

## DT4227 UI (PS)

Process Indicator

## Operating Instructions



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## 1. About this document

### 1.1. Function

This operating instructions manual has all the information you need for quick set-up and safe operation of instrument.

Please read this manual before you start setup.

### 1.2. Target group

This operating instructions manual is directed to trained personnel. The contents of this manual should be made available to these personnel and put into practice by them.

### 1.3. Symbolism used



#### Information, tip, note

This symbol indicates helpful additional information.



#### Caution, warning, danger

This symbol informs you of a dangerous situation that could occur. Ignoring this cautionary note can impair the person and/or the instrument.

#### List

- The dot set in front indicates a list with no implied sequence.

#### Sequence

- 1 Numbers set in front indicate successive steps in a procedure.

#### Parting

- / Parting set in between the elements of a list.  
It's meaning: only one element can be chosen from the list.

## 2. For your safety

### 2.1. Authorized personnel



All operations described in this operating instructions manual must be carried out only by trained and authorized specialist personnel. For safety and warranty reasons, any internal work on the instruments must be carried out only by DATCON personnel.

### 2.2. Appropriate use

The DT4227 UI Process Indicator enable process variable 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, 2-10 V to be displayed in engineering units on the control panel.

Detailed information on the application range of the instrument is available in chapter "Product description".

### 2.3. Warning about misuse



Nem megfelelő vagy helytelen használat — alkalmazástól függően — zavart okozhat a készülékhez kapcsolódó egyéb készülékekben, rendszerekben.

### 2.4. General safety instructions



The DT4227 UI Process Indicator is a high-tech instrument requiring the strict observance of standard regulations and guidelines. The user must take note of the safety instructions in this operating instructions manual, the country-specific installation standard as well as all prevailing safety regulations and accident prevention rules.

### 2.5. CE conformity

A DT4227 UI is in conformity with the provisions of the following standards:

MSZ EN 61326-1 (EMC)

### 2.6. Environmental instructions

Protection of the environment is one of our most important duties. Please take note of the instructions written in the following chapters:

- Chapter 3.6. **Storage and transport**
- Chapter 9.2. **Disposal**

### 3. Product description

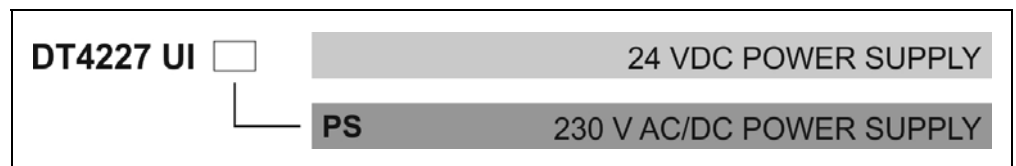
#### 3.1. Delivery configuration

##### Delivered items

The scope of delivery encompasses:

- DT4227 UI
- 4 pc. mounting clamps (enclosed in a nylon bag)
- documentation:  
     this operating instructions manual  
     warranty

#### 3.2. Type designation



#### 3.3. Operating principle

##### Area of application

The DT4227 UI (PS) Process Indicator enable process variable 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, 2-10 V to be displayed in engineering units on the control panel. Any optional display range can be assigned to the input signal range. Large 5 digits LED display make process value easily visible at a distance.

##### Operating principle

The input current or voltage to be measured is led to the 23 bit A/D converter through a protection and signal condition circuit. The digital output signal of the A/D converter is processed by a microcontroller. The microcontroller drives the 5 digit LED display, processes the front panel membrane keypad. Easy on-site configuration through the front panel membrane keypad is a major advantage of the microcontroller-based technology. The configuration parameters: input signal selection, display scaling, decimal point position, display refresh rate, etc. are stored in FRAM. The settings are protected by a two-level password against unauthorized manipulation.

##### Power supply

The instrument has two power supply version:

DT4227 UI	24 VDC power supply
DT4227 UI PS	230 V AC/DC power supply

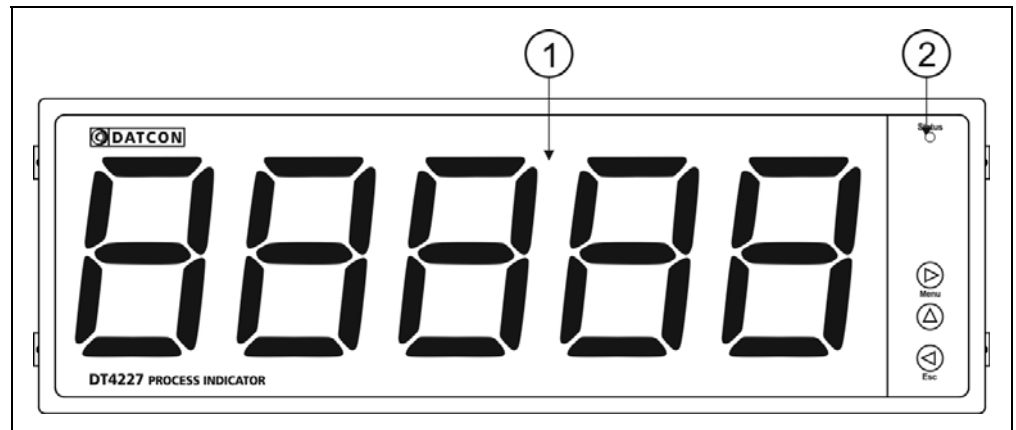
### 3.4. Adjustment

The instrument can be adjusted through the 3 button front panel keypad. All configuration parameters are stored in the instrument FRAM for unlimited time, even when the supply voltage being switched off.

The instrument doesn't need any internal adjustment.

### 3.5. Display

The following figure shows the front panel of the instrument:



1. 5 digit 7 segment LED for displaying the measured value and the mnemonic messages.
2. The "Status" indicator not used in this device.

### 3.6. Storage and transport

This instrument should be stored and transport in places whose climatic conditions are in accordance with Chapter **10.1. Technical specifications**, as described under the title: Environmental conditions.

The packaging of instrument consist of environment-friendly, recyclable cardboard is used to protect the instrument against the impacts of normal stresses occurring during transportation. The corrugated cardboard box is made from environment-friendly, recyclable paper. The inner protective material is nylon, which should be disposed of via specialized recycling companies.

