

Unified-E Allen Bradley Adapter User Manual

Configure Allen Bradley PLC Endpoints and Datapoints

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1 General

This adapter allows you to access Rockwell Allen-Bradley controllers via Ethernet/IP or CIP. For example, the following CPU families are supported:

- ControlLogix
- CompactLogix
- Micro800
- MicroLogix

2 Adapter Parameters in Unified-E

The adapter supports the following parameters for communication:

- **IP Port:** Describes the IP port used in the controller, which is set to 44818 by default.
- **Type:** Type of control. Select ControlLogix for both ControlLogix and CompactLogix controllers. "Micro800" is to be used for controllers of the Micro800 series (e.g. Micro820).
- **Slot/Path:** Assumption: CPU and Ethernet card are directly on the main chassis. All you have to do is enter the slot number of the CPU.
 - For more complex cases, the connection path to the CPU must be entered, usually <Slot1>, 1,<Slot/ControlNet-Port/Address>,1,<Slot/ControlNet-Port/Address>,...
 - The "1" in the path stands for backplane
 - For the CompactLogix controllers, the value "Slot/Path" must be entered as 0; for Micro800 controllers, this parameter is not taken into account.
- **Socket timeout (ms):** Timeout when connecting, reading, or writing

End Point Address:

An IP address must be set as the endpoint address.

3 Datapoint Addressing

Basically, access to variables is symbolic. If no address is set for the datapoint in the datapoint table in the Unified-E App Designer, then the datapoint label is used for addressing.

Possible data types:

Variables with the following data types are supported:

- BOOL
- SINT

- INT
- DINT
- LINT
- BYTE
- WORD
- DWORD
- LWORD
- REAL
- LREAL
- STRING
- LREAL
- STRING
- BIT

Reading complete arrays (e.g. for the «Chart» view element):

Arrays with numeric values are supported.

Syntax: <Symbol Name>(<Number of Elements>),

e.g. myNumbers(3) returns the first 3 elements

Accessing array elements within arrays/structures:

Access to arrays is done with square brackets,

e.g. myNumbers[1]

Structural elements can be accessed via «.»,

e.g. Data1.Data2.Value1

Bit-addressing is also possible with «.»,

e.g. Data1.Data2.Value1.0

Example:

Unified-E App Designer 3.1.5.2 - ABSample.uep (saved)

File Edit Simulator Publish Settings Help

Active App Language: German Active Display: Smartphone

Create Edit Simulate Test online Publish

Project Navigation

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PLC1 x Ansicht 1

Select Endpoint Adapter and Configure

Step 1: Select adapter
Endpoint object name: PLC1
Endpoint adapter for communication: Allen Bradley Adapter PDF

Step 2: Set parameters
IP port: 44818
Type: ControlLogix
Slot/Path: 0
Socket timeout [ms]: 3000

Step 3: Test connection
Test online connection to endpoint
The entered address and parameters are used to test the reachability of the endpoint.
Test connection...
Comment:

Define Endpoint Datapoints

Datapoints

Watch endpoint datapoints: Start Finish PLC: Allen Bradley Adapter - 172.22.21.191 Connection status: 

	Name	Address	Access	Data type	Simulator start value	Group	Cross reference
52	FBLList_23	WEB.FBLList[23]	Read	Numeric			4
53	FBLList_24	WEB.FBLList[24]	Read	Numeric			4
54	FBLList_25	WEB.FBLList[25]	Read	Numeric			4
55	FBLList_26	WEB.FBLList[26]	Read	Numeric			4
56	FBLList_27	WEB.FBLList[27]	Read	Numeric			4
57	FBLList_28	WEB.FBLList[28]	Read	Numeric			4
58	FBLList_29	WEB.FBLList[29]	Read	Numeric			4
59	RTLList_1	WEB.RTLList[1]	Read	Text			1
60	RTLList_2	WEB.RTLList[2]	Read	Text			1
61	RTLList_3	WEB.RTLList[3]	Read	Text			1

Define script datapoints 

Import... Export...