

DITRONIC

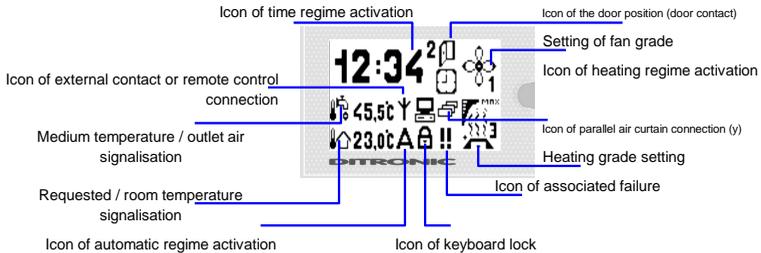
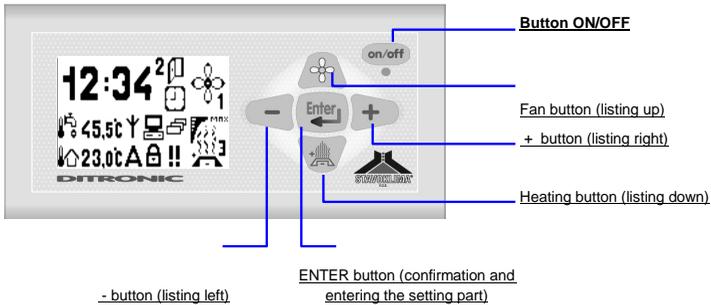


USER MANUAL INSTRUCTIONS FOR MOUNTING

REGULATOR AND SYSTEM DESCRIPTION



Regulator Ditrionic and Ditrionic plus is processor regulator intended for air curtains control. The regulator is intended only for wall mounting for basic environment without a humidity.



Technical conditions for the regulator running:

- max. environment temperature 35°C / degree of protection IP 20
- running voltage of the regulator 12V DC
- running unit voltage 230V(400V) - 50Hz (if not ordered differently)

REGULATOR UNPACKING, MOUNTING

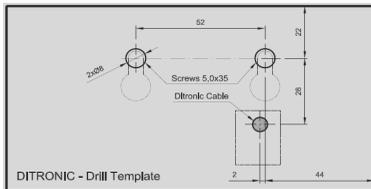


The regulator Ditrionic (plus) is delivered as a set with the room sensor, shortened manual for quick service, user manual and mounting accessories (connectors, screws) and mounting model. Firstly check the correctness of the cable* (recommended cable is UTP - 8 leads; for example ROLINE U125H424-A etc.), afterwards you enclose the model to fit the anchorage screws, mark the holes for drilling. Mind the right placement of the cable, as it is marked on the model. Afterwards drill the holes $\varnothing 8$ for connectors and fit the connectors with screws according to the enclosed model (pic. 1). The screws screw up to the wall almost complete with a distance of cca. 1,5 mm for steady fitting of the regulator anchorage plate (pic. 2).

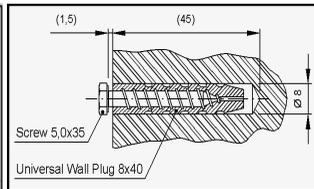
!!! Place the cable always into the protective pipe !!!

* cable type can be different according to the habits of each country and distributor

pic. 1 - model



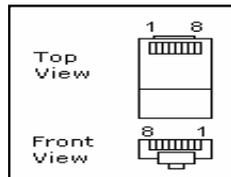
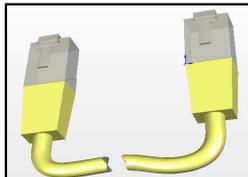
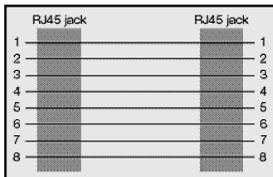
pic. 2 - anchorage plate



