

CHERUBINI

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META Smart Plug



Presă inteligentă **IT**

Smart plug **EN**

Smart plug **DE**

Prise intelligente **FR**

Enchufe inteligente **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 Smart Plug is able to detect overvoltage and/or overcurrent events and indicate them through a multicolor LED. Furthermore, it protects appliances from eventual overload. A very innovative design, which integrates a complex system that allows a precise energy consumption monitoring. The integration of these features in its very small size product, make it unique on the market.

The device is equipped with contact protection technology (Zero Crossing) which reduces the electrical stress on the relay contacts and ensures a longer life. The open / closed switching of the device always occur when the instantaneous value of voltage is 0.

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, WiDom Smart Plug will act as repeater regardless of the vendor in order to increase the reliability of the network.

ENGLISH



Load control functionality	Switching the relay
Z-Wave functionality	3 clicks including the device in the Z-Wave Network; 3 clicks removing the device from the Z-Wave Network;
Meter functionality	Manual reset of alarms

TECHNICAL SPECIFICATIONS

Power Supply	230 VAC \pm 10% 50/60 Hz
Maximum Load on Relay	2800 VA – 230 VAC – 12A
Temperature limitation	105 °C
Work Temperature	From -10° to 40° C
Power consumption	< 0.4 Watt
Radio frequency	868.4 MHz
Protection system	S0 and S2 Security
Maximum distance	Up to 100 m outdoor Up to 40 m indoor
Dimensions (HxWxD)	69x44x44 mm
Actuator element	Relay
Compliance	CE, RoHs
Electrical IP Rating	IP20

Meter Specifications

Parameters	Voltage RMS, Active Power, Energy
Meter Range	Voltage RMS: 250 V Active Power: 2500 W Energy: 2.000.000 kWh
Resolution	Voltage RMS: 0.1 V Active Power: 0.01 W Energy: 0.001 kWh
Maximum Error	Voltage RMS: 2 Volt Active Power: 0.5 Watt

LED STATUS INDICATOR

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

One single BLUE blink: when connecting to the power supply and the device is not yet included in the Z-Wave network

OFF: the relay is OFF

Solid GREEN: the relay is ON

Blink GREEN - BLUE: Learn mode for Inclusion and Exclusion

Blink GREEN: the device is indicating Overcurrent event

Blink BLUE: the device is indicating Overvoltage event.

META SMART PLUG ACTIVATION

- 1) Connect the device to a power outlet
- 2) Include the device in the Z-Wave network.

INCLUDING (ADD) THE DEVICE INTO AN EXISTING Z-WAVE NETWORK

META Smart Plug is compatible with all Z-Wave/Z-Wave Plus certified controllers. The device supports 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**.

If the device is not included into a Z-Wave network, three consecutive clicks on the Push Button will launch the process of traditional inclusion. If the device inclusion procedure does not start within 2 seconds, the Network Wide Inclusion network will be launched and will last between 15-30 seconds.

The procedure of inclusion is started from the gateway control interface and by performing 3 consecutive clicks on the integrated button.

EXCLUDING (REMOVE) THE DEVICE FROM A Z-WAVE NETWORK

Only a controller can remove a device from the network. After activating the exclusion function by the controller, the device can be removed by setting it in Exclusion Mode by three consecutive clicks on the Push Button.

At this point, the LED indicator starts a sequence of GREEN-BLUE blinks until the end of the process of Exclusion.

CONTROLLING THE DEVICE

Controlling the load through the Smart Plug

A single click or two clicks on the Push Button can turn ON/OFF the load (Parameter No. 1).

Controlling the device through Z-Wave network

META Smart Plug can be controlled by any Z-Wave / Z-Wave Plus certified controller available in the market.

All Z-Wave controllers can control the device by using the **Basic Set** command.

RESET TO FACTORY SETTINGS

The device can be reset to the original factory settings by removing the device from the Z-Wave Network.

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. If the load is ON it will be turned OFF and then again ON.

It is advisable to carry out the firmware update procedure only when necessary.

ELECTRIC PARAMETERS READING

META Smart Plug can read the Active Power, the Voltage RMS and the Energy consumed by the load. These values can be obtained through the certified controllers that support the Meter Command Class version 3.

OVERVOLTAGE AND OVERCURRENT ALARMS

META Smart Plug is able to detect overvoltage and overcurrent events, and show them through a blinking LED:

- **Blink GREEN** – Overcurrent event
- **Blink BLUE** – Overvoltage event

These events generate alarms that can control associated devices, by sending Basic Set Commands, and open the relay in case of the overcurrent alarm.

ASSOCIATIONS

META Smart Plug can control, through direct association, other