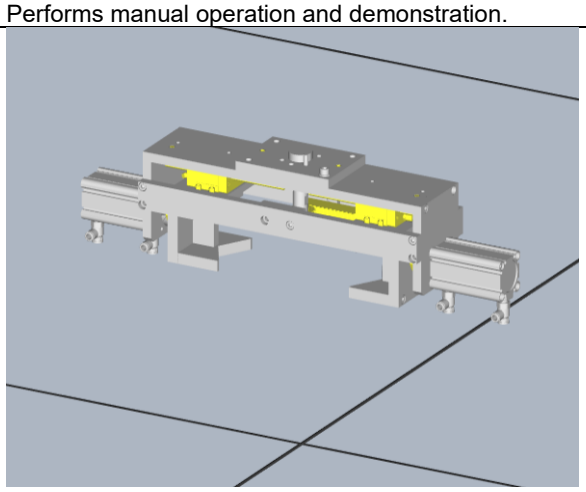
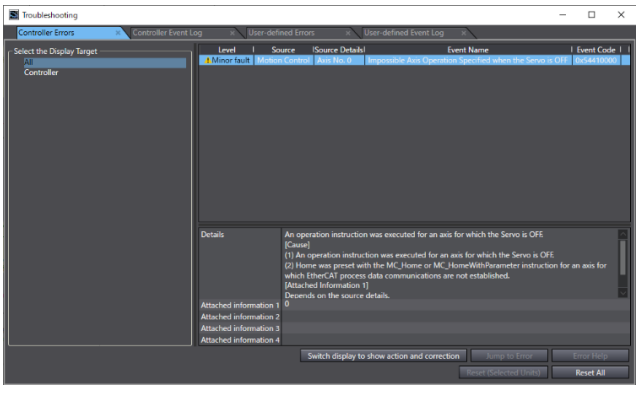
| 3D Simulation Sample Program No.24 | Gripper double solenoid mechanism |
|---|---|

| | | |
|---|---|---|
| Basic function | Performs manual operation and demonstration. | |
| 3D image |  <br>CAD data: MISUMI Corporation inCAD Library No.000578 (*)<br>The CAD data was edited by OMRON. Refer to the Sysmac Studio 3D Simulation Function Operation Manual (W618-E1) for the editing procedures.<br>(*The component name is not listed in the English website of MISUMI Corporation.) | |
| File name | 3DSimulationSample_24_Gripper_double_solenoid_mechanism_V1_00.smc2 | |
| Applicable model | Sysmac Studio (64-bit version) | SYSMAC-SE2xxx Ver.1.40 or higher |
| | Sysmac Studio 3D Simulation Option | SYSMAC-SA4xxL-64 |
| Used language | Ladder programming | |
| Used materials and equipment | - | |
| Function description | ・When the Execute_Manual_Close variable (BOOL) changes to TRUE while the Execute_Manual_Open variable (BOOL) is FALSE, the chuck moves to the close position.<br>When the Execute_Manual_Open variable (BOOL) changes to TRUE while the Execute_Manual_Close variable (BOOL) is FALSE, the chuck moves to the open position.<br>・When the Execute_Demo variable (BOOL) changes to TRUE, a demonstration is performed. | |
| Mechanical component types provided on the Sysmac Studio | Robot tool (Parallel switching 2-finger type chuck/double solenoid type) | |
| Precaution for use | ・This sample program is specifically prepared for 3D simulation. Do no use this program in actual machine operation.<br>・MISUMI Corporation may not offer all parts in each application design. Available parts can only be purchased separately not as a unit shown in each application design. MISUMI Corporation does not guarantee quality, accuracy, functionality, safety or reliability for the combination of the parts in each application example. | |
| Restrictions and others | ・Error processing is not included in the sample program.<br>To reset errors, select **Troubleshooting** from the Tools Menu, then click the **Reset All** button.<br>  | |

