Mitsubishi Electric AC Servo System
Sales and Service

Addition of Some Overload Protection Characteristics for AC Servo Amplifiers

Thank you for your continued patronage of the Mitsubishi Electric AC servo system.
In preparation for the certification of UL 61800-5-1 Edition 2, overload protection characteristics for this standard will be added to the current overload protection characteristics for AC servo amplifiers.

1. **Target Model**
   MR-J4-B-LL

2. **Reason for the Change**
   To comply with UL 61800-5-1 Edition 2

3. **Details of the Change**
   In software version W0, an overload protection curve (thermal overload 6) for the standard mentioned above will be added to the current overload protection characteristics.
   This addition will be made for the update from software version B9 to version W0.
   Along with the addition of the overload protection curve, an alarm of [AL. 50.7 Thermal overload error 6 during operation], a warning of [AL. E1.9 Thermal overload warning 6 during operation], and a parameter of [Pr. PE09 Thermal overload warning level 6 during operation] will be added.
   Refer to the following pages for details of the change.
   When [AL. 50.7] occurs, please contact your local sales office.

4. **Certification of UL 61800-5-1 Edition 2**
   Certification of UL 61800-5-1 Edition 2 is scheduled in or after 2025.

5. **Compliance with UL 61800-5-1**
   UL 61800-5-1 Edition 2 will be enforced from January 2026.
   Products shipped in or before December 2025 can be used continuously as UL 61800-5-1 compliant products.

6. **Schedule**
   This change will be made sequentially from the shipment of October 2025.
   There may be cases where both the former and new products exist in the distribution stage.

