40-pin Hirose (HIF3BA-40PA-2.54DSA)	40-pin Omron (XG4A-4031)	50-pin Hirose (HIF3BA-50PA-2.54DSA)
Material	CASE, BASE: MPPO, terminal: brass	CASE, BASE: PC, terminal: brass	CASE, BASE: MPPO, terminal: brass	CASE, BASE: PC, terminal: brass	CASE, BASE: MPPO, terminal: brass
Certification	CE UK CA cULus EAC	CE UK CA cULus	CE UK CA cULus EAC	CE UK CA cULus	CE UK CA cULus EAC
Unit weight (packaged)	≈ 71 g (≈ 103 g)	≈ 93 g (≈ 133 g)	≈ 133 g (≈ 175 g)	≈ 142 g (≈ 194 g)	≈ 163 g (≈ 211 g)

Rated voltage 01)	≤ 125 VDC⎓, 125 VAC~ 50/60 Hz
Rated current	≤ 1 A
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength	2,700 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

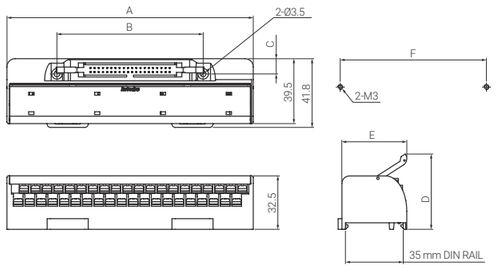
01) When connecting loads to output part, connect loads of same power type. Connecting loads of different power type may cause safety issues.

Applicable wire - solid	Ø 0.3 to 1.2 mm
Applicable wire - stranded	AWG 22-16 (0.30 to 1.25 mm²)
Crimp terminal connection tensile strength	≥ 30 N
Tightening torque	0.5 to 0.6 N·m

Dimensions

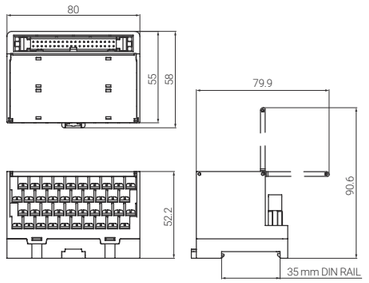
Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ **Single line**



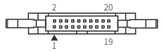
	A	B	C	D	E	F
20-pin	80	62.5	9.3	45.8	39.6	62.5
26-pin	102	81	9.3	52.8	29.7	81
40-pin	150	89	9.3	45.8	39.7	89
50-pin	184	104	8.8	45.8	39.7	104

■ **Double line**



■ **Hirose connector pin arragement**

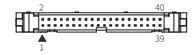
[20-pin connector]
Hirose (HIF3BA-20PA-2.54DSA)



[26-pin connector]
Omron (XG4A-2631)

[40-pin connector]
Hirose (HIF3BA-40PA-2.54DSA)

Omron (XG4A-4031)

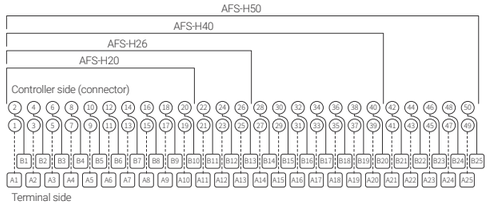


[50-pin connector]
Hirose (HIF3BA-50PA-2.54DSA)

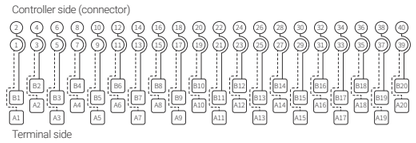
Wire Connection

■ **Wire Connection**

[Single line]



[Double line]



Interface Terminal Blocks

Screwless Type

AFL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

AFL - ❶ ❷ ❸ - ❹ ❺

❶ Connector type
H: Hirose connector

❷ Number of connector
20: 20-pin
26: 26-pin
40: 40-pin
50: 50-pin

❸ Connector
No-mark: HIF3BA, XG4A-2031, XG4A-2631
B: HIF3BB

❹ Indicator
No-mark: no LED
L: LED equipped

❺ Input logic
No-mark: None
N: NPN
P: PNP

Sold Separately

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	AFL-H20	AFL-H26	AFL-H40	AFL-H50	AFL-H50B
No. of connector pins	20	26	40	50	50
No. of terminal points	20	26	40	50	50
Terminal type	Screwless	Screwless	Screwless	Screwless	Screwless
Terminal pitch	5.0 mm	5.0 mm	5.0 mm	5.0 mm	5.0 mm
Connector for controller side	20-pin Omron (XG4A-2031)	26-pin Omron (XG4A-2631)	40-pin Hirose (HIF3BA-40PA-2.54DSA)	50-pin Hirose (HIF3BA-50PA-2.54DSA)	50-pin Hirose (HIF3BB-50PA-2.54DSA)
Material	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC
Certification	CE UK cULus EAC	CE UK cULus	CE UK cULus EAC	CE UK cULus EAC	CE UK cULus EAC
Unit weight (packaged)	≈ 48.5 g (≈ 86.2 g)	≈ 60 g (≈ 89 g)	≈ 89 g (≈ 156 g)	≈ 110 g (≈ 177 g)	≈ 110 g (≈ 177 g)

Model	AFL-H20-LN, AFL-H20-LP	AFL-H40-LN, AFL-H40-LP
No. of connector pins	20	40
No. of terminal points	16 [01]	32 [02]
Terminal type	Screwless	Screwless
Terminal pitch	5.0 mm	5.0 mm
Connector for controller side	20-pin Omron (XG4A-2031)	40-pin Hirose (HIF3BA-40PA-2.54DSA)
Input logic	NPN / PNP model	
Indicator	Power indicator: red, operation indicator: blue	
Material	CASE, BASE: PC	
Certification	CE UK cULus EAC	CE UK cULus EAC
Unit weight (packaged)	≈ 48.6 g (≈ 86.3 g)	≈ 91 g (≈ 158 g)

01) Four terminals among twenty terminals are used for LED power.
02) Eight terminals among fourty terminals are used for LED power or N.C (Not Connected) terminals.

Rated voltage [01]	Basic model: ≤ 125 VDC⎓, 125 VAC~ 50/60 Hz Indicator equipped model: ≤ 24 VDC⎓ ± 10%
Rated current	≤ 1 A
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength	2,700 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

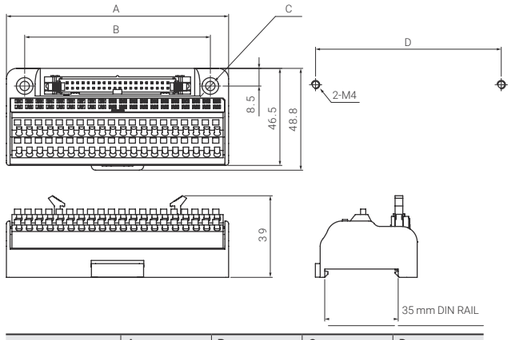
01) When connecting loads to output part, connect loads of same power type.
Connecting loads of different power type may cause safety issues.

Applicable wire-solid [01]	Ø 0.6 to 1.25 mm
Applicable wire - stranded [01] [02]	AWG 22-18 (0.30 to 0.80 mm²)
Wire ferrule connection tensile strength	≥ 30 N
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

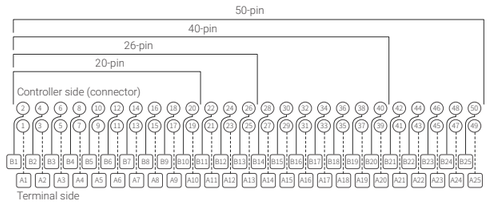


	A	B	C	D
20-pin	57.5	53	2-Ø4.2	53
26-pin	72.5	64	2-Ø4.2	64
40-pin	106.5	89	2-Ø4.5	89
50-pin	131.5	102	2-Ø4.5	102

Wire Connection

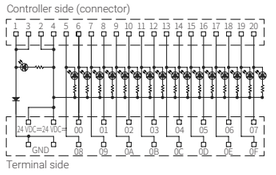
■ Wire Connection

[Basic model]

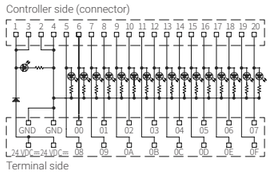


[Indicator equipped model]

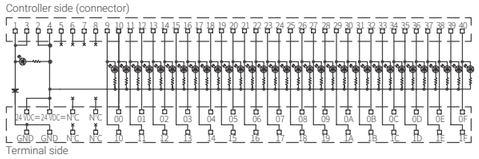
20-pin NPN



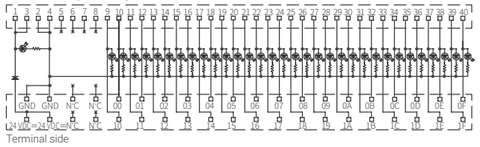
20-pin PNP



40-pin NPN

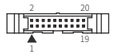


40-pin PNP



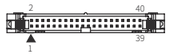
■ Hirose connector pin arragement

[20-pin connector]
Omron (XG4A-2031)

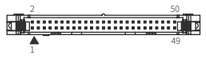


[26-pin connector]
Omron (XG4A-2631)

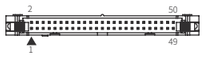
[40-pin connector]
Hirose
(HIF3BA-40PA-2.54DSA)



[50-pin connector]
Hirose
(HIF3BA-50PA-2.54DSA)



Hirose
(HIF3BB-50PA-2.54DSA)



Interface Terminal Blocks

Rising Clamp Type

AFR Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

AFR - ❶ ❷ ❸ - ❹ ❺

❶ Connector type
H: Hirose connector

❷ Number of connector
20: 20-pin
26: 26-pin
40: 40-pin
50: 50-pin

❸ Connector
No-mark: HIF3BA, XG4A-2031, XG4A-2631
B: HIF3BB

❹ Indicator
No-mark: no LED
L: LED equipped

❺ Input logic
No-mark: None
N: NPN
P: PNP

Sold Separately

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	AFR-H20	AFR-H26	AFR-H40	AFR-H50	AFR-H50B
No. of connector pins	20	26	40	50	50
No. of terminal points	20	26	40	50	50
Terminal type	Rising Clamp	Rising Clamp	Rising Clamp	Rising Clamp	Rising Clamp
Terminal pitch	5.0 mm	5.0 mm	5.0 mm	5.0 mm	5.0 mm
Connector for controller side	20-pin Omron (XG4A-2031)	26-pin Omron (XG4A-2631)	40-pin Hirose (HIF3BA-40PA-2.54DSA)	50-pin Hirose (HIF3BA-50PA-2.54DSA)	50-pin Hirose (HIF3BB-50PA-2.54DSA)
Material	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC	CASE, BASE: PC
Certification	CE UK CA cULus EAC	CE UK CA cULus	CE UK CA cULus EAC	CE UK CA cULus EAC	CE UK CA cULus EAC
Unit weight (packaged)	≈ 61 g (≈ 98.7 g)	≈ 78 g (≈ 107 g)	≈ 116 g (≈ 183 g)	≈ 143 g (≈ 210 g)	≈ 143 g (≈ 210 g)

Model	AFR-H20-LN, AFR-H20-LP	AFR-H40-LN, AFR-H40-LP
No. of connector pins	20	40
No. of terminal points	16 01)	32 02)
Terminal type	Rising Clamp	Rising Clamp
Terminal pitch	5.0 mm	5.0 mm
Connector for controller side	20-pin Omron (XG4A-2031)	40-pin Hirose (HIF3BA-40PA-2.54DSA)
Input logic	NPN / PNP model	
Indicator	Power indicator: red, operation indicator: blue	
Material	CASE, BASE: PC	
Certification	CE UK CA cULus EAC	CE UK CA cULus EAC
Unit weight (packaged)	≈ 61.1 g (≈ 98.8 g)	≈ 118 g (≈ 188 g)

01) Four terminals among twenty terminals are used for LED power.
02) Eight terminals among forty terminals are used for LED power or N.C (Not Connectred) terminals.

Rated voltage 01)	Basic model: ≤ 125 VDC⎓, 125 VAC~ 50/60 Hz Indicator equipped model: ≤ 24 VDC⎓ ± 10%
Rated current	≤ 1 A
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength	2,700 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

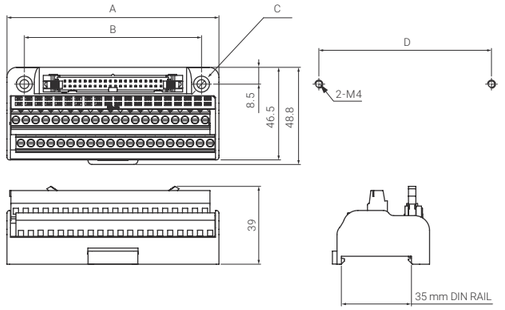
01) When connecting loads to output part, connect loads of same power type.
Connecting loads of different power type may cause safety issues.

Applicable wire - solid 01)	Ø 0.3 to 1.2 mm
Applicable wire - stranded 01) 02)	AWG 22-16 (0.30 to 1.25 mm²)
Wire ferrule connection tensile strength	≥ 30 N
Stripped length	6 to 8 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

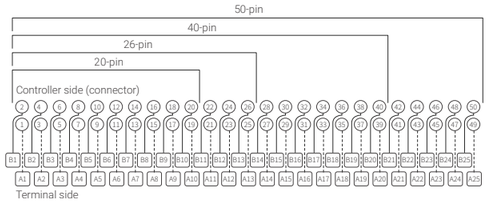


	A	B	C	D
20-pin	57.5	53	2-Ø4.2	53
26-pin	72.5	64	2-Ø4.2	64
40-pin	106.5	89	2-Ø4.5	89
50-pin	131.5	102	2-Ø4.5	102

Wire Connection

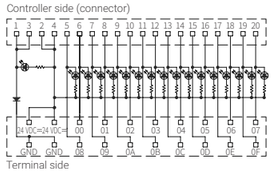
■ Wire Connection

[Basic model]

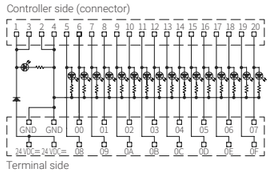


[Indicator equipped model]

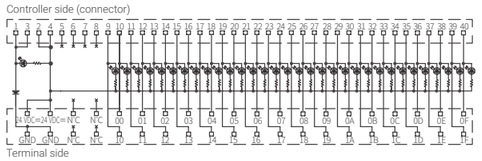
20-pin NPN



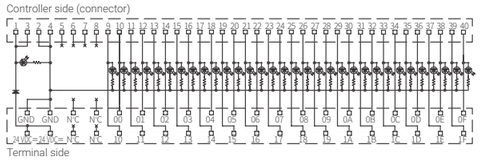
20-pin PNP



40-pin NPN

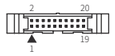


40-pin PNP



■ Hirose connector pin arragement

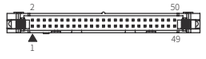
[20-pin connector]
Omron (XG4A-2031)



[26-pin connector]
Omron (XG4A-2631)

[40-pin connector]
Hirose
(HIF3BA-40PA-2.54DSA)

[50-pin connector]
Hirose
(HIF3BA-50PA-2.54DSA)



Hirose
(HIF3BB-50PA-2.54DSA)

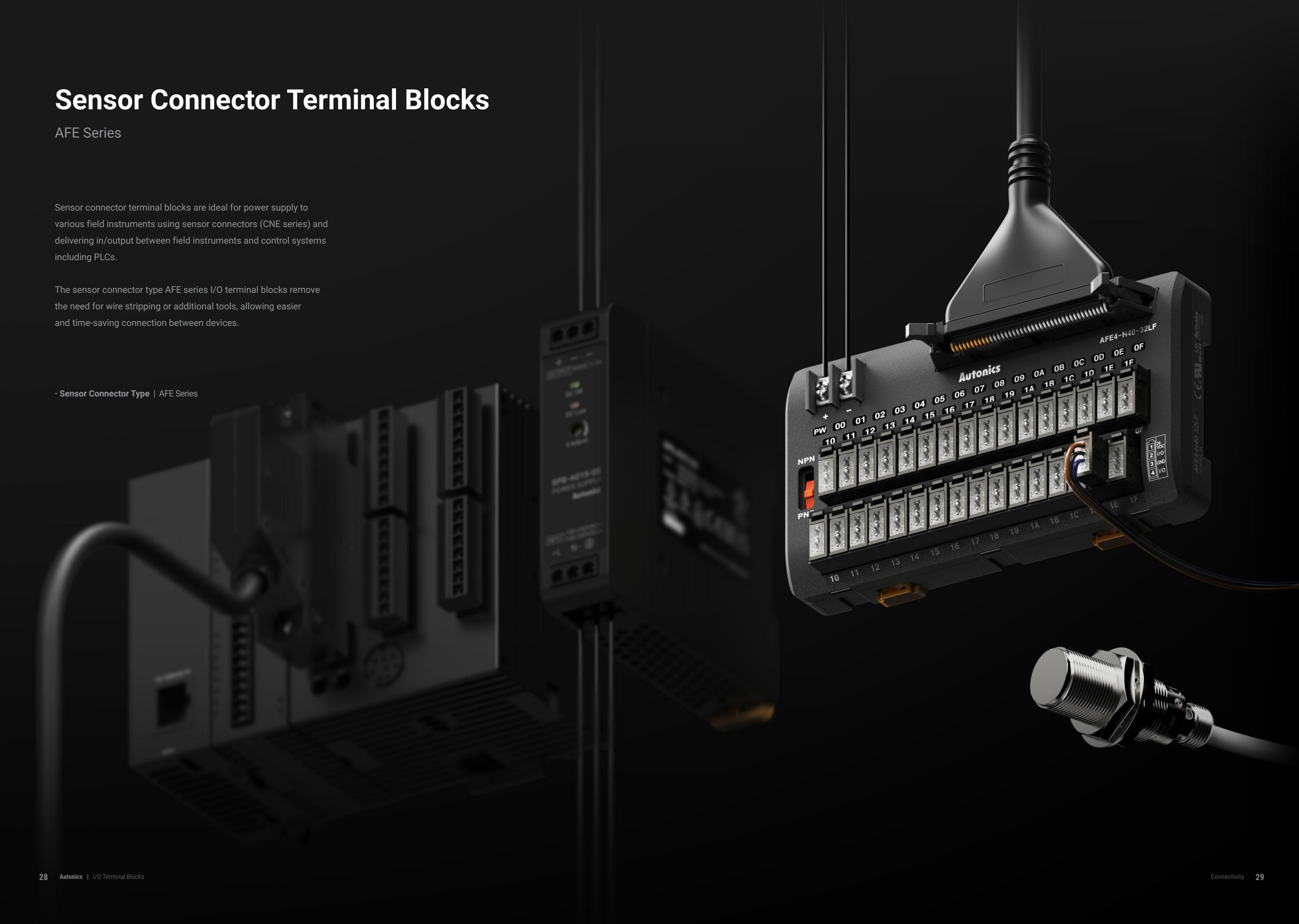
Sensor Connector Terminal Blocks

AFE Series

Sensor connector terminal blocks are ideal for power supply to various field instruments using sensor connectors (CNE series) and delivering in/output between field instruments and control systems including PLCs.

The sensor connector type AFE series I/O terminal blocks remove the need for wire stripping or additional tools, allowing easier and time-saving connection between devices.

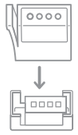
· **Sensor Connector Type** | AFE Series



Sensor Connector Terminal Blocks

AFE Series

Connection type

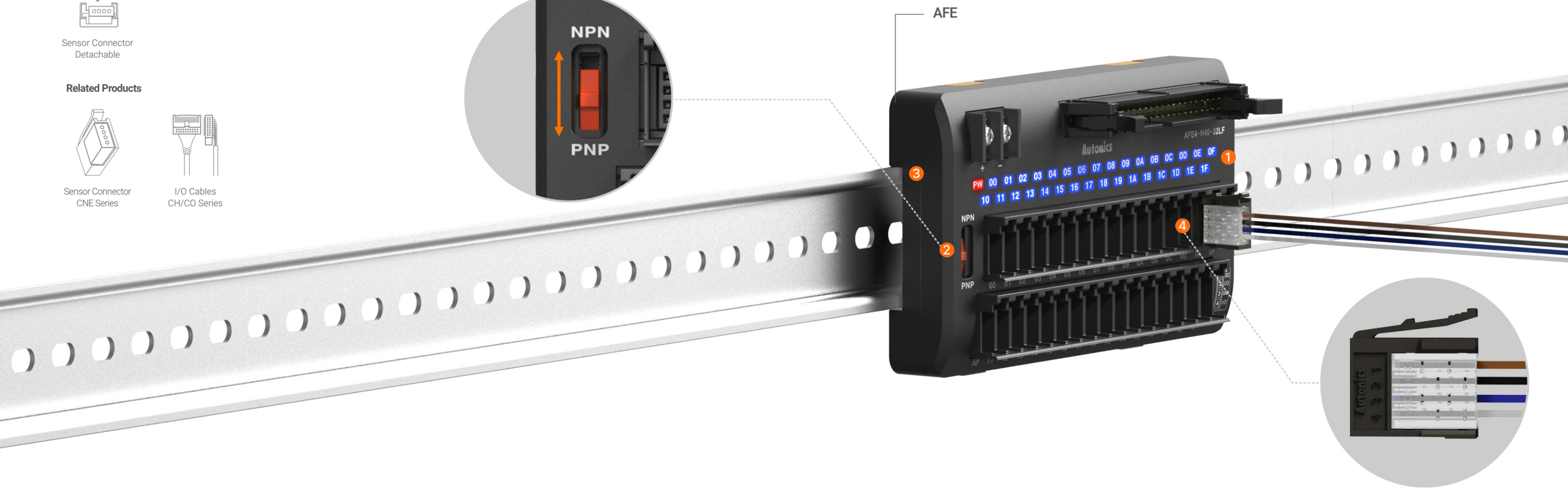


Sensor Connector
Detachable

Related Products

Sensor Connector
CNE Series

I/O Cables
CH/CO Series



1 Operation Status Indicators

Checking the status with red LED (power on) and blue LED (operation)

2 Convenient Input Logic Switch

Switch between NPN and PNP input with switch

3 Independent or Common Output Selectable

For application in various environments.

