1. General characteristics of the device

The display PMS-620N/E is designed to co-operate with measuring transducers with standard output signal 4...20mA or 0...20mA. The built-in auxiliary power supply adaptor 24V DC allows to supply the transducer directly from the measuring instrument. A hermetic housing with the IP 65 protection degree predestines this device for work under harsh environmental conditions.

The display enables the programming of the following parameters:

- type of input signal;
- range of indication of the measured value and the position of the decimal point;
- password protecting the access to the programming menu;
- filtration degree of indicated values;

2. Technical data

Input signal	4...20mA or 0...20mA
Range of indication	-999 to 9999
Display	LED 4×20mm
Display error	±0,25%±1 digit
Power supply	230V AC±10%/2,5VA
Built in power adapter	24V DC stabilized, max. 25mA
Working temperature	0...50°C
Storing temperature	-10...70°C
Housing	wall-mounted IP 65

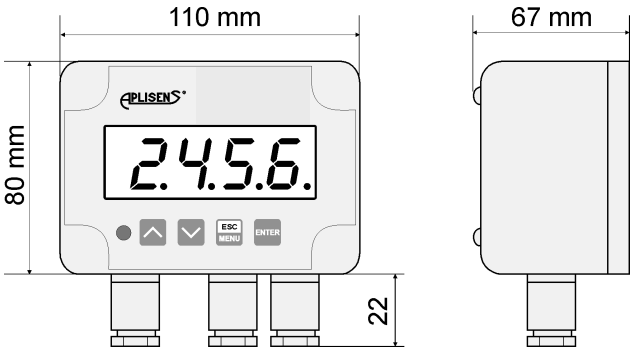

Fig 1 External dimensions of the measuring instrument
Fixing holes spacing 90mm×60mm

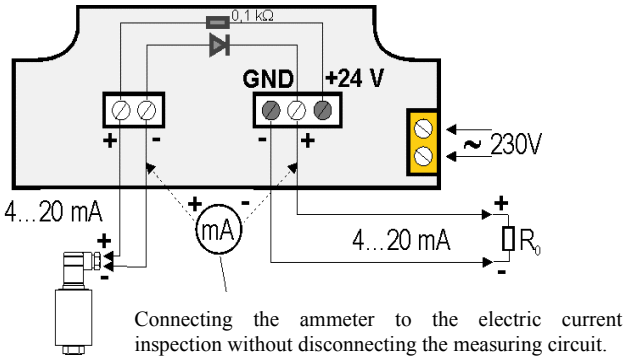

Fig. 2 Scheme of the electric leads

3. Function keys

[ENTER]
starting the edition of parameters;
switching to the lower level of the programming menu;
[ESC/MENU]
entering the configuration and threshold programming menu
leaving the current level of the programming menu – return to the higher level of the menu or to the measuring mode;
[↑], [↓]
changing the position in the programming menu;
increasing the value of the parameter during programming;
changing the working mode of the display;

6. Measuring mode

In the measuring mode, the measuring instrument displays the measured value. If the measuring exceeds the permissible range, the message "ovEr" is displayed.

7. Configuration setting

The switching from the measuring mode to the programming mode is done by pressing the [ESC/MENU] key (it needs to be pressed down for more than 2 seconds) and entering the access password, provided it has been predefined.
The modification of a parameter is possible after selecting a parameter in the programming menu and pressing the [ENTER] key. The keys [↑] and [↓] are used for modification of the current value – a digit for numeric parameters or a switch condition – for switching parameters e.g. selection of the input current range. In case of negative values, the character "-" may be selected in the first decimal position. By pressing the [ENTER] key, one can proceed to the next decimal position. The edition of the parameter ends after pressing the [ENTER] key

following the last decimal digit. The message “Set?” appears then on the display, and another pressing of the [ENTER] key results in acknowledging the modified parameter.
Changes made during the modification of parameters which have not been confirmed by pressing the [ENTER] key following the ”Set?” message may be cancelled anytime by pressing the [ESC/MENU] key – this results in switching to the upper level of the programming menu.

