PROGRAMMABLE TRANSDUCER OF DC CURRENT AND DC VOLTAGE

P20H TYPE

Configuration Manual of P20H
Programmable Transducer
by Means of the LPCon Program

Contents

1. CONFIGURATION OF THE P20H TRANSDUCER BY MEANS OF THE LPCon PROGRAM

The LPCon program is destined for the configuration of the P20H transducer. One must connect the transducer through the PD14 programmer and configure the connection, choosing

-> ***Connection configuration*** from the ***Options*** menu (for the P20H transducer, we choose: address 1, 9600 kb/s baud rate, RTU 8N2 mode, timeout 1000, and the suitable COM port under which the PD14 programmer driver has been installed).

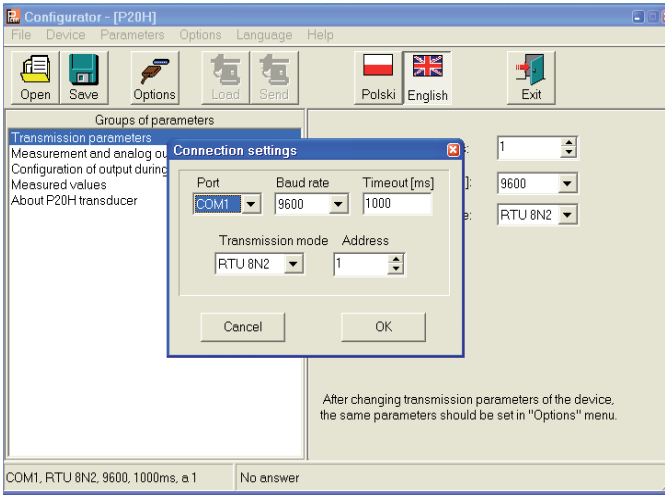

Fig. 1. Connection configuration with the P20H transducer

After the connection configuration, one must choose ***Transducers P*** -> ***P20H*** from the ***Devices*** -> menu, and next click the readout icon in order to read out all parameters.

One can also read out parameters individually in each group by clicking the ***Refresh*** push-button.

To change parameters, one must write the new value in the parameter window and click the ***Apply*** push-button.

1.1. Configuration of Transducer Transmission Parameters

In the parameter group „Transmission Parameters", one can choose: address, baud rate and transmission mode for the version with the output of RS-485 type.

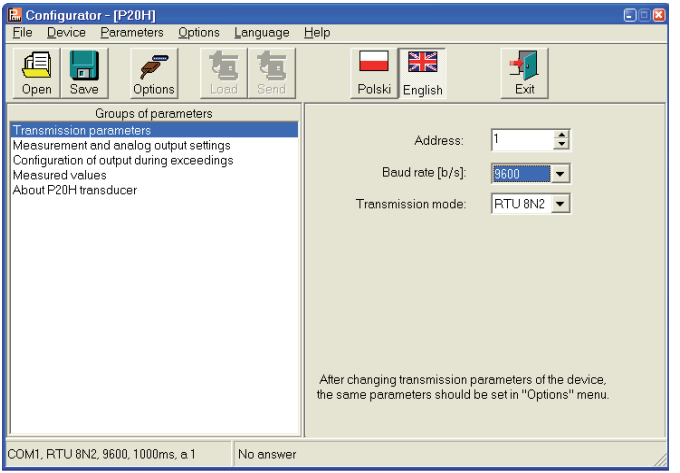

Fig. 2. View of the „Transmission Parameters" window of the LPCon program

Note!

In the version with RS-485, parameters for the communication through RS-485 and the PD14 programmer are the same. After changing transmission parameters, one must set suitable values in ***Options*** -> ***Connection Configuration***.

For versions with analog outputs, the change of transmission parameters does not cause parameter changes for the communication with PD14.

