Configuration Dialog Box (D2000/Communication with I/O Devices/Communication Lines)

Communication lines - configuration dialog box

Editing of all objects in the process D2000 CNF is being performed in the configuration dialog box, a specific part of which is common for all editable objects and another part depends on the type of edited object.

The configuration dialog box of communication lines consists of several parts (tabs), which contains similar parameters. The display of particular tabs depends on the category of a particular communication line.

General properties
Groups
Line parameters
Other (name of the tab depends on the communication protocol of the station)
Line modes
Protocol parameters

General properties

Description

A text string describing the communication line. Maximum: 128 characters.
Possibility to use the Dictionary (to open press **CTRL+L**).

Value type

Selection of an object value type. For each communication line, the value type is automatically **Li-Line**.

Line parameters

Category

Category of the communication line. There are the following categories of lines:

- None
- Serial
- Serial Line Redundant
- Serial System & Line Redundant
- MOXA IP Serial Library
- ASYNC
- ASYNC Protocol Redundant
- Ext KOM
- RFC2217 Client
- FILE I/O
- API
- LonWorks
- Modem
- TCP/IP-UDP
- TCP/IP-TCP
- TCP/IP-TCP Redundant
- SerialOverUDP Device Redundant
- SerialOverUDP Line Redundant
- SerialOverUDP System&Line Redundant
- Moxa UDP Cli/Srv Redundant
- Moxa UDP Protocol Redundant
- DDE Client (for DDE Client protocol)
- OPC Client (for OPC Data Access 2.05 & 3.0 Client and OPC Historical Data Access 1.20 Client)
- HTTP Client (for OPC XML Data Access 1.01 Client protocol)
- KMFB02 L&G Profibus (for L&G PROFIBUS protocol)
- KMFB02 Honeywell C-Bus (for Honeywell Excel C-Bus protocol)
- KMFB02 Allen-Bradley DH485 (for Allen-Bradley DH485 protocol)
- OPC UA Client (for OPC Unified Architecture Data Access Client protocol)

The line category determines basically the type of interface to a particular device. The list of available communication protocols in the configuration of stations, which are the line children, varies according to the chosen line category. Most of the lines require the configuration of specific parameters depending on the configured line category. A typical example is an asynchronous communication line and settings of transmission parameters for individual line modes. A detailed description of these parameters and their interpretation you can find in topic communication protocols.

RQ delay

This time represents the delay [ms], that is inserted between an incoming request for communication and its processing via the thread of the communication line. The parameter may be used to slow down (delay) communication or simulation.

Priority

Using this parameter allows setting the priority of the communication line thread. A high value represents a high priority and vice versa.

Communication tracing

There are the following levels to trace the communication with the communication line:

- **None** - no outputs.
- **Screen** - diagnostic outputs are displayed only on the screen (in the window of process D2000 KOM).
- **Screen & Disk** - diagnostic outputs are displayed on the screen and they are saved in *LINE*.LOG text file, where *LINE* is the logical name of a particular line. The output file *line_name.log* is placed in the directory **TRACE**, which is a subdirectory of the application directory. This directory is created automatically and the maximum size of the file is 10 MB. The oldest logs are deleted, new diagnostic logs are stored at the end of the file. Error logs are saved into this file automatically, although the "Monitor & Disk" radio button is not enabled. Error logs are saved automatically, together with the time and date of their occurrence.
- **Disk** - diagnostic outputs are saved only into a file on disk (see "Monitor & Disk"). Error messages are displayed also on the screen.

Other

The name of the tab depends on the communication protocol selected for the station. It contains special parameters of the communication protocol and they are described in the documentation of the respective communication protocol.

Line modes

The **Line modes** tab is accessible only for the **Serial** line category in the configuration window. In modified form, these parameters can be defined also for the lines of "Serial Line Redundant", "Serial System&Line Redundant" and "Moxa IP Serial Library" categories.

Device

Selection of line communication device. For asynchronous communication lines on the Windows platform, there are used the device names COM1, COM2, etc.

Line modes

The table displays the parameters of individual modes of a particular communication line. These parameters are transferred into the communication process as parameters for the setting and behavior of the communication channel. Line, in dependence on category, allows defining several different sets of parameters for communication (up to 4). The choice of particular sets of parameters (mode 1, mode 2, mode 3, or mode 4) that are used for the communication depends on the value of the **Line mode** spin button in the configuration dialog box of a Station object, that uses the communication line. This procedure enables the communication of stations, which communicate with the use of various parameters of the communication line (Baud rate, number of bits, etc.) via one physical line. Parameters of line modes are configured in the dialog box, which is opened after double-clicking the numerical level of a particular mode in the displayed table.

Protocol parameters

This tab contains a full list of protocol communication parameters. They influence and set communication of all stations on a communication line.
When you want to set some parameters you have to choose the communication protocol in the upper part of the tab.

If the protocol is not in the list it means that it has no line protocol parameters.

The list contains the following information:

- Parameter name
- Value
- Technical units and permitted range
- Default value

Only values in the column "Value" can be modified. The parameters, which have been changed, are highlighted (red color).
If you want to set the default parameter back, choose the parameter and click on the "Def" button placed below the list of protocols.

Related pages:

Communication lines