



## JSON Utilities SL

With the “JSON Utilities SL” library, data can be read and written in JSON format from a CODESYS controller.

### Product description

The ‘JSON Utilities SL’ library provides the following functionalities:

- Read JSON files (UTF-8 and UTF-16)
- Read JSON byte arrays
- Write JSON files (UTF-8 and UTF-16)
- Read JSON byte arrays
- Search for keys, values, and child and parent elements

The data is stored in an array of structures. Data access and element search is performed by means of methods from the JSONData function block. The simple creation of a JSON-File can be realized with function block JSONBuilder. The function blocks JSONByteArrayReader and JSONFileReader read data in JSON format and save the values in the JSONData function block. Writing files and byte arrays is performed by means of the function blocks JSONFileWriter and JSONByteArrayWriter.

A simple REST client can be implemented easily in connection with the library ‘Web Client SL’.

.. note:: To test the examples on a CODESYS Control Win the files “test\_utf16.json” and “test.json” can be copied from the target directory of the installation into the directory “c:\temp”.

The sample project “JSON Utilities SL Example.project” provides three applications to demonstrate how to use the library.

#### **Application: JSONArrayExample**

In this example, a JSON byte array is read and written. The data is displayed in a visualization.

#### **Application: JSONFileExample**

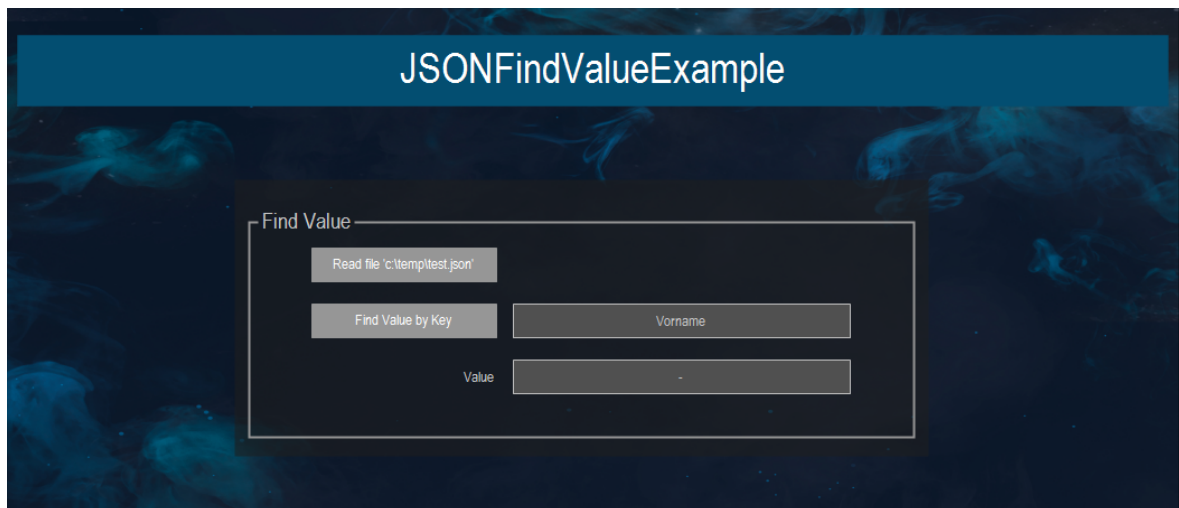
In this example, a JSON file is read and written. The data is displayed in a visualization.

