

System Manual



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Sommario

Architecture	6
General characteristics of a Wi-Fi mesh system	6
Specific features of the AVE IoT Wi-Fi mesh system	7
Double Wireless Technology on each device	8
Wi Fi Mesh Domina Smart IoT	8
IEEE 802.11. standard Wi Fi	8
No gateway required	9
Correct device positioning	9
System Configuration	9
The AveCloud application	10
Meaning of the front LEDs	10
The PRG button	10
Wizard	11
Adding a new IOT system	11
Wizard – Step1: Adding the Access Point	11
Wizard – Step 2: Adding the "Root Node"	12
Wizard – Step 3: Adding more devices	12
Wizard – Step 4: Connecting the system to the home router	13
Wizard – Conclusion: devices are configured	13
Acquisition of a System	14
How do I find the PIN of the system I own?	15
Wizard for adding Router to the system configured with Access Point	16
Wizard: Opening of the system configuration menu	16
Wizard in case the WIFI network to which the root node is connected is changed	18
Wizard: Opening of the system configuration menu	18
Configuration menu	20
Access to the EasyConfig tool	20
Access to the Facility Information tool	20
Access to the instrument restarts the system	21
Accesso allo strumento informazioni di sistema	21
Access to the Ave Cloud tool	22
Access to the Domina Integration tool	22
Access to the scene tool	23
Access to the room configuration tool	25
Adding a device to an existing system	25





442002ST-W - IoT TWO WAY SWITCH - 1MOD. S.44
Protections
Installation and Maintenance Rules 28
Regulatory compliance:
Operation
Reset procedure
Advanced configuration with EasyConfig IoT
Connection Diagram
442053ST-W - Shutter switch mechanism IoT - 1mod. S.44
Caratteristiche tecniche:
Protections
Installation and Maintenance Rules
Regulatory compliance:
Operation
Reset procedure
Advanced configuration with EasyConfig IoT
Configuring the Scene keypad function
Configuration of the Avebus keypad function
Connection Diagram
44074-W - Lights Relay Or IOT Sockets - 1mod. S.44
Caratteristiche tecniche:
Protections
Installation and Maintenance Rules 40
Regulatory compliance:
Operation
Reset procedure
Advanced configuration with EasyConfig IoT 42
Connection Diagram
53ECO11-W - IoT load control for single-phase systems - 4 DIN mod 44
Caratteristiche tecniche 44
Protections
Installation and Maintenance Rules 45
Regulatory compliance
Operation
Reset procedures
First configuration and start up of the device 48





Procedura guidata – Step1	48
Wizard – Step 2	49
Configuration Menu	50
Access to the EasyConfig tool	50
Advanced configuration with EasyConfig IoT	51
Connection Diagram	52
53ECOR16A-W – Device for control and the measurement of consumption IoT	53
2 Mod. Din	53
Technical specifications	53
Mechanical	53
Signalling	53
Button	54
Connections	54
Radio Specification	54
Monitoring device specifications	54
Power and energy measurement	54
Power supply voltage:	54
Weather conditions:	54
Rated load / electrical life	55
Protections	55
Overload and short-circuit protection	55
Overtemperature safety protection	55
Installation and Maintenance Rules	55
Regulatory compliance	55
Operation	56
Reset procedures	56
Advanced configuration with EasyConfig IoT	57
Connection Diagram	58
442TC16-W - IoT - 3-module Multi-touch control S.44	59
Technical specifications:	59
Protections	60
Installation and Maintenance Rules	61
Regulatory compliance:	61
Advanced configuration with EasyConfig IoT	62
Connection Diagram	65
442TC14-W - IoT multi-touch control - 2Mod. S.44	68
Technical specifications:	68





Protections
Installation and Maintenance Rules
Regulatory compliance:
Advanced configuration with EasyConfig IoT
Connection Diagram
443CRTALS-W / 445CRTANS-W / 441CRT-W / 445CRT-W Chronothermostat WI-FI
Technical data
Technical Specifications:
Radio specifications
Power supply voltage
Weather conditions
Characteristics
Protections:
Installation and Maintenance Rules
Configuration
How to configure the thermostat?
Which are the operation modalities?
How can I set the time programming of the thermostat?
How can I set the additional parameters? 79
Advanced configuration







Ave's new connected solution: A network of devices with new generation Wi-Fi Mesh technology that guarantees reliability and safety. The installation is optimized: the devices communicate directly with each other as each device can be the gateway to the system. Configuration is simplified: the application guides the user step by step. Control is immediate: thanks to the wi-fi direct mode, it is possible to activate the system even without a router and Internet connection.

General characteristics of a Wi-Fi mesh system

The devices of a DOMINA Smart IoT connected system allow you to add home automation functions to a traditional system through a Wi-Fi channel in mesh mode, without the need for wiring a bus and without the need to install home automation supervisors.

The term mesh means a different use of the Wi-Fi channel than the traditional one for two main reasons:

• the devices can propagate the signal among themselves even arriving very far from the Wi-Fi router. While in traditional Wi-Fi networks the Wi-Fi router is a star center that must be reachable by all connected devices, in the case of Mesh Wi-Fi networks the signal is instead propagated by the devices that act as a "repeater" of the signal itself. . In this way, greater distances than the range of the central router can be reached.



• an addressing system between the nodes based on MAC address and not on TCP / IP is used. Each device in the mesh network communicates with the other devices directly through an addressing based on MAC address and not using IP addressing.

There is a node (and only one) within the network that is chosen to manage both TCP / IP and MESH communication based on MAC address: this node is called Root Node (RN) and is the node that acts as a "bridge "To the home router where the classic Wi-Fi client devices (PC and smartphone) are present.

In the AVE DOMINA Smart IoT system the main feature is that of not having to have a dedicated gateway for the connection between the TCP / IP network and the mesh network. Each device can in fact be configured as a Root Node. Being connected to the TCP / IP Wi-Fi network, the Root Node is able, through the home router, to connect to the Internet and allow remote control of the system.



AVECloud



Architecture

If you do not have a home router, you can use one of the network devices as an Access Point (AP) to access the system's functions; in this case the Access Point device creates a "bridge" with the Root Node (and this mesh to the nodes) through a TCP / IP connection, but is unable to connect to the Internet (cloud) or to a home automation supervisor (AVEbus wired devices).

Specific features of the AVE IoT Wi-Fi mesh system

- The maximum number of IoT devices in a plant is 50.
- The root node is chosen by the installer from among the devices that make up the system and is always fixed.
- In an already configured system, only one device can be added at a time.
- During the configuration phase, the MESH_ID parameter is set automatically. The MESH_ID parameter is therefore not editable by the installer.
- The devices are characterized by having an AVEbus address and an AVEBus UID. The AVEbus addresses and UIDs of the devices within a system are unique (devices with the same AVEbus address are not allowed).
- The mesh system can be configured to be combined with an existing Wi-Fi router (system with router) or by using a device as Access Point of the system itself (system without router).
- In the case of configuration with a home router, it is possible to connect the root node device to the AVECloud service to be able to control the devices remotely via APP or via voice command (with Google Home and Amazon Alexa).





Double Wireless Technology on each device

Wi Fi Mesh Domina Smart IoT.

For grid creation among devices. The Wi-Fi Mesh system are highly beneficial because you can always extend the grid range. The term "mesh" defines the way the connection is made. The devices build a dynamic "mesh" based on the quality of the signal they receive and monitor. This allows a continuous evolution of the system that guarantees maximum performance of the entire grid.

What also distinguishes Mesh Wi-fi from other solutions is that there is no deterioration in the quality of the connection. Mesh-based systems are slowly replacing other solutions because they are based on a high-quality and highly secure connection.

IEEE 802.11. standard Wi Fi

It allows dual management in both Wi-Fi® DIRECT mode and Home Router mode.

Wi-Fi[®] DIRECT mode. A device of your choice within the system is identified as a Wi-Fi[®] Access-Point. By independently generating the Wi-Fi[®] grid, it enables local dialogue with the AVE Cloud application.



DOMESTIC ROUTER mode. A device of your choice in the system is identified as the Root-Node. Connecting to the Wi-Fi[®] grid (generated by the home router) allows supervision, both local and remote, via the AVE Cloud application and popular cloudconnected Voice Assistants







No gateway required

Every IoT device is smart and can be the potential gateway to the system. In the example below, the two way switch has been configured as a Root-Node, given the technology present on the device it, therefore, also fulfils the function of a system gateway. A single device, therefore, provides both standard Wi-Fi and Wi-Fi mesh communication.



Correct device positioning

During configuration, you are asked to enable the Wi-Fi® ACCESS-POINT mode in a wireless device of your choice. This allows the AVE Cloud application to connect to the system. If there are other DOMINA smart wireless IoT devices present, it is essential that the device in this mode is not the one closest to the DOMESTIC ROUTER. The closest device must instead be the one that will be configured as ROOT-NODE. The system allows the creation of systems consisting of up to 50 WIFI mesh devices..







The AveCloud application



The AveCloud application allows you to configure the system in an easy and intuitive way. The wizard guides the user step by step through the operations. The first action to be carried out is therefore to download the Ave Cloud application. The application is free and available: for Android devices on the Google Play Store and for iOS devices on the App Store. Once downloaded, you can easily add a new Wireless IOT system.

Meaning of the front LEDs

Before deepening the programming steps, it is useful to summarize briefly below the meaning of the front single-color LEDs and pressing the PRG button according to the various situations in which the device may be configured:

- fast flashing LED: the device is in the factory parameter reset conditions and is not associated with any system; by holding down the PRG button for 2 seconds, with subsequent release, you pass to the next state.
- slow flashing LED (1 flash per second): the device is looking for WiFi networks with AVE_IOT SSID that may already be present. If another network is found, the device remains in this state waiting for the AVE_IOT SSID to become free; if instead the SSID is free, it goes to the next state;
- 1-pulse flashing led: the device is in Access Point mode and is generating a WiFi network with SSID AVE_IoT and password aveiot58.
- 2-pulse flashing LED: the device is in root node mode, connected to another device in Access Point mode. To enter this mode, it is necessary to start from the reset conditions to the factory parameters and keep the PRG button pressed for 8 seconds, with subsequent release;
- 3-pulse flashing LED: the device is a node in network configuration mode that has connected to a root node (also in configuration mode).

