

SSCNET III/H Compatible
MR-MV200 Optical Hub Unit

October 2014

New Product Release

SV1410-1E

The SSCNET III/H compatible network hub unit is newly available



The MR-MV200 optical hub unit allows a more flexible wiring arrangement while increasing ease of maintenance.

Distribution of SSCNET III/H compatible servo amplifiers is achieved

- With this unit connected in the system, an ideal wiring arrangement for your application can be achieved by flexibly combining start/line/cascade topologies, etc.
- The connect/disconnect function of the Motion controller allows you to power off only the desired servo amplifiers.
- This unit is introduced just by making some changes in wiring without making any new settings.
- Longer-distance wiring becomes available by using this optical hub unit.



Mitsubishi has invented an original servo system synchronous network "SSCNET III/H" providing high response and reliability. The SSCNET III/H is an optical network that achieves smooth, high-response and high-accuracy operation.

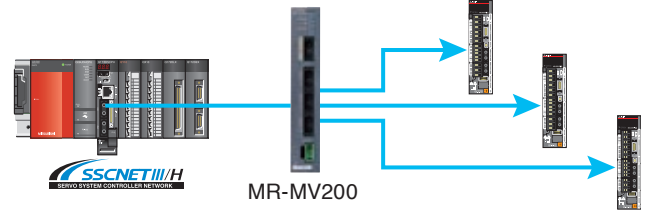
Branching a single SSCNET III/H communication line in three separate directions

The MR-MV200 can branch a single SSCNET III/H network line in three separate directions. This enables distribution of the high-performance MELSERVO-J4 series servo amplifiers with flexible wiring arrangement.

[A system without the MR-MV200]

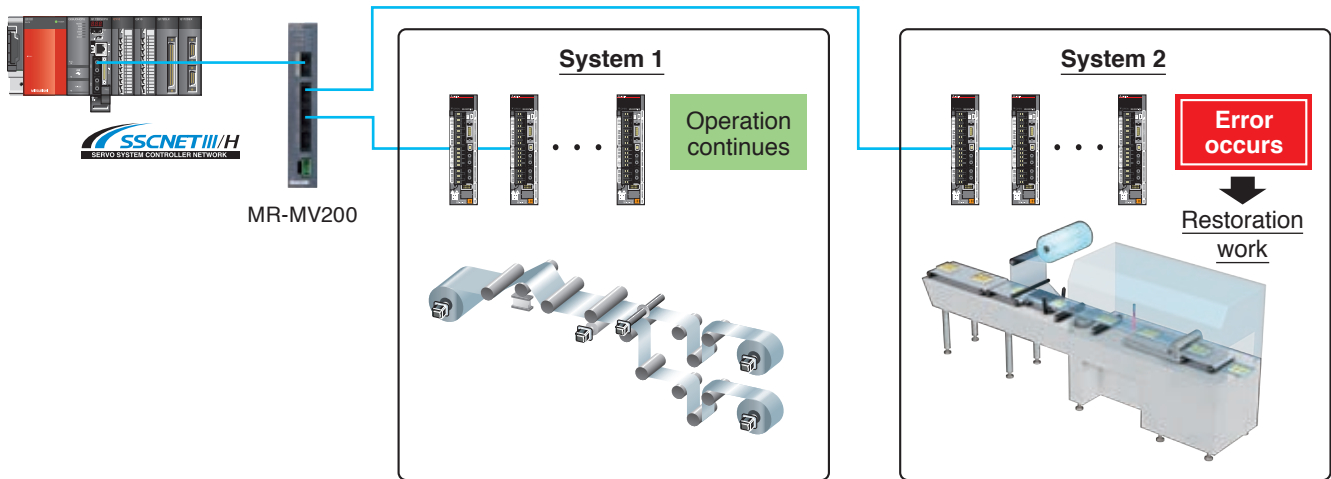


[A system with the MR-MV200]

