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AS511 - Driver of AS511 Protocol for SIMATIC S5 PLCs
User's Manual

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1. AS511 - Driver of AS511 Protocol for SIMATIC S5 PLCs

1.1. Driver Use

The AS511 driver is used for data exchange with SIMATIC S5 PLCs by means of a programmer interface. The transmission is performed with use of serial interfaces of standard serial ports of **asix** system computers provided with the RS232C converter – current loop 20 mA. The operation of **asix** with PLCs with use of the AS511 protocol doesn't require any program modification in the controller.

The AS511 driver of the **asix** system may be used for data exchange with the following PLC types: S5-90U, S5-95U, S5-100U, S5-115U, S5-135U.

1.2. Declaration of Transmission Channel

The syntax of declaration of transmission channel operating according to the AS511 protocol is given below:

logical_name=AS511,*port,[baud,character,parity,stop]*

where:

port	- serial port name;
baud	- transmission speeds in bauds; the transmission speed must be equal to 9600 bauds;
character	- number of bits in a transmitted character;
parity	- parity check type (even, odd, none).

The parameters *baud*, *character*, *parity*, *stop* i *buffer* are optional. When they are omit, 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 - 2.

EXAMPLE

An example item defining the use of transmission channel operating according to the AS511 protocol is given below:

CHAN1=AS511,COM1

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

- AS511 protocol using a serial interface,
- port COM1,
- transmission speed of 9600 Bd,
- transmitted character length - 8 bits,
- parity check,
- two stop bits.

1.3. Addressing the Process Variables

The syntax of symbolic address which is used for variables belonging to the AS511 driver channel is as follows:

variable_type [db_number.]variable_index

where:

variabletype	- 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 map the content 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.

The following symbols of process variables are allowed:

EA	- states of outputs, transferred in bytes,
EAW	- states of outputs, transferred in words,
EE	- states of inputs, transferred in bytes,
EEW	- states of inputs, transferred in words,
EM	- states of marks (flags), transferred in bytes,
EMW	- states of marks (flags), transferred in words,
EZ	- states of counters, transferred in words,
ET	- states of clocks, transferred in words,
ED	- values of words in data blocks,
EL	- values of double words in data blocks,
EG	- values of double words in data blocks, treated as a floating-point number in KG format,

EXAMPLES

ED10.22	- word no. 22 in the data block no. 10
EL20.32	- double word placed in words no. 32 and no. 33 in the data block no. 20
EZ50	- counter no. 100

1.4. Driver Configuration

☑ ***BLOCK= YES/NO***

Meaning	*- allows reading the whole data block.*
Default value	*- YES*

NOTE

The AS511 driver (from 1.23 version) allows reading words of data placed in data blocks by reading the whole block instead of determined part of cashe (like it was in the previous version). It allows data reading from the 115F controller. Reading the whole block is possible if the parameter 'block' is placed in the INI file in the [AS511] section.