The PRG button

During the configuration phase, the wizard will ask you to press the front button on the device in this way it will be possible to configure first the access-point and then the root node of the system. The function of the PRG button (programming function) is present on each device. In particular:

- IoT light switch body Press the front button used to control the load;
- IoT shutter switch body Simultaneous pressing of the two front buttons;
- Step-by-step relay and IoT controlled socket Press the front button integrated in the luminous gem;
- IoT loads control Press the front button "PRG";
- IoT multitouch devices Press the button located on the side of the device;

The reset procedure is performed by pressing the PRG button for 15 seconds if the device has been powered for less than 60 minutes.





Wizard

Adding a new IOT system

Thanks to the application, it is possible in 4 steps to add a new IOT system and start the configuration wizard.



Wizard – Step1: Adding the Access Point

In just 4 steps it is possible to configure the access point of your system.



We put one of the devices in Access Point mode We press the front Button for just over 2 seconds. The front LED flashes with a single pulse.



We check the available Wi-Fi networks on our mobile device (smartphone or tablet).



We connect our mobile device to the "AVE_IoT" Wi-Fi network The network password is: aveiot58



Check that the access point is connected





	Wi-Fi	
~	domina-smart-iot	• 🕈 🕕
	AVE	4 T ()
	AVE_IoT	• • ()
	INTEAM_WLAN	• 🕈 🕕
	SWA_ACCESS	4 ₹ ()







Wizard – Step 2: Adding the "Root Node"

In just 4 steps it is possible to configure the Root Node of the system. The Root Node must be positioned close to the home rooter (if present) to which the system will then be connected.



The application confirms that the access point has been added successfully.

device.





We check that the Root Node is connected



The application confirms that the Root Node has been found.

It is possible to continue with the configuration procedure.

It is possible to add the second



We place the second device in

We press the front Button for

The front LED flashes with a

Root Node mode

double pulse

just over 8 seconds.

Wizard – Step 3: Adding more devices

In just 4 steps it is possible to add other devices to the system.



The application asks if other devices need to be paired. We check that they are in configuration mode (fast flashing) and continue.





All the devices present in the system are displayed. The Root-Node and Access-Point devices are selected by default. The application is used to:

- 1. Change the name;
- 2. Test operation;



We select the devices we want to add



Press on confirm to add the devices we have selected





Wizard – Step 4: Connecting the system to the home router

In just **4** steps it is possible to connect the system to the home router.



At this point we can choose whether or not to connect our system to the home router. Choosing no, the system uses the previously configured IoT device as Access-Point.



We enter the name of the SSID and the password of our home network



We press on finish. The devices will be configured and connected to our home router. The device identified as Root-Node will remain fixed.



The configuration is complete. The application has disconnected from the AVE_IoT network. We simply have to connect our Smartphone or Tablet to our home network and press on system check.

Choosing not to use the home router, it will still be possible to connect locally to the system while keeping the access point active. It will be necessary to connect your smartphone to the Wi-Fi network generated by the access point and confirm that it is a network without Internet access.

Wizard - Conclusion: devices are configured



After pairing the devices with your own system, advanced configuration of the parameters and modes of use is carried out by accessing the EasyConfig section in the Setup menu of the AVE Cloud application (access password: "2"). This is an optional step because the devices are activated and are already operational with a default avebus parameter configuration.

The DOMINA smart wireless IoT system allows the creation of systems consisting of up to 50 Wi-Fi mesh peripherals.





Acquisition of a System

This guided procedure is used to recover and acquire a system that has already been created. All in a few simple steps.



In the **Direct Connections** section, press the magnifying glass in the top right.



The application searches for

active systems.





The following message is shown:

Attention System not present in the local memory of your device. Do you want to add it to your device's local storage?

By pressing YES, the system is acquired in the local memory of the device. It is shown in the Your Systems section



In the **Your Systems** section, the system is displayed in a lighter green.

This difference indicates that you are not the owner of the system. It is possible to press the icon with the wrench to access the **System Settings** menu



It is possible to select the **Become Owner** function



Then simply enter the system PIN in the box. It is an alphanumeric code consisting of no.6 characters





How do I find the PIN of the system I own?

Recovering the system PIN is an easy but fundamental operation. In fact, knowing the pin gives the user the possibility to recover the system at any time.

The procedure is simple and can only be performed on systems that you own. The advice is to write down the PIN as soon as the configuration is complete.



On the main screen, select the configuration symbol, for example, on the system concerned.



We select Network Settings.



The settings are displayed and it is possible to recover the PIN of your system.





Wizard for adding Router to the system configured with Access Point

Wizard: Opening of the system configuration menu

In a few steps, the application guides the user to add the router. **Before starting, it is advisable to identify which device we had chosen to perform the "access point" function on**. We also need to make sure that the router is as close as possible to the "Root Node" of our system.

Cloud



We are on the "Your Systems" page. Select the symbol in the top right which allows us to access the "system configuration" menu



On the "Configure system" page, select the "Add Router" button. This starts the Add Router Wizard.



The Wizard asks if the device consists of only one device. We select "no" if we have a larger system.



Place the "Access Point" device in programming mode by pressing for 8 seconds until the LED flashes twice.





Now place the device in configuration change mode by pressing the same device for 8 seconds until it flashes quickly. When the Button is released, the flashing will change to a single pulse. We then select the generated WI-FI network





After verifying the connection to the access point, we can proceed by pressing the "Next" button.







We enter the SSID and the password of the WI-FI network of the router to which we intend to connect our Root Node



By pressing on verify WI-FI we check that we are connected to the WI-FI network generated by the router. We then press on system check.



The Wizard asks us to confirm the connection. Pressing on confirm we conclude the procedure and we are redirected to the page of our system

The root node is now connected to the home router. The system has maintained all the configurations and settings made previously





Wizard in case the WIFI network to which the root node is connected is changed

Wizard: Opening of the system configuration menu

In a few steps, the application guides the user to change the WI-FI network to which the root node is connected. **Before** starting, it is advisable to identify which device we had chosen to perform the "Root Node" function. It should be one of the devices closest to the router.



We are on the "Your Systems" page. Select the symbol in the top right which allows us to access the "system configuration" menu



On the "Configure system" page, select the "Change router" button. This starts the Wi-Fi network change wizard



The Wizard prompts you to verify that the old router is turned off. It then asks us if the systems consists of only one device. We select "no" if we have a larger system.



We place a device in programming mode by pressing for 8 seconds until the LED flashes twice. It must not be our "Root Node".





Now place the device in configuration change mode by pressing the same device for 8 seconds until it flashes quickly. When the Button is released, the flashing will change to a single pulse. We then select the generated WI-FI network





After verifying the connection to the access point, we can proceed by pressing the "Next" button.







We enter the SSID and the password of the WI-FI network of the new router to which we intend to connect our Root Node



By pressing on verify WI-FI we check that we are connected to the WI-FI network generated by the new router. We then press on system



The Wizard asks us to confirm the connection. Pressing on confirm we conclude the procedure and we are redirected to the page of our system

The root node is now connected to the new home router. The system has maintained all the configurations and settings made previously.





Configuration menu

Access to the EasyConfig tool

Thanks to the EasyConfig tool, we can set advanced functions and parameters for the devices of the range.







We select the configuration menu in the top right

We select the EasyConfig IoT tool

Select the default password "2" and then press "OK"



Select "Local system devices" to access the installed devices

Access to the Facility Information tool

Thanks to the System information tool, it is possible to query the installed devices.



We select the configuration menu in the top right

We select the system information tool

The list of devices that can be interrogated is displayed







Information: used to view the general status of the device.







Access to the instrument restarts the system

Thanks to the system restart tool, it is possible to "restart" the system directly from the application.



menu in the top right

"2" and then press "OK"

Accesso allo strumento informazioni di sistema

Thanks to the system information tool, it is possible to view the data relating to the IoT system.



We select the configuration menu in the top right

We select the System information menu



It is possible to view the information relating to the IoT system





Access to the Ave Cloud tool

Thanks to the Ave Cloud tool it is possible, very simply, to activate the system also on the Cloud.



Access to the Domina Integration tool

Thanks to the domina integration tool, we can connect our IoT system to an Ave Bus home automation system equipped with a Web Server or to an AVE burglar alarm control unit.



We select the configuration menu in the top right

We select the Ave Cloud menu



It is possible to enter the IP address of the supervisor and the port to proceed with integration of the systems





Access to the scene tool

Attraverso il menù configurazione possiamo accedere al menu scene ed abilitare fino a 16 scene.



We choose the configuration menu in the top right

We select the Scene Button to access the configuration

If we also want to recall the scene from the IoT devices present in the system, we can do so using the Easy Config tool. In this way we enter the advanced configuration of each device. By pressing the dedicated Button we can choose which scene to transmit with a long press of the Button.







Access to the Power Graphs tool

Thanks to the power graph tool, it is possible to display the graphs of the amount absorbed on each socket relay.





We select the configuration menu in the top right

We select the Power Graphs menu



It is possible to view the hourly, daily, monthly and yearly trends of the powers.

Access to the system topology tool

Thanks to the system topology tool, it is possible to view the distribution of the mesh network.



4 We select the configuration

menu in the top right

We select the System Topology menu

.



It is possible to view the topology of the system. The quality of the communication signal is also indicated.

The representation shows the signal quality graphically:

Steel Blue colour from 0 db to -60 db excellent quality

Yellow colour from **-60 bd** to **-65 db** good quality

Orange colour below -65 db sufficient quality

Below -75 db communication can have long latencies

Below -90 db the signal is considered absent

Pag. 24





Access to the room configuration tool

By means of the room configuration tool, it is possible to divide the devices according to their position inside the home.



Adding a device to an existing system

It is possible to add a device to the IoT system; the procedure is as follows:





On the main screen, select the configuration symbol for the system to which we want to add the device.

We select add Device



The wizard for adding a new device to the system starts



The device is displayed with the possibility of testing its operation before associating it to the system.





Connected Wiring Accessories series with WiFi mesh





442002ST-W - IoT TWO WAY SWITCH - 1MOD. S.44 🙄 🐲

The mechanism of two-way electronic switch of the range Domina Smart Wireless IoT with a relay output 230Vac can control incandescent lamps of 500W, LED lamps up to 100W, electronic transformers of up to 250VA, fluorescent lamps of 120W. furthermore, the device can be managed locally or remotely with the double technology IoT on standard WiFi® for the realization of mesh domina smart IoT and IEEE 802.11. the frontal local button allows the control of the load and to recall a scene with the long pressing. The device is characterized by the presence of a BLUE LED with adjustable intensity/brightness, power range from 100 to 240 Vac. The device must be completed with a frontal interchangeable key of 1module S44 (44xTGP-W)..