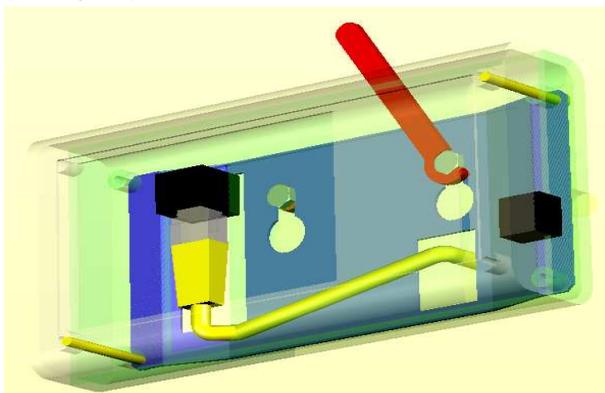
Shorten the cable afterwards (8 leads) for the distance of 10 cm from the wall and fit the end of the cable. Mind the right fitting of the wires see pic. 3 (the same on the both ends of the cable). Before fitting the regulator on the wall, plug in the connector into the regulator socket. Place the cable in that way, that it won't overhang the outline of the anchorage plate. Slide on the regulator with the anchorage plate on the screws and movement down you will finish the mounting. To secure the regulator against steeling, you can secure the screws by fully tightening up (pic. 4).



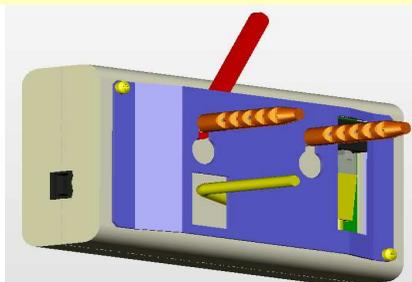
pic. 3 - connector connection 8 PIN



pic. 4 - regulator placement on the wall



pic. of the regulator mounting on the wall and event. securing the screws with the key



Attention !!! Before regulator connection (connection under voltage) check the rightness of all cables in the unit electronic. Also check the rightness of the preliminary element according to the project documentation.

SHORTENED INSTRUCTIONS FOR QUICK CONTROL

ON - OFF

With the button **ON-OFF** you can switch ON/OFF the unit. The setting of the fan and heating grade will be saved afterwards and unchanged. This button is superior before all other functions incl. the keyboard lock.

2 FAN

You can choose the fan grade via the buttons "+" and "-"; selected grade is indicated by the symbol " _ " , after 1 sec it will be saved automatically into the memory.

3 HEATING

You can choose the heating grade (for water heated version - control by electrothermic valve /if it is used/ ; for electric version control of electric heater) via the buttons "+" and "-"; selected grade is indicated by the symbol " _ " , after 1 sec it will be saved automatically into the memory. The heating is activated only if it is needed from the achieved temperatures.

REMOTE RADIO CONTROL

This function is active only if it was permitted in the user level. It allows to remote control the unit ON/OFF wireless (key-rack). Active contact is indicated via lighting icon, disconnection by this contact - blinking icon. Activation of this function eliminates the control via external contact.

SUPERIOR SYSTEM - BMS

This function is active only if it was permitted in the user level (UU). All the hand controls (fan and heating buttons) is blocked. All the setting are controlled by superior system BMS. If there was activated in "UU" the button BMS-hand, it is possible to switch off the system BMS for a short time and control the unit in hand mode. The hand mode activation is made by pressing the button " - " for 5 s. Active control BMS is indicated via lighting icon, control in hand mode - blinking icon.



PARALEL UNIT(S)

The system automatically supports the parallel connection of other units to one control. If other unit is connected into the control electronic, the icon "master/ slave" is activated. All parallel "slave" units follow the unit "Master". Protective functions on the units "slave" are active autonomously.



KEYBOARD LOCK

Against undesirable change-over or unit control it is possible to lock the keyboard. Locking and unlock is made by pressing the buttons "+" and "-" for 6 s at the same time. The lock activation is indicated via light up icon. For the safety reason the button "ON/OFF" is not brought to the lock.



HEAT UP REGIME

This function is active only if it was permitted in the user level. It allows casual covering of the losses in the room (immediate heating). By pressing the button " - " for 5 s, + ENTER it will activate the heat up regime for the time set in the UU. By pressing any button it will change over to standard regime.



TEMPERATURE OF OUTLET AIR

This icon signals the air temperature coming out of the unit. From this sensor is also activated the anti-frost protection of the heat exchanger. The sensor also restricts the minimum outlet temperature.