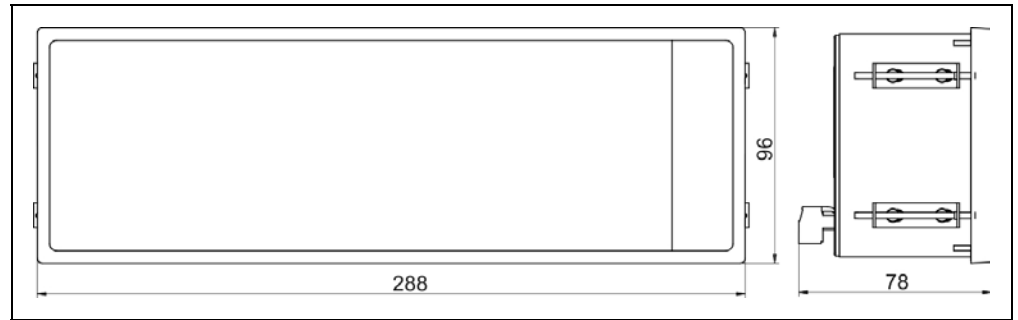
## 4. Mounting

### 4.1. General instructions

#### Mounting position

Select a mounting position you can easily read the display reach for mounting and connecting the instrument and that minimizes the hazard of water, dust or dump getting into the instrument.

### 4.2. Main dimensions of the instrument

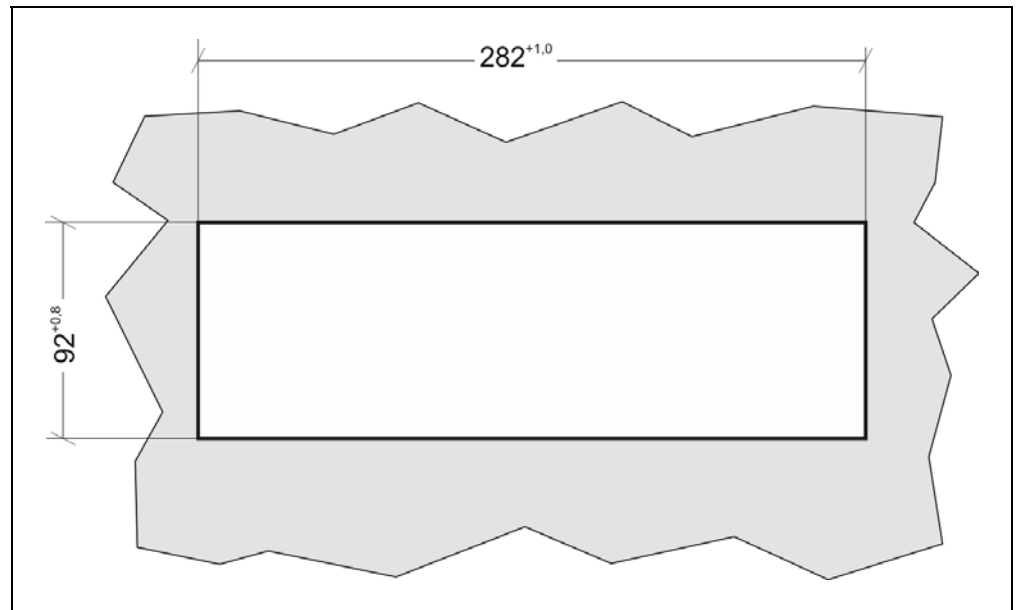


### 4.3. Mounting

#### Preparatory steps

The instrument is housed in a DIN standard ABS case. Fix it in the panel with the enclosed mounting clamps.

#### Dimensions of panel cutout



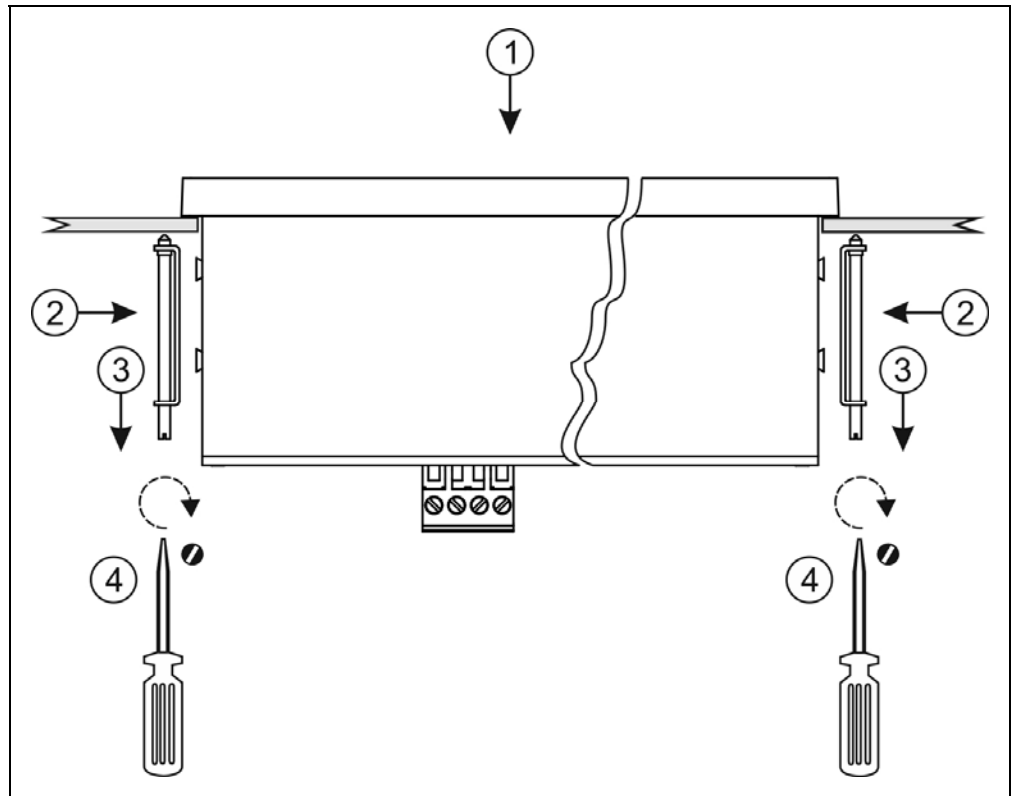
1. Cut-out the panel according to the figure shows above.



The cut-out needs special tools, it must be carried out by trained specialist personnel.



### Mounting with the mounting clamps



1. Put the instrument into the prepared cut-out until it possible and check the fitting of the seal between case and mounting surface.
2. Place the retaining tabs on the copper pins on the side of the unit.
3. Pull the retaining tabs back.
4. Fasten the device to the panel cut-out by screwing it.

Please do not exercise forces higher than necessary, as it may cause damages to the clamp.

## 5. Connecting

### 5.1. Preparing the connection

Always observe the following safety instructions:



- Connect or disconnect only in the complete absence of line voltage
- Take note the data concerning on the overcurrent protection in installation.
- Use only a screwdriver with appropriate head

#### Select connecting cable

Take note the suitability of the connecting cable (wire cross-section, insulation, etc.).