The two-way electronic switch of the range Domina smart wireless IoT allows

the control of the load by means of the frontal button, through wireless connection and through a home automation system DOMINA smart IoT Avebus completed with supervisor.

The device does not require any communication gateway, it has the possibility to be controlled:

- In Wi-Fi® DIRECT mode, in which a device of your choice within the system is identified as a Wi-Fi® Access-Point, . which by generating the Wi-Fi[®] network itself allows local dialogue with the AVE Cloud application;
- In DOMESTIC ROUTER mode, in which a device chosen (by the programmer) within the system is identified as a Root-Node, by connecting to the Wi-Fi® network generated by the home router allows local and remote supervision, using AVE Cloud application and the most common Voice Assistants connected to the cloud;

The device is equipped with a relay output to perform the function of a two-way switch; frontal button for controlling the connected load (by short press) and recalling the linked scene (by long press). It automatically opens the relay for thermal protection and the switching occurs on zero crossing. The device can be connected to 1way, twoway or inverted switching lines already existing making "connected" the load function. In the event of a power failure, the load is restored in the status before the interruption;

IMPORTANT: the electronic relay should be powered from the same line (L) and beutral (N) of the load (check diagram). The load should exceed a power of 5W for the correct detection. For inductive loads it recommended to install a filter RC (snubber) to the load.

Technical features

Mechanical

- Compatible with all System44 items, installation into boxes with Ø59mm
 - Dimension: 1 mod. S44 (22.5 l x 45 h x 50.5 p) mm
- IP20. If installed in dedicated boxes: IP40 Protection Degree:

38g

Weight:

Signalling

Frontal LED:

Blu led with adjustable intensity for individuation in darkness and indication of the configuration status (blinking)

Button

٠ Frontal Button.

Connections

4 terminals of 15A 250V

- Isolator: 6 mm
- Screw: head for slotted screwdriver 3 x 1 mm
- Tightening torque: 0,5 Nm
- Capacity: Flexible wires $0,14 \div 2,5 \text{ mm2}$ (26 ÷ 13 AWG)





- Stiff wires 0,14 ÷ 4 mm2 (26 ÷ 11 AWG)
- Entrance: 2,5 mm x 3 mm
- Terminal L: Line
- Terminal N: Neutral
- Terminal 1: Relay output (Line interruption)
- Terminal 2: Relay output (Line interruption)

Wiewkwaa

- Wi-Fi 802.11b/g/n
- Access point (AP) Station (STA), B,G,N or mixed mode mesh network
- Coding WPA2.PSK

Power supply voltage

- Nominal voltage: 100-240V~ 50-60Hz
- Tolerance: ±10%
- Absorption max @ 230V~: 1,5 W

Weather conditions

- Temperature and relative humidity: 25°C HR65%
- Operating temperature: from -5° up to +35°C (indoor)
- Maximum relative humidity: 90% at 35°C
- Maximum altitude: 2000m s.l.m.

Rated load

- Incandescent lamps; 500W @ 240VAC
- Led lamps; 100W @ 240VAC
- Fluorescent lamps; 120W @ 240VAC

IMPORTANT: To have the correct signaling of the load status, a minimum absorption of 5 W.

Protections

Overload and short-circuit protection

External safety protection, guaranteed by a fast fuse with high breaking capacity 3.15A / 250V ~ (F3.15AH).

Protection against overheating

A thermic fuse PTC is integrated into the device. It is active in case of internal defects that can increase dangerously the internal temperature

Installation and Maintenance Rules

Installation and maintenance must be carried out by qualified personnel in compliance of the provisions governing the installation and maintenance of electrical equipment in force in the country where the products are installed.

- Before operating on the system, disconnect the power by acting on the main switch (symbol /).
- The electronic relay must be powered with the same Line L and Neutral N that power the load
- This device complies with the reference standard, in terms of electrical safety, when it is insta lled in flushmounted or wall-mounted boxes with supports and plates S.44
- Inside the same box it is necessary that the side of the device dominates smart wireless IoT marked with the symbol | is not accompanied by another electronic device. At least the space of half a module must be left free
- If this device is used for purposes not specified by the manufacturer, the protection provided may be impaired.
- Respect the maximum current and voltage values indicated for the device.
- The relay output power circuit must be protected against overloads by installing a device, fuse or automatic 1way switch, with a rated current not exceeding 10 A.





Regulatory compliance:

- RED Directive. RoHS directive.
- Standard EN61010-1, EN_61010-2-030.
- Standard EN 61000-6-1, EN 6100-6-3.

AVE SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is on the product sheet available on the following website: www.ave.it.

Operation

By default, the device works as any two-way switch and allows the connected load to be switched on and off (mode indicated by the blue flashing of the front LED).

After configuration, it is also possible to:

- set scenes and recall one by long pressing the front button for 2s;
- check the consumption and the status of the load from the AVE Cloud application, from voice assistants and from the home automation supervisor (if available). Through the IoT AVE Cloud, without any additional gateways, the device can be controlled and managed locally or remotely through App and using Alexa and Google voice assistant.

The device has two operational modes:

- Two-way switch: the load changes status upon a command reception (remotely or locally).
- Staircase light: at the reception of a command (remotely or locally), the load status is switched to timed ON. If the front button is pressed during the ON status, the timing will restart from the beginning. Otherwise, if an OFF command is remotely received, the load switches off.

The following parameters can be set from AVE Cloud App:

- Customization of the name;
- LED brightness: off, low, medium or high;
- Relay operation: bistable for two-way switch function or monostable for the Staircase light function (default mode: bistable);
- Monostable activation time: from 1" to 480" [8 min.] (Default: 60 s);
- Load status in each of the 16 scenes: Not active, ON, OFF or timed ON (by default: Not active);
- Scene to be recalled by long pressing the front button: None, Scene 1 ÷ Scene 16 (by default: None);
- IOT AVE cloud credentials and connection with Voice Assistants.

Reset procedure

To reset the device recovering the default factory settings, press the front button for a minimum of 15s until the quick flashing of LED. This operation can take effect only on the first 60minutes from the device powering.





Advanced configuration with EasyConfig IoT







Function: On/off diverter

Function: Staircase Light Parameter 1: On time

Global Parameters Menu: LED on or off LED intensity

Scenes Menu

Setting of he scene to be transmitted with a long press. Setting of the actions to be performed



Device programming



Firmware Update







Connection Diagram







442053ST-W - Shutter switch mechanism IoT - 1mod. S.44

Electronic shutter switch mechanism of the DOMINA smart wireless IoT range for 1 roller shutter with slats orientation relay output for motor $\cos\phi$ 0.65 2A 100-240 Vac 50/60 Hz locally or remotely controlled, double IoT technology on Wi-Fi® mesh standard IoT Domina smart systems and IEEE 802.11, double front button for actuator control, preferred position recall function, identification in the dark with adjustable intensity BLUE LED, 100-240 Vac power supply, to be completed with two half buttons interchangeable 1 module cod. 44... TGC-W.



The electronic shutter switch of the DOMINA smart wireless IoT range allows you to control the shutter with orientation of the slats via the double front button via a wireless connection and through the system AVEbus DOMINA smart IoT home automation with a supervisor.

The device does not require any communication gateway, it has the possibility to be controlled:

- In Wi-Fi[®] DIRECT mode, in which a device of your choice within the system is identified as a Wi-Fi[®] Access-Point, which by generating the Wi-Fi[®] network itself allows local dialogue with AVE Cloud application;
- In DOMESTIC ROUTER mode, in which a device chosen (by the programmer) within the system is identified as a Root-Node, by connecting to the Wi-Fi[®] network generated by the home router allows local and remote supervision, using AVE Cloud application and the most common Voice Assistants connected to the cloud

The device is equipped with 2 monostable output relays with interlock function. In the event of a power failure, the 2 relays remain open. The double front buttons control the connected rolling shutter as follow:

- Short press: the higher button raises the shutter and the lower key lowers it until the end of line.

- Long press: it makes the rolling shutter moving in the desired direction if it is stopped, if it is in movement the long press stopped it and if it is closed the slats rotate;

- Double press of both buttons: recall of the preferred position (storage via AVE Cloud App).

IMPORTANT: the electronic relay must be powered with the same Line L and Neutral N that power the load (see diagram). For inductive loads it recommended to install a filter RC (snubber) to the load (fig.3).

Caratteristiche tecniche:

Mechanical

Compatible with all System44 items, installation into boxes with Ø59mm

- Dimension 1mod.S44 (22,5 x 45 x 50,5) mm
- Protection degree: IP20. If installed in dedicated boxes: IP40
- Weight: 38g

Signalling

Blue signaling LED with adjustable intensity for identification in the dark and signaling of the configuration status (flashing).

Button

Double front button;

Connections

4 terminals of 16A 250V

- Isolator: 6 mm
- Screw: head for slotted screwdriver 3 x 1 mm
- Tightening torque: 0,5 Nm
- Capacity: Flexible wires 0,14 ÷ 2,5 mm2 (26 ÷ 13 AWG) Stiff wires 0,14 ÷ 4 mm2 (26 ÷ 11AWG)
- Entrance: 2,5 mm x 3 mm
- Terminal L: Linea
- Terminal N: Neutral
- Terminal U: Line interrupted Up (UP)
- Terminal D: Line interrupted Down (DOWN)





Radio Specification

- Wi-Fi 802.11b/g/n
- Access point (AP) Station (STA), B,G,N or mixed mode mesh network
- Coding WPA2.PSK

Power supply voltage

- Nominal voltage: 100-240V~ 50-60Hz
- Tolerance: ±10%
- Absorption max @ 230V~: 1,3 W with relay closed

Weather conditions

- Temperature and relative humidity: 25°C HR65%
- Operating temperature: from -5° up to +35°C (indoor)
- Maximum relative humidity: 90% at 35°C
- Maximum altitude: 2000m s.l.m.

Rated load

• Motor Load: 2 A @ 240VAC cos\$ 0,65.

Protections

Overload and short circuit protection

External safety protection, guaranteed by a 2.5A / 250V ~ (T2,5H) fast fuse with high breaking capacity.

Overtemperature safety protection

PTC resettable thermal fuse integrated into the device. It intervenes for internal faults that could lead to dangerous overheating.

