

Readme

For sample project:

Readme_Demo_CDS_3.5.14_TBEN_PLC_L5_10_TBEN_S2_4IOL_RFID_IOL2_V1.
0.0.0

Content

1.	General information	2
1.1	Revision history and changes	2
1.2	Instructions for use.....	2
1.3	Range of validity	2
2.	Reference Material.....	3
2.1	Hardware	3
2.2	Software	3
3.	Application Setup	3
3.1	Configuration.....	4
3.2	Description of the function	6
4.	Operation Manual	7

1. General information

1.1 Revision history and changes

Revision	Date	Author	Changes
0.10	15.03.2020	A.Bäker	Initial version
0.20			
1.00	17.03.2020	A.Bäker	The revision should be changed to version 1.00 with the technical release. Revision below 1.00 are unreleased preliminary revisions.

1.2 Project information

Topics	Data
Name of the sample project :	Readme_Demo_CDS_3.5.14_TBEN_PLC_L5_10_TBEN_S2_4IOL_RFID_IOL2_V1.0.0.0
Short description / Target definition :	
Category :	
Department / Company / Author ID :	Hans Turck GmbH&Co.KG Mülheim an der Ruhr

1.3 Instructions for use

This sample project has been created with great care and is available to the USER free of charge. TURCK does not guarantee faultlessness, excludes all liability and warranty claims, which can be excluded by law and has no obligation to correct any errors. This example project has been tested to a limited extent and has been tested only for its functionality as described. Compliance with the applicable standards, regulations and guidelines as well as the responsibility for safety considerations and use of the sample project is subject to the USER.

1.4 Range of validity

This sample project is based on the hardware and software of the respective manufacturers as well as on the associated documentation. Therefore, this example project only applies to the described installation. New hardware and software versions may require modified handling. Please see the detailed description in the respective manuals.

2. Reference Material

2.1 Hardware

List of used Hardware and their firmware versions.

Vendor	Part no.	Type	Revision	Comment	Quantity
Siemens	100000272	TBEN-L5-PLC-11	FW v1.4.9		
Turck	6814029	TBEN-S2-4IOL	FW3.4.0.0		

2.2 Software

Operating system information

Used programming software and configuration tools (e.g. Programming environment, libraries, device files, etc.)

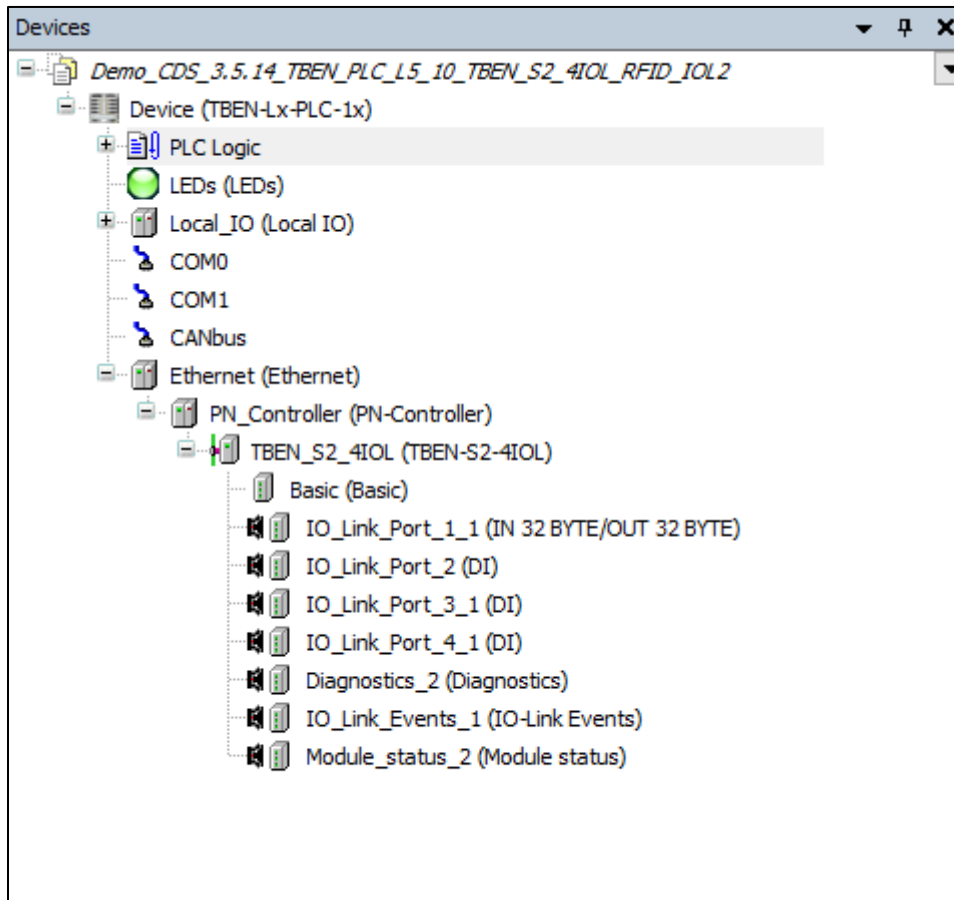
Vendor	Type	Revision	Comment
Codesys	Codesys V3	V3.5 SP14 Patch 2	