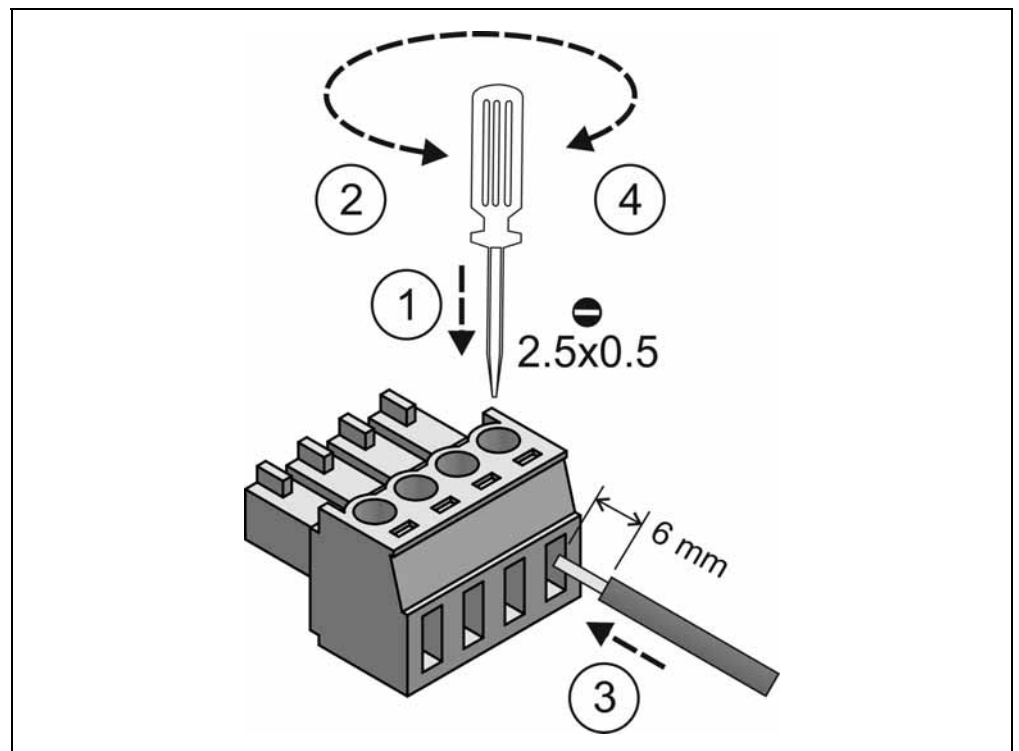
You may use either solid conductor or flexible conductor.

In case of using flexible conductor use crimped wire end.

In case of mains connection the wire cross-section should be 1.0 mm<sup>2</sup> (min.).

It's an important rule that the power cables and signal cables should lead on a separate way.

#### Preparing cables



Prepare the cable for the connection.

Strip approx. 6 mm insulation.

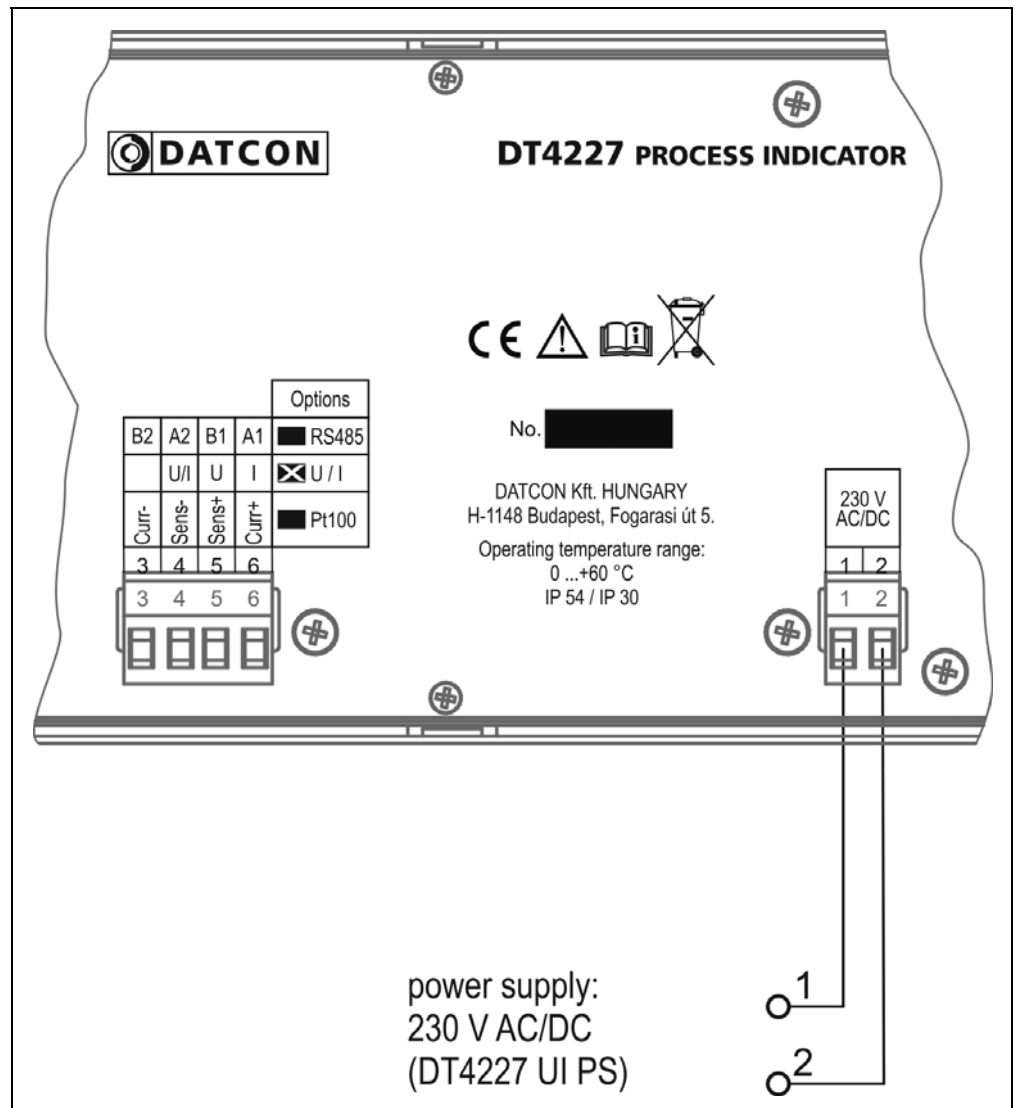
In case of using flexible cable, use crimped wire end.

## 5.2. Connecting the mains

The following figure shows the wiring plan, connecting the a DT4227 UI **PS** type instrument to the mains:

### Wiring plan, connecting the PS type instrument to the mains

In case of DC supply the polarity is indifferent.