4 Convenient Connection

Saving installation time and work with Autonics CNE series sensor connectors

Series	Type	Terminal blocks side	Controller side		Mounting	Model
	Connector type	The number of sensor connectors	The number of connector pins	Connector		
AFE	Sensor connector 4 pin socket [01]	16 connectors	20 pin	HIF3BA-20PA-2.54DSA	DIN Rail/ Screw mount	AFE4-H20-16LF
		32 connectors	40 pin	HIF3BA-40PA-2.54DSA		AFE4-H40-32LF

01) Sold separately. Refer to 34 page for information of sensor connector wire mount plug.

Sensor Connector Terminal Blocks

AFE Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

AFE ❶ - ❷ ❸ - ❹ ❺ ❻

❶ Connector type for primary
4: Sensor connector 4-pin socket

❷ Connector type for secondary
H: Hirose connector

❸ Number of connector
20: 20-pin
40: 40-pin

❹ Number of sensor connectors
16: 16-connector
32: 32-connector

❺ Operation indicator
L: Supported

❻ Case shape
F: Full case integral type

Sold Separately

[Sensor connector wire mount plug]
CNE-P04-□

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items

Specifications

Model	AFE4-H20-16LF	AFE4-H40-32LF
No. of connector pins	20	40
No. of sensor connectors	16	32
Connector for controller side	20-pin Hirose (HIF3BA-20PA-2.54DSA)	40-pin Hirose (HIF3BA-40PA-2.54DSA)
Indicator	Power indicator: red, operation and disconnection indicator: blue	
Material	CASE, BASE: PC	
Certification	CE UK CA cULus EAC	
Unit weight (Packaged)	≈ 69 g (≈ 121 g)	≈ 119 g (≈ 203 g)

Voltage	12-24 VDC⎓ ±10%
Current	≤ 1 A 01)
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Input logic	NPN/PNP switch
Dielectric strength	600 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 1 hour
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

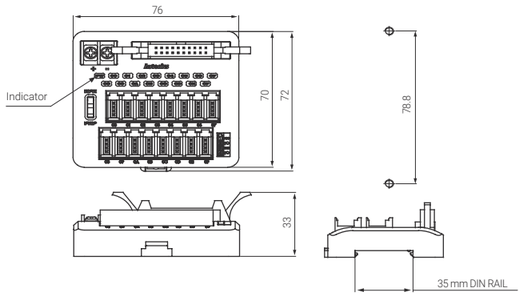
01) It includes LED current of terminal block.

Tightening torque	0.7 to 0.8 N·m

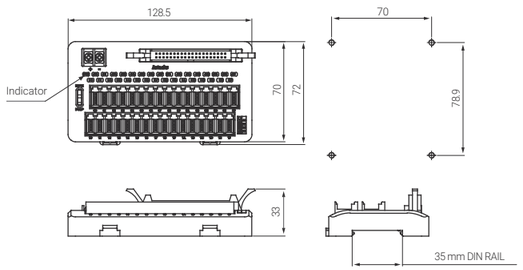
Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ **AFE4-H20-16LF**

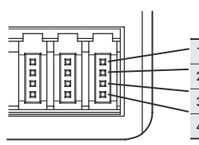


■ **AFE4-H40-32LF**



Sensor Connector Wire Connection

Pin 2 and 4 are connected inside of the product.



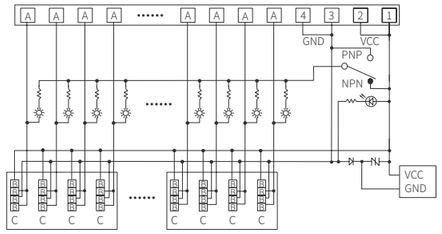
1	12-24 VDC⎓
2	I/O
3	GND
4	I/O

Wire Connection

■ **Wire connection**

[AFE4-H20-16LF]

Controller side (connector)

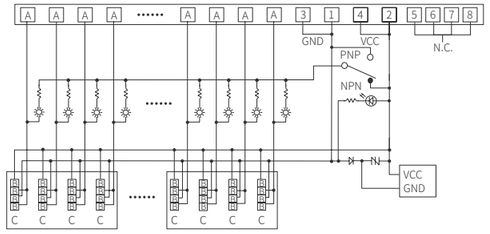


Terminal side

A	Pin	20	18	16	14	12	10	8	6	19	17	15	13	11	9	7	5
B	Sensor connector	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	Output	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F

[AFE4-H40-32LF]

Controller side (connector)



Terminal side

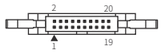
A	Pin	40	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10
B	Sensor connector	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	Output	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F

A	Pin	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9
B	Sensor connector	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
		17	18	19	20	21	22	23	24	25	29	27	28	29	30	31	32
		G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
		17	18	19	20	21	22	23	24	25	29	27	28	29	30	31	32
C	Output	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F

■ **Hirose connector pin arrangement**

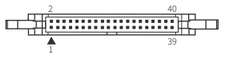
[20-pin connector]

Hirose (HIF3BA-20PA-2.54DSA)



[40-pin connector]

Hirose (HIF3BA-40PA-2.54DSA)



Sensor Connectors

CNE Series

Features

[Common Features]

- Significantly reduce installation work and time
- Wide range of connectors compatible with diverse cables and wires
- High density connection with contact pitch of 2mm
- Compatible with e-CON connectors
- 3A current capacity for each pin

[Wire Mount Plug / Socket]

- Compact and secure one-touch connection type sensor connectors
- Wire mount plug/sockets allow relay connection of wires
- 9 different color covers for identifying wire thickness
- Visually inspect connection status with translucent covers

[Board Mount Socket]

- Contacts positioned within mold to prevent electric shock or short-circuit
- Connect up to 4 wire mount plugs (1/2/4)
- Closely-packed connection possible

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

■ Wire mount plug / Socket

CNE - ❶ ❷ - ❸

❶ Connector type
P: Wire mount plug
S: Wire mount socket

❷ No. of pins
03: 3-pin
04: 4-pin

❸ Cover color and cable specification

Model	Cover color	Cable spec. 01)	
		Nominal cross section area (mm²)	Cover diameter (mm)
WT	Clear	0.05 to 0.08 (AWG30 - 28)	Ø 0.6 to 0.8
YG	Yellow-green		Ø 0.8 to 1.0
VT	Violet		Ø 1.0 to 1.2
RE	Red	0.13 to 0.21 (AWG26 - 24)	Ø 0.8 to 1.0
YW	Yellow		Ø 1.0 to 1.2
OG	Orange		Ø 1.2 to 1.6
GN	Green	0.32 to 0.5 (AWG22 - 20)	Ø 1.0 to 1.2
BL	Blue		Ø 1.2 to 1.6
GY	Gray		Ø 1.6 to 2.0

01) It is recommended to use PVC insulation.

■ Board mount socket

CNE - B ❶ ❷

❶ No. of lines
No mark: 1-line
2: 2-line
4: 4-line

❷ No. of pins
03: 3-pin
04: 4-pin

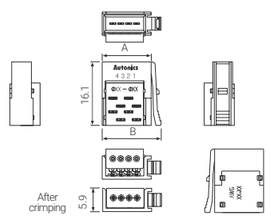
Specifications

Type		Wire mount plug	Wire mount Socket	Board mount socket
Model		CNE-P	CNE-S	CNE-B
Application	Connector	Board mount socket / Wire mount Socket	Wire mount plug	Wire mount plug
	Cable	AWG30 - 20 (insulator outside diameter Ø 0.6 to 2.0)		-
	PCB	-		Fender plated-through hole, hole dia.: 1.0 mm PCB thickness: 1.0 to 2.2 mm
Power supply		≤ 32 VAC~ / VDC⎓		
Rated current		≤ 3.0 A		
Ambient temperature		Applying 1 A: -20 to 85 °C Applying 2 A: -20 to 75 °C Applying 3 A: -20 to 60 °C (rated at no freezing or condensation)		
Ambient humidity		40 to 80%RH (rated at no freezing or condensation)		
Terminal retention		≥ 1.4 kgf		
Pressure strength		AWG30: ≥ 0.5 kgf AWG24: ≥ 0.8 kgf AWG20: ≥ 1.0 kgf		
Extraction		≥ 0.49N (50 gf) / pin		
Insertion		≤ 1.96 N (200 gf) / pin		
Dielectric strength		1,000 VAC~ for 1 min (between terminals)		
Insulation resistance		≥ 1,000 MΩ (between terminals)		
Contact resistance		≤ 0.05 Ω (short current: 1 mA, max. open voltage: 20 mV)		
Material		Body: PC/ABS (UL94V-0), terminal: C5210 (Gold 0.2μm), case: PC (UL94-V0)		Body: PC/ABS (UL94-V0), terminal: C5210 (Gold 0.2μm)

Dimensions

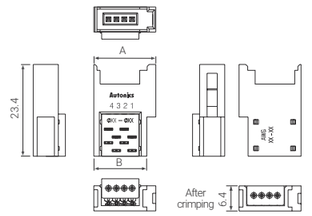
Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ Wire mount plug



Pins	A	B
3-pin	10.4	14.4
4-pin	12.4	16.4

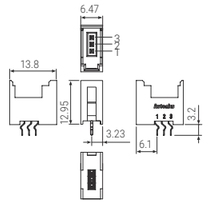
■ Wire mount Socket



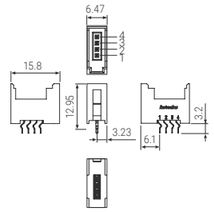
Pins	A	B
3-pin	13.8	11.5
4-pin	15.8	13.5

■ Board mount socket

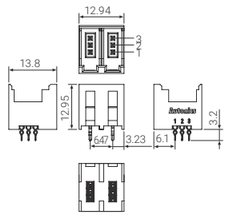
CNE-B03 (1-line × 3-pin)



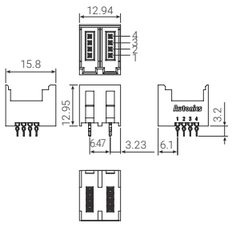
CNE-B04 (1-line × 4-pin)



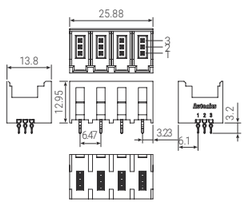
CNE-B203 (2-line × 3-pin)



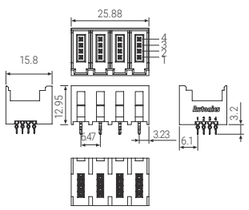
CNE-B204 (2-line × 4-pin)



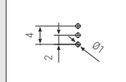
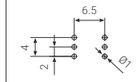
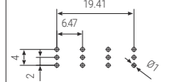
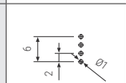
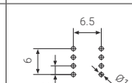
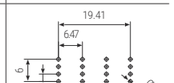
CNE-B403 (4-line × 3-pin)



CNE-B404 (4-line × 4-pin)



PCB hole pattern

	1-line	2-line	4-line
3-pin			
4-pin			

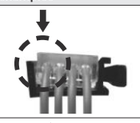
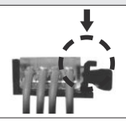
Connections Order

01. Select the connector
Check the wire specifications (conductor section, cover diameter) and select the proper color of sensor connector. The proper sensor connector may be different by conductor of wire. Cover diameter of applied wire at connector (at translucent part) and AWG number of body backside are marked.

02. Insert the wires
Check the pin numbers and insert the wires into the according holes. Check that the wires are fully inserted to the end of the cover.

03. Crimping
Insert the cover into the body with a jig (press fitting tool, etc). Apply pressure with the jig from the side.

04. Check the cover
Check to make sure that the cover is level with the body and that there is no space between the cover and the body.

Wrong examples	
	
Press the part of arrows again. Press the part of arrows again.	

Relay Terminal Blocks

ABS / ABL Series

Relay terminal blocks are used to receive input signal from PLCs and operate loads through contact points.

Available relay terminal blocks include screw connection type ABS series and screwless connection type ABL series.

Relay terminal blocks are available in diverse number of relay points, rated load current and input logic models for application in diverse environments.

- **Screw Type** | ABS Series
- **Screwless Type** | ABL Series

Relay Terminal Blocks

ABS / ABL Series

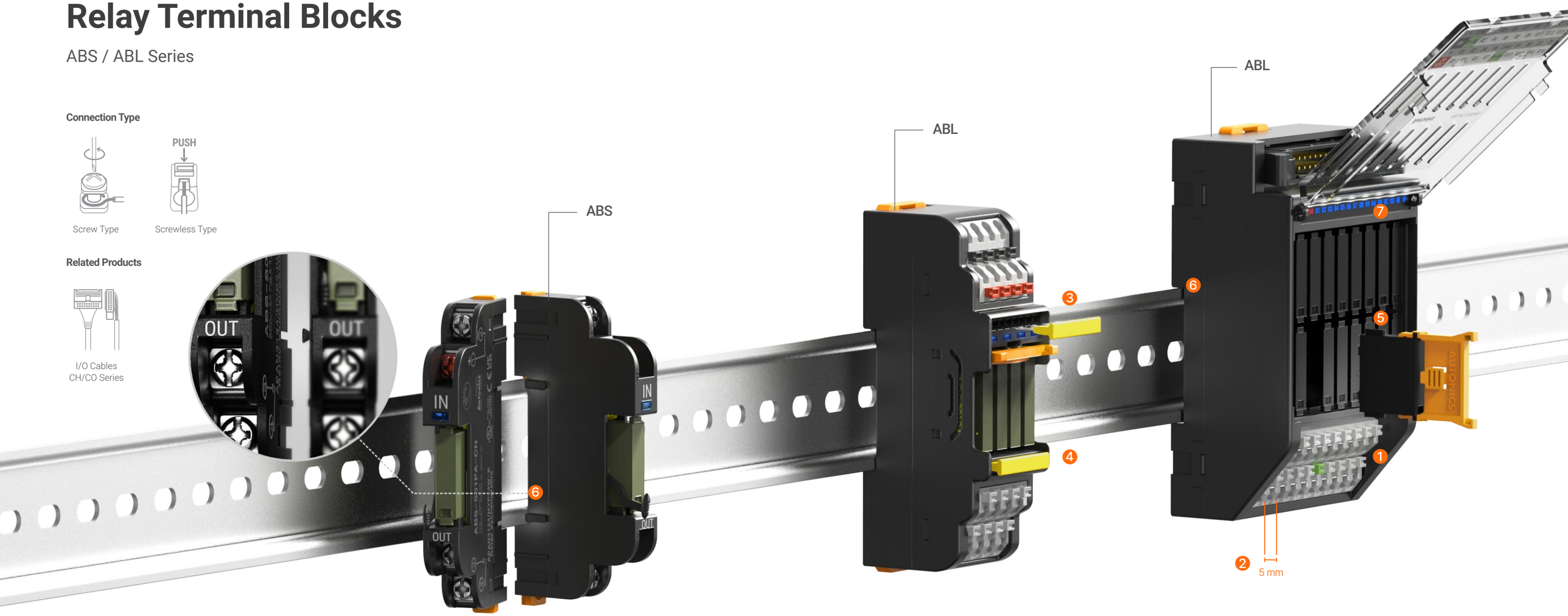
Connection Type

Screw Type

Screwless Type

Related Products

I/O Cables
CH/CO Series



1 Comprehensive Connection

Space-saving design with comprehensive connection
(16, 32 point comprehensive connection type model)

2 5mm Pitch Terminal

Space-saving design with 5 mm pitch between terminals (16, 32 point comprehensive connection type model, ABL series 4 point model)

3 Independent or Common Output Selectable

Input/output change by using jumper bar and power/load common change by jumper bar position (independent connection type)

4 Selectable Between NPN and PNP Input

Switch between NPN and PNP input options by changing jumper bar location (left/right)
(ABL series 4 point model)

5 Convenient Relay Removal

Convenient relay removal without specific tools

6 Easy Connection Between Terminals

Clip connection between terminals allowing compact and easy expansion

7 Operation Status Indicators

Checking the status with red LED (power on) and blue LED (operation) (Except for 1, 4 point model for red LED)

Series	Connection	Connector type (Controller side)	The number of relay points	Mounting	Model
ABS	Independent connection	Screw	1 point	DIN Rail/ Screw mount	ABS-S01PA□-CN, ABS-S01TN□-CN ABS-S01PQ□-CN, ABS-S01R6□-CN ABS-S01R2□-CN
			4 point		ABS-S04PA□-CN, ABS-S04TN□-CN
		Hirose connector	16 point		ABS-H16PA□-□N, ABS-H16TN□-□N
	Comprehensive conanection	Hirose connector	16, 32 point		ABS-HC□PA□-□N, ABS-HC□TN□-□N
ABL	Independent connection	Screwless	1 point	DIN Rail	ABL-L01PA-□□, ABL-L01TN-□□
			4 point	DIN Rail/ Screw mount	ABL-L04PA-U□, ABL-L04TN-U□ ABL-L04PQ-U□, ABL-L04R6-U□
		Hirose connector	16 point	DIN Rail	ABL-H16R6-□N
	Comprehensive conanection	Hirose connector	16, 32 point	DIN Rail/ Screw mount	ABL-HC□PA-□N, ABL-HC□TN-□N

Relay Terminal Blocks

Screw Type (1-point)

ABS Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ABS - ❶ ❷ ❸ ❹ - ❺ ❻

❶ Connector type
S: Screw

❷ The number of relay
01: 1-point

❸ Relay type
PA: APAN3124 [MATSUSHITA (Panasonic)]
TN: NYP24W-K [TAKAMISAWA (Fujitsu)]
PQ: PQ1a-24V [MATSUSHITA (Panasonic)]
R6: G6B-1174P-FD-US [OMRON]
R2: G2R-1-S24VDC [OMRON]

❹ Voltage specification of relay coil
No mark: 24 VDC⎓
5: 200/220VAC～ or 220VAC～
6: 100/110VAC～

❺ Input logic
C: No COM

❻ Varistor
N: None

Specifications

Model	3 A model	5 A model	10 A model		
	ABS-S01□-CN	ABS-S01□-CN	ABS-S01R2-CN	ABS-S01R26-CN	ABS-S01R25-CN
Applied relay 01)	PA: APAN3124 [MATSUSHITA (Panasonic)] TN: NYP24W-K [TAKAMISAWA (Fujitsu)]	PQ: PQ1a-24V MATSUSHITA (Panasonic) R6: G6B-1174P-FD-US [OMRON]	G2R-1-S24VDC [OMRON]	G2R-1-S100/(110)VAC [OMRON]	G2R-1-S200/(220)VAC [OMRON]
Output method	1a	1a	1c	1c	1c
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %	≤ 24VDC⎓ ±10 %	100/110 VAC～	200/220 VAC～
Current consumption	PA: ≤ 8 mA TN: ≤ 8.5 mA	≤ 20 mA	≤ 25 mA	≤ 15 mA	≤ 10 mA
Relay output rated spec. 02) 03)	250 VAC～ 50/60 Hz 3A, 30 VDC⎓ 3A	250 VAC～ 50/60 Hz 5A, 30 VDC⎓ 5A	250 VAC～ 50/60 Hz 10A, 30 VDC⎓ 10A	250 VAC～ 50/60 Hz 10A, 30 VDC⎓ 10A	250 VAC～ 50/60 Hz 10A, 30 VDC⎓ 10A
Terminal type	Screw	Screw	Screw	Screw	Screw
Indicator	Operation indicator: blue	Operation indicator: blue	Operation indicator: blue	Operation indicator: blue	Operation indicator: blue
Varistor	None	None	None	None	None

01) For the detailed information about each relay, please refer to 'Power Relay' or data sheet from the manufacturer.
02) This value is rated with resistive load.
03) When connecting loads to output part, please connect loads of same power type.
Connecting loads of different power type may cause safety issues.

