

Comlynx to Modbus TCP protocol conversion

Description

This article describes WCC Lite configuration steps to enable Comlynx protocol conversion to Modbus TCP



<https://www.youtube.com/embed/mTSQG8vIQCA>

First steps

Before you begin, make sure you have completed all physical installation work according to the manufacturer's installation instructions.

Set up your computer and connect Ethernet cable to WCC Lite ETH0 port. Login with default credentials and setup basic required settings (name, network, users, etc.). You can find configuration tutorials in **How to** articles.

After setup, download configuration template from device (Protocol Hub → Configuration → Template configuration Download)

Or download configuration example from this article **Files**.

To prepare configuration fill information in both - **Devices** and **Signals** sheets:

Configure devices

Add connected inverter with ComLynx protocol required information:

name	device_alias	enable	protocol	timeout_ms	device	baudrate	databits	stopbits	parity	flowcontrol
Inverter	Danfoss_INV_1	1	ComLynx	2000000	PORT1	19200	8	1	none	none

scan_rate_ms	retry_count	network	subnet	address
--------------	-------------	---------	--------	---------

60000	3	3	2	163
-------	---	---	---	-----

Add Modbus Slave required information:

name	device_alias	enable	protocol	timeout_ms	bind_address
Modbus Slave	Modbus_slave	1	Modbus TCP Slave	500000	0.0.0.0

host	port	mode
192.168.1.1	502	tcp

You can find more options and descriptions of the settings in [Device configuration](#) article.

Configure signals

Add connected inverter signals information. Use inverter manual for information and addresses (**tag_job_todo**).

signal_name	device_alias	signal_alias	enable	tag_type	units	multiply	job_todo	job_todo	number_type
Total energy production	Danfoss_INV_1	Danfoss_1	1	Normal	kWh	0,001	08 01 02	NA	UNSIGNED16
...									

Where in **job_todo** 08 is "module id", 01 - "Index", 02 - "SubIndex" of measurements.

number_type can be found in manual as Data type id converted to data type as follow:

```
0x0: Not defined- Not supported
0x1: Boolean
0x2: Signed 8
0x3: Signed 16
0x4: Signed 32
0x5: Unsigned 8
0x6: Unsigned 16
0x7: Unsigned 32
0x8: Float
0x9: Visible string - Not supported
0xA: Packed bytes - Not supported
0xB: Packed words - Not supported
0xC - 0xF: Reserved- Not supported
```

Add Modbus slave signals information

signal_name	device_aliases	signal_alias	source_device_alias	source_signal_alias	enable	tag_type	units	multiply
Total energy production	Modbus_slave	Modbus_1	Danfoss_INV_1	Danfoss_1	1	Normal	kWh	1.0

common_address	function	info_address	number_type	size
1	3	1	UNSIGNED16	1

Use measurements from inverter as a source to be forwarded.

You can find more options and descriptions of the settings in [Signals sheet](#) article.

Upload configuration

After configuring all devices and signals, follow these steps to check and upload configuration using WCC Excel Utility:

1. **Download** and run WCC Excel Utility;
2. Select Excel file from your computer and click *Convert*;
3. Check if no events in red color occur. If so, edit Excel file according to event text and repeat Step 2;

4. Enter Host and credentials of WCC Lite and click*Upload configuration*.

Another method to upload the configuration is via the web interface:

1. Access the WCC Lite interface via your browser:

Authorization Required

Please enter your username and password.

Username

Password

Login

Reset

2. Upload the Excel configuration:

PROTOCOL HUB

STATUS

SYSTEM

SERVICES

NETWORK

USERS

LOGOUT (ROOT)

CONFIGURATION

IMPORTED SIGNALS

EVENT LOG

PROTOCOL CONNECTIONS

PROTOCOL LOGGER

SCRIPT-RUNNER

Protocol configuration

IMPORT PROTOCOL CONFIGURATION

Here you can import Excel configuration file. Up to 1000 signals are allowed. All previous signals will be replaced.

Configuration file:

Choose File

No file chosen

Import configuration

PLC (IEC-61499) Boot file:

Choose File

No file chosen

Import FBOOT file

IEC61850 Client model file:

Choose File

No file chosen

Import client model file

IEC61850 Server model file:

Choose File

No file chosen

Import server model file

3. After a successful upload, the configuration will appear under the**DOWNLOAD CONFIGURATION** tab:

DOWNLOAD CONFIGURATION

Current configuration (config-elseta-wcc-Comlynx.xlsx):
Last changed: 2024-11-10 01:44:14

Download

Template configurations:

Download

4. If any errors occur during the upload, follow the error messages, fix them along Excel utility guidelines.

Files

- 1. Danfoss inverter manual - Accessing Inverter Parameters via RS485 using the ComLynx protocolDownload
- 2. WCC Excel Utility Download
- 3. Example of configuration fileDownload

Revision #19

★Created 6 October 2020 13:50:53 by Matas

✎Updated 2 December 2024 12:38:12 by Tautvydas Gritė