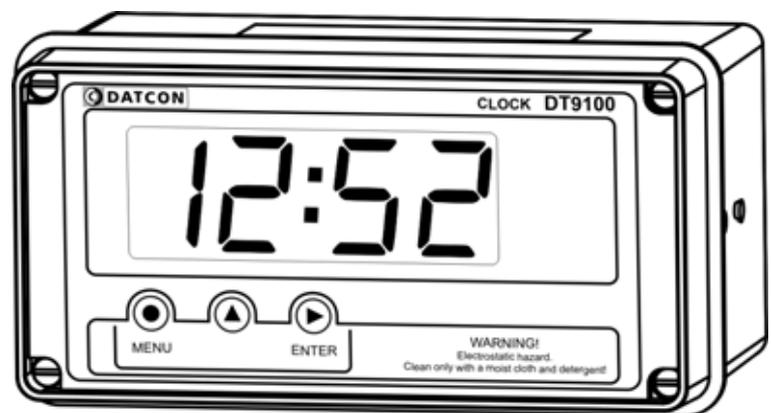


## DT9100 I4

Intrinsically Safe Digital Clock

## 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 DT9100 I4. 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.



#### **Ex applications**

This symbol indicates special instructions for Ex applications.



#### **List**

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



#### **Action**

This arrow indicates a single action.



#### **Sequence**

Numbers set in front indicate successive steps in a procedure.

## 2. For your safety

### 2.1. Authorised personnel



All operations described in this operating instructions manual must be carried out only by trained and authorised 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 DT9100 I4 is a 4–20mA loop-powered intrinsically safe digital clock. Detailed information on the application range of the DT9100 I4 is available in chapter „Product description”.

### 2.3. Warning about misuse



Inappropriate or incorrect use of the instrument can give rise to application-specific hazards, or damage to system components through incorrect mounting or adjustment.

### 2.4. General safety instructions



The DT9100 I4 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



The DT9100 I4 is in conformity with the provisions of the following standards:

MSZ EN IEC 60079-0:2018 (ATEX)  
MSZ EN 60079-11:2012 (ATEX)  
MSZ EN IEC 61326-1:2021 (EMC)  
MSZ EN 55011:2016 (EMC)  
MSZ EN 55011:2016/A1:2017 (EMC)  
MSZ EN 55011:2016/A2:2021 (EMC)  
MSZ EN IEC 63000:2019 (RoHS 2)



## **2.6. Safety information for Ex areas**

Please note the Ex-specific safety information for installation and operation in Ex areas. These safety instructions are part of the operating instructions manual and come with the Ex-approved instruments.

## **2.7. 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 **3.4. Storage and transport**
- Chapter **9.2. Disposal**

### 3. Product description

#### 3.1. Delivery configuration

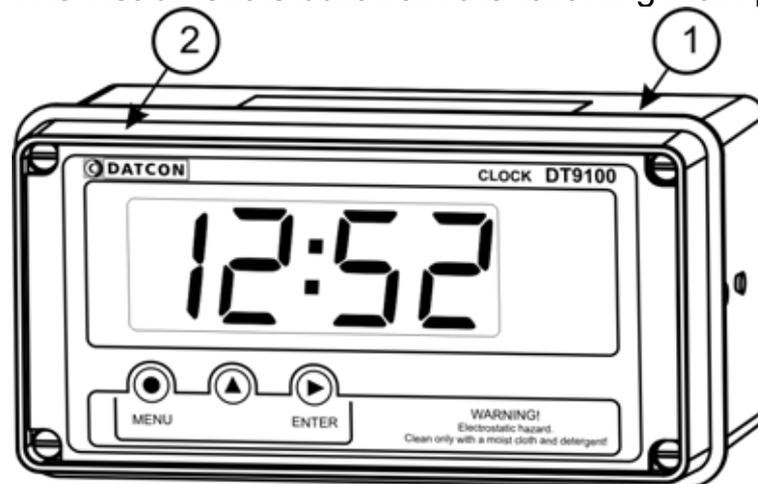
##### Delivered items

The scope of delivery encompasses:

- DT9100 I4 digital clock
- 2 pcs. of screw clamps (only panel mounting version)
- 1 pcs. M16x1.5 cable entries
- instrument sealing (only panel mounting version)
- documentation:
  - this operating instructions manual
  - certification
  - warranty

##### Main parts

The instrument is built from the following main parts:



1. instrument case
2. front panel with 3 membrane push buttons

### 3.2. Principle of operation

#### Area of application

DT9100 I4 is an intrinsically safe digital clock enable accurate time to be displayed in even the most hazardous plant areas: Zone 1, 2 or in the safe area. Synchronising function allows the clock to be synchronised with a master clock. The clock can be synchronise through the current loop. When the loop current is over 12 mA the clock stop going when the loop current decrease under 8 mA the clock will re-start from a new time selected in the programme menu. This may be the nearest minute or the nearest hour of the original display or a preset time may be entered during programming. The DT9100 I4 has two isolated digital outputs, which can be used for alarm signaling or for synchronising other clocks. DT9100 I4 is housed in a moulded polycarbonate case hauseproof to IP65 for installation in the field or on the control panel.

#### Operating principle



The clock incorporate a high accuracy temperature compensated time base, which is processed by a microcontroller. The microcontroller produces the real time, in 24 hour HH:MM format, drives the large 4 digit 25,4 mm height LCD display, process the front panel keypad, the synchronising inputs, and drives the digital outputs. The settings and the actual time are stored in a memory which stores it's content for cca. 1 hour for bridging the supply current failure. The clock also going for cca. 1 hour at this case.

#### Power supply

DT9100 I4 is loop-powered from 4–20 mA synchronising signal, dropping less than 2,2 V. It is not recommended to bring the supply current below 8 mA.

### 3.3. Adjustment



The DT9100 I4 can be adjusted through the 3 front panel membrane keypad. The instrument doesn't need any internal adjustment.

All settings are stored in a battery back-up RAM.

At first installation you have to set the time and other working parameters what you need.

At battery replacement the settings are kept for min. 1 hour.

### 3.4. 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 DT9100 I4 consist of enviroment-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 polyfoam and nylon, which should be disposed of via specialised recycling companies.

## 4. Mounting

### 4.1. General instructions

After the dismount of front panel be careful that do not get in foreign material to inside of device.

When mount of front panel be careful the seal, because if you mount the seal in wrong position, the enclosure may get wet!



When mounting DT9100 I4 as panel instrument, use the enclosed seal to assure IP 65 protection between the instrument and the panel on the front side (only for the panel-mounted version).



Electrostatic hazard! Clean only a moist cloth and detergent.

#### Mounting positions

The device can be mounted any position.

Select a mounting position: where you can easily read the display, which is accessible for mounting and connecting the instrument, and which minimises the hazard of water, dust or dump getting into the instrument.



The recommended mounting position is same like in capter

### 4.2. Main dimensions of the instrument.

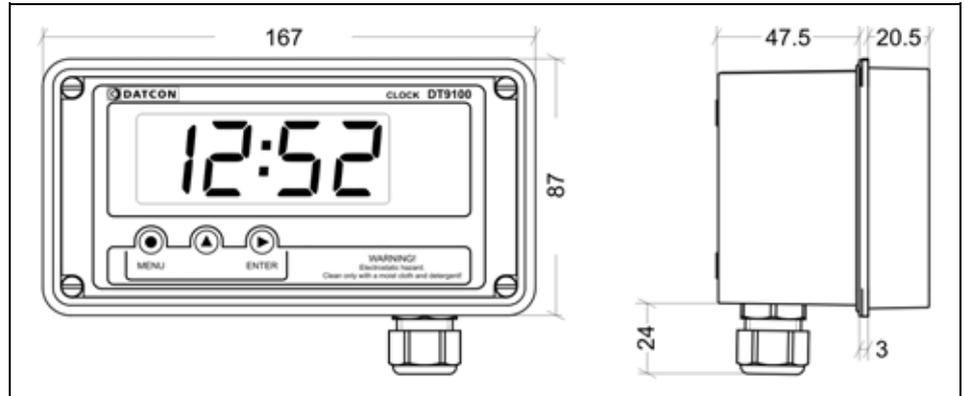
#### Mounting cable entries

The instrument is equipped with one M16x1.5 cable entry and one additional hole equipped with sealing plug. One M16x1.5 cable entry are accessories. If more than one cable entry is required (see chapter 5.), take out a sealing plug by turning it in an anticlockwise direction. To put in a cable entry, use a sealing ring and turn the cable entry in a clockwise direction. Tighten the screws as much as necessary to ensure the desired sealing. Use only appropriate tools.