7. **Overload Protection Characteristics**
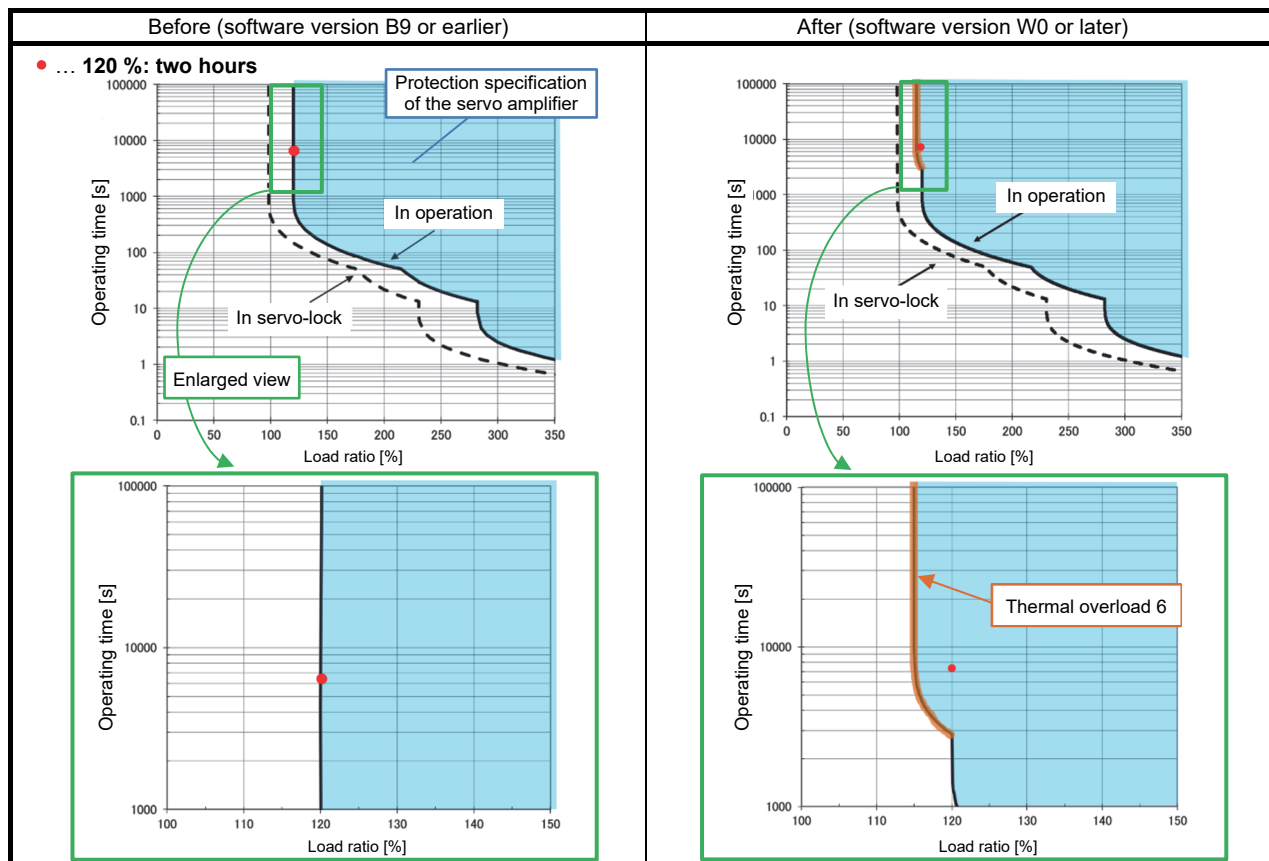   Refer to the following pages for the overload