3. Example Application (Demo)

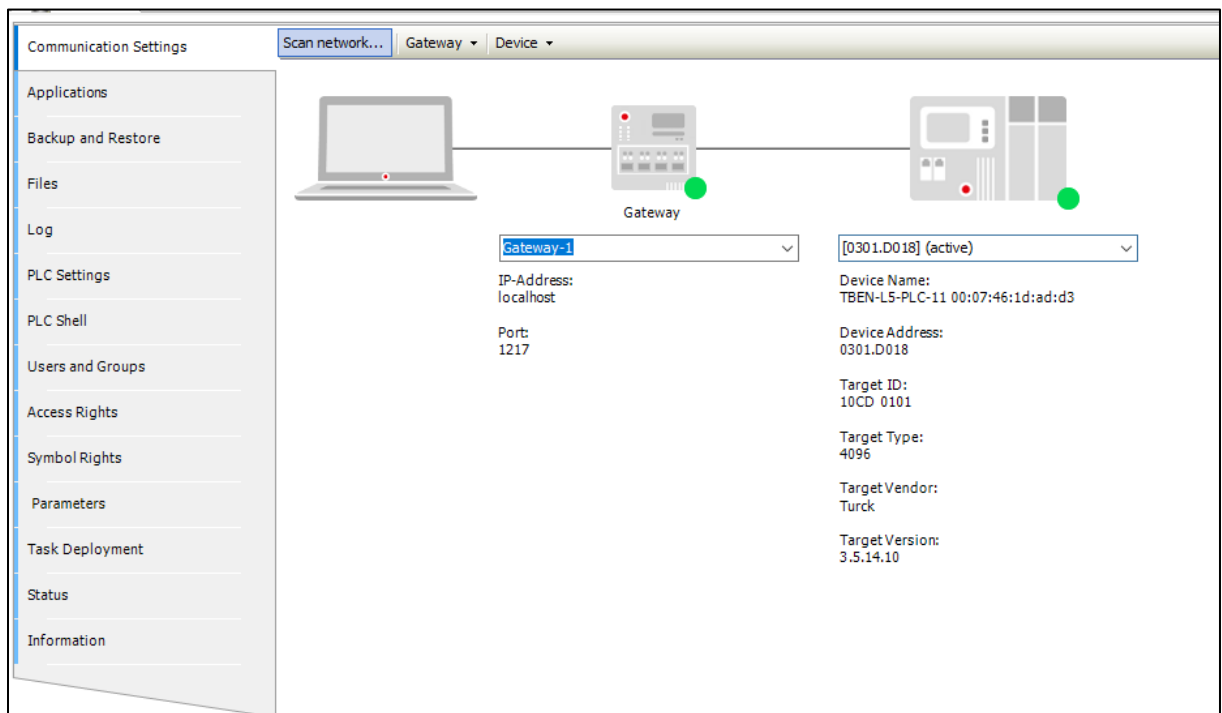
This is an example program to show the function block for RFID IOL2 device of the TBEN-S2-4IOL module on a TBEN-L5-PLC.

