

Functional description

Add-on for Rockwell Allen-Bradley controllers

1 Contact

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2 Legal note

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3 Model designation

This function description applies for the Add-on 'siebert_display_sx502_dynamic-mode' used with the engineering tool 'Rockwell Studio 5000'.

It is used to communicate between a Rockwell Allen-Bradley controller and displays of the SX502, SX602 and SX702 series with EtherNet / IP or DeviceNet interface. The handshake procedure described in the operating instructions is shown.

The screenshots show the use of the add-on with Rockwell Studio 5000 V21.03.

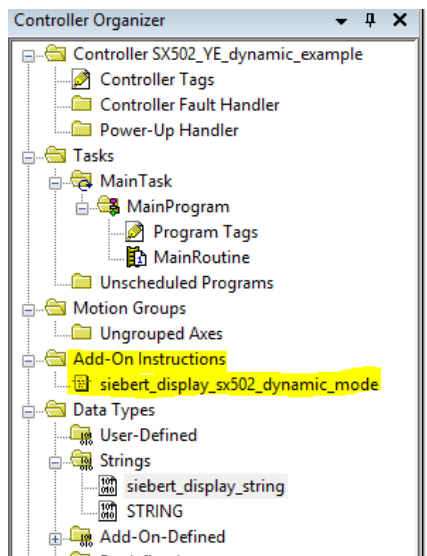
4 Commissioning

Install EDS data file of the display and activate Add-on

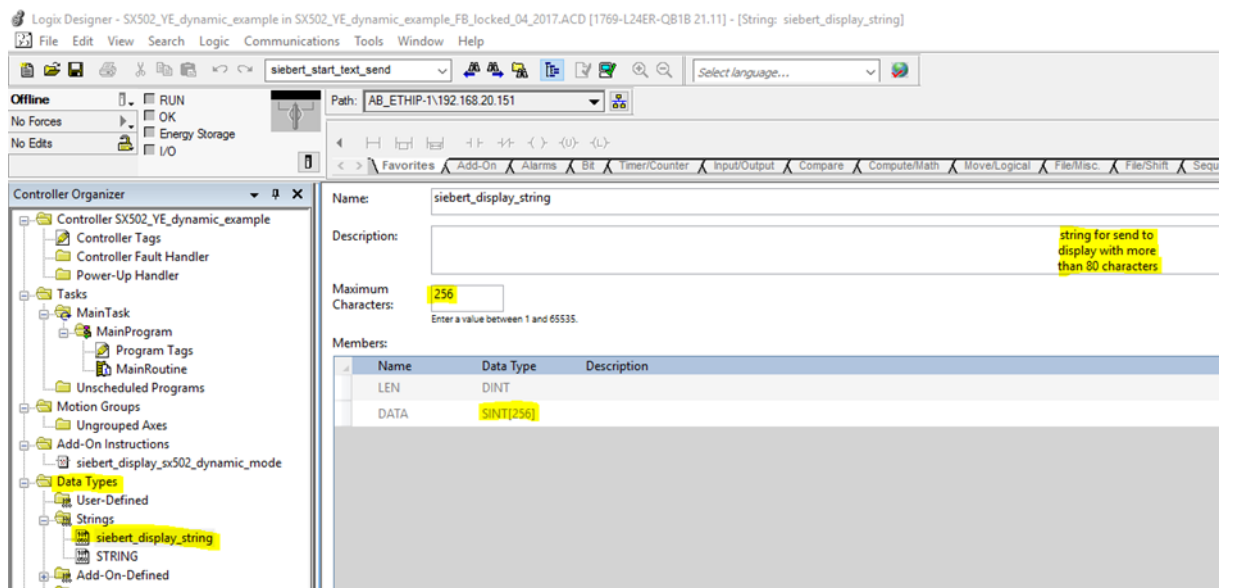
Install the EDS data file of the display. You will find the data file on the data carrier Included in delivery or on ww.siebert-group.com.

After installation, the display is listed in the hardware catalogue. Add the module 'siebert-display' to 'Devices & Networks / Network view'.

