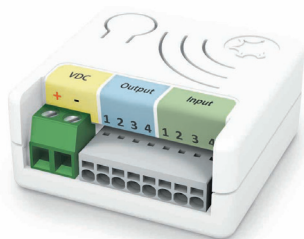


CHERUBINI

tocco italiano dal 1947



A510081 META 4 CH PWM DIMMER 7



Dimmer 4 canali

IT

4-channel dimmer

EN

4-Kanal-Dimmer

DE

Variateur 4 canaux

FR

Actuador de iluminación de 4 canales

ES



ISTRUZIONI - INSTRUCTIONS - EINSTELLANLEITUNGEN
INSTRUCTIONS - INSTRUCCIONES

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EU declaration of conformity

CHERUBINI S.p.A. declares that the product is in conformity with the relevant Union harmonisation legislation: Directive 2014/53/EU, Directive 2011/65/EU.

The full text of the EU declaration of conformity is available upon request at the following website: www.cherubini.it.

Failure to comply with these instructions annuls CHERUBINI's responsibilities and guarantee.



The crossed-out wheellie bin symbol indicates that the product must be collected separately from other waste at the end of its useful life. Therefore, users should deliver this product to appropriate waste collection points or return it to their dealers at the end of its service life. See your local authority's regulations.

Adequate waste sorting for subsequent processing and environmentally compatible disposal helps to avoid possible negative effects on the environment and public health and promotes reuse and/or recycling of the materials used to make the equipment.

DEVICE DESCRIPTION

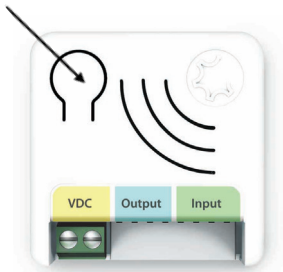
META 4 CH PWM Dimmer 7 is four channel PWM dimmer controllable through Z-Wave protocol, for constant voltage LED loads, such as LED strips, halogen lights and constant voltage LED modules. Controlled devices may be powered by 12 or 24 VDC

It is connected between a 12-24 VDC power supply and the constant voltage LED load. It can control up to four channels of lighting applications. The maximum combined output current is 12 A and 6A maximum per each channel.

It operates in any Z-Wave network with other Z-Wave/Z-Wave Plus certified devices and controllers from any other manufacturer. As a constantly powered node, the device will act as repeater regardless of the vendor in order to increase the reliability of the network.

This device is a security enabled Z-Wave Plus product that is able to use encrypted Z-Wave Plus messages to communicate to other security enabled Z-Wave Plus products. This device must be used in conjunction with a Security Enabled Z-Wave Controller in order to fully utilize all implemented functions.

Integrated Button



Integrated Button

1 or 3 clicks to enter in Learn Mode

6 clicks to reset the system to manufacturer's settings

Power Supply

12-24 VDC (+, -)

Input Switch

IN 1, 2, 3, 4


Output


OUT 1, 2, 3, 4


TECHNICAL SPECIFICATIONS


Power supply	12/24 VDC
Maximum Load	6A for channel, 12 A in total
System temperature limitation	105 °C
Work temperature	From -10° to 40° C
Power consumption	<1 W
Radio frequency	868,4 MHz
Protection system	S2 Security
Maximum distance	Up to 100 m outdoor Up to 40 m indoor
Dimensions	37x37x17 mm
Actuator element	4 Power Mosfet
Compliance	CE, RoHs
Electrical IP Rating	IP20


SAFETY INFORMATION


 **INFO:** The device is designed to be installed in flush mounting junction boxes or close to the load to be controlled.

 **WARNING:** The device must be installed by electricians qualified to intervene on electrical systems in compliance with safety requirements set out by the regulations in force.

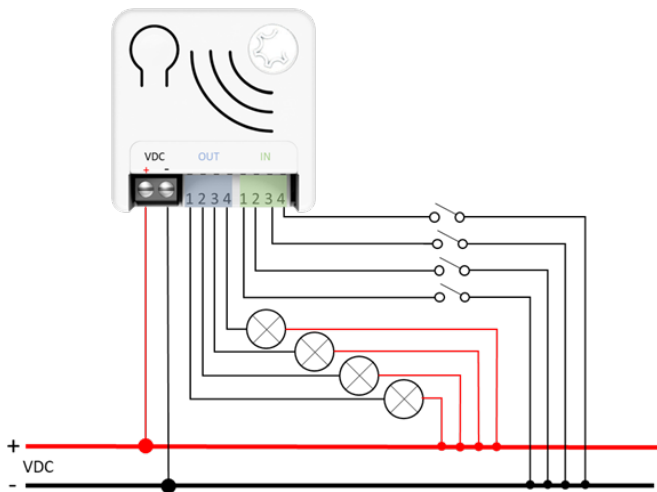
 **DANGER:** Any procedure requiring the use of the Integrated Button is related only to the installation phase and is to be considered a service procedure that must be performed by qualified personnel. This operation must be performed with all necessary precautions for operating in areas with a single level of insulation.