Installation and Maintenance Rules

Installation and maintenance must be carried out by qualified personnel in compliance of the provisions governing the installation and maintenance of electrical equipment in force in the country where the products are installed.

- Before operating on the system, disconnect the power by acting on the main switch (symbol /).
- The electronic relay must be powered with the same Line L and Neutral N that power the load
- This device complies with the reference standard, in terms of electrical safety, when it is insta lled in flushmounted or wall-mounted boxes with supports and plates S.44
- Inside the same box it is necessary that the side of the device dominates smart wireless IoT marked with the symbol | is not accompanied by another electronic device. At least the space of half a module must be left free
- If this device is used for purposes not specified by the manufacturer, the protection provided may be impaired.
- Respect the maximum current and voltage values indicated for the device.
- The relay output power circuit must be protected against overloads by installing a device, fuse or automatic 1way switch, with a rated current not exceeding 10 A.

Regulatory compliance:

- RED Directive. RoHS directive.
- Standard EN61010-1, EN_61010-2-030.
- Standard EN 61000-6-1, EN 6100-6-3.

AVE SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is on the product sheet available on the following website: www.ave.it.





Operation

By default, the device works as a normal shutter switch allowing the connected shutter to be raised and lowered (mode indicated by the blue flashing of the front LED).

After configuration, it is also possible to:

- Set scenes and recall one by short pressing the double frontal button.
- Set favorite position 1, favorite position 2 and recall it in combination with one of the sixteen scenes.
- Move the shutter through Ave Cloud App and from the voice assistants and home automation supervisor (when available).

The device has two modes of operation:

- Shutter function, when the front key is pressed long press (or remotely), the shutter moves to itsend of line in the direction of button pressing; with a briefly, the shutter moves in the desired direction until releasing the button; while with a short double press of both buttons, the shutter will move to the favorite position or recall a scene;
- Shutter with orientation, when the front button is pressed long press (or remotely) the shutter moves to it end line in the direction of button pressing; with a briefly, the rolling shutter moves with an initial sequence of impulsive movements, subsequently continuing with the movement until the button is released. This movement allows the rotation of the slats in the direction of pressing the button; with a short press of both buttons, it moves in the favorite position or it recalls a scene;

Upon reception of a command (local or remote), the shutter performs the requested movement, while if the front button is pressed during movement, the shutter stops.

The following parameters can be set from AVE Cloud App:

- Customization of the name;
- LED light brightness: OFF, Low, Medium and high.
- Relay operation: shutter or shutter with slats motion.
- Closing and opening of the shutter: from 3" to 240" [4min] (default:30s).
- Slats rotation time and pulse number.
- Favorite position of the shutter: the shutter moves for the programmed timing starting from the end of line.
- Shutter status for each of the 16 scenes: Disabled, Open, Closed, Favorite position1 or Favorite position2 (default: disabled)
- Scene calling by double pressing both buttons: No scene, Scene 1÷16 (default: No scene)
- Authentication to Cloud IoT AVE and connection with Voice assistants.

Reset procedure

To reset the device recovering the default factory settings, press both front buttons for a minimum of 15s until the quick flashing of the front LED. This operation can take effect only on the first 60minutes from the device powering.





Advanced configuration with EasyConfig IoT



Function: Standard shutter



Parameter setting for the standard rolling shutter function.



Function: Blackout rolling shutter



Setting of the parameters for the blackout rolling shutter function.



Global Parameters Menu: LED on or off LED intensity



۲ Scenes Menu Setting of he scene to be transmitted with a long press. Setting of the actions to be performed.





Device programming



. Firmware Update





The implementation released on 20/09/2022 (fw 91) introduces two new features on the device:

- Scene Keypad: used to manage two scenes from the switch. In this way it is possible to use the switch as a twobutton keyboard to activate, for example, the scene that opens all the rolling shutters and the scene that closes all the rolling shutters.
- Avebus keypad:used to send Avebus frames to other devices. In this way it is possible to provide, for example, an additional command point to control a rolling shutter already connected to another IoT switch.

It should be known that the choice of one function clearly excludes the selection of the others.

Configuring the Scene keypad function.





Function: Scene Keypad

After selecting the function it is necessary to program the device.



Function: The possibility of associating the scenes to be recalled is enabled.



Finally, it is necessary to reprogram the device




Configuration of the Avebus keypad function.



Function: Keypad



After selecting the function it is necessary to program the device.



Function: The possibility of associating the avebus addresses to be controlled and the type of command to be sent (On, Toggle, Off, Up, Down) is enabled



Finally, it is necessary to reprogram the device





Connection Diagram



442053ST-W



44..074-W - Lights Relay Or IOT Sockets - 1mod. S.44 🔌 🚛

Electronic relay of the range DOMINA smart wireless IoT with relay output for light or socket function 16A 250Vac 50/60 Hz, locally or remotely controlled, double IoT technology on Wi-Fi[®] mesh standard IoT Domina smart systems and IEEE 802.11, front button for actuator control, identification in the dark with adjustable intensity BLUE LED, 230 Vac power, complete with frontal aesthetics according to the AVE S.44 -1 module of wiring accessories range.

The electronic relay of the DOMINA smart wireless IoT allows you to control a load using the lighted front button (which performs the function of a luminous gem and the function of a local control button), via a wireless connection and through the system AVEbus DOMINA smart IoT home automation with a supervisor.

The device does not require any communication gateway, it has the possibility to be controlled:

- In Wi-Fi[®] DIRECT mode, in which a device of your choice within the system is identified as a Wi-Fi[®] Access-Point, which by generating the Wi-Fi[®] network itself allows local dialogue with AVE Cloud application;
- In DOMESTIC ROUTER mode, in which a device chosen (by the programmer) within the system is identified as a Root-Node, by connecting to the Wi-Fi[®] network generated by the home router allows local and remote supervision, using AVE Cloud application and the most common Voice Assistants connected to the cloud;

The device is equipped with a relay output to perform the function of a latching relay or managed socket; frontal luminous gem with button function for controlling the connected load (by short press) and recalling the linked scene (by long press). It automatically opens the relay for thermal protection or when the consumption exceeds the threshold configured in advanced functions. Switching occurs on zero crossing. One or more push buttons can be connected to the device recalling the function of frontal button. In the event of a power failure, the load is restored in the status before the interruption;

IMPORTANT: the electronic relay should be powered from the same line (L) and beutral (N) of the load (check diagram). The load should exceed a power of 12W for the correct detection. For inductive loads it recommended to install a filter RC (snubber) to the load.

Caratteristiche tecniche:

Mechanical

Compatible with all System44 items, installation into boxes with Ø59mm

- Dimension 1mod.S44 (22,5 x 45 x 50,5) mm
- Protection degree: IP20. If installed in dedicated boxes: IP40
- Weight: 38g

Signalling

Frontal blue LED is visible for an optical signalization with adjustable intensity:

- ON continuous when relay is closed (load enabled)
- OFF when relay is disconnected (load disabled)
- Flashing long, short blinking or pulsing (fading effect) to indicates the device's functioning mode

Button

• Integrated push button with frontal led;

Connections

4 terminals of 15A 250V

- Isolator: 6 mm
- Screw: head for slotted screwdriver 3 x 1 mm
- Tightening torque: 0,5 Nm
- Capacity: Flexible wires 0,14 ÷ 2,5 mm2 (26 ÷ 13 AWG)











- Stiff wires 0,14 ÷ 4 mm2 (26 ÷ 11 AWG)
- Entrance: 2,5 mm x 3 mm
- Terminal L: Linea
- Terminal N: Neutral
- Terminal 1: Relay output
- Terminal P: Input for external push button

Radio Specification

- Wi-Fi 802.11b/g/n
- Access point (AP) Station (STA), B,G,N or mixed mode mesh network
- Coding WPA2.PSK

Power supply voltage

- Nominal voltage: 100-240V~ 50-60Hz
- Tolerance: ±10%
- Absorption max @ 230V~: 1,2 W 1,8 W max with relay closed

Weather conditions

- Temperature and relative humidity: 25°C HR65%
- Operating temperature: from -5° up to +35°C (indoor)
- Maximum relative humidity: 90% at 35°C
- Maximum altitude: 2000m s.l.m.

Rated load

- Resistive load (coso 1): 16A @ 250 Vac Duration: 0,5s ON 1,5s OFF at ambient temperature 20.000 cycles
- Incandescent load: max. 10A @ 250 Vac Duration: 0,5s ON 1,5s OFF at ambient temperature 20.000 cycles
- Engine loads: 10A @ 250Vac cos\$ 0,65 200ms Duration: 0,5s ON 1,5s OFF at ambient temperature 20.000 cycles
- Capacitive load: 2,50hm + 140uF in parallel with 10A @ 250 Vac cosφ 0,9 Duration: 0,5s ON 1,5s OFF at ambient temperature 20.000 cycles

Protections

Overload and short-circuit protection

Add to the circuit an MCB C16 about 1,5KA (minimum)

Protection against o verheating

A ther mic fuse PTC is integrated into the device. It is active in case of internal defects that can increase dangerously the internal temperature

Installation and Maintenance Rules

Installation and maintenance must be carried out by qualified personnel in compliance of the provisions governing the installation and maintenance of electrical equipment in force in the country where the products are installed.

- Before operating on the system, disconnect the power by acting on the main switch (symbol 🎪).
- The electronic relay must be powered with the same Line L and Neutral N that power the load
- This device complies with the reference standard, in terms of electrical safety, when it is insta lled in flushmounted or wall-mounted boxes with supports and plates S.44
- Inside the same box it is necessary that the side of the device dominates smart wireless IoT marked with the symbol | is not accompanied by another electronic device. At least the space of half a module must be left free
- If this device is used for purposes not specified by the manufacturer, the protection provided may be impaired.
- Respect the maximum current and voltage values indicated for the device.
- The relay output power circuit must be protected against overloads by installing a device, fuse or automatic 1way switch, with a rated current not exceeding 16 A.





Regulatory compliance:

- RED Directive. RoHS directive.
- Standard EN61010-1, EN_61010-2-030.
- Standard EN 61000-6-1, EN 6100-6-3.

AVE SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is on the product sheet available on the following website: www.ave.it.

Operation

By default, the device works as any managed socket and allows the connected load to be switched on and off (mode indicated by the blue flashing of the front LED). After configuration, it is also possible to:

- set scenes and recall one by long pressing the front button for 2s or through the push button on the input P;
- check the consumption and the status of the load from the AVE Cloud application, from voice assistants and from the home automation supervisor (if available).