DOOR

This icon is active only if it was setted in the user level of the unit control by the door (door contact). The icon signals the door position (closed/open). After the door closing, the unit will be switched off (with time delay), if the automatic regime "A" was not activated.



TIME REGIME

This icon is active only if the clock and the switch times were setted. If the unit is in setted time period, when it should work, this icon is lighted up on the display.



REAL TIME AND THE DAY OF THE WEEK

The regulator allows to control the unit according to the week time regime. The regime selects in the user mode (access via button ENTER). There are 2 control possibilities available, namely 1-7 or 1-5 and 6-7, where the small number means the day of the week (1=Monday; 7 = Sunday). The time regime is setted always in 24 hour regime.



EXTERNAL CONTACT

This function is active only if it was permitted in the user level. It allows external control (permission to switching on) from the superior place. If the contact is off, the unit can not be switched on. Active contact is signed via lighting icon, disconnection by this contact - blinking icon. Activation of this function eliminates to control the unit via remote radio control..



ANTI-FROST PROTECTION

This icon is activated automatically. In the factory settings it is setted on 10°C. At the water heated version is the anti-frost protection watched in 2 places (heat exchanger and space) and it is two-phase. Reaching the anti-frost temperature it will light up the icon of anti-frost protection and the failure relay will be connect. If the temperature still falls down, the acoustic warning signal is active. At the electro version is watched only the anti-frost protection of the room.

A

AUTOMATIC REGIME

This function is active only if it was permitted in the user level. It allows automatic operation according to the door position (door contact). If the door is closed, while activation of this function the unit switch over into the min. heating and fan grades automatically. Repeat door opening it will switch over into the setted grades. Active regime is signaled via lighting icon.

!!

ASSOCIATED FAILURE

The system picks out any failure of the unit (the communication, motor failure, sensor failure, anti-frost protection etc.). If the failure comes, the icon lights up and the failure relay connects for signalisation.



ROOM AND MEDIUM TEMPERATURE

This icon signals the room temperature, where the unit is installed.



This icon signals the medium temperature coming into the unit. This icon is active only at the water heated version.



REQUESTED TEMPERATURE

The regulator offers in "**user mode (UU)**" selection of two possible temperatures, according to which the unit will be controled (outlet sensor or room sensor). The device controls the setted temperature in "**UU**". Via buttons "+" and "-" it is possible to make the temperature correction.

USER LEVEL - MANUAL



The settings in the user level allow to use lots of other additional functions, which are not accesible to the basic level. Because there are mostly important technological changes in the functions and unit running, we recommend that a qualified and trained person will work with this level. Entry and exit (level escape) is done by longer pressing the butten ENTER. Entry into the control line is done by pressing the butten "ENTER", selection (change) is done by "+" and "-" and saving again via "ENTER".



ON - OFF ↔ 1

WEEKLY SWITCHING CLOCK

The regulator offers the possibility to control the unit according to the time regime selected by the user. The current time and switching time you can set see underneath of the chapter. If you want to control the unit according to the time regime choose "ON".

SET

YES - NO ↔ 2

WEEKLY SWITCHING CLOCK - SETTING

If you have on the line "1" chosen the weekly clock "ON" you can set or change the current time - choose "YES". The time is setted in 24h regime. At least 1x in 6 months check the time reality. If you set the time once, it is saved in the regulator memory automatically (event. after the failure of current it will download the right time). This line is active only if you have choosen to control the unit according to the time clock (line 1).

SET

HOUR 12 ↔ 3

TIME SETTING - CLOCK

Here you can set (change) the real time - HOUR. This line is active only if you have choosen to control the unit according to the time clock (line 1).

SET

MIN 39 ↔ 4

TIME SETTING - MINUTES

Here you can set (change) the real time - MINUTES. This line is active only if you have choosen to control the unit according to the time clock (line 1).

 **DAY 1** ↔ **5** **DAY IN A WEEK SETTING**

Here you can set (change) the real day in a week. Monday = 1 / Sunday = 7. This line is active only if you have chosen to control the unit according to the time clock (line 1).

