

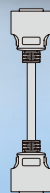
Spring Clamp Junction Terminal Blocks for Mitsubishi Electric AC Servo Systems

MITSUBISHI SERVO AMPLIFIERS & MOTORS

MELSERVO



**For network-based
servo amplifiers**



**For general-purpose
interface servo amplifiers**



FLS/RLS/DOG
signal-specialized
network amplifier
terminal block



Junction terminal block
for servo motors with
brakes



Network amplifier
junction terminal block



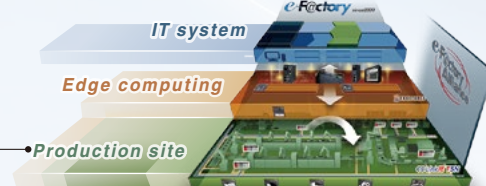
General-purpose interface amplifier
junction terminal block

Recommended products for MELSERVO-J5 series
**Special purpose junction terminal blocks
and cables for easy and reliable wiring**

FAgoods Products **eFactory**



wire-saving and
process time reduction



Source: Mitsubishi Electric Corporation

Are you searching for solutions to these kinds of problems?



Issue

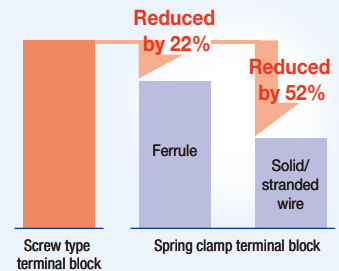
Productivity improvement



Solution

Significant reduction in wiring time thanks to spring clamp terminals

* Calculated by comparing the time taken by non-experts with two years of experience (Data sourced from Japan Switchboard & control system Industries Association)



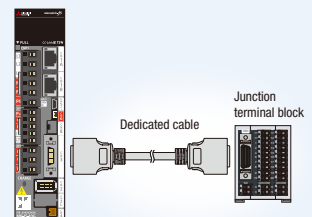
Issue

Time and quality problems for making cables



Solution

Easy and reliable wiring using a junction terminal block and a cable



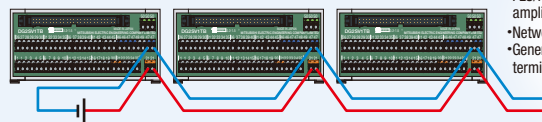
Issue

Power supply branching with spring clamp terminals



Solution

Connecting the power supply in series across branching common terminal blocks



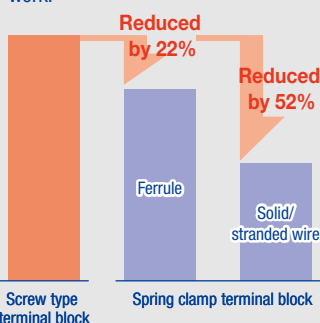
- FLS/RLS/DOG signal-specialized network amplifier terminal block
- Network amplifier junction terminal block
- General-purpose interface amplifier junction terminal block

For details, refer to the relevant manual.

Benefits of the spring clamp type

Significant reduction in wiring time

Significant reduction in man-hours required for screw tightening. Wires can be pushed into terminals without a screwdriver. Using solid or stranded wires further reduces wiring work.



* Calculated by comparing the time taken by non-experts with two years of experience (Data sourced from Japan Switchboard & control system Industries Association)

Reliable connections

Spring clamp type connection eliminates the risk of loosening of screws due to vibrations, impacts, or long-time use, and does not require screw-tightening skill.