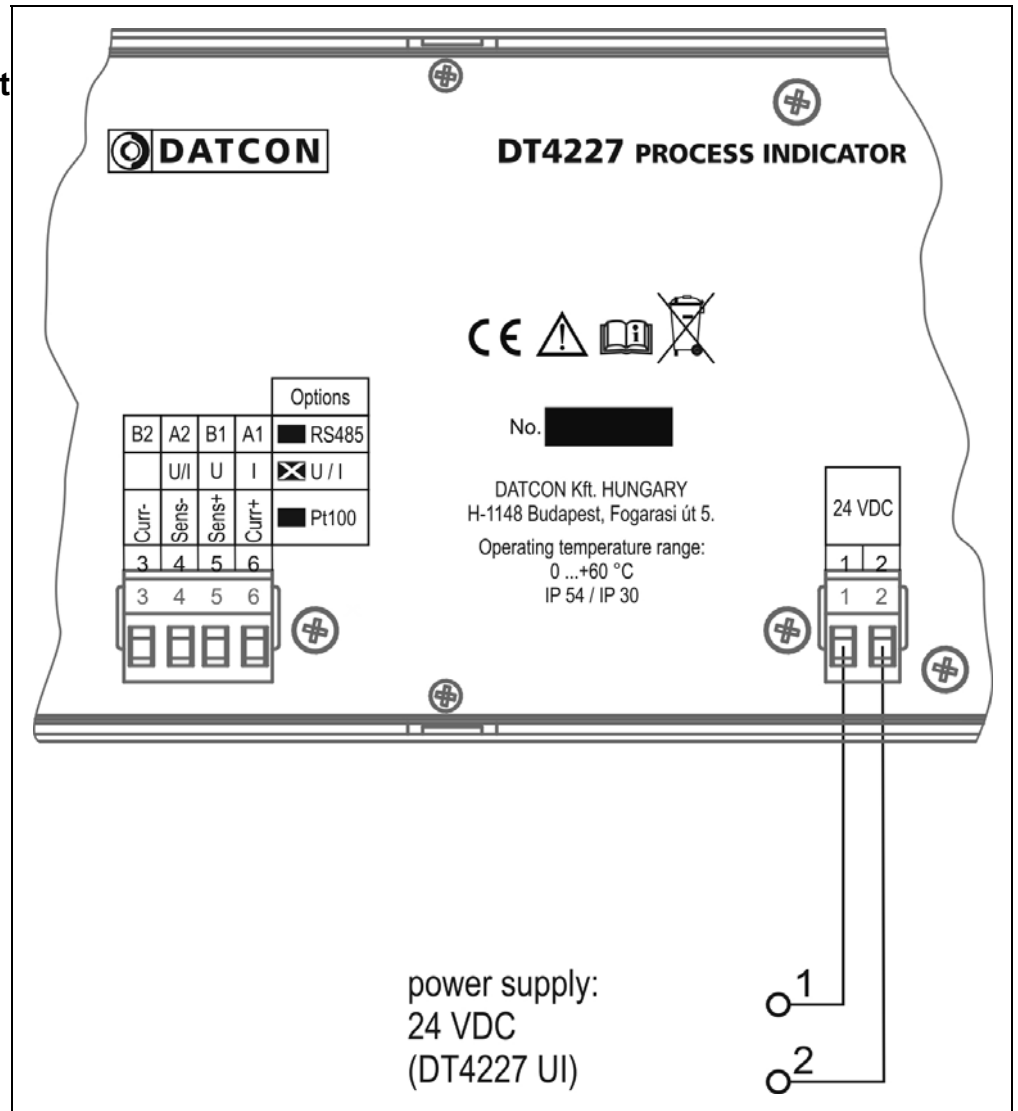


1. Loosen terminal screws.
2. Insert the wire ends into the open terminals according to the wiring plan.
3. Screw the terminal in.
4. Check the hold of the wires in terminals by pulling on them firmly.

The following figure shows the wiring plan, connecting the DT4227 UI instrument to the low voltage power supply:

**Wiring plan, connecting the 24 V type instrument to the the low voltage power supply**

In case of DC supply the polarity is indifferent.

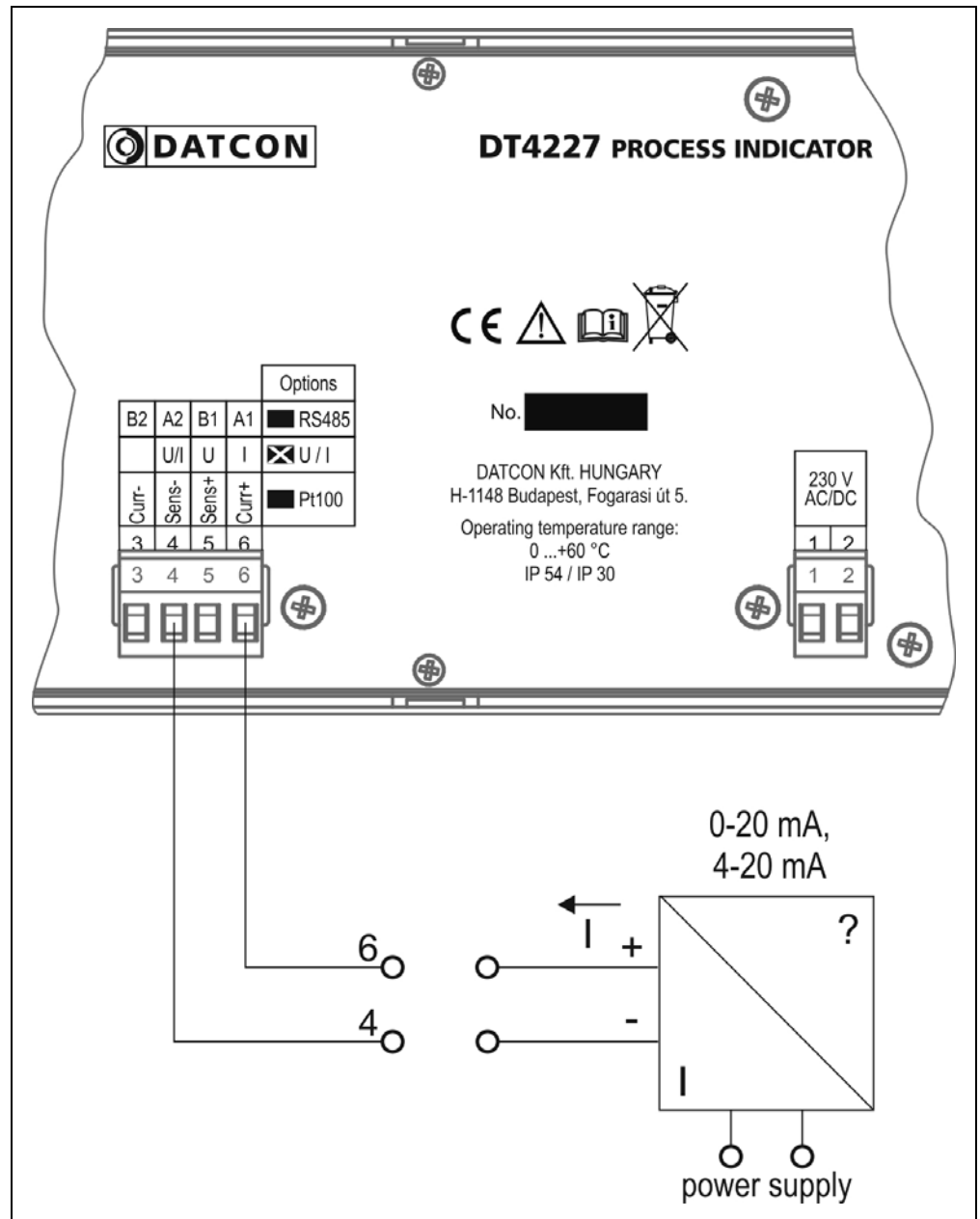


1. Loosen terminal screws.
2. Insert the wire ends into the open terminals according to the wiring plan.
3. Screw the terminal in.
4. Check the hold of the wires in terminals by pulling on them firmly.