8. Configuration parameters

a) “tYPE” - type of input signal
“4-20” or “0-20”
b) “FiLt” – filtration degree of indicated values in the range of 0...5. The maximum time constant amount to approx. 2 sec.
c) “Pnt” – position of the decimal point
d) “Lo C” – displayed value, representing the minimum current in the selected measuring range
e) “Hi C” – displayed value, representing the maximum current in the selected measuring range
f) “SCod” - password protecting the access to the programming menu. Setting this parameter to the value “0000” means that no password is selected.
g) „Serv” – options available after entering the service password, are used to enter the settings of the measuring instruments (available only to the authorized service station).

9. Determining the displayed value (W)

a) Calculation of the normalized measurement result I_n (within the range of 0...1) according to the following formula:

range 4...20mA

$$I_n = \frac{I_{we} - 4}{16}$$

range 0...20mA

$$I_n = \frac{I_{we}}{20}$$

b) Calculating the result (W):
Meaning of the symbols:
I_n – value of the normalized result (in the range between 0...1)
“Lo C” – indicated value for I_n=0
“Hi C” – indicated value for I_n=1

$$W = I_n \times \left(" HiC" - " LoC"\right) + " LoC"$$

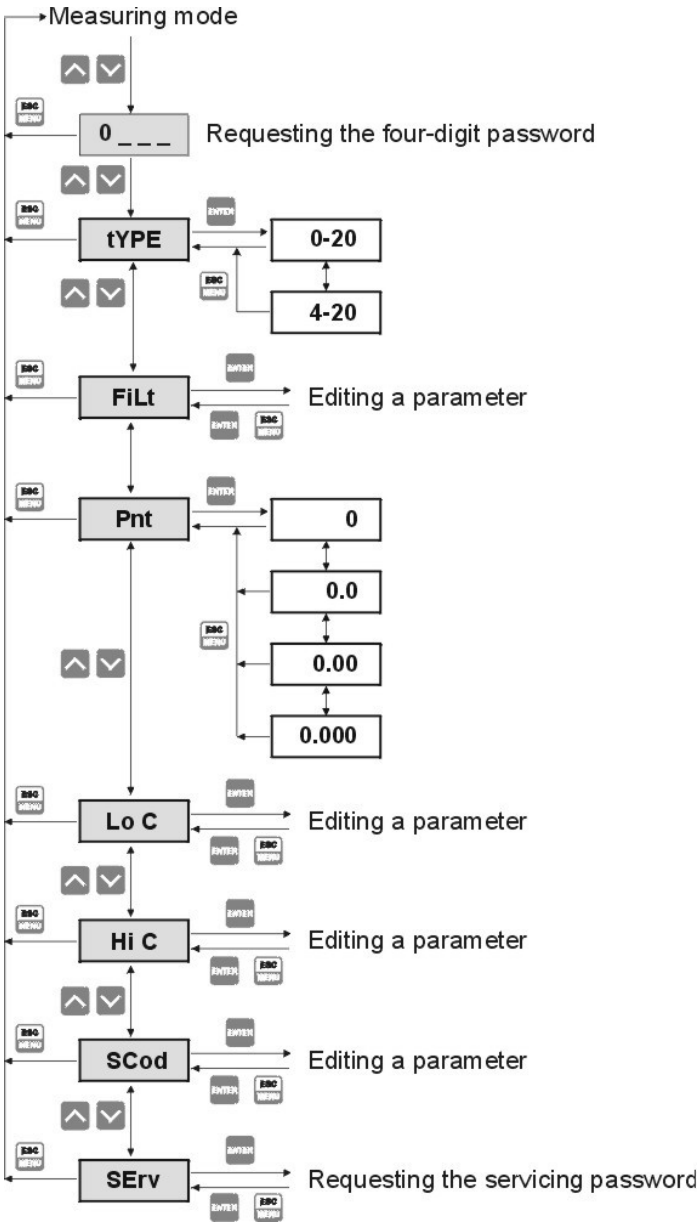

Fig. 3 Structure of the programming menu