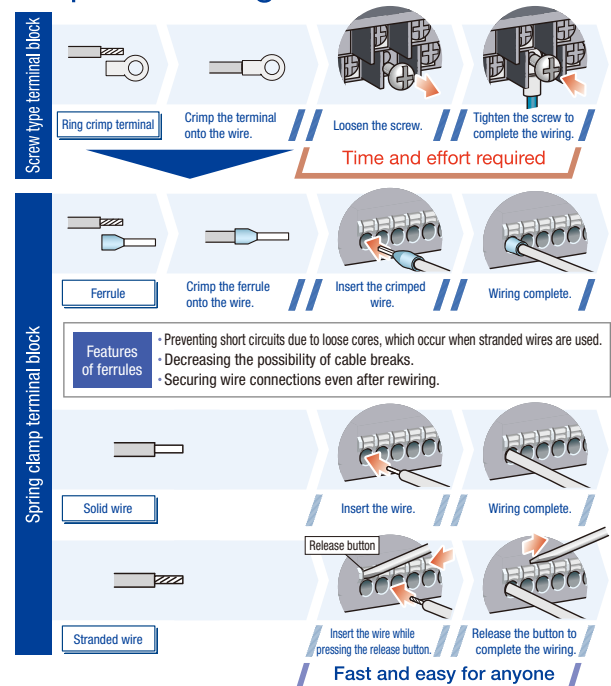
Maintenance-free

Screw tightening is not required at the time of delivery or inspection of the control panel or the mechanical system.

Space-saving

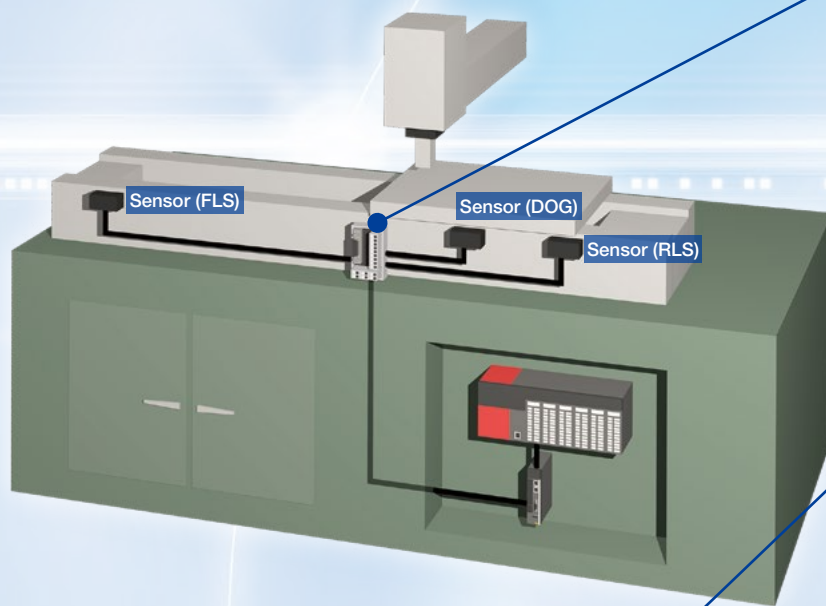
The installation space can be reduced compared to the space required for the screw type.

Steps for wiring

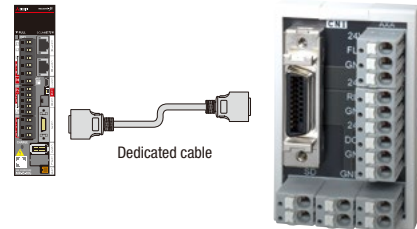


* The release button can be pressed using a tool with a thin tip such as a flathead screwdriver.

Select the spring clamp terminal block best suited for your application.



