

# Realtime Controller Dedicated Linkage Function



## » Features

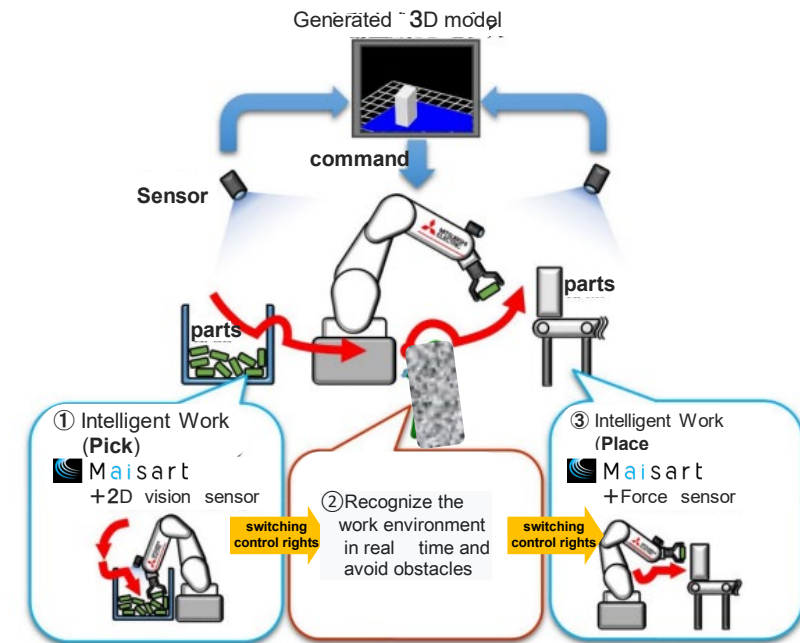
Intelligent work such as assembly is controlled by a robot controller, and movement that autonomously avoids obstacles is a Realtime Controller. Robot operation is possible while switching between control and control

Prepare a dedicated command as MELFA Library to easily set and control the Realtime Controller

While controlling the Realtime Controller, the robot can be operated within the safe speed limit, making it easy to build a safety-friendly system.

## » Diagram

Obstacle avoidance and advanced assembly system can be easily constructed by switching control rights



The dedicated integration function for Realtime Controller is a function to easily realize 'robot system construction' jointly developed with Realtime Robotics. Motion planning greatly reduces design and start-up work.



# Realtime Controller Dedicated Linkage Function

## » Features

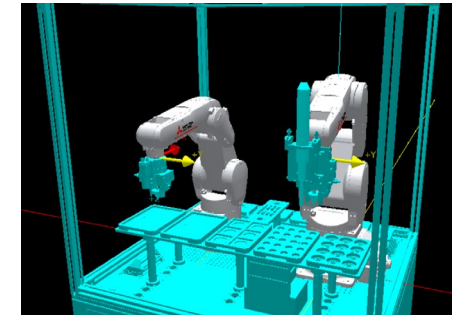
By controlling the Realtime Controller from the robot program (control right switching \* 1), advanced positioning and assembly using vision and force sensors are performed by "MELFA control", and movement (interpolation) to the target position is performed by "MELFA control". Realable with "Realtime Controller Control"

Realtime Controller can be controlled by the same operation as MELFA. It is possible to stop / restart, change speed, etc. with the same operation feeling as a conventional robot. Easy programming and debugging can be realized because the program can be step-executed using the teaching box.

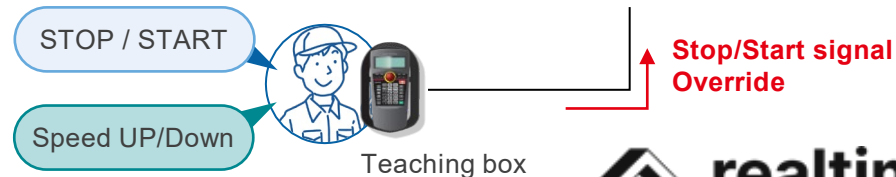
\*1 "MELFA Library" will be provided for switching control rights between Realtime Controller and MELFA (robot controller).  
By using this MELFA library, programming and debugging time is greatly reduced.

The Realtime Controller dedicated linkage function is a function to easily realize "robot system construction" jointly developed with Realtime Robotics. Motion planning can significantly reduce design and start-up man-hours.