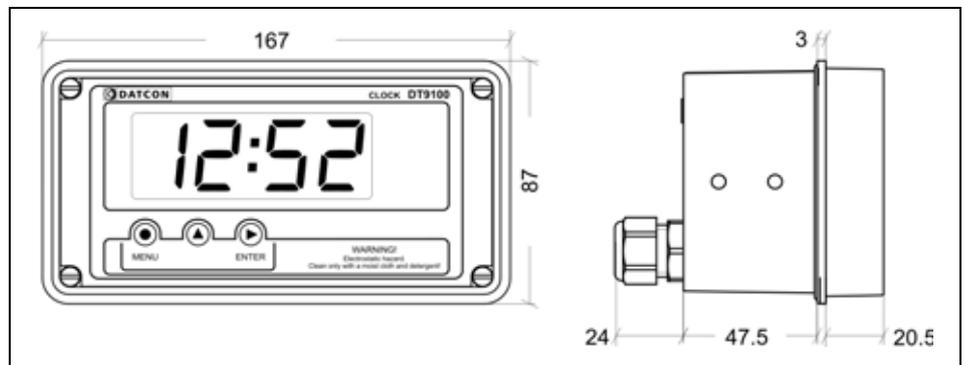


## 4.2. Main dimensions of the instrument

### Wall-mounted instrument

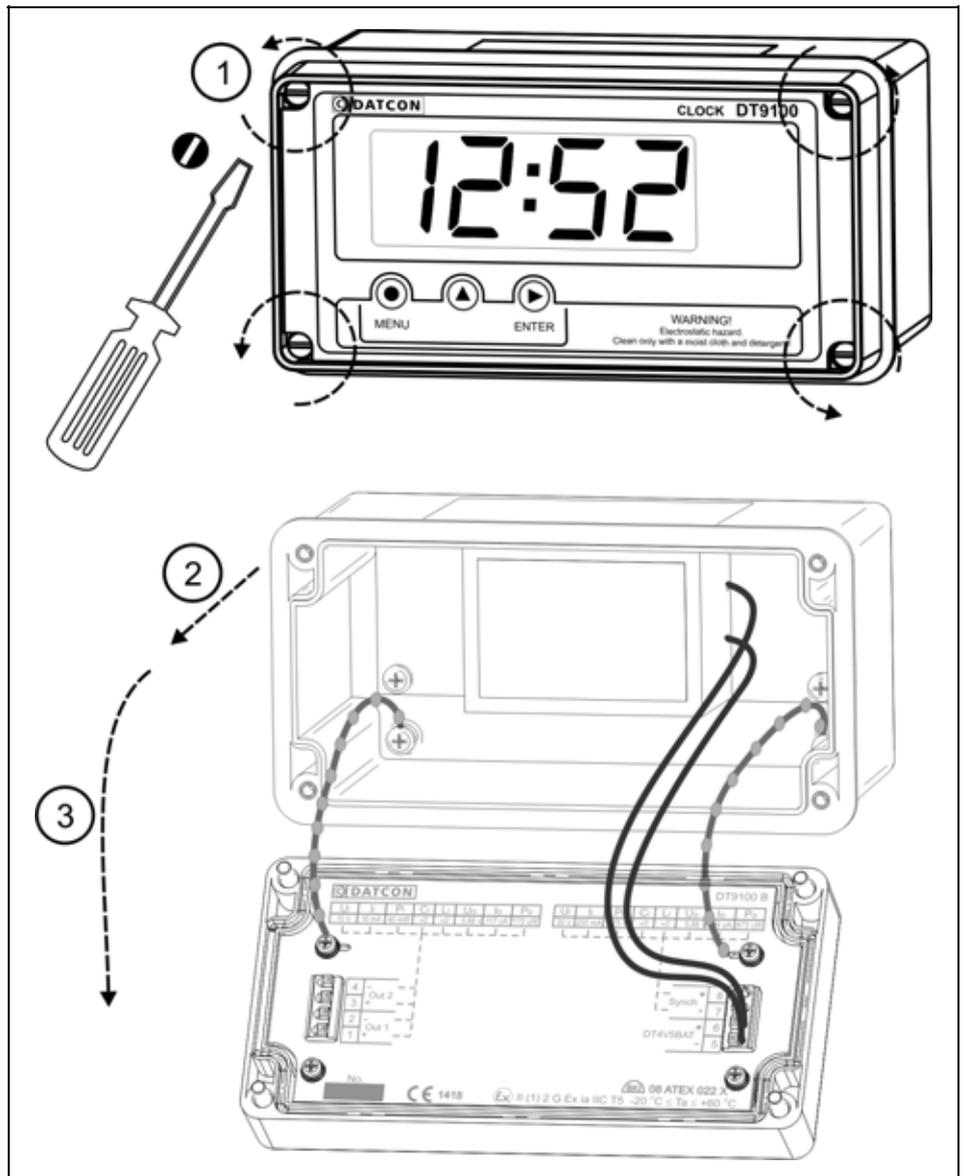


### Panel-mounted instrument



### 4.3. Mounting as a wall-instrument

#### Removing the front cover



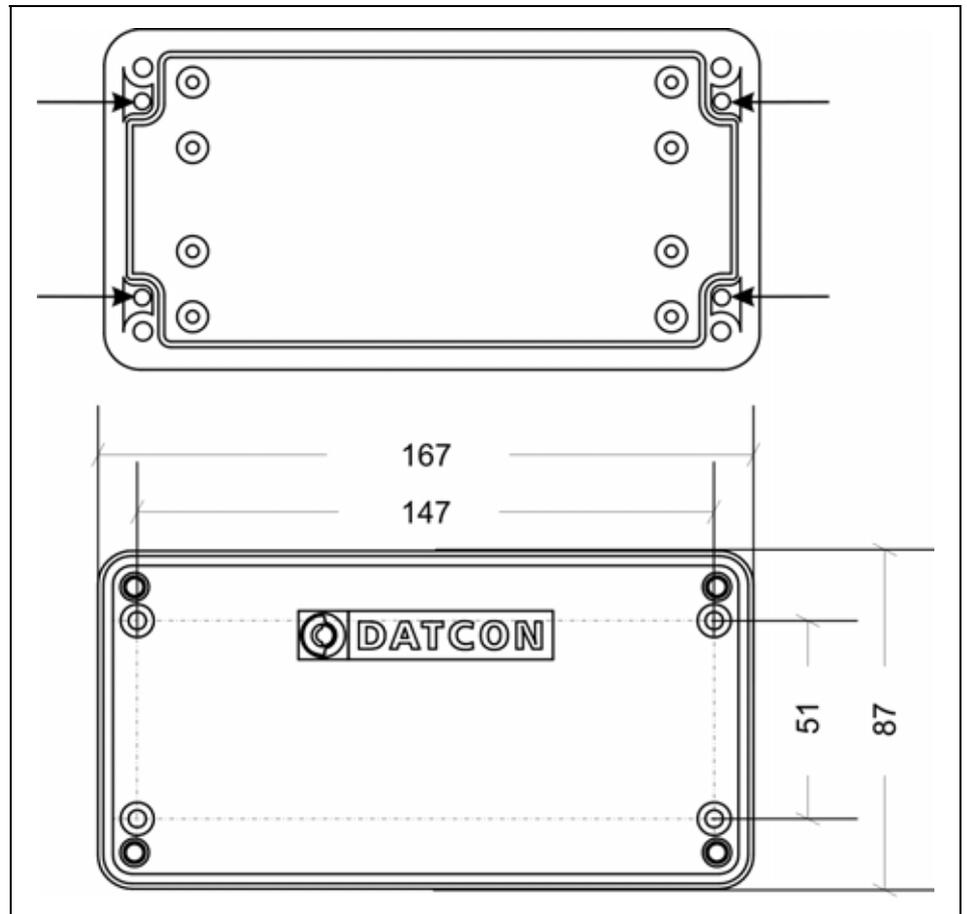
In order to remove the front cover, first remove the four fixing screws as shown in the drawing. A **screwdriver** of appropriate head-size should only be used. Using screwdrivers with an inappropriate head-size may cause damage to the screws' heads or to the instrument front panel.

Remove the screws by turning them in an anticlockwise direction as shown in the drawing **Step (1)**. The screws are secured against falling out. After this, you can simply take away the front cover from the housing **(2)** and you can open the housing by turning the cover downwards **(3)**. Plastic ties are used for fastening the front cover to the housing in order to prevent it from falling down.

## Preparatory steps

There are four through-holes, shown by arrows in the following drawing, for the fastening of the housing. The diameters of the holes are made for M3 screws.

## Holes for mounting



1. Mark the places of the holes in accordance with the drawing.
2. Make the holes ready for mounting.
3. Remove any burrs from the ready-made holes.



Please observe the safety rules throughout the operation.

**Mounting the instrument** Four M3 threaded screws are needed for mounting the instrument (these are not accessories). The type of the screws depends on the wall-material, while the dimensions depend on the wall-thickness. The use of cross recessed pan head screws is recommended to make the mounting easier. The minimum screw-length should be the wall-thickness + 10 mm.



During mounting, please observe all safety rules, and use only appropriate tools.

Secure the screws against getting loose. For this purpose you may use spring lock or serrated lock washers.



Depending on the material of the wall, and in order to ensure the most practicable mounting method, it is not mandatory, of course, to use the above-described threaded joints. Depending on the situation, special screw types for wood or for metal sheets can also be used, or the joint can be riveted too.

**Mounting the front cover back to its place** 1. Check if there are alien materials left in the housing, like small tools, wire or metal pieces, plastic chips, etc. If there are, remove them.



2. Put back the front cover of the instrument, taking care that the sealing should get to its place. There should be no gap, nor cables caught between the housing and the front cover.

3. Tighten the front cover.  
Turn the screws in clockwise direction. Tighten the screws so much that ensures the desired sealing.

#### 4.4. Mounting as a panel-instrument

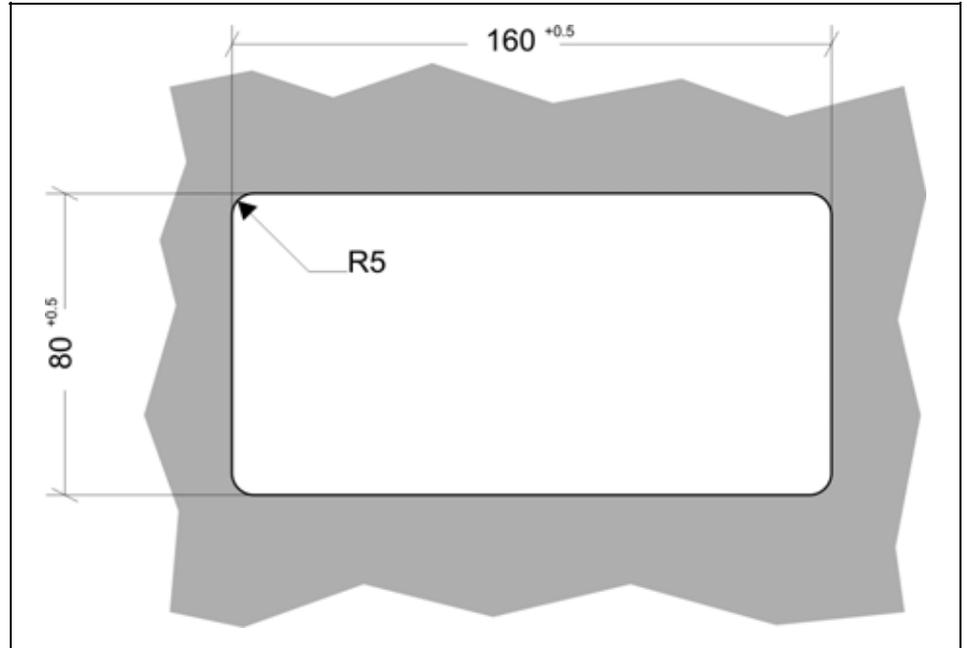
##### Preparatory steps

1. Cut a piece out of the panel according to the figure shown below.

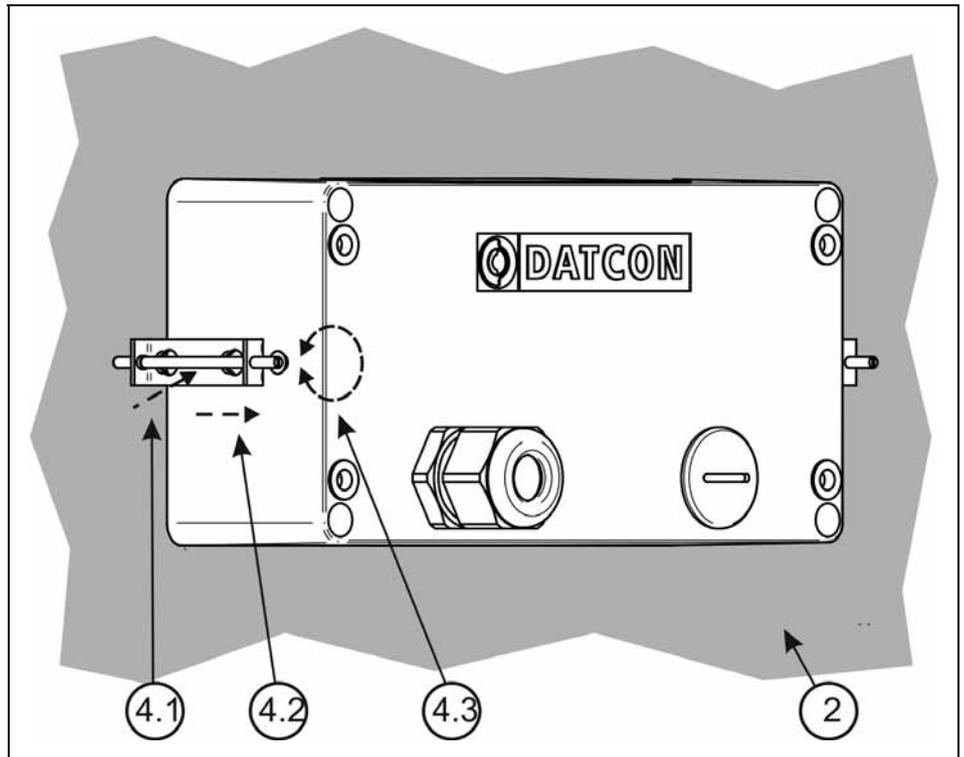


The cutting requires special tools; it must be carried out by trained specialist personnel.

##### Cut-out dimensions



**Mounting with the screw clamps**



2. Put on the enclosed seal onto the instrument case from the rear side and fit it to the instrument holding frame (Figure step 2).

3. Put the instrument into the prepared cut-out as much as possible and check the fitting of the seal between case and mounting surface.

4. Put on the enclosed screw clamps onto the sides of the instrument case (Figure step 4.1 and 4.2). Fix the instrument by turning the screws in clockwise direction (Figure step 4.3).



Take care that pointed, sharp metal parts do not cause accidents.

## 5. Connecting

### 5.1. Preparing the connection

Always observe the following safety instructions:

- When you are going to install instruments in a hazardous area, or install instruments which are connected to instruments working in a hazardous area, you should take note of the appropriate regulations, and conformity and type approval certificates of the DT9100 I4 and the other instruments (e.g. isolator, Zener barrier).
- The connection must be carried out by trained and authorized personnel.
- In particular, make sure that no potential equalization currents flows over the cable screen. Ground only one side the cable screen.
- Use only a screwdriver with appropriate head.
- Do not touch the wire ends to each other.



#### Select the connection cable

Use two wire twisted pair screened cable. The wire cross-section should be 0.25–1.5 mm<sup>2</sup>. You may use either solid conductor or flexible conductor. In the case of using flexible conductor, use crimped wire end.



#### EMC considerations

When select the cable, consider the Ex installation regulations.

In installation must be ensured, that no potential equalization currents flows over the cable screen.

Ground only one side the cable screen (it's recommended the transmitter side). If necessary of grounding on both sides (for suppress very high level, high fequency interference signals) this can be achieved by use separate potential equalization or by use of a blocking capacitor (e.g. ceramic capacitor 1 nF, 1500 V) or. The low frequency potential equalization currents are thus suppressed, but the protective effect against high frequency interference signals remains.



Choosing the value of the capacitor should take consider the Ex installation regulations.

The DT9100 I4 has a very powerful EMC protection, so grounding and practice on both sides are generally unnecessary, but when a particularly high electrical disturbance device (such as an inverter drive system) is used nearby, it may be necessary to use the above. An important rule is that the signal cables, separate from the power cable.

### Number of cables

It is recommended to trace the synchronizing 4-20 mA current loop with a separate shielded cable and digital outputs on another cable. To reduce electromagnetic disturbance to the device, it is imperative to install the wiring shown on the previous pages and to form the shields as shown in the diagram.



A common cable can only be used, if the insulation strength between the wires is 500 V or higher!

### Cables entries



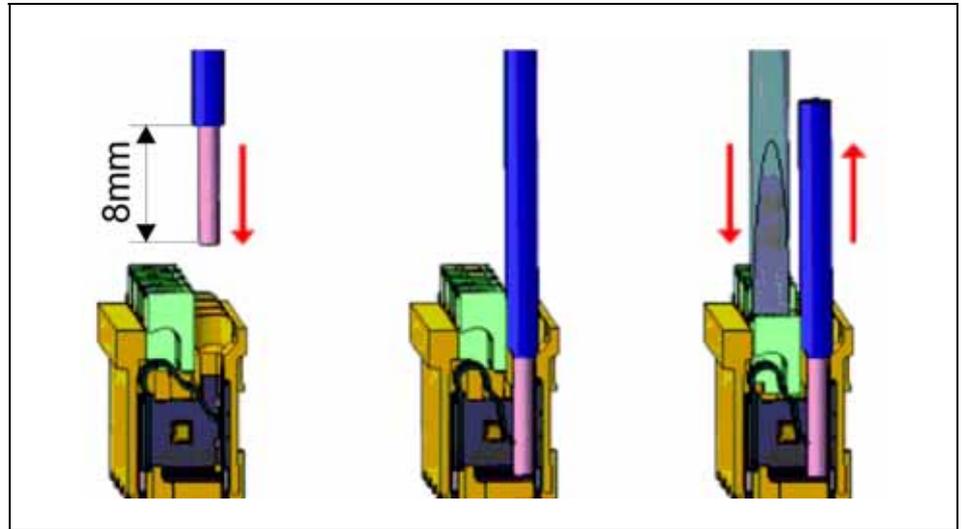
1. Check the conformity of the cables as described in the Cables Selection section.
2. Prepare the cable for connection. The uninsulated wire end length should be 8 mm.
3. Remove the front cover of the device as described in chapter 4.3.
4. Loosen the clamp nut on the cable gland so that the cable can be easily inserted. (Do not wrap it down completely, as it may be lost and the sealing ring may be lost.)
5. Route the cable through the cable gland into the housing so long that it can easily loosen the cable tie. (The excess length can be retracted at the end of the operation.) Make sure the cable does not damage the device.

## Connecting the cables into the terminal assemblies

Make sure before connection that the power supply is switched off.

The push-in direct connector assemblies used allow a fast connection of the cables.

