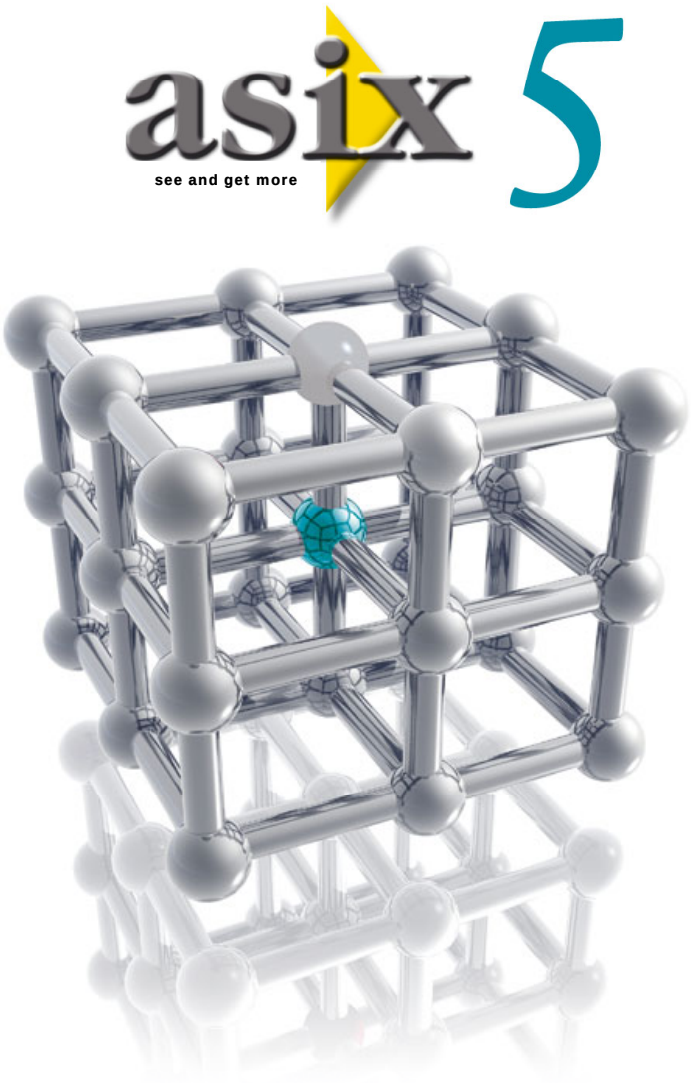

MicroSmart – Driver for Data Exchange with MicroSmart Controllers from IDEC

User's Manual

Doc. No. ENP5072
Version: 01-02-2008

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1. MicroSmart – driver for data exchange with MicroSmart controllers from IDEC

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Driver designation

The MicroSmart protocol driver allows data with MicroSmart controllers from IDEC to be exchanged.

The transmission is executed with the use of serial ports by means of standard **asix** system computer serial ports. Cooperation of the **asix** system with the MicroSmart controller does not require any intervention in the driver program.

The parameterization of the MicroSmart driver is performed by the Architect application.

Transmission channel declaration

The declaration of the transmission channel utilizing the MicroSmart driver requires a channel with the following parameters to be added to the *Current data* module:

Standard tab:

Name: logical name of the transmission channel
Driver: MicroSmart

MicroSmart tab:

Network device number – number between 0-31 or 255; number 255 can only be used when a device is connected to the port
Port – serial port name (COM1 ... COM256)
Transmission speed in bauds
Character bits number
Parity control – parity control type:
- no control
- even control
- odd control
- mark
- space

Stop bits number – values: 1; 1.5; 2

Transmission speed in bauds, *Character bits number*, *Parity control* and *Stop bits number* are optional. If those are ignored, the following default values are adopted:

transmission speed - *9600,*
number of bits in character – - *7,*
parity control type - *parity control,*
number of stop bits - *1*

EXAMPLE

An example of channel declaration:

Name: MicroSmart
Driver: MicroSmart
Network device number: 5
Port: COM1

Process variable addressing

The symbolic address for variables belonging to the MicroSmart channel has the following syntax:

variable_typevariable_index

where:
variable_type - string identifying the variable type in the controller;
variable_index - variable index within the given type; in the case of data blocks, this is the word number in the data block.

The following marking of the process variables types are allowed:

Q - single input status
QB - statuses of outputs, transmitted in bytes,
QW - statuses of inputs, transmitted in words,
I - single input status,
IB - statuses of inputs, transmitted in bytes,
IW - statuses of inputs, transmitted in words,
M - single flag status,
MB - statuses of flags, transmitted in bytes,
MW - statuses of flags, transmitted in words,
R - status of single shift register bit,
RB - statuses of shift registers, transmitted in bytes,
RW - statuses of shift registers, transmitted in words,
T - clock status as a byte of the following value:
  0 - when the time is measured
  1 - when the time measurement is over (timeout)
TC - current values of clocks, transmitted in words,
TP - setting values for clocks, transmitted in words,
TS - clock status bytes
TPVCS - byte of value 1, when the clock setting value was changed, and of value 0 in the opposite case
C - counter status as a byte of the following value:
  0 - when the counter is counting
  1 - when the counting is over (countout)
CC - current statuses of counters, transmitted in words,
CP - setting values for counters, transmitted in words,
CS - counter status bytes

CPVCS - byte of value 1, when the counter setting value was changed, and of value 0 in the opposite case
D - data word
DD - double data word
E - error code as a word (index may have a value of 0-5)

EXAMPLES

M0003	- flag no. 3
MB0005	- byte containing 8 subsequent flags starting from flag 0005
T1	- status of clock no.1
CPVCS7	- byte determining whether the setting value of counter 7 was changed

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• **NOTE**
The last digit of the variable index I,IB,IW,Q,QB,QW,M,MB,MW is an octal digit.