Model	3 A Model	5 A Model	10 A Model		
	ABS-S01□-CN	ABS-S01□-CN	ABS-S01R2-CN	ABS-S01R26-CN	ABS-S01R25-CN
Material	CASE, BASE: PA6, terminal pin: brass	CASE, BASE: PA6, terminal pin: brass	CASE, BASE: PBT, terminal pin: brass, phosphor bronze	CASE, BASE: PBT, terminal pin: brass, phosphor bronze	CASE, BASE: PBT, terminal pin: brass, phosphor bronze
Certification	cULus, EAC 01)	cULus, EAC 01)	cULus, EAC 01)	cULus, EAC 01)	cULus, EAC 01)
Unit weight (packaged) 02)	PA: ≈ 21.5 g (≈ 314.5 g) TN: ≈ 22.2 g (≈ 324.5 g)	PQ: ≈ 31 g (≈ 430 g) R6: ≈ 30 g (≈ 416 g)	≈ 53 g (≈ 719 g)	≈ 52 g (≈ 711 g)	≈ 52 g (≈ 712 g)

01) 30 VDC⎓ of rated load voltage is not subjected to UL Listed.
02) It is weight per product. The weight in parentheses is for 10 packing units (PA, TN: 14) including packing materials.

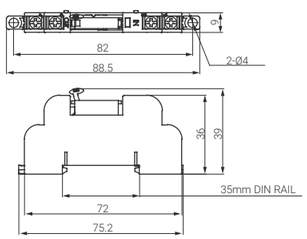
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	PA, TN: 3,000 VAC～ 50/60 Hz for 1 minute PQ, R6: 4,000 VAC～ 50/60 Hz for 1 minute R2 (5, 6): 5,000 VAC～ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	PA: 1,000 VAC～ 50/60 Hz for 1 minute TN: 750 VAC～ 50/60 Hz for 1 minute PQ: 1,000 VAC～ 50/60 Hz for 1 minute R6: 3,000 VAC～ 50/60 Hz for 1 minute R2 (5, 6): 1,000 VAC～ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	PA, TN: 500 m/s² (≈ 50 G) X, Y, Z direction for 3 times PQ, R6, R2 (5, 6): 1,000 m/s² (≈ 100 G) X, Y, Z direction for 3 times
Shock (malfunction)	PA, TN: 147 m/s² (≈ 15 G) X, Y, Z direction for 3 times PQ, R6, R2 (5, 6): 100 m/s² (≈ 10 G) X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

Applicable wire - stranded	PA, TN: AWG 22-16 (0.30 to 1.25 mm²) PQ, R6: AWG 19-14 (0.65 to 2.0 mm²) R2 (5, 6): AWG 17-14 (1.0 to 2.0 mm²)
Tightening torque	PA, TN: 0.5 to 0.6 N·m PQ, R6: 0.7 to 0.8 N·m R2 (5, 6): 0.7 to 0.8 N·m

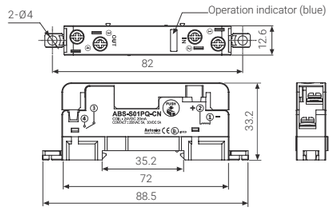
Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.

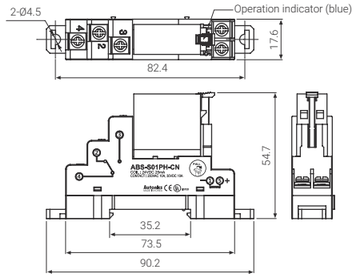
■ PA, TN



■ PQ, R6

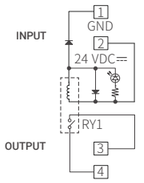


■ R2

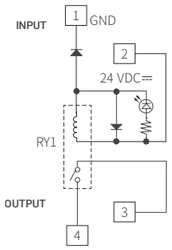


Wire Connection

■ PA, TN (3A model)

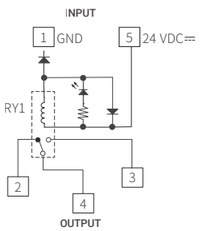


■ PQ, R6 (5A model)

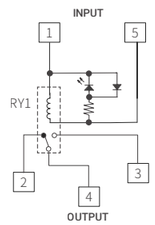


■ R2 (10A model)

[Rated voltage DC]



[Rated voltage AC]



Relay Terminal Blocks

Screw Type (4,16-point)

ABS Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ABS	-	❶	❷	❸	-	❹	❺

❶ Connector type
S: Screw
H: Hirose connector

❷ Number of relay
04: 4-point
16: 16-point

❸ Relay type
PA: APAN3124 [MATSUSHITA (Panasonic)]
TN: NYP24W-K [TAKAMISAWA (Fujitsu)]

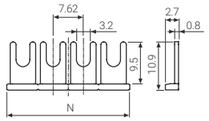
❹ Input logic
C: No COM
N: NPN (+COM)
P: PNP (-COM)

❺ Varistor
N: None

Sold Separately

[7.62 mm Pitch Jumper Bar]
4-pin: JB-7.62-04, 8-pin: JB-7.62-08

1. Using a nipper, cut the notches on the jumper bar as much as you need.
2. Loosen the screws which are needed to be common.
3. Insert the jumper bar under the loosen screws.
4. Tighten the screws.



Model	The number of jumper pins	N
JB-7.62-04	4	29.5
JB-7.62-08	8	60.0

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	ABS-S04□-CN	ABS-H16□-□
Applied relay 01)	PA: APAN3124 [MATSUSHITA (Panasonic)] / TN: NYP24W-K [TAKAMISAWA (Fujitsu)]	
Output method	1a	1a
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %
Current consumption	PA: ≤ 8 mA 02) TN: ≤ 8.5 mA 03)	PA: ≤ 8 mA 03) or ≤ 13 mA 03) TN: ≤ 8.5 mA 03) or ≤ 13.5 mA 04)
Relay output rated spec. 04) 05)	250 VAC~ 50/60 Hz 3A, 30 VDC⎓ 3A	250 VAC~ 50/60 Hz 3A, 30 VDC⎓ 3A
No. of connector pins	-	20
Connector for controller side	-	20-pin Hirose (HIF3BA-20PA-2.54DSA)
No. of relay points	4	16
Terminal type	Screw	Screw
Terminal pitch	7.62 mm	7.62 mm
Indicator	Operation indicator: blue	Power indicator: red, operating and disconnection indicator: blue
Varistor	None	None
Input logic	-	NPN / PNP model
Material	CASE, BASE: MPPO, terminal pin: brass	CASE: MPPO, BASE: PA66 (G25%), terminal pin: brass
Certification	CE UKCA cULus EAC 06)	CE UKCA cULus EAC 06)
Unit weight (packaged)	PA: ≈ 68 g (≈ 104 g) TN: ≈ 71 g (≈ 107 g)	PA: ≈ 224 g (≈ 307 g) TN: ≈ 235 g (≈ 318 g)

01) For the detailed information about each relay, please refer to 'Power Relay' or data sheet from the manufacturer.
02) It is current consumption for a relay including LED current.
03) It is current consumption including LED current for power part to 2).
04) This value is rated with resistive load.
05) When connecting loads to output part, please connect loads of same power type.
Connecting loads of different power type may cause safety issues.
06) 30 VDC⎓ of rated load voltage is not subjected to UL Listed.

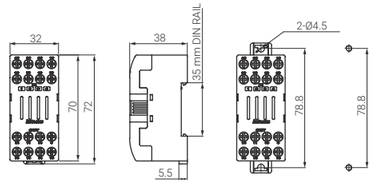
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	3,000 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	PA: 1,000 VAC~ 50/60 Hz for 1 minute TN: 750 VAC~ 50/60 Hz for 1 minute
Vibration	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 10 minutes
Shock	500 m/s² (≈ 50 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	147 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

Applicable wire - stranded	AWG 22-16 (0.30 to 1.25 mm²)
Tightening torque	0.5 to 0.6 N·m

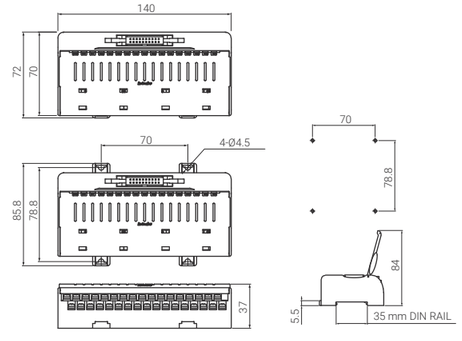
Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.

■ **4-point**



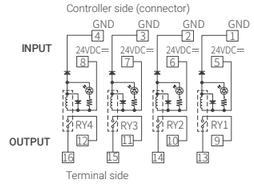
■ **16-point**



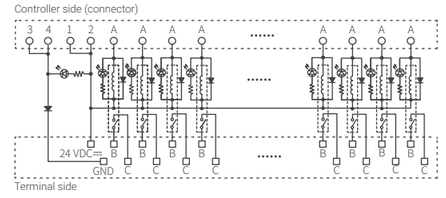
Wire Connection

■ **Wire Connection**

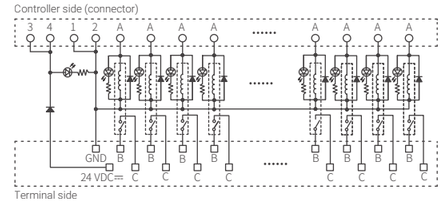
[4-point]



[16-point NPN]



[16-point PNP]

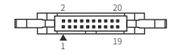


	Pin	20	18	16	14	12	10	8	6	19	17	15	13	11	9	7	5
B	Upper terminal	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
		R1+	R2+	R3+	R4+	R5+	R6+	R7+	R8+	R9+	R10+	R11+	R12+	R13+	R14+	R15+	R16+
C	Low terminal	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
		R1-	R2-	R3-	R4-	R5-	R6-	R7-	R8-	R9-	R10-	R11-	R12-	R13-	R14-	R15-	R16-

■ **Hirose connector pin arragement**

[20-pin connector]

Hirose (HIF3BA-20PA-2.54DSA)



Relay Terminal Blocks

Screw Type

(comprehensive connection,16,32-point)

ABS Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ABS - ❶ ❷ ❸ ❹ - ❺ ❻

❶ Connector type
H: Hirose connector

❷ Wire connection
C: Common

❸ Number of relay
16: 16-point
32: 32-point

❹ Relay type
PA: APAN3124 [MATSUSHITA (Panasonic)]
TN: NYP24W-K [TAKAMISAWA (Fujitsu)]

❺ Input logic
N: NPN (+COM)
P: PNP (-COM)

❻ Varistor
N: None

Sold Separately

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Model	ABS-HC16□-□N	ABS-HC32□-□N
Terminal type	Screw	Screw
Terminal pitch	7.62 mm	7.62 mm
Indicator	Power indicator: red, operating indicator: blue	Power indicator: red, operating indicator: blue
Varistor	None	None
Input logic	NPN / PNP model	NPN / PNP model
Material	CASE, BASE, COVER: PC, terminal pin: brass, Ni-plating	CASE: MPPO, BASE: PA66 (G25%), COVER: PC, terminal pin: brass, Ni-plating
Certification	CE UK cULus LISTED	CE UK cULus LISTED
Unit weight (packaged)	PA: ≈ 173 g (≈ 220 g) TN: ≈ 185 g (≈ 232 g)	PA: ≈ 345 g (≈ 438 g) TN: ≈ 370 g (≈ 463 g)

Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	3,000 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	PA: 1,000 VAC~ 50/60 Hz for 1 minute TN: 750 VAC~ 50/60 Hz for 1 minute
Vibration	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 10 minutes
Shock	300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

Applicable wire - solid	Ø 0.3 to Ø 1.2 mm
Applicable wire - stranded	AWG 22-16 (0.30 to 1.25 mm²)
Tightening torque	0.5 to 0.6 N·m

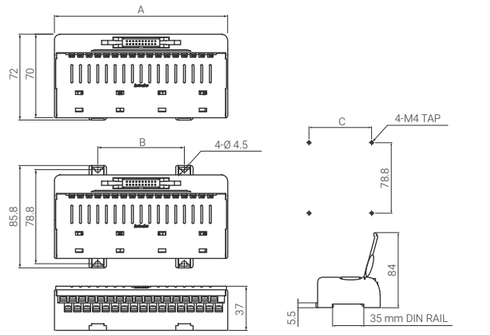
Specifications

Model	ABS-HC16□-□N	ABS-HC32□-□N
Applied relay 01)	PA: APAN3124 [MATSUSHITA (Panasonic)] / TN: NYP24W-K [TAKAMISAWA (Fujitsu)]	
Output method	1a	1a
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %
Current consumption	PA: ≤ 7.4 mA 02) or ≤ 10.1 mA 03) TN: ≤ 7.8 mA 02) or ≤ 10.5 mA 03)	PA: ≤ 8.0 mA 02) or ≤ 13.0 mA 03) TN: ≤ 8.5 mA 02) or ≤ 13.5 mA 03)
Relay output rated spec.	250 VAC~ 50/60 Hz 2A (2 A /1 point, 8 A /1COM), 24 VDC⎓ 2A (2 A / 1-point, 8 A / 1COM)	250 VAC~ 50/60 Hz 2A (2 A /1 point, 8 A /1COM), 24 VDC⎓ 2A (2 A /1-point, 8 A / 1COM)
No. of connector pins	20	40
Connector for controller side	20-pin Omron (XG4A-2031)	40-pin Hirose (HIF3BA-40PA-2.54DSA)
No. of relay points	16	32
Output connection	8-point/1COM	8-point/1COM

01) For the detailed information about each relay, please refer to 'Power Relay' or data sheet from the manufacturer.
02) It is current consumption per a relay including LED current.
03) It is current consumption including LED current for power part to 02).

Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.

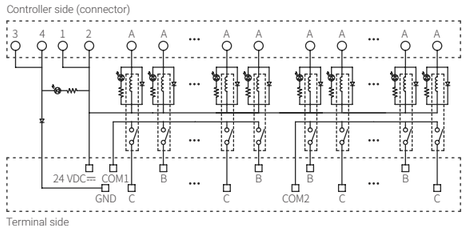


	16-point	32-point
A	90.5	173
B	40	100
C	40	100

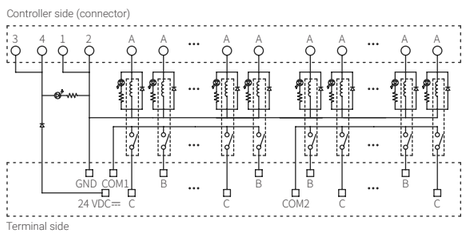
Wire Connection

■ **Wire Connection**

[16-point NPN]

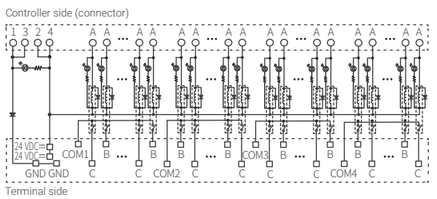


[16-point PNP]

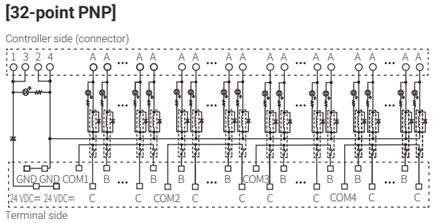


A	Pin	20	18	16	14	12	10	8	6	19	17	15	13	11	9	7	5
COM	COM	COM1								COM2							
B	Upper terminal	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

[32-point NPN]



[32-point PNP]

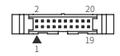


A	Pin	40	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10
COM	COM	COM1								COM2							
B	Upper terminal	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

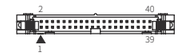
A	Pin	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9
COM	COM	COM3								COM4							
B	Upper terminal	-	11	-	13	-	15	-	17	18	-	1A	-	1C	-	1E	-
		-	R18	-	R20	-	R22	-	R24	R25	-	R27	-	R29	-	R31	-
C	Low terminal	10	-	12	-	14	-	16	-	-	19	-	1B	-	1D	-	1F
		R17	-	R19	-	R21	-	R23	-	-	R26	-	R28	-	R30	-	R32

■ **Hirose connector pin arragement**

[20-pin connector]
Omron (XG4A-2031)



[40-pin connector]
Hirose (HIF3BA-40PA-2.54DSA)



Relay Terminal Blocks

Screwless Type (1-point)

ABL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ABL	-	❶	❷	❸	-	❹	❺

❶ Connector type
L: Screwless

❷ Number of relay
01: 1-point

❸ Relay type
PA: APAN3124 [MATSUSHITA (Panasonic)]
TN: NYP24W-K [TAKAMISAWA (Fujitsu)]

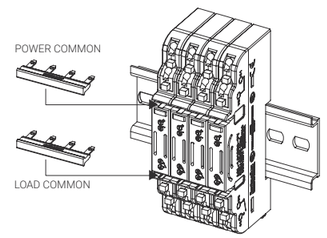
❹ Input logic
N: NPN (+COM)
P: PNP (-COM)

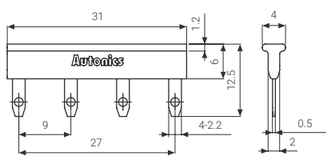
❺ Varistor
N: None
Y: Equipped

Sold Separately

[9.0 mm Pitch Jumper Bar]
JB-9.0-04L

It is example of mounting 4 units.
• POWER COMMON: insert the jumper bar in the jumper bar groove above the relay.
• LOAD COMMON: insert the jumper bar in the jumper bar groove below the relay.





Specifications

Model	ABL-L01PA-□	ABL-L01TN-□
Applied relay 01)	APAN3124 [MATSUSHITA(Panasonic)]	NYP24W-K [TAKAMISAWA(Fujitsu)]
Output method	1a	
Power supply	≤ 24 VDC⎓ ± 10 %	
Current consumption 02)	≤ 8 mA	
Relay output rated spec. 03) 04)	250 VAC~ 50/60 Hz 3A, 30 VDC⎓ 3A	
Terminal type	Screwless	
Terminal pitch	9.0 mm (arranging over 2 units)	
Indicator	Operation indicator: blue	
Varistor	Equipped / not equipped model	
Input logic	NPN / PNP model	
Material	Terminal block: PA66, CASE, BASE: PPS, conducting plate: brass	
Certification	CE UK cULus EAC	
Unit weight (packaged) 05)	≈ 21 g (≈ 138 g)	≈ 21 g (≈ 135 g)

01) For the detailed information about each relay, please refer to 'Power Relay' or data sheet from the manufacturer.
02) It is current consumption for a relay including LED current.
03) This value is rated with resistive load.
04) When connecting loads to output part, please connect loads of same power type.
Connecting loads of different power type may cause safety issues.
05) It is weight per product. The weight in parentheses is for 4 packing units including packing materials.

Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	3,000 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact) 01)	PA: 1,000 VAC~ 50/60 Hz for 1 minute TN: 750 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	1,000 m/s² (≈ 100 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

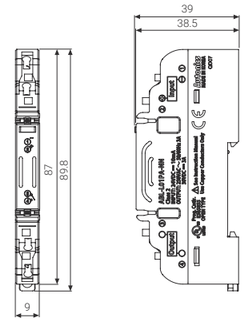
01) Varistor type is 300 VAC~.

Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

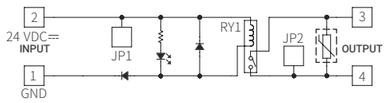
Unit: mm, For the detailed drawings, follow the Autonics website.



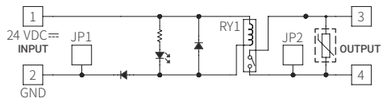
Wire Connection

- ⬚ is only for the varistor type.
- When mounting four products arrangement, Power/Load common can be done by inserting a jumper bar. Use four products with the same input logic.
- In case of POWER COMMON(NPN: + COM, PNP: -COM), the JP1 terminals of each product are connected.
  In case of LOAD COMMON, the JP2 termincals of each product are conencted.

■ NPN



■ PNP



Relay Terminal Blocks

Screwless Type (4-point)

ABL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ABL - ❶ ❷ ❸ - ❹ ❺

❶ Connector type
L: Screwless

❷ Number of relay
04: 4-point

❸ Relay type
PA: APAN3124 [MATSUSHITA (Panasonic)]
TN: NYP24W-K [TAKAMISAWA (Fujitsu)]
PQ: PQ1a-24V [MATSUSHITA (Panasonic)]
R6: G6B-1174P-FD-US [OMRON]

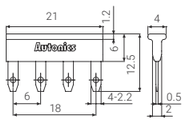
❹ Input logic
U: Universal

❺ Varistor
N: None
Y: Equipped

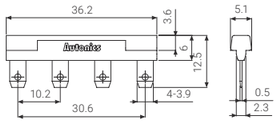
Sold Separately

Remove the protection cover and use the jumper bar accordingly.
• NPN (+ COM): insert the jumper bar to see NPN mark below terminals 8, 7, 6, 5.
• PNP (- COM): insert the jumper bar to see PNP mark below terminals 8, 7, 6, 5.
• LOAD COMMON: insert the jumper bar above terminals 12, 11, 10, 9.