Their proper usage is shown by the following figure:



1. Push the stripped cable-end until it possible into the terminal assembly. In the case of flexible cable-ends, you can facilitate opening the connection part by pushing down the white button.

2. By pushing the wire in, the self-closing connection is being established. Check it by pulling it outwards slightly.

(3. When you disassemble the cable, push down the white button by a screwdriver, and pull the cable-end out.)



There is no need to use great force for pushing the cable in, neither for removal. The button can be pushed down easily. Please do not exercise forces higher than necessary, as it may cause damages to the terminal assembly.

**5.2. Connecting the digital outputs**

A DT9100 I4 digital output is an output for direct driving an other DT910x B clock synchronising input or a NAMUR input.

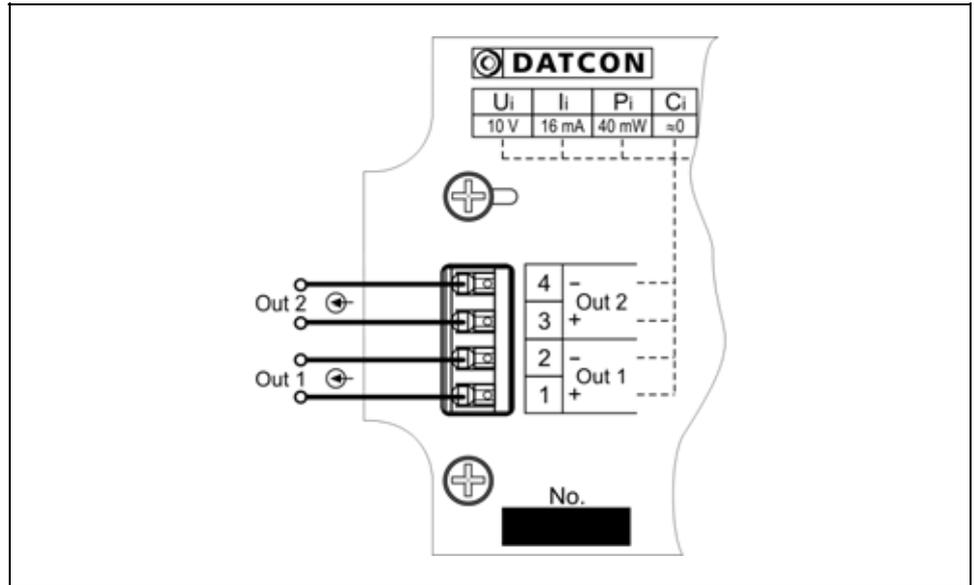
You may connect an instrument to the output which input is in conformity with the following output parameters:  
 $U_o < 10\text{ V}$ ,  $I_o < 200\text{ mA}$ ,  $P_o < 0,5\text{ W}$ .



**Wiring plan, connecting the digital outputs**  
 (see also “Application example”)

Be careful the polarity of the cables.

The following figure shows the connection:



1. Push the cable-end until it possible into the terminal assembly. By pushing the wire in, the self-closing connection is being established.
2. Check it by pulling it outwards slightly.

### 5.3. Connecting into the current loop (synchronising input)

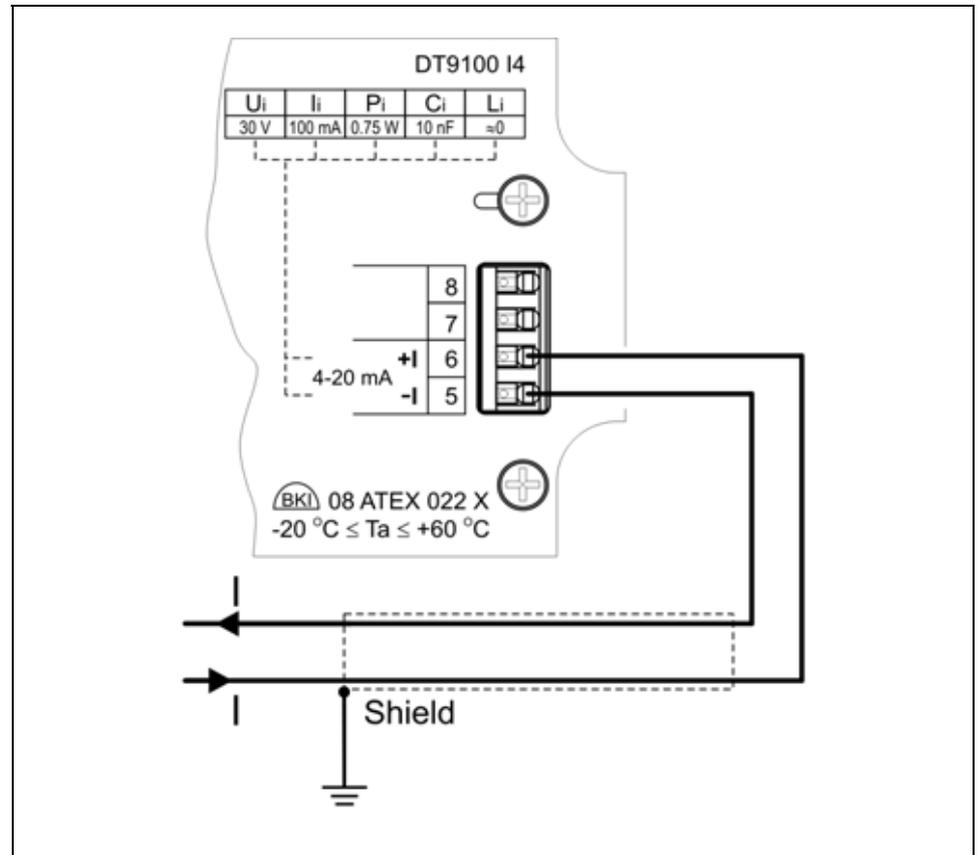
#### Connecting as end device

The DT9100 I4 acts as a terminal device of the current loop. In this case the signal comes via a pair of wires, and it does not have to go to other devices.

The following figure shows the connection:

#### Wiring plan, connecting into the current loop (synchronising input) (see also “Application example”)

Be careful the polarity of the cables



1. Push the cable-end until it possible into the terminal assembly. By pushing the wire in, the self-closing connection is being established.
2. Check it by pulling it outwards slightly.

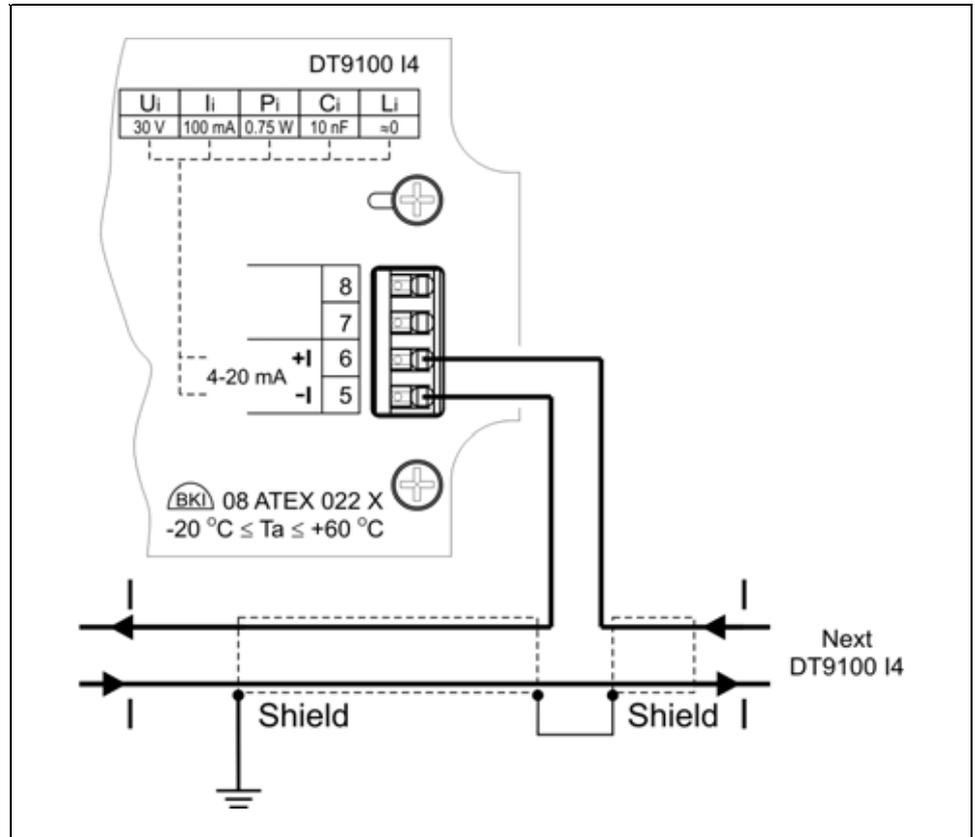
**Connecting as “middle” device**

- The DT9100 I4 is situated in the „middle” of the current loop. In this case one cable comes from the signal source and another cable goes to the next unit(s).

The following figure shows the connection:

**Wiring plan, connecting into the current loop (synchronising input) (see also “Application example”)**

Be careful the polarity of the cables



1. Push the cable-end until it possible into the terminal assembly. By pushing the wire in, the self-closing connection is being established.
2. Check it by pulling it outwards slightly.

**Checking the connections**

Check if the cables are connected properly (have you connected all the cables, have you connected to the right place, do not the cable-ends touch each other).

**Finishing steps**

1. Check if the cables are connected properly (have you connected all the cables, have you connected them to the right place, are not the cable ends touching each other).
2. Pull back the unnecessary cable length from inside of instrument enclosure.
3. Tight the gland nut that the cable can not be moved by pulling.

**Operating check**

If the connections are appropriate, the display shows numbers or text.

If the display shows nothing (no LCD segment lit), probable the connections of wire not appropriate or the current do not flow in current loop.

**Assemble**

Check the connections and measure the voltage between connectors 5 and 6, it must be about 2 VDC.

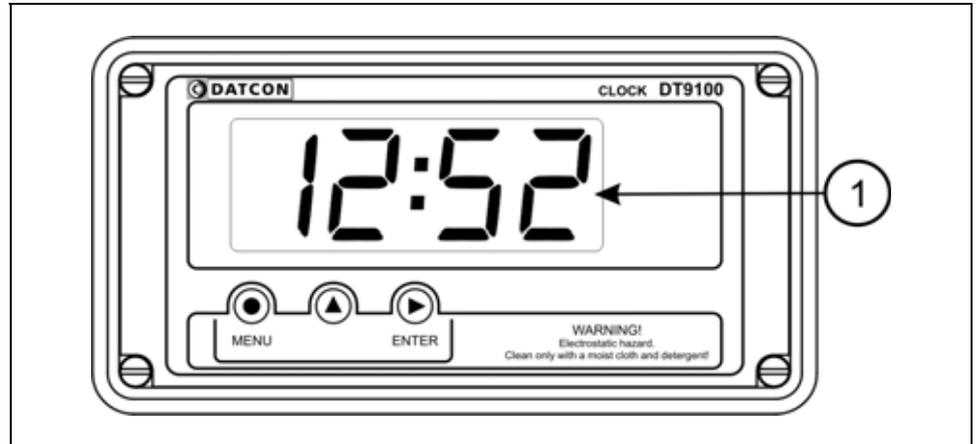
4. Mount back the front cover as shown the chapter **4.3 Mounting back the front cover**.

The mounting and connecting are finished.

## 6. Display and manual controls

### 6.1. The first start-up

#### The display



#### The display is indicated by the arrow (1)

After the instrument has been installed and connected to the power supply, first you see on the display:

Type of instrument: *dt, 9100*

Type of power supply: *LOOP*

Initialization: *init*

Factory default: *FACT*

#### In the case of an error message

If anything else appears on the display instead of the numbers showing the current value (e.g. a message with blinking letters), then it is an error message of the instrument.

In order to define the error more accurately, please go to Chapter **10.3. Error messages** or **10.4. Messages of critical errors**, found at the end of this Manual, in the Appendix.

## 6.2. Characters and mnemonics appearing on the display

DT9100 I4 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:



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

All mnemonics (code words) presented on the display comes from English expressions in abbreviated form. The following part gives a list of the possible mnemonics and their meaning. The left-side column shows the characters appearing on the display. The right-side column gives first the meaning, then the full English word in brackets and, after the hyphen, and explanation may be given.

### Login text

$dt$   
 $9\ 100$   
 $i4$

**DT** - Datcon instrument

**9100** - Type of the instrument

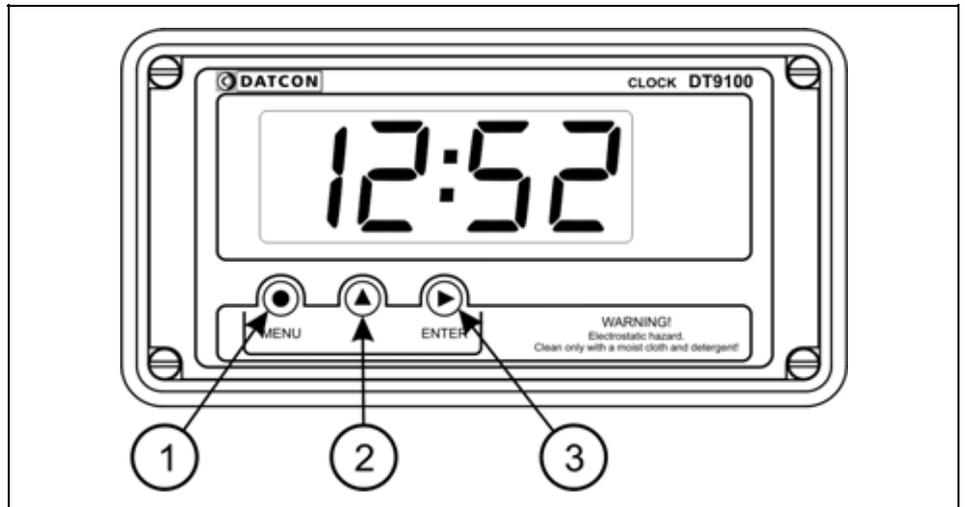
**I4** - Type of power source

**Messages of critical errors***S:dFS***Default factory settings (Service: Default Factory Settings)****During code writing***codE***Code? (Code)***bAd.c***Bad Code (Bad Code)***USEr***A User login took place (User)***SUPr***A Supervisor login took place (Supervisor)****During setting up***ErrO***Bad input value (Error)***r.tYPE***Retype it please (Retype)***t.oUt***Automatic escaping (Time Out) - after 4 minute***EH it***Exit from the setting (Exit)***SEc.O***Enter menu of second clearing***rEdY***The requested operation has been completed (Ready)***SAvE***The saving of the settings is being done (Save)***nO***No, I don't want this menu (No)***YES***Yes, the menu can be started (Yes)***cAnC***Cancel, I don't want this setting (Cancel)**

### 6.3. Manual controls

DT9100 I4 can be adjusted by the membrane push-buttons indicated by (1), (2), and (3) in the drawing.

