

Operative Display for REVO RT and REVO RTL series



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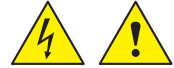


Important warnings for safety

The unit are integral part of industrial equipments.

When it is supply, the unit is subject to dangerous tensions. Don't remove the plastic cover.

Don't use this unit in aerospace and nuclear application.



Electric Shock Hazard (Rischi di scosse elettriche, Risque de choque électrique)

When thyristor unit has been connected to main supply voltage and is switched off, before to touch it be secure that the unit is isolated and wait at least one minute to allow discharging internal capacitors. Thus be secure that:

- access to thyristor unit is only permitted to specialised personnel;
- the authorised personnel must read this manual before to have access to the unit;
- the access to the unit must be denied to unauthorised personnel.

Important warnings (Avvertenze importanti, attention)

During the operations with units under tension, local regulations regarding electrical installation should be rigidly observed:

- Respect the internal safety rules.
- Don't bend components to maintain insulation distances.
- Protect the units from high temperature humidity and vibrations.
- Don't touch components to prevent electrostatic discharges on them.
- Verify that the size is in line with real needs.
- To measure voltage current etc. on unit, remove rings and other jewels from fingers and hands; also make sure that the instruments are in good condition.
- Authorized personnel that work on thyristor unit under power supply voltage must be on insulated board

This listing does not represent a complete enumeration of all necessary safety cautions

Protection (Protezione, Protection)

The protection of the REVO series units complies with international specifications with IP20 protection degree. To assess whether the IP20 protection is sufficient, consider the place where the units are installed.

Earth (Messa a terra, Terre)

For safety, the Thyristor unit with isolated heat-sink must be connected to earth.

Earth impedance should be correspondent to local earth regulation. Periodically the earth efficiency should be inspected.

Electromagnetic compatibility (Compatibilità elettromagnetica, Compatibilité électromagnétique)

Our thyristor units have an excellent immunity to electromagnetic interferences if all suggestions contained in this manual are respected. In respect to a good Engineering practice, all inductive loads like solenoids contactor coils should have a filter in parallel

Emissions (Emissioni, Emission)

All solid-state power controllers emit a certain amount of radio-frequency energy because of the fast switching of the power devices. The Thyristor unit are in accord with the EMC norms, CE mark.

In most installations, near by electronic systems will experience no difficulty with interference. If very sensitive electronic measuring equipment or low-frequency radio receivers are to be used near the unit, some special precautions may be required. These may include the installation of a line supply filter and the use of screened (shielded) output cable to the load.

Warranty condition

Producer gives a 12 months warranty to its products.

The warranty is limited to repairing and parts substitution in our factory and does exclude products not properly used and fuses.

Warranty does not include products with serial numbers deleted. The faulty product should be shipped to Producer at customer's cost and our Service will evaluate if product is under warranty terms.

Substituted parts remain of Producer property.



Return Material Authorization (RMA)

Customers wishing to return any items, whether they are incorrectly supplied, faulty or damaged in transit, must first complete a Return Material Authorisation (RMA) form to obtain an RMA number from the Service Department.

A full repair service is available for customers. Prior to submitting the RMA form and returning products, customers are recommended to contact the technical support team to determine whether the issue can be resolved with telephone support.

How the RMA service works

The RMA form and details are available on our web sites:

<https://www.cdautomation.com/returns-material-authorisation/>

When completing the RMA form, please be as specific as possible about the problem, including any pertinent application details. The more information given, the more quickly and more thoroughly the problem can be solved. The minimum information required is:

1. The Full Model Number
2. Quantity of units being returned
3. The units Serial Number(s)
4. A description of the problem ("faulty" or "unknown" is not sufficient)



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1 Introduction

The REVO RT and REVO RTL have several values available on the serial port that are useful for understanding whether a process is behaving correctly. The KP Panel is used to display these values graphically and easily readable.