[6.0 mm pitch jumper bar]
JB-6.0-04L (for PA, TN)



[10.2 mm pitch jumper bar]
JB-10.2-04L (for PQ, R6)



Specifications

Model	ABL-L04PA-□	ABL-L04TN-□	ABL-L04PQ-□	ABL-L04R6-□
Applied relay 01)	APAN3124 [MATSUSHITA (Panasonic)]	NYP24W-K [TAKAMISAWA (Fujitsu)]	PQ1a-24V [MATSUSHITA (Panasonic)]	G6B-1174P-FD-US [OMRON]
Output method	1a	1a	1a	1a
Power supply	≤ 24 VDC⎓ ± 10 %	≤ 24 VDC⎓ ± 10 %	≤ 24 VDC⎓ ± 10 %	≤ 24 VDC⎓ ± 10 %
Current consumption 02)	≤ 8 mA	≤ 8 mA	≤ 20 mA	≤ 20 mA
Relay output rated spec. 03) 04)	250 VAC~ 50/60 Hz 3A, 30 VDC⎓ 3 A		250 VAC~ 50/60 Hz 3A, 30 VDC⎓ 5 A	
Terminal type	Screwless		Screwless	
Terminal pitch	5.0 mm		10.2 mm	
Indicator	Operation indicator: blue		Operation indicator: blue	
Varistor	Equipped 05) / not equipped model		Equipped 05) / not equipped model	
Input logic	NPN / PNP selectable with jumper bar		NPN / PNP selectable with jumper bar	
Material	Terminal block: PA66, CASE, BASE: PPS, conducting plate: brass		Terminal block: PA66, CASE, BASE: MPPO, conducting plate: brass	
Certification	CE UK cULus EAC		CE UK cULus EAC	
Unit weight (packaged)	≈ 72 g (≈ 125 g)	≈ 75 g (≈ 128 g)	≈ 94 g (≈ 150 g)	≈ 88 g (≈ 144 g)

01) For the detailed information about each relay, please refer to 'Power Relay' or data sheet from the manufacturer.
02) It is current consumption for a relay including LED current.
03) This value is rated with resistive load.
04) When connecting loads to output part, please connect loads of same power type.
Connecting loads of different power type may cause safety issues.
05) Since the varistor type is for protecting the contact, it is recommanded to use with an inductive load.

Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	PA, TN, R6: 3,000 VAC~ 50/60 Hz for 1 minute PQ: 4,000 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact) 01)	PA, PQ, R6: 1,000 VAC~ 50/60 Hz for 1 minute TN: 750 VAC~ 50/60 Hz for 1 minute
Vibration	PA, TN: 0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours PQ, R6: 1.5 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	PA, TN: 0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes PQ, R6: 1.5 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	1,000 m/s² (≈ 100 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (a non freezing or condensation environment)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (a non freezing or condensation environment)
Protection structure	IP20 (IEC standard)

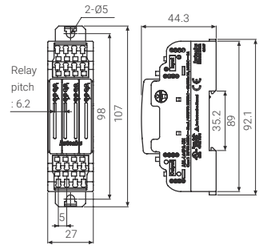
01) Varistor type is 300 VAC~.

Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

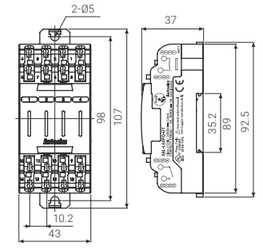
01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

■ **PA, TN**

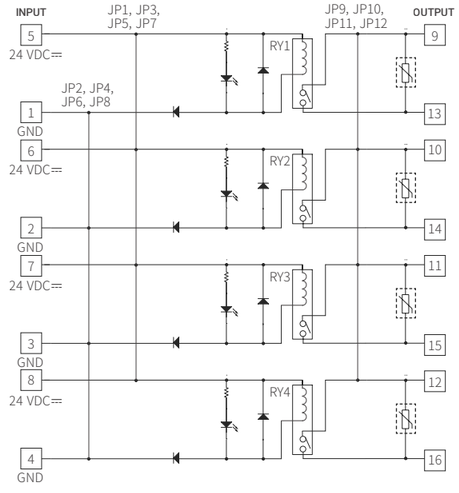


■ **PQ, R6**



Wire Connection

• ⬚ is only for the varisctor type.
• In case of POWER COMMON(NPN : +COM), the JP1, JP3, JP5, JP7 terminals are connected.
• In case of POWER COMMON(PNP : -COM), JP2, JP4, JP6, JP8 terminals are connected.
In case of LOAD COMMON, JP9, JP10, JP11, JP12 terminals are connected.



Relay Terminal Blocks

Screwless Type (16-point)

ABL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ABL	-	❶	❷	❸	-	❹	❺

❶ Connector type
H: Hirose connector

❷ Number of relay
16: 16-point

❸ Relay type
R6: G6B-1174P-FD-US [OMRON]

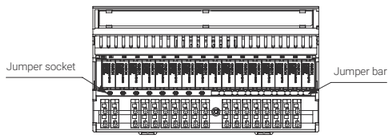
❹ Input logic
N: NPN
P: PNP

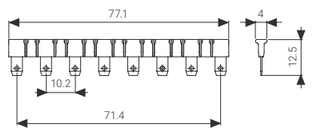
❺ Varistor
N: None

Sold Separately

[10.2 mm Pitch Jumper Bar]
JB-10.2-08L

1. Using a nipper, cut the notches on the jumper bar as much as you need.
2. Insert the jumper bar at the jumper socket you need.





[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	ABL-H16R6-□
Applied relay 01)	G6B-1174P-FD-US [OMRON]
Output method	1a
Power supply	24 VDC⎓ ±10 %
Current consumption 02)	≤ 20 mA
Relay output rated spec. 03) 04)	250 VAC~ 50/60 Hz 3A, 30 VDC⎓ 3A
No. of connector pins	20
Connector for controller side	20-pin Hirose (HIF3BA-20PA-2.54DSA)
Terminal type	Screwless
Terminal pitch	≥ 7.8 mm
Indicator	Power indicator: red, operation indicator: blue
Varistor	None
Input logic	NPN / PNP model
Material	CASE, BASE: MPPO, terminal block, cover: PC
Certification	CE UK cULus EAC
Unit weight (packaged)	≈ 348 g (≈ 446 g)

01) For the detailed information about each relay, please refer to 'Power Relay' or data sheet from the manufacturer.
02) It is current consumption for a relay including LED current .
03) This value is rated with resistive load.
04) When connecting loads to output part, please connect loads of same power type.
Connecting loads of different power type may cause safety issues.

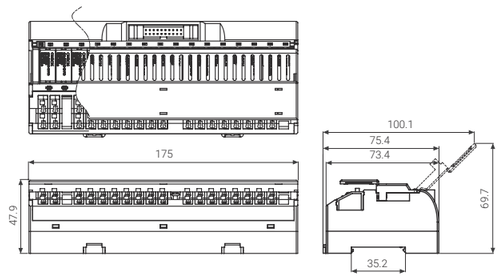
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	3,000 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	1,000 VAC~ 50/60 Hz for 1 minute
Vibration	1.5 mm amplitude at frequency 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.5 mm amplitude at frequency 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	1,000 m/s² (≈ 100 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.

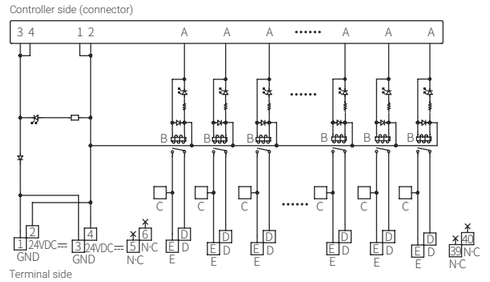


Wire Connection

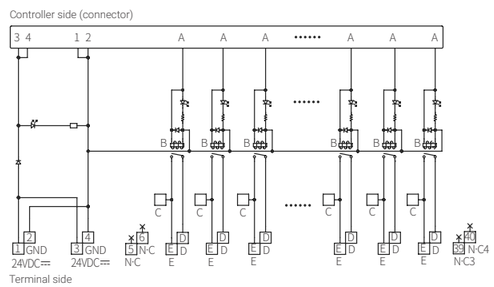
When using the jumper bar, the JP1 to JP16 terminals are connected depending on the cutting and insertion methods.

■ Wire connection

[NPN]



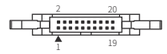
[PNP]



A	Pin	20	18	16	14	12	20	8	6	19	17	15	13	11	9	7	5
B	Relay	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	Jumper socket	JP1	JP2	JP3	JP4	JP5	JP6	JP7	JP8	JP9	JP10	JP11	JP12	JP13	JP14	JP15	JP16
D	Upper terminal	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
		R1+	R2+	R3+	R4+	R5+	R6+	R7+	R8+	R9+	R10+	R11+	R12+	R13+	R14+	R15+	R16+
E	Low terminal	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37
		R1-	R2-	R3-	R4-	R5-	R6-	R7-	R8-	R9-	R10-	R11-	R12-	R13-	R14-	R15-	R16-

■ Hirose connector pin arragement

[20 pin connector]
Hirose (HIF3BA-20PA-2.54DSA)



Relay Terminal Blocks

Screwless Type

(comprehensive connection,16,32-point)

ABL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ABL	-	❶	❷	❸	❹	-	❺	❻

❶ Connector type
H: Hirose connector

❷ Wire connection
C: Common

❸ Number of relay
16: 16-point
32: 32-point

❹ Relay type
PA: APAN3124 [MATSUSHITA (Panasonic)]
TN:NYP24W-K [TAKAMISAWA (Fujitsu)]

❺ Input logic
N: NPN (+COM)
P: PNP (-COM)

❻ Varistor
N: None

Sold Separately

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	ABL-HC16□-□N	ABL-HC32□-□N
Applied relay 01)	PA: APAN3124 [MATSUSHITA (Panasonic)] / TN: NYP24W-K [TAKAMISAWA (Fujitsu)]	
Output method	1a	1a
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %
Current consumption	PA: ≤ 7.4 mA 02) or ≤ 10.1 mA 03) TN: ≤ 7.8 mA 02) or ≤ 10.5 mA 03)	PA: ≤ 7.4 mA 02) or ≤ 10.1 mA 03) TN: ≤ 7.8 mA 02) or ≤ 10.5 mA 03)
Relay output rated spec.	250 VAC~ 50/60 Hz 2A (2A / 1-point, 8A / 1COM), 24 VDC⎓ 2A (2A / 1-point, 8A / 1COM)	250 VAC~ 50/60 Hz 2A (2A / 1-point, 8A / 1COM), 24 VDC⎓ 2A (2A / 1-point, 8A / 1COM)
No. of connector pins	20	40
Connector for controller side	20-pin Omron (XG4A-2031)	40-pin Omron (XG4A-4031)
No. of relay points	16	32
Output connection	8-point/1COM	8-point/1COM
Terminal type	Screwless	Screwless
Terminal pitch	≥ 5 mm	≥ 5 mm
Indicator	Power indicator: red, operating indicator: blue	Power indicator: red, operating indicator: blue
Varistor	None	None
Input logic	NPN / PNP model	NPN / PNP model

01) For the detailed information about each relay, please refer to 'Power Relay' or data sheet from the manufacturer.
02) It is current consumption per a relay including LED current.
03) It is current consumption including LED current for power part to 02).

Model	ABL-HC16□-□N	ABL-HC32□-□N
Material	CASE, BASE, COVER: PC terminal pin: copper+PA66	CASE, BASE, COVER: PC, terminal pin: copper+PA66
Certification	CE UK cULus LISTED	CE UK cULus LISTED
Unit weight (packaged)	PA: ≈ 173 g (≈ 220 g) TN: ≈ 185 g (≈ 232 g)	PA: ≈ 345 g (≈ 438 g) TN: ≈ 370 g (≈ 463 g)

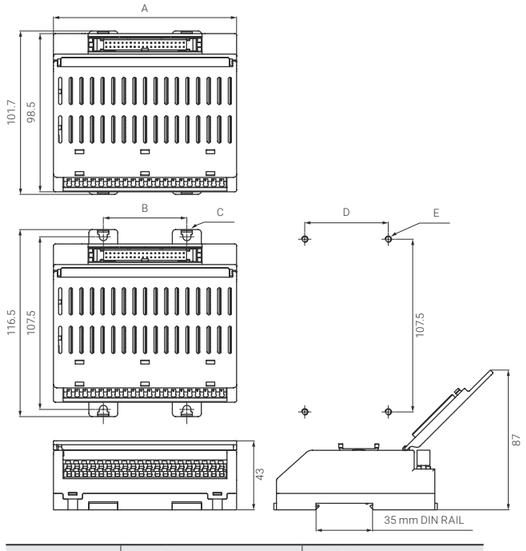
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	3,000 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	PA: 1,000 VAC~ 50/60 Hz for 1 minute TN: 750 VAC~ 50/60 Hz for 1 minute
Vibration	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 10 minutes
Shock	300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.

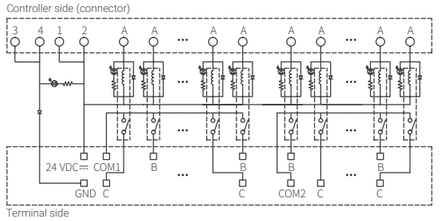


	16-point	32-point
A	62	114
B	-	52
C	2-Ø5	4-Ø5
D	-	52
E	2-M4 TAP	4-M4 TAP

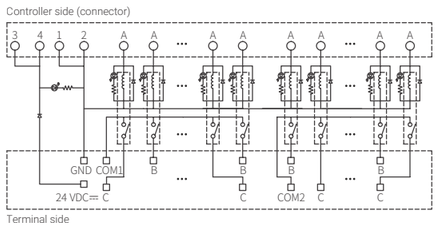
Wire Connection

■ Wire Connection

[16-point NPN]



[16-point PNP]

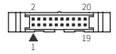


A	Pin	20	18	16	14	12	10	8	6	19	17	15	13	11	9	7	5
COM	COM	COM1								COM2							
B	Upper termina	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

■ Hirose connector pin arragement

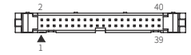
[20-pin connector]

Omron (XG4A-2031)

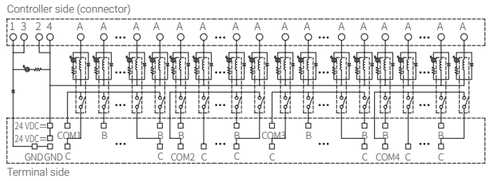


[40-pin connector]

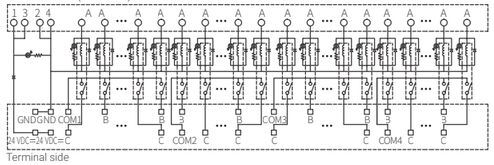
Omron (XG4A-4031)



[32-point NPN]



[32-point PNP]



A	Pin	40	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10
COM	COM	COM1								COM2							
B	Upper termina	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

A	Pin	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9
COM	COM	COM3								COM4							
B	Upper termina	-	11	-	13	-	15	-	17	18	-	1A	-	1C	-	1E	-
		-	R18	-	R20	-	R22	-	R24	R25	-	R27	-	R29	-	R31	-
C	Low terminal	10	-	12	-	14	-	16	-	-	19	-	1B	-	1D	-	1F
		R17	-	R19	-	R21	-	R23	-	-	R26	-	R28	-	R30	-	R32

SSR Terminal Blocks

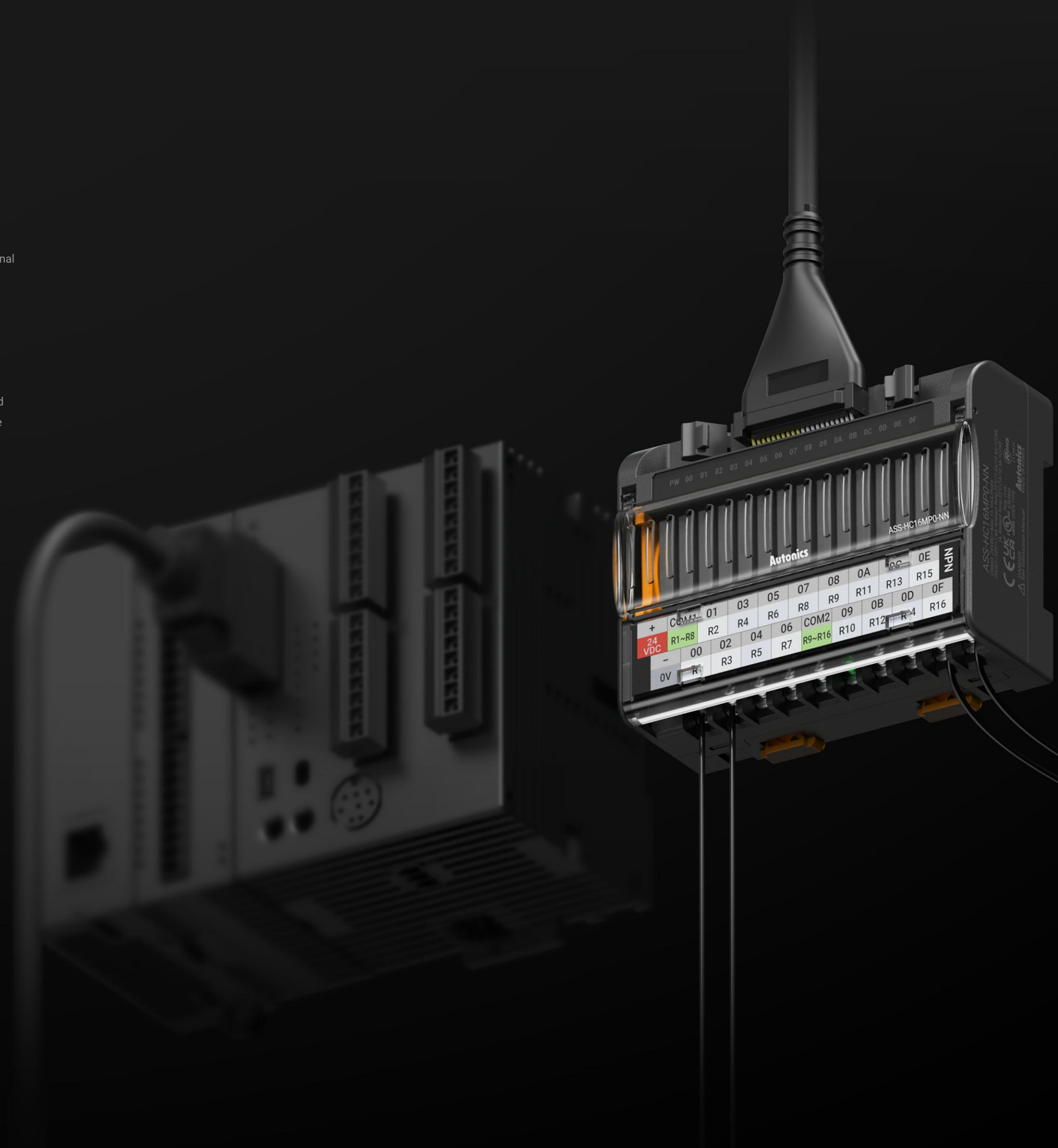
ASS / ASL Series

Solid state relay terminal blocks are ideal for receiving an input signal from PLC and operating load through non contact points.

Available SSR terminal blocks include screw connection type ASS series and screwless connection type ASL series.

SSR terminal blocks feature contactless relay terminal blocks compensating for wear problems and assuring a long life cycle and high-speed response. Users can utilize various lineups with diverse SSR points, rated load current, and input logic models for flexible applications.