The Realtime Controller can be operated with the same operation feeling as a conventional robot.



Advanced assembly application using vision sensor and force sensor.



# Realtime Controller Dedicated Linkage Function



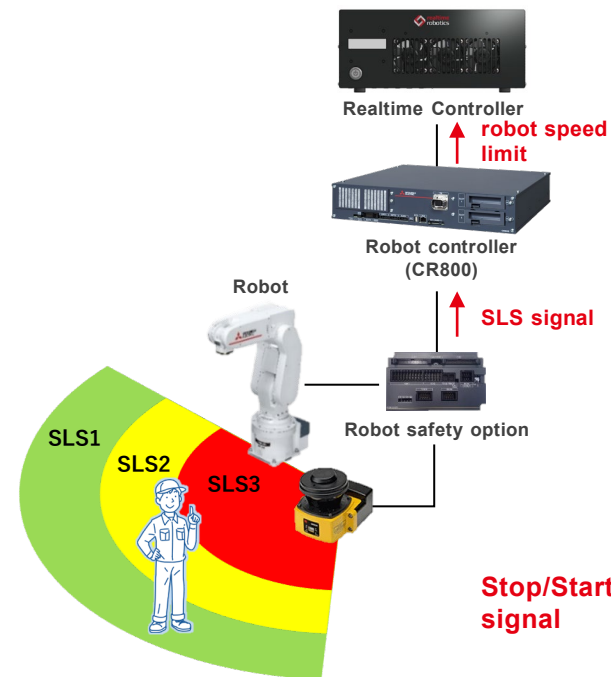
## » Features

The safety speed monitoring function by the robot safety option is possible even during Realtime Controller control (always effective during MELFA control), realizing the construction of a safe robot system.

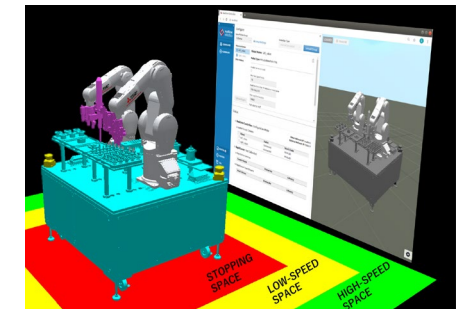
	Item	Description	Remarks
Safety function	STO function	The function electrically shuts off the driving energy to the motor of the robot arm.	IEC 60204-1 Corresponds to stop category 0
	SS1 function	The function to control and decelerate the motor speeds of the robot. After stopping, the robot transitions to the STO state.	IEC 60204-1 Corresponds to stop category 1
	SS2 function	The function to control and decelerate the motor speeds of the robot. After stopping, the robot transitions to the SOS state.	IEC 60204-1 Corresponds to stop category 2
	SOS function	Without shutting off the driving energy to the motors, this function monitors the robot so that it stays at rest.	EN61800-5-2 compliant
	SLS function	This is a function to monitor each part of the robot arm so that their speeds do not exceed monitoring speeds.	EN61800-5-2 compliant
	SLP function	The function monitors specified monitoring positions so that they do not go across position monitoring planes.	EN61800-5-2 compliant
Safety performance	Standard	ISO10218-1(2011) EN62061(2006) ISO13849-1(2015) IEC61508 (2010) EN61800-5-1 (ES, EN for Drive) EN61800-5-2(Safety function Drive) IEC61326-3-1 (EMC for RS) EN60204-1	
	Safety level	STO	SIL 3, PLd/Category 4
			SIL 2, PLd/Category 3
	Dangerous failure rate	SS1, SOS, SS2, SLS, SLP	SIL 2, PLd/Category 3
		STO	PFH = $1.40 \times 10^{-5}$ [1/h]
		SS1, SOS, SS2, SLS, SLP	PFH = $3.42 \times 10^{-7}$ [1/h]

The Realtime Controller dedicated linkage function is a function to easily realize "robot system construction" jointly developed with Realtime Robotics. Motion planning can significantly reduce design and start-up man-hours.

## ■ system configuration diagram



## ■ assembly application layout



High speed operation (green): 251 mm/s or more  
Low speed operation (yellow): 250 mm/s or less  
Stop (red) : 0 mm/s

