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AS512S7 - Driver of AS512 Protocol for SIMATIC S7 PLCs
User's Manual

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1. AS512S7 - Driver of AS512 Protocol for SIMATIC S7 PLCs

1.1. Driver Use

The AS512S7 driver is used for data exchange with SIMATIC S7 PLCs provided with the CP340 communication processor. The transmission is performed with use of serial interfaces in standard serial ports of a computer according to the AS512 protocol.

The ASKOM company offers the software for the SIMATIC S7 PLC that enables data exchange with **asix** according to the AS512 protocol.

1.2. Declaration of Transmission Channel

The full syntax of declaration of transmission channel operating according to the AS512S7 protocol is given below:

logical_name=AS512S7,*port, [,bauds,character,parity,stop,cpu]*

where:

port	- name of the serial port,
bauds	- transmission speed in bauds,
character	- number of bits in a transmitted character,
parity	- parity check type (even, odd, none),
stop	- number of stop bits,
cpu	- number of the CPU (to which the carried out operation refers) in the controller.

The parameters *bauds*, *character*, *parity*, *stop*, *cpu* are optional. When they are omitted, the default values are as follows:

- transmission speed - 9600 Bd,
- number of bits in a character - 8,
- parity check type - parity check,
- number of stop bits - 1,
- CPU number - 0.

EXAMPLE

An example item, which defines the use of transmission channel operating according to the AS512S7 protocol, is given below:

CHAN1=AS512S7,COM1,4800,8,even,1,2

The transmission channel of the logical name CHAN1 has the following parameters defined:

- AS512S7 protocol using a serial interface,
- port COM1,
- transmission speed of 4800 Bd,
- transmitted character length - 8 bits,
- parity check,
- one stop bit,

- data exchange concerns the CPU no. 2.

During the declaration of process variable its symbolic address is entered. It is an unique definition of the controller variable, the value of which will be assigned to the process variable in **asix**.

1.3. Addressing the Process Variables

The syntax of symbolic address which is used for the variables belonging to the AS512S7 driver channel is presented below:

variabke_type [db_number.]variable_index

where:

variable_type	- string identifying the variable type in the controller;
db_number	- optional number of a data block; it is used only in case of process variables, which are the content mapping of words in data blocks;
variable_index	- variable index within a given type. In case of data blocks, it is the word no. in a data block.

In the AS512S7 protocol only the access to words in data blocks is implemented. For this reason there is only one type of process variables allowed:

ED - values of words in data blocks.

EXAMPLES

ED10.22 - word no. 22 in the data block no. 10

The AS512S7 driver is loaded as a DLL automatically.