- **Screw Type** | ASS Series
- **Screwless Type** | ASL Series



SSR Terminal Blocks

ASS / ASL Series

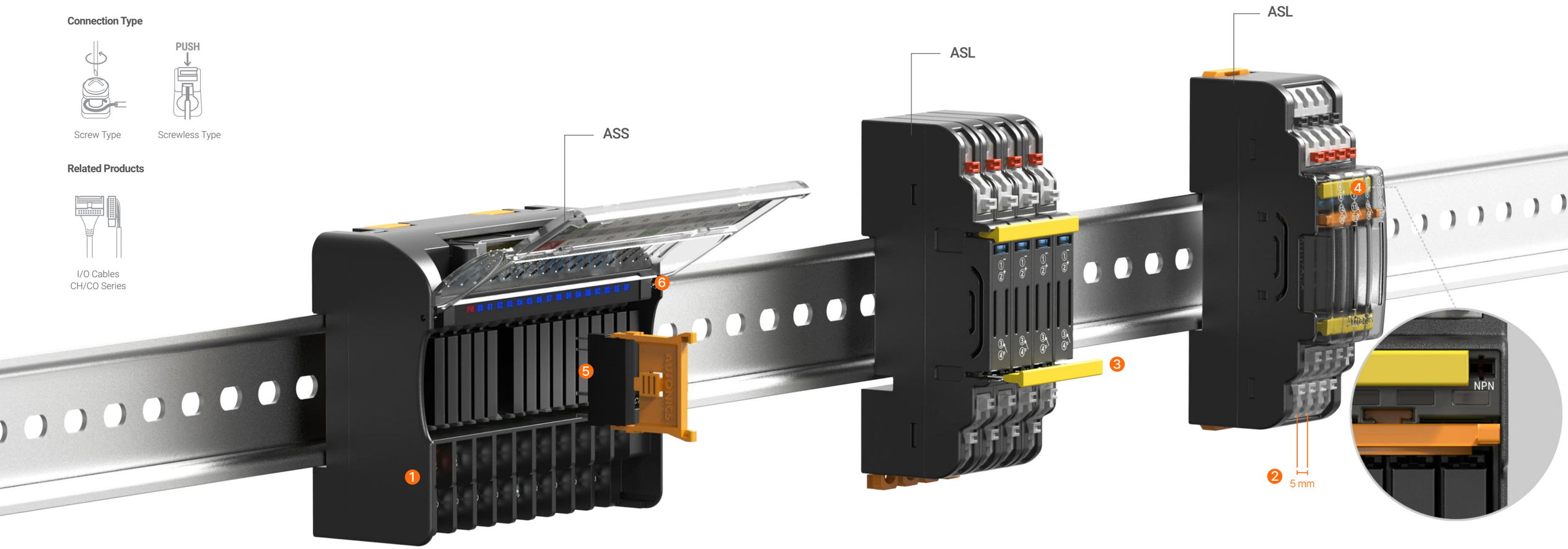
Connection Type

Screw Type

Screwless Type

Related Products

I/O Cables
CH/CO Series



1 Comprehensive Connection

Space-saving design with comprehensive connection (16, 32 point comprehensive connection type model)

2 5mm Terminal Pitch

Space-saving design with 5 mm pitch between terminals (16, 32 point comprehensive connection type model, ASL series 4 point model)

3 Independent or Common Output Selectable

Input/output change by using jumper bar and power/load common change by jumper bar position (independent connection type)

4 Selectable Between NPN and PNP Input

Switch between NPN and PNP input options by changing jumper bar location (left/right) (ABL series 4 point model)

5 Convenient SSR Removal

Convenient SSR removal without specific tools

6 Operation Status Indicators

Checking the status with red LED (power on) and blue LED (operation) (Except for 1, 4 point model for red LED)

Series	Connection	Connector type (Controller side)	The number of SSR points	Mounting	Model
ASS	Comprehensive connection	Hirose connector	16, 32 point	DIN Rail/ Screw mount	ASS-HC□MP0-□N
ASL	Independent connection	Screw	1 point	DIN Rail	ASL-L01MP0-□□, ASL-L01SP0-□□ ASL-L01SP1-□□, ASL-L01SR0-□□ ASL-L01ST0-□□
			4 point	DIN Rail/ Screw mount	ASL-L04MP0-U□, ASL-L04SP0-U□ ASL-L04SP0-U□
		Hirose connector	16 point	DIN Rail	ASL-H16MP0-□N
	Comprehensive connection	Hirose connector	16, 32 point	DIN Rail/ Screw mount	ASL-HC□MP0-□N

SSR Terminal Blocks

Screw Type

(comprehensive connection,16,32-point)

ASS Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ASS	-	❶	❷	❸	❹	-	❺	❻

❶ Connector type
H: Hirose connector

❷ Wire connenction
C: Common

❸ The number of SSR
16: 16-point
32: 32-point

❹ SSR type
MP0: AQZ202D [Panasonic]

❺ Input logic
N: NPN (+COM)
P: PNP (-COM)

❻ Varistor
N: None

Sold Separately

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	ASS-HC16MP0-□N	ASS-HC32MP0-□N
Applied SSR 01)	AQZ202D [Panasonic]	
Output method	1a	1a
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %
Current consumption	≤ 10.4 mA 02) or ≤ 13.1 mA 03)	≤ 11.5 mA 02) or ≤ 15.3 mA 03)
SSR output rated spec.	24 VAC~ 50/60 Hz 1.6A, 24 VDC⎓ 1.6A (1.6 A / 1-point, 8 A / 1COM)	24 VAC~ 50/60 Hz 1.6A, 24 VDC⎓ 1.6A (1.6 A / 1-point, 8 A / 1COM)
No. of connector pins	20	40
Connector for controller side	20-pin Omron (XG4A-2031)	40-pin Hirose (HIF3BA-40PA-2.54DSA)
No. of SSR points	16	32
Output connection	8-point/1COM	8-point/1COM
Terminal type	Screw	Screw
Terminal pitch	7.62 mm	7.62 mm
Indicator	Power indicator: red, operating indicator: blue	Power indicator: red, operating indicator: blue
Varistor	None	None
Input logic	NPN / PNP mode	NPN / PNP mode
Material	CASE, BASE, COVER: PC, terminal pin: brass, Ni-plating	CASE: MPPO, BASE: PA66 (G25 %), COVER: PC, terminal pin: brass, Ni-plating
Certification	CE EAC cULus	CE EAC cULus
Unit weight (packaged)	≈ 185 g (≈ 232 g)	≈ 370 g (≈ 463 g)

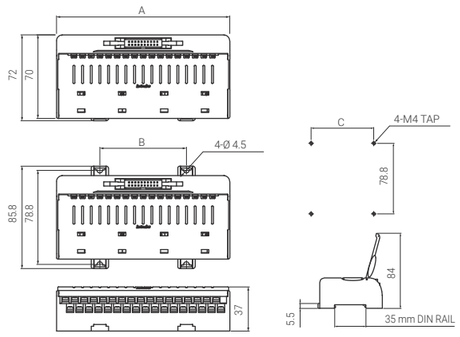
01) For the detailed information about the SSR, please refer to 'SSR' or data sheet from the manufacturer..
02) It is current consumption per a SSR including LED current.
03) It is current consumption including LED current for power part to 02).

Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	2,500 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	1,000 VAC~ 50/60 Hz for 1 minute
Vibration	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 10 minutes
Shock	300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

Applicable wire - solid	Ø 0.3 to Ø 1.2 mm
Applicable wire - stranded	AWG 22-16 (0.30 to 1.25 mm²)
Tightening torque	0.5 to 0.6 N·m

Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.

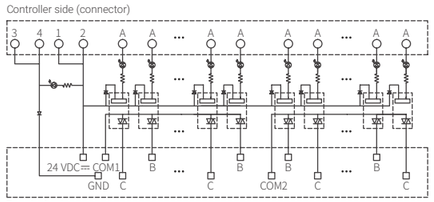


	16-point	32-point
A	90.5	173
B	40	100
C	40	100

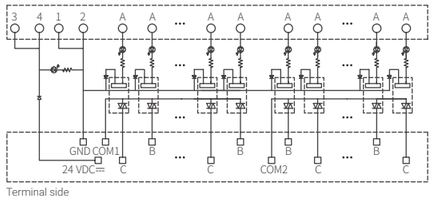
Wire Connection

■ Wire Connection

[16-point NPN]

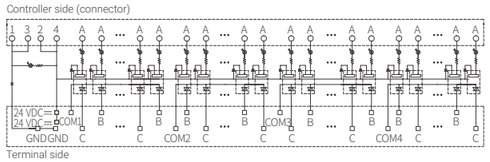


[16-point PNP]

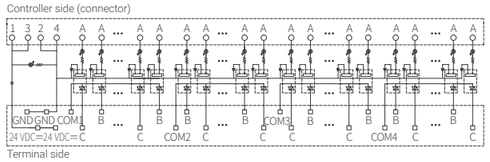


A	Pin	20	18	16	14	12	10	8	6	19	17	15	13	11	9	7	5
COM	COM	COM1								COM2							
B	Upper terminal	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

[32-point NPN]



[32-point PNP]



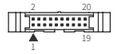
A	Pin	40	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10
COM	COM	COM1								COM2							
B	Upper terminal	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

A	Pin	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9
COM	COM	COM3								COM4							
B	Upper terminal	-	11	-	13	-	15	-	17	18	-	1A	-	1C	-	1E	-
		-	R18	-	R20	-	R22	-	R24	R25	-	R27	-	R29	-	R31	-
C	Low terminal	10	-	12	-	14	-	16	-	-	19	-	1B	-	1D	-	1F
		R17	-	R19	-	R21	-	R23	-	-	R26	-	R28	-	R30	-	R32

■ Hirose connector pin arragement

[20-pin connector]

Omron (XG4A-2031)



[40-pin connector]

Hirose (HIF3BA-40PA-2.54DSA)

SSR Terminal Blocks

Screwless Type (1-point)

ASL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ASL - ❶ ❷ ❸ - ❹ ❺

❶ Connector type
L: Screwless

❷ Number or SSR
01: 1-point

❸ SSR type
MP0: AQZ202D [Panasonic]
SP0: AQG12124 [Panasonic]
SP1: AQG22124 [Panasonic]
SR0: G3MC-202P [Omron]
ST0: SN-24A01C [Fujitsu]

❹ Input logic
N: NPN
P: PNP

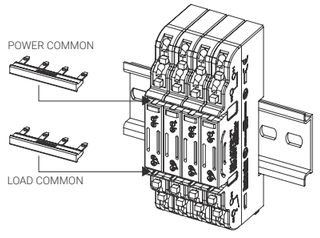
❺ Varistor
N: None
Y: Equipped

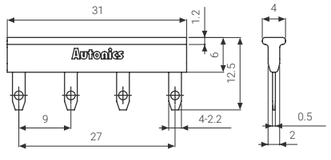
Sold Separately

[9.0 mm pitch jumper bar]
JB-9.0-04L

It is example of mounting 4 units.

- POWER COMMON: insert the jumper bar in the jumper bar groove above the SSR.
- LOAD COMMON: insert the jumper bar in the jumper bar groove below the SSR.





Specifications

Model	ASL-L01MP0-□	ASL-L01SP0-□	ASL-L01SP1-□	ASL-L01SR0-□	ASL-L01ST0-□
Applied SSR [01]	AQZ202D [Panasonic]	AQG12124 [Panasonic]	AQG22124 [Panasonic]	G3MC-202P [Omron]	SN-24A01C [Fujitsu]
Output method	1a	1a	1a	1a	1a
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %
Current consumption [02]	≤ 3 mA	≤ 18 mA	≤ 18 mA	≤ 18 mA	≤ 10 mA
SSR output rated spec. [03] [04]	24 VAC~ 50/60 Hz, 2.7A 24 VDC⎓ 2.7A	75-240 VAC~ 50/60 Hz 1A	75-240 VAC~ 50/60 Hz 2A	24-240 VAC~ 50/60 Hz 2A	24-240 VAC~ 50/60 Hz 1A
Terminal type	Screwless				
Terminal pitch	9.0 mm (arranging over 2 units)				
Indicator	Operation indicator: blue				
Varistor	Equipped [05]/ not equipped model				
Input logic	NPN / PNP model				
Material	Terminal block: PA66, CASE, BASE: PPS, conducting plate: brass				
Certification					
Unit weight (packaged) [06]	≈ 19 g (≈ 130 g)	≈ 20 g (≈ 134 g)	≈ 22 g (≈ 140 g)	≈ 24 g (≈ 148 g)	≈ 21 g (≈ 136 g)

01) For the detailed information about each SSR, please refer to 'SSR' or data sheet from the manufacturer.
02) It is current consumption for a SSR including LED current.
03) This value is rated with resistive load, when the conditions of the temperature characteristic graph are satisfied.
04) When connecting loads to output part, please connect loads of same power type.
Connecting loads of different power type may cause safety issues.
05) Since the varistor type is for protecting the contact, it is recommended to use with an inductive load.
06) It is weight per product. The weight in parentheses is for 4 packing units including packing materials.

Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	2,500 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact) [01]	1,000 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	1,000 m/s² (≈ 100 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

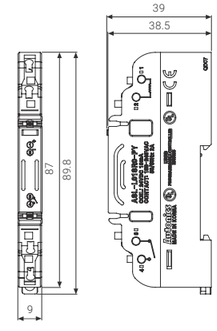
01) Varistor type is 300 VAC~.

Applicable wire - solid [01]	Ø 0.6 to 1.25 mm
Applicable wire - stranded [01] [02]	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

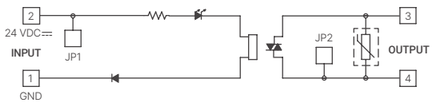


Wire Connection

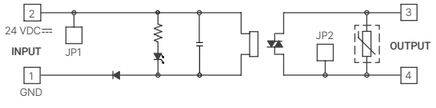
- ⋯ is only for the varistor type.
- When mounting four products arrangement, Power/Load common can be done by inserting a jumper bar. Use four products with the same input logic.
- In case of POWER COMMON(NPN: + COM, PNP: -COM), the JP1 terminals of each product are connected.
  In case of LOAD COMMON, the JP2 terminals of each product are conencted.

■ NPN

[MP0]

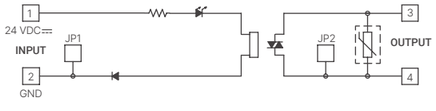


[SP0 / SP1 / SR0 / ST0]

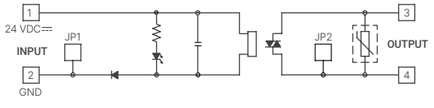


■ PNP

[MP0]



[SP0 / SP1 / SR0 / ST0]



SSR Terminal Blocks

Screwless Type (4-point)

ASL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ASL	-	❶	❷	❸	-	❹	❺

❶ Connector type
L: Screwless

❷ Number or SSR
04: 4-point

❸ SSR type
MP0: AQZ202D [Panasonic]
SP0: AQG12124 [Panasonic]
ST0: SN-24A01C [Fujitsu]

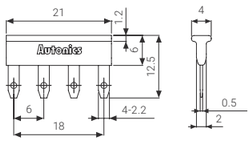
❹ Input logic
U: Universal

❺ Varistor
N: None
Y: Equipped

Sold Separately

[6.0 mm pitch jumper bar]
JB-6.0-04L

Remove the protection cover and use the jumper bar accordingly.
• NPN (+ COM): insert the jumper bar to see NPN mark below terminals 8, 7, 6, 5.
• PNP (- COM): insert the jumper bar to see PNP mark below terminals 8, 7, 6, 5.
• LOAD COMMON: insert the jumper bar above terminals 12, 11, 10, 9.



Specifications

Model	ASL-L04MP0-U□	ASL-L04SP0-U□	ASL-L04ST0-U□
Applied SSR 01)	AQZ202D [Panasonic]	AQG12124 [Panasonic]	SN-24A01C [Fujitsu]
Output method	1a	1a	1a
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %
Current consumptio 02)	≤ 3 mA	≤ 18 mA	≤ 10 mA
SSR output rated spec. 03) 04)	24 VAC~ 50/60 Hz 2.7A, 24 VDC⎓ 2.7A	75-240 VAC~ 50/60 Hz 1A	24-240 VAC~ 50/60 Hz 1A
Terminal type	Screwless		
Terminal pitch	5.0 mm		
Indicator	Operation indicator: blue		
Varistor	Equipped 05) / not equipped model		
Input logic	NPN / PNP selectable with jumper bar		
Material	Terminal block: PA66, CASE, BASE: PPS, conducting plate: brass		
Certification	CE UK EA cULus EAC	CE UK cULus EAC	CE UK EAC
Unit weight (packaged)	≈ 65 g (≈ 118 g)	≈ 69 g (≈ 122 g)	≈ 172 g (≈ 126 g)

01) For the detailed information about each SSR, please refer to 'SSR' or data sheet from the manufacturer.
02) It is current consumption for a SSR including LED current.
03) This value is rated with resistive load, when the conditions of the temperature characteristic graph are satisfied.
04) When connecting loads to output part, please connect loads of same power type.
Connecting loads of different power type may cause safety issues.
05) Since the varistor type is for protecting the contact, it is recommended to use with an inductive load.

Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	2,500 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact) 01)	1,000 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	1,000 m/s² (≈ 100 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

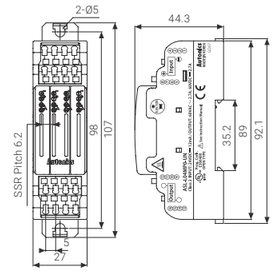
01) Varistor type is 300 VAC~.

Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

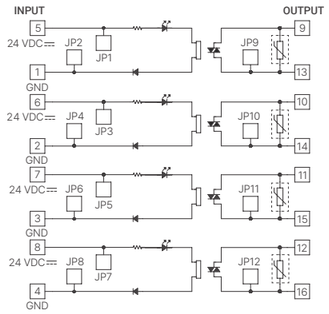


Wire Connection

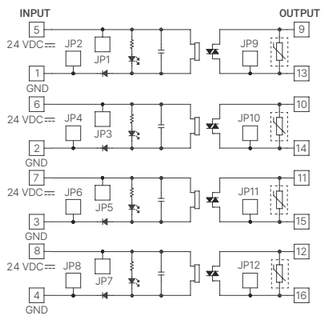
• ⬚ is only for the varistor type.
• In case of POWER COMMON(NPN : +COM), the JP1, JP3, JP5, JP7 terminals are connected.
• In case of POWER COMMON(PNP : -COM), JP2, JP4, JP6, JP8 terminals are connected.
In case of LOAD COMMON, JP9, JP10, JP11, JP12 terminals are connected.

■ Wire Connection

[MP0]



[SP0 / SP1 / SR0 / ST0]



SSR Terminal Blocks

Screwless Type (16-point)

ASL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ASL	-	❶	❷	❸	-	❹	❺

❶ Connector type
H: Hirose connector

❷ Number or SSR
16: 16-point

❸ SSR type
MP0: AQZ202D [Panasonic]

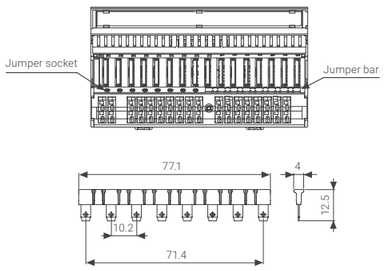
❹ Input logic
N: NPN
P: PNP

❺ Varistor
N: None

Sold Separately

[10.2 mm pitch jumper bar]
B-10.2-08L

1. Using a nipper, cut the notches on the jumper bar as much as you need.
2. Insert the jumper bar at the jumper socket you need.



[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items.

Specifications

Model	ASL-H16MP0-□N
Applied SSR 01)	AQZ202D [Panasonic]
Output method	1a
Power supply	≤ 24 VDC⎓ ±10 %
Current consumption 02)	≤ 4 mA
SSR output rated spec. 03) 04)	24 VAC~ / VDC⎓ 50/60 Hz
No. of connector pins	20
Connector for controller side	20-pin Omron (XG4A-2031)
Terminal type	Screwless
Terminal pitch	≥ 7.8 mm
Indicator	Power indicator: red, operation indicator: blue
Varistor	None
Input logic	NPN / PNP model
Material	Terminal block: PC, CASE, BASE: MPPO
Certification	CE UK CA cULus
Unit weight (packaged)	≈ 278 g (≈ 377 g)

01) For the detailed information about each SSR, please refer to 'SSR' or data sheet from the manufacturer.
02) It is current consumption for a SSR including LED current.
03) This value is rated when using the resistive load. Use proper current for the ambient temperature. (Refer to the 'Temperature Characteristic Graph'.)
04) When connecting loads to output part, please connect loads of same power type. Connecting loads of different power type may cause safety issues.

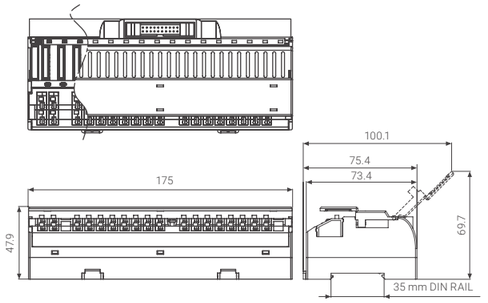
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	2,500 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	1,000 VAC~ 50/60 Hz for 1 minute
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours
Vibration (malfunction)	0.75 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes
Shock	1,000 m/s² (≈ 100 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	IP20 (IEC standard)

Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.



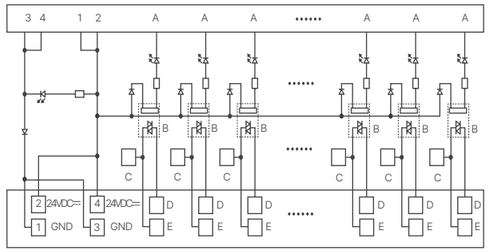
Wire Connection

When using the jumper bar, the JP1 to JP20 terminals are connected depending on the cutting and insertion methods.