Easy to wire stroke limit and proximity dog signals

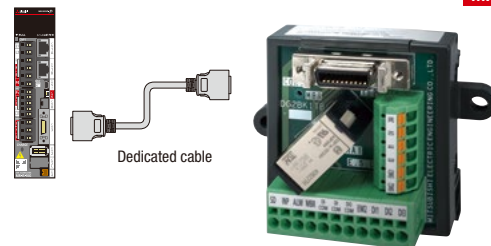


FLS/RLS/DOG signal-specialized network amplifier terminal block

MR-J5-G
MR-J5W-G
MR-J5-B
MR-J5W-B
MR-J4-B
MR-J4-GF
MR-J4W-B

P. 4

Reduces the space required by brake circuits for servo motors with brakes

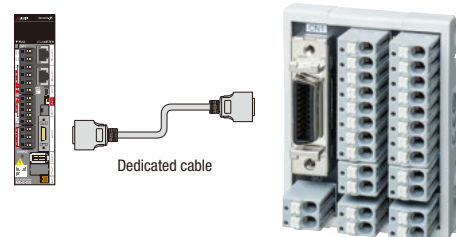


Junction terminal block for servo motors with brakes

MR-J5-G
MR-J5-B
MR-J4-B
MR-J4-GF

P. 5

Easy to wire external signals thanks to spring clamp terminals

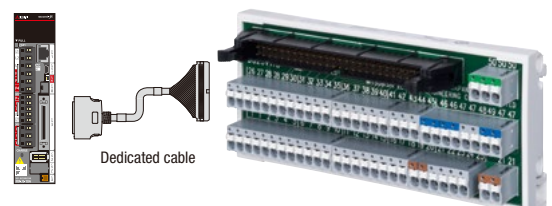


Network amplifier junction terminal block

MR-J5-G
MR-J5-B
MR-J4-B
MR-J4-GF

P. 6

Easy to wire external signals thanks to spring clamp terminals



General-purpose interface amplifier junction terminal block

MR-J5-A
MR-J4-A

P. 6

Easy to wire stroke limit and proximity dog signals

FLS/RLS/DOG signal-specialized network amplifier terminal block

DG2SV2TB / DG2SV2TB2 / DG2SV2TB3

(for 1 axis)

(for 2 axes)

(for 3 axes)

MR-J5-G

MR-J5W-G

MR-J5-B

MR-J5W-B

MR-J4-B

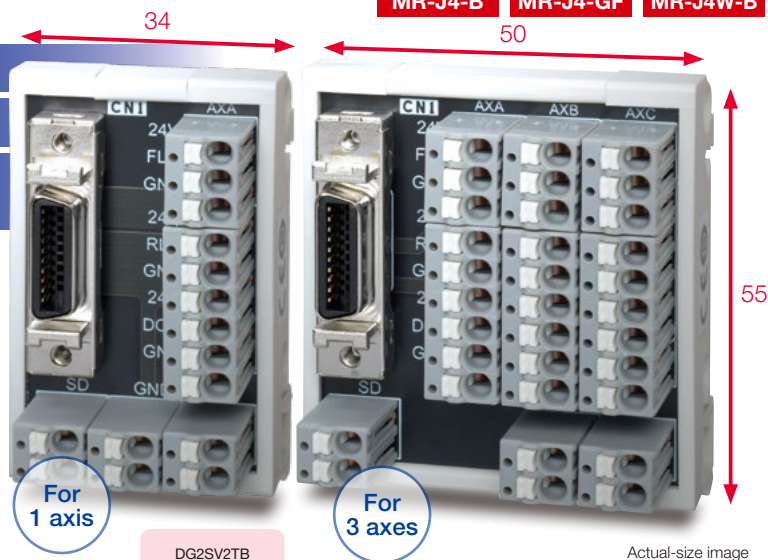
MR-J4-GF

MR-J4W-B

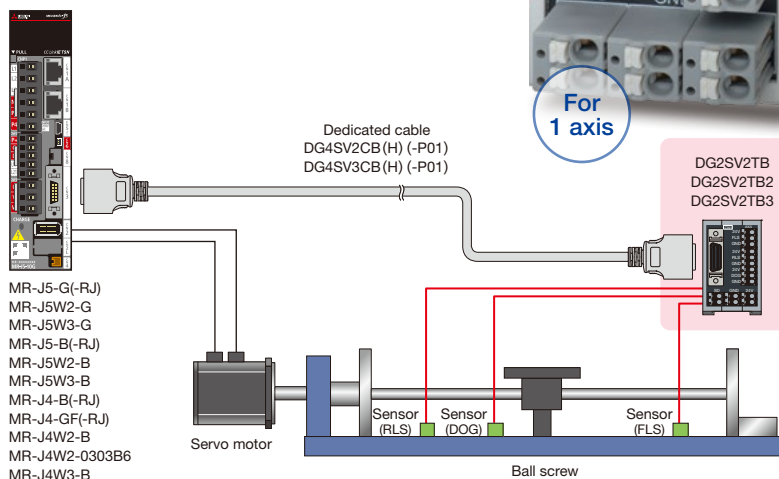
Common terminals make wiring neat and compact.

Signal name markings prevent erroneous wiring.

Using a long length, high flex life cable allows installation in the mechanical section or on movable parts.