Through the IoT AVE Cloud, without any additional gateways, the device can be controlled and managed locally or remotely through App and using Alexa and Google voice assistant.

The device has four operational modes:

- Managed socket: the load changes status upon a command reception (remotely or locally).
- Timed socket: at the reception of a command (remotely or locally), the load status is switched to timed ON. If the front button is pressed during the ON status, the timing will restart from the beginning. Otherwise, if an OFF command is remotely received, the load switches off.
- Latching relay function: at the reception of a command (remotely or locally), the load change status.
- Staircase light: at the reception of a command (remotely or locally), the load status is switched to timed ON. If the front button is pressed during the ON status, the timing will restart from the beginning. Otherwise, if an OFF command is remotely received, the load switches off.

The following parameters can be set from AVE Cloud App:

- Customization of the name;
- LED brightness: off, low, medium or high;
- Relay operation: managed socket, timed socket, latching relay, Staircase light function (default mode: managed socket);
- Monostable activation time: from 1" to 480" [8 min.] (Default: 60 s);
- Load status of each of the 16 scenes: Not active, ON, OFF or timed ON (by default: Not active);
- Scene to be recalled by long pressing the front button: None, Scene 1 ÷ Scene 16 (by default: None);
- Switching load power in case of exceeding the threshold: OW ÷ 3825W (default: OW)
- Tolerance timing before switching OFF the load for exceed threshold: 0" ÷ 255" [4 min.] (default: 30 s);
- IOT AVE cloud credentials and connection with Voice Assistants

Reset procedure

To reset the device recovering the default factory settings, press the front button for a minimum of 15s until the quick flashing of LED. This operation can take effect only on the first 60minutes from the device powering.







Function: Controlled socket. Possibility to set: disconnect power and tolerance time.



Function: Timed socket. Possibility to set: ON time, disconnect power and tolerance time.



Function: Step Step Relay. Possibility to set: disconnect power and tolerance time.



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Function: Staircase light relay. Possibility to set: ON time, disconnect power and tolerance time.



Global Parameters Menu: Front LED intensity.



Scenes Menu Setting of he scene to be transmitted with a long press. Setting of the actions to be



Device programming



Firmware Update





Connection Diagram

L N 44x074-W







53ECO11-W - IoT load control for single-phase systems - 4 DIN mod.

53ECO11-W is a device for monitoring power consumption, monitoring self-production by means of photovoltaic panels and controlling electrical loads within a residential context with single-phase users (230Vac/50Hz) and power used not exceeding 10kW.

The device envisages the connection of two TA current transformers, one to measure the power and the energy taken from and/or delivered to the grid (exchange TA) and a second transformer to measure the power and energy produced by the self-production photovoltaic system (production TA).



Based on parameter programming, the device is able to optimise the excess energy produced by the photovoltaic system.

The device is also able to control the power consumption of the home, keeping the power taken from the grid within the set threshold (contractual power of the user) by controlling the "loads" by means of home automation / IoT actuators: the device connects and/or disconnects the loads following the set order of priority to keep the maximum power used (set during the configuration phase) within the set limits, taking into account the power of each load and the power that can still be taken from the meter. In this way, the device prevents user overload (if several high-consumption appliances are switched on at the same time), thus avoiding the intervention of the thermal protection of the meter.

Caratteristiche tecniche

Mechanical

Container: 4 DIN modules

- Dimensions: (70 x 89 x 66) mm
- Degree of protection: IP20 (IP 30D in the special containers)
- Colour of container: grey RAL 7016
- Fixing: on EN 50022 DIN rail or directly on the panel, using the special holes for screws (Ø 4mm max)
- Operating position: vertical
- Terminal boards: 16A-250V

Signalling

• Led Signalling ON: There is a yellow optical signalling light on the front.

Button

• PRG programming button

Connections

- Insulation stripping: 6 mm
- Screw: slotted screwdriver head 3 x 1 mm
- Tightening torque: 0.5 Nm
- Capacity: flex wire 0.14 ÷ 2.5 mm2 (26 ÷ 13 AWG) rigid wire 0.14 ÷ 4 mm2 (26 ÷ 11 AWG)
- Opening: 2.5 mm x 4 mm
- Terminal N: Neutral
- Terminal L: Line
- Terminals 1 and 2: Clean contact output for Storage Tank control
- Terminal 3: Temperature Probe Connection for Storage Tank
- Terminal 4: PWM for Storage Tank control
- Terminal 5: GND -common for terminals 3 and 4-
- Terminals 6 and 7: Clean contact input: Storage Tank management consent.
- Terminals 8 and 9: Clean contact input: Storage Tank management consent.
- Terminals 10 and 11: Exchange TA connection (pay attention to the direction indicated on the wiring diagram and to the arrow on the TA. Terminal 10 white Terminal 11 black)
- Terminals 12 and 13: Production TA connection (pay attention to the direction indicated on the wiring diagram and to the arrow on the TA Terminal 12 white Terminal 13 black)





Radio Specification Wi-Fi 802.11b/g/n Access point (AP) Station (STA), B, G, N or mixed mode -mesh network-

Monitoring device specifications

Power and energy measurement

- Manageable system power: from 1.0 to 10.0kW in steps of 0.1kW
- Measurement range (PATT) : from 0 to 10 kW
- Resolution (PATT) : 10 W
- Max Metering (EATT) : 6.55 MWh
- Minimum sectionable load : 100 W
- Maximum sectionable load : <= Manageable system power

Temperature measurement

- Measuring range: from 0°C to +90°C
- Resolution: 1°C
- Loyalty error: 2°C max

Power supply voltage

- Rated voltage: 230V~ 50Hz
- Tolerance: ±10%
- Maximum power consumption: 3.5W with relay energised

Weather conditions

- Overvoltage category: II
- Reference Temperature and Relative Humidity: 25°C RH 65%
- Operation Ambient Temperature Range: -5°C to +35°C (Indoor)
- Pollution degree: 2
- Maximum Relative Humidity: 90% at 35°C
- Max altitude: 2000 m a.s.l.

Rated load / electrical life

- Incandescent load: max. 10A @ 250VAC
 Duration: 0.5s ON 1.5s OFF at room temperature 20000 cycles
- Capacitative load: 2.50hm + 140uF in parallel with 10A 250VAC cosφ 0.9 Duration: 0.5s ON 1.5s OFF at room temperature 5000 cycles

Protections

Overload and short-circuit protection

Insert a 1.5kA (min) C16 circuit breaker in series with the circuit.

Overtemperature safety protection

PTC resettable thermal fuse built into the appliance. It trips when there are internal faults that may lead to dangerous over-temperatures.

Installation and Maintenance Rules

Installation and maintenance operations must be performed by qualified personnel in compliance with the regulations governing the installation and maintenance of electrical equipment in force in the country where the products are installed.





- 1. Before working on the system, turn off the power by acting on the main switch (symbol).
- 2. This device complies with the reference standard, in terms of electrical safety, when installed in the relative control unit.
- 3. If this device is used for purposes not specified by the manufacturer, the protection provided may be impaired.
- 4. Respect the maximum current and voltage values indicated for the device.
- 5. The mains power supply circuit must be protected against overloads by an easily identifiable and easily accessible device, fuse or circuit breaker, with a rated current not exceeding 16A.

Regulatory compliance

- RED Directive. RoHS Directive.
- LV Directive. Standards EN61010-1, EN_61010-2-030.
- EMC Directive. Standards EN 61000-6-1, EN 6100-6-3.

AVE SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity can be found in the product data sheet at the following address: www.ave.it.

Operation

The device allows power consumption monitoring and load management.

During the configuration it is possible to set the following parameters:

- Parameter 1 The power of the system (from 1 to 10KW): it is used to set the power value of your home system beyond which to activate load management.
- Parameter 2 Overload percentage for immediate disconnection (from 0% to 30%): used to set the percentage value for immediate disconnection of the managed loads with respect to the system power.
- Parameter 3 Overload time permitted (from 0 to 5 minutes): used to set a value in minutes which corresponds to the time permitted for exceeding of the threshold set in parameter 1.
- Parameter 4 The percentage of hysteresis for reconnection (10% to 90%): used to set the percentage value for reconnecting of the loads when the measured power returns lower than that set in parameter 1.
- Parameter 5 The power of the production system (from 0 to 10 kW): used to set the power value of your photovoltaic or production system.
- Parameter 6 The self-consumption power threshold (from 0 to 6 kW): used to exploit the excess power of your production system to avoid selling it to the grid. Once the value set in parameter 6 is exceeded, the contact on terminals 1 and 2 is closed.
- Parameter 7 (free parameter);
- Parameter 8 TA transformation ratio;
- Parameter 9 Grid TA position: used to set the grid TA position. If positioned downstream of the meter or if positioned downstream of the main switch.

The device also has the ability to manage up to 12 loads. IoT loads can be associated but also wired loads if a web server is present

Reset procedures

To reset and bring the device back to factory conditions, in the first 60 minutes from when the device is powered, press the PRG key for at least 15s until the front LED flashes quickly











First configuration and start up of the device

Thanks to the Ave Cloud application, it is also possible to configure just one device. The first **4** steps allow us to access the wizard.



We download and open the Ave Cloud application. To store the reading data of the economiser it is necessary to be registered on the cloud. (see procedure)



We select the systems Button in the bottom left.



We select the add system Button in the top right.



We select the add IoT system Button.

Procedura guidata – Step1

In just 4 steps it is possible to connect to the device by putting it in "Access Point" mode



We place the device in Access Point mode

Press the PRG front button for just over 2 seconds. The front LED flashes with a

single pulse.



We check the available Wi-Fi networks on our mobile device (smartphone or tablet).

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AVE_IoT

INTEAM WLAN

SWA_ACCESS

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We connect our mobile device to the "AVE_IoT" Wi-Fi network generated by the 53ECO11-W The network password is: aveiot58





Check that the access point is connected







Wizard – Step 2

If we have no other devices to add in just **4** steps, we complete the procedure.



The application confirms that the access point has been added successfully. If we have no further devices, press NO.



The application displays the "Economiser" device. We can customise its name. We press on CONFIRM



Colleghiamo il dispositivo alla rete WiFi del nostro router.



Enter the SSID and Password of the network. We press Finish. Finally, we will have to connect our mobile device to the router's WI-FI network.



