PC interface

Type: PC-02-XX

Version: 10.06.2014

1. Basic features of the device

The PC-02-XX PC interface is intended for connection of incremental sensors providing standard TTL or RS-422 signals to a PC (or PLC).

Standard accessories:

- PC interface for 1 / 2 / 3 / 4 axes, special option for up to 256 axes
- power supply (220V / 50Hz)
- data cable (2m length)
- software
- user manual

Special accessories:

- USB convertor from RS232 to USB connector

2. Technical specifications

Power voltage:	5V (power adapter 220V / 50Hz)
Power current:	30mA / axis (without encoder)
Operating temperature:	+10°C to +40°C
Baud rate:	19,200 bps
Measurement frequency:	500kHz
Stop bit:	1
Data bits:	8
Parity:	none
Data output:	RS-232 / USB
Inputs:	A, B,Z

3. Functions of the PC interface

RS232 parameters: baud rate 19200 bps / 8 bit / parity none / 1 start bit / 1 stop bit / data mode HEX

After power on and 5 second delay (power on time of the unit) the unit is waiting for a signal from the PC / PLC. Format of the 2-byte signal is **XXYY**, where

XX = axis number. Allowable range of values: 00h to FFh (set in the factory).

Standard numbers of the axes:

- 11h - axis No. 1
- 12h - axis No. 2
- 13h - axis No. 3
- 14h - axis No. 4

If the number does not exist, the unit does not respond.

Notice:
Read carefully this manual before using the device. Complaints caused by tampering from the side of the user will not be recognized as legitimate.

YY = command.

Commands:

- **00h -** question: current position of the axis. 3-byte answer of the unit: LLMMHH.
- **80h -** command: moving to reference point (negative edge). The unit does not answer, it is waiting for reference point. When moving over the reference point, the unit sends 3 bytes. Attention! Between the command and the answer of the unit it is not allowed to send any commands to the unit.
- **40h -** command: moving to reference point (positive edge). The unit does not answer, it is waiting for reference point. When moving over the reference point, the unit sends 3 bytes. Attention! Between the command and the answer of the unit it is not allowed to send any commands to the unit.
- **C0h -** this command sets the axis to zero. The unit does not answer, counters are reset. After that the unit is ready to accept commands again.

Other commands are not accepted.

Note : during switch off, current state of all the axes is stored into the memory.

Attention! If the unit accepts a command to move to the reference point and the point does not exist, it is necessary to switch the unit off.

Examples of communication with the unit (parameters – number of the axis 1 is 11h, reference 40h, increment of the encoder 0.005):

1. *Question: position of the axis 1*

Application: sends the command 0011h
Unit: accepts the command 1100h
Unit: sends the answer, eg. ED4D00h
Application: accepts 004DEDh = 19949 (in decimal)
Application: processes data; result value in mm = (19949 * 0.005) mm = 99.745 mm

2. *Reset axis 1*

Application: sends the command C011h
Unit: accepts the command 11C0h
Unit: resets the counter and is ready to accept commands again

3. *Moving to reference point in axis 1*

Application: sends the command 4011h
Unit: accepts the command 1140h
Unit: is waiting for a reference point
Unit: after moving over the reference point the unit sends 3 bytes and is ready to accept commands again
Application: accepts 3 bytes indicating it can send further commands to the unit.