ZAKŁADY URZĄDZEŃ PRZEMYSŁOWYCH
ZAM KĘTY SP. Z O.O.

32-650 Kęty, ul. Kościuszki 115
e-mail: zam@zam.com.pl
www.zam.com.pl

tel. centrala: +48 33 847 51 00
tel. sekretariat: +48 33 847 51 03
fax. sekretariat: +48 33 847 51 04

CMR-10A Digital differential micromanometer

Application

CMR-10A Digital differential micromanometer has been designed for making accurate measurements of pressure differential of gases and particularly for the measurements of gas velocities with impact pressure tubes of any type (with known numbers of the shape B) and for the measurements of gas flow through measuring pipes.

CMR-10A Micromanometer is the result of cooperation of the manufacturer i.e. Z.U.P. ZAM Kęty Sp. z o.o. with BAASK company- Measuring Apparatus and Silesian University of Technology.

In measuring systems of P-10ZA dust meter, CMR-10A micromanometer can work together with impact pressure tubes RS25, SRS-25, RSSK, WRSK and with measuring pipe ZP-10ZA. Owing to internal accumulator, CMR-10A is suitable for making measurements both in laboratory and range conditions.

Measurements' results made by CMR-10A micromanometer can be saved in internal memory and after transmission into computer corrected using calculation program "CMR-10A.Operating program."

This program allows particularly:

Within the range of CMR-10A operation:

- Transmission of data recorded in CMR-10A memory into the computer fitted with USB or RS232C port; this transmission can be done in normal or crash mode (if necessary),
- Deletion of CMR-10A memory content,
- Time and data preview of CMR-10A and their synchronisation with a computer,
- Preview of current measurement's results on a computer screen.

Within the range of data management:

- Edition of transmitted data that allows to:
  - browse data and if necessary, exclude recording of the incorrect
  - enter real values of gas density and the number of the shape of an impact pressure tube for measuring series
  - create gas velocity profiles for selected measuring series
  - calculate gas volume flux for selected series that form one measuring cross section,
  - generate measuring protocols for selected series and gas volume flux calculated,
  - save rough or compiled data to a file of the operating program,
  - export rough data to a text file or an Excel file

- Reproduce data from previously saved files (the archival),

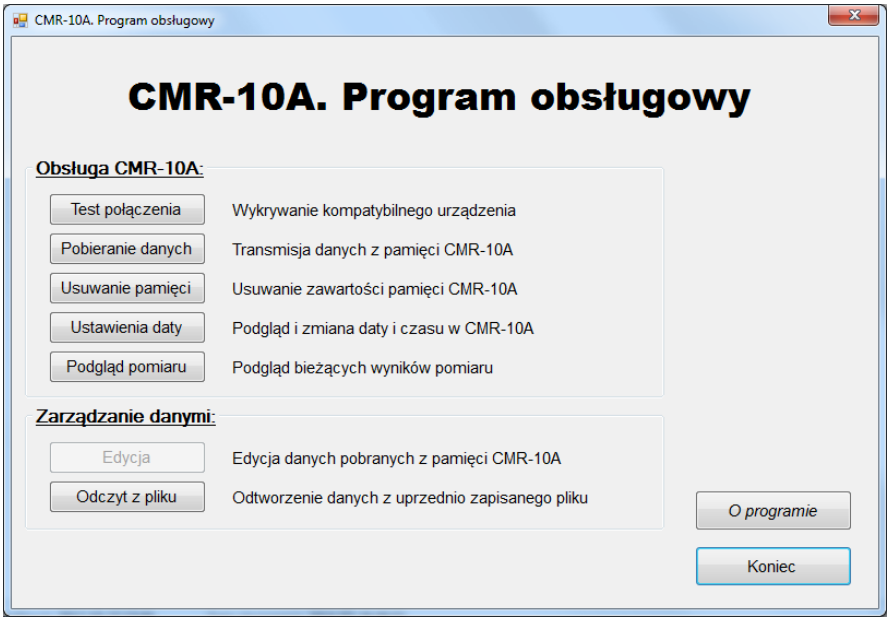

Figure 1: Main window of the program "P-10ZA Operating program"

Technical Data

- Measuring range of pressure differential Δp: ± (0÷1500) Pa (after exceeded - self-locking
- Resolution: 0,1 Pa in the range of +(0,0 ÷ 999,9) Pa; 1 Pa in the range of +(1000 ÷ 1500) Pa
- Maximal measurement uncerainty: ± (0,005 | Δp | +0,5) Pa
- Working temperature range: 0 ÷ 50 ^{o}C
- Display: LED znak +/-, 4 znaki wartości
- Range of set value of gas density product and number of shape of impact pressure tube β: 0,10 ÷ 6,00 kg/m^3 co 0,01 kg/m^3
- Range of set averaging time of measurements' results: 1 ÷ 120 seconds, every 1 second
- RAM memory capacity supplied from accumulator 10 000 measurements' results: 10 000 measurements' results
- Possibility to arrange measurements' results in sectors RAM Memory: Up to 250 sectors
- Automatic reset: Every 120 seconds
- Thermal compensation of differential pressure transmitter
- Power supply: Own accumulator NI-Cd (time of constant work after charging: up to 30 hours); Power supply adapter ~220V / -12V, 2A (used exclusively to charge accumulator)
- Dimensions: 215 x 88 x 188 mm
- Weight: 1,8 kg
- Standard equipment: Power supply adapter, cable RS 232 C with program for computer operation, measurement accuracy examination certificate, user's manual