Connection diagram



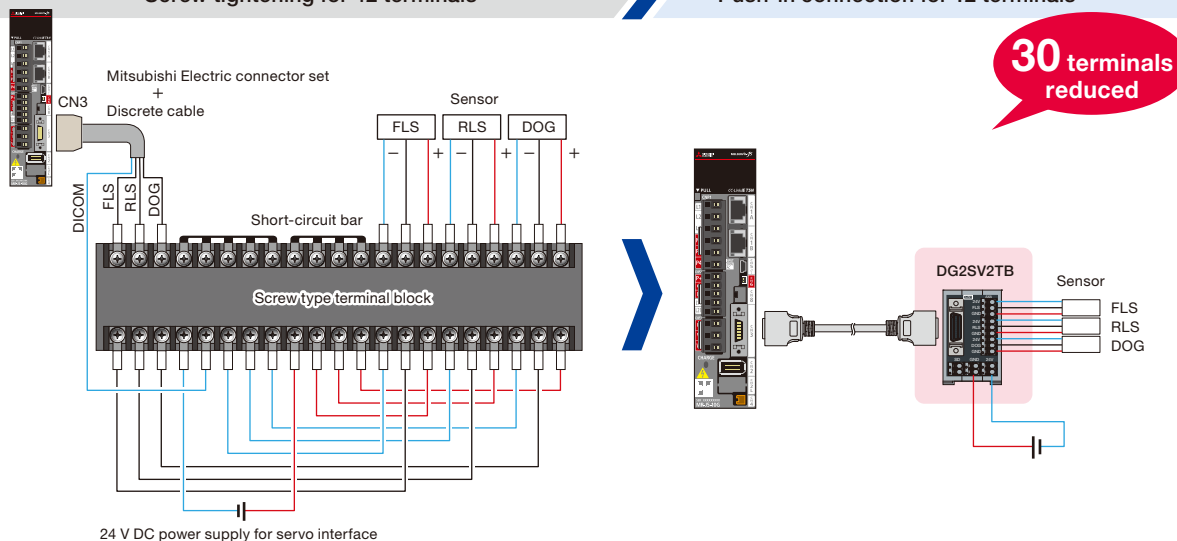
Example of reduction in wiring work

Before

After

Screw tightening for 42 terminals

Push-in connection for 12 terminals



For information on the combination of equipment, refer to page 7.

Reduces the space required by brake circuits for servo motors with brakes

Junction terminal block for servo motors with brakes

DG2BK1TB * (-D): Models for DIN rail installation

MR-J5-G

MR-J5-B

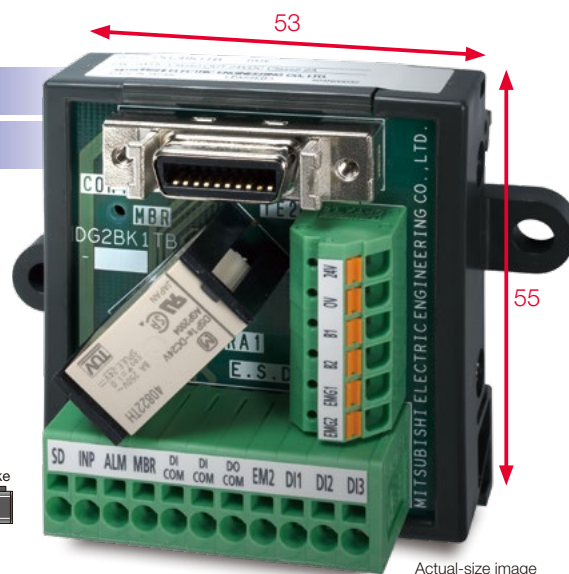
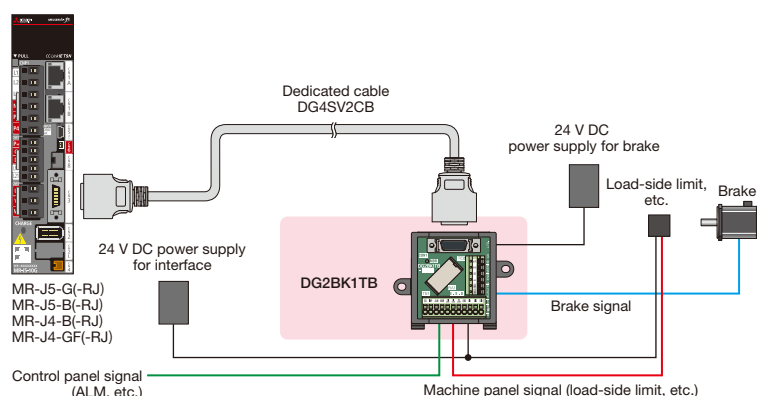
MR-J4-B

MR-J4-GF

A brake sequence circuit (Mitsubishi Electric recommended) is built in.