■ Wire Connection

[NPN]

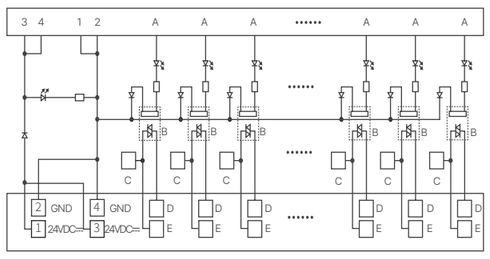
Controller side (connector)



Terminal side

[PNP]

Controller side (connector)



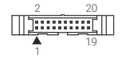
Terminal side

A	Pin	20	18	16	14	12	10	8	6	19	17	15	13	11	9	7	5
B	SSR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	Jumper socket	JP 1	JP 2	JP 3	JP 4	JP 5	JP 6	JP 7	JP 8	JP 9	JP 10	JP 11	JP 12	JP 13	JP 14	JP 15	JP 16
D	Upper terminal	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
		R1 +	R2 +	R3 +	R4 +	R5 +	R6 +	R7 +	R8 +	R9 +	R10 +	R11 +	R12 +	R13 +	R14 +	R15 +	R16 +
E	Low terminal	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37
		R1 -	R2 -	R3 -	R4 -	R5 -	R6 -	R7 -	R8 -	R9 -	R10 -	R11 -	R12 -	R13 -	R14 -	R15 -	R16 -

■ Hirose connector pin arragement

[20-pin connector]

Omron (XG4A-2031)



SSR Terminal Blocks

Screwless Type

(comprehensive connection,16,32-point)

ASL Series

Ordering Information

This is only for reference, the actual product does not support all combinations.
For selecting the specified model, follow the Autonics website.

ASL - ❶ ❷ ❸ ❹ - ❺ ❻

❶ Connector type
H: Hirose connector

❷ Wire connection
C: Common

❸ Number of SSR
16: 16-point
32: 32-point

❹ SSR type
MP0: AQZ202D [Panasonic]

❺ Input logic
N: NPN (+COM)
P: PNP (-COM)

❻ Varistor
N: None

Sold Separately

[I/O cable CH/CO Series]

* Refer to p.68 for information on separately sold items

Specifications

Model	ASL-HC16□-□N	ASL-HC32□-□N
Applied SSR 01)	AQZ202D [Panasonic]	
Output method	1a	1a
Power supply	≤ 24 VDC⎓ ±10 %	≤ 24 VDC⎓ ±10 %
Current consumption	≤ 10.4 mA 02) or ≤ 13.1 mA 03)	≤ 10.4 mA 02) or ≤ 13.1 mA 03)
SSR output rated spec.	24 VAC~ 50/60 Hz 1.6A, VDC⎓ 1.6A (1.6 A / 1-point, 8 A / 1COM)	24 VAC~ 50/60 Hz 1.6A, VDC⎓ 1.6A (1.6 A / 1-point, 8 A / 1COM)
No. of connector pins	20	40
Connector for controller side	20-pin Omron (XG4A-2031)	40-pin Omron (XG4A-4031)
No. of SSR points	16	32
Output connection	8-point/1COM	8-point/1COM
Terminal type	Screwless	Screwless
Terminal pitch	≥ 5 mm	≥ 5 mm
Indicator	Power indicator: red, operating indicator: blue	Power indicator: red, operating indicator: blue
Varistor	None	None
Input logic	NPN / PNP model	NPN / PNP model
Material	CASE, BASE, COVER: PC, terminal pin: copper+PA66	CASE, BASE, COVER: PC, terminal pin: copper+PA66
Certification	CE UK CA cULus	CE UK CA cULus
Unit weight (packaged)	≈ 185 g (≈ 232 g)	≈ 370 g (≈ 463 g)

01) For the detailed information about each SSR, please refer to 'SSR' or data sheet from the manufacturer.
02) It is current consumption for a SSR including LED current.
03) It is current consumption including LED current for power part to 02).

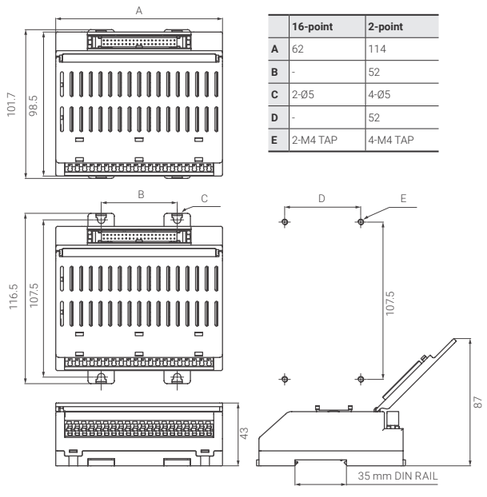
Insulation resistance	≥ 1,000 MΩ (500 VDC⎓ megger)
Dielectric strength (coil-contact)	2,500 VAC~ 50/60 Hz for 1 minute
Dielectric strength (same polarity contact)	1,000 VAC~ 50/60 Hz for 1 minute
Vibration	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours
Vibration (mal-function)	0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 10 min
Shock	300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times
Shock (malfunc-tion)	150 m/s² (≈ 15 G) in each X, Y, Z direction for 3 times
Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

Applicable wire - solid 01)	Ø 0.6 to 1.25 mm
Applicable wire - stranded 01) 02)	AWG 22-18 (0.30 to 0.80 mm²)
Stripped length	8 to 10 mm

01) Use the cable of copper conductor in 60 °C temperature class.
02) When using the stranded wire, use End Sleeve (wire ferrule).

Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.



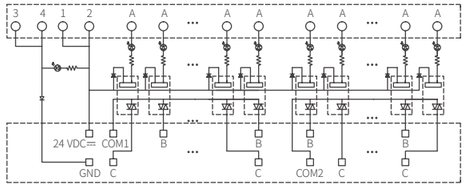
	16-point	2-point
A	62	114
B	-	52
C	2-Ø5	4-Ø5
D	-	52
E	2-M4 TAP	4-M4 TAP

Wire Connection

■ Wire Connection

[16-point NPN]

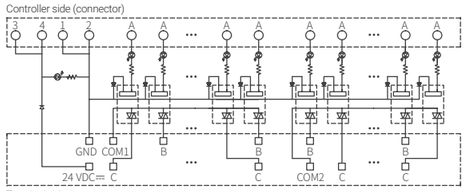
Controller side (connector)



Terminal side

[16-point PNP]

Controller side (connector)

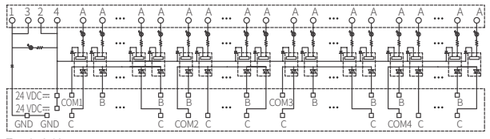


Terminal side

A	Pin	20	18	16	14	12	10	8	6	19	17	15	13	11	9	7	5
COM	COM	COM1								COM2							
B	Upper terminal	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

[32-point NPN]

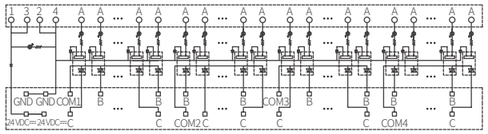
Controller side (connector)



Terminal side

[32-point PNP]

Controller side (connector)



Terminal side

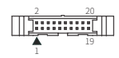
A	Pin	40	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10
COM	COM	COM1								COM2							
B	Upper terminal	-	01	-	03	-	05	-	07	08	-	0A	-	0C	-	0E	-
		-	R2	-	R4	-	R6	-	R8	R9	-	R11	-	R13	-	R15	-
C	Low terminal	00	-	02	-	04	-	06	-	-	09	-	0B	-	0D	-	0F
		R1	-	R3	-	R5	-	R7	-	-	R10	-	R12	-	R14	-	R16

A	Pin	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9
COM	COM	COM3								COM4							
B	Upper terminal	-	11	-	13	-	15	-	17	18	-	1A	-	1C	-	1E	-
		-	R18	-	R20	-	R22	-	R24	R25	-	R27	-	R29	-	R31	-
C	Low terminal	10	-	12	-	14	-	16	-	-	19	-	1B	-	1D	-	1F
		R17	-	R19	-	R21	-	R23	-	-	R26	-	R28	-	R30	-	R32

■ Hirose connetor pin arragement

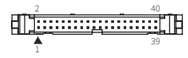
[20-pin connector]

Omron (XG4A-2031)



[40-pin connector]

Omron (XG4A-4031)



I/O Terminal Block Cables

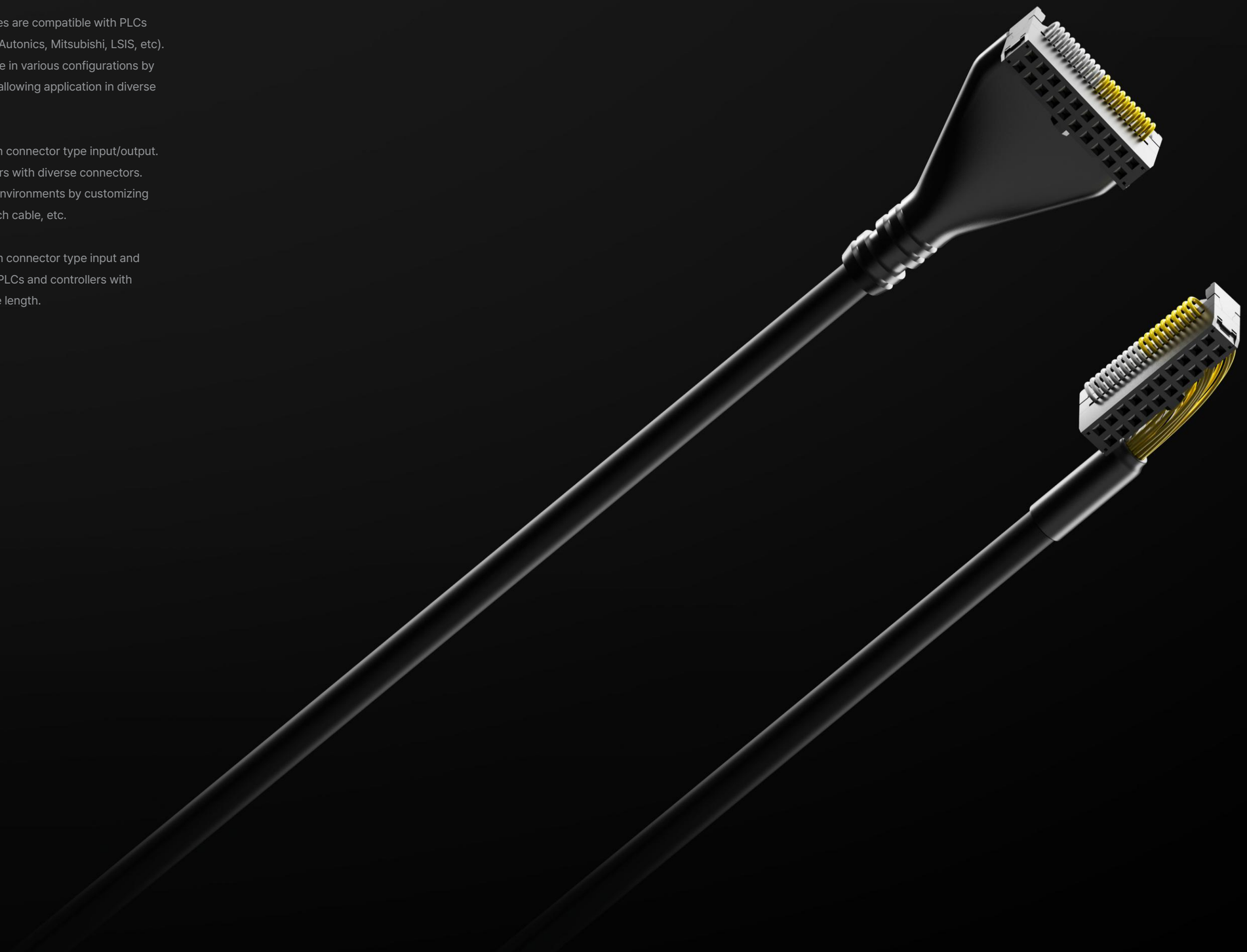
CH / CO Series

I/O terminal block cables CH/CO series are compatible with PLCs and controllers from various brands (Autonics, Mitsubishi, LSIS, etc). The CH/CO series cables are available in various configurations by cable length and cable arrangement allowing application in diverse working environments.

CH series is a transmission cable with connector type input/output. Users can access PLCs and controllers with diverse connectors. CH series can be applied to various environments by customizing cable arrangement, length, and branch cable, etc.

CO series is a transmission cable with connector type input and open type output. Users can access PLCs and controllers with diverse connectors and choose cable length.

- **Connector Type** | CH Series
- **Open Type** | CO Series



I/O Terminal Block Cables
(Connector Type)

CH Series

Ordering Information

This is only for reference.
For selecting the specified model, follow the Autonics website.
Check PLC / SERVO Connector, cable appearance, cable selection and connection to order a product. Optional specifications, needed to contact Autonics
If there is no items you are looking for, please contact Autonics.

CH ❶ - ❷ ❸ - ❹ ❺ ❻ ❼ ❽ - ❾

❶ No. of connector pins
Number: Number of connector pins

❷ PLC / SERVO connector
HP: Hirose plug
FP: Fujitsu plug
DP: D-sub plug
DS: D-sub socket
MP: 3M plug (latch)
MQ: 3M plug (bolt)

❸ Cable length
005: 0.5 m
010: 1 m
015: 1.5 m
020: 2 m
025: 2.5 m
030: 3 m
040: 4 m
050: 5 m

❹ Position of PLC (SERVO) power connection pin

❺ Signal arrangement

❻ PLC (SERVO) power connection pin

❼ Connection type of PLC (SERVO)

❽ PLC (SERVO) connector direction

❾ Cable branching

Specifications

Series	CH Series
Cable connector	PLC / SERVO side - Terminal block side
PLC / SERVO side	Hirose 20-pin / 40-pin socket Fujitu 40-pin socket D-Sub 37-pin socket / plug MDR (latch) 20-pin / 26-pin / 50-pin socket MDR (bolt) 26-pin / 50-pin socket
Terminal block side	Hirose 20-pin / 26-pin / 40-pin / 50-pin socket
Wire 01)	UL 20276 TWIST 20C / 40C / 26C / 50C
Conductor characteristics	7 / 0.127 mm (AWG 28) × 20P, 7 / 0.127 mm (AWG 28) × 13P, 7 / 0.127 mm (AWG 28) × 10P, 7 / 0.127 mm (AWG 28) × 25P
Insulation diameter	0.12 mm²
Cable diameter	Ø 6.3 mm (26C) / Ø 7.2 mm (40C) / Ø 8.9 mm (50C)
Rated current	≤ 1 A
Conductor resistance	≤ 0.223 Ω/m
Insulation voltage	500 VAC~ 50/60Hz for 1 min
Insulation resistance 02)	≥ 15 MΩ/km
Ambient temperature	-15 to 55°C, storage: -25 to 65°C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

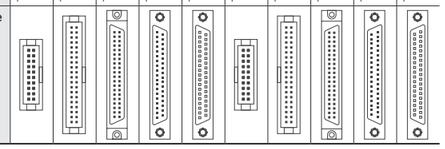
01) Color is black.
02) Conductor resistance value is rated at 20 °C.

Connectible Connectors

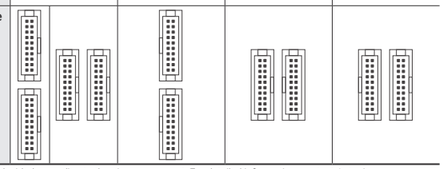
These are shape and direction of connectors in PLC / SERVO to which CH series cable can be connected.
These images stand for the direction of cable running down.

■ PLC connector

[Non-branching]

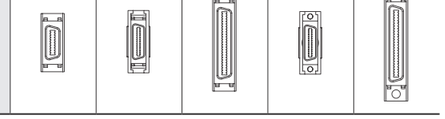
Direction	Right (R)					Left (L)				
Type	Hirose plug		Fujitsu plug	D-Sub plug	D-Sub socket	Hirose plug		Fujitsu plug	D-Sub plug	D-Sub socket
No. of pin	20-pin	40-pin	40-pin	37-pin	37-pin	20-pin	40-pin	40-pin	37-pin	37-pin
Shape										

[2-branching]

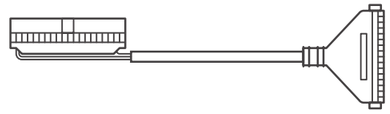
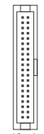
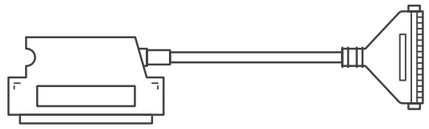
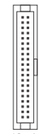
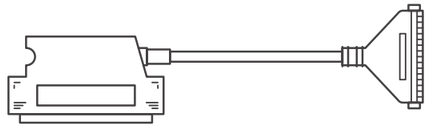
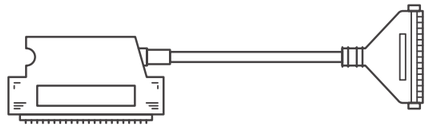
Direction	Right (R)	Left (L)	Right + Left (W, X) (W, X) 01)	Left + Right (Y, Z) (Y, Z) 01)
Type	Hirose plug	Hirose plug	Hirose plug	Hirose plug
No. of pin	40-pin	40-pin	40-pin	40-pin
Shape				

01) It is decided according to the pin arrangement. For detailed information, contact Autonics.

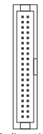
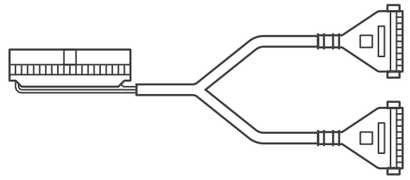
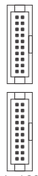
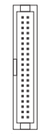
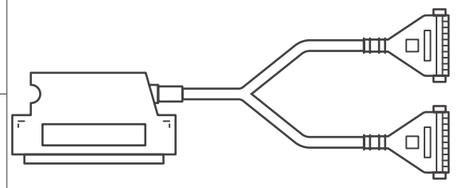
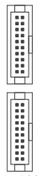
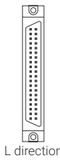
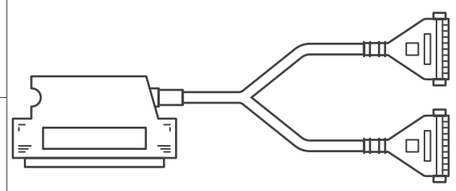
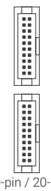
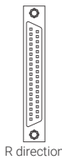
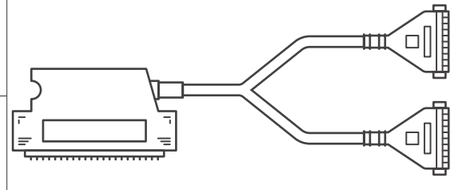
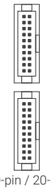
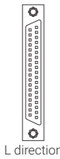
■ SERVO connector

Direction	Right (R)				
Type	3M plug (latch)			3M plug (bolt)	
No. of pin	20-pin	26-pin	50-pin	26-pin	50-pin
Shape					

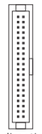
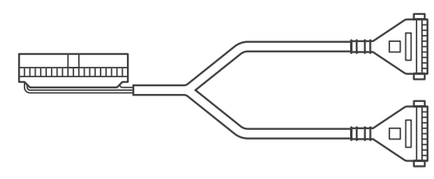
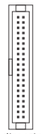
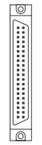
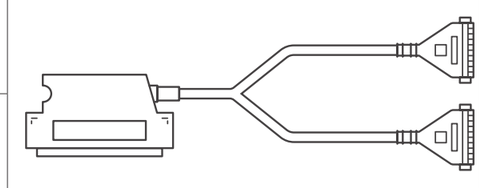
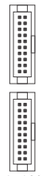
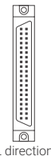
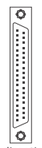
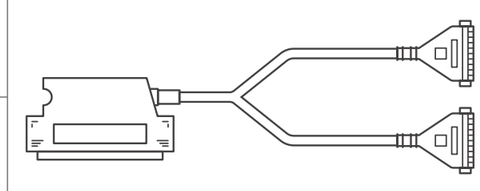
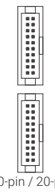
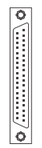
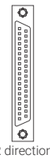
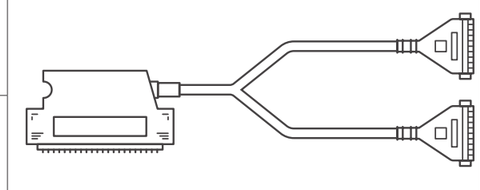
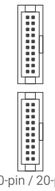
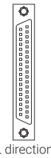
Cable Appearance: Non-branching