#### **Application: JSONFindValueExample**

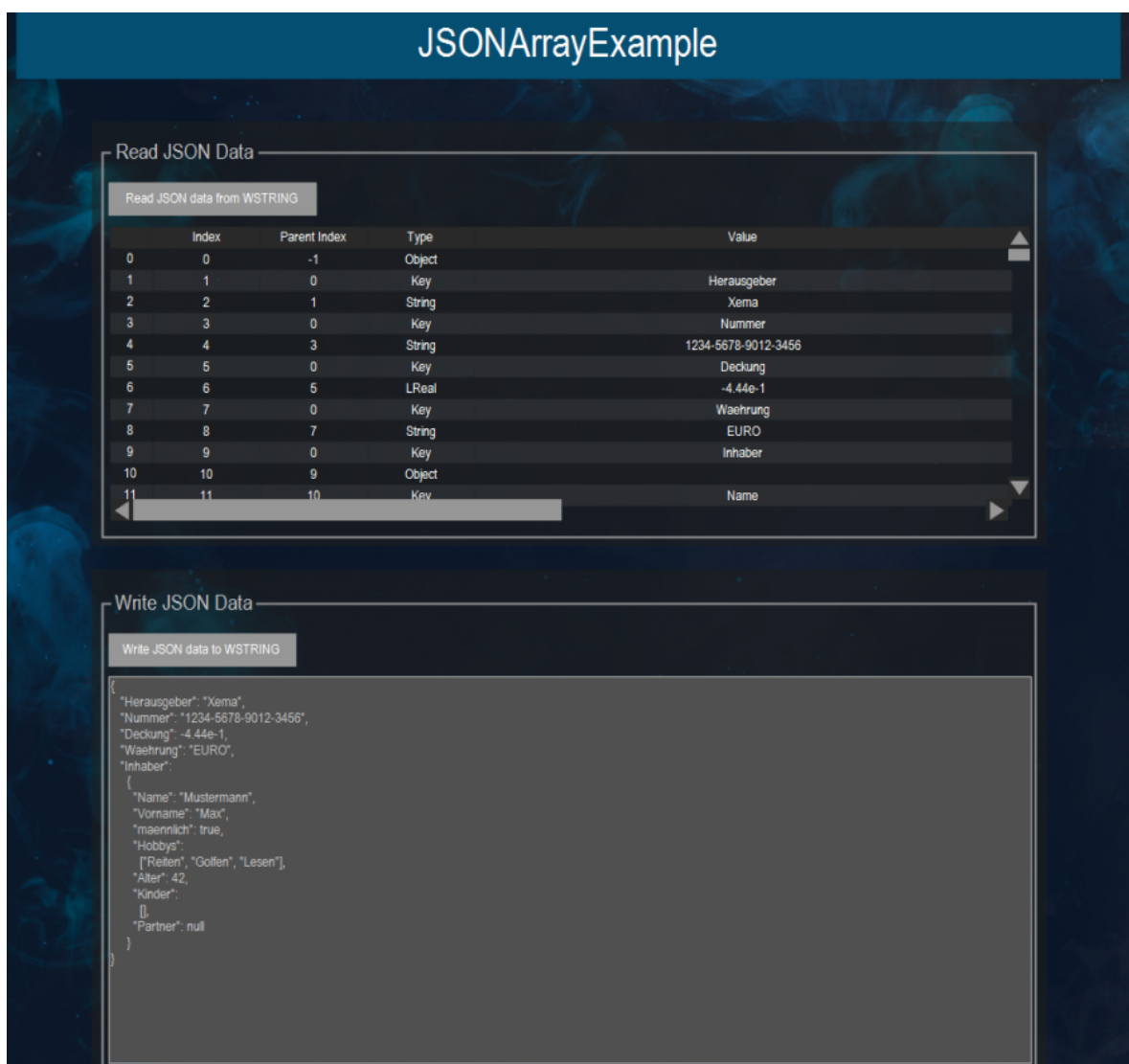
This example demonstrates how to search for values within a JSON file.

#### **Application: JSONDataExample**

This example demonstrates how to generate a JSON string based on two different examples.



Find Value Example



Array Example

## JSONFileExample

Read / Write JSON File

Read JSON File

c:\temptest.json

Write JSON File

c:\temptestWrite.json

	Index	Parent Index	Type	Value
0	0	-1	Object	
1	1	0	Key	Herausgeber
2	2	1	String	Xema
3	3	0	Key	Nummer
4	4	3	String	1234-5678-9012-3456
5	5	0	Key	Deckung
6	6	5	LReal	-4.44e-1
7	7	0	Key	Waehrung
8	8	7	String	EURO
9	9	0	Key	Inhaber
10	10	9	Object	
11	11	10	Key	Name
12	12	11	String	"Mustermann"
13	13	10	Key	Vorname
14	14	13	String	Max
15	15	10	Key	maennlich
16	16	15	Bool	TRUE
17	17	10	Key	Hobbys

*File Example*

## General information

### Supplier:

CODESYS GmbH  
 Memminger Strasse 151  
 87439 Kempten  
 Germany

### Support:

Technical support is not included with this product. To receive technical support, please purchase a CODESYS Support Ticket.

<https://support.codesys.com>

### Item:

JSON Utilities SL

### Item number:

### Sales/Source of supply:

CODESYS Store  
<https://store.codesys.com>

### Included in delivery:

CODESYS Package

## System requirements and restrictions

<b>Programming System</b>	CODESYS Development System V3.5.15.0
<b>Runtime System</b>	CODESYS Control V3.5.15.0
<b>Supported Platforms/ Devices</b>	Note: Use the project "Device Reader" to find out the supported features of your device. "Device Reader" is available for free in the CODESYS Store.
<b>Additional Requirements</b>	-
<b>Restrictions</b>	-
<b>Licensing</b>	License activation optional on CODESYS Key or CODESYS Soft Key (free of charge component of CODESYS Controls). Licensing via Soft Key is strictly linked to hardware.  Note: Without a license the software runs for 30 minutes in demo mode.
<b>Required accessories</b>	-

*Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.*

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