Platform MX6
Software option S100
CODESYS Modbus RTU/TCP

1 Identification

Identification	
Option ID	S100
Order number	S-05000301-0000
Short name	CODESYS Modbus RTU/TCP
Brief description	With this software option it is possible to operate the control as Modbus Master or as Modbus Slave. Modbus TCP through Ethernet as well as Modbus RTU through serial link are supported.
Revision ID document	V3.0

2 System requirements and restrictions

System requirements and restrictions	
Supported platforms and devices	Berghof PLC devices of the MX6 platform (e.g.: MCs, CCs, DCs). Additional information regarding availability and compatibility can be found in options section of the product catalog.
Firmware	MX6-PLC from version 1.3.1, CODESYS from 3.5 SP5 Patch 4
Additional requirements	— Free RS232 or RS485 port for Modbus RTU — IP network port for Modbus TCP
Restrictions	— Modbus Master supports maximum 32 Modbus-Slaves — Modbus ASCII not supported

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3   Product description

This software option activates the license for the in CODESYS integrated Modbus RTU/TCP stack.

Modbus is a common protocol which makes it possible to exchange data between systems through serial line or through Ethernet/TCP. Modbus knows two roles: Modbus Master and Modbus Slaves. Modbus Master is the active part in communication, the data is set and read on the Modbus Slave devices.
The data exchange with Modbus takes place through prescribed function codes with whom you can access to single bits or bit groups and to 16 bit registers or register groups.

The configuration of the Modbus Master- und Slave-communication is done through the in CODESYS integrated Modbus-configurator.
For that the communication interfaces (Modbus_COM or Ethernet) are integrated into the device tree. The Modbus Master and the Modbus Slave devices are hung under these communication drivers.
In case of a Modbus Masters designated Slave devices have to be configurated.
The configuration of the communication interfaces of the Master and Slave devices is done through the Modbus configurator in CODESYS.

The Modbus variables are provided through the scheduling mechanism in the Modbus stack over the IO image of the PLC application. Various update mechanism like cyclic update or edge triggered update are selectable in the configurator for the particular channels.

For full documentation of the different Modbus device configuration menus please check the CODESYS Online help under:
https://help.codesys.com/webapp/_mod_f_configurator;product=core_modbus_configuration_editor;version=3.5.14.0

4   Technical data

Technical data	
Supported roles	Modbus Master RTU, Modbus Slave RTU, Modbus Master TCP, Modbus Slave TCP
Supported function codes	FC 01 – Read Coils FC 02 – Read Discrete Inputs FC 03 – Read Holding Registers FC 04 – Read Input Registers FC 05 – Write Single Coil FC 06 – Write Single Register FC 15 – Write Multiple Coils FC 16 – Write Multiple Registers FC 23 – Read/ Write Multiple Registers