



***MSP1X - Driver of Protocol for MSP-1x
ELMONTEX PLCs
User's Manual***

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1. MSP1X - Driver of Protocol for MSP-1x ELMONTEX PLCs

1.1. Driver Use

The MSP1X driver is used for data exchange between MSP1X PLCs made by ELMONTEX and an **asix** system computer. The communication is executed in the RS485 standard according to the protocol developed for MSP1X PLCs by ELMONTEX (no official specification).

1.2. Declaration of Transmission Channel

The full syntax of declaration of transmission channel which operates according to the MSP1X protocol is given below:

```
channel_logical_name=MSP1X, group_no, device_no, port [, baud]
```

where:

MSP1X	- driver name;
group_no	- number of the group to which the controller belongs;
device_no	- number of a controller within the group;
port	- port name: COM1, COM2 etc.;
baud	- transmission channel (by default, 9600).

Other parameters are default:

- 8 bits in a character,
- without parity check (NONE),
- 1 stop bit.

EXAMPLE

The declaration of the logical channel named CHAN1, which works according the MSP1X protocol and exchanges data with the controller with the number 1, within the group with the number 5, by means of the COM2 port, with default transmission parameters:

```
CHAN1 = MSP1X, 5, 1, COM2
```

The MSP1X driver is loaded as a DLL automatically.

1.3. Addressing the Process Variables

The syntax of symbolic address which is used for variables belonging to the MSP1X driver channel is as follows:

```
<type><index>
```

where:

type	- variable type,
index	- index within the type.

Symbols of variable types (the raw variable value type is given in parentheses):

AI	- Analog Input	(WORD),
AO	- Analog Output	(WORD),
BI	- Binary Input	(WORD),
BO	- Binary Output	(WORD),
PV	- Preset Value	(WORD),
PD	- Delta Preset Value	(WORD),
IS	- Binary Input Status	(WORD),
OS	- Binary Output Status	(WORD).

EXAMPLE

Examples of declarations of process variables:

X4, analog input nr 1, AI1, CHAN1, 1, 1, NOTHING
 X5, binary output nr 15, BO15, CHAN1, 1, 1, NOTHING

1.4. Driver Configuration

The MSP1X protocol driver may be configured by use of the section **[MSP1X]** placed in the application INI file. Individual parameters are transferred in separate items of the section. Each item has the following syntax:

item_name=[number [,number]] [YES] [NO]



REINITIALIZATION= [YES/NO]

Meaning - allows to re-initiate a serial port before each communication session with the controller.

Default value - NO.

Defining - *manual.*



WRITE_DELAY= number

Meaning - declares a time interval (in milliseconds) between the data writing to the controller and the next session of data exchange with the controller.

Default value - 1200.

Defining - *manual.*



HEADER_DELAY= number

Meaning - declares a time interval (in milliseconds) between the characters of a command sent to the controller from the **asix** system.

Default value - 50.

Defining - manual.



DTR_DELAY= number

Meaning - declares a time interval (in milliseconds) between sending a command to the controller and setting DTR signaling readiness for data receiving by the **asix** system.

Default value - 2.

Defining - manual.



UPDATE= number

Meaning - declares a time interval (in milliseconds) between the next data reading from the controller to internal driver buffers.

Default value - 5.

Defining - manual.

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