#### Functions of the push-buttons during displaying time



**(1) MENU button:** Enters the menu  
When you push this button, the device will ask for a password (code) in accordance with Chapter 7.1. **Type in the code (password)**, when the right code has been given, it enters into the menu. **During this time the clock is running, and the digital outputs don't change.** If no keys are pressed for a period of one minute, the instrument restarts and the measurement goes on.

**(2) ▲ button:** displays the firmware version. The firmware version remains on the display as long as the button is being pressed. **During this time the clock is running, and the digital outputs don't change.**

**(3) ENTER button:** displays the seconds.  
The seconds are refreshed on the display as long as the button is being pressed.

## 7. Setting up

### 7.1. Type in the code (password)

#### The importance of the code

You may enter the menu only when you type in your code. The code consists of 4 numbers. This prevents unauthorised access.

#### 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**.

#### Type in the code

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

2. Four zeros appear: *0000*. Left side zero is blinking.

- By **▲** button you can increase the value of the blinking number:

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

- Press the **▶** button to select the next digit.

3. By pressing the **▲** and the **▶** buttons, type in either the user code or the supervisor code.

4. Press the **MENU** button. If a correct code has been type in, the *USEr* (login as a user) or *SUPr* (login as a supervisor) is displayed and stays there for 2.5 seconds;

then the first menu item is shown on the display: *0 I.5E*.

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

Start typing the code in again from Point 1.

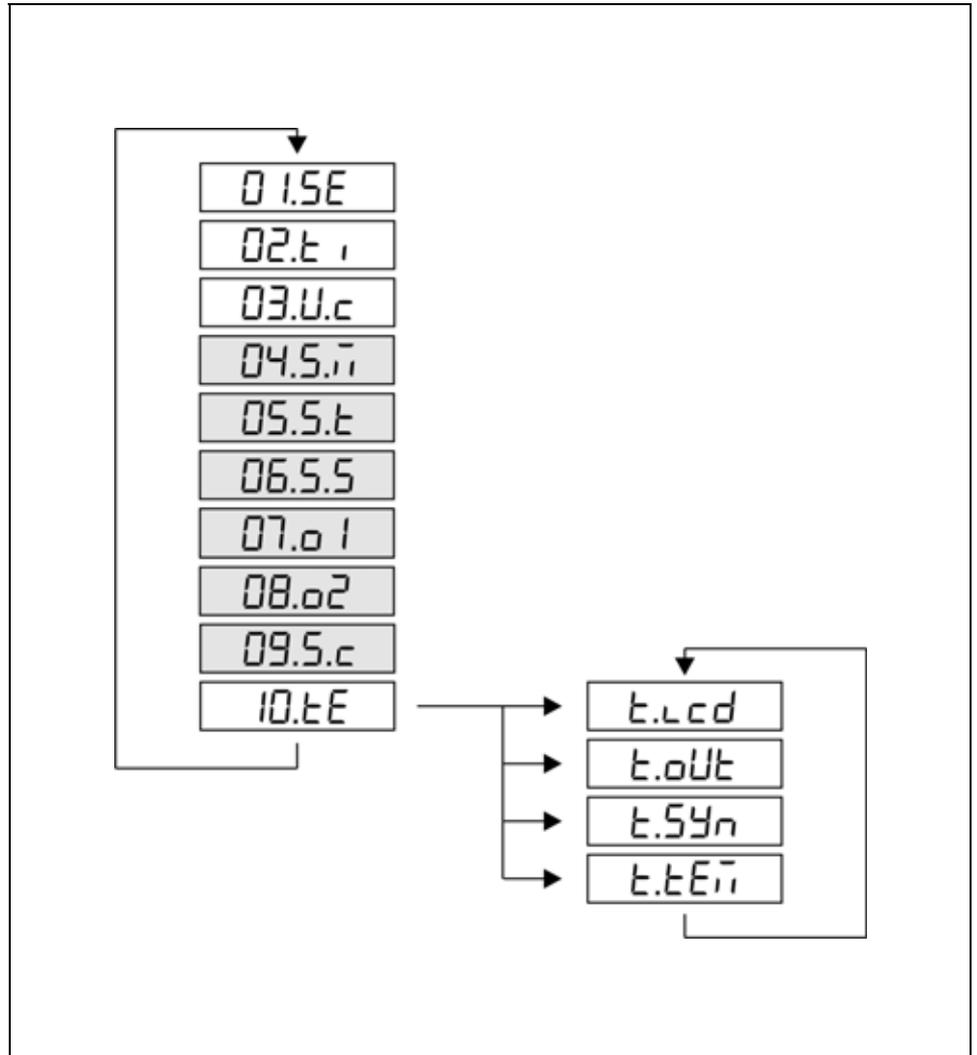
#### Automatic exit from the request for the code

If no buttons are pressed, the instrument displays the mnemonic *t.OUt* (**Time Out**) after 4 minute has passed from the last pressing of a button, and it **RESTARTS**, i. e. goes back to the clock mode. This solution is due to security: should the instrument be left alone for some reason, unauthorised persons will not be able to change the settings of the instrument after 4 minute.

## 7.2. The menu

### The menu structure

- 01: Second clear  
30. page
- 02: Time set  
31. page
- 03: User code  
32. page
- 04: Synchronisation mode  
34. page
- 05: Synchronisation time  
35. page
- 06: Sync. gate time  
36. page
- 07: Digital output 1  
37. page
- 08: Digital output 2  
38. page
- 09: Supervisor code  
39. page
- 10: Tests  
41. page



**Comment:**

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

### 7.3. Second clear (01. menu item)

#### Function

Set the seconds of time to zero, and round time.  
If the moment of button pressing the second was between 0 and 29, the hour and minute not changing.  
If the moment of button pressing the second was between 30 and 59, the minute rounding up (if necessary the hour too).

#### Sequence of operations

1. Enter the menu by the user or the supervisor code. Chapter 7.1. **Type in the code (password)** describes how you can it. You will see on the display: **0 1.5E**.
2. Enter this menu item by the **ENTER** button.
3. You will see the mnemonic **SEc.0** on the display for 3 seconds, the time appears in MM.SS format. The decimal point is blinking per second.
4. Press the **▲** button to set the seconds to zero. Seconds are rounded down between 0 and 29 and rounded up between 30 and 59.
5. Press MENU button to set the time (if there is no need to set seconds to zero).

#### Exit from the menu item

1. After finishing the settings, press the **MENU** button to exit the given menu item, and will you see: **0 1.5E**.  
(2. If you want to change the settings you have just done, or if you just want to check what you have typed in, go on with the operation from point 2 of the **Sequence of operations**.)  
(3. If you don't want to exit the menu (you want to make further settings), then you may select the desired menu items by pressing the **▲** button.)

#### Exit from the menu

1. Press the **MENU** button. First the mnemonic **SAVE** (**Save**), then the mnemonic **EXIT** (**Exit**) are shown on the display. With that, the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

#### 7.4. Time-set (02. menu item)

##### Function

Setting the time (hour : minute) without second clearing.

##### Sequence of operations

1. Enter the menu by the user or the supervisor code. The way the code should be typed in can be found in Chapter 7.1. **Type in the code (password)**. You will see on the display: **0 1.5E**.
2. Keep stepping by pressing the **▲** button until the menu item **02.t i** appears.
3. Enter the menu item by pressing the **ENTER** button.
4. You will see the **00:00** on the display, and first digit will be blinking.
5. Pressing the **▲** button you can increase the value of the blinking digit:
 

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

  - By pressing the **▶** button you can select the next digit, so you can set all the four digits. (after the 4th digit the 1st digit will appear).

##### Exit from the menu item

1. After finishing the settings, press the **MENU** button to exit the given menu item, and then you will see this:
 

**02.t i**.

(2. If you want to change the setting you have just done, or if you just want to check what you have typed in, go on with the operation from point 2 of the **Sequence of operations**.)

(3. If you don't want to exit the menu (you want to make further settings), then you may select the desired menu items by pressing the **▲** button.)

##### Exit from the menu

1. Press the **MENU** button. First the mnemonic **SAVE** (**Save**), then the mnemonic **EXIT** (**Exit**) will be shown on the display. With that, the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

### 7.5. User code (03. menu item)

#### 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

1. Enter the menu by typing either the user code or the supervisor code.

The way the code should be typed in is described in Chapter 7.1. **Type in the code (password)**. You will see this: *0 1.5E*.

2. Keep stepping by pressing the **▲** button until the menu item *□3.U.c* appears.

3. Enter the menu item by pressing the **ENTER** button.

4. You see on the display: *0000*.

The digit on the left side is blinking.

- By pressing the **▲** button you can increase the value of the blinking digit:

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

- By pressing the **▶** button you can select the next digit.

3. By pressing the buttons **▲** and **▶**, type in the new user code.

4. Press the **MENU** button.

5. 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 *r.tYP* (re-type).

6. By pressing the buttons **▲** and **▶** type in the new user code again.

7. Press the **MENU** button.

8. When the code you wrote in for the first time is not identical with the code written in for the second time, a

blinking mnemonic *r.bAd.c* warns you about the error, and the device exits the menu item. You will see this

*03.U.c* on the display. (The user code has not changed, the old one is valid.) Restart the operation from Point 3.

**Sequence of operations** 9. If the codes written in for the first and second time are identical with each other, the device exits from the menu item. You see this **03.U.C** on the display.



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

**Returning into the menu item Changing the user code**

1. As you have already left the menu item **Changing the**

**user code**, you see this: **03.U.C**.

(2. If you want to change the setting you have performed just now, or if you just want to check what you have typed in, continue the operation from **Point 3 of the Sequence of operations.**)

(3. If you do not want to exit from the menu, as you want to perform further settings, you may press the **▲** button to select the desired menu items.)

**Exit from the menu**

1. Press the **MENU** button. First the mnemonic **SAVE**

(**Save**), then the mnemonic **EXIT** (**Exit**) are shown on the display. With this the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

## 7.6. Synchronisation mode (04. menu item)

### Function

Setting the remote synchronisation mode.

### Sequence of operations

1. Enter the menu by typing the supervisor code. The way the code should be typed in is described in Chapter 7.1. **Type in the code (password)**. You will see this on the display: **0 1.5E**.
2. Keep stepping by pressing the **▲** button until the menu item **□ 4.5.7** appears.
3. Enter the menu item by pressing the **ENTER** button.
4. You will see the actual synchronization mode on the display. The mnemonic will be blinking.
5. You can change the synchronisation mode by pressing the **▲** button.
  - **oFF** = no remote synchronisation [factory setting]
  - **SEc** = synchronisation of seconds.
  - **t 7E** = synchronisation at the time given in **05.5.t** menu item.

### Exit from the menu item

1. After finishing the setting, press the **MENU** button to exit the menu item, and you will see this: **04.5.7**.
  - (2. If you want to change the setting you have just done, or if you just want to check what you have typed in, go on with the operation from point 3 of the **Sequence of operations**.)
  - (3. If you don't want to exit the menu, as you want to make further settings, then you may select the desired menu items by pressing the **▲** button.)

### Exit from the menu

1. Press the **MENU** button. First the mnemonic **SAvE** (**Save**), then the mnemonic **EH t** (**Exit**) will be shown on the display. With this the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

## 7.7. Synchronisation time (05. menu item)

### Function

Setting remote synchronisation time. When **EH iE** is selected in **04.5.i** menu item, the clock will set at this time.

### Sequence of operations

1. Enter the menu by typing in the supervisor code. The way the code should be typed in is described in Chapter 7.1. **Type in the code (password)**. You will see on the display: **0 1.5E**.
2. Keep stepping by pressing the **▲** button until the menu item **05.5.E**.
3. Enter the menu item by pressing the **ENTER** button.
4. You will see the actual synchronisation time on the display.
5. By pressing the **▲** button you can increase the value of the blinking digit:

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

- By pressing the **▶** button you can select the next digit, so you can set all the four digits. (after the 4th digit the 1st digit will appear).

### Exit from the menu item

1. After finishing the setting, press the **MENU** button, to exit the menu item, and then you will see this: **05.5.E**.  
(2. If you want to change the setting you have just done, or if you just want to check what you have typed in, go on with the operation from point 3 of the **Sequence of operations**.)  
(3. If you don't want to exit the menu, as you want to make further settings, then you may select the desired menu items by pressing the **▲** button.)

### Exit from the menu

1. Press the **MENU** button. First the mnemonic **SAVE** (**Save**), then the mnemonic **EH iE** (**Exit**) are shown on the display. With that, the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

## 7.8. Synchronisation gate time (06. menu item)

### Function

The setting of the pulse width of the remote synchronisation signal. When the active state of the synchronising current is lower than this value the instrument will not accept it as a synchronisation signal (this function is useful for filtering a false value caused by noise). The active state of the input is 12 mA or higher loop-current.

When the input is in active state the clock stops (and you will see the **Sync** mnemonic on the display), and when the input goes to inactive state ( $I = 8$  mA), the clock starts (and you will see the time on the display).