1567 ON - 17 ON ↔ **6** **SETTING OF THE WEEK SWITCHING SELECTION**

Options for switching clock you can choose the same for all days (option 1-7 ON) or separately for working days and separately for days 6,7 (1-5,6-7, ON). Monday = 1 / Sunday = 7. This line is active only if you have chosen to control the unit according to the time clock (line 1).

 **ON** -  **ON** ↔ **7** **CONTROLLING SENSOR SELECTION**

For temperature regulation you can choose from 2 sensors. Room sensor or sensor of outelt air.

 **43°C** ↔ **8** **PRE-SETTING OF REQUIRED TEMPERATURE**

Here you can set the required temperature from selected type of sensor (line 7). This temperature can be corrected with the buttons "+" and "-". After unit switching off it will download again the pre-setted temperature without the correction.

  **+1,5°C** ↔ **9** **ROOM SENSOR CORRECTION**

If you were not able to place the sensor ideally because of the architectonic or space reasons and the sensor measures distorted data, you have the possibility to shift the measured temperature +, - °C through this correction. It is also necessary to use this correction while excessive sunshine or sensor cooling. See page 17

**ON - OFF****10****SUPERIOR SYSTEM (BMS)**

This option is when required to control the unit from superior system. You can use 3-grade control of fan and heater as a standard. Further linked control possibilities (0-10V) has to set authorized technician and it is not a part of this user level (it is not mentioned in the price list - see price list of service works). These entries are freepotential contacts. Mind to always switch on only 1.grade of the heater and fan capacity. When choosing this function you will loose manual control above the regulator (the unit will be fully controlled via BMS expect the button HOTKEY (line 11). Active regime BMS is signaled via lighted icon. BMS connection is made in the unit electronic and it is obvious from the delivered documentation. Max contact load is 24V/3A/AC-15.

**ON - OFF****11****HAND CONTROL AT THE SYSTEM BMS**

For the case, that it will be necessary to cut off the unit for a short-term from BMS, you can allow the "hand control" at BMS. This function is active only if the regime BMS is allowed. Change into hand regime is possible when pressing the button "-" for 2 s. Afterwards you can control the unit in hand regime, without dependence on BMS. Next pressing of "-" will cause fully change to BMS regime (deactivation of hand regime). Hand regime at BMS is signaked via lighted icon.

**ON - OFF****12****SOUND**

Setted fan and heater grades are acoustically signaled. 1-grade = 1x sound. You can switch off the sound through the option "OFF".

**ON - OFF****13****KEYBOARD LOCK**

You can lock the keyboard for the case of not willing to control the regulator. If you wish to lock the keyboard, choose "ON". After the time of 3s and none change has been made in the basic level, the keyboard will lock. Unlock and back lock you can make when pressing the buttons "+" and "-" for 2s at the same time. For the safety purpose the only button "ON/OFF" is still active, even the keyboard is locked.

	ON - OFF		14	EXTERNAL CONTACT
<p>This function allows external control (switch on allowance) from the superior place. If the contact (free potential contact) is switched off, the unit can not be switched on. Active contact is signaled via lightened icon, disconnection - blinking icon. Activation of this function eliminate to control the unit via remote radio control. Max. contact loading 24V/3A/AC-15.</p>				

	ON - OFF		15	REMOTE RADIO CONTROL
<p>This function allows remote control of the unit ON/OFF wireless . Active contact is signaled via lightened icon, disconnection with this contact - blinking icon. Activation of this function eliminate to control the unit via external contact. Mind the right channel settings (switch DIP) of the receiving part of the control (placed in the unit). The remote control is not a standard part of the delivery (optional).</p>				

	ON - OFF		16	DOOR CONTACT
<p>This function allows to control the unit according to the door position (door contact). The icon signaled the door position (closed/open). After the door close the unit will switch off (with time delay), if the automatic regime wasn't activated " A "(line 21). It is a free potential contact. As a contact you can use a contact of the electronic of the automatic door shifting or mechanicka or magnetical door contact (delivered as an accessorie when requested). Max. contact loading 24V/3A/AC-15.</p>				

			17	DOOR CONTACT POSITION
<p>If your selected door contact (door position) doesn't correspond to the icon signalling it is necessary to choose the reverse stage of this contact. Change of the switching contact will lead to the right contact position to the regulator icon. This setting is active only, if the door contact was allowed (line 16).</p>				



120 SEC



18

TIME DELAY OF THE DOOR CONTACT

Concerning the unit lifetime and because of the reason of steady unit running it is sensible to choose the optimal time delay of the unit after the door close (switch off the door contact). Don't set the time too short, recommended time is 60s (see factory settings). Range of setting 30-240s step 5s. This setting is active only in that case, that the door contact was allowed (line 16).



