

IEC Master

Brief Characteristics

- ☒ communicates through protocols IEC 60870-5-101 and IEC 60870-5-104,
- ☒ data transfer through serial line, TCP (client and server) and UDP,
- ☒ displaying of actual signal states and measurement values,
- ☒ generating of general query, time synchronization, commands,
- ☒ ongoing communication recording and storage,
- ☒ statistics displaying,
- ☒ easy configuration of application,
- ☒ possibility of storage and uploading of configuration,
- ☒ demo mode for testing.

Basic Description

The IEC Master primarily serves for testing and verifying the slave devices which communicate through IEC 60870-5-101 and IEC 60870-5-104 protocols. For the data transfer, it is possible to use serial line, TCP protocols (client and server) and UDP. In the configuration of the application, it is sufficient to set only several communication parameters and the application is ready for the use. The database of signals and measurements is created dynamically, it is not necessary to define it in advance. The application provides the states of the signals and the values of measurements (standardized values and decimal numbers), including quality attributes. It is possible to send a general query to the slave device, time synchronization, testing command, single-bit and double-bit command with or without the

timestamp. For diagnostic purposes, the list of the ongoing communication is displayed. For automatic testing of the application, there is the interface for running of the test scripts.

Communication Log

The ongoing communication can be logged. The user can select the level of logging. At the first level, clean data is logged which is sent/comes into/from the selected communication interface. At the second level, transferred data is processed at the level of the connecting/transport layer (establishment and maintenance of the connection, ...). The third level logs the application data (values of signals, measurements ...). It is possible to save the communication log for further analysis at the request of the user, or automatically.

Testing Interface

The IEC Master automatically tests the inputs and outputs of the slave device. It is possible to define the scenario with the events (output control) and the responses to them (requested signal states). In addition, there is defined the time limit (the response must occur within the predefined time). The output of the test is the report which contains the list of changes occurred on the monitored device, including information of whether this change was or was not expected. After termination of the test, there is displayed the statistics of faulty (unexpected) signal states. The incoming measurement only evokes a warning.

