

Data Sheet MsSQL library SL



The MsSQL library helps to read and store your data directly to Microsoft SQL Server without middleware (such as OPC).

Product Description

This library allows you to connect your CODESYS V3.5 application to Microsoft SQL database. With this library you can store and read process data. Read recipes from ERP, save breakdown report etc. No more OPC servers and other middleware.
Note! This is Single License for one device.

Range of Functions

This library allows to the user connect to Microsoft SQL Server from 2005 to 2017. This library uses for communication with server TDS protocol.

Supported commands:

- SELECT
- INSERT
- UPDATE
- DELETE
- Execute Stored procedures

This library contains 5 functions for converting data from SQL to IEC data types:

- BOOL
- DINT
- REAL
- STRING
- DATETIME

This library has 4 function blocks:

- **fbMsSQL_compact** for compact connection and communication with database
- **fbMsSQL** for connection and communication with database
- **fbPing** for test of availability of remote host
- **fbFIFOQuery** for handle more SQL request in time

Visualization templates

For easy test of library with server. Library contains 4 visualization templates:

- login credentials
- login procedure
- query window
- response window

Example

Example contains

- Sample project for Codesys
- Source scripts to create Microsoft SQL database
- Video manual

General Information

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Product **MsSQL library SL**

Order Number **2112000003**

Sales CODESYS Store
 store.codesys.com

Scope of Delivery ▪ CODESYS Package with library and example projects

System Requirements and Restrictions

Programming System	CODESYS Development System V3.5.8.10
Target System	CODESYS Control V3.5.8.10
Supported Platforms / Devices	Device with support for Network (NBS) library Tested devices CODESYS Control WIN V3, Raspberry PI, WAGO PFC200
Additional Requirements	-
Restrictions	-
Licensing	License activation CODESYS Runtime key
Required Accessory	Optional: CODESYS Runtime Key or SoftContainer

Screenshots

Expression	Type	Value	Prepared value	Address	Comment
# fbMsSQL_compact_0	MsSqlLibrary.fbMsSQL...				fbMsSQL_compact
sHost	STRING	*			
uiPort	UINT	1433			
tTimeout	TIME	T#1s			
sHostName	STRING	'WindowsPLC'			
sUserName	STRING	*			
sPassword	STRING	*			
sDatabase	STRING	*			
queryString	STRING(255)	'INSERT INTO tblTestPLC (Bools,String,I...			
xWriteData	BOOL	FALSE			

Picture 1 Example of using fbMsSQL_compact library in FBD language

MsSQL Library SL Compact example for Windows V3

MsSQL Library SL V1.2.0.0 for CODESYS V3.5



Microsoft SQL Server settings

IP Address:

Port:

Username:

Password:

Hostname:

Database:

Connection to the server

Server test

Response:

Error:

Current step:

Response

Read data

rows: columns:

col[1]: col[6]:

col[2]: col[7]:

col[3]: col[8]:

col[4]: col[9]:

col[5]: col[10]:

Convert functions

row: column:

Converted value:

fcGetBOOL:

fcGetDINT:

fcGetREAL:

fcGetString:

fcGetDATETIME:

Picture 2 Visualization example compact

CODESYS_Control_Win_V3.Application.prgExample

Expression	Type	Value
fbMsSQL_0	MsSqlLibrary.fbMsSQL	
sHost	STRING	"
uiPort	UINT	1433
tTimeout	TIME	T#1s
sHostName	STRING	'WindowsPLC'
sUserName	STRING	"
sPassword	STRING	"
sDatabase	STRING	"
astQuery	MsSqlLibrary.astQuery	

Picture 3 Example of using fbMsSQL library in FBD language

MsSQL Library SL example for Windows V3

MsSQL Library SL V1.2.0.0 for CODESYS V3.5



Microsoft SQL Server settings

IP Address:

Port:

Username:

Password:

Hostname:

Database:

Connection to the server

Response:

Error:

Current step:

Response

Read data

rows: columns:

No data read!

col[1]: col[6]:

col[2]: col[7]:

col[3]: col[8]:

col[4]: col[9]:

col[5]: col[10]:

Query

Q[0]:

Q[1]:

Q[2]:

Q[3]:

Q[4]:

Q[5]:

Picture 4 Visualization example

Change History

Version	Description	Editor	Date
0.1.0.0	Creation	KrajcarT	20.2.2016
0.2.0.0	Review	KrajcarT	30.5.2016
1.0.0.0	Release	KrajcarT	July 2016
1.1.0.0	New version	KrajcarT	5.9.2016
1.1.0.1	New version	KrajcarT	11.9.2016
1.1.0.2	New version	KrajcarT	18.9.2016
1.1.0.3	New version	KrajcarT	23.9.2016
1.1.0.4	New version	KrajcarT	18.1.2017
1.1.0.5	New version	KrajcarT	27.2.2017
1.2.0.0	New version	KrajcarT	26.3.2017
1.2.0.1	New version	KrajcarT	12.11.2017
1.2.0.2	New version	KrajcarT	16.11.2017
1.2.0.3	New version	KrajcarT	5.2.2018
1.3.0.0	New version	KrajcarT	9.3.2018
1.3.0.1	New version	KrajcarT	30.6.2018
1.3.0.2	New version	KrajcarT	3.11.2018
1.3.0.3	New version	KrajcarT	2.1.2019
1.3.0.4	New version	KrajcarT	5.2.2019
1.4.0.0	New version	KrajcarT	27.10.2019
1.4.0.1	New version	KrajcarT	10.11.2019
1.4.0.2	New version	KrajcarT	24.11.2019
1.4.0.3	New version	KrajcarT	2.1.2020
1.4.0.4	New version	KrajcarT	12.1.2020
1.4.0.5	New version	KrajcarT	24.3.2020