Signal name markings prevent erroneous wiring.

Connection diagram



The brake sequence circuit that is built into this junction terminal block is recommended for servo amplifiers and contains the necessary relays, which optimally reduces the installation area and wiring work.

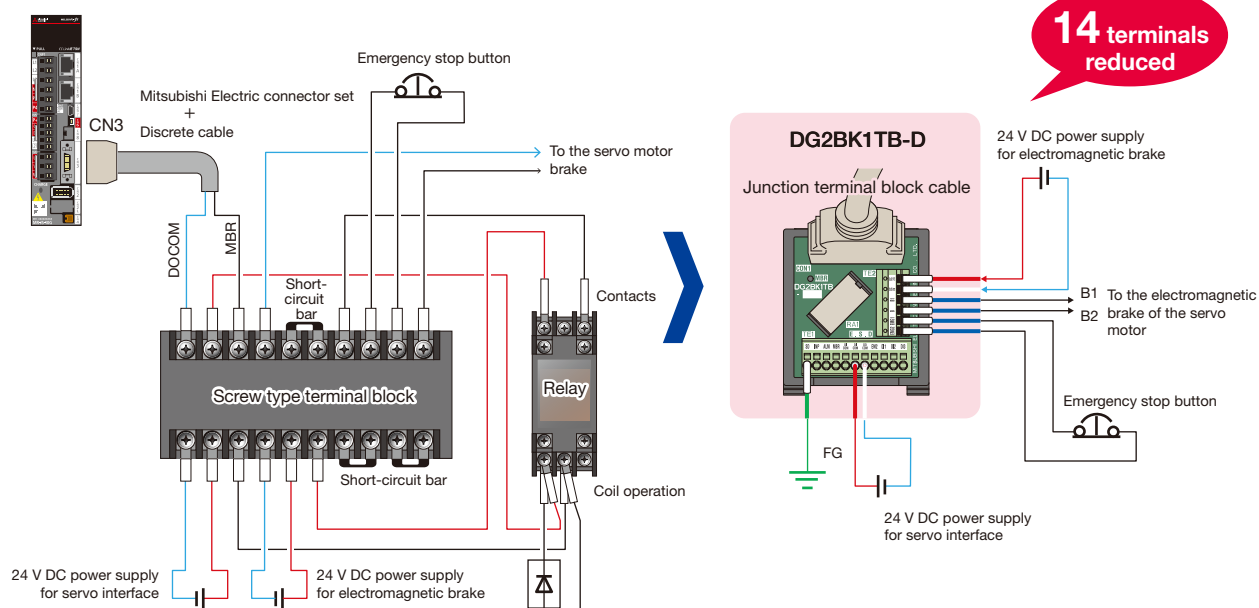
Example of reduction in wiring work

Before

After

Screw tightening for 24 terminals

Push-in connection for 10 terminals



For information on the combination of equipment, refer to page 7.

Easy to wire external signals thanks to spring clamp terminals

For customers using fabricated cables (soldered)

For customers using screw type junction terminal blocks

Eliminate cable fabrication time and improve connection quality with our dedicated cable.

Spring clamp terminals reduce wiring time and save space.

Network amplifier junction terminal block DG2SV3TB

A standard connector cable makes reliable wiring connections.

Spring clamp terminals make wiring easier.

Connection diagram



MR-J5-G (-RJ)
MR-J5-B (-RJ)
MR-J4-B (-RJ)
MR-J4-GF (-RJ)

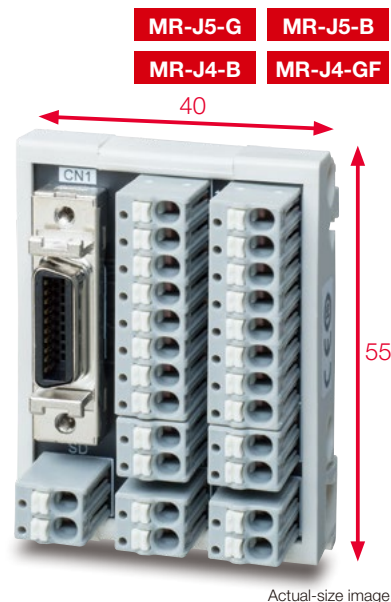
Dedicated cable
DG4SV2CB

DG2SV3TB



POINT

- Easy connection in a single step
- No soldering required for connectors
- Push-in connection reduces wiring time
- Vibration resistance



For information on the combination of equipment, refer to page 7.

