Compliance with UL Standard of Power Cables for Small-Capacity General-Purpose AC Servo Motors

Thank you for your continued patronage of the Mitsubishi Electric AC servo system.
The wire diameter of servo motor power cables will be changed along with the standard transition of UL 61800-5-1 for servo amplifiers.

1. Target Model

Servo motor power cables (for HG-KR/HG-MR/HG-KNS/HG-KN/HJ-KS/HJ-FS)

Table 1. Target Model

Product name	Model	Length	Bending life	Application
Power cable (load-side lead)	MR-PWS1CBL2M-A1-H	2 m	Long bending life	Direct connection type
	MR-PWS1CBL5M-A1-H	5 m		
	MR-PWS1CBL10M-A1-H	10 m		
Power cable (opposite to load-side lead)	MR-PWS1CBL2M-A2-H	2 m	Long bending life	Direct connection type
	MR-PWS1CBL5M-A2-H	5 m		
	MR-PWS1CBL10M-A2-H	10 m		
Power cable (load-side lead)	MR-PWS2CBL03M-A1-L	0.3 m	Standard	Junction type
Power cable (opposite to load-side lead)	MR-PWS2CBL03M-A2-L	0.3 m	Standard	Junction type

2. Reason for the Change

The transition to UL 61800-5-1 Edition 2, a standard for servo amplifiers, is scheduled for 2025 or later.
Therefore, the wire diameter will be changed along with this transition.
Products shipped before the change can be used continuously.

3. Details of the Change

The core wire will become thicker, and thus the characteristics of the core wire and the overall diameter will be changed.
Refer to Table 2 for detailed specifications of cables subject to the change.

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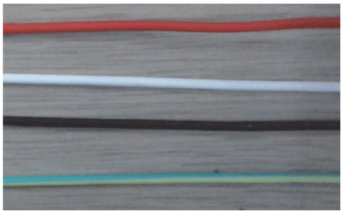
Table 2. List of Wire Changes

Model	Item		Wire currently used	Wire after the change
MR-PWS1CBL□M-■-H (□indicates 2, 5, or 10) (■ indicates A1 or A2)	Size of the core wire		AWG 19	AWG 18
	Number of core wires		4	Same as on the left
	Character-istics of a core wire	Structure [number of strands/mm]	150/0.08	7 bundles 24/0.08 (*1)
		Conductor resistance [Ω/km]	29.1 or less	25.6 or less
		Insulator OD [mm]	1.63	1.86
	Cable OD [mm]		5.7 (±0.5)	6.3 (+0.2, -0.3)
	Example of indication on the wire			

*1 The changes are as follows.

Wire currently used: One core wire consists of 150 strands of 0.08 mm diameter copper wire.

Wire after the change: One core wire consists of 7 bundles, and each bundle contains 24 strands of 0.08 mm diameter copper wire. (A total of 168 copper wires per core wire)

Model	Item		Wire currently used	Wire after the change
MR-PWS2CBL03M-■-L (■ indicates A1 or A2)	Size of the core wire		AWG 19	AWG 18
	Number of core wires		4 (single core wire)	Same as on the left
	Character-istics of a core wire	Structure [number of strands/mm]	30/0.18	175/0.08
		Conductor resistance [Ω/km]	25.8 or less	22.6 or less
		Insulator OD [mm]	1.64	1.76
	Appearance example		 The green/yellow wire has a spiral pattern.	 The green/yellow wire has a striped pattern.

4. Schedule

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

Revision

Version	Date of issue	Revision
A	September 2025	[4.Schedule] the content has been changed. July → October