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This document is automatically generated. Because of this, the chapter 30 Visualization is not shown in this document. If you are interested in getting to know more about visualization, we refer to the library manager of e!Cockpit.

Subject to Changes

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Personnel Qualification

All tasks that are carried out with libraries made for the e!COCKPIT software must only be performed by qualified electrical specialists instructed in PLC programming according to IEC 61131-3.

All tasks that have an effect on the properties or the behavior of automation hardware or software products must only be performed by qualified employees with a thorough knowledge of handling the products concerned.

Intended Use of e!COCKPIT Libraries

Libraries created for the e!COCKPIT software are used to simplify the development of application projects in the IEC 61131-3 programming languages.

For automation tasks, WAGO offers programmable logic controllers in a wide variety of performance classes. In combination with a wide range of I/O modules, the controllers can process standard types of field signals. Controllers can be implemented centrally or in decentralized configurations. The controllers offer interfaces for the most commonly used fieldbuses for use in decentralized configurations. Fieldbus independent I/O modules are then linked via fieldbus couplers. WAGO controllers offer a runtime environment for user programs called e!RUNTIME. Software projects for implementation in e!RUNTIME environments can be created in e!COCKPIT. The programming environment in e!COCKPIT is based on the established CODESYS 3 industrial standard. Users with a previous knowledge of CODESYS 3 will thus find this environment largely familiar. The following programming languages of the IEC 61131-3 standard are available:

- Structured Text (ST)
- Ladder Diagram (LD)
- Function Block Diagram (FBD)
- Instruction List (IL)
- Sequential Function Chart (SFC)
- Continuous Function Chart (CFC)

The individual programming languages can also be combined as required during the development of the software. A portfolio of prepared libraries can be accessed for many frequently used functions in order to make software development more efficient. This document provides an overview of the WagoSolElsner that WAGO offers for e!COCKPIT.
This library supports all variants of the P03/3-Modbus weather stations from Elsner Elektronik GmbH. Further library information are summarized here:

- **Company**: WAGO
- **Title**: WagoSolElsner
- **Version**: 1.0.1.0
- **Categories**: Application; WAGO BusinessView|Building Automation; WAGO FunctionalView|Connectivity|Serial; WAGO LayerView|Solution
- **Namespace**: WagoSolElsner
- **Author**: WAGO / u010729
- **Placeholder**: WagoSolElsner

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1 Based on WagoSolElsner.library, last modified 13.08.2019, 21:29:10. The content of this file was automatically generated with None on 13.08.2019, 21:29:12
2.1 doc01_Foreword (FB)

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Personnel Qualification
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Intended Use
For each individual application, the components are supplied from the factory with a dedicated hardware and software configuration. Modifications are only admitted within the framework of the possibilities documented in this document. All other changes to the hardware and/or software and the non-conforming use of the components entail the exclusion of liability on part of WAGO Kontakttechnik GmbH & Co. KG.

Please direct any requirements pertaining to a modified and/or new hardware or software configuration directly to WAGO Kontakttechnik GmbH & Co. KG.

Scope of Applicability
This application note is based on the _stated hardware and software from the specific manufacturer, as well as the associated documentation. This application note is therefore only valid for the described installation. New hardware and software versions may need to be handled differently.

Please note the detailed description in the specific manuals.
3.1 FbMultipleWeatherStation (FB)

Interface variables

<table>
<thead>
<tr>
<th>Scope</th>
<th>Name</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>I_Port</td>
<td>WagoAppPlcModbus.WagoAppCom.WagoTypesCom.I_WagoSysComBase</td>
<td>Name of the COM Port</td>
</tr>
<tr>
<td></td>
<td>atypWeatherStation</td>
<td>POINTER TO typWeatherStation</td>
<td>Array with measured values from the weather stations</td>
</tr>
<tr>
<td>Output</td>
<td>xError</td>
<td>BOOL</td>
<td>Collective fault of all Elsner weather stations</td>
</tr>
<tr>
<td></td>
<td>xIsConnected</td>
<td>BOOL</td>
<td>Devices are connected</td>
</tr>
</tbody>
</table>

Function:
The function block is used for connecting multiple Elsner P03/3-Modbus weather stations to the WAGO I/O System.

Graphical Illustration:

![Function Block Diagram]

3.2 FbSingleWeatherStation (FB)

Interface variables
### Function:

The function block is used for connecting one Elsner P03/3-Modbus weather station to the WAGO I/O System.

