



***AS512 - Driver of AS512 Protocol for  
SIMATIC S5 PLCs  
User's Manual***

Doc. No. ENP4006  
Version: 29-08-2005

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# 1. AS512 - Driver of AS512 Protocol for SIMATIC S5 PLCs

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## 1.1. Driver Use

The AS512 driver is used for data exchange with SIMATIC S5 PLCs provided with the CP524/CP525 communication processor. The transmission is performed with use of serial interfaces of standard or additional serial ports of a computer.

The controller software must be prepared for cooperation with **asix**, i.e.

- program in a CPU controller must include calls of functional blocks handling receiving and sending telegrams with use of a CP524/CP525 communication processor (*SEND\_ALL*, *RECV\_ALL*). The number of calls of these blocks within a controller operation cycle define the number of telegrams, which may be sent during the cycle between the computer and controllers !
- software of communication processor must use the 3964R procedure and transmission speed must be the same as the rate declared in the transmission channel of ASMEN.

## 1.2. Declaration of Transmission Channel

The full syntax of declaration of transmission channel operating according to the AS512 protocol is given below:

*logical\_name=AS512,port, [,baud,character,parity,stop,cpu]*

where:

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

The parameters *baud*, *character*, *parity*, *stop*, *cpu* i *buffer* are optional. In case of omitting them 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 AS512 protocol, is given below:

CHAN1=AS512,COM1,4800,8,even,1,2

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

- AS512 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.

### 1.3. Addressing the Process Variables

During declaration of process variable its symbolic address is entered. It is used as a unique definition of the controller variable, the value of which will be assigned to the process variable in **asix**. The syntax of symbolic address which is used for the variables belonging to the AS512 driver channel, is presented below:

*variabke\_type [db\_number.]variable\_index*

where:

<i>variable_type</i>	- string identifying the variable type in the controller;
<i>db_number</i>	- 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;
<i>variable_index</i>	- 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 types (following the names of variable types used by SIEMENS) are permitted:

EA	- states of outputs, transferred in bytes,
EE	- states of inputs, transferred in bytes,
EM	- states of marks (flags), transferred in bytes,
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 number in the KG floating-point format.

**EXAMPLES**

ED10.22	- word no. 22 in the data block no. 10
EZ100	- counter no. 100

The AS512 driver is loaded as a DLL automatically.

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