3.1 Configuration

3.1.1. Overview of the devices



3.1.2. IP settings of the TBEN-L5-PLC PLC



3.1.3. PN settings of the TBEN-S2-4IOL

General

Options

IOxS

PNIO I/O Mapping

PNIO IEC Objects

Status

Information

Station Name

tbens4iol

Station Status

IP Parameter

IP Address

192 . 168 . 1 . 2

Subnet Mask

255 . 255 . 255 . 0

Default Gateway

0 . 0 . 0 . 0

Communication

Send Clock (ms)

2

Watchdog (ms)

24

Reduction Ratio

4

VLAN ID

0

Phase

-

RT Class

RT Class 1

Settings

Set all default values

Read all values

Write all values

Parameters	Value	Datatype	Allowed values	Description
PROFINET configuration				
Output behav. at communic. loss	set to 0	BitArea		
Deactivate all diagnostics	no	Bit		
Deactiv. load voltage diagn.	no	Bit		
Deactivate I/O-ASS. Force Mode	no	Bit		
Fieldbus configuration				
Deactivate Modbus TCP	no	Bit		
Deactivate EtherNet/IP	no	Bit		
Deactivate PROFINET	no	Bit		
Deactivate WEB server	no	Bit		

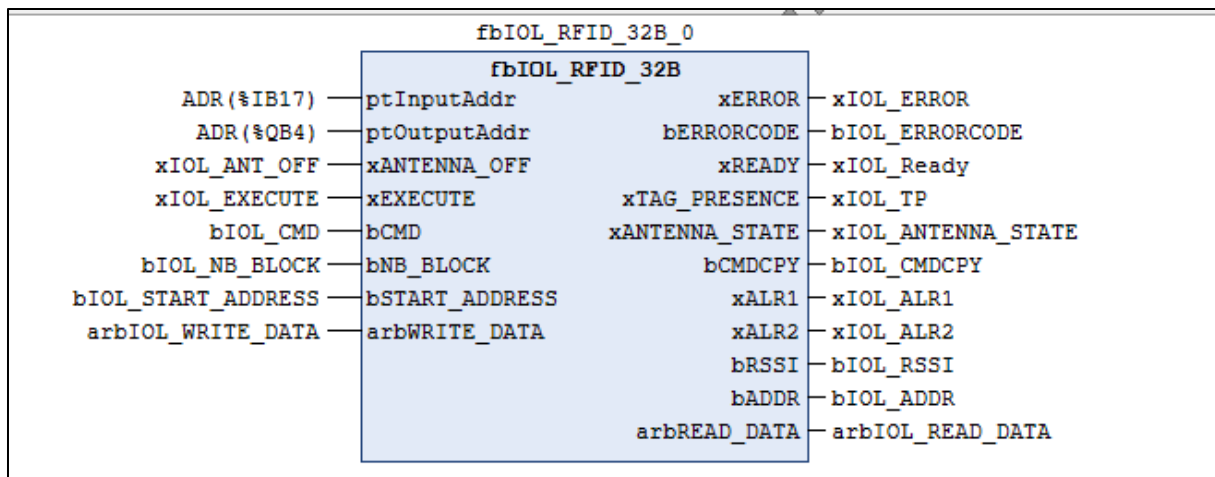
Page 5

3.2 Description of the function

3.2.1. fbIOL_RFID_32B

3.2.1.1 General overview

Call in the "PLC_PRG"



Inputs	Typ	
ptInputAddr	Pointer	Inputaddress of IO-Link port
ptOutputAddr	Pointer	Outputaddress of IO-Link port
ANTENNA_OFF	BOOL	Antenna switsch on(FALSE) and off(TRUE)
EXECUTE	BOOL	Command execute (Execution on positive and negative edge)
CMD	BYTE	Command 1 = auto read; 2 = auto write; 3 = read; 4 = write; 5 = UID
NB_BLOCK	BYTE	Lenth of Blocks
START_ADDRESS	BYTE	Start address
arbWRITE_DATA	Array[0..27] of Byte	Write data
Outputs		
ERROR	BOOL	Error
ERRORCODE	BYTE	Errorcode (Description see manual)
READY	BOOL	Command executed successfully
TAG_PRESENCE	BOOL	TAG available
ANTENNA_STATE	BOOL	Antenna activated ON = TRUE; OFF = FALSE
CMDCPY	BYTE	Selected command
ALR1	BOOL	Alarm 1 can be set in the device
ALR2	BOOL	Alarm 2 can be set in the device
RSSI	BYTE	Signal strength of the TAG
ADD	BYTE	Selected address
arbREAD_DATA	Array[0..27] of Byte	Read Data

Visualisation

Antenna switch ON/OFF

Command

3

NB_Block

1

Address

0

Execute

Error-Code

0

RSSI

7

Address

0

	WRITE_DATA
0	11
1	22
2	33
3	44
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0

	READ_DATA
0	0
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0

TAG available

Antenna state

Error

Ready

Alert 1

Alert 2

3.3 Operation Manual

For more information on the TN-xx-IOL2-H1141 see manual