### Sequence of operations

1. Enter the menu by typing in the supervisor code. The way the code should be typed in is described in Chapter 7.1. **Type in the code (password)**. You will see on the display: **0 1.5E**.
2. Keep stepping by pressing the **▲** button until the menu item **06.5.5**.
3. Enter the menu item by pressing the **ENTER** button.
4. You will see the actual gate time on the display, and the first digit will be blinking.
5. By pressing button **▲** you can set the pulse width between 1 and 8 seconds.

### Exit from the menu item

1. After finishing the setting, press the **MENU** button to exit the menu item, and you will see this: **06.5.5**.  
(2. If you want to change the setting you have just done, or if you just want to check what you have typed in, go on with the operation from point 3 of the **Sequence of operations**.)  
(3. If you don't want to exit the menu, as you want to do further settings, then you may select the desired menu items by pressing the **▲** button.)

### Exit from the menu

1. Press the **MENU** button. First the mnemonic **SAVE** (Save), then the mnemonic **EXIT** (Exit) are shown on the display. With this the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.
- 2.

## 7.9. Digital output 1 (07. menu item)

### Function

**Out 1** digital output mode setting.

### Sequence of operations

1. Enter the menu by typing in the supervisor code. The way the code should be typed in is described in Chapter 7.1. **Type in the code (password)**. You will see on the display: **0 I.5E**.
2. Keep stepping by pressing the **▲** button until the menu item **07.0 I**.
3. Enter the menu item by pressing the **ENTER** button.
4. You will see the **mode** mnemonic on the display. The mnemonic will be blinking.
5. Pressing the **ENTER** button you can read the active digital output mode.
6. Press **▲** button to select the desired output mode:
  - **off** = output in OFF state [Factory setting]
  - **Sync** = repeating synchronisation input signal. You can synchronise an other DT9100 B clock with the help of this function.
  - **on** = output is in ON state.

### Exit from the menu item

1. After finishing the setting, press the **MENU** button, to exit the menu item, and you will see this: **07.0 I**.
- (2. If you want to change the setting you have just done, or if you just want to check what you have typed in, go on with the operation from point 3 of the **Sequence of operations**.)
- (3. If you don't want to exit the menu, as you want to do further settings, then you may select the desired menu items by pressing the **▲** button.)

### Exit from the menu

1. Press the **MENU** button. First the mnemonic **SAVE** (**Save**), then the mnemonic **EXIT** (**Exit**) are will be shown on the display. With that, the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

## 7.10. Digital output 2 (08. menu item)

### Function

**Out 2** digital output mode setting.

### Sequence of operations

1. Enter the menu by typing in the supervisor code. The way the code should be typed in is described in Chapter 7.1. **Type in the code (password)**. You will see on the display: **0 1.5E**.
2. Keep stepping by pressing the **▲** button until the menu item **08.02**.
3. Enter the menu item by pressing the **ENTER** button.
4. You will see **mode** mnemonic on the display. The mnemonic will be blinking.
5. By pressing the **ENTER** button you can read the active digital output mode.
6. Press the **▲** button to select the desired output mode:
  - **off** = output in OFF state [Factory setting]
  - **Sync** = repeating synchronisation input signal.

With this function, you can synchronise an other DT9100 B clock.

  - **on** = output is in ON state.

### Exit from the menu item

1. After finishing the setting, press the **MENU** button, to exit the menu item, and you will see this: **08.02**.  
(2. If you want to change the setting you have just done, or if you just want to check what you have typed in, go on with the operation from point 3 of the **Sequence of operations**.)  
(3. If you don't want to exit the menu, as you want to do further settings, then you may select the desired menu items by pressing the **▲** button.)

### Exit from the menu

1. Press the **MENU** button. First the mnemonic **SAVE** (**Save**), then the mnemonic **EXIT** (**Exit**) will be shown on the display. With that, the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

### 7.11. Changing the supervisor code (09. menu item)

#### Function

You can define new codes instead of the factory-defined supervisor code. The code is an optional number within the range between 0000 and 9999.  
[Default factory setting: 1000]

#### Sequence of operations

1. Enter the menu by typing in the supervisor code. The way the code should be typed in is described in Chapter 7.1. **Type in the code (password)**. You see this: **0 1.5E**.
2. Keep stepping by pressing the **▲** button until the menu item **09.5.c** appears.
3. Enter the menu item by pressing the **ENTER** button.
4. You will see on the display: **1000**. The digit on the left side will be blinking.
  - Pressing the **▲** button you can increase the value of the blinking digit:
   
**1, 2, 3, 4, 5, 6, 7, 8, 9, 0**, etc.
  - Pressing the **▶** button you can select the next digit.
3. Pressing the buttons **▲** and **▶**, type in the new supervisor code.
4. Press the **MENU** button.
5. You have to type the new code in twice. This prevents errors due to typing mistakes in defining the new code. This is indicated by the mnemonic **r.tYP** (re-type).
6. By pressing the buttons **▲** and **▶** type in the new supervisor code again.
7. Press the **MENU** button.
8. When the code you wrote in for the first time is not identical with the code written in for the second time, a blinking mnemonic **rbAd.c** warns you about the error, and the instrument exits from the menu item. You will see this **09.5.c** on the display. (The supervisor code has not changed, the old one is valid.) Restart the operation from Point 3.

**Sequence of operations** 9. If the codes type in for the first and second time are identical with each other, the instrument exits from the menu item. You see this **09.5.c** on the display.



**Returning into the menu item Changing the supervisor code**

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

1. As you have already left the menu item **Changing the supervisor code**, you see this: **09.5.c**.

(2. If you want to change the setting you have performed just now, or if you just want to check what you wrote in, continue the operation from **Point 3 of the Sequence of operations.**)

(3. If you do not want to exit from the menu, as you want to perform further settings, you may press the **▲** button to select the desired menu items.)

**Exit from the menu**

1. Press the **MENU** button. First the mnemonic **SAVE** (**Save**), then the mnemonic **EXIT** (**Exit**) are shown on the display. With this the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

### 7.12. Tests (10. menu item)

#### Function

Checking the display and the limit outputs.

#### Sequence of operations

1. Enter the menu by typing either the user code or the supervisor code.  
The way the code should be type in is described in Chapter 7.1. **Type in the code (password)**. You see this: **0 I.5E**.
2. Keep stepping by pressing **▲** button as long as you see this menu item: **10.tE**.
3. Enter the menu item by pressing the **ENTER** button.
4. You see this **t.Lcd** on the display. (It's meaning: Display test). The mnemonic **Lcd** is blinking.
5. If you want to test the display, press the **ENTER** button. In this case all the segments on the display get switched on. By pressing the **▲** button several times you can select from several test patterns by which you can decide whether the display is good or not. You may exit from the display test by pressing the **MENU** button. You see this **t.Lcd** again.
6. If you want to test the limit outputs, press the **▲** button to switch to the **t.oUt** mnemonic from the **t.Lcd** mnemonic. (It's meaning: Output test).
7. Press the **ENTER** button.
8. You see this: **d.o.- -**. The blinking signs indicates the status of the digital outputs. In this present case both of them are switched off. This is why the blinking sign is in the middle position.
9. Pressing the **▲** button, you can switch the outputs on.
  - **d.o.** = both are switched OFF.
  - **d.o. 1-** = 1. ON; 2. OFF.
  - **d.o.- 2** = 1. OFF; 2. ON.
  - **d.o. 12** = both are switched ON.

Comment: the status you have selected here remains unchanged as long as you exit the menu, and the instrument starts measuring.
10. You can exit from the output test by pressing the **MENU** button. You see the blinking **t.oUt** mnemonic.

- Sequence of operations**
11. If you want to test synchronisation input, press **▲** button to change *t.OUt* mnemonic to *t.SYn* mnemonic. (It's meaning: synchronisation input test)
  12. Press **ENTER** button.
  13. You can read on the display: • - - - - when the synchronisation input is in inactive state (I = 8 mA)
  - or you can read on the display: • *SYnc* when the synchronisation input is in active state (I > 12 mA).
  14. Press **MENU** button to exit from this menu item: you can read on the display *t.SYn* mnemonic. The mnemonic is blinking.
  15. Press **▲** button to change *t.SYn* mnemonic to *t.tEt* mnemonic. (It's meaning: Temperature measurement)
  16. Press **ENTER** button.
  17. You can read on the display the temperature inside the instrument in °C.
  18. Press **MENU** button to exit from this menu item: you can read on the display: *t.tEt* mnemonic. The mnemonic is blinking.

- Exit from the menu item**
1. Press the **MENU** button, to exit from the Tests menu item, and you see this: *IO.tE*.
  - (2. If you want to return to the tests, go on from **point 3 of the Sequence of operations.**)
  - (3. If you don't want to exit the menu because you want to perform further settings, you can select the desired menu items by pressing the **▲** button.)

- Exit from the menu**
1. Press the **MENU** button. First the mnemonic *SAUE* (**Save**), then the mnemonic *EH tE* (**Exit**) are shown on the display. With this the storing of the settings is completed. The instrument has exited the menu and goes on with the measurement.

## 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.

All the error messages are described in detail in chapters **10.3. Error messages** and **10.4. Messages of critical errors** of the Appendix.

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 chapter **2.1. Authorised personnel: 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 information please communicate to the Datcon service personnel.

## 9. Dismounting

### 9.1. Dismounting procedure

The steps described in Chapter **4. Mounting** should be performed in reverse sequence. Upon dismounting the instrument, observing all the safety rules is mandatory, like upon mounting.

Only qualified and authorised professionals may perform the dismounting operations.



### 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

#### Intrinsic safety data

Certification: BKI18ATEX0007 X, BKI18ATEX0007 X/1  
 Marking:  $\text{Ex}$  II 2 G Ex ia IIC T6 Ga (-20 °C ≤ Ta ≤ 60 °C)

Ex safety data								
Synchronising input (current loop)	$U_i$	$I_i$		$P_i$		$C_i$	$L_i$	
	30 V	100 mA		0.75 W		10 nF	≈0	
Digital outputs	$U_i$	$I_i$	$P_i$	$C_i$	$L_i$	$U_o$	$I_o$	$P_o$
	10 V	16 mA	40 mW	≈0	≈0	6.6 V	131 μA	216 μW

#### Power supply

Power supply: 4-20 mA loop-powered  
 Voltage drop: < 2 V (at 20 mA), < 2.2 V (at 4 mA)  
 Reverse polarity protection: Yes  
 Maximum current and voltage: see: at Safety data  
 Backup time (without loop-current): minimum 15 minutes, approximately 1 hour

#### Input:

Input type: current  
 Range: 6-10 mA (normal state), typical: 8 mA  
 12-22 mA (synchronization state), typical: 20 mA  
 Voltage drop: < 2 V (@20 mA); < 2.2 V (@ 8 mA)

#### Digital outputs:

Output type: optically isolated passive switching transistor  
 Current in OFF condition:  $I < 0.1\text{mA}$  (at 9 V)  
 Voltage in ON condition:  $U < 1\text{ V}$  (at 10 mA)  
 Load rating: 10 V, 16 mA max. (Ex safety data)

#### Display / manual controls

Display unit: LCD, 4 digit, 7 segments  
 decimal point and negative sign  
 Character height: 25.4 mm  
 Display range: 00:00 – 23:59  
 Accuracy: ±1 min / year @ 0°C < Ta < +40 °C (typical)  
 Display refreshing time: 1 sec

**Environmental conditions:**

Operating temperature range:	$-20\text{ °C} \leq T_a \leq +60\text{ °C}$
Storing temperature range:	$-25\text{ °C} \leq T_a \leq +70\text{ °C}$
Klíma osztály:	EN 60654-1, class B2
Place of installation:	Zone 1, Zone 2, safe area

**Electromagnetic compatibility (EMC)**

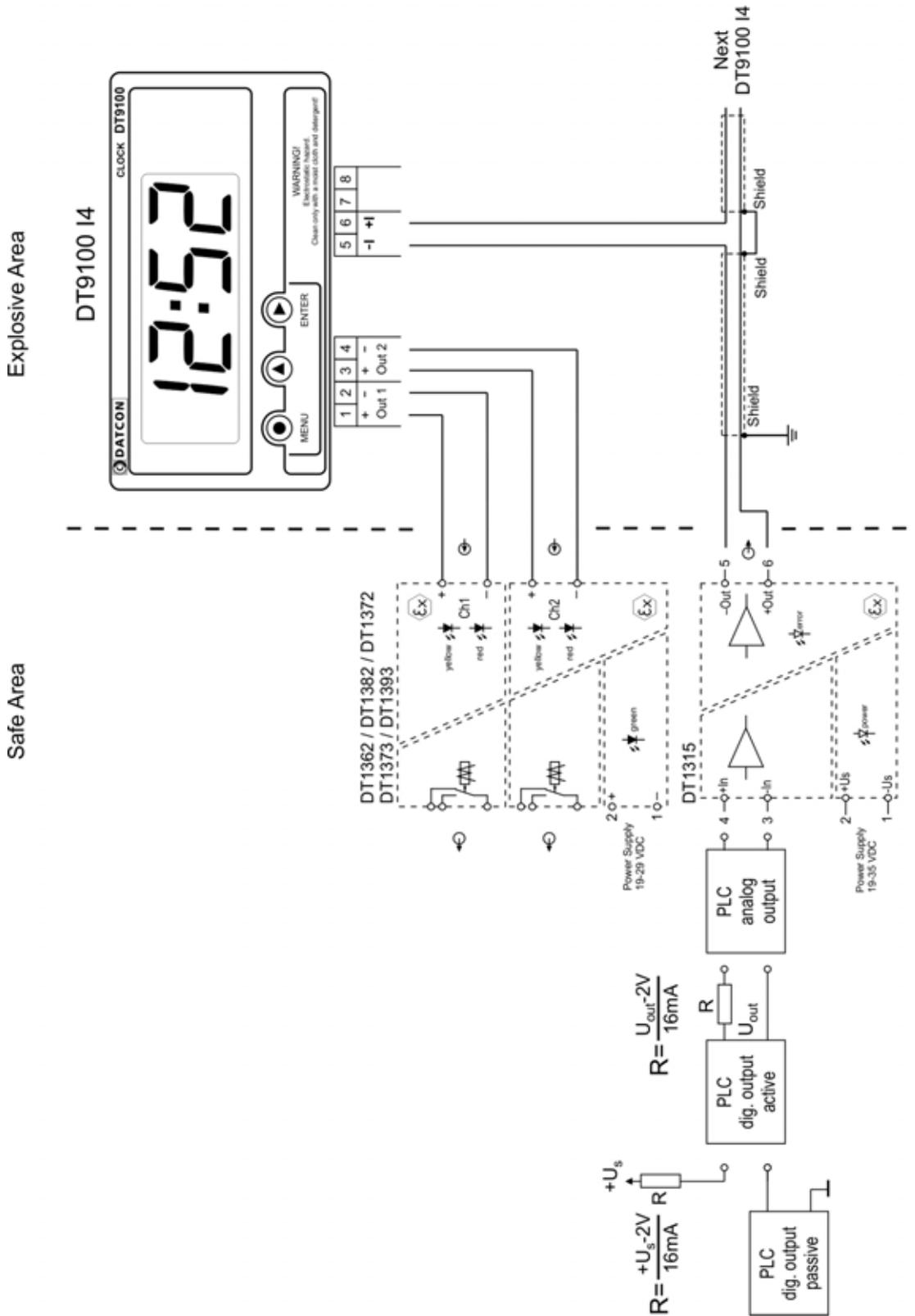
In accordance with MSZ EN IEC 61326-1:2021	
Immunity:	-A- criterion
Noise emission:	-A- class