### 5.3. Connecting to active current transmitter

The following figure shows the wiring plan:

#### Wiring plan

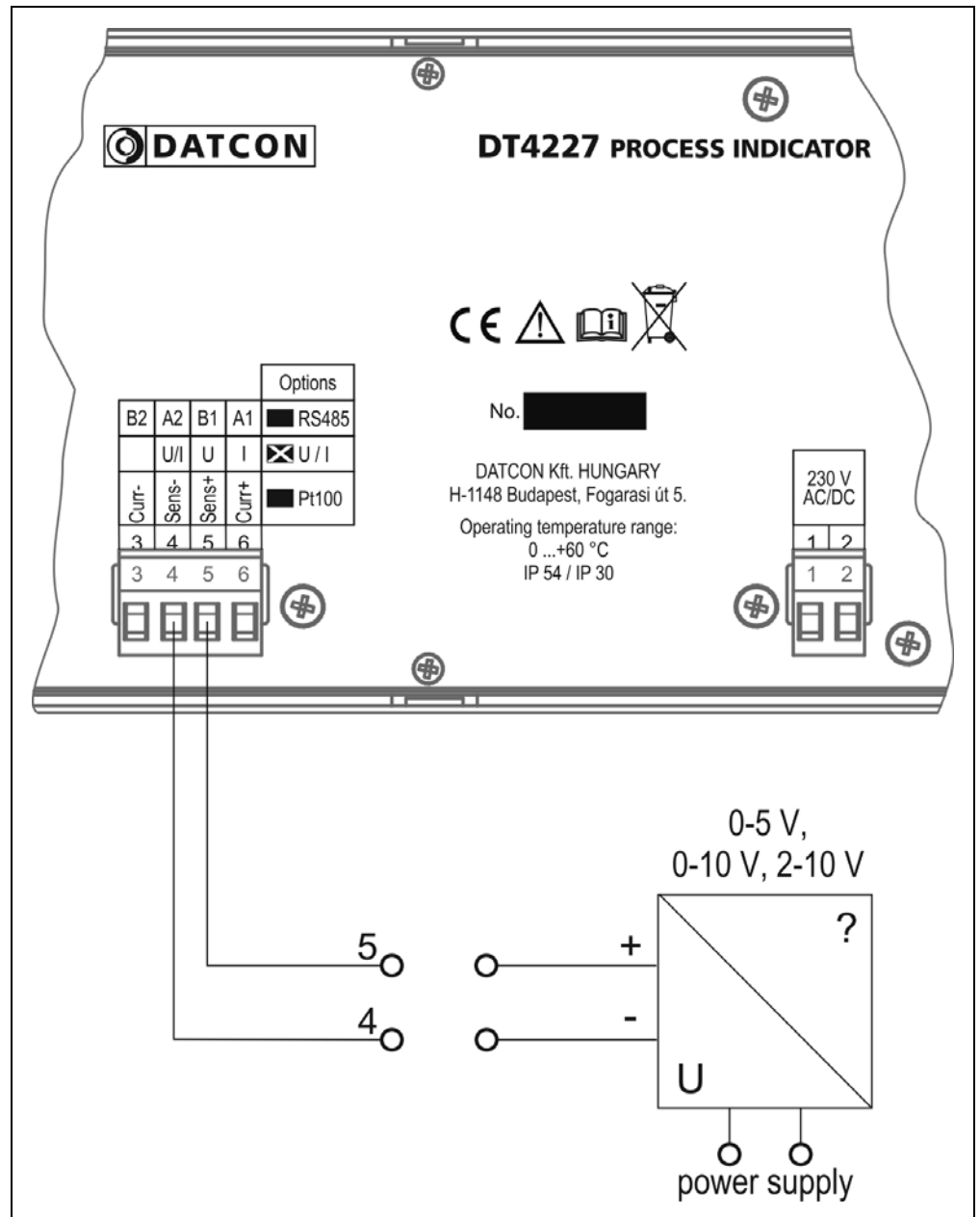


1. Pull out the terminal so you can make connection easier.
2. Loosen terminal screws.
3. Insert the wire ends into the open terminals according to the wiring plan.
4. Screw the terminal in.
5. Check the hold of the wires in terminals by pulling on them firmly.
6. Push in the terminal.

**5.4. Connecting to voltage transmitter**

The following figure shows the wiring plan:

**Wiring plan**



1. Pull out the terminal so you can make connection easier.
2. Loosen terminal screws.
3. Insert the wire ends into the open terminals according to the wiring plan.
4. Screw the terminal in.
5. Check the hold of the wires in terminals by pulling on them firmly.
6. Push in the terminal.

## 6. Display and manual controls

### 6.1. The first start-up

The factory default setting is:

Selected input signal: 4-20 mA

Scaling: 4 mA ÷ 0%  
20 mA ÷ 100%

When the input current is 0 mA, you can see *-25.00* on the display.

When the input current is 12 mA, you can see *050.00* on the display.

#### **In the case of an error message**

If anything else appears on the display instead of the scaled input signal (e.g. a message with blinking letters), then it is an error message of the instrument.

**The most frequented error messages** are the following:

1. There is only a flashing *!* at the left side of display:  
The input signal is more than the specified input range. The instrument can not measure it.

Solution: check the input signal with a digital multimeter.

2. There is only a flashing *-!* at the left side of display:  
The input signal is less than the specified input range. The instrument can not measure it.

Solution: check the input signal with a digital multimeter.

3. There is a flashing *-9999* or *99999* on the display:  
The input signal is less or more than the displayable value. The instrument can not display it.

Solution: modify the low value of scale or the high value of scale, change the decimal point position if necessary.

In order to define the error more accurately, please go to Chapter 6.2.