protection characteristics.
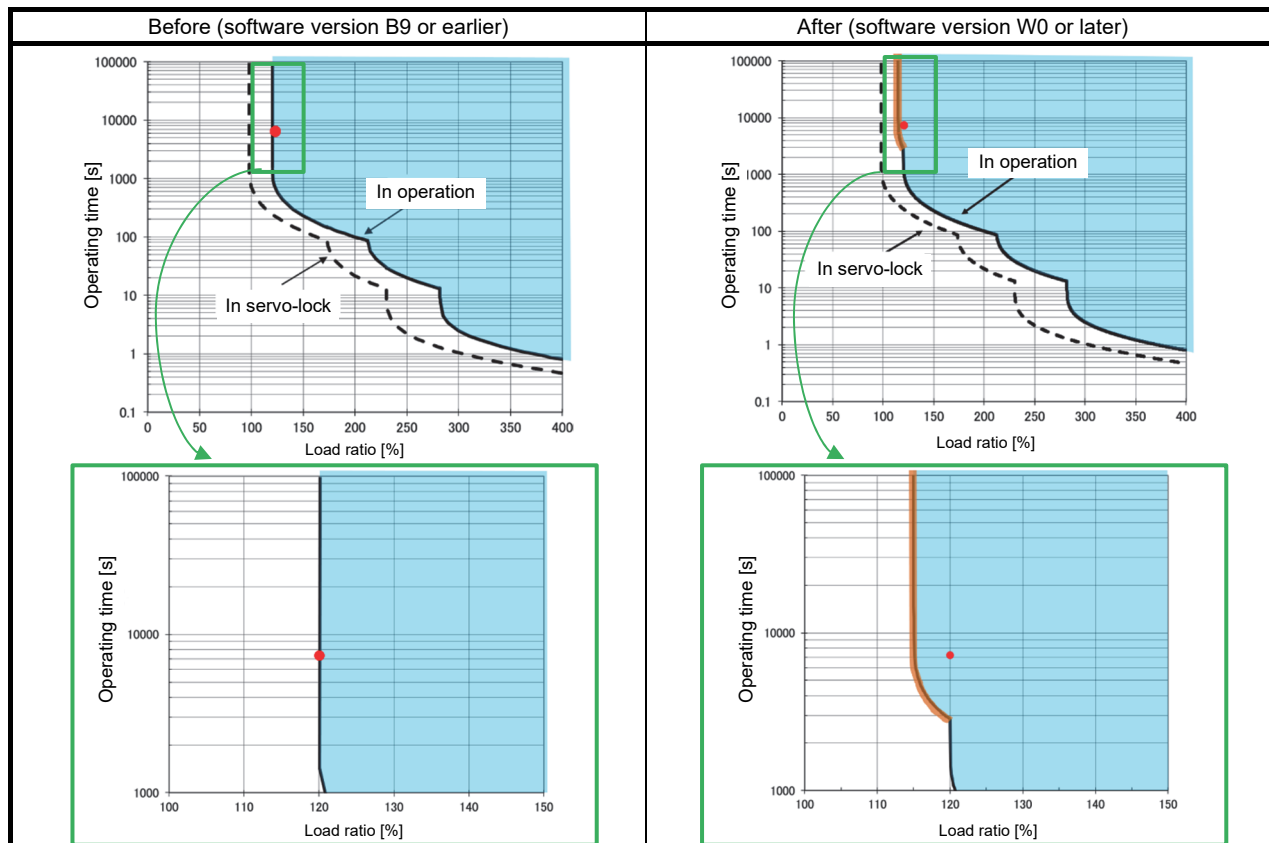
Figure 1. Characteristic a
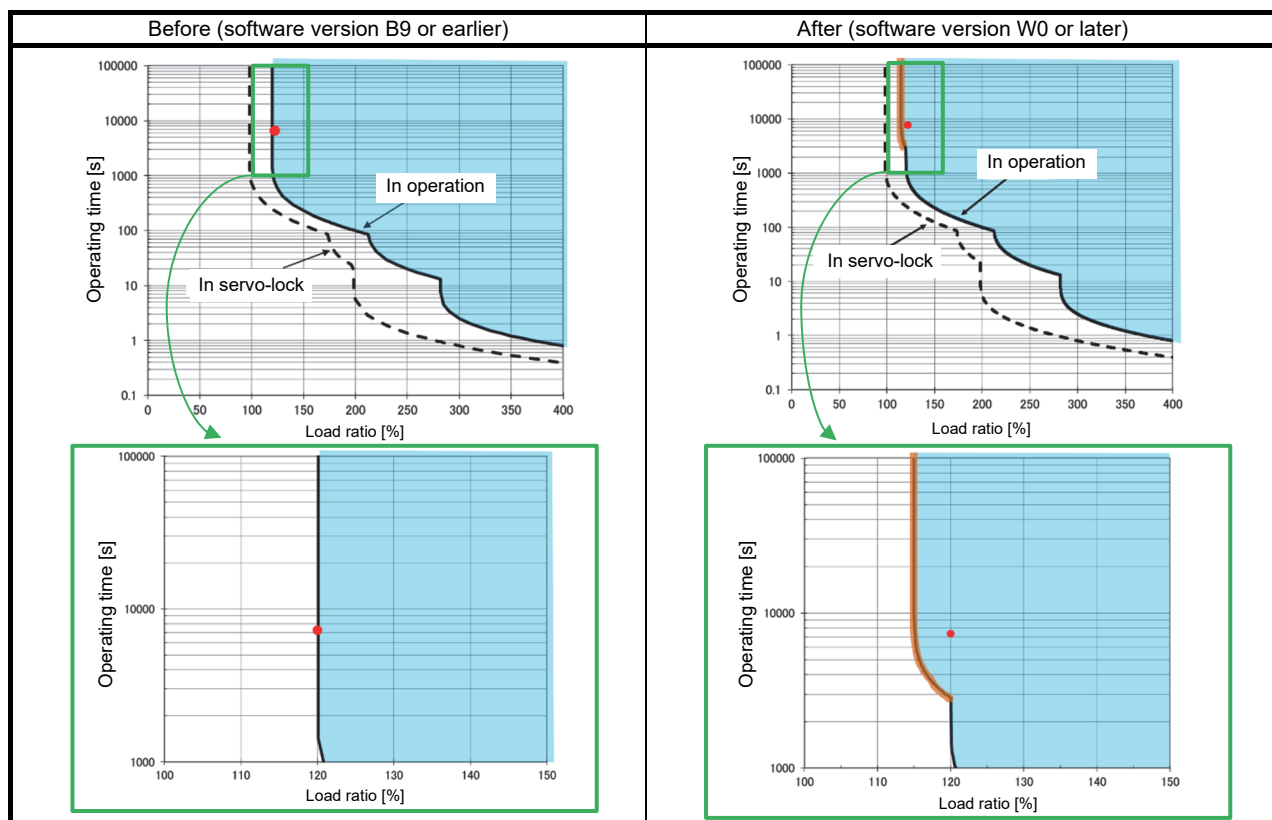