2 Features

- Screen size: 4.3" or 7"
- Resolution: 480 x 272 / 800x600, 35k colour (16bit)
- Backlighting: LED
- Communication: RS485
- Power Supply: 6.0 ÷ 26.0Vdc
- Operating Temperature: -20 ÷ +70°C
- Storage Temperature: -23 ÷ +80°C

3 Order Code

Order Code																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
K	P	-	-	-	-	-	-	-	-	-	-	0	0	0	0		

Version	3	4
description	code	
Operative Display for REVO C and REVEX Series	R	C
Operative Display for REVO PN	P	N
Operative Display for REVO RT / REVO RTL	R	T

Screen size	5	6
description	code	
4.3" Horizontal	H	4
7" Horizontal	H	7

Communication	7	8	9	10
description	code			
MODBUS RTU	M	0	0	0

Approvals	11	12
description	code	
CE	0	0

4 Connections

4.3" panel

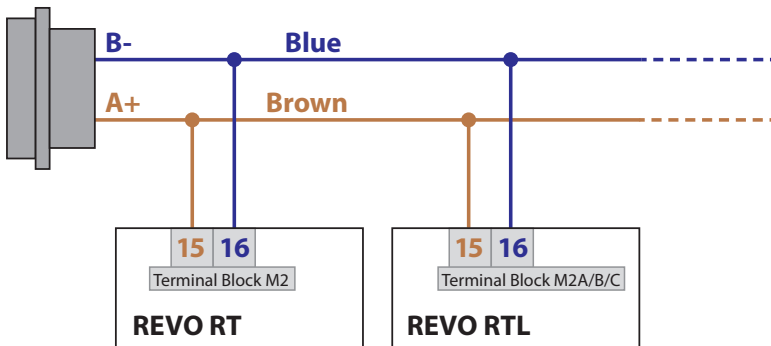
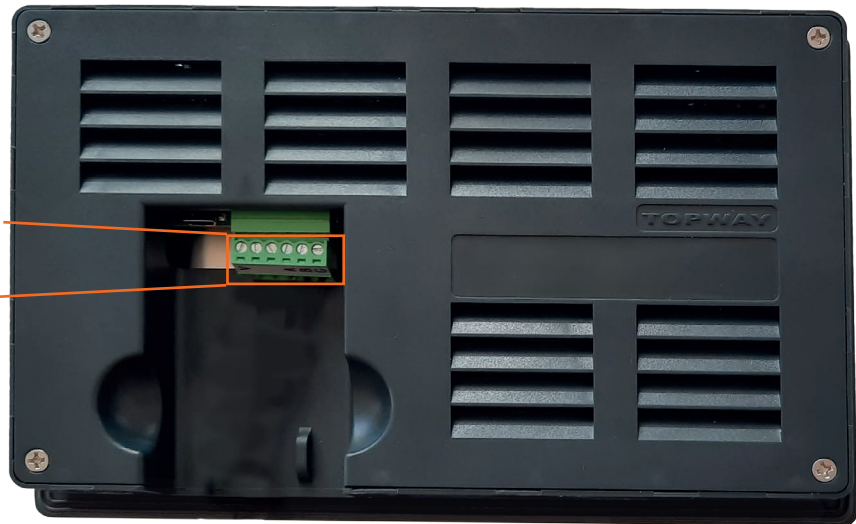
- G. GND (0V) — G
- B. RS485 - (B) — B
- A. RS485 + (A) — A
- T. Not used — T
- R. Not used — R
- V. Power Supply 24Vdc — V



Terminal G-V: Power Supply 24Vdc (6.0-26.0V), 80mA
 Terminal B-A: RS485 MODBUS RTU Master

7" panel

- V. Power Supply 24Vdc
- R. Not used
- T. Not used
- A. RS485 + (A)
- B. RS485 - (B)
- G. GND (0V)



Serial communication baud rate on the static unit:
 In the 'Communication' menu, set the 'Port 1' Baud parameter to 19.2K.