1.2. Configuration of Measuring Parameters and the Analog Output

The P20H transducer enables the conversion of measured values into the output signal on the base of an individual linear characteristic of the analog output. On the base of given by the user coordinates of two points, the transducer determines (from the equation system) coefficients **a** and **b** of the individual characteristic.

$$\begin{cases} Y1Out = a \bullet X1In + b \\ Y2Out = a \bullet X2In + b \end{cases}$$

where:

X1 In and X2 In – measured value

Y1 Out and Y2 Out – expected value on the output

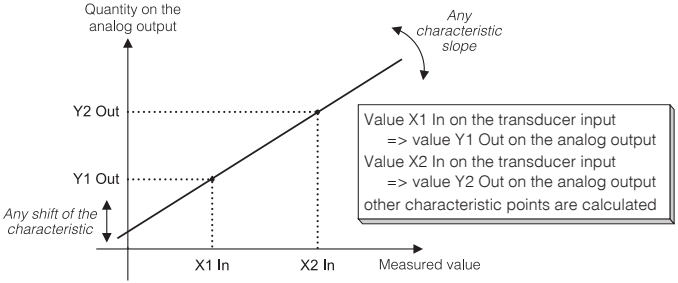

Fig. 3. Individual characteristic of analog outputs

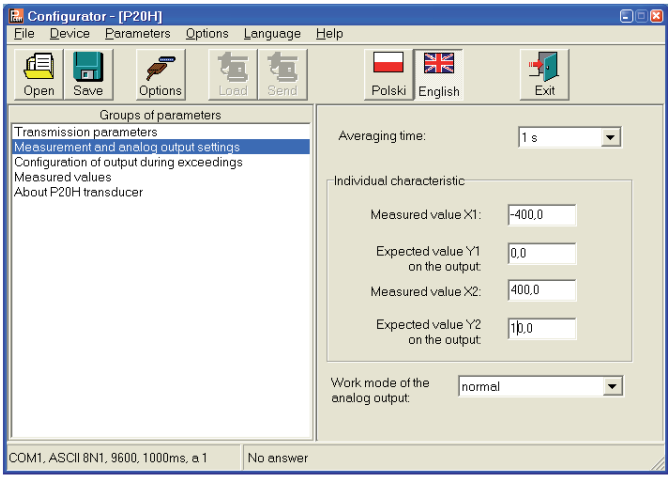

Fig. 4 View of the „Individual characteristic" window of the LPCon program

1.3. Configuration of the Analog Output at Overflows

In the P20H transducer, the user has the additional possibility to configure the behaviour of the analog output after the occurrence of a signal overflow on the measuring input.

The default service of overflows is switched off (except the version with the 4...20 mA output) – then, after the signal overflow on the input, the output signal value is still proportional to the input signal value. After the overflow service switching on, the user can define himself by which value the output will be steered after the occurrence of an upper or lower overflow.

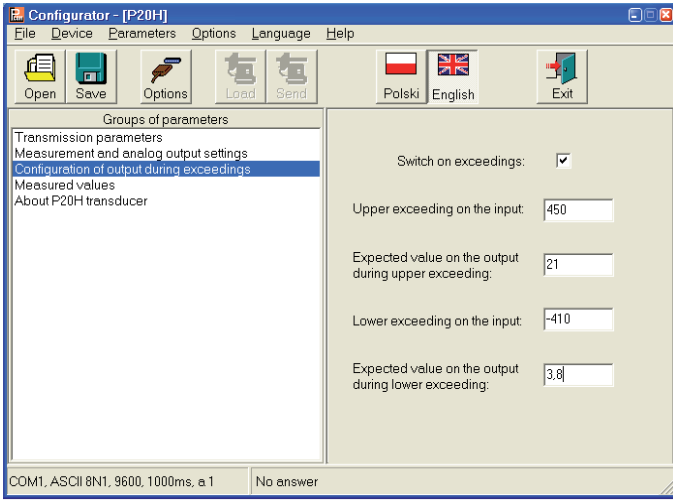

Fig.5. View of the window „ Output configuration at overflows" of the LPCon program

Example:

P20H transducer with a ± 400 V d.c. input and a 4...20 mA output.