The economiser is configured and will be available in the section of the application dedicated to "my systems".





Configuration Menu

Access to the EasyConfig tool

Thanks to the EasyConfig tool, we can set advanced functions and parameters for the devices of the range.





We select the configuration menu in the top right

We select the EasyConfig IoT tool



Select the default password "2" and then press "OK"



Select "Local system devices" to access the installed devices





Advanced configuration with EasyConfig IoT

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Loads Management

It is possible to associate the loads to be managed. They can be both IoT and wired (with the presence of a web server).



Parameter setting. Pressing the

Button it is possible to access

the settings to configure the loads.

Device programming

10



Firmware Update







53ECOR16A-W – Device for control and the measurement of consumption IoT 2 Mod. Din

The relay 53ECOR16A-W is a 2.4GHz wireless electronic control device with a 16A 230Vac 50Hz relay output, IoT technology on standard Wi-Fi® to create IoT and IEEE 802.11 domina smart mesh network systems. It requires the connection of the TA current transformer included in the package for the measurement of the power and the energy consumption. The device is powered with 230 Vac and is composed by a step-by step relay (dry contact) that can be controlled as wireless and/or locally by a frontal push Button. 2 DIN modules.

The electronic relay from the DOMINA smart wireless IoT range allows you to control an electrical device connected to it, both locally and remotely. The local command can be managed using the front Button. The remote control can be managed by a wireless connection thanks to the AVE Cloud application and the domotic DOMINA smart IoT AVEbus system complete with supervisor.

The device does not require a communication gateway and can, therefore, be managed in two ways:

• Wi-Fi® DIRECT mode. A device of your choice within the system is identified as a Wi-Fi® Access-Point. By independently generating the Wi-Fi® grid, it enables local dialogue with the AVE Cloud application;

• DOMESTIC ROUTER mode. A device of your choice in the system is identified as the Root-Node. Connecting to the Wi-Fi® grid (generated by the home router) allows supervision, both local and remote, via the AVE Cloud application and popular cloud-connected Voice Assistants.

The relay is capable of controlling loads up to 16A; however the device, through a current transformer and an accurate meter, can measure powers absorbed by the load up to 6kW. This is possible, for example, if the device 53ECOR16A-W, instead of supplying the load directly, is used to control remote switches capable of managing greater power loads (for ex. pumps or electric motors). The functions that can be implemented by the device are commanded relay and timed relay.

Technical specifications

The characteristics are described with reference to fig.1

Mechanical

Container:	2 DIN modules
Dimensions:	(35 x 89 x 66) mm
Protection rating:	IP20 (IP 30D in the special containers)
Container colour:	grey RAL 7016
Operation Posit.:	vertical
Terminals:	16A-240V
Weight:	110 g
Signalling	
Led Signalling ON:	A green optical Signalling is visible on the front.
	On when the relay is closed (load activated)
	Flashing with very short pulse every 5 seconds when the relay is open (inactive load)
	Flashing with long, short flashes or pulses (also with fading effect) for Signalling of temporary Operation states of the device.











Button PRG programming button

Connections

Insulation stripping:	6 mm
Screw:	slotted screwdriver head 3 x 1 mm
Tightening torque:	0.5 Nm
Capacity:	flex wire 0.14 to 2.5 mm2 (26 to 13 AWG)
	rigid wire 0.14 ÷ 4 mm2 (26 ÷ 11 AWG)
Opening:	2.5 mm x 4 mm
Terminal N:	Neutral
Terminal L:	Line
Terminal 1 and 2:	Dry contact output
Terminal 3 and 4:	TA connection included in the package - 50cm cable cannot be extended.

Radio Specification

Wi-Fi 802.11b/g/n Access point (AP) Station (STA), B, G, N or mixed mode -mesh network-

Monitoring device specifications

Power and energy measurement

Manageable system power:	from 1.0 to 6.0 kW
Measuring range (PATT):	from 0 to 6 kW
Resolution (PATT):	10 W
Max Metering (EATT) :	6.55 MWh
Minimum sectionable load :	100 W
Maximum sectionable load :	<= Manageable system power

Power supply voltage:

Rated voltage:		230V~ 50-60Hz
Tolerance:		±10%
Maximum	power	3.5W with relay energised
consumption:		

Weather conditions:

Overvoltage category: II Reference Temperature and 25°C RH 65% Relative Humidity:





OperationAmbientfrom -5°C to +35°C (Indoor)Temperature Range:2Pollution degree:2Maximum Relative Humidity:90% at 35°CMax altitude:2000 m a.s.l.

Rated load / electrical life

Resistive load ($\cos \phi$ 1):	16A @ 250VAC
Incandescent load:	max. 10A @ 250VAC
Motor load:	ON = 60A 250VAC cosφ 0.65 300ms + 10A 250Vca cosφ 0.65 200ms (300ms + 200ms = 0.5s ON)
Capacitative load:	2.50hm + 140uF in parallel with 10A 250VAC $\cos \phi$ 0.9

Protections

Overload and short-circuit protection

Insert an easily identifiable and easily accessible C16 1.5kA (min) circuit breaker in series with the circuit.

Overtemperature safety protection

PTC resettable thermal fuse built into the appliance. It trips when there are internal faults that may lead to dangerous over-temperatures.

Installation and Maintenance Rules

Installation and maintenance operations must be performed by qualified personnel in compliance with the regulations governing the installation and maintenance of electrical equipment in force in the country where the products are installed.

- Before working on the system, disconnect the power using the main switch.
- This device complies with the reference standard, in terms of electrical safety, when installed in the relative control unit.
- If this device is used for purposes not specified by the manufacturer, the protection provided may be impaired.
- Respect the maximum current and voltage values indicated for the device.
- The mains power supply circuit must be protected against overloads by an easily identifiable and easily accessible device, fuse or circuit breaker, with a rated current not exceeding 16A.

Regulatory compliance

RED Directive CEI EN 60669-2-1

AVE SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity can be found in the product data sheet at the following address: <u>www.ave.it</u>.





Operation

The device has two Operation modes, controlled relay and timed relay. An automatic disconnection is always available for all functions when the power absorbed by the load exceeds a threshold. The automatic disconnection parameters can be adjusted through parameters 2 and 3 that represent respectively the power threshold above which the load disconnection takes place and the allowable time limit before which no disconnection is made.

After the disconnection, the load can be rearmed after a pre-set time (rearming time) or immediately by pressing the frontal push Button. Based on the selected operation mode, the commands emitted remotely and those emitted by pressing the frontal push Button are interpreted as follows:

• Controlled relay: the reception of a command emitted remotely or through the frontal push Button is interpreted as a state changing command (toggle). If the relay is in OFF state it will toggle to ON and vice-versa.

• Timed relay: the reception of a command emitted remotely or through the frontal push Button is interpreted as a state changing command (toggle). If the relay is in OFF state it will toggle to ON and vice-versa. In the ON state a timer is started with a duration equal to the value set in parameter 1. When the timer has expired the relay is switched to the OFF state.

The load connected is managed in the Zero Crossing mode in order to mitigate the voltage arch inside the relay. The device is capable of measuring the electric consumption of the load (min 5W) connected to it (it does not measure the consumption of the device itself) and communicates this to the system so the information can be displayed (instant value), stored and made visible by means of consumption graphs.

If the load controlled by the device is absent or in fault, or has a non-detectable power, the state of the input is then indicated in the AVECloud app through the respective warning icon (!).

The device 53ECOR16A-W, if inserted in an IoT wireless system combined with a power saving device (for ex. 53ECO11-W), can be configured in the latter to allow the automatic disconnection of the load connected to the input should a threshold be exceeded (power saving), according to a pre-set priority.

Reset procedures

To reset the device and place it in the delivery conditions, within the first 60 minutes after the device is powered, press the frontal push button for at least 15s until the frontal led flashes quickly.







Advanced configuration with EasyConfig IoT





Change of function S

Selection of the Controlled Relay function



Possibility of setting disconnect power, tolerance time, reset time and transformation ratio





Change of function



Selection of the Controlled Relay function



Possibility of setting on

time, disconnect power, tolerance time, reset time and transformation ratio

In this section it is possible to set functions and parameters





Connection Diagram









442TC16-W - IoT - 3-module Multi-touch control S.44

Il The 442TC16-W multi-touch control block is a 2.4GHz wireless electronic device. It is a multi-function appliance with IoT technology on standard Wi-Fi®to create IoT and IEEE 802.11 domina smart mesh network systems. 230 VAC power supply, to be completed with 3-module touch plates.

The electronic multi-touch control from the DOMINA smart wireless IoT range has: two local IoT relays (L1; L2) that act in pairs to control a diverter or roller shutter control (the two relays have an AVEbus address). Two contact closure relays (L3; L4 - relays with no addresses) which close when there is pressure on the keypad and open when the appropriate configured keys are released. An input (P) for an external pulse command to switch relays L1; L2 if they are configured as diverters.



The front area of the device is divided into 9 sensitive zones, divided into 3 columns of 3 zones each. The central zone, or the two high+low zones, or no zone can be activated for each column. You can, therefore, have from a minimum of one (at least one zone must be defined) active sensitive zone up to a maximum of 6 zones.

During programming, you can choose which zones to activate and which functions to assign by configuring the columns:

- a column is used to operate the pair of local relays and can be configured by means of the middle touch button to manage the diverter, or by means of the up/down touch buttons to manage the roller shutter;
- the other two columns can be used to control:

 the local relay without address only by means of the middle touch button;
 remote devices through the sending of radio frames to diverters or IoT sockets with column set by means of themiddle touch button, or up/down button, or both keys with different controls;
 or scene retrieval.

There is also a mode in which none of the columns are connected to the local IoT load with an address, in which case the touch keypad becomes a pure control element. The device does not require a communication gateway and can, therefore, be managed in two ways:

- Wi-Fi[®] DIRECT mode. A device of your choice within the system is identified as a Wi-Fi[®] Access-Point. By independently generating the Wi-Fi[®] grid, it enables local dialogue with the AVE Cloud application;
- DOMESTIC ROUTER mode. A device of your choice in the system is identified as the Root-Node. Connecting to the Wi-Fi[®] grid (generated by the home router) allows the monitoring, both local and remote, via the AVE Cloud application and popular cloud-connected Voice Assistants.