## 6.2. Characters and mnemonics appearing on the display

DT4227 UI has a 7-segment type display. It means that maximum 7 bars are used to form each characters. The numbers can be read easily, some of the letters, marks however, looks unusual:



*1* = 1, *2* = 2, *3* = 3, *4* = 4, *5* = 5,  
*6* = 6, *7* = 7, *8* = 8, *9* = 9, *0* = 0

*A* = A, *b* = B, *c* = C, *d* = D, *E* = E, *F* = F, *9* = G,  
*h* = H, *i* = I, *J* = J, *H* = K, *L* = L, *ī* = M, *n* = N,  
*o* = O, *P* = P, *q* = Q, *r* = R, *5* = S, *t* = T, *U* = U,  
*u* = V, *'* = W, *H* = X, *Y* = Y, *2* = Z

All mnemonics (code words, 5 digit length max.) presented on the display comes from English expressions in abbreviated form.



**Login text***dt*

DT - Datcon instrument.

*4227*

Type of the instrument.

*U I*

Voltage and current input

**Error messages***1*

The input signal is more than the specified input range. The instrument can not measure it.

*- 1*

The input signal is less than the specified input range. The instrument can not measure it.

*-9999*

The input signal is less or more than the displayable value. The instrument can not display it.

*99999***Critical error messages****In case of a critical error call manufacturer service department!***S. Adc*

A/D converter error. (Service: ADC)

*S.FrAī*

FRAM error. (Service: FRAM)

*S.cAL. 1*Calibration error. (Service: Calibration Input)  
Factory calibration is damaged.

**During code writing***codE*

Code? (Code) - type in the code!

*bAd.co*

Bad code (Bad Code)

*USEr*

A User login took place (User)

*SUPER*

A Supervisor login took place (Supervisor)

**During setting***Lo''*

The typed number is lower than allowed (Low Limit)

*h i9h*

The typed number is higher than allowed (High Limit)

*rEtYP*

Re-type it please (Re-type)

*EScAP*

Automatic escaping (Auto Escape)-over 5 minutes

*EH it*

Exit from the setting (Exit)

*rEAdY*

The requested operation has been completed (Ready)

*Error*

Error (Error)

*no*

No, I don't want this menu item (No)

*YES*

Yes, the menu can be started (Yes)

### 6.3. Functions of the push-buttons during measurement

The following figure shows the push buttons:



(1) ► **Menu** button: Entering the menu.

When you push this button, the instrument will ask for a password (code) in accordance with Chapter 7.1. **Functions of the push-buttons during navigation in the menu**, when the right code has been given, it enters into the menu. If no keys are pressed for a period of 5 minutes, the instrument exits from menu.

(2) ▲ button: displaying firmware version.

The firmware version remains on the display as long as the button is being pressed.

Format: YY.M.DD: YY = year, M = month, DD = day.

(3) ◀ **Esc** button: it has not function during measurement.

## 7. Setting-up

### 7.1. Functions of the push-buttons during navigation in the menu

► **Menu** button:

You can enter the actual menu item or the actual submenu item by pressing this button.

During typing/editing a number:

You can select the next digit. If this button is held on over 1 sec, the left digit of display is selected.

▲ button:

You can select the next menu item by pressing this button.

If this button is held on over 1 sec, the first menu item is selected.

During selecting a parameter item from a list:

You can select the next parameter item by pressing this button.

If this button is held on over 1 sec, the default parameter item is selected.

During typing/editing a number:

You can increment the selected digit of number by pressing this button.

If this button is held on over 1 sec, the selected digit of number is 0.

◀ **Esc** button:

You can leave the actual menu item or the actual submenu item by pressing this button.

The changed parameter is saved before the exit had occurred.

If no keys are pressed for a period of 5 minutes, the instrument also exits from menu.

## 7.2. Typing the code (password) in

### The importance of the code

You may enter the menu only after you have typed your code in. The code is made from 4 numeric characters. This solution prevents unauthorised persons from changing the settings of the instrument.

### Levels of authorisation

**User level:** allows the modification of the most necessary parameters only. The rest of the menu is not even shown for users. The user code default factory setting is: **0000**.

**Supervisor level:** allows the modification of all parameters for the authorised person. The supervisor code default factory setting is: **1000**.

### Typing the code in

1. Press the ► **Menu** button. The blinking *codE* mnemonic shows that the device is asking for the code.

2. Four zeros appear: *0000*. The zero at the left side is blinking.

3. Use the ▲ and the ► buttons, type in either the user code or the supervisor code.

4. Press the ◀ **Esc** button. If a correct code has been type in, the mnemonic *USER* (login as a user) or the mnemonic *SUPER* (login as a supervisor) is displayed and stays there for 2.5 seconds; then the first menu item is shown on the display: *0 l.br i.*

5. If an incorrect code has been typing in, the mnemonic *bAd.co* (BAD Code) is shown on the display and stays there for 2.5 seconds; then the instrument exits from the menu.

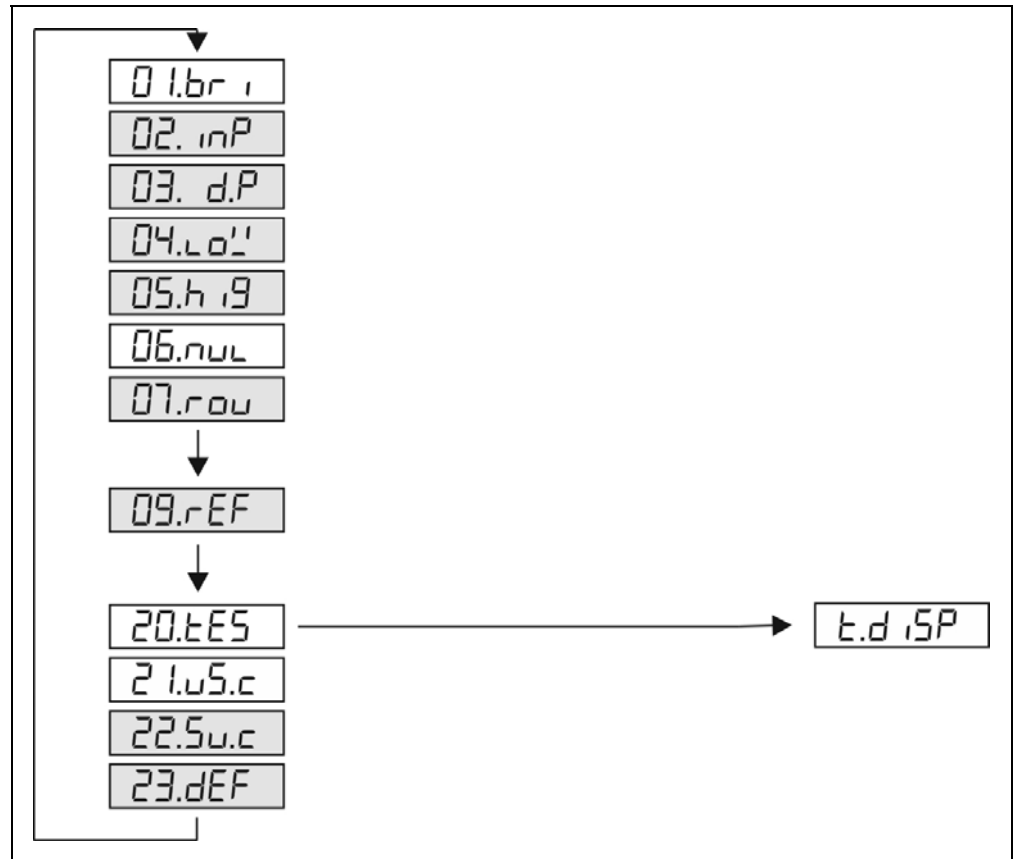
Start typing the code in again from Point 1.