 **WARNING:** Do not connect loads that exceed the maximum load permitted by the actuator element.

 **WARNING:** All connections must be performed according to the electrical diagram provided below.

 **WARNING:** The device must be installed in norm-compliant systems suitably protected from overloads and short circuits.

ELECTRICAL CONNECTIONS DIAGRAM



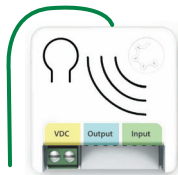
DEVICE INSTALLATION

- 1) Make sure the main switch is set to the OFF position
- 2) Connect the device based on the diagrams provided
- 3) Turn the main switch to the ON position
- 4) Include the device in the Z-Wave network



TIP: The antenna must not be shortened, removed or modified. To ensure maximum efficiency, it must be installed as shown.

Large size metal equipment near the antenna can negatively affect reception. Each device is a node in a mesh network. If there are metal obstacles, the obstacle can often be overcome with a further triangulation node.



LED STATUS INDICATOR

The system includes an RGB LED that shows the device's status during installation:

Solid RED: the device is not included in any network

Solid BLUE: the device is Offline setup mode

4 GREEN blinks then OFF: the device has been just added to a Z-Wave network in S2 Authenticate Mode

4 BLUE blinks then OFF: the device has been just added to a Z-Wave network in S2 Unauthenticated Mode

4 RED blinks then OFF: the device has been just added to a Z-Wave network without security

Sequence of GREEN-BLUE Learn Mode for inclusion

Sequence of RED-BLUE Learn Mode for exclusion



TIP: To test if the electrical connections are correct, before the inclusion of the device, while pressing **n** times the external switch, the RGB LED should flash **green** for the same amount of times. If it does not, check the wire connections.

ADD/REMOVE THE DEVICE INTO A Z-WAVE NETWORK (*classic*)

Standard Inclusion (add)

All META Serie 7 devices are compatible with all Z-Wave/Z-Wave Plus certified controllers. The devices support both the **Network Wide Inclusion** mechanism (which offers the ability to be included in a network, even if the device is not directly connected to the controller) and **Normal Inclusion**.

By default, the inclusion procedure starts in **Normal Inclusion** mode and after a short timeout the procedure continues in **Network Wide Inclusion** mode that lasts for about 20 Seconds.

Only a controller can add the device into the network. After activating the inclusion function by the controller, the device can be added by setting it in Learn Mode.

Before including the device, the LED status indicator is solid RED. The adding of a device is executed by activating the adding procedure in the inclusion section of the controller interface and then executing 1 or 3 click on the integrated button. As soon as the inclusion procedure initiates the LED indicator starts a sequence of GREEN-BLUE blinks. The device is included in the network when the LED status is OFF and the interview is completed.

Standard exclusion (remove)

Only a controller can remove the device from the network. After activating the exclusion function by the controller, the device can be removed by setting it in **Learn Mode**.

The procedure of exclusion can be activated by **Removing** a node from the Z-Wave network and executing 1 or 3 click on the integrated button; as soon as the exclusion initiates, the LED indicator starts a sequence of RED-BLUE blinks. The device is excluded from the network when the LED status indicator is solid RED and the App_status in the interface is OK.

SMARTSTART INCLUSION

Z-Wave SmartStart aims to shift the tasks related to inclusion of an end device into a Z-Wave network away from the end device itself, and towards the more user-friendly interface of the gateway.

Z-Wave SmartStart removes the need for initiating the end device to start inclusion. Inclusion is initiated automatically on power-ON and repeated at dynamic intervals for as long as the device is not included into a Z-Wave network. As the new device announces itself on power-ON, the protocol will provide notifications, and the gateway can initiate the inclusion process in the background, without the need for user interaction or any interruption of normal operation. The SmartStart inclusion process only includes authenticated devices.

