



***MUPASZ - Driver of MUPASZ Device  
Protocol  
User's Manual***

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# 1. MUPASZ - Driver of MUPASZ Device Protocol

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## 1.1. Driver Use

The MUPASZ driver is used for data exchange between MUPASZ or MUPASZ2000 devices and an **asix** system computer. The communication is performed with use of serial interfaces in the RS232C or RS485 standard.

## 1.2. Declaration of Transmission Channel

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

*logical\_name*=MUPASZ, *number*, *port*, *AlSygOf*, *AlWyłOf*, *AlBlokOf*

where:

MUPASZ	- driver name;
<i>number</i>	- number assigned to the remote device;
<i>port</i>	- name of the serial port;
<i>AlSygOf</i>	- number added to the event number with <b>signalization</b> executing mode in order to build a unique number of the alarm transferred to the <b>asix</b> system;
<i>AlWyłOf</i>	- number added to the event number with <b>shutdown</b> executing mode in order to build a unique number of the alarm transferred to the <b>asix</b> system;
<i>AlBlokOf</i>	- number added to the event number with <b>shutdown with lock</b> executing mode in order to create a unique number of the alarm transferred to the <b>asix</b> system.

### EXAMPLE

The declaration of the logical channel named CHAN1, which works according to the MUPASZ protocol and has parameters as below:

- number of remote device - 4
- port - COM1
- number added to the number of event **signalization** - 100
- number added to the number of event **shutdown** - 200
- number added to the number of event **shutdown with lock** - 300

is as follows:

CHAN1=MUPASZ, 4, COM1, 100, 200, 300

The MUPASZ 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 MUPASZ driver channel is as follows:

<variable\_type><channel>.<index>

where:

*variable\_name* - process variable type,  
*index* - index of a process variable within the type.

Types of process variable:

P - measurement values (FLOAT),  
 B - state of locks arriving with measures (WORD),  
 L - values of counters (WORD),  
 F - status arriving with measurements and events (WORD).

### EXAMPLE

Example of declarations of variables:

X1, current Io,	P1,	CHAN1, 1, 1, NOTHING_FP
X2, I1 accum.,	P31,	CHAN1, 1, 1, NOTHING_FP
X3, state of blockade no. 1,	B1,	CHAN1, 1, 1, NOTHING
X4, counter of switch openings,	L1,	CHAN1, 1, 1, NOTHING
X5, counter of motor startups,	L25,	CHAN1, 1, 1, NOTHING
X6, switch state,	F1,	CHAN1, 1, 1, NOTHING

## 1.4. Generating Alarms

Numbers of events generated by a remote device have the same range of variation. In order to be able to uniquely determine which device the event comes from, the MUPASZ driver adds to the event number the number specified in the channel declaration as *AlSygOf* (for signalization), *AlWyOf* (for shutdowns) or *AlBlokOf* (for shutdowns with lock). In such way this number is transferred to the **asix** system as an alarm number.

For some alarms the MUPASZ driver may transfer values coming with events (activation time or current). These values may be read by giving a formatting string (%3.0f) in the definition of an alarm message.

In order to transfer alarms the MUPASZ driver uses the function *AsixAddAlarmGlobalMili()* by default. The item *GLOBAL\_ALARMS* allows to change default settings and to transfer alarms by means of the function *AsixAddAlarmMili()*.

## 1.5. Driver Configuration

The MUPASZ protocol driver may be configured by use of the **[MUPASZ]** section 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*]



*LOG\_FILE*=*file\_name*

Meaning - the item allows to define a file to which all diagnostic messages of the MUPASZ driver and information about contents of telegrams received and sent by the MUPASZ driver will be written. If the item does not define the full path, then the log file is created in the current directory. The log file should be used only while the **asix** start-up.

Default value - by default, the log file is not created.

Defining - manual.



**TRANSMISSION\_DELAY=number**

Meaning - the item allows to specify the time period (as a multiple of 10 msec) between successive operations on the MUPASZ bus.

Default value - by default, the item assumes a value of 1 (10 msec).

Defining - manual.



**NUMBER\_OF\_REPETITIONS=number**

Meaning - the item allows to specify a number of repetitions in case of a transmission error.

Default value - by default, the item assume a value of 0 (no repetitions).

Defining - manual.



**DATA\_UPDATE=number**

Meaning - the item allows to define the time period (in seconds), after which the driver should update values of process variables stored in internal driver buffers.

Default value - by default, the item assumes a value of 1.

Defining - manual.



**TIME\_UPDATE=number**

Meaning - the item allows to define a time period (in seconds), after which an actual time should be sent to remote devices.

Default value - by default, the item assumes a value of 60.

Defining - manual.



**GLOBAL\_ALARMS=YES/NO**

Meaning - the item controls the way of transferring alarms read from remote devices to the **asix** alarm system.

Default value - by default, the alarms are transferred to the alarm system as global alarms (transferred by means of the function *AsixAddAlarmGlobalMili()*). Setting the GLOBAL\_ALARMS item value causes that alarms are transferred to the alarm system by means of the function *AsixAddAlarmMili()*.

Defining - manual.



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