### Automatic exit from the menu

If no buttons are pressed, the instrument displays the mnemonic *EScAP* (Auto Escape) after 5 minutes has passed from the last pressing of a button, and goes back to the measuring mode. This solution is due to security: unauthorised persons, after 5 minute, will not be able to change the settings of the instrument, should it be left alone for some reason.

### 7.3. The menu structure

The following figure shows the menu structure.  
The detailed description is on next pages.



Comment:

The menu items shown in grey appear only in the case of a supervisor-level login.

#### 7.4. The menu structure (detailed description)

##### The menu items

01.br 01. brightness - Display brightness

\*02.inP 02. input - Input selection

\*03.dP 03. decimal point - Decimal point position

\*04.Lo 04. low - Low value of scale

\*05.hi 05. high - High value of scale

06.nUL 06. null - Leading zeroes enable / disable

\*07.roU 07. rounding - Display value rounding

\*09.rEF 09. refresh - Display refresh time

20.tES 20. test - Tests

21.uS.c 21. user code – Change user code

\*22.SU.c 22. supervisor code - Change supervisor code

\*23.dEF 23. default - Factory default setting

Comment:

The menu items marked with '\*' appear only in the case of a supervisor-level login.

### 7.5. Menu item 01: Display brightness

**Function**

The brightness can be set between 10%-100%, in 10% steps.  
[factory default: 100%]

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Pressing the ▲ button, select the desired value.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

The selectable values: 100, 90, 80, 70, 60, 50, 40, 30, 20, 10.

### 7.6. Menu item 02: Input selection

**Function**

The instrument has current and voltage inputs. Here you can select the input and the signal level.  
[Factory default: 4-20 mA current input]

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Pressing the ▲ button, select the desired value.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

The selectable values: I 4-20, I 0-20, U 0-10, U 0-5, U 2-10.



### 7.7. Menu item 03: Decimal point position

**Function**

Setting the position of the decimal point on the display, or switching the decimal point off.

[Default factory setting: 2 decimals]

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Pressing the ▲ button, select the desired value.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

The selectable values: 2, 1, 0, 4, 3.

### 7.8. Menu item 04: Low value of scale

**Function**

Any optional display range can be assigned to the input signal range (scaling). Here you can set the low value of the desired display range.

[Factory default: 000.00. ]

Note! For scaling the DISPLAYED value you should set the high value also. (Next menu item.)

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Type the desired value by using the ▲ and the ► buttons.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

**Notice**

For scaling must be assign the high (end) value also. (Next menu item)

### 7.9. Menu item 05: High value of scale

**Function**

Any optional display range can be assigned to the input signal range (scaling). Here you can set the high value of the desired display range.

[Factory default: 100.00]

Note! For scaling the displayed value you should set the low value also. (Previous menu item.)

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Type the desired value by using the ▲ and the ► buttons.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

**Notice**

For scaling must be assign the low (start) value also. (Previous menu item)

### 7.10. Menu item 06: Enable / disable displaying the leader zeros

**Function**

Leader zero: the zeros that stand in front of an integer of no value. E.g. the instrument displays the value 5.2 together with the leader zeros:

005.20 (default factory setting), or without the leader zeros: 5.20.

In this menu item you can either disable displaying of the leader zeros or you can enable this function again.

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Pressing the ▲ button, select the desired value.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

The selectable values: NULL (enabled) or SPACE (disabled).

### 7.11. Menu item 07: Rounding displayed value

#### Function

In some case it can be useful to round the displayed value. E.g. the measured physical quantity is noisy.

In this menu item you can select a rounding value.

[Factory default: 1]

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Pressing the ▲ button, select the desired value.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

The selectable values: 1, 2, 5, 10, 20, 50, 100.

### 7.12. Menu item 09: Display refresh time

#### Function

Here you can define the time periods by which the instrument displays the new measurement values.

[Factory default: 0.5 second]

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Pressing the ▲ button, select the desired value.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

The selectable values: 0.5 sec, 1.0 sec, 1.5 sec, 2.0 sec, 0.01 sec, 0.1 sec, 0.3 sec.

### 7.13. Menu item 21: Changing the user code

**Function**

You can define new codes instead of the factory-defined user code. The code is an optional number within the range between 0000 and 9999.

[Default factory setting: 0000]

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Type the desired value by using the ▲ and the ► buttons. Press the Esc button. You have to type the new code in twice. This prevents an error in defining the new code due to typing mistakes. This is indicated by the mnemonic *re-TYP* (re-type). Type the code value again by using the ▲ and the ► buttons.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

**Warning!**

Do not forget the user code you have defined. If you forget it, defining another one is possible only by using a supervisor code for entering into the menu.

### 7.14. Menu item 22: Changing the supervisor code

**Function**

You can define new codes instead of the factory-defined supervisor code. The code is an optional number within the range between 0000-9999.

[Default factory setting: **1000**]

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Type the desired value by using the ▲ and the ► buttons. Press the Esc button. You have to type the new code in twice. This prevents an error in defining the new code due to typing mistakes. This is indicated by the mnemonic *re-TYP* (re-type). Type the code value again by using the ▲ and the ► buttons.
5. Exit from menu item by pressing the Esc button. The change is saved to FRAM.
- (6. Press Esc button again if you want to leave the menu.)

**Warning!**

Do not forget the supervisor code you have defined. If you forget it, defining another one is possible in the service only.

### 7.15. Menu item 23: Resetting the default settings

#### Function

In this case **all** the settings are deleted, and the default factory setting is restored.

Using this function makes sense in that case, when the settings of the instrument have changed so much, that it is easier to start the setting-up process from the default factory setting.

It is not possible to cancel this operation once the command has been issued.

**Sequence of operations** Read the chapter **7.1. Functions of the push-buttons during navigation in the menu** for learning the buttons handle.

1. Enter the menu by typing the supervisor code.
2. Keep stepping by pressing the ▲ button as long as you see this menu item.
3. Enter the menu item by pressing the Menu button.
4. Pressing the ▲ button, select the *YES* (Yes) text.
5. Press the Menu button you see this *REdY* (Ready) on the display. All of the parameters have been set to factory default settings. After then the instrument restarts.

## 8. Fault rectification

### 8.1. Fault finding

The instrument has a sophisticated self-test function. It is able to detect and display the majority of the errors.