IMPORTANT: the electronic device must be powered with the same Line (L) and Neutral (N) that powers the load (see diagram). If the IoT diverter function is set, the load must be greater than 5W for correct detection. If an inductive load is connected, we recommend installing an RC filter (snubber) to be connected near the load

Technical specifications:

Mechanical

Compatible with all elements of System 44.

- Container: 3-module S44 (67 l x 45 h x 40 d) mm
- Degree of protection: IP20. When installed in the appropriate containers: IP40
- Weight: 90 g

Signalling

Optical signals (LEDs) are visible on the front in the enabled areas: both the intensity and the colour can be set during programming (blue, amber or purple). When the touch is recognized, the LED emits a more intense light.

Button

Front touch buttons. Side button for programming (the button must be pressed using a slotted screwdriver.



Connections



8-pole 16A 250V~ terminal block

- Insulation stripping: 6 mm
- Screw: slotted screwdriver head 3 x 1 mm
- Tightening torque: 0.5 Nm
- Capacity: flex wire 0.14 ÷ 2.5 mm2 (26 ÷ 13 AWG) rigid wire 0.14 ÷ 4 mm2 (26 ÷ 11 AWG)
- Opening: 2.5 mm x 3 mm
- Terminal L1: Line to IoT Device interrupted (Roller shutter Div/UP)
- Terminal L2: Line to IoT Device interrupted (Roller shutter Div/Down)
- Terminal L3: Line to First Local Stand Alone Button interrupted
- Terminal L4: Line to Second Local Stand Alone Button interrupted
- Terminals P: Button input for remote operation
- Terminal L: Line
- Terminal N: Neutra

Radio Specification

- Wi-Fi 802.11b/g/n
- Access point (AP) Station (STA), B, G, N or mixed mode -mesh network-
- WPA2.PSK encryption

Power supply voltage

- Rated voltage: 230V~ 50Hz
- Tolerance: ±10%
- Max absorption @ 230V~: 1.2W, 2.6W with energized relay

Weather conditions

- Reference temperature and relative humidity: 25°C RH 65%
- Operating ambient temperature range: from -5°C to +35°C (indoors)
- Maximum Relative Humidity: 90% at 35°C
- Max altitude: 2000 m a.s.l.

Rated load

If programmed as diverter

- Incandescent lamps: 500W @ 240VAC
- LED lamps: 100W @ 240VAC
- Fluorescent lamps: 120W @ 240VAC

If programmed as a roller shutter switch

- Engine load: 2 A @ 240VAC cos\$ 0.65.
- Engine load: 2 A @ 100VAC cos\$ 0.65

Protections

Overload and short-circuit protection

Insert a 1.5kA (min) C10 circuit breaker in series with the circuit

Overtemperature safety protection

PTC resettable thermal fuse built into the appliance. It trips when there are internal faults that may





Installation and Maintenance Rules

Installation and maintenance must be carried out by qualified personnel in compliance of the provisions governing the installation and maintenance of electrical equipment in force in the country where the products are installed.

- Before operating on the system, disconnect the power by acting on the main switch (symbol $/\gamma$).
- The electronic relay must be powered with the same Line L and Neutral N that power the load
- This device complies with the reference standard, in terms of electrical safety, when it is insta lled in flushmounted or wall-mounted boxes with supports and plates S.44
- Inside the same box it is necessary that the side of the device dominates smart wireless IoT marked with the symbol I is not accompanied by another electronic device. At least the space of half a module must be left free
- If this device is used for purposes not specified by the manufacturer, the protection provided may be impaired.
- Respect the maximum current and voltage values indicated for the device.
- The relay output power circuit must be protected against overloads by installing a device, fuse or automatic 1way switch, with a rated current not exceeding 16 A.

Regulatory compliance:

- RED Directive. RoHS directive.
- Standard EN61010-1, EN 61010-2-030.
- Standard EN 61000-6-1, EN 6100-6-3.

AVE SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is on the product sheet available on the following website: www.ave.it.







The bottom view shows the screws for tightening of the terminals. The front view shows the positioning of the LEDs. The side view shows the position of the Button PRG for programming of the device





Advanced configuration with EasyConfig IoT



Setting of the IoT On/Off Switch function. Selection of the central command point.



Selection of the local twoway switch function for the central control point.



Possibility of setting the IoT staircase light function.

In this section it is possible to set functions and parameters relating to the two IoT outputs L1 and L2.



Setting of the Standard IoT rolling shutter function. Selection of the two control points for Up & Down.



Selection of the local rolling shutter function for the two central control points.



Setting of the IoT rolling shutter function. Point selection of the two control points for Up & Down.

In this section it is possible to set the functions of the buttons.







Selection of two side buttons.



Selection of the function to be associated with the Button in the top right. Possibility to run one of the enabled scenes.



Selection of the function to be associated with the Button in the bottom right. Possibility to execute an Avebus command. Specifying whether "ON", "OFF" or "TOGGLE". The address must also be indicated.

The functions are assigned by pressing the Button.



Selection of a side Button.



Selection of the function to be associated with the central Button. Possibility to select the two local relays (outputs L3; L4).

The two local relays (Relay 1 - Output L3; Relay 2 -Output L4) can only be set if the use of a Button on the column is chosen. These are outputs that have the function of Button: the

relay closes when pressed and opens when released.







Setting of global device parameters



Possibility to select: acoustic feedback when pressing keys. Touch sensitivity. Light intensity of the front LEDs (minimum, medium and maximum). Colour of the front LEDs (blue, amber, violet).



Device programming

Before starting programming, the application verifies the congruence of the settings and signals any errors.





Device programming

Firmware Update





Connection Diagram











The example shows the possibility of managing the rolling shutter function from control point A. Again from control point A A it is possible to control the light point connected to control point B via the wired control: pulse output of relay L3 and input P.





The example shows the possibility of managing the light points from both control devices also through the wired connection. The impulsive output of the local relay "L3" and the "P" input of both devices are used.





442TC14-W - IoT multi-touch control - 2Mod. S.44

The 442TC14-W multitouch control is a 2.4GHz wireless electronic device. It is a multifunctional device with IoT technology on Wi-Fi[®] standard for the creation of mesh systems dominated by smart IoT and IEEE 802.11. 230 Vac power supply, to be completed with touch plates.

The electronic multi-touch control from the DOMINA smart wireless IoT range has: two local IoT relays (L1; L2) that act in pairs to control a diverter or roller shutter control (the two relays have an AVEbus address). A relay for the impulsive closing of the local relay (L3 - relay not equipped with an address) which closes when the keyboard is pressed and opens when the appropriate configured keys are released. An input (P) for an external pulse command to switch relays L1; L2 if they are configured as diverters.



The front area of the device is divided into 9 sensitive zones, divided into 3 columns of 3 zones each. If the central column is active, the two lateral columns cannot be activated and vice-versa. The central zone, or the two high+low zones, or no zone can be activated for each column. It is possible to have from a minimum of one active sensitive zone (at least one zone must be defined) up to a maximum of 4 zones.

In the programming phase it is possible to choose which zones to be activated and which functions to be assigned. When configuring two columns:

- a column can be used to control the pair of local relays and can be configured with the *central touch Button* to manage the **diverter** or with the *up/down touch buttons* to manage the **rolling shutter**;
- the other column can be used to control:
 - o local relay without address with *central touch Button* only;
 - remote activations by sending radio frames to other devices with column set with *central touch Button* or with *up+down* commands.

There is also a mode in which none of the columns are connected to the local IoT load with an address, in which case the touch keypad becomes a pure control element.

The device does not require a communication gateway and can, therefore, be managed in two ways:

- Wi-Fi[®] DIRECT mode. A device of your choice within the system is identified as a Wi-Fi[®] Access-Point. By independently generating the Wi-Fi[®] grid, it enables local dialogue with the AVE Cloud application;
- DOMESTIC ROUTER mode. A device of your choice in the system is identified as the Root-Node. Connecting to the Wi-Fi[®] grid (generated by the home router) allows supervision, both local and remote, via the AVE Cloud application and popular cloud-connected Voice Assistants.

IMPORTANT: the electronic device must be powered with the same Line (L) and Neutral (N) that powers the load (see diagram). The load must be greater than 5W for correct detection. If an inductive load is connected, we recommend installing an RC filter (snubber) to be connected near the load.

Technical specifications:

Mechanical

Compatible with all elements of System 44.

- Container: 2-module S44 (45 l x 45 h x 40 d) mm
- Protection rating: IP20. When installed in the appropriate containers: IP40
- Weight: 60 g

Signalling

Optical signals (LEDs) are visible on the front in the enabled areas: both the intensity and the colour can be set during programming (blue, amber or purple). When the touch is recognized, the LED emits a more intense light.





Button

Front touch buttons. Lateral button for programming (The Button must be pressed with the use of a flat screwdriver)

Connections

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8-pole 16A 250V~ terminal block

- Insulation stripping: 6 mm
- Screw: slotted screwdriver head 3 x 1 mm
- Tightening torque: 0.5 Nm
 - Capacity: flex wire 0.14 to 2.5 mm2 (26 to 13 AWG)
 - rigid wire 0.14 ÷ 4 mm2 (26 ÷ 11 AWG)
- Opening: 2.5 mm x 3 mm
- Terminal L1: Line to IoT Device interrupted (Roller shutter Div/UP)
- Terminal L2: Line to IoT Device interrupted (Roller shutter Div/Down)
- Terminal L3: Line interrupted Local Stand Alone First Button
- Terminal L:
- Terminal N: Neutral
- Terminal P: Button input for remote operation

Line

Radio Specification

- Wi-Fi 802.11b/g/n
- Access point (AP) Station (STA), B, G, N or mixed mode -mesh network-
- WPA2.PSK encryption

Power supply voltage

- Rated voltage: 230V~ 50Hz
- Tolerance: ±10%
- Max absorptions: @ 230V~:1.2 W, 2.6W with relay excited.

Weather conditions

- Reference temperature and relative humidity: 25°C RH 65%
- Operation ambient temperature range: -5°C to +35°C (for indoor)
- Maximum Relative Humidity: 90% at 35°C
- Max altitude: 2000 m a.s.l.

Rated load

If programmed as diverter

- Incandescent lamps: 500W @ 240VAC
- LED Lamps: 100W @ 240VAC
- Fluorescent lamps: 120W @ 240VAC

If programmed as a roller shutter switch

- Motor load: 2 A @ 240VAC cosφ 0.65.
- Motor load: 2 A @ 100VAC cosφ 0.65.

