

signaling. Then, for entering back into normal limits, the voltage must be within the limits plus programmed hysteresis value, as shown on fig.1. There is no time delay when returning to "within limits" mode.

V4080 programming

V4080 can be programmed via user menu. The user can enter in the menu by pressing the "OK" key when the device is in normal working mode. IT IS FORBIDDEN to press any key when the device is in initialization mode! If V4080 is with option "C" (V4080C), the menu requires user code; the display shows 'uSEr', until "OK" key is depressed. After that the display shows "codE" and the device waits for four-digit user code to be entered. If the entered code is valid, then the user is allowed to the menu; and if the code is invalid, the user cannot have access to the menu and the device returns back to normal working mode. Entering the code is basically four-digit parameter edit (see below). If the device is without option "C", user code is not required and the user is allowed to the menu, the display shows the first parameter in the menu (Hi).

User menu parameters:

- low voltage level (Lo)
Below this level of input voltage V4080 signals for value below limits – with LED and relay
- high voltage level (Hi)
Over this level of input voltage V4080 signals for value above limits – with LED and relay
- display blinking when value is outside programmed limits (bLin)
turns on/off display blinking if the value is outside programmed limits
- hysteresis (HYSt)
This is the hysteresis between voltage entering and exiting "value outside limits" mode ad signalization
- signalization delay (rdEL)
This is the number of consecutive measurements before the device signals that the voltage is outside programmed limits

When entering user menu the display shows "Hi" – the first parameter in the menu. Other parameters can be chosen by pressing '↗' key, and editing the chosen parameter can be done by pressing 'OK' key. Exiting the menu can be done only if parameter is not edited at the moment (i.e. the user can exit the menu only when choosing parameter to edit) by pressing and holding '↗' key and briefly pressing 'OK' key when '↗' is pressed. After exiting the menu V4080 continues to work normally.

IMPORTANT: When the device is in the menu, it does not measure input value and therefore does not alarm if the value is – or not – within the programmed limits. All of the signals remain as they were prior entering the menu!

Parameter editing – if the parameter is chosen by '↗' key, with 'OK' key the user can edit the parameter. If the parameter has several digits to be entered, with both the keys the digits are edited one by one: after entering "parameter edit" mode the display shows the current value of the parameters and the most significant digit is blinking. Blinking of the digit means that it is the current edited digit, and pressing '↗' key increments it with 1. After reaching '9' incrementing the digit resets its value to '0'. Pressing 'OK' key confirms the value of this digit and goes to the next digit, which now blinks. After confirmation of the last digit the parameter is saved and the user goes back to the menu to select another parameter to edit.

If the parameter to edit has several values or options, then with '↗' key the user can go round all the options/values and when selects the correct one, confirms it with the 'OK' key and goes back to the menu.

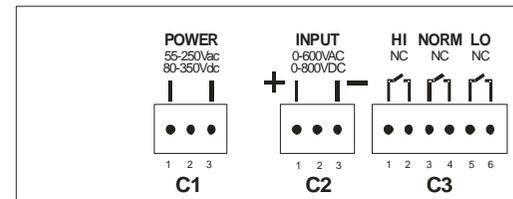
If version of device is "X" then no parameter can be edited by the user – all parameters are written when produced and can only be read.

This table shows the factory default settings and limits for all the parameters in the menu:

Parameter(submenu)	Display	Limits	Default value
High level	Hi	0000-9999	1200
Low level	Lo	0000-9999	0800
Display blinking	bLin	on/oFF	On
Hysteresis	HYSt	0000-0099	0010
Relay delay	rdEL	0000-0099	0008

3. Mounting and electrical connection

V4080 should be mounted on board with opening 43x90mm with mounting kit, supplied with the device. All connections must be made with isolated cables with cross sectional area of 0.75mm²±2.5mm². The connections are shown on the next figure:



C1 'Power'/'Voltage measure'

No	Description
1, 3	Power supply/measured voltage
2	Not used

C2 'Input voltage'

No	Description
1	Input voltage, plus
2	Not used
3	Input voltage, minus

C3 'Relays' – optional

No	Description
1,2	NC "high value"
3,4	NC "normal value" (value within limits)
5,6	NC "low value"

If ordered with separate voltage measuring input C2 – measured voltage must be supplied to this input and the device is powered on C1 with stated power supply; if not - V4080 measures its power supply. C2 is mandatory for device with options "L" and "H". C1, C2 and C3 are galvanically isolated with break-through voltage above 1000VDC.

IMPORTANT: Only qualified personnel, familiar with safety instructions and this user manual should be allowed to work with V4080!

4. Warranty

The warranty of the device is limited to two years from the date of sale. If the device shows any defect or malfunctions during that period, the manufacturer is obligated to repair the device in its own service for manufacturer's expense, or, if the repair is impossible, to replace the device with new one. The transportation costs to the manufacturer's service are due to the client. The warranty voids if this manual instructions are not met, warranty seals are removed or the device was opened by unauthorized by the manufacturer personnel.

Serial number:.....

Date of sale:.....

Signature:.....