META Serie 7 devices can be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

The SmartStart QR and the full DSK string code can be found on the back of the device. The PIN is the first group of 5 digits printed underlined. If you plan to use the DSK, it is important that you take a picture of the label and keep it in a safe place.



S2 SECURE INCLUSION

When adding META Serie 7 devices to a Z-Wave network with a controller supporting Security 2 Authenticated (S2), the PIN code of the Z-Wave Device Specific Key (DSK) is required. The unique DSK code is printed on the product label. The first five digits of the key are highlighted and underlined to help the user identify the PIN code.



SUPPORTED COMMAND CLASSES

Command Class	Version	Non-Secure CC	Secure CC
ZWAVEPLUS_INFO	2	X	
ASSOCIATION	2		X
MULTI_CHANNEL_ASSOCIATION_V2	3		X
ASSOCIATION_GRP_INFO	3		X
TRANSPORT_SERVICE	2	X	
VERSION	3		X
MANUFACTURER_SPECIFIC	2		X
DEVICE_RESET_LOCALLY	1		X
INDICATOR	3		X
POWERLEVEL	1		X
SECURITY_2	1	X	
SUPERVISION	1	X	
MULTI_CHANNEL_V4	4		X
FIRMWARE_UPDATE_MD	5		X
APPLICATION_STATUS	1	X	
CONFIGURATION_V4	4		X
SWITCH_MULTILEVEL	3		X

Supporting Command Class Basic

The basic command classes are mapped into the Switch Binary Command Class.

Supporting Command Class Indicator

The device supports the command class Indicator V3 (ID 0x50). When the device receives an indicator set, the led blinks accordingly to the Indicator set received.

The color shown by the indicator will be:

RED: if the device is included without Security

BLUE: if the device is included in S2 Unauthenticated Mode

GREEN: if the device is already included in S2 Authenticated Mode.

DEVICE CONTROL

META 4 CH PWM Dimmer 7 can turn ON and OFF the load by using an external switch (Momentary switch), or from remote through a controller.

Controlling the device by External Switches

For the operation of the device within the Z-Wave network and controlling the loads connected to the device, control actions are performed on the external switches.



The **CONTROL ACTIONS** are **EVENTS** executed on **EXTERNAL SWITCHES** (connected between the 12-24 VDC (-) Terminal and one of the INPUT 1, 2, 3, 4 of the device), which can be *Clicks, Hold Down and Up*.

Event	Type of switch	Actions on the switch
Click	Momentary switch (<i>button</i>)	Press briefly & Release (<i>when pressed it autonomously returns to the initial position</i>)
MultiClick= n clicks	Momentary switch	Sequence of consecutive n clicks
Hold Down	Momentary switch	Press longer than click. <i>After a Hold Down always follows an UP event.</i>
Up	Momentary switch	Release. <i>The event applies only if there has been a previous Hold Down event.</i>

Controlling the device by a Z-Wave controller

The device can be controlled by any Z-Wave / Z-Wave Plus certified controller available in the market.

ASSOCIATIONS

META 4 CH PWM Dimmer 7 supports 1 association group, which supports the association of up to 8 devices (nodes):

Group ID	Group Name	N° max nodes	Description	Command sent
1	Lifeline	8	Lifeline Group	DEVICE_RESET_LOCALLY_NOTIFICATION SWITCH_MULTILEVEL_REPORT INDICATOR_REPORT

RESET TO THE FACTORY SETTINGS

The device can be reset to the original factory with 6 consecutive clicks on the integrated button.

After the reset is completed, the device will reboot and a RED solid led is showed.



INFO: If the reset is performed while the device is still part of a network, it notifies the other devices that it has been removed (***Device Reset Locally Notification***).

FIRMWARE UPDATE

The system supports over-the-air firmware updates that do not require the device to be removed from its location. The firmware update can be activated from all certified controllers supporting version 2 of the Firmware Update function.



WARNING: The system will be rebooted at the end of the firmware update procedure. It is advisable to carry out the firmware update procedure only when necessary and following careful planning of the intervention.

CONFIGURATIONS

Parameter Number	Size	Parameter Name	Default Value	Description
50	4	DIMMING_ TIME	3	Fade On/Off time in seconds used when the device is controlled with the switch
Parameters Values			Min: 0	Max: 3600
Value	Description			
0-3600	Specific time expressed in seconds			

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