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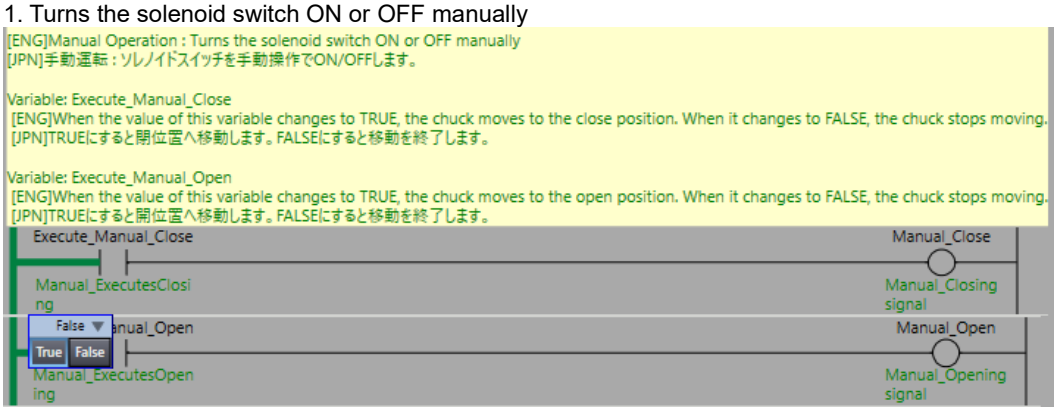
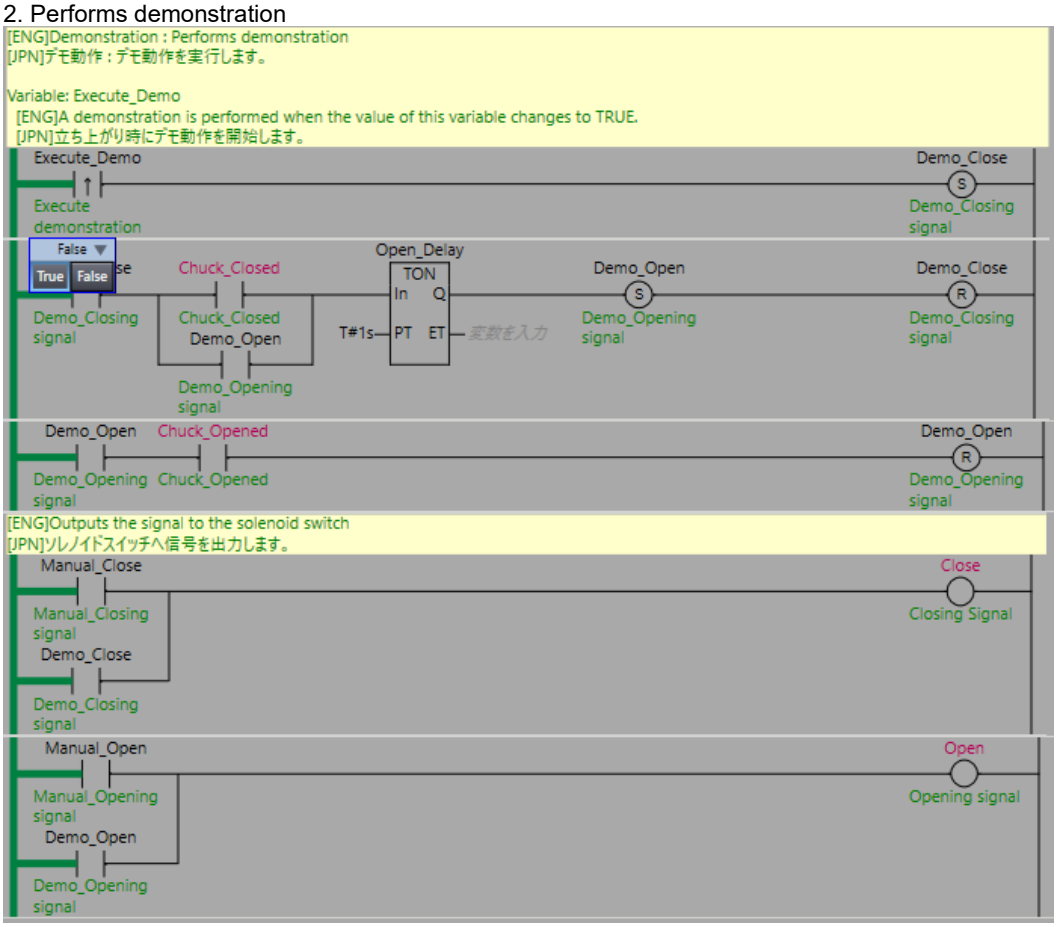
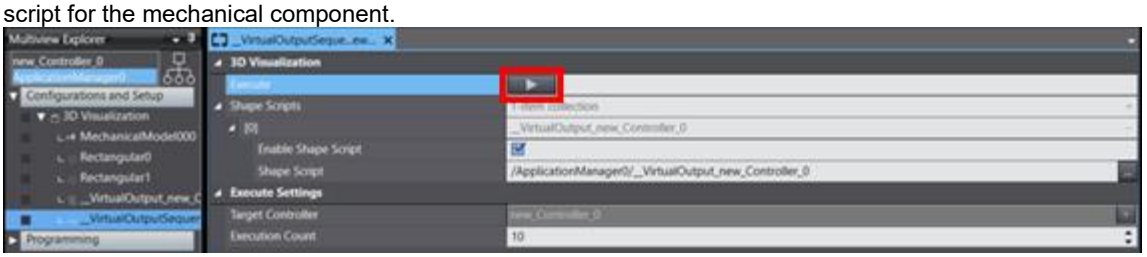
| | |
|---|---|
| Application example | 1. Turns the solenoid switch ON or OFF manually<br>  <br><br>2. Performs demonstration<br>  <br><br>(Additional information)<br>To confirm 3D operation, select **3D Visualizer** from the View menu. You can confirm the operation on the 3D Visualizer.<br><br>After performing a program simulation on the Sysmac Studio, execute the virtual output script for the mechanical component, in the following procedure.<br>Select **ApplicationManager0** – **Configuration and Setup** – **3D Visualization** - **_VirtualOutputSequence_new_Controller_0** in the Multiview Explorer, and execute the virtual output script for the mechanical component.<br>  <br> |
| Related manuals | Sysmac Studio Version 1 Operation Manual (W504-E1)<br>Sysmac Studio 3D Simulation Function Operation Manual (W618-E1) |