**General data:**

Housing:	moulded polycarbonate case, installable as a field or panel-instrument
Dimensions:	see: figure 4.2.
Weight:	~0.5 kg
Protection:	IP 65
Mounting position:	optional, see: figure 4.2.
Connection:	IP 65 cable entry
Connection cable:	0.25-1.5 mm <sup>2</sup> cross-section
Electrical connection:	Push-in direct connection

The manufacturer reserves the right to change specifications.

### 10.2. Application example



### 10.3. Error messages

The instrument has a sophisticated self-testing function; it is capable of detecting the majority of the errors. All mnemonics (code words) presented on the display come from English expressions in abbreviated forms.

--:--

#### **The time hasn't been set**

The time hasn't been set since the first power-up or the clock hasn't been powered for more than 1 hour.

**Repairing:** enter the time set menu **0 1.5E** and set the time and set the seconds to zero.

When the **t 11E** synchronisation mode (synchronisation to a preset time) is selected in the **04.5.11** menu item, the synchronisation signal can clear the error message.

0 1 23

#### **Colon is not blinking**

Low battery voltage, you have to replace it.

In this state the clock operates for several months but the LCD contrast may degrade.

**Repairing:** replace DT4V5BAT battery pack.

bAd.c

#### **Bad code (Bad. Code)**

You have used bad code when you entered the menu or you modified the code.

**Repairing:** type the correct code in.

If you don't remember the user code, you can enter by typing in the supervisor code, and look up the user code in the **03.U.c** item.

If you don't remember the supervisor code, call the manufacturer's service department.

#### 10.4. Messages of critical errors

Such errors are caused normally by structural injuries or damages. Repair is done by the service of Datcon. In case of error it is recommended to notice of the displayed error message, as well as of the phenomenon seen and communicate to the Datcon service personnel.

**S:dFS**

##### **Default Factory Settings (Service: Default Factory Settings)**

The instrument needs to be re-calibrated, and the operating parameters have also got damaged.

**Repairing:** by service

**E:LSE**

##### **The last saving was not successful (Error: Last Save)**

Saving of the parameters modified last time was unsuccessful. The error was caused most probably by an interruption of the current loop. The status prior to the modification was preserved.

**Repairing:** Enter the menu, check the parameters. Change the incorrect values to the desired values, then exit the menu in the regular way. Pay attention to ensure that the loop current should not get interrupted during the operation

### 10.5. Description of the menu items

You find a description of the menu items in the following part. A description on the handling of the menu is in Chapter 7. **Setting** up.

**01.5E**

#### **The setting of the time (Sec null)**

You can set the seconds to zero to set the exact time or you can set the hours and the minutes by increasing or decreasing selected digits.

**02.t**

#### **Time set (Time)**

You can set the hours and the minutes by increasing or decreasing selected digits.

**03.U.c**

#### **Changing the User Code (User Code)**

The new User Code must be typed in twice in order to avoid any typing errors. The mnemonic **r.tYP** (**Re-Type**) warns you to type the code for the second time, after you have typed it once. If the two codes are not identical with each other, the mnemonic **bAd.C** (**Bad Code**) appears on the display and the instrument exits the menu item.



Make sure that you do not forget the User Code, otherwise a new one can be defined only if you enter the menu by a Supervisor Code [Default factory setting: 0000]

**04.5.7**

Use supervisor  
code

#### **Synchronisation mode (Synchron Mode)**

The setting of the remote synchronisation mode.

Modes:

**OFF** = non active

**SEc** = rounding the seconds down or up

**Sync** = synchronisation to a preset time written in the

**05.5.t** menu item (here you can set hours and minutes, the seconds are set to zero automatically).

**05.5.t**

Use supervisor  
Code

**Synchronisation time set (Synchron Time)**

Here you can preset the synchronisation time for the remote synchron function.

(The seconds are set to zero automatically.)

**06.5.5**

Use supervisor  
code

**Synchronisation puls width set (Synchron Gate Time Set)**

Here you can set the pulse width of the remote synchronisation signal. When the active state of the synchron puls is lower then this value the instrument doesn't accept it as a synchronisation puls.

E.g. when **2.5Ec** is selected than the the loop current have to keep over 12 mA for more than 2 seconds to stop the clock and activate the synchronisation after the loop current goes under 8 mA.

**07.01**

Use supervisor  
code

**1. digital output mode (Output 1)**

Here you can set Out1 (terminal 1, 2) digital output mode. You can use it for synchronising other clocks selecting the repeater function.

**08.02**

Use supervisor  
code

**2. digital output mode (Output 2)**

Here you can set Out1 (terminal 3, 4) digital output mode. You can use it for synchronising other clocks selecting the repeater function.

**09.5.c**Use supervisor  
code**10.tE****Changing the Supervisor Code (Supervisor Code)**

The new Supervisor Code must be typed in twice, in order to avoid any typing errors. The mnemonic **r.tYP** (**Re-Type**) warns you to type the code for the second time, after you have typed it once. If the two codes are not identical with each other, the mnemonic **bAd.C** (**Bad Code**) appears on the display, and the instrument exits the menu item. Make sure not to forget the Supervisor Code, otherwise a new one can be defined in the service only. [Default factory setting: 1000]

**Test functions (Test)**

- **t.LCd** display test (Test: **LCD**)  
for testing display working properly.
- **t.oUt** output test (Test: **Output**)  
Force digital output for a desired state.
- **t.Syn** synchronising input test (Test: **Synchon**)  
for testing synchronising input.
- **t.tEi** display temperature (Test: **Temperature**)

### 10.6. Messages and error messages during setting up

The following mnemonics may displayed when the settings are being performed.

<i>EXIT</i>	<b>Exit from the menu, returning to the normal operating mode (Exit)</b>
<i>SAVE</i>	<b>Saving the changed parameters is being done (Save)</b>
<i>BUSY</i>	<b>The instrument is performing internal operations (Busy)</b>
<i>READY</i>	<b>The requested task has been successfully completed (Ready)</b>
<i>NO</i>	<b>I do not want this menu item (No)</b>
<i>YES</i>	<b>Yes, the menu item may be started (Yes)</b>
<i>CANCEL</i>	<b>Cancel, exit from menu without change (Cancel)</b>
<i>ERROR</i>	<b>Time set error (Error)</b>

**Function**  
**Enter the menu**

### 10.7. Setting the time (example)

Time set.

1. Press the **MENU** button. You will see the *codE* mnemonic on the display. The mnemonic will be blinking.
2. You will see: *0000* on the display. The left digit will be blinking.
  - By pressing the **▲** button you can increase or decrease the selected digit:
 

*1, 2, 3, 4, 5, 6, 7, 8, 9, 0*, etc.
  - Press the **▶** button to select the next digit.
3. By pressing the **▲** and **▶** buttons you can type in the supervisor code.
4. Press the **MENU** button. If you have typed in the correct code you will see the *USEr* (enter as user) or *SUPr* (enter as supervisor) mnemonics for 2.5 seconds, after that you will see the *0 1.5E* on the display.
5. Entering bad code, the *bAd.c* (Bad Code = bad code) mnemonic will appear on the display for 2.5 seconds, then the instrument exits this menu and the clock goes on working.  
Begin the time setting from point 1.

**Setting the seconds**

6. Enter the *0 1.5E* menu item by pressing the **ENTER** button.
7. You will see the mnemonic *SEc.0* on the display for 2.5 seconds, and then the time appears in MM.SS format. The decimal point will be blinking.
8. Press the **▲** button to set the seconds to zero. Seconds will be rounded down between 0 and 29 seconds, and they will be rounded up between 30 and 59 (11:59.25 » 11:59.00 or 11:59.37 » 12:00.00). This function can be used if the time hasn't been set, then you will see *--:--* on the display, or when the time isn't accurate.

**Setting the hours**

9. Press Menu button to escape from menu item.
10. Press the ▲ button to select the **02.t** menu item.
11. Enter the **02.t** menu item by pressing the **ENTER** button. You will see the **00:00** on the display, and the hours will be blinking.
12. Press the ▲ button to increase the hours, press the **ENTER** button to decrease the hours.  
While setting the hours the clock continues to count the seconds. It is a useful function when setting the clock from winter time to summer time or vice versa.

**Setting the minutes**

13. Press **MENU** button to set the minutes. You will see the **00:00** on the display, and minutes will be blinking.
14. Press the ▲ button to increase the minutes, press the **ENTER** button to decrease the minutes.  
Setting the minutes has no effect on going of the clock. If you have set the seconds before, the seconds remain accurate.

**Exit from Time setting menu**

15. Press the **MENU** button. You will see on the display: **0 1.5E**.

**Exit from menu**

16. Press the **MENU** button. You will see on the display: **SAVE** (**Save** = save, store), then the: **EXIT** (**Exit** = exit) mnemonic. The settings have been saved, the clock shows the time.

## 10.8. ATEX Certification

	
	
<p>A NAH által NAH-6-0027/2017/K számon akkreditált terméktesztelő szervezet. / Product certification organisation accredited by NAH under No. NAH-6-0027/2017/K.</p>	
	
<p><b>Ex</b></p>	
(1)	<p><i>EU-Típus Vizsgálati Tanúsítvány</i> <i>EU-Type Examination Certificate</i></p>
(2)	<p>A potenciálisan robbanásveszélyes környezetben történő alkalmazásra szánt berendezések, védelmi rendszerek 2014/34/EU Direktíva / Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU</p>
(3)	<p>EU-Típus Vizsgálati Tanúsítvány száma / EU-Type Examination Certificate Number: <b>BKI18ATEX0007 X</b></p>
(4)	<p>A gyártmány / Product: <b>Gyújtószikramentes digitális óra / Intrinsically safe digital clock</b> Típusa / Type: <b>DT9100 B, DT 9102 B, DT9100 I4, DT9102 I4</b></p>
(5)	<p>Gyártó / Manufacturer: <b>DATCON Ipari Elektronikai Kft. / DATCON Industrial Electronics Ltd.</b></p>
(6)	<p>Cím / Address: <b>H-1148 Budapest, Fogarasi út 5., 27. épület / Building 27 Hungary</b></p>
(7)	<p>A gyártmány és annak változatai a jelen tanúsítvány vonatkozó pontjában vannak feltüntetve. / This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.</p>
(8)	<p>A ExVÁ Robbanásbiztos Berendezések Vizsgáló Állomása Kft., 1418 sz. kijelölt testület, a 2014. február 26-i Európai Parlament és Tanács 2014/34/EU Direktívájának 17. cikkelye szerint tanúsítja, hogy a gyártmány megfelel az Alapvető Egészségügyi és Biztonsági Követelményeknek a Direktíva II. számú Mellékletében a potenciálisan robbanásveszélyes térben alkalmazásra szánt gyártmányok tervezése és gyártása szerint. / ExVÁ Testing Station for Explosion Proof Equipment Company Limited, notified body number 1418 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.</p>
	<p>A vizsgálat eredményeit az alábbi nyilvántartási számú bizalmas vizsgálati dokumentáció tartalmazza: / The examination and test results are recorded in confidential report No.: <b>R - 011 - 18</b></p>
<p>Ez a tanúsítvány csak a maga egészében és változatlan formában használható fel, mellékleteivel együtt. / This certificate may only be reproduced in its entirety and without any changes, schedule included.</p>	
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(9) Az alapvető egészségügyi és biztonsági követelményeknek való megfelelést a következők biztosítják: /  
 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**MSZ EN 60079-0:2013, MSZ EN 60079-0:2013/A11:2014, MSZ EN 60079-11:2012**

kivéve a 18. pontban felsorolt követelményekre vonatkozóan.  
 except in respect of those requirements listed at item 18 of the Schedule.