ON - OFF



19

HEAT UP REGIME

For the case, that it will be necessary to cover with the air curtain also casual heating losses, there is an inbuilt function into the regulator of heat up regime. When activating this function the unit will be switch on at maximum fan and heating capacity, which the unit allows. Heat up regime is running for the time setted in the line 20. When pressing the button "Heating" for 5s you will activate the heat up regime. Afterwards it is necessary to confirm this option with the button "ENTER". Deactivation that means return into the previous setting you can make via any button.



1,5 MIN



20

TIME OF HEAT UP REGIME

If you have allowed the heat up regime of the unit you can set the time for how long will the heat up regime work. Range of setting 3-15min step 0,5min.



ON - OFF



21

AUTOMATIC REGIME OF THE UNIT

This function allows automatic running of the uni according to the door position (door contact). When the door is closed and the function is activated the unit will automatically switch over into the min. grade of heating and fan. Repeated door opening will cause switch over into the setted grades. Active regime is signaled via blinking icon. The door contact will automatically release and set, if you will choose A ="ON".

**ON - OFF****22****SWITCHING OFF THE HEATING REGIME - WINTER/SUMMER**

For the economic purposes lots of moder heating systems don't have the preparation (heating) of the heating medium in the summer time. If you don't use such a system and you require DON'T HEAT in the summer time while sudden temperature drop choose the regime SUMMER = "OFF". The heating will be passive (expect the anti-frost protection) in this regime.

**13°C****23****ANTI-FROST PROTECTION**

There is an inbuilt anti-frost protection (PO) because of the possibility of exchanger freezing (only at water heated versions). When achieving this temperature it will switch on the relay failure outlet in the unit electronic and this will cause the valve opening (only if the electrothermic valve is used). If the temperature still drops the fan will be switched off and the acoustic signal about danger is active. The regulator watches also the anti-frost room temperature as standard. Setting for water heated version: setted temperature of PO of the heat exchanger - see regulator line, PO room temperature = value +3°C automatically. Setting for electro version: setted temperature of room PO - see regulator line. In the air curtains connected in the system Master/Slave is the PO watched autonomously at each air curtain. You can change some parametres in the service technicians level. Ask the authorized service of the producer. (it is not included in the price - see price list of service works).

15:00**ON HOUR****0****24****SWITCH ON TIME - REGIME 1÷5 ; HOURS**

Time setting "HOURS" SWITCH ON for the selection "1-5". This line is active only, if you have chosen the control according to the time clock (line 1).

15:00**ON MIN****0****25****SWITCH ON TIME - REGIME 1÷5 ; MINUTES**

Time setting "MINUTES" SWITCH ON for the selection "1-5". This line is active only, if you have chosen the control according to the time clock (line 1).

15:00 OFF H_{OUR} 0 26 SWITCH OFF TIME - REGIME 1÷5 ; HOURS

Time setting "HOURS" SWITCH OFF for the selection "1-5". This line is active only, if you have chosen the control according to the time clock (line 1).

15:00 OFF M_{IN} 0 27 SWITCH OFF TIME - REGIME 1÷5 ; MINUTES

Time setting "MINUTES" SWITCH OFF for the selection "1-5". This line is active only, if you have chosen the control according to the time clock (line 1).

6:00 ON H_{OUR} 0 28 SWITCH ON TIME - REGIME 6 ; HOURS

Time setting "HOURS" SWITCH ON for the selection "6". This line is active only, if you have chosen the control according to the time clock (line 1).