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 20-pin plug	R direction	CH20-HP□-□R		 20-pin
	L direction	CH20-HP□-□L		
Hirose 40-pin plug	R direction	CH40-HP□-□R		 40-pin
	L direction	CH40-HP□-□L		
Fujitsu 40-pin plug	R direction	CH40-FP□-□R		 40-pin
	L direction	CH40-FP□-□L		
D-sub 37-pin plug	R direction	CH37-DP□-□R		 40-pin
	L direction	CH37-DP□-□L		
D-sub 37-pin socket	R direction	CH37-DS□-□R		 40-pin
	L direction	CH37-DS□-□L		

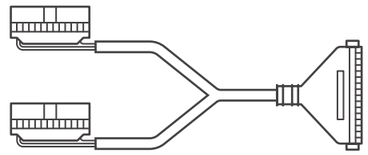
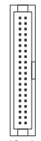
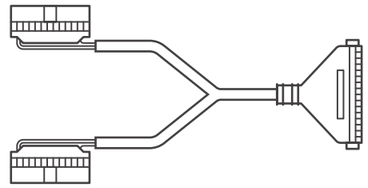
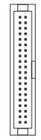
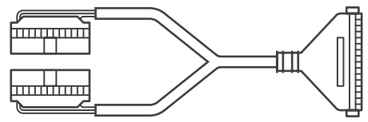
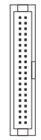
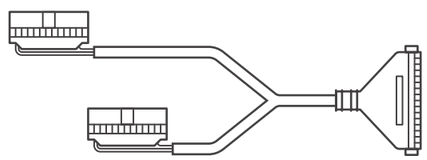
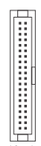
Cable Appearance: Terminal block side 2-branching short type

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 40-pin plug	 R direction	CH40-HP□-□R-2S		 20-pin / 20-pin
	 L direction	CH40-HP□-□L-2S		
Fujitsu 40-pin plug	 R direction	CH40-FP□-□R-2S		 20-pin / 20-pin
	 L direction	CH40-FP□-□L-2S		
D-sub 37-pin plug	 R direction	CH37-DP□-□R-2S		 20-pin / 20-pin
	 L direction	CH37-DP□-□L-2S		
D-sub 37-pin socket	 R direction	CH37-DS□-□R-2S		 20-pin / 20-pin
	 L direction	CH37-DS□-□L-2S		

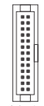
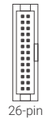
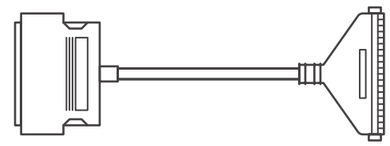
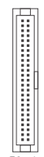
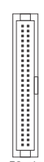
Cable Appearance: Terminal block side 2-branching long type

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 40-pin plug	 R direction	CH40-HP□-□R-2L		 20-pin / 20-pin
	 L direction	CH40-HP□-□L-2L		
Fujitsu 40-pin plug	 R direction	CH40-FP□-□R-2L		 20-pin / 20-pin
	 L direction	CH40-FP□-□L-2L		
D-sub 37-pin plug	 R direction	CH37-DP□-□R-2L		 20-pin / 20-pin
	 L direction	CH37-DP□-□L-2L		
D-sub 37-pin socket	 R direction	CH37-DS□-□R-2L		 20-pin / 20-pin
	 L direction	CH37-DS□-□L-2L		

Cable Appearance: PLC side 2-branching short type

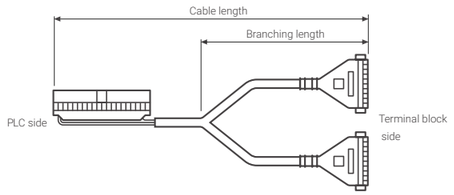
PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 20-pin plug	R direction + R direction	CH40-HP□-□R-YS		 40-pin
	R direction + L direction	CH40-HP□-□W-YS CH40-HP□-□X-YS		 40-pin
	L direction + R direction	CH40-HP□-□Y-YS CH40-HP□-□Z-YS		 40-pin
	R direction + R direction	CH40-HP□-□R-FS		 40-pin
	L direction + L direction	CH40-HP□-□L-FS		

Cable Appearance: SERVO

SERVO connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
3M 20-pin plug (latch)	R direction	CH20-MP□-□R		 20-pin
3M 26-pin plug (latch)	R direction	CH26-MP□-□R		 26-pin
3M 26-pin plug (bolt)	R direction	CH26-MQ□-□R		 26-pin
3M 50-pin plug (latch)	R direction	CH50-MP□-□R		 50-pin
3M 50-pin plug (bolt)	R direction	CH50-MQ□-□R		 50-pin

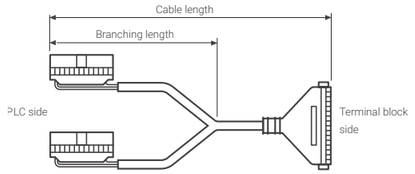
Cable Length of Branching Type Cable

■ Terminal block side branching cable

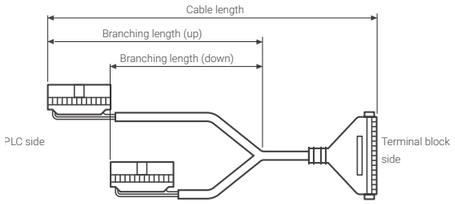


Cable model	Branching	Cable length	Branching length
CH□-□005-□-2S	2-branching short type	0.5 m	0.15 m
CH□-□010-□-2S		1 m	0.15 m
CH□-□015-□-2S		1.5 m	0.15 m
CH□-□020-□-2S		2 m	0.15 m
CH□-□025-□-2S		2.5 m	0.15 m
CH□-□030-□-2S		3 m	0.15 m
CH□-□040-□-2S		4 m	0.15 m
CH□-□050-□-2S		5 m	0.15 m
CH□-□005-□-2L	2-branching long type	0.5 m	0.3 m
CH□-□010-□-2L		1 m	0.8 m
CH□-□015-□-2L		1.5 m	1.3 m
CH□-□020-□-2L		2 m	1.8 m
CH□-□025-□-2L		2.5 m	2.3 m
CH□-□030-□-2L		3 m	2.8 m
CH□-□040-□-2L		4 m	3.8 m
CH□-□050-□-2L		5 m	4.8 m

■ PLC side branching cable



Cable model	Branching	Cable length	Branching length
CH40-HP005-□-YS	2-branching right/left type	0.5 m	0.15 m
CH40-HP010-□-YS		1 m	0.15 m
CH40-HP015-□-YS		1.5 m	0.15 m
CH40-HP020-□-YS		2 m	0.15 m
CH40-HP025-□-YS		2.5 m	0.15 m
CH40-HP030-□-YS		3 m	0.15 m
CH40-HP040-□-YS		4 m	0.15 m
CH40-HP050-□-YS		5 m	0.15 m



Cable model	Branching	Cable length	Branching length
CH40-HP005-□-FS	2-branching up/down type	0.5 m	Up: 0.15 m Down: 0.09 m
CH40-HP010-□-FS		1 m	
CH40-HP015-□-FS		1.5 m	
CH40-HP020-□-FS		2 m	
CH40-HP025-□-FS		2.5 m	
CH40-HP030-□-FS		3 m	
CH40-HP040-□-FS		4 m	
CH40-HP050-□-FS		5 m	

Cable Selection Table and Connection Diagram

For detailed information, please check the website through the QR code.

I/O Terminal Block Cables
(Open Type)

CO Series

Ordering Information

This is only for reference.
For selecting the specified model, follow the Autonics website.
Check PLC / SERVO Connector, cable appearance, cable selection and connection to order a product. Optional specifications, needed to contact Autonics
If there is no items you are looking for, please contact Autonics.

CO ❶ - ❷ ❸ - ❹

❶ No. of connector pins
Number: Number of connector pins

❷ PLC / SERVO connector
HP: Hirose plug
FP: Fujitsu plug
DP: D-sub plug
DS: D-sub socket
MP: 3M plug (latch)
MQ: 3M plug (bolt)

❸ Cable length
005: 0.5 m
010: 1 m
015: 1.5 m
020: 2 m
025: 2.5 m
030: 3 m
040: 4 m
050: 5 m

❹ PLC (SERVO) connector direction
R: Right
L: Left

Specifications

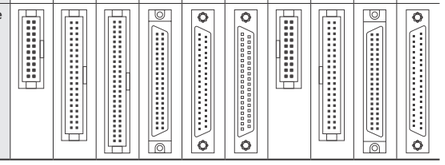
Series	CO Series
Cable connector	Hirose 20-pin / 40-pin socket, Fujitu 40-pin socket, D-sub 37-pin socket/ plug, MDR (latch) 20-pin / 26-pin / 50-pin socket, MDR (bolt) 26-pin socket
Wire 01)	UL 20276 TWIST 20C / 26C / 40C / 50C
Conductor characteristics	7 / 0.127 mm (AWG 28) × 20P, 7 / 0.127 mm (AWG 28) × 13P, 7 / 0.127 mm (AWG 28) × 10P, 7 / 0.127 mm (AWG 28) × 25P
Insulation diameter	0.12 mm²
Cable diameter	Ø 6.3 mm (26C) / Ø 7.2 mm (40C) / Ø 8.9 mm (50C)
Rated current	≤ 1 A
Conductor resistance	≤ 0.223 Ω/m
Insulation voltage	500 VAC~ 50/60Hz for 1 min
Insulation resistance 02)	≥ 15 MΩ/km
Ambient temperature	-15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage : 35 to 85 %RH (no freezing or condensation)

01) Color is black.
02) Conductor resistance value is rated at 20 °C.

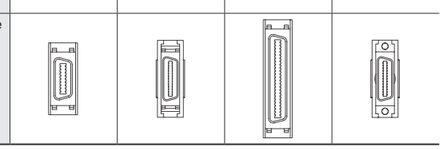
Connectible Connectors

These are shape and direction of connectors in PLC / SERVO to which CO series cable can be connected.
These images stand for the direction of cable running down.

■ PLC connector

Direction	Right (R)						Left (L)			
Type	Hirose plug			Fujitsu plug	D-Sub plug	D-Sub socket	Hirose plug		Fujitsu plug	D-Sub plug
No. of pin	20-pin	40-pin	50-pin	40-pin	37-pin	37-pin	20-pin	40-pin	40-pin	37-pin
Shape										

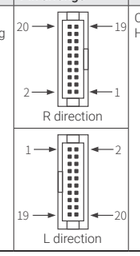
■ SERVO connector

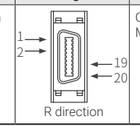
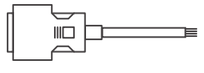
Direction	Right (R)			
Type	3M plug (latch)			3M plug (bolt)
No. of pin	20-pin	26-pin	50-pin	26-pin
Shape				

Cable Color Table

■ 20-pin

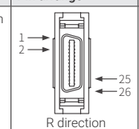
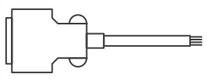
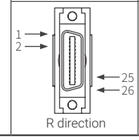
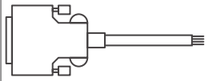
Connector pin no.	Conductor color	Point color	No. of points
1	Yellow	Black	1
2	Yellow	Red	1
3	Yellow	Black	2
4	Yellow	Red	2
5	Yellow	Black	3
6	Yellow	Red	3
7	Yellow	Black	4
8	Yellow	Red	4
9	Yellow	Black	5
10	Yellow	Red	5
11	White	Black	1
12	White	Red	1
13	White	Black	2
14	White	Red	2
15	White	Black	3
16	White	Red	3
17	White	Black	4
18	White	Red	4
19	White	Black	5
20	White	Red	5

PLC connector		Cable model	Cable appearance
Type	Pin arrange		
Hirose 20-pin plug		CO20-HP□-□	

SERVO connector		Cable model	Cable appearance
Type	Pin arrange		
3M 20-pin plug		CO20-MP□-□	

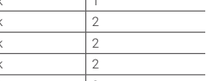
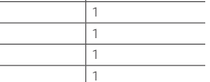
■ 26-pin

Connector pin no.	Conductor color	Point color	No. of points
1	Orange	Black	1
2	Orange	Red	1
3	Orange	Black	2
4	Orange	Red	2
5	Orange	Black	3
6	Orange	Red	3
7	Orange	Black	4
8	Orange	Red	4
9	Orange	Black	Consecutive
10	Orange	Red	Consecutive
11	Yellow	Black	1
12	Yellow	Red	1
13	Yellow	Black	2
14	Yellow	Red	2
15	Yellow	Black	3
16	Yellow	Red	3
17	Yellow	Black	4
18	Yellow	Red	4
19	Yellow	Black	Consecutive
20	Yellow	Red	Consecutive
21	White	Black	1
22	White	Red	1
23	White	Black	2
24	White	Red	2
25	White	Black	3
26	White	Red	3

SERVO connector		Cable model	Cable appearance
Type	Pin arrange		
3M 26-pin plug		CO20-MP□-□	
		CO26-MQ□-□	

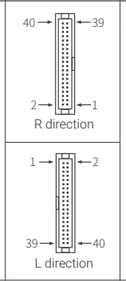
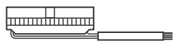
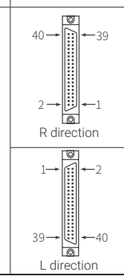
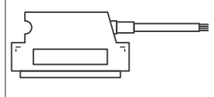
■ 37-pin

Connector pin no.	Conductor color	Point color	No. of points
1	Orange	Black	1
2	Yellow	Black	1
3	White	Black	1
4	Gray	Black	1
5	Pink	Black	1
6	Orange	Black	2
7	Yellow	Black	2
8	White	Black	2
9	Gray	Black	2
10	Pink	Black	2
11	Orange	Black	3
12	Yellow	Black	3
13	White	Black	3
14	Gray	Black	3
15	Pink	Black	3
16	Orange	Black	4
17	Yellow	Black	4
18	White	Black	4
19	Gray	Black	4
20	Orange	Red	1
21	Yellow	Red	1
22	White	Red	1
23	Gray	Red	1
24	Pink	Red	1
25	Orange	Red	2
26	Yellow	Red	2
27	White	Red	2
28	Gray	Red	2
29	Pink	Red	2
30	Orange	Red	3
31	Yellow	Red	3
32	White	Red	3
33	Gray	Red	3
34	Pink	Red	3
35	Orange	Red	4
36	Yellow	Red	4
37	White	Red	4

PLC connector		Cable model	Cable appearance
Type	Pin arrange		
D-sub 37-pin plug		CO37-DP□-□	
D-sub 37-pin socket		CO37-DS□-R	

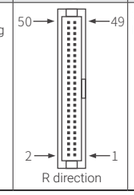
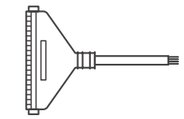
■ 40-pin

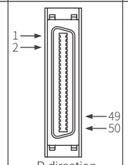
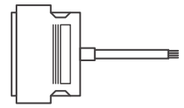
Connector pin no.	Conductor color	Point color	No. of points
1	Orange	Black	1
2	Orange	Red	1
3	Orange	Black	2
4	Orange	Red	2
5	Orange	Black	3
6	Orange	Red	3
7	Orange	Black	4
8	Orange	Red	4
9	Yellow	Black	1
10	Yellow	Red	1
11	Yellow	Black	2
12	Yellow	Red	2
13	Yellow	Black	3
14	Yellow	Red	3
15	Yellow	Black	4
16	Yellow	Red	4
17	White	Black	1
18	White	Red	1
19	White	Black	2
20	White	Red	2
21	White	Black	3
22	White	Red	3
23	White	Black	4
24	White	Red	4
25	Gray	Black	1
26	Gray	Red	1
27	Gray	Black	2
28	Gray	Red	2
29	Gray	Black	3
30	Gray	Red	3
31	Gray	Black	4
32	Gray	Red	4
33	Pink	Black	1
34	Pink	Red	1
35	Pink	Black	2
36	Pink	Red	2
37	Pink	Black	3
38	Pink	Red	3
39	Pink	Black	4
40	Pink	Red	4

PLC connector		Cable model	Cable appearance
Type	Pin arrange		
Hirose 40-pin plug		CO40-HP□-□	
Fujitu 40-pin plug		CO40-FP□-□	

■ 50-pin

Connector pin no.	Conductor color	Point color	No. of points
1	Orange	Black	1
2	Orange	Red	1
3	Orange	Black	2
4	Orange	Red	2
5	Orange	Black	3
6	Orange	Red	3
7	Orange	Black	4
8	Orange	Red	4
9	Orange	Black	5
10	Orange	Red	5
11	Yellow	Black	1
12	Yellow	Red	1
13	Yellow	Black	2
14	Yellow	Red	2
15	Yellow	Black	3
16	Yellow	Red	3
17	Yellow	Black	4
18	Yellow	Red	4
19	Yellow	Black	5
20	Yellow	Red	5
21	White	Black	1
22	White	Red	1
23	White	Black	2
24	White	Red	2
25	White	Black	3
26	White	Red	3
27	White	Black	4
28	White	Red	4
29	White	Black	5
30	White	Red	5
31	Gray	Black	1
32	Gray	Red	1
33	Gray	Black	2
34	Gray	Red	2
35	Gray	Black	3
36	Gray	Red	3
37	Gray	Black	4
38	Gray	Red	4
39	Gray	Black	5
40	Gray	Red	5
41	Pink	Black	1
42	Pink	Red	1
43	Pink	Black	2
44	Pink	Red	2
45	Pink	Black	3
46	Pink	Red	3
47	Pink	Black	4
48	Pink	Red	4
49	Pink	Black	5
50	Pink	Red	5

PLC connector		Cable model	Cable appearance
Type	Pin arrange		
Hirose 50-pin plug		CO50-HP□-R	

SERVO connector		Cable model	Cable appearance
Type	Pin arrange		
3M 50-pin plug		CO50-MP□-R	

Cable Selection Table and Connection Diagram

For detailed information, please check the website through the QR code.

I/O Terminal Block Cable Selection

Selection Table

CH Series Selection Table

■ **Cable Selection Table**

[Interface/Relay/SSR Terminal Blocks]

Controller						Terminal block to connect	Proper cable	
Manufacturer	Series	Module name	Input/Output	No. of I/O	Logic		Model name	Quantity
LS	XGT	XGI-D24A	Input	32		Interface terminal block	CH40-FP□-1R	1
		XGI-D24B	Input	32	-	Interface terminal block	CH40-FP□-1R	1
		XGI-D28A	Input	64	-	Interface terminal block	CH40-FP□-1R	2
		XGI-D28B	Input	64	-	Interface terminal block	CH40-FP□-1R	2
		XGQ-TR4A	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
		XGQ-TR4B	Output	32	PNP	Interface terminal block	CH40-FP□-1R	1
			Output	32	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	1
		XGQ-TR8A	Output	64	NPN	Interface terminal block	CH40-FP□-1R	2
			Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
		XGQ-TR8B	Output	64	PNP	Interface terminal block	CH40-FP□-1R	2
			Output	64	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	2
	XGB	XBM-DN32H	Input/Output	32	-	Interface terminal block	CH40-HP□-8L	1
		XBM-DN16S	Input	8	-	Interface terminal block	CH20-HP□-1R	1
			Output	8	NPN	Interface terminal block	CH20-HP□-1L	1
			Output	8	NPN	Relay/SSR terminal block	CH20-HP□-D1T1L	1
		XBM-DN32S	Input	16	-	Interface terminal block	CH20-HP□-1R	1
			Output	16	NPN	Interface terminal block	CH20-HP□-1L	1
			Output	16	NPN	Relay/SSR terminal block	CH20-HP□-D1T1L	1
		XBE-DN32A	Input/Output	32	-	Interface terminal block	CH40-HP□-8L	1
		XBE-DC32A	Input	32	-	Interface terminal block	CH40-HP□-8L	1
		XBE-TN32A	Output	32	NPN	Interface terminal block	CH40-HP□-8L	1
			Output	32	NPN	Relay/SSR terminal block	CH40-HP□-E1T1L	1
		XBE-TP32A	Output	32	PNP	Interface terminal block	CH40-HP□-8L	1
			Output	32	PNP	Relay/SSR terminal block	CH40-HP□-E1T4L	1
MITSUBISHI	iQ-R	RX41C4, RX41C6HS	Input	32	-	Interface terminal block	CH40-FP□-1R	1
		RY41NT2P, RY41NT2H	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
		RY41PT1P, RY41PT2H	Output	32	PNP	Interface terminal block	CH40-FP□-1R	1
			Output	32	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	1
		RX42C4	Input	64	-	Interface terminal block	CH40-FP□-1R	2
		RY42NT2P	Output	64	NPN	Interface terminal block	CH40-FP□-1R	2
			Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
		RY42PT1P	Output	64	PNP	Interface terminal block	CH40-FP□-1R	2
			Output	64	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	2
		RH42C4NT2P	Input	32	-	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
	iQ-F	FX5-C16EX/D	Input	16	NPN	Interface terminal block	CH20-HP□-4R	-
		FX5-C16EX/DS	Input	16	-	Interface terminal block	CH20-HP□-4R	-
		FX5-C32EX/D	Input	32	NPN	Interface terminal block	CH40-HP□-8R-FS	-
		FX5-C32EX/DS	Input	32	-	Interface terminal block	CH40-HP□-8R-FS	-
		FX5-C16EYT/D	Output	16	NPN	Interface terminal block	CH20-HP□-4R	-
		FX5-C16EYT/DSS	Output	16	PNP	Interface terminal block	CH20-HP□-4R	-
		FX5-C32EYT/D	Output	32	NPN	Interface terminal block	CH40-HP□-8R-FS	-
		FX5-C32EYT/DSS	Output	32	PNP	Interface terminal block	CH40-HP□-8R-FS	-

□ in proper cable model name stands for the cable length. Please refer to the cable length in 'Ordering Information'.