(10) A tanúsítvány száma után álló „X” jel azt mutatja, hogy a gyártmány speciális feltételek megtartása mellett felel meg a jelen tanúsítvány vonatkozó pontjában feltüntetett biztonságos alkalmazás feltételeinek. /  
 If the sign „X” is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) Jelen EU-TÍPUS VIZSGÁLATI TANÚSÍTVÁNY csak a megjelölt gyártmány tervezésére és kivitelezésére vonatkozik. A jelen Direktíva további követelményei vonatkoznak a gyártmány gyártási folyamatára és szállítására. Ezek nem tartoznak e tanúsítvány alá. /  
 This EU-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of this Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) A gyártmány jele a következő /  
 The marking of the product shall include the following:

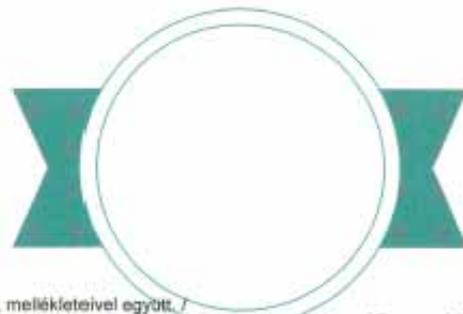
- DT9100 B, DT9102 B :  II 2 G Ex ia IIC T5	T <sub>környezet</sub> / T <sub>ambient</sub> : -20 °C ... +50 °C
- DT9100 I4, DT9102 I4 :  II 2 G Ex ia IIC T6	T <sub>környezet</sub> / T <sub>ambient</sub> : -20 °C ... +60 °C

**ExVÁ Robbanásbiztos Berendezések**  
**Vizsgáló Állomása Kft.**  
**ExVA Testing Station for Explosion Proof**  
**Equipment Ltd.**  
 Hungary, 1037 Budapest, Mikoviny u. 2-4.  
 Tel.: 36 1 250 1720  
 E-mail: bkiex@bki.hu



*Molnár Edit*  
**Molnár Edit**  
 Tanúsító Szervezet Vezető /  
 Head of Certification Body

**Budapest, 2018. június / June 12.**



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### (13) Melléklet / Schedule

#### (14) EU-TÍPUSVIZSGÁLATI TANÚSÍTVÁNY szám / EU-TYPE EXAMINATION CERTIFICATE N<sup>o</sup> BKI18ATEX0007 X

#### (15) Gyártmány leírása / Description of Product

A DT9100 B és DT9102 B gyújtószikramentes telepes táplálású nagy pontosságú digitális óra. Tápellátását DT4V5BAT típusú tápegység biztosítja. Fenti típusok rendelkeznek egy külső szinkronizáló kontaktus jelet fogadó bemenettel is.

A DT9100 I4 és DT9102 I4 gyújtószikramentes huroktáplálású nagy pontosságú digitális óra. A működtetéséhez szükséges energiát és a szinkronizáló jelet a 4-20 mA áramhurokból veszi.

A DT9100 B és DT9100 I4 típusok IP 65 védetségű tokozásban nyertek elhelyezést, csatlakoztatásuk M16x1,5 tömszelencén keresztül történik.

A DT9102 B és DT9102 I4 típusok védetsége IP65/IP30, csatlakoztatásuk a hátoldalra dugaszolható LSF-SMT5 sorkapcson keresztül történik. Ez utóbbi változatok csatlakozó táblába, műszerfalba, védődobozba beépíthető kivitelűek. /

The DT9100 B and DT9102 B are intrinsically safe battery supplied digital clocks of high accuracy. Their power supply is ensured by the DT4V5BAT type unit. The above types are provided also with an entry receiving external synchronising contact signal.

The DT9100 I4 and DT9102 I4 are intrinsically safe loop supplied digital clocks of high accuracy. The power required for operation and the synchronising signal are provided by the 4-20 mA current loop.

The DT9100 B and DT9100 I4 types are located in an enclosure of IP 65 protection; their connection is ensured by an M16x1,5 gland.

The DT9102 B and DT9102 I4 types are of IP 65 / IP 30 protection, their connection is ensured through an LSF-SMT5 terminal block, which can be plugged in the back side. These latter variations can be incorporated into a junction board, instrument panel, protective box.

#### 15/1 Műszaki adatok / Technical data

##### 15/1.1 DT 9100 B, DT 9102 B telepes kivitel / Make with battery pack supplied

##### - Táplálás / Power (5, 6)

Csatlakoztatás DT4V5BAT gyújtószikramentes kialakítású telepegységhez /  
Connection to intrinsically safe battery pack

$U_i = 5,5 \text{ V}$

$I_i = 17 \text{ mA}$

$P_i = 23,4 \text{ mW}$

A csatlakozó pont saját kapacitása, induktivitása elhanyagolható /

Self capacitance and inductance of the connections point are negligible

##### - Szinkronizáló bemenet / Synchronising entry (7, 8)

Csatlakoztatás gyújtószikramentes kialakítású, tanúsított, Ex ia IIC védelmi jelű áramkörhöz;  
megengedett adatok az alábbiak /

Connection to intrinsically safe certified circuit with protection mark Ex ia IIC;  
the admissible parameters are following:

$U_i = 30 \text{ V}$

$I_i = 200 \text{ mA}$

$P_i = 0,75 \text{ W}$

$C_i, L_i$  elhanyagolható / negligible

Az áram és feszültség addícióhoz figyelembe vehető értékek a következők /

The acceptable values for the current and voltage addition are the next:

$U_o = 5,88 \text{ V}$

$I_o = 594 \text{ } \mu\text{A}$

$P_o = 873 \text{ } \mu\text{W}$

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- Digitális kimenetek / Digital outputs OUT1 (1, 2) és / and OUT2 (3, 4)  
 Csatlakoztatás gyújtószikramentes kialakítású, tanúsított Ex ia IIC védelmi jelű áramkörhöz,  
 megengedett adatok az alábbiak /  
 Connection to certified intrinsically safe circuit with protection mark Ex ia IIC,  
 admissible parameters are following  
 $U_i = 10 \text{ V}$   
 $I_i = 16 \text{ mA}$   
 $P_i = 40 \text{ mW}$   
 $C_i, L_i$  elhanyagolható / negligible  
 Az áramkör passzív kontaktus jellegű.  
 A leválasztó optocsatoló hibája esetén a kimeneten megjelenő paraméterek a következők /  
 The circuit is typical passive.  
 In case error of the optocoupler the parameters on the output are following:  
 $U_o = 5,88 \text{ V}$   
 $I_o = 117 \mu\text{A}$   
 $P_o = 172 \mu\text{W}$

**15/1.2DT 9100 I4, DT 9102 I4 huroktáplálású kivitel / Make with loop supplied**

- Táplálás / Power (5, 6)  
 Csatlakoztatás gyújtószikramentes kialakítású, tanúsított, Ex ia IIC védelmi jelű áramkörhöz /  
 Connection to certified intrinsically safe circuit with protection mark Ex ia IIC.  
 $U_i = 30 \text{ V}$   
 $I_i = 100 \text{ mA}$   
 $P_i = 0,75 \text{ W}$   
 $C_i = 10 \text{ nF}$   
 $L_i$  elhanyagolható / negligible
- Digitális kimenetek / Digital outputs OUT1 (1, 2) és / and OUT2 (3, 4)  
 Csatlakoztatás gyújtószikramentes kialakítású, tanúsított Ex ia IIC védelmi jelű áramkörhöz,  
 megengedett adatok az alábbiak /  
 Connection to certified intrinsically safe circuit with protection mark Ex ia IIC,  
 admissible parameters are following:  
 $U_i = 10 \text{ V}$   
 $I_i = 16 \text{ mA}$   
 $P_i = 40 \text{ mW}$   
 $C_i, L_i$  elhanyagolható / negligible  
 Az áramkör passzív kontaktus jellegű.  
 A leválasztó optocsatoló hibája esetén a kimeneten megjelenő paraméterek a következők /  
 The circuit is typical passive.  
 In case error of the optocoupler the parameters on the output are following:  
 $U_o = 6,6 \text{ V}$   
 $I_o = 131 \mu\text{A}$   
 $P_o = 216 \mu\text{W}$

**15/2 Védettség / Ingress protection**

DT9100 B és / and DT9100 I4 :		IP 65
DT9102 B és/ and DT9102 I4	előlről / front side:	IP 65
	hátról / back side:	IP 30

**15/3 Érintésvédelem / Electrical shock protection**

SELV ( safe extra low voltage ) - MSZ HD 60364-4-41 szerint/ according to MSZ HD 60364-4-41

**(16) Jegyzőkönyv / Report N°**

R-011-18 ATEX Értékelő Jelentés / ATEX Assessment Report

2018.06.12

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**(17) Biztonságos üzemeltetés feltételei / Special conditions of Use**

- 17.1 A készülék tokozása műanyag, ezért „elektrosztatikus feltöltődés veszély”-re figyelmeztető felirattal kell ellátni a készüléket. Az elektrosztatikus feltöltődés elkerülése érdekében a felület csak nedves ruhával tisztítható. / The enclosure of the device is plastic, therefore must be provided by a warning label on the "hazard of electrostatic charging". The electrostatic charging can be avoided if the surface is cleaned by a damp cloth.
- 17.2 Mivel a DT4V5BAT típusú tápegység cseréje a robbanásveszélyes térben is elvégezhető, a telepés kivételű készüléket meg kell jelölni az alábbi figyelmeztető táblával:  
 "FIGYELEM: Csak Li/FeS2 elemekből kialakított, DT4V5BAT típusú tápegység alkalmazható." / Since the replacement of the DT4V5BAT type power supply unit can be carried out also in potentially explosive areas, the following caution board shall be affixed on the apparatus:  
 "ATTENTION: Solely DT4V5BAT type power supply unit made of battery pack powered Li/FeS2 elements can be used."

**(18) Alapvető egészségügyi és biztonsági követelmények / Essential Health and Safety Requirements**

Amellett, hogy az alapvető egészségügyi és biztonsági követelményeknek való megfelelést a 9. pontban felsorolt szabványok biztosítják, a következő megfontolások vonatkoznak a gyártmányra, amelyek megfelelősége jegyzőkönyvben bizonyított: /

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

**Záradék / Clause Tárgy / Subject**

N/A N/A

**(19) Rajzok és dokumentációk / Drawings and Documents**

Szám / Number	Lap / Sheet	Kiadás / Issue	Dátum / Date	Leírás / Description
DT910x x-58, DT910x x-58 Eng	1		2018.04.18.	EU megfelelőségi nyilatkozat / EU declaration of conformity
DT910x B-59 I / DT910x B-59 I Eng	2 2		2018.04.18. 2018.04.18.	CE Jegyzőkönyv I. EMC / CE Protocol I. EMC
DT910x I4-59 I / DT910x I4-59 I Eng	2 2		2018.04.18. 2018.04.18.	
DT910x B-59 II / DT910x B-59 II Eng	2 2		2018.04.18. 2018.04.18.	CE Jegyzőkönyv II. Biztonsági előírások / CE Protocol II. Safety requirements
DT910x I4-59 II / DT910x I4-59 II Eng	2 2		2018.04.18. 2018.04.18.	
DT9100, DT9102-57 / DT9100, DT9102-57 Eng	8 8	2 2	2018.04.18. 2018.04.18.	Robbanásbiztonsági leírás / Description of explosion safety
DT9100, DT9102-57 R / DT9100, DT9102-57 R Eng	5 5	1 1	2018.04.18. 2018.04.18.	Szabványváltozási jelentés / Report of standard change
DT9100 B, DT9102 B-53 / DT9100 B, DT9102 B-53 Eng	9 9	2 2	2018.04.18. 2018.04.18.	Darabvizsgálati utasítás (+ mellékletei) / Unit Test Instructions (+ Annexes)
DT9100 I4, DT9102 I4-53 / DT9100 I4, DT9102 I4-53 Eng	9 9	2 2	2018.04.18. 2018.04.18.	Darabvizsgálati utasítás (+ mellékletei) / Unit Test Instructions (+ Annexes)
DT910x B-23 ( kétnyelvű / bilingual )	1		2018.05.23.	DT910x B kapcsolási blokkvázlat / DT910x B schematic block-diagram
DT910x I4-23 ( kétnyelvű / bilingual )	1		2018.05.23.	DT910x I4 kapcsolási blokkvázlat / DT910x I4 schematic block-diagram
DT9100-10 / DT9100-10 Eng	1 1	2 2	2018.05.15. 2018.05.15.	DT9100 digitális óra tartalomjegyzék / DT9100 digital clock contents