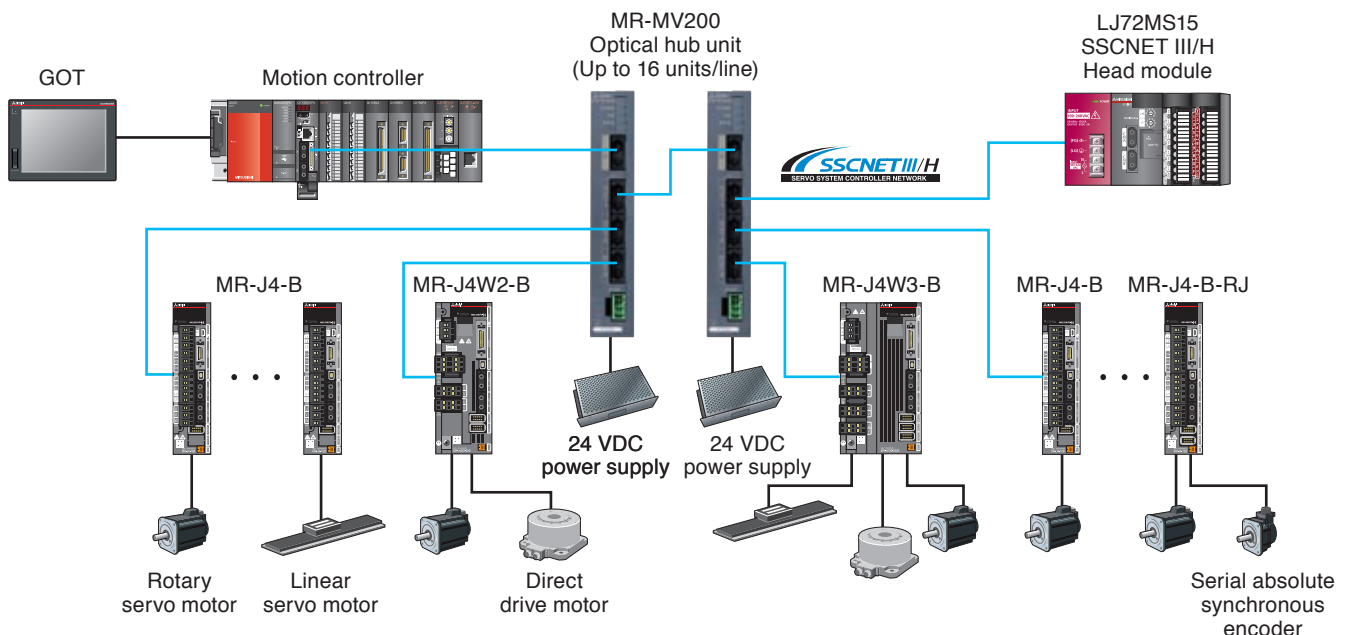


Reduced system restoration time by powering off only the desired servo amplifiers

When servo amplifiers are distributed using the MR-MV200, the servo amplifiers can be turned OFF independently without affecting other servo amplifiers connected to other branched lines. This leads to significant reduction in restoration time by turning OFF only the amplifiers with errors.



System configuration



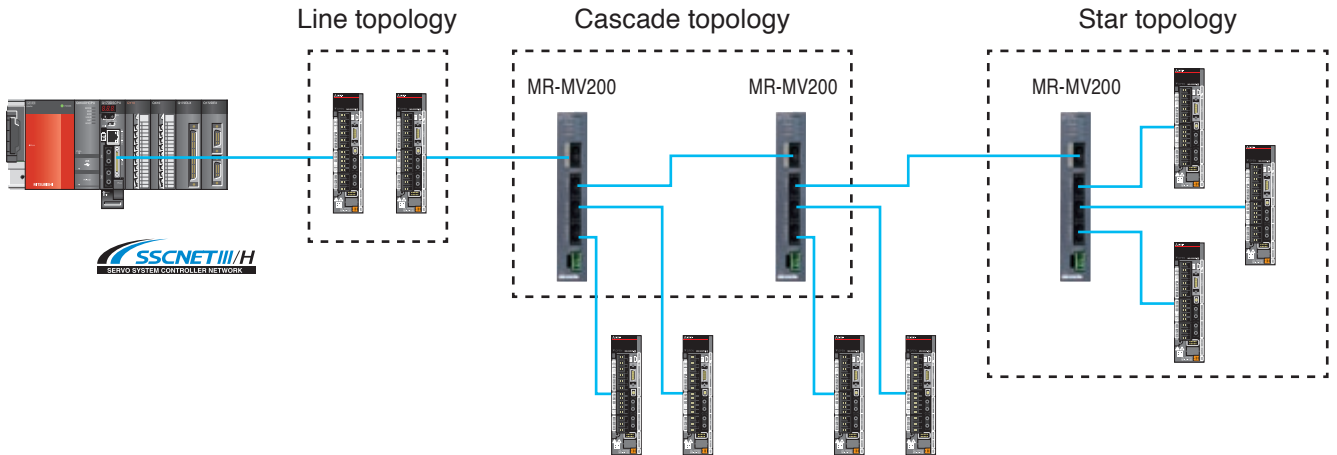
Topology

The optical hub unit allows more flexible topologies, such as star, line, cascade topologies, or the combination of these.

