

MITSUBISHI

Mitsubishi Electric Corporation **Industrial** Robot

MELFA Technical News

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Subject: Report of SQ/SD series software version R1d/S1d release

Applicable to: SQ series, SD series
(CRnQ-700/CRnD-700 series robot controller)

Thank you for your continued patronage of the Mitsubishi Industrial Robot.

This newsletter presents the information about the new version of the SQ/SD series controller.

About an additional or improvement function in R1d /S1d version

- (1) Became selectable the synchronism with PLC in SQ series.(CRnQ-700 only)
Previously, the time of the robot controller is synchronized with the time of the PLC. It became possible to choose whether to synchronize or not by changing the parameter "TIMESYNC".
- (2) Correction and Subdividing of output value of robot status variable M_ErrLvl
The error level output by robot status variable M_ErrLvl was made more detailed.
- (3) Adding the function of outputting temperature in the controller to the dedicated I/O signal.
The temperature inside the robot controller is output to the numerical output (IODATA).
- (4) Display addition of multi base coordinates
Current base coordinate system number is displayed on the JOG operation screen.
Moreover, the base coordinate system selection screen was added.

Contents

1. Selection of synchronization/asynchronous time with PLC (CRnQ-700 only)	2
2. Subdivision of value of robot status variable M_ErrLvl	2
3. Temperature output function	3
4. Display of multi base coordinates (R32TB)	3

1. Became selectable the synchronism with PLC in SQ series.(CRnQ-700 only)

Previously, the time of the robot controller is synchronized with the time of the PLC. It became possible to choose whether to synchronize or not by changing the parameter “TIMESYNC”. If the setting is “synchronize”, the robot time setting is changed into the PLC time setting automatically. Since the synchronous setting is fixed at “synchronize” in Ver. S1c and older one, please inform the customer as updating.

Parameter	Parameter name	No. of arrays No. of characters	Details explanation
Synchronize Time with PLC (CRnQ-700 only)	TIMESYNC	Integer 1	Choose whether to synchronize time of the robot controller and the PLC. (Synchronize/ Not synchronize = 1/0)

2. Correction and Subdividing of output value of robot status variable “M_ErrLvl”

It was found the output value of robot status variable “M_ErrLvl” was not correct. In addition to correcting the trouble, the error level was subdivided.

【Before subdividing】

Output value of M_ErrLvl	Error level	Error reset means
4	High	Power supply reset
3	High	[Reset] key
2	Low	
1	Caution	
0	No error	-



【After subdividing】

Output value of M_ErrLvl	Error level	Error reset means
6	High	Power supply reset
5	Low	
4	Caution	
3	High	[Reset] key
2	Low	
1	Caution	
0	No error	-

3. Adding the function of outputting temperature in the controller to the dedicated I/O signal.

It became possible to output the temperature in the controller by this function. For using this function, assign the signal No. (input signal No., output signal No.) in the parameter "TMPOUT". If the input signal is on (edge input), the output signal No. is on and at once the temperature is output to the output signal No. assigned in parameter "IODATA". The output temperature is the same as temperature displayed in operation panel. This function can be used on all of the I/O devices (parallel I/O interface, parallel I/O unit, CC-Link, PROFIBUS, DeviceNet, CPU shared memory).

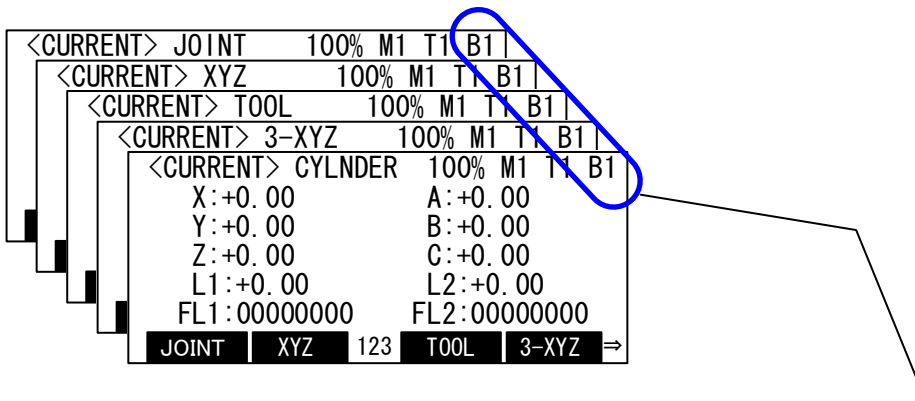
On CC-Link, it is possible to output the temperature to the output register by assigning the parameter "DIODATA". If the parameter "IODATA" is set, robot controller gives preference to "IODATA" over "DIODATA".

Parameter name	Class	Name	Function	Signal level	Factory shipment signal number. Input, output
TMPOUT	Input	Temperature output Request	The temperature inside the robot controller is output to the numerical output (IODATA). After the start of inputting this signal to the robot, wait at least 15 ms before reading the numerical output (IODATA) signal.	Edge	-1,-1 (-1:meaningless)
	Output	Temperature output signal	The "temperature output in progress" status is output to the numerical output.	-	

4. Display of multi base coordinates (R32TB)

(4-1) Display of current base number

The current base number (B1-B8) is displayed on the upper right of the jog screen.



The current base number (B1-B8) is displayed on the upper right of the jog screen.
 B1~B8 : Base coordinate number
 (correspond to parameter MEXBSNO=1 to 8)
 B0 : System's initial value (P_Nbase)
 (correspond to parameter MEXBSNO=0)
 B* : Base conversion data is specified by a base command,
 or parameter MEXBS is directly edited.
 (correspond to parameter MEXBSNO=-1)

※When the multi-coordinate system function is not mounted, the current base number is not displayed on the screen of the teaching Pendant.

(4-2) Changing the base coordinate number

At the <BASE SELECT> screen If the base coordinate number to wish is inputted and the [EXE] key is pressed, the world coordinate will change.