The individual characteristic is set: for - 400 V – 4 mA, for 400 V – 20 mA.

Additionally, the user want to prepare the transducer operation so that the output current would not be lower than 3.8 mA and higher than 21 mA.

Solution:

One must calculate a and b coefficients from the individual characteristic (see section 1.2.) next, set the required current value as Y and calculate for which X it occurs.

In this way, one must calculate minimal and maximal input value. For the output value Y=3.8 mA corresponds the input value X = - 410 V, however for the output value Y= 21 mA corresponds the input value X = 450 V. The way to carry out the overflow service for this example is shown on the fig. 5.

1.4. Readout of Measured Value

By means of the LPCon program, one can also read out the currently measured value, check the output steering, read out the serial number and the programming version. These quantities are situated in the ***Measured values*** window.

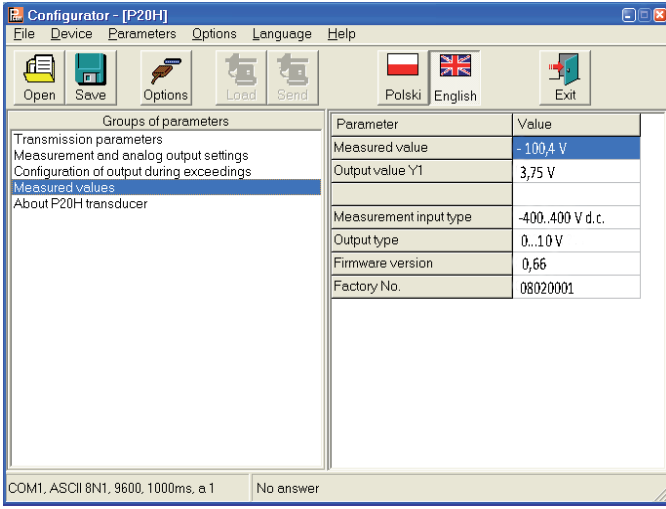

Fig. 6. View of the window „Measured values" of the LPCon program

SALES PROGRAM

MEASUREMENT
CONTROL
RECORDING
ANALYSIS

- DIGITAL AND BARGRAPH PANEL METERS
- MEASURING TRANSDUCERS
- ANALOG PANEL METERS (DIN INSTRUMENTS)
- PROCESS AND POWER CONTROLLERS
- CHART AND PAPERLESS RECORDERS
- 1-PHASE AND 3-PHASE WATT-HOUR METERS
- NUMERICAL AND ALPHANUMERICAL LARGE SIZE DISPLAYS
- ACCESSORIES FOR MEASURING INSTRUMENTS (SHUNTS AND MODULES)
- MEASURING SYSTEMS (LUMEL-PROCESS)
- CUSTOM-MADE ELECTRONIC SUB-ASSEMBLIES ACC. TO ORDERS

WE ALSO OFFER OUR SERVICES IN THE PRODUCTION OF:

- ALUMINIUM ALLOY PRESSURE CASTINGS
- PRECISION ENGINEERING AND THERMOPLASTICS PARTS
- PRESSURE CASTING DIES AND OTHER TOOLS
- CUSTOM-MADE ELECTRONIC SUB-ASSEMBLIES

QUALITY PROCEDURES:

ACCORDING TO ISO 9001 AND ISO 14001 INTERNATIONAL REQUIREMENTS.
ALL OUR INSTRUMENTS HAVE CE MARK.
FOR MORE INFORMATION, PLEASE WRITE TO OR PHONE OUR EXPORT DEPARTMENT

P20H-07/2

LUMEL

Lubuskie Zakłady Aparatów Elektrycznych LUMEL S.A.
ul. Sulechowska 1
65-022 Zielona Góra - Poland

Tel.: (48-68) 329 51 00 (exchange)
Fax: (48-68) 329 51 01
e-mail: lumel@lumel.com.pl
http://www.lumel.com.pl

Export Department:
Tel.: (48-68) 329 53 02 or 53 04
Fax: (48-68) 325 40 91
e-mail: export@lumel.com.pl