5 Dimensions

4.3" panel

Dimensions: front: width 138 mm, height 97 mm, frame thickness 5 mm
 perforation: width 127 mm, height 85 mm - depth rear 15 mm



7" panel

Dimensions: front: width 272 mm, height 220 mm, frame thickness 5 mm
 perforation: width 258 mm, height 200 mm - depth rear 22.1 mm

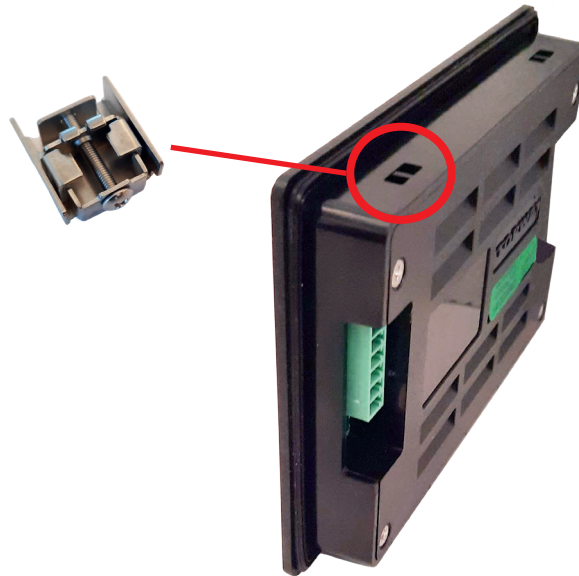


6 Installation

Before installation, ensure that the product has not been damaged during transport. In case of damage, notify the carrier immediately.

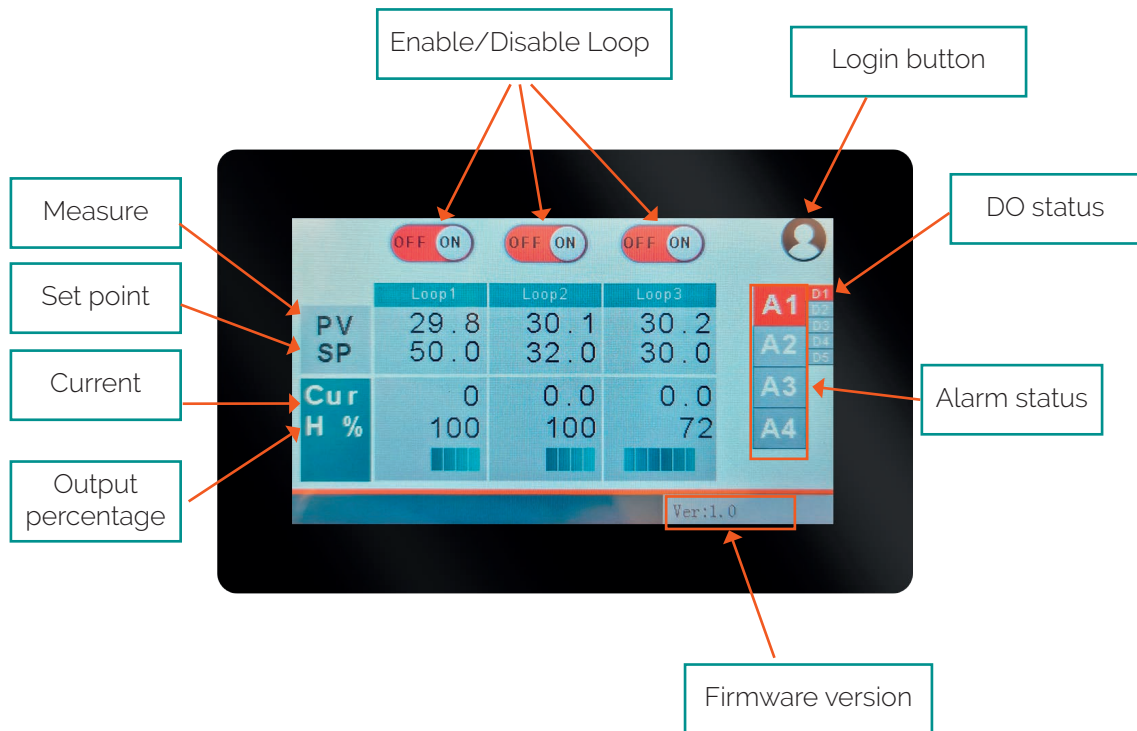
Check that the product actually corresponds to the one ordered.