In the case of an error that causes total inability of the instrument to function, nothing appears on the display.

### 8.2. Repairing



In accordance with **Point 2.1..**: For safety and warranty reasons, any internal work on the instrument must be carried out by DATCON personnel.

In the case of errors, it is recommended to notice of the displayed error message, as well as of the phenomenon seen.

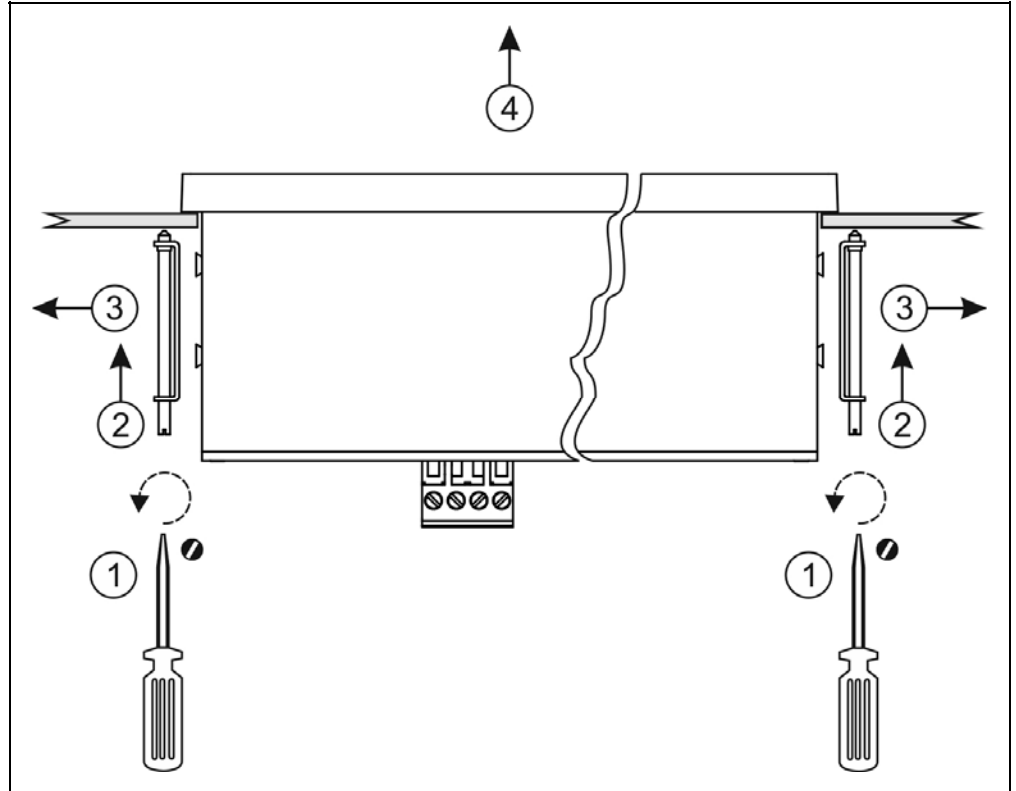
These informations please communicate to the Datcon service personnel.

## 9. Dismounting

### 9.1. Dismounting procedure

The following figure shows the dismounting procedures:

#### Dismounting



Before put off power supply and disconnect all wires.

1. Slip the tip of the screwdriver into the hole of the mounting clamp (A) (Figure step 1).

2. Move the screwdriver handle to make free the clamp (Figure step 2).

3. Keeping the screwdriver in this position draw back the mounting clamp (Figure step 3).

Please do not exercise forces higher than necessary, as it may cause damages to the clamp.

4. Repeat the 1., 2., 3. steps with the other clamp.

5. You can take out the instrument from the panel cutout (Figure step 4).



### 9.2. Disposal

According with the concerning EU directive, the Manufacturer undertakes the disposal of the instrument that are manufactured by it and intended to be destroyed. Please deliver it in contamination-free condition to the site of the Manufacturer or to a specialised recycling company.

## 10. Appendix

### 10.1. Technical specifications

\* = default settings

#### Input parameters

Input signal:	DC current / DC voltage
Measuring range:	0-20 mA / *4-20 mA 0-10 V / 2-10 V / 0-5 V
Input resistance:	12 $\Omega$ (current input) 55 k $\Omega$ (voltage input)
Overrange:	$\pm$ 50 mA (current input) $\pm$ 200 V (voltage input)

#### Display

Display unit:	LED, 5 digit (+ values) / 4 digit (- values), 7 segment, negative sign, setable decimal point
Character height:	56.9 mm
Display color:	red
Display brightness:	Adjustable from 10% to *100% in 10% steps.
Display range:	-9 999–99 999
Relation between the display and the input signal:	Any values to be displayed could be selected (within the display range) to be assigned to the input values.
Display refresh time:	0.01 / 0.1 / 0.3 / *0.5 / 1.0 / 2.0 sec (adjustable)
Indicator LED:	Yellow (not used in this model)
Manual controls:	3 membrane push-buttons on the front cover

#### Measuring parameters

Characteristic:	Linear
Display accuracy at 23 °C $\pm$ 2 °C, after 10 min warm up time:	0.02%
Display accuracy at whole operating temperature range:	0.2%
Temperature-dependency:	25 ppm / °C
ADC sample rate:	122 SPS
Number of averaged samples:	Display refresh time / ADC sample rate. (*61)



### Power supply

Supply voltage:	
DT4227 UI	24 VDC $\pm 10\%$ , 3 W
DT4227 UI PS	230 V AC/DC $\pm 10\%$ , 5 VA (3.5 W)
Overvoltage class:	CAT II.
The overcurrent protection in installation:	4 A (B)

### Ambient conditions

Operating temperature range:	0-60 °C *
Storage temperature range:	-25 - +70 °C
Climatic conditions:	MSZ EN 60654-1, class B2
Relative humidity:	90% (max., non-condensing)
Place of installation:	Cabinet

You can order instrument for -20 - +60 °C operating temperature range.

### Electromagnetic compatibility (EMC): In accordance with the standard IEC 61326-1

#### Emission:

Conducted:	MSZ EN 55011 Limits for Class A equipments
Radiated:	MSZ EN 55011 Limits for Class A equipments

#### Immunity:

ESD:	4 kV/8 kV contact / air	-B- criteria
BURST:	2 kV/1 kV power / signal	-B- criteria
SURGE:	1 kV	-B- criteria
Conducted RF:	3 Veff	-A- criteria

### General data

Housing:	panel instrument
Dimensions [mm]:	288 x 96 x 78 (width x height x depth)
Panel cut off:	282 x 92 (width x height)
Weight:	0.7 kg
Protection:	IP 54 (front) IP 30 (rear)
Connection cable:	max. 2 mm <sup>2</sup>
Connection:	plug-in screw terminal

The Manufacturer maintain the right to change the technical data!

10.2. Application example