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■ Variable Tables

Input Variables

| Meaning | Name | Data type | Default | Range | Description |
|---|---|---|---|---|---|
| Manual Operation (close position) | Execute_Manual_Close | BOOL | | TRUE or FALSE | When the value of this variable changes to TRUE while the Execute_Manual_Open variable is FALSE, the chuck moves to the close position. |
| Manual Operation (open position) | Execute_Manual_Open | BOOL | | TRUE or FALSE | When the value of this variable changes to TRUE while the Execute_Manual_Close variable is FALSE, the chuck moves to the open position. |
| Demonstration | Execute_Demo | BOOL | | TRUE or FALSE | A demonstration is performed when the value of this variable changes to TRUE. |

Output Variables

| Meaning | Name | Data type | Range | Description |
|---|---|---|---|---|
| Solenoid Switch Close Position | Close | BOOL | TRUE or FALSE | TRUE while signals are output to the double solenoid switches. |
| Solenoid Switch Open Position | Open | BOOL | TRUE or FALSE | TRUE while signals are output to the double solenoid switches. |

■ Version History

| Version | Date | Contents |
|---|---|---|
| 1.00 | March 2021 | Original production. |

■ Note

This document explains the function of the sample programs specifically prepared for 3D simulation.
It does not provide information of restrictions on the use of Units and Components or combination of them. For actual applications, make sure to read the operation manuals of the applicable product.

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