General-purpose interface amplifier junction terminal block DG2SV1TB

MR-J5-A MR-J4-A

The installation space is reduced by about 40% compared to that of the screw type.

Connection diagram



MR-J5-A(-RJ)
MR-J4-A(-RJ)
MR-J4-03A6(-RJ)
MR-J4-DU_A(-RJ)
MR-D01 (Extension I/O unit)

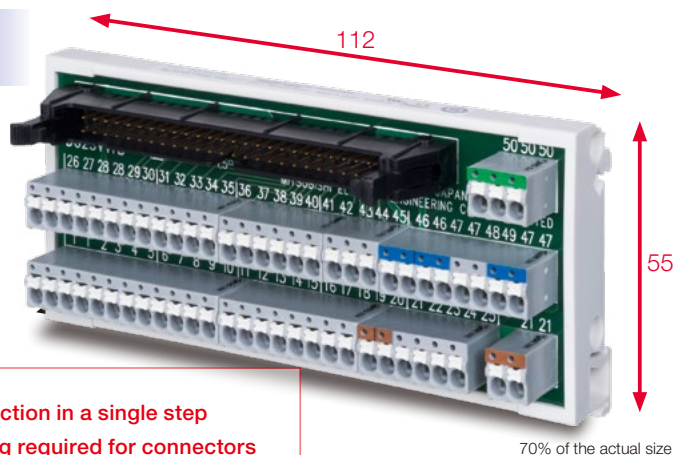
Dedicated cable
DG4SV1CB

DG2SV1TB



POINT

- Easy connection in a single step
- No soldering required for connectors
- Push-in connection reduces wiring time
- Vibration resistance



For information on the combination of equipment, refer to page 7.

Product list

▼ FLS/RLS/DOG signal-specialized network amplifier terminal block

Connected servo amplifier	Specifications			Model
MR-J5-G(-RJ) MR-J5-B(-RJ) MR-J4-B(-RJ) MR-J4-GF(-RJ)	FLS/RLS/DOG signal-specialized network amplifier terminal block		1 axis	DG2SV2TB
	<ul style="list-style-type: none">Sink/source common type, dedicated for FLS/RLS/DOG signalsExternal power supply voltage: 24 V DC ±10%Maximum usable current: 0.5 A for signal / 6 A for common line			
	Network amplifier connection cable	Sink	Length: 0.5m	DG4SV2CB05
			Length: 1m	DG4SV2CB10
			Length: 5m	DG4SV2CB50
		Sink, long bending life	Length: 5m	DG4SV2CB50H
			Length: 10m	DG4SV2CB100H
		Source	Length: 0.5m	DG4SV2CB05-P01
			Length: 1m	DG4SV2CB10-P01
			Length: 5m	DG4SV2CB50-P01
		Source, long bending life	Length: 5m	DG4SV2CB50H-P01
			Length: 10m	DG4SV2CB100H-P01
MR-J5W2-G MR-J5W3-G MR-J5W2-B MR-J5W3-B MR-J4W2-B MR-J4W2-0303B6 MR-J4W3-B	FLS/RLS/DOG signal-specialized network amplifier terminal block		2-axis	DG2SV2TB2
	<ul style="list-style-type: none">Sink/source common type, dedicated for FLS/RLS/DOG signalsExternal power supply voltage: 24 V DC ±10%Maximum usable current: 0.5 A for signal / 6 A for common line		3-axis	DG2SV2TB3
	FLS/RLS/DOG signal terminal block connection cable	Sink	Length: 0.5 m	DG4SV3CB05
			Length: 1 m	DG4SV3CB10
			Length: 5 m	DG4SV3CB50
		Sink, long bending life	Length: 5 m	DG4SV3CB50H
			Length: 10 m	DG4SV3CB100H
		Source	Length: 0.5 m	DG4SV3CB05-P01
			Length: 1 m	DG4SV3CB10-P01
			Length: 5 m	DG4SV3CB50-P01
		Source, long bending life	Length: 5 m	DG4SV3CB50H-P01
			Length: 10 m	DG4SV3CB100H-P01