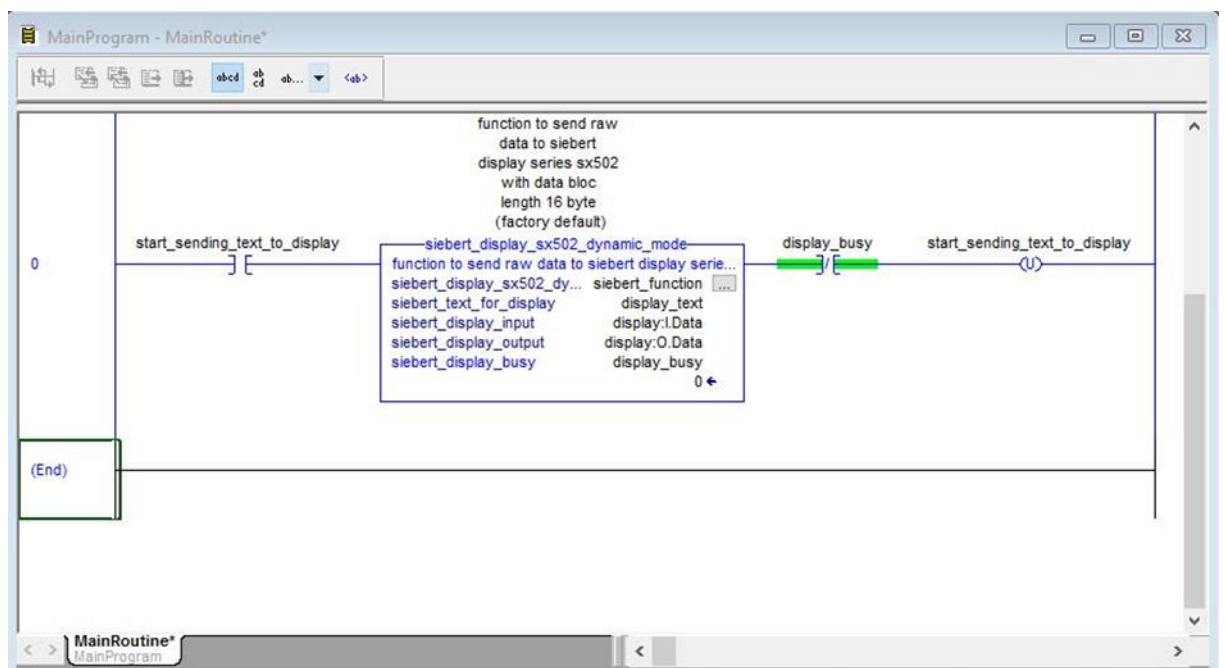
After installation the Add-on 'siebert_display_sx502_dynamic_mode' is listed in the Controller Organizer under 'Add-On Instructions'.



Note: *The data string (Message string) of the standard data type can have a maximum of 82 characters. Therefore, we recommend to create a user-defined data type. An individual data type with 256 characters is created in the included example project.*



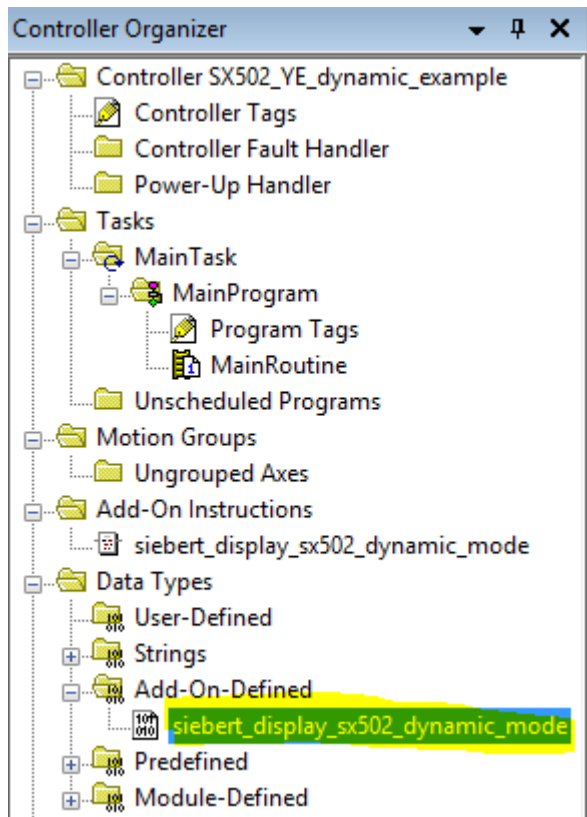
Add-on settings



Name	Meaning
siebert_display_sx502_dynamic_mode	Local variable of the Add-on
siebert_text_for_display	Data string (Message string)
siebert_display_input	Handshake: input data area of the display
siebert_display_output	Handshake: output data area of the display
siebert_display_busy	Send-/communication bit

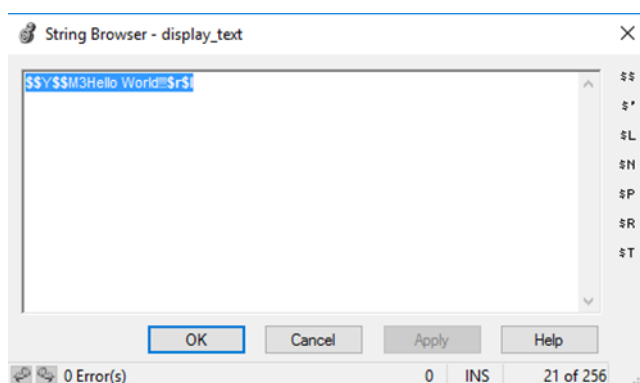
'siebert_display_sx502_dynamic_mode'

With this parameter local variables are defined. This parameter is listed in the Controller Organizer under 'Add-On-Defined'.