Use the 4 supplied brackets for fixing.



7 Main page

As soon as it is switched on, the main screen appears, where the operating functions can be viewed and managed.



7.1. Enable/Disable zone

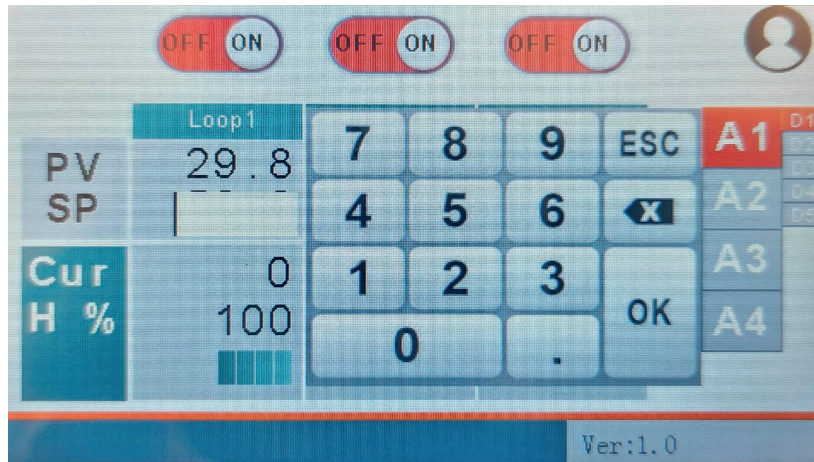
Enables or disables a control zone. When disabled, the output is forced to 0..

7.2. Measure

Actual temperature value read.

7.3. Set Point

Desired temperature value: touch the SP value to change it and confirm with **OK**.



7.4. Current

Current value read by the connected current transformer

7.5. Output percentage

Output percentage value calculated by the PID

7.6. Alarm status

Status of configured temperature alarms

- A1 → Alarme 1
- A2 → Alarme 2
- A3 → Alarme 3
- A4 → Alarme 4

7.7. DO status

Status of digital outputs (Relays)

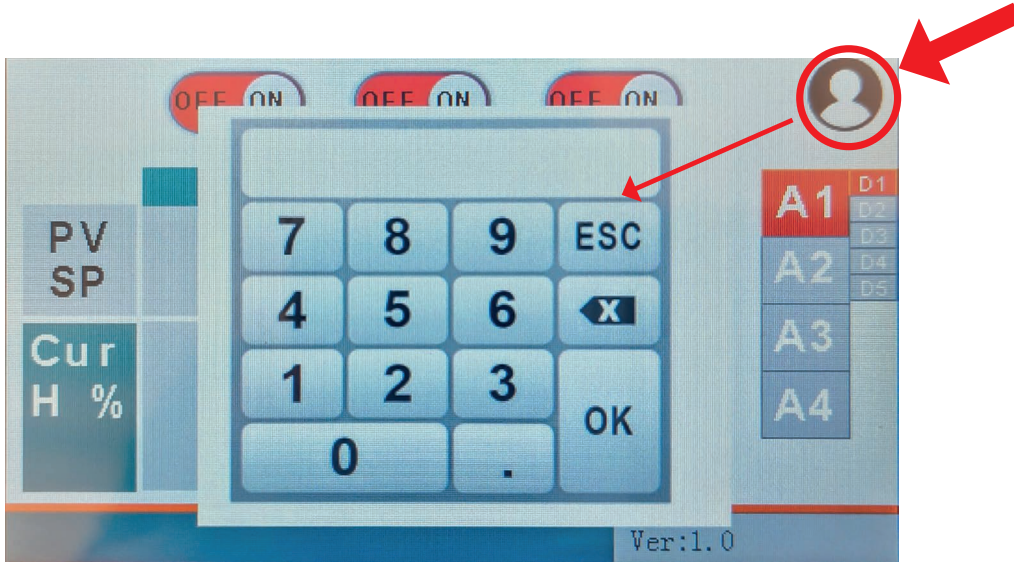
- D1 → Relay output 1
- D2 → Relay output 2
- D3 → Relay output 3
- D4 → Relay output 4
- D5 → Relay output 5