Figure 2. Characteristic b
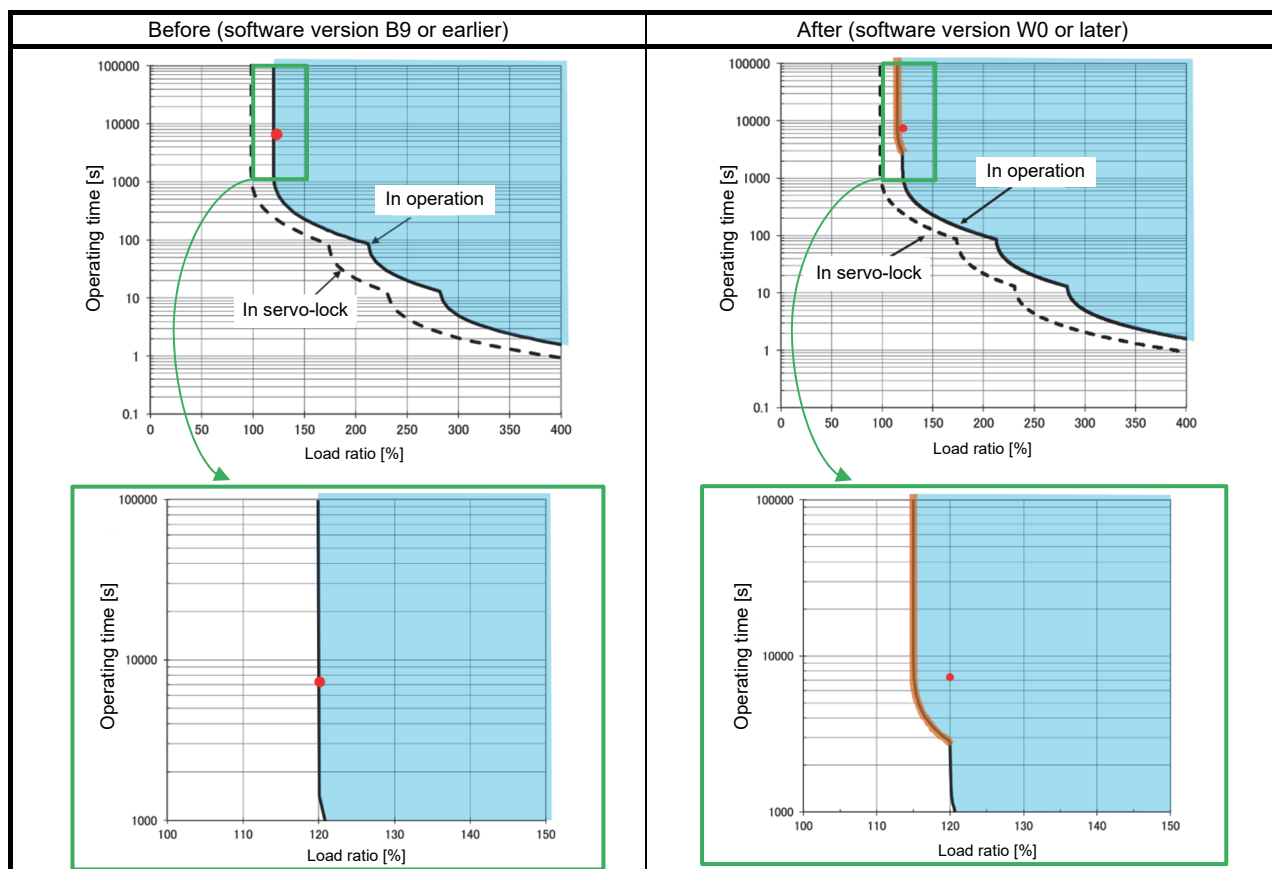
Figure 3. Characteristic c
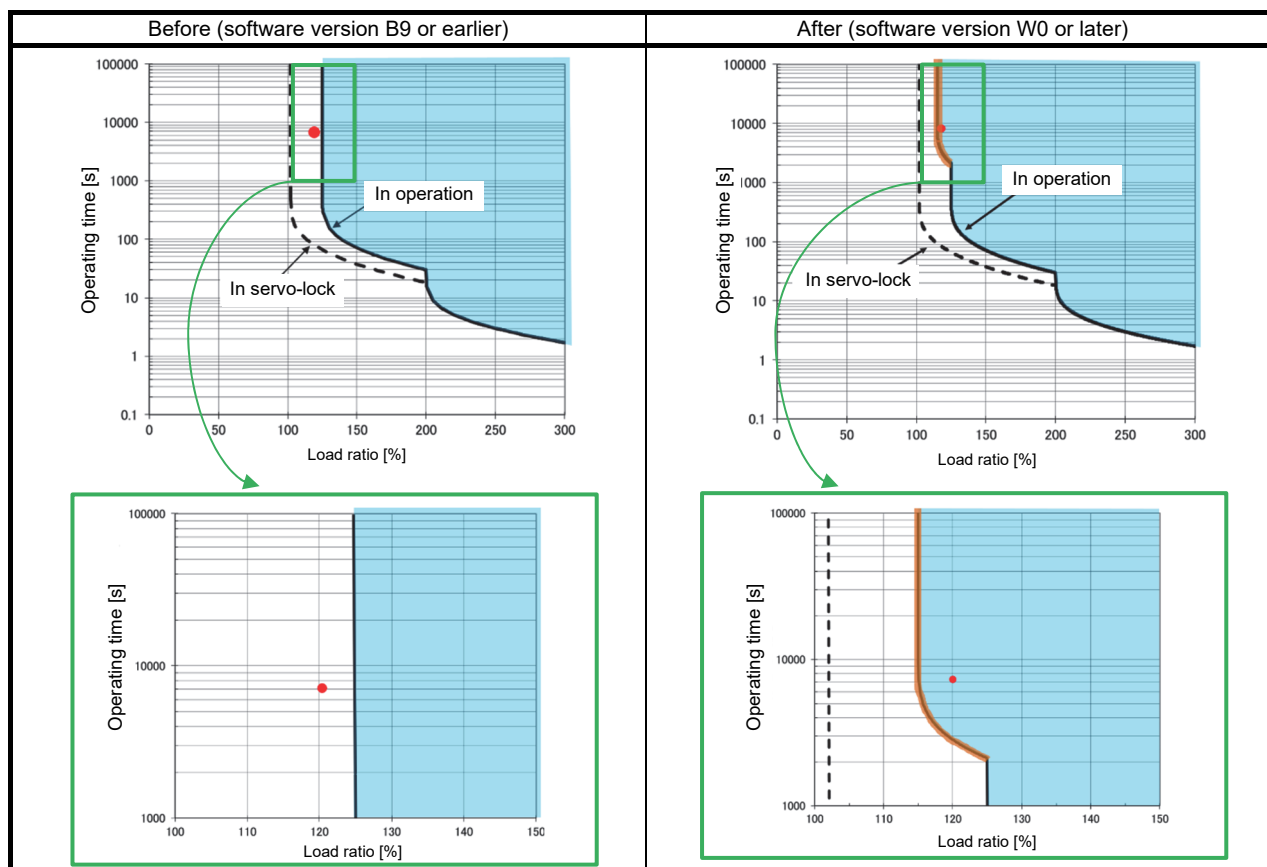