6:00 ON M_{IN} 0 29 SWITCH ON TIME - REGIME 6 ; MINUTES

Time setting "MINUTES" SWITCH ON for the selection "6". This line is active only, if you have chosen the control according to the time clock (line 1).

6:00 OFF H_{OUR} 0 30 SWITCH OFF TIME - REGIME 6 ; HOURS

Time setting "HOURS" SWITCH OFF for the selection "6". This line is active only, if you have chosen the control according to the time clock (line 1).

6:00 OFF M_{IN} 0 31 SWITCH OFF TIME - REGIME 6 ; MINUTES

Time setting "MINUTES" SWITCH OFF for the selection "6". This line is active only, if you have chosen the control according to the time clock (line 1).

7:00 ON H_{OUR} 0 32 SWITCH ON TIME - REGIME 7 ; HOURS

Time setting "HOURS" SWITCH ON for the selection "7". This line is active only, if you have chosen the control according to the time clock (line 1).

7:00 ON MIN 0 33 SWITCH ON TIME - REGIME 7; MINUTES

Time setting "MINUTES" SWITCH ON for the selection "7". This line is active only, if you have chosen the control according to the time clock (line 1).

7:00 OFF HOUR 0 34 SWITCH OFF TIME - REGIME 7; HOURS

Time setting "HOURS" SWITCH OFF for the selection "7". This line is active only, if you have chosen the control according to the time clock (line 1).

7:00 OFF MIN 0 35 SWITCH OFF TIME - REGIME 7; MINUTES

Time setting "MINUTES" SWITCH OFF for the selection "7". This line is active only, if you have chosen the control according to the time clock (line 1).

+7:00 ON HOUR 0 36 SWITCH ON TIME - REGIME 1÷7 ; HOURS

Time setting "HOURS" SWITCH ON for the selection "1-7". This line is active only, if you have chosen the control according to the time clock (line 1).

+7:00 ON MIN 0 37 SWITCH ON TIME - REGIME 1÷7 ; MINUTES

Time setting "MINUTES" SWITCH ON for the selection "1-7". This line is active only, if you have chosen the control according to the time clock (line 1).

+7:00 OFF HOUR 0 38 SWITCH OFF TIME - REGIME 1÷7 ; HOURS

Time setting "HOURS" SWITCH OFF for the selection "1-7". This line is active only, if you have chosen the control according to the time clock (line 1).

+7:00 OFF MIN 0 39 SWITCH OFF TIME - REGIME 1÷7 ; MINUTES

Time setting "MINUTES" SWITCH OFF for the selection "1-7". This line is active only, if you have chosen the control according to the time clock (line 1).

MEM ← YES - NO ↔ 40 STANDARD FACTORY SETTINGS

Option for overwriting the memory into the first setting = factory setting.

REMOVAL OF EASY BREAK-DOWNS

the unit fails to heat	too high temperature against required	check
	aerating system, not sufficient medium temperature	check
	electrothermic valve failure (if it is used)	check, exchanging
	disconnection of anti-damage thermostat	find out the cause

the unit indicates a failure	disconnected or faulty sensor	check, exchanging
	anti-frost protection	find out the cause
	faulty thermocontact or motor (if it is used)	check, exchanging

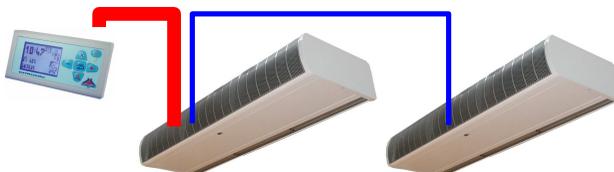
the regulator doesn't react to the buttons	locked keyboard	unblock	
	activated system BMS	adjust, check	
	failure of regulator processor	reset (switching off/voltage switch on)	

the regulator doesn't react, display doesn't light	not functional air curtain's current supply	check, exchanging
	not functional fuse in the unit's electronic	check, exchanging
	not functional batterie in the Ditronic regulator	check, exchanging
	error in the regulator's processor when resetting the programm (LED green lights constantly)	reset (switching off/voltage switch on)

MASTER-SLAVE SYSTEM



The regulators Ditronic support as standard the connection possibility of other parallel devices. Under the condition for their function is the right connection and respecting the same types of air curtains and their regulating systems (it is not possible to combine water heated and electro units). All accessories (room sensor, regulator Ditronic, external or door contacts, BMS connection) are always connected to the MASTER unit. The SLAVE units behave as chain the same as MASTER. At the air curtains SLAVE is series inbuilt automatic protective functions (it is not controlled via air curtain MASTER).