### Graphical Illustration:

![Function Block: FbSingleWeatherStation (FB)](image-url)
### 4.1 `typWeatherStation` (STRUCT)

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>oStatus</td>
<td>WagoAppPlcModbus.WagoSysErrorBase.FbResult</td>
<td>Detailed Status information</td>
</tr>
<tr>
<td>sStatus</td>
<td>STRING</td>
<td>Status description as string</td>
</tr>
<tr>
<td>xError</td>
<td>BOOL</td>
<td>Error available</td>
</tr>
<tr>
<td>rOutsideTemperature</td>
<td>REAL</td>
<td>Current outside temperature [°C]</td>
</tr>
<tr>
<td>bSunSouth</td>
<td>BYTE</td>
<td>Solar radiation south [kLx]</td>
</tr>
<tr>
<td>bSunWest</td>
<td>BYTE</td>
<td>Solar radiation west [kLx]</td>
</tr>
<tr>
<td>bSunEast</td>
<td>BYTE</td>
<td>Solar radiation east [kLx]</td>
</tr>
<tr>
<td>wTwilight</td>
<td>WORD</td>
<td>Twilight [Lx]</td>
</tr>
<tr>
<td>rWind</td>
<td>REAL</td>
<td>Wind strength [m/s]</td>
</tr>
<tr>
<td>xRain</td>
<td>BOOL</td>
<td>Rain (TRUE)</td>
</tr>
<tr>
<td>rAzimuth</td>
<td>REAL</td>
<td>Solar azimuth [°]</td>
</tr>
<tr>
<td>rElevation</td>
<td>REAL</td>
<td>Solar elevation [°]</td>
</tr>
<tr>
<td>rLongitude</td>
<td>REAL</td>
<td>Longitude [°]</td>
</tr>
<tr>
<td>rLatitude</td>
<td>REAL</td>
<td>Latitude [°]</td>
</tr>
<tr>
<td>dtUtcTime</td>
<td>DT</td>
<td>Actual UTC-Time from GPS-receiver</td>
</tr>
<tr>
<td>xGPS_Signal</td>
<td>BOOL</td>
<td>GPS Signal received (TRUE)</td>
</tr>
</tbody>
</table>
## ParameterList (PARAMS)

<table>
<thead>
<tr>
<th>Scope</th>
<th>Name</th>
<th>Type</th>
<th>Initial</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>UP-DATE_INTERVAL</td>
<td>TIME</td>
<td>TIME#1s0ms</td>
<td>Update interval for the Elsner MODBUS weather station</td>
</tr>
</tbody>
</table>
### VersionHistory (GVL)

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WagoSysVersion.ProjectInfo</td>
</tr>
</tbody>
</table>

**WagoAppTemplate.library**

<table>
<thead>
<tr>
<th>date</th>
<th>version</th>
<th>author</th>
<th>change</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.01.2019</td>
<td>1.0.1.0</td>
<td>u015842</td>
<td>Properties: free placeholder added</td>
</tr>
<tr>
<td>07.02.2018</td>
<td>1.0.0.1</td>
<td>WAGO / u010188</td>
<td>Category assignment “App” removed</td>
</tr>
<tr>
<td>28.09.2017</td>
<td>1.0.0.0</td>
<td>WAGO / u010729</td>
<td>Release</td>
</tr>
</tbody>
</table>

**Release Notes:**
Library Reference

This is a dictionary of all referenced libraries and their name spaces.

**Standard**

*Library Identification:*
- Placeholder: Standard
- Default Resolution: Standard, * (System)
- Namespace: Standard

*Library Properties:*
- LinkAllContent: False
- QualifiedOnly: False
- SystemLibrary: False
- Optional: False

**WagoAppPlcModbus**

*Library Identification:*
- Placeholder: WagoAppPlcModbus
- Default Resolution: WagoAppPlcModbus, * (WAGO)
- Namespace: WagoAppPlcModbus

*Library Properties:*
- LinkAllContent: False
- Optional: False
- QualifiedOnly: True
- SystemLibrary: False
- PublishSymbolsInContainer: True

**WagoAppTime**

*Library Identification:*
- Placeholder: WagoAppTime
- Default Resolution: WagoAppTime, * (WAGO)
- Namespace: WagoAppTime
Library Properties:

- LinkAllContent: False
- QualifiedOnly: False
- SystemLibrary: False
- Optional: False

WagoSysBSDSocket

Library Identification:
Placeholder: WagoSysBSDSocket
Default Resolution: WagoSysBSDSocket, * (WAGO)
Namespace: WagoSysBSDSocket

Library Properties:

- LinkAllContent: False
- QualifiedOnly: False
- SystemLibrary: False
- Optional: False

WagoSysErrorBase

Library Identification:
Placeholder: WagoSysErrorBase
Default Resolution: WagoSysErrorBase, * (WAGO)
Namespace: WagoSysErrorBase

Library Properties:

- LinkAllContent: False
- QualifiedOnly: False
- SystemLibrary: False
- Optional: False
- PublishSymbolsInContainer: True

Library Parameter:
Parameter: RES_LOG_MAX_FILESIZE = 2000
Parameter: RES_LOG_MAX_FILES = 1
Parameter: RES_LOG_MAX_ENTRIES = 200
Parameter: RES_LOG_NAME = ‘WagoAppResultLogger’

WagoSysVersion

Library Identification:
Name: WagoSysVersion
Version: 1.0.0.0
Company: WAGO
Namespace: WagoSysVersion
Library Properties:

- LinkAllContent: False
- QualifiedOnly: False
- SystemLibrary: False
- Optional: False

WagoTypesCommon

Library Identification:
Placeholder: WagoTypesCommon
Default Resolution: WagoTypesCommon, * (WAGO)
Namespace: WagoTypes

Library Properties:

- LinkAllContent: False
- Optional: False
- QualifiedOnly: False
- SystemLibrary: False
- PublishSymbolsInContainer: True

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