

## Notice Regarding Processing Times of MELSEC iQ-R Series SIL2 Process CPUs

**■Date of Issue**

October 2025

**■Relevant Models**

R08PSFCPU-SET, R16PSFCPU-SET, R32PSFCPU-SET, R120PSFCPU-SET

Thank you for your continued support of Mitsubishi Electric programmable controllers, MELSEC iQ-R series.

This technical bulletin informs you of important notice regarding the processing times of the MELSEC iQ-R series SIL2 Process CPUs.

## 1 OVERVIEW

In the safety system using the MELSEC iQ-R series SIL2 process CPUs, processing times (instructions and functions) will change in order to obtain certification from a third-party certification body for compliance with safety standards.

When replacing the SIL2 process CPUs with the product listed in Chapter 2, check the change details in Chapter 3. If your system does not meet the conditions listed in Chapter 4, take the actions described in Chapter 5.

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## 2 APPLICABLE MODELS

Product	Model	Remarks
SIL2 Process CPU (Packaged with SIL2 function modules)	R08PSFCPU-SET, R16PSFCPU-SET, R32PSFCPU-SET, R120PSFCPU-SET	Firmware version "14" or later

### Point

Check the firmware version at the positions listed below.

When checking on the module body

- Rating plate (first 2-digit of the production information (16 digits))
- Production information marking (first 2-digit of the production information (16 digits))

When checking using the engineering tool

- Production information list
- Module diagnostics

For details, refer to the following.

📖 MELSEC iQ-R Series Module Configuration Manual

FA-A-0471-A

### 3 DETAILS ON THE CHANGE

Processing times will change.

For details, refer to the following.

Manual title	Manual No.
MELSEC iQ-R SIL2 Process CPU Module User's Manual	SH-082503ENG
MELSEC iQ-R Programming Manual (CPU Module Instructions, Standard Functions/Function Blocks)*1	SH-081266ENG

\*1 This manual is scheduled for revision in November 2025, so the revised content will apply.

### 4 CONFIRMATION ITEMS

The following conditions must be met to continue using the safety system with SIL2 Process CPUs after the change from version "13" or earlier to version "14" or later.

- Maximum safety cycle processing time (SD1894, SD1895) in the model of firmware version "13" or earlier  $\times 1.5 < \text{Safety cycle time}$

Number	Name	Description	Details
SD1894	Maximum safety cycle processing time	Maximum safety cycle processing time (in increments of ms)	<ul style="list-style-type: none"><li>The maximum value of the safety cycle processing time is stored (Measured in increments of 1<math>\mu</math>s)</li></ul> SD1894: The value of the ms place is stored. (Storage range: 0 to 65535) SD1895: The value of the $\mu$ s place is stored. (Storage range: 0 to 999) <ul style="list-style-type: none"><li>The measured value is stored even at STOP.</li></ul>
SD1895		Maximum safety cycle processing time (in increments of $\mu$ s)	

The above conditions serve as a guideline. When using the system with SIL2 Process CPUs of firmware version "14" or later, confirm that the safety cycle processing time does not exceed the safety cycle time.

## 5 MEASURES TAKEN BY USERS

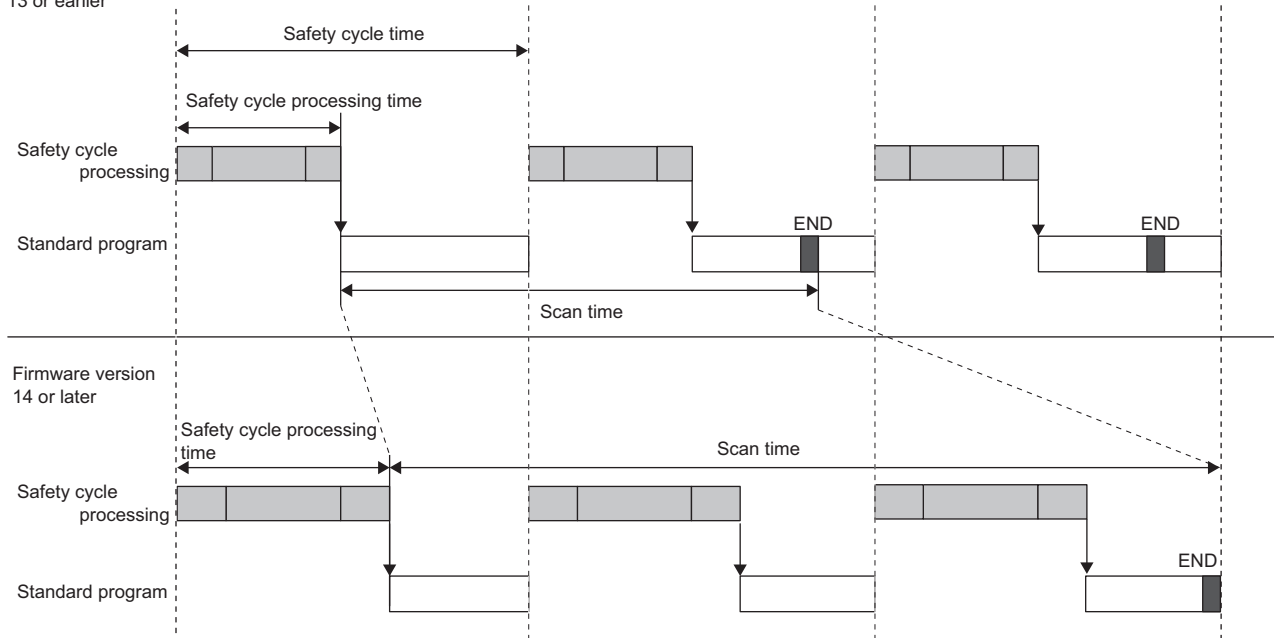
If the conditions listed in Page 2 CONFIRMATION ITEMS are not met, the safety cycle time must be reviewed, and the safety system must be changed to match the reviewed safety cycle time.

Even if the conditions listed in Page 2 CONFIRMATION ITEMS are met, the time required to execute the safety cycle processing (safety input → safety program → safety output) may change depending on the timing of safety cycle time. This affects the scan program that is executed during the remaining time, which results in a longer scan time or the execution cycle of END processing. Furthermore, the control cycle of standard control may be getting longer, or communication performance, such as MELSOFT connection, Ethernet connection, and GOT communications, may be degraded. When general control or communication performance is prioritized, the safety cycle time must be increased. Parameters, such as transmission interval monitoring time and safety refresh monitoring time, and the whole system (safety distance) must also be reviewed.

**Ex.**

Example of behavior after change of processing time

Firmware version  
13 or earlier



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**REVISIONS**

Version	Date of Issue	Revision
A	October 2025	First edition

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