Topology	Description
Star topology	Communication lines radially spread from one connection point. One MR-MV200 branches SSCNET III/H line in three separate directions.
Line topology	Servo amplifiers can be connected between a controller and the optical hub unit, or the optical hub units. This topology is used for servo amplifiers not distributed.
Cascade topology	Hubs are hierarchically connected. More stations can be distributed by using the multiple optical hub units.

●Topology examples

Various topologies can be combined, so you can configure an ideal wiring arrangement for your application.



Component

Use the followings for a system using the optical hub unit.

Be sure to check the Motion controller operating system software version when introducing the optical hub unit in an existing system.

●Motion controller

(1) CPU module

Model	Details	Remarks
Q173DSCPU	Up to 32 axes	No restriction regarding serial number
Q172DSCPU	Up to 16 axes	No restriction regarding serial number
Q170MSCPU(-S1)	Up to 16 axes	No restriction regarding serial number

(2) Operating system software

Application	Q173DSCPU	Q172DSCPU	Q170MSCPU(-S1)	Version
Conveyor assembly use (SV13)	SW8DNC-SV13QJ	SW8DNC-SV13QL	SW8DNC-SV13QN	Ver.00F or later
Automatic machinery use (SV22)	SW8DNC-SV22QJ	SW8DNC-SV22QL	SW8DNC-SV22QN	

(3) Engineering environment

MELSOFT MT Works2 supports a system using the optical hub unit without any restriction.

Be sure to confirm that "SSCNET III/H" is selected in the system setting when introducing the optical hub unit.

●Servo amplifier

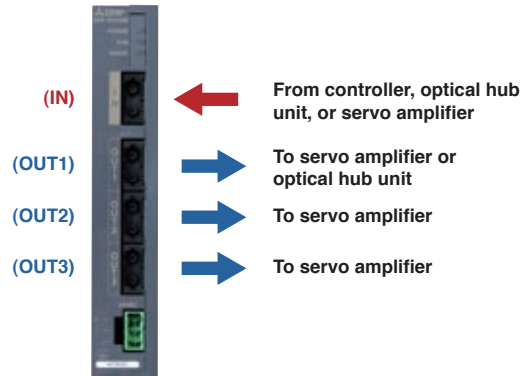
Model	Description	Remarks
MR-J4-B(-RJ)	SSCNET III/H compatible servo amplifier	No restriction regarding serial number
MR-J4W2-B	SSCNET III/H compatible 2-axis servo amplifier	No restriction regarding serial number
MR-J4W3-B	SSCNET III/H compatible 3-axis servo amplifier	No restriction regarding serial number

(Note): The MR-MV200 cannot be connected to a system in "J3 compatibility mode". Make sure to use it in a system in "J4 mode".

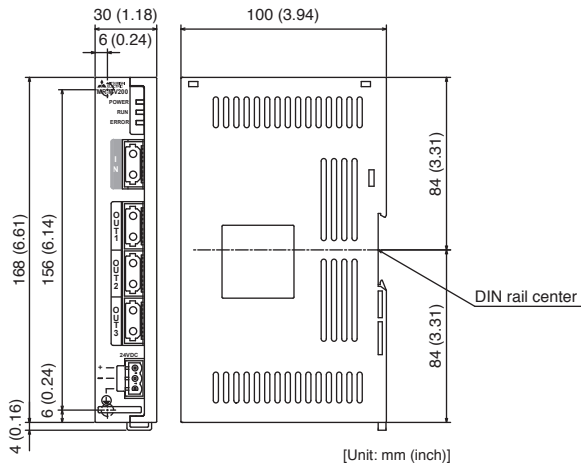
Specifications

Item	Description	
Input power supply	Input voltage [V]	21.6 to 26.4 VDC (24 VDC±10%)
	Input current [A]	0.2
Consumption power [W]	4.8	
Mass [kg]	0.2	
Mounting method	Directly mounted to the control panel or with DIN rail	
Cable length [m(ft.)]	Up to 100 (328.08)	
Number of optical hub units	Up to 16 units/line	
Number of servo amplifiers ^(Note-1)	Up to 16 axes/line	
Exterior dimensions [mm(inch)]	168 (6.61) (H)×30 (1.18) (W)×100 (3.94) (D)	

(Note-1): MR-J4-B, MR-J4W2-B, and MR-J4W3-B are 1-axis, 2-axis and 3-axis amplifiers, respectively.



Exterior dimensions



Product list

Name	Model	Description	Standard
Optical hub unit	MR-MV200	Three branches/unit, DC power supply connector enclosed	CE, UL, KC

Safety Warning

To ensure proper use of the products listed in this catalog, please be sure to read the instruction manual prior to use.

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS: 1-14, YADA-MINAMI 5, HIGASHI-KU, NAGOYA, JAPAN