Controller						Terminal block to connect	Proper cable	
Manufacturer	Series	Module name	Input/Output	No. of I/O	Logic		Model name	Quantity
MITSUBISHI	QnU	QX41, QX42-S1/S2	Input	32	-	Interface terminal block	CH40-FP□-1R	1
		QH42P, QX41Y41P	Input	32	-	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
		QX42, QX42-S1	Input	64	-	Interface terminal block	CH40-FP□-1R	2
		QX82	Input	64	-	Interface terminal block	CH40-FP□-1R	2
		QY41P	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
		QY42P	Output	64	NPN	Interface terminal block	CH40-FP□-1R	2
			Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
		QY82P	Output	64	PNP	Interface terminal block	CH40-FP□-1R	2
			Output	64	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	2
		QX81, QX81-S2	Input	32	-	Interface terminal block	CH37-DP□-3R	1
		QY81P	Output	32	PNP	Interface terminal block	CH37-DP□-3R	1
			Output	32	PNP	Relay/SSR terminal block	CH37-DP□-B6T1R	1
OMRON	CJ/NJ	CJ1W-ID232, CJ1W-ID233	Input	32	-	Interface terminal block	CH40-HP□-4L	1
		CJ1W-ID262	Input1	32	-	Interface terminal block	CH40-HP□-1R	1
			Input2	32	-	Interface terminal block	CH40-HP□-4L	1
		CJ1W-OD233, CJ1W-OD234	Output	32	NPN	Interface terminal block	CH40-HP□-4L	1
			Output	32	NPN	Relay/SSR terminal block	CH40-HP□-ICM1L	1
		CJ1W-OD263	Output1	32	NPN	Interface terminal block	CH40-HP□-1R	1
			Output2	32	NPN	Interface terminal block	CH40-HP□-4L	1
			Output1	32	NPN	Relay/SSR terminal block	CH40-HP□-L9M4R	1
			Output2	32	NPN	Relay/SSR terminal block	CH40-HP□-ICM1L	1
		CJ1W-OD232	Output	32	PNP	Interface terminal block	CH40-HP□-4L	1
			Output	32	PNP	Relay/SSR terminal block	CH40-HP□-ICM4L	1
		CJ1W-OD262	Output1	32	PNP	Interface terminal block	CH40-HP□-1R	1
			Output2	32	PNP	Interface terminal block	CH40-HP□-4L	1
			Output1	32	PNP	Relay/SSR terminal block	CH40-HP□-L9M1R	1
			Output2	32	PNP	Relay/SSR terminal block	CH40-HP□-ICM4L	1
		CJ1W-MD263	Input	32	-	Interface terminal block	CH40-HP□-4L	1
			Output	32	NPN	Interface terminal block	CH40-HP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-HP□-L9M1R	1
		CJ1W-MD233	Input	16	-	Interface terminal block	CH20-HP□-4L	1
			Output	16	NPN	Interface terminal block	CH20-HP□-1R	1
			Output	16	NPN	Relay/SSR terminal block	CH20-HP□-C1T4R	1
		CJ1W-MD232	Input	16	-	Interface terminal block	CH20-HP□-4L	1
			Output	16	PNP	Interface terminal block	CH20-HP□-1R	1
			Output	16	PNP	Relay/SSR terminal block	CH20-HP□-C1T4R	1
		CJ1W-ID231	Input	32	-	Interface terminal block	CH40-FP□-4L	1
		CJ1W-ID261	Input1	32	-	Interface terminal block	CH40-FP□-1R	1
			Input2	32	-	Interface terminal block	CH40-FP□-4L	1
		CJ1W-OD231	Output	32	NPN	Interface terminal block	CH40-FP□-4L	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-L1T4L	1
		CJ1W-OD261	Output1	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output2	32	NPN	Interface terminal block	CH40-FP□-4L	1
			Output1	32	NPN	Relay/SSR terminal block	CH40-FP□-I4T1R	1
			Output2	32	NPN	Relay/SSR terminal block	CH40-FP□-L1T4L	1
		CJ1W-MD261	Input	32	-	Interface terminal block	CH40-FP□-4L	1
			Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-I4T1R	1
	NX	NX-ID6142-5	Input	32	-	Interface terminal block	CH40-HP□-4L	1
		NX-OD6121-5	Output	32	NPN	Interface terminal block	CH40-HP□-4L	1
			Output	32	NPN	Relay/SSR terminal block	CH40-HP□-ICM1L	1
		NX-OD6256-5	Output	32	PNP	Interface terminal block	CH40-HP□-4L	1
			Output	32	PNP	Relay/SSR terminal block	CH40-HP□-ICM4L	1
		NX-ID5142-5	Input	16	-	Interface terminal block	CH20-HP□-4L	1
		NX-OD5121-5	Output	16	NPN	Interface terminal block	CH20-HP□-4L	1
			Output	16	NPN	Relay/SSR terminal block	CH20-HP□-A4T1L	1
		NX-OD5256-5	Output	16	PNP	Interface terminal block	CH20-HP□-4L	1
			Output	16	PNP	Relay/SSR terminal block	CH20-HP□-A4T4L	1

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Controller						Terminal block to connect	Proper cable	
Manufacturer	Series	Module name	Input/Output	No. of I/O	Logic		Model name	Quantity
OMRON	NX	NX-MD6121-5	Input	16	-	Interface terminal block	CH20-HP□-4L	1
			Output	16	NPN	Interface terminal block	CH20-HP□-1R	1
			Output	16	NPN	Relay/SSR terminal block	CH20-HP□-C1T4R	1
		NX-MD6256-5	Input	16	-	Interface terminal block	CH20-HP□-4L	1
			Output	16	PNP	Interface terminal block	CH20-HP□-1R	1
			Output	16	PNP	Relay/SSR terminal block	CH20-HP□-C1T4R	1
		NX-ID6142-6	Input	32	-	Interface terminal block	CH40-FP□-4L	1
		NX-OD6121-6	Output	32	NPN	Interface terminal block	CH40-FP□-4L	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-L1T4L	1
RS Automation	X8	X8-XU32, X8-XU32SA	Input	32	-	Interface terminal block	CH40-HP□-4L	1
		X8-YN32, X8-YN32S	Output	32	NPN	Interface terminal block	CH40-HP□-4L	1
			Output	32	NPN	Relay/SSR terminal block	CH40-HP□-F5T1L	1
YOKOGAWA	FA-M3V	F3XD32-3F, F3XD32-4F, F3XD32-5F	Input	32	-	Interface terminal block	CH40-FP□-1R	1
		F3XD64-3F, F3XD64-4F	Input	64	-	Interface terminal block	CH40-FP□-1R	2
		F3YD32-1H, F3YD32-1P	Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
		F3YD32-1H, F3YD32-1P	Output	32	NPN	Relay/SSR terminal block	CH40-FP□-H4M1R	1
		F3YD64-1P	Output	64	NPN	Interface terminal block	CH40-FP□-1R	2
			Output	64	NPN	Relay/SSR terminal block	CH40-FP□-H4M1R	2
		F3YD32-1R	Output	32	PNP	Interface terminal block	CH40-FP□-1R	1
			Output	32	PNP	Relay/SSR terminal block	CH40-FP□-H4M1R	1
		F3YD64-1R	Output	64	PNP	Interface terminal block	CH40-FP□-1R	2
			Output	64	PNP	Relay/SSR terminal block	CH40-FP□-H4M1R	2
		F3WD64-3P, F3WD64-4P	Input	32	-	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Interface terminal block	CH40-FP□-1R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-H4M1R	1
FUJI	MICREX-SX	NP1X3206-W, NP1X3202-W	Input	32	-	Interface terminal block	CH40-FP□-4R	1
		NP1Y32T09P1	Output	32	NPN	Interface terminal block	CH40-FP□-4R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
		NP1Y64T09P1	Output	64	NPN	Interface terminal block	CH40-FP□-4R	1
			Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
		NP1Y32U09P1	Output	32	PNP	Interface terminal block	CH40-FP□-4R	1
			Output	32	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	1
		NP1Y32U09P1	Output	32	PNP	Interface terminal block	CH40-FP□-4R	1
			Output	32	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	1
		NP1Y64U09P1	Output	64	PNP	Interface terminal block	CH40-FP□-4R	1
			Output	64	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	2
		NP1W6406T	Input	32	-	Interface terminal block	CH40-FP□-4R	1
			Output	32	NPN	Interface terminal block	CH40-FP□-4R	1
			Output	32	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	1
		NP1W6406U	Input	32	-	Interface terminal block	CH40-FP□-4R	1
			Output	32	PNP	Interface terminal block	CH40-FP□-4R	1
			Output	32	PNP	Relay/SSR terminal block	CH40-FP□-E1T4R	1
CIMON	CM1	XD32E, XD32F	Input	32	-	Interface terminal block	CH37-DS□-4R	1
		YT32E	Output	32	NPN	Interface terminal block	CH37-DS□-4R	1
			Output	32	NPN	Relay/SSR terminal block	CH37-DS□-F5T1R	1
		YT32F	Output	32	PNP	Interface terminal block	CH37-DS□-4R	1
			Output	32	PNP	Relay/SSR terminal block	CH37-DS□-F5T4R	1
		XD64E	Input	64	-	Interface terminal block	CH40-FP□-1R	2
		YT64E	Output	64	NPN	Interface terminal block	CH40-FP□-1R	2
			Output	64	NPN	Relay/SSR terminal block	CH40-FP□-E1T1R	2
	CM3	CM3-SP32MDT, CM3-SP32EDT	Input	16	NPN	Interface terminal block	CH40-HP□-8X-FS	-
			Output	16	NPN	Interface terminal block		-
		CM3-SP32EDO	Output	32	-	Interface terminal block	CH40-HP□-8L	-
		CM3-SP32EOT	Output	32	NPN	Interface terminal block	CH40-HP□-8L	-
		CM3-SP32EOT	Output	32	NPN	Relay/SSR terminal block	CH40-HP□-E1T4L	-
Autonics	LP	LP-S044-S1D0(1)-C5R	Input	16	-	Interface terminal block	CH20-HP□-4R	1
			Output	16	NPN	Interface terminal block	CH20-HP□-4R	1
			Output	16	NPN	Relay/SSR terminal block	CH20-HP□-C1T1R	1
		LP-S070-T9D6(7)-C5R	Input	16	-	Interface terminal block	CH20-HP□-4R	1
			Output	16	NPN	Interface terminal block	CH20-HP□-4R	1
			Output	16	NPN	Relay/SSR terminal block	CH20-HP□-C1T1R	1
		LP-A070-T9D6(7)-C5R	Input	16	-	Interface terminal block	CH20-HP□-4R	1
			Output	16	NPN	Interface terminal block	CH20-HP□-4R	1
			Output	16	NPN	Relay/SSR terminal block	CH20-HP□-C1T1R	1

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Controller						Terminal block to connect	Proper cable	
Manufacturer	Series	Module name	Input/Output	No. of I/O	Logic		Model name	Quantity
Autonics	LP	LP-A104-T9D8(9)-C6R	Input	32	-	Interface terminal block	CH20-HP□-4R	2
			Output	32	NPN	Interface terminal block	CH20-HP□-4R	2
			Output	32	NPN	Relay/SSR terminal block	CH20-HP□-C1T1R	2
	PMC	PMC-1HS(PI/F side), PMC-2HS(PI/F side)	Input/Output	20	-	Interface terminal block	CH20-HP□-1R	1
		PMC-2HSP(PI/F side), PMC-2HSN(PI/F side)	Input/Output	20	-	Interface terminal block	CH20-HP□-1R	1

[Sensor connector terminal block]

Controller						Terminal block to connect		Proper cable	
Manufacturer	Series	Module name	Input/Output	No. of I/O	Logic	Type	Logic	Model name	Quantity
LS	XGT	XGI-D24A	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
			Input	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T2R	1
		XGI-D24B	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
			Input	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T2R	1
		XGI-D28A	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2
			Input	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T2R	2
		XGI-D28B	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2
			Input	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T2R	2
		XGQ-TR4A	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1
		XGQ-TR4B	Output	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	1
		XGQ-TR8A	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	2
		XGQ-TR8B	Output	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	2
	XGB	XBM-DN32H	Input/Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-D1T1L	1
		XBE-DN32A	Input/Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-D1T1L	1
		XBM-DN16S	Input	8	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T3R	1
			Input	8	PNP	Sensor connector terminal block	PNP	CH20-HP□-D1T6R	1
			Output	8	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T1L	1
		XBM-DN32S	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T3R	1
			Input	16	PNP	Sensor connector terminal block	PNP	CH20-HP□-D1T6R	1
			Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-D1T1L	1
		XBE-DC32A	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-E1T3L	1
			Input	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-E1T2L	1
		XBE-TN32A	Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-E1T1L	1
		XBE-TP32A	Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-E1T1L	1
MITSUBISHI	iQ-R	RX41C4, RX41C6HS	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1
		RY41NT2P, RY41NT2H	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1
		RY41PT1P, RY41PT2H	Output	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	1
		RX42C4	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	2
		RY42NT2P	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	2
		RY42PT1P	Output	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	2
		RH42C4NT2P	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1
			Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1
	QnU	QX41, QX42-S1/S2	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1
		QH42P, QX41Y41P	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1
			Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1
		QX42, QX42-S1	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	2
		QX82	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	2
		QY41P	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1
		QY42P	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	2
		QY82P	Output	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	2

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Controller						Terminal block to connect		Proper cable	
Manufacturer	Series	Module name	Input/Output	No. of I/O	Logic	Type	Logic	Model name	Quantity
MITSUBISHI	QnU	QX81, QX81-S2	Input	32	PNP	Sensor connector terminal block	PNP	CH37-DP□-B6T2R	1
		QY81P	Output	32	PNP	Sensor connector terminal block	PNP	CH37-DP□-B6T1R	1
OMRON	CJ/NJ	CJ1W-ID232, CJ1W-ID233	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM3L	1
			Input	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM2L	1
		CJ1W-ID262	Input1	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-L9M3R	1
			Input1	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-L9M6R	1
			Input2	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM3L	1
			Input2	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM2L	1
		CJ1W-OD233, CJ1W-OD234	Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-ICM1L	1
		CJ1W-OD263	Output1	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-L9M4R	1
			Output2	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-ICM1L	1
		CJ1W-OD232	Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-ICM1L	1
		CJ1W-OD262	Output1	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-L9M4R	1
			Output2	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-ICM1L	1
		CJ1W-MD263	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM3L	1
			Input	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM2L	1
			Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-L9M4R	1
		CJ1W-MD233	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-A4T5L	1
					PNP	Sensor connector terminal block	PNP	CH20-HP□-A4T2L	1
			Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T4R	1
		CJ1W-MD232	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-A4T5L	1
					PNP	Sensor connector terminal block	PNP	CH20-HP□-A4T2L	1
			Output	16	PNP	Sensor connector terminal block	PNP	CH20-HP□-C1T1R	1
		CJ1W-ID231	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-X1T3L	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-X1T6L	1
		CJ1W-ID261	Input1	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-W4T5R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-W4T2R	1
			Input2	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-X1T3L	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-X1T6L	1
		CJ1W-OD231	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-L1T4L	1
		CJ1W-OD261	Output1	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-I4T1R	1
			Output2	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-L1T4L	1
		CJ1W-MD261	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-X1T3L	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-X1T6L	1
			Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-I4T1R	1
	NX	NX-ID6142-5	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM5L	1
					PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM2L	1
		NX-OD6121-5	Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-HCM1L	1
		NX-OD6256-5	Output	32	PNP	Sensor connector terminal block	PNP	CH40-HP□-HCM1L	1
		NX-ID5142-5	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-A4T5L	1
					PNP	Sensor connector terminal block	PNP	CH20-HP□-A4T2L	1
		NX-OD5121-5	Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-A4T1L	1
		NX-OD5256-5	Output	16	PNP	Sensor connector terminal block	PNP	CH20-HP□-A4T1L	1
		NX-MD6121-5	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-A4T5L	1
					PNP	Sensor connector terminal block	PNP	CH20-HP□-A4T2L	1
			Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T4R	1
		NX-MD6256-5	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-A4T5L	1
					PNP	Sensor connector terminal block	PNP	CH20-HP□-A4T2L	1
			Output	16	PNP	Sensor connector terminal block	PNP	CH20-HP□-C1T1R	1
RS Automation	X8	X8-XU32, X8-XU32SA	Input	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-F5T3L	1
					PNP	Sensor connector terminal block	PNP	CH40-HP□-F5T2L	1
		X8-YN32, X8-YN32S	Output	32	NPN	Sensor connector terminal block	NPN	CH40-HP□-F5T1L	1
YOKOGAWA	FA-M3V	F3XD32-3F, F3XD32-4F, F3XD32-5F	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-W4T5R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-W4T2R	1
		F3XD64-3F, F3XD64-4F	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-W4T5R	2
					PNP	Sensor connector terminal block	PNP	CH40-FP□-W4T2R	2
		F3YD32-1H, F3YD32-1P	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-I4M1R	1
		F3YD64-1P	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-I4M1R	2
		F3YD32-1R	Output	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-I4M4R	1

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Controller						Terminal block to connect		Proper cable	
Manufacturer	Series	Module name	Input/ Output	No. of I/O	Logic	Type	Logic	Model name	Quantity
YOKOGAWA	FA-M3V	F3YD64-1R	Output	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-I4M4R	2
		F3WD64-3P, F3WD64-4P	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-W4T5R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-W4T2R	1
			Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-I4M1R	1
FUJI	MICREX-SX	NP1X3206-W, NP1X3202-W	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1
		NP1Y32T09P1	Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1
		NP1Y64T09P1	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	2
		NP1Y32U09P1	Output	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	1
		NP1Y64U09P1	Output	64	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	2
		NP1W6406T	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1
			Output	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	1
		NP1W6406U	Input	32	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	1
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	1
			Output	32	PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T1R	1
CIMON	CM1	XD64E	Input	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T3R	2
					PNP	Sensor connector terminal block	PNP	CH40-FP□-E1T6R	2
		YT64E	Output	64	NPN	Sensor connector terminal block	NPN	CH40-FP□-E1T1R	2
Autonics	LP	LP-S044-S1D0(1)-C5R	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T5R	1
			Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T1R	1
		LP-S070-T9D6(7)-C5R	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T5R	1
			Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T1R	1
		LP-A070-T9D6(7)-C5R	Input	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T5R	1
			Output	16	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T1R	1
		LP-A104-T9D8(9)-C6R	Input	32	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T5R	1
			Output	32	NPN	Sensor connector terminal block	NPN	CH20-HP□-C1T1R	1

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[SERVO]

Controller				Connector	Terminal block to connect	Proper cable	
Manufacturer	Series	Module name	No. of I/O			Model name	Quantity
MITSUBISHI	J3	MR-J3-A	50	CN1	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
		MR-J3-B(-□)	20	CN3	Interface terminal block	CH20-MP□-8R	1
		MR-J3-D01	20	CN20	Interface terminal block	CH20-MP□-8R	1
			26	CN6	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
			50	CN10	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
		MR-J3-T	20	CN20	Interface terminal block	CH20-MP□-8R	1
			26	CN6	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
			50	CM10	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
		MR-J3W-B	26	CN3	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
	J4	MR-J4-B(-RJ)	20	CN3	Interface terminal block	CH20-MP□-8R	1
		MR-J4W2-B	26	CN3	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		MR-J4W2-0303B6	26	CN3	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		MR-J4W3-B	26	CN3	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		MR-J4-□A(-RJ)	50	CN1	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
		MR-J4-03A6(-RJ)	50	CN1	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
YASKAWA	Σ-7	SGD7S-□□□□10A	26	CN1	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		SGD7S-□□□□20A	26	CN1	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		SGD7S-□□□□00A	50	CN1	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
	Σ-5	SGDV	50	CN1	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
Panasonic	A6	A6NE	26	X4	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		A6NF	26	X4	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		A6BE	26	X4	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		A6BF	26	X4	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		A6SE	50	X4	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
		A6SG	50	X4	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
		A6SF	50	X4	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
	A5	MINAS A5 II N	26	X4	Interface terminal block	CH26-MP□-8R, CH26-MQ□-8R	1
		MINAS A5	50	X4	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1
		MINAS A5 II	50	X4	Interface terminal block	CH50-MP□-8R, CH50-MQ□-8R	1

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