7.8. Firmware version

Panel firmware version

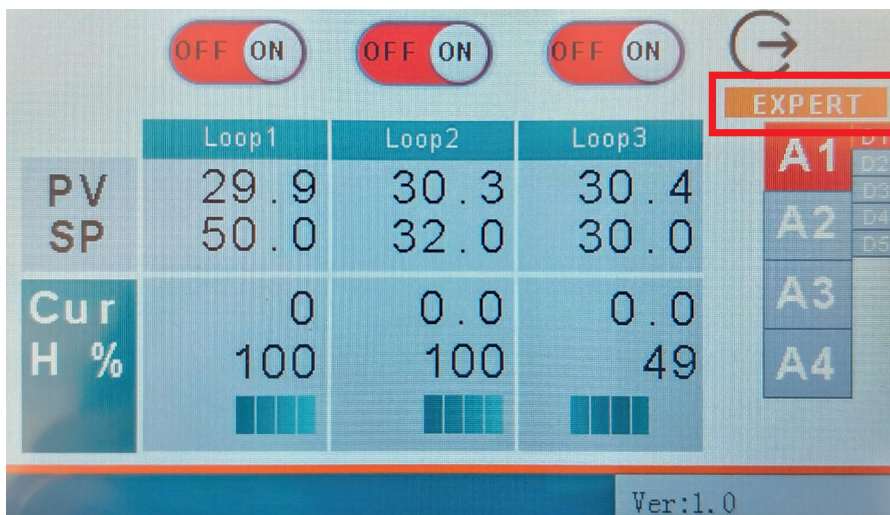
8 Login Page

By logging in, it is possible to access the EXPERT level and thus set password-protected data. To access the EXPERT level, tap the icon in the top right-hand corner to bring up the keyboard.



Enter the password: 1234

When you are in 'EXPERT' mode, this is indicated by the word 'EXPERT' in the orange box

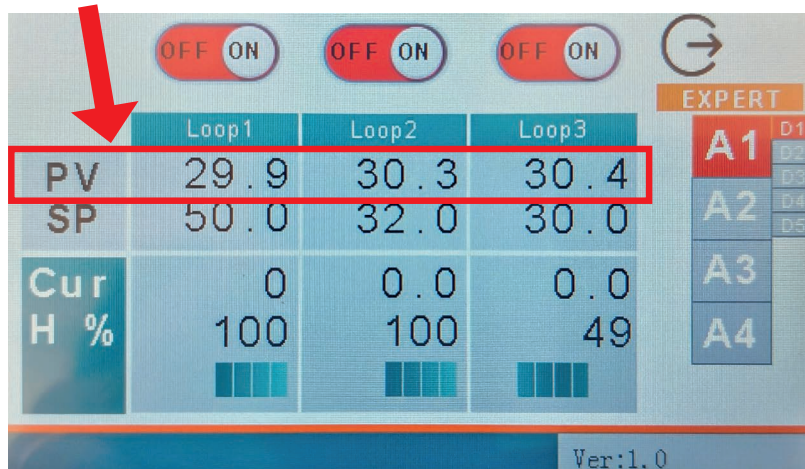


To exit EXPERT level, tap on the logout icon above the 'EXPERT' text.