▼ Junction terminal block for servo motors with brakes

Connected servo amplifier	Specifications			Model
MR-J5-G(-RJ) MR-J5-B(-RJ) MR-J4-B(-RJ) MR-J4-GF(-RJ)	Junction terminal block for servo motors with brakes		For screw / DIN rail installation	DG2BK1TB
	<ul style="list-style-type: none"> Sink/source common type Applicable servo motor capacity: 50 W to 22 kW External power supply voltage 			
	For servo amplifier interface: 24 V DC $\pm 10\%$, 0.3 A (max) For electromagnetic brake: 24 V DC 0/-10%, 1.43 A (max) Relay: DSP1a-DC24V (Panasonic Corporation)		For DIN rail installation	DG2BK1TB-D
	Network amplifier connection cable		Length: 0.5 m	DG4SV2CB05
			Length: 1 m	DG4SV2CB10
			Length: 5 m	DG4SV2CB50

▼ Network amplifier junction terminal block

Connected servo amplifier	Specifications			Model
MR-J5-G(-RJ) MR-J5-B(-RJ) MR-J4-B(-RJ) MR-J4-GF(-RJ)	Network amplifier junction terminal block			DG2SV3TB
	<ul style="list-style-type: none"> Sink/source common type External power supply voltage: 24 V DC $\pm 10\%$ Maximum usable current: 0.5 A for signal / 6 A for common line 			
	Network amplifier connection cable		Length: 0.5 m	DG4SV2CB05
			Length: 1 m	DG4SV2CB10
			Length: 5 m	DG4SV2CB50

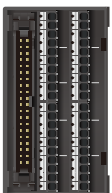
▼ General-purpose interface amplifier junction terminal block

Connected servo amplifier	Specifications			Model
MR-J5-A(-RJ) MR-J4-A(-RJ) MR-J4-03A6(-RJ) MR-J4-DU_A(-RJ) MR-D01 (Extension I/O unit)	General-purpose interface amplifier junction terminal block			DG2SV1TB
	<ul style="list-style-type: none"> Sink/source common type External power supply voltage: 24 V DC $\pm 10\%$, current capacity 1 A(max) 			
	General-purpose interface amplifier connection cable		Length: 0.5 m	DG4SV1CB05
			Length: 1 m	DG4SV1CB10

Spring clamp terminal blocks for programmable controllers


Junction terminal block

32 points



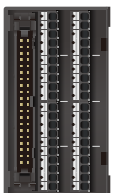
FA1-TE2SD32XY
Installation direction:
Vertical horizontal

16 points




FA1-TE2SV16XY
Installation direction:
Vertical

40 points



FA1-TE2SD40P
Installation direction:
Vertical horizontal

20 points




FA1-TE2SV20P
Installation direction:
Vertical

+

Common terminal block

20 points + 20 points



FA1-TE2SV40EX
Installation direction:
Vertical

Mitsubishi Electric

MELSEC iQ-R series	Input/output/I/O combined
MELSEC iQ-F series	
MELSEC-Q series	
MELSEC-L series	
MELSEC-F series	
CC-Link family	

Mitsubishi Electric

MELSEC iQ-R series	Input/output/ I/O combined/analog/ high-speed counter
MELSEC iQ-F series	
MELSEC-Q series	
MELSEC-L series	
MELSEC-F series	
CC-Link family	Input/output/I/O combined
CNC (computerized numerical controller)*	Remote I/O

OMRON Corporation*

CJ1/CS1/DRT2/GT1/SRT2	Input/output
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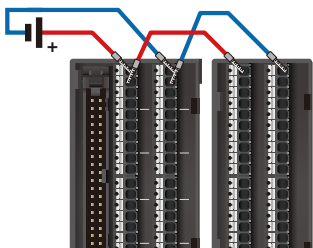
Yokogawa Electric Corporation*

FA-M3	Input/output
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FUJI ELECTRIC CO., LTD.*

MICREX-SX	Input/output
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*: FA1-TE2SD40P only



Installing the common terminal block next to the junction terminal block allows wiring common terminals easily.

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