Figure 4. Characteristic d

Figure 5. Characteristic e

8. Alarm

[AL. 50.7 Thermal overload error 6 during operation] will be added.

Name	Detail display	Detail name	Description	Processing system	Stop system
Overload 1	50.7	Thermal overload error 6 during operation	This alarm is detected when the load ratio exceeds thermal overload 6.	Each axis	Each axis

9. Warning

[AL. E1.9 Thermal overload warning 6 during operation] will be added.

Name	Detail display	Detail name	Description	Processing system	Stop system
Overload warning 1	E1.9	Thermal overload warning 6 during operation	This warning is detected when the load ratio exceeds the warning level. Initial value of the warning level: 95 % of thermal overload 6 The warning level can be changed with [Pr. PE09].	Each axis	-

10. Parameter

[Pr. PE09 Thermal overload warning level 6 during operation] will be added.

No.	Symbol	Compatibility mode	Description	Initial value (unit)	Setting range	Setting method
PE09	OLLV6	J4 mode	**Thermal overload warning level 6 during operation** Set the level at which Thermal overload warning 6 during operation is generated. When "0" is set, the warning will be generated when the load ratio exceeds 95 % of thermal overload 6. When "100" is set, the warning will be disabled.	0 [%]	0 to 100	Each axis
		J3 compatibility mode Standard control mode	**Thermal overload warning level 6 during operation** Specifications are the same as those of the J4 mode.	0 [%]	0 to 100	Each axis
		J3 compatibility mode Fully closed loop control mode	**Thermal overload warning level 6 during operation** Specifications are the same as those of the J4 mode.	0 [%]	0 to 100	Each axis
		J3 compatibility mode Linear servo motor control mode	**Thermal overload warning level 6 during operation** Specifications are the same as those of the J4 mode.	0 [%]	0 to 100	Each axis
		J3 compatibility mode DD motor control mode	**Thermal overload warning level 6 during operation** Specifications are the same as those of the J4 mode.	0 [%]	0 to 100	Each axis