-  connection cabel Ditronic 8 -PIN
-  connection cabel MASTER/SLAVE 6 -PIN

ROOM SENSOR - Ni 1000

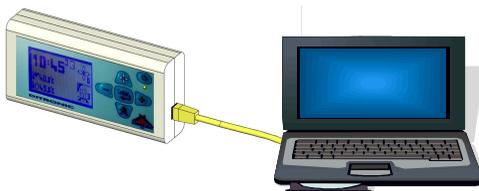
The sensor is intended for mounting on the wall. It is possible to mount it on common boxes. The cabel can be brought from the back part (through the plaster).

Placement: on the internal side of the heated or air-conditioned space. Don't mount into the niches, shelves, behind the curtains, abouve or near the the heating elements. Don't put the device against direct sunshine. Tighten the install tube of the connection cabel to avoid possible failure while meassuring the temperature caused by the air draught. Keep the permitted conditions of surrounding environment.

DITRONIC PLUS - USB



The regulator Ditronic is produced also in the version DITRONIC PLUS. This kind of regulator allows to configurate the setting via USB port and PC. There is delivered a configuration software to DITRONIC PLUS, which is a part of the delivery. The cabel USB is not a part of the delivery. This version is very advantageous especially when repeated standard settings for one building or groupe of customers. The connector USB is inbuilt in the wall regulator (not in the air curtain's electronic).



SAFETY NOTICE

All electrical work should be carried out in accordance with current regulations in given country and according to ČSN 12 2002 and other linked rules. At any service intervention the unit must be disconnect. Connection and earthing of electric unit or its parts has to correspond especially with ČSN 332190, 332000-5-51, 33 2000-5-54. All electrical investigations must be performed by a qualified electrician according to the notice §6 ČBU No.50/78 law.

Electro investigations must be performed by a qualified person according to ČSN 34 3205 and notice No. 50-51/1979 law. Electro connections make exactly according to the delivered wiring diagrams. Don't forget to do the corresponding protective earthing. Always think over the suitability of recommended cable connections with regard to fire section of the building, protective distance, fuse and stage of the building electro installation.

Do all connections of prepared cables to the grips according to the applied electro documentation, afterwards check the connections, earthing and finally switching on the power supply.

SERVICE - BRIEFLY

Before all maintenance on the unit it is necessary to switch off the power supply. Current injury danger.

Corresponding wiring diagram you will find in the unit. Wiring diagram for individual delivered product is valid, but it can be modified as optional or from production causes according to the specified request.

Mounting and all electrical investigations must be performed by a qualified electrician according to the notice §6 ČBU No.50/78 law or according to the valid regulations and normatives in given country. Also the medium connection must be performed by a qualified company.

If the regulator Ditronic will be eventually damaged, it is not necessary to switch off the unit. Disconnect only the current supply of the unit and demount the regulator from the wall. Afterwards disconnect the cable connector (the connector is easy to slide out) and make the reverse connection. Don't forget, that you have to do again the configuration for your chosen setting.

In case of electronic failure in the unit, it is always necessary to disconnect any voltage. Demounting of the control you will do when releasing all connected connectors and disconnecting the earth conductors (it is not necessary to disconnect the cables from the terminal of connector's counterparts, only to push out from the cap).

DITRONIC



Make inquiries at the producer or distributor about the servicing contract. You will achieve by this a regular service and a perfect care of your bought unit.

All the units are tested and carefully checked by the producer before the expedition. The most common faults come from misunderstandings of the function or wrong connection. That's why keep exactly the producer regulations, you will prevent a difficult faults searching. Don't try to run the unit under different connections - the unit can run in a short-time as you want and expect, but this may cause irreversible losses and damages. There is no guarantee due to this operation.

DITRONIC



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