'siebert_text_for_display'

The string browser is used to edit the content to be shown on the display, as well as its formatting, by means of the commands according to the command table in the operating instructions.



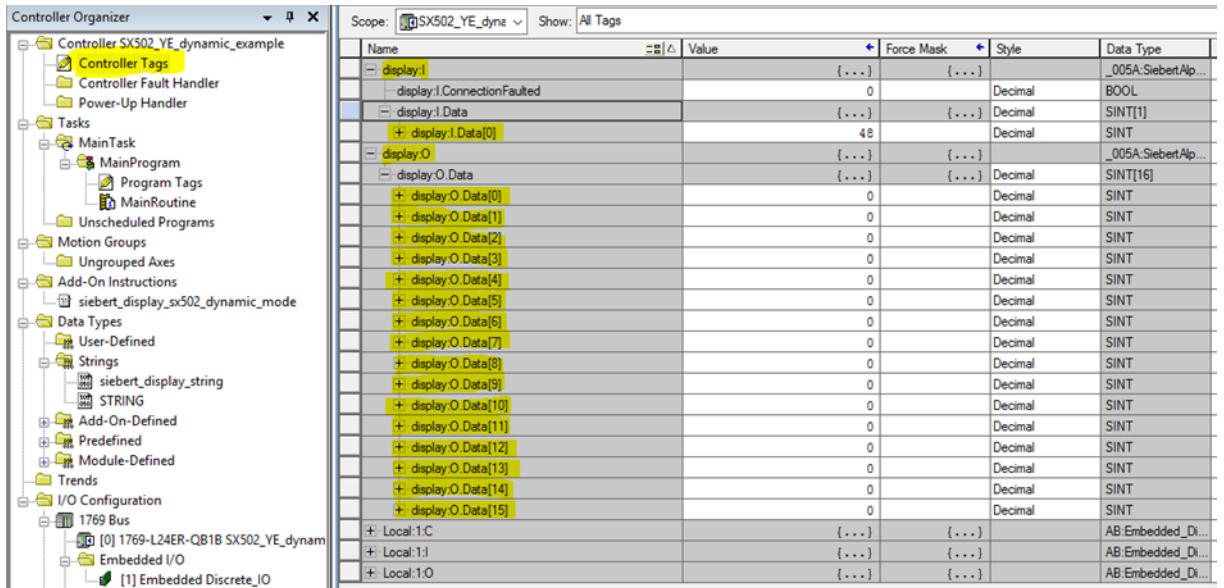
Note: The command to display the character '\$' is \$\$\$. The command for a telegram ending with CR/LF is performed with the command \$r\$!

siebert_display_input

With this parameter the input data area of the display (1 byte) is defined.

siebert_display_output

With this parameter the output data area of the display (16 bytes) is defined.