Protections

Overload and short-circuit protection

Insert a 1.5kA (min) C10 circuit breaker in series with the circuit

Overtemperature safety protection

PTC resettable thermal fuse built into the appliance. It trips when there are internal faults that may lead to dangerous over-temperatures.



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Installation and Maintenance Rules

Installation and maintenance operations must be performed by qualified personnel in compliance with the regulations governing the installation and maintenance of electrical equipment in force in the country where the products are installed.

• Before working on the system, turn off the power by acting on the main switch (symbol).



- The electronic device must be powered with the same Line L and Neutral N that power the load.
- In terms of electrical safety, this device complies with the reference standard when it is installed in recessed or wall-mounted boxes with S.44 brackets and plates.
- Inside the same box, the side of the IoT wireless smart device marked with the symbol | should not be flanked by another electronic device. At least the space of half a module should be left free.
- If this device is used for purposes not specified by the manufacturer, the protection provided may be impaired.
- Respect the maximum current and voltage values indicated for the device.
- The relay output supply circuit must be protected against overloads by a device, fuse or circuit breaker, with a rated current not exceeding 10 A.

Regulatory compliance:

- RED Directive. RoHS Directive.
- LV Directive. Standards EN61010-1, EN_61010-2-030.
- EMC Directive. Standards EN 61000-6-1, EN 6100-6-3.

AVE SpA declares that the radio equipment complies with Directive 2014/53/EU. The full text of the EU Declaration of Conformity can be found in the product data sheet at the following address: <u>www.ave.it</u>.



The bottom view shows the screws for tightening of the terminals. The front view shows the positioning of the LEDs. The side view shows the position of the Button PRG for programming of the device





Advanced configuration with EasyConfig IoT



Setting of the IoT On/Off Switch function. Selection of the central command point.



Selection of the local twoway switch function for the central control point.



Possibility of setting the IoT staircase light function.

In this section it is possible to set functions and parameters relating to the two IoT outputs L1 and L2.



Setting of the Standard IoT rolling shutter function. Selection of the two control points for Up & Down.



Selection of the local rolling shutter function for the two central control points.



Setting of the IoT rolling shutter function. Point selection of the two control points for Up & Down.

In this section it is possible to set the functions of the buttons.







Selection of two side buttons.



Selection of the function to be associated with the Button in the top right. Possibility to run one of the enabled scenes.



Selection of the function to be associated with the Button in the bottom right. Possibility to execute an Avebus command. Specifying whether "ON", "OFF" or "TOGGLE". The address must also be indicated.

The functions are assigned by pressing the Button.



Selection of a side Button.



Selection of the function to be associated with the central Button. Possibility to select the local relay (L3 outputs).

The local relay (Relay 1 – Output L3) can only be set if the use of a Button on the column is chosen. It is an output that has the function of Button: the relay closes when pressed and opens when released.






Setting of global device parameters



Possibility to select: acoustic feedback when pressing keys. Touch sensitivity. Light intensity of the front LEDs (minimum, medium and maximum). Colour of the front LEDs (blue, amber, violet).



Device programming

Before starting programming, the application verifies the congruence of the settings and signals any errors.



Programmazione dispositivo



Firmware Upgrade





Connection Diagram









Rolling Shutter switch function





The example shows the possibility of managing the light points from both control devices also through the wired connection. The impulsive output of the local relay "L3" and the "P" input of both devices are used.





443CRTALS-W / 445CRTANS-W / 441CRT-W / 445CRT-W Chronothermostat WI-FI

The T44 Chronothermostat connected allows the monitoring and management of the ambient temperature in an easy and intuitive way. It is a 2.4 Ghz wireless device with IoT technology based on he Wi-Fi standard for the creation of Domina Smart IoT mesh systems. Power supply 230Vac. The device does not require any communication gateway and can be managed in two ways:



• Wi-Fi® DIRECT modality. A device to be selected inside the system is identified as Access- Point Wi-Fi®. Generating itself the Wi-Fi® network it allows locally the dialogue with the application AVE Cloud;

• HOME ROUTER modality. The Root-Node device inside the system connected to the Wi-Fi[®] grid (generated by the domestic router) allows the supervision, either local or remote, through the AVE Cloud application and the most common Vocal Assistants connected to the cloud.

The device is equipped with an integrated relay and also a temperature and relative humidity sensor. On an IoT system it is possible to install up to a maximum of 5 44..CRT-W devices. To obtain a correct and stable measurement of temperature and humidity (internal sensor) it is necessary to wait at least 30 minutes from the first start-up of the device.

Technical data

Power supply 110 – 240 Vac, 50/60Hz Absorption 2 W max Maximum cable section 1 x 1.5 mm2 Contacts capacity 5(2) A Actuation type 1BU Pollution degree 2 Rated impulse voltage 4 kV Wireless device according to standard 802.11b/g/n, frequency 2.4 – 2.4835 Ghz, transmission power < 20 dBm. Safety protocol WEP/WPA/WPA2. Protocol IPv4. Radio connection: short range communication, frequency 868MHz/915MHz, transmission power < 25mW e.r.p.

Technical Specifications:

Mechanical

Compatible with all elements of the 44 system

- Container: Single-block (125 | x 86 h x 47.5 p)mm
- Degree of protection: IP20; IP40 if installed in the appropriate box
- Weight: 180 g

Connections

5-pole clamp terminal 5 A 250 Vac

- Insulation stripping: 5 mm
- Screw: head for flat screwdriver 2 x 1 mm
- Tightening torque: 0.2 Nm
- Capacity: flex wire 0.3 ÷ 1.5 mm2
- Terminal L: Line
- Terminal N: Neutral





- NC terminal: Relay contact normally closed
- NO terminal: Relay contact normally open
- Clamp terminal C: Common relay contact

2-pole clamp terminal

• ADC and PE clamp terminals: connection of external NTC probe

Radio specifications

- Wi-Fi 802.11b/g/n
- Access point (AP) Station (STA), B, G, N or mixed mode -mesh network-
- WPA2.PSK encryption

Power supply voltage

- Rated voltage: 100-240Vac 50-60 Hz
- Tolerance: + 10 %
- Max absorption @230Vac: 1.1W with open relay, 2W max;

Weather conditions

- Reference temperature and relative humidity: 25°C RH 65%
- Operating ambient temperature range: from -10°C to +55°C (indoors)
- Maximum Relative Humidity: 90% at 35°C
- Max altitude: 2000 m a.s.l.

Characteristics

Internal temperature and humidity sensor: on bus I2C External temperature sensor (optional): NTC 10K Ω @25° β 3380K Adjustment range: from 5 °C to 35 °C (0.1 °C steps) Differential (hysteresis): from 0.1 °C to 2.5 °C adjustable Relay output with dry contact: 5A (2A) 250Vac

Protections:

Overload and short-circuit protection

External safety protection guaranteed by a quick fuse with high interruption power from 2 A / 250 Vac (F2AH).

Overtemperature safety protection

Fuse integrated to the device. It trips when there are internal faults that may lead to dangerous overtemperatures.

Installation and Maintenance Rules

Installation and maintenance must be carried out by qualified personnel observing the current regulations governing the installation and maintenance of electrical equipment in the country where the products are installed.

- Before working on the system, disconnect the power using the main switch .
- The present device complies with the reference standard in terms of electrical safety, if installed with the applicable supports and boxes..
- If the present device is used for purposes not specified by the manufacturer, the protection supplied can be compromised.
- Respect the maximum current and voltage values indicated for the device.
- The network supply circuit must be protected against overload by a device, fuse or automatic switch easily identifiable and accessible.





Configuration

The thermostat, once powered, operates locally. When the led below on the left flashes quickly it indicates that the device is still not configured. However, in this phase it is already possible to use the thermostat by pressing the buttons and the central ring.

How to configure the thermostat?

- Step 1 Download and install the AveCloud App on your smartphone or tablet.
- Step 2 Open the AveCloud App: on the lower bar select "account" and proceed with the registration of your account.
- Step 3 always on the lower bar select now "systems": the page "your systems" opens.
- Step 4 select the button "+" above on the right: the page "add system" opens.

• Step 5 – select the "IOT Wireless" system to start the guided procedure that allows the creation of a system with the thermostat and the devices of the civil series connected with Ave.

• Step 6 - We are now on the "Wizard System" page: follow the instructions. The only attention to be paid is that on our thermostat the button for programming is the one above on the left (summer/winter) and that the luminous signal is given by the button below on the left (on/off).

Which are the operation modalities?

Manual Modality - can be selected through the button with the hand symbol and the temperature setting can be set through the rotation of the central ring.

Automatic Modality - can be selected through the button with the hand symbol. The thermostat follows the temperature setting programmed on the application in relation to the day of the week and the time.

Temporary Manual Modality – if the thermostat is in automatic modality and the temperature setting is changed through the rotation of the ring, the device forces the manual modality for a time period that can be set on the additional parameters, once this time has elapsed the thermostat returns to the automatic modality. During this modality the word AUTO flashes on the display.

Away Modality - can be selected by keeping pressed the button with the hand symbol for approx. 5 seconds. The thermostat enters in the "out of house" modality and is set based on the setting defined on the additional parameters. To leave the Away modality it is necessary to press the button with the hand symbol for approx. 5 seconds.

Simple to use - the buttons on the application have the same icons and functions of those present on the device.

How can I set the time programming of the thermostat?



Open the application and access the main page of our device. The time programming of the thermostat can only be set by the application by pressing the button with the pencil symbol located above on the right at the side of the gear symbol. It is possible to set up to 9 time bands every day.

How can I set the additional parameters?

Open the application and access the main page of our device. The additional parameters can be set by pressing the button with the gear symbol located above on the right at the side of the pencil symbol. In this section it is possible to set the summer and winter temperature for the modality "AWAY" out of house. Also in this page it is possible to set the duration of the temporary manual modality.





Advanced configuration

After pairing the device with your installation, advanced configuration of the parameters and modes of use is carried out by accessing the EasyConfig section in the Setup menu of the AVE Cloud application (access password: "2"). During the configuration phase, a request is sent to enable the Wi-Fi® Access Point mode on a wireless device of your choice among those present in the system, in order to allow the AVE Cloud application to connect to it. If there are other IoT wireless smart DOMINA devices present in the system, it is essential that the device in this mode is not the one closest to the HOME ROUTER, as the closest one must be the device enabled with the Root-Node mode.