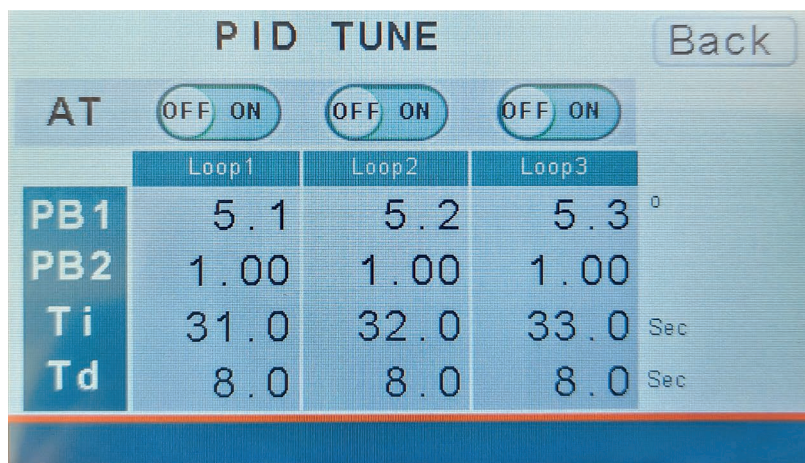


9 PID and Auto Tune Page

Quando la modalità Expert è attiva, toccando i valori delle misure si entra nella pagina di "PID TUNE".



The screen for calibrating the PID parameters of the three zones will appear.



9.1. AT section

The Auto Tuning (AT) function uses the REVO RTL automatic tuning function called Pretune (see REVO RTL manual). To activate it, press the button to set it to ON.

Once the calculation is complete, the function is automatically deactivated.

If you want to stop the calculation, press again to set the selector to OFF..

9.2. PB1

Proportional band for heating expressed in degrees Celsius.

9.3. PB2

Multiplication coefficient for the proportional cooling band. Setting this to 1 means that the proportional heating band is equal to the cooling band.

9.4. Ti

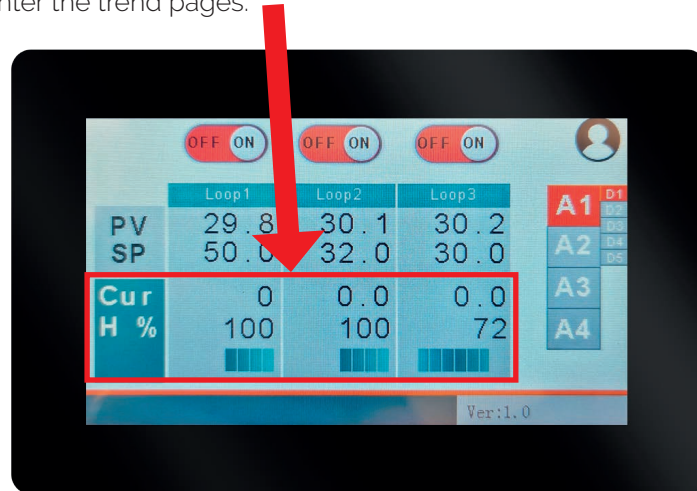
Regulation Integral time in seconds (see REVO RTL manual).

9.5. Td

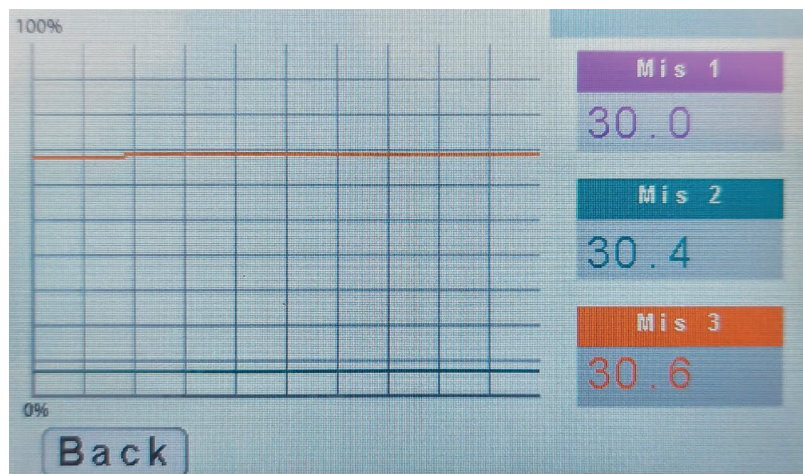
Regulation Derivative time in seconds (see REVO RTL manual).

10 Trend page

Tap on the measures to enter the trend pages.



The page shows the values for First input measurement, Second input measurement and Third input measurement.



Tapping 'Back' takes you back to the main page.



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