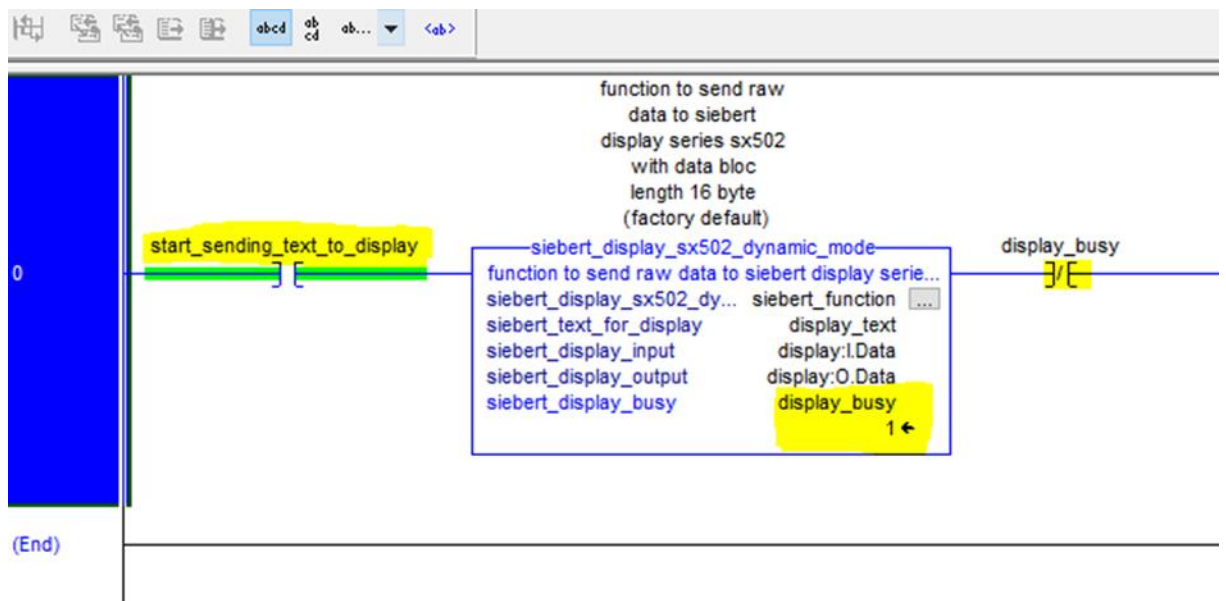


Name	Value	Force Mask	Style	Data Type
display	{...}	{...}		_005A.SiebertAlp...
display.I.ConnectionFaulted	0		Decimal	BOOL
display.I.Data	{...}	{...}	Decimal	SINT[1]
display.I.Data[0]	48		Decimal	SINT
display.O	{...}	{...}		_005A.SiebertAlp...
display.O.Data	{...}	{...}	Decimal	SINT[16]
display.O.Data[0]	0		Decimal	SINT
display.O.Data[1]	0		Decimal	SINT
display.O.Data[2]	0		Decimal	SINT
display.O.Data[3]	0		Decimal	SINT
display.O.Data[4]	0		Decimal	SINT
display.O.Data[5]	0		Decimal	SINT
display.O.Data[6]	0		Decimal	SINT
display.O.Data[7]	0		Decimal	SINT
display.O.Data[8]	0		Decimal	SINT
display.O.Data[9]	0		Decimal	SINT
display.O.Data[10]	0		Decimal	SINT
display.O.Data[11]	0		Decimal	SINT
display.O.Data[12]	0		Decimal	SINT
display.O.Data[13]	0		Decimal	SINT
display.O.Data[14]	0		Decimal	SINT
display.O.Data[15]	0		Decimal	SINT
Local:1.C	{...}	{...}		AB Embedded_Di...
Local:1.I	{...}	{...}		AB Embedded_Di...
Local:1.O	{...}	{...}		AB Embedded_Di...

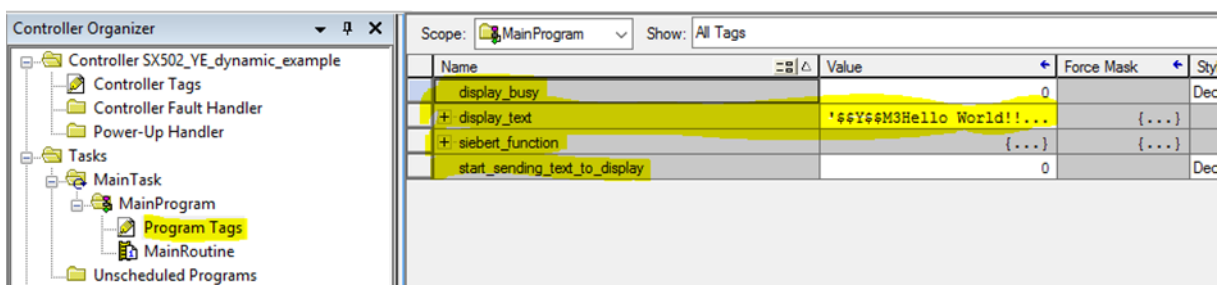
If the display was installed using the supplied EDS file, the data is automatically listed in the Controller Organizer under 'Controller Tags'.

siebert_display-busy

During the transmission of data packets by the controller this bit is set to 'true' (1). After the display has received the telegram ending, the bit is reset to 'false' (0).



The bit is necessary as a variable in the program tags.



Name	Value	Force Mask	Style	Data Type
display_busy	0			Dec
display_text	'\$\$Y\$\$M3Hello World!...	{...}		
siebert_function	{...}	{...}		
start_sending_text_to_display	0			Dec

Use Add-on with multiple display

The add-on can be used with multiple displays in a system.

In this case, the names of the individual displays or the associated blocks must differ.