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Szám / Number	Lap / Sheet	Kiadás / Issue	Dátum / Date	Leírás / Description
DT9100 B-12-A / DT9100 B-12-A Eng	1 1	12 11	2018.05.16. 2016.12.07.	DT9100 B digitális óra összeállítási rajz / Assembly drawing of DT9100 B digital clock
DT9100 I4-12-A / DT9100 I4-12-A / Eng	1 1	12 12	2018.05.16. 2018.05.16.	DT9100 I4 digitális óra összeállítási rajz / Assembly drawing of DT9100 I4 digital clock
DT9100-11 / DT9100-11 Eng	2 2	19 19	2018.05.15. 2018.05.15.	Mechanikai alkatrészjegyzék / Mechanical part list
DT9100-21 / DT9100-21 Eng	1 1	2 2	2018.05.15. 2018.05.15.	Nyomt. áramkör mechanikai alkatrészjegyzék / Printed circuit board mechanical part list
DT9100-24 / DT9100-24 Eng	1 1	2 2	2018.05.22. 2018.05.22.	Nyomatott áramkör fólia rajz / Printed circuit board foil drawing
DT9100-25 / DT9100-25 Eng	1 1	2 2	2016.12.07. 2017.04.05.	Szerelt nyomtatott áramkör szerelési rajz / Assembly dwg. of fitted printed circuit board
DT9100-1-25 / DT9100-1-25 Eng	1 1	1 1	2008.08.01. 2008.08.01.	Szerelt nyomtatott áramkör szerelési rajz / Assembly dwg. of fitted printed circuit board
DT9100-26 B / DT9100-26 B Eng	2 2	5 5	2016.09.21. 2016.09.21.	Villamos alkatrészjegyzék / Electrical part list
DT9100-26 I4 / DT9100-26 I4 Eng	3 3	5 5	2016.09.21. 2016.09.21.	Villamos alkatrészjegyzék / Electrical part list
DT9100-27 / DT9100-27 Eng	2 2	0 0	2008.04.23. 2018.05.22.	Opcionális alkatrészjegyzék / Optional part list
DT9100 B-62 / DT9100 B-62 Eng	64 64	1 1	2018.05.21. 2018.04.18.	Kezelési útmutató / Operating instructions
DT9100 I4-62 / DT9100 I4-62 Eng	60 60	1 1	2018.05.21. 2018.05.09.	Kezelési útmutató / Operating instructions
AT0098 / AT0098 Eng ME0069 / ME0069 Eng	2 1	0 0	2018.05.22. 2008.07.31.	DT9100 .. adattábla / DT9100 .. data plate DT9100 előlap-fólia / DT9100 front panel foil
DT9102-10 / DT9102-10 Eng	1 1	1 1	2018.05.22. 2018.05.15.	Tartalomjegyzék/ Contents
DT9102-10 SK / DT9102-10 SK Eng	1 1	0 0	2008.07.31. 2008.07.31.	Tartalomjegyzék/ Contents
DT9102 B-12-A / DT9102 B-12-A Eng	1 1	4 4	2014.07.30. 2014.07.30.	DT9102 B digitális óra összeállítási rajz / Assembly drawing of DT9102 B digital clock
DT9102 I4-12-A / DT9102 I4-12-A Eng	1 1	4 4	2014.07.30. 2014.07.30.	DT9102 I4 digitális óra összeállítási rajz / Assembly drawing of DT9102 I4 digital clock
DT9102-11 / DT9102-11 Eng	2 2	6 6	2015.09.07. 2018.05.15.	Mechanikai alkatrészjegyzék / Mechanical part list
DT9102-21 SK / DT9102-21 SK Eng	2 2	0 0	2018.05.22. 2018.05.22.	Nyomt. áramkör mechanikai alkatrészjegyzék / Printed circuit board mechanical part list
DT9102-17 / DT9102-17 Eng	1 1	1 1	2009.02.13. 2018.05.15.	Opcionális mechanikai alkatrészjegyzék / Optional mechanical part list
DT9102-24 SK / DT9102-24 SK Eng	2 2	0 0	2008.08.01. 2008.08.01.	Nyomatott áramköri rajz / Printed circuit board foil drawing
DT9102-25 SK / DT9102-25 SK Eng	1 1	0 0	2008.08.01. 2008.08.01.	Szerelt csatlakozó nyomt. ág. szerelési rajz / Assembly dwg. of fitted connector PCB
DT9102-26 B / DT9102-26 B Eng	2 2	5 5	2016.09.21. 2016.09.21.	Villamos alkatrészjegyzék / Electrical part list
DT9102-26 I4 / DT9102-26 I4 Eng	3 3	5 5	2016.09.21. 2016.09.21.	Villamos alkatrészjegyzék / Electrical part list
DT9102-26 SK / DT9102-26 SK Eng	1 1	1 1	2013.04.11. 2013.04.11.	Villamos alkatrészjegyzék / Electrical part list
M0065/F,G / M0065/F,G Eng ME0070 / ME0070 Eng	2 1	0 0	2018.05.22. 2008.07.31.	DT9102 .. adattábla / DT9102 .. data plate DT9102 előlap-fólia / DT9102 front panel foil

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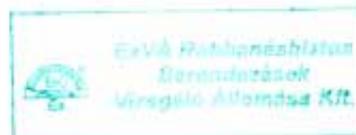
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EU-Típus Vizsgálati Tanúsítvány /  
EU-Type Examination Certificate

Szám / Number	Lap / Sheet	Kiadás / Issue	Dátum / Date	Leírás / Description
DT9102 B 62 / DT9102 B-62 Eng	60 60	1 1	2018.05.21. 2018.04.18.	Kezelési útmutató / Operating instructions
DT9102 I4-62 / DT9102 I4-62 Eng	56 56	1 1	2018.05.21. 2018.05.09.	Kezelési útmutató / Operating instructions
DT4V5BAT-10 / DT4V5BAT-10 Eng	1 1	0 0	2018.05.22. 2018.05.17.	Telep tartalomjegyzék / Battery pack content
DT4V5BAT-11 / DT4V5BAT-11 Eng	1 1	1 1	2018.05.17. 2018.05.17.	Mechanikai alkatrészjegyzék / Mechanical part list
DT4V5BAT-12 / DT4V5BAT-12 Eng	1 1	3 3	2011.07.01. 2011.07.01.	Telep összeállítási rajz / Assembly drawing of battery pack
DT4V5BAT-21 / DT4V5BAT-21 Eng	1 1	2 2	2010.07.20. 2018.05.18.	NYÁK mechanikai alkatrészjegyzék / PCB mechanical part list
DT4V5BAT-21 AA / DT4V5BAT-21 AA Eng	1 1	2 2	2010.07.20. 2018.05.18.	Telep mechanikai alkatrészjegyzék / Battery pack mechanical part list
DT4V5BAT-23 AA / DT4V5BAT-23 AA Eng	1 1	0.1 0.1	2018.05.22. 2018.05.22.	Telep kapcsolási rajz / Battery pack schematic drawing
DT4V5BAT-25 AA / DT4V5BAT-25 AA Eng	1 1	1 1	2011.07.01. 2011.07.01.	Szerelt AA telep szerelési rajz / Assembly drawing of fitted AA battery pack
DT4V5BAT-26 AA / DT4V5BAT-26 AA Eng	1 1	0.2 0.2	2014.11.27. 2014.11.27.	Telep villamos alkatrészjegyzék / Battery pack electrical part list
AT0099 / AT0099 Eng	1	2	2018.06.06.	Telep-egység adattábla / Battery pack data plate
M0161-A / M0161 Eng	1	1	2013.09.24.	Szerelt RC modul / Fitted RC module
MEEI H-07524	1		2000.05.17.	IP védefttségi vizsgálat - vizsgálati bizonyítvány / Test Certificate on degrees of protection

továbbá : alkatrészek és anyagok adatai, gyártói tájékoztatások, gyártmányismertető /  
as well as : data sheet of components and materials, manufacturer's information, product reviews




**Molnár Edit**

Tanúsító Szervezet Vezető /  
Head of Certification Body

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 Vizsgáló és Tanúsító Kft.

A NAH által NAH-6-0027 X/1017/K számon  
 akkreditált terméktanúsító szervezet. /  
 Product certification organisation accredited  
 by NAH under No. NAH-6-0027 X/1017/K



(1) *Kiegészítő EU-Típus Vizsgálati Tanúsítvány*  
*Supplementary EU-Type Examination Certificate*

(2) A potenciálisan robbanásveszélyes környezetben történő alkalmazásra szánt  
 berendezések, védelmi rendszerek  
 2014/34/EU Direktíva /

Equipment or Protective Systems Intended for use  
 in Potentially Explosive Atmospheres  
 Directive 2014/34/EU

(3) Kiegészítő EU-Típus Vizsgálati Tanúsítvány száma /  
 Supplementary EU-Type Examination Certificate Number: **BK118ATEX0007 X/1**

(4) A gyártmány / Product:  
**Gyújtószikramentes digitális óra /**  
**Intrinsically safe digital clock**

Típusa / Type:  
**DT9100 B, DT 9102 B, DT9100 I4, DT9102 I4**

(5) Gyártó / Manufacturer:  
**DATCON Ipari Elektronikai Kft. / DATCON Industrial Electronics Ltd.**

(6) Cím / Address:  
**H-1148 Budapest, Fogarasi út 5., 27. épület / Building 27**  
**Hungary**

(7) E kiegészítő tanúsítvány kiegészíti a BK118ATEX0007 X számú EU-Típus Vizsgálati Tanúsítványt, az abban meghatározott gyártmányok tervezésére és gyártására vonatkozóan az eredeti tanúsítvány mellékletében lévő specifikáció szerint, de kiegészítve ezen tanúsítvány mellékletében lévő specifikáció változtatásokkal és a hivatkozott dokumentációval. /

This supplementary certificate extends EC-Type Examination Certificate No. BK118ATEX0007 X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) A ExVA Vizsgáló és Tanúsító Kft., 1418 sz. kijelölt testület, a 2014. február 26-i Európai Parlament és Tanács 2014/34/EU Direktívájának 17. cikkelye szerint tanúsítja, hogy a jelen kiegészítő tanúsítvány által módosított gyártmány, megfelel az Alapvető Egészségügyi és Biztonsági Követelményeknek a Direktíva II. számú Mellékletében a potenciálisan robbanásveszélyes térben alkalmazásra szánt gyártmányok tervezése és gyártása szerint. /

ExVA Testing and Certification Limited Liability Company, notified body number 1418 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that the product, as modified by this supplementary certificate, has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

A vizsgálat eredményeit az alábbi nyilvántartási számú bizalmas vizsgálati dokumentáció tartalmazza: / The examination and test results are recorded in confidential report No.:

**VA-0165-21-A-11**

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BKI18ATEX0007 X/1  
 Kiegészítő EU-Típus Vizsgálati Tanúsítvány /  
 Supplementary EU-Type Examination Certificate

## 14 Melléklet / Schedule

**15 Tanúsítvány szám / Certificate number BKI18ATEX0007 X/1**

**16 Gyártmány változásának leírása / Description of the variation to the Product**

Az alábbi változások kerülnek bevezetésre a jelen BKI18ATEX0007 X/1 számú kiegészítő EU-Típus Vizsgálati Tanúsítványban:

- Az alapvető egészségügyi és biztonsági követelményeknek való megfelelést biztosító szabványok legutolsó szabványkiadások szerinti aktualizálása

A változások a berendezés robbanásbiztonsági jellemzőit nem befolyásolják, a berendezés egyéb jellemzői változatlanok. /

The following changes are introduced in this supplementary EU-Type Examination Certificate nr. BKI18ATEX0007 X/1 :

- Updating the referring standards according to their latest editions which assure the compliance with the Essential Health and Safety Requirements

The changes do not affect the explosion safety of the equipment, the other features of the equipment are unchanged.

**17 Vizsgálati dokumentáció / Report N°**

VA-0165-21-A-11      ATEX Értékelő Jelentés / ATEX Assessment Report      2021.12.07.

**18 Biztonságos üzemeltetés feltételei / Special Conditions of Use**

Az eredeti tanúsítványban foglaltak szerint. /  
 As stated in the original certificate.

**19 Alapvető egészségügyi és biztonsági követelmények /  
 Essential Health and Safety Requirements**

A módosítás nem érinti az alapvető egészségügyi és biztonsági követelményeket. /  
 Compliance with the Essential Health and Safety Requirements is not affected by this variation.

Záradék / Clause	Tárgy / Subject
Nem vonatkozik / Not applicable	Nem vonatkozik / Not applicable

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BKI18ATEX0007 X/1  
Kiegészítő EU-Típus Vizsgálati Tanúsítvány /  
Supplementary EU-Type Examination Certificate

20 Rajzok és dokumentációk / Drawings and Documents

GYÁRTÓI DOKUMENTÁCIÓK / MANUFACTURER'S DOCUMENTS						
No.	Fájl név / File name	Szám / Number	Lap / Sheet	Verzió / Issue	Dátum / Date	Leírás / Description
1.	DT9100, DT9102-57.doc	DT9100, DT9102-57	8	3	2021.10.14.	Robbanásbiztonsági leírás / Description of Explosion Safety
2.	DT9100, DT9102-57 angol.doc	DT9100, DT9102-57 ENG	8	3	2021.10.14.	Robbanásbiztonsági leírás (angol) / Description of Explosion Safety (English)
3.	DT9100, DT9102-57 R .doc	DT9100, DT9102-57 R	4	2	2021.10.14.	Szabványváltozási jelentés / Report of Standard Change of Device
4.	DT9100, DT9102-57 R angol.doc	DT9100, DT9102-57 R	4	2	2021.10.14.	Szabványváltozási jelentés (angol) / Report of Standard Change of Device (English)
5.	DT910x x-58.doc	DT910x x-58	1	-	2021.10.14.	EU Megfelelőségi Nyilatkozat / EU Declaration of Conformity
6.	DT910x x-58 Eng.doc	DT910x x-58 Eng	1	-	2021.10.14.	EU Megfelelőségi Nyilatkozat (angol) / EU Declaration of Conformity (English)
7.	DT9100 B-62.doc	DT9100 B	64	1	2021.10.15.	Felhasználói leírás DT9100 B / DT9100 B User Manual
8.	DT9100 B-62 angol.doc	DT9100 B	64	1	2021.10.15.	Felhasználói leírás DT9100 B (angol) / DT9100 B User Manual (English)
9.	DT9100 I4-62.doc	DT9100 I4	60	1	2021.10.15.	Felhasználói leírás DT9100 I4 / DT9100 I4 User Manual
10.	DT9100 I4-62 angol.doc	DT9100 I4	60	1	2021.10.15.	Felhasználói leírás DT9100 I4 (angol) / DT9100 I4 User Manual (English)
11.	DT9102 B-62.doc	DT9102 B	60	1	2021.10.15.	Felhasználói leírás DT9102 B / DT9102 B User Manual
12.	DT9102 B-62 angol.doc	DT9102 B	60	1	2021.10.15.	Felhasználói leírás DT9102 B (angol) / DT9102 B User Manual (English)
13.	DT9102 I4-62.doc	DT9102 I4	56	1	2021.10.15.	Felhasználói leírás DT9102 I4 / DT9102 I4 User Manual
14.	DT9102 I4-62 angol.doc	DT9102 I4	56	0	2021.10.15.	Felhasználói leírás DT9102 I4 (angol) / DT9102 I4 User Manual (English)

ExVA Vizsgáló és Tanúsító Kft.  
1037 Budapest, Mikoviny S. u. 2-4  
10925306-2-41



**Nagy Botond**  
Tanúsító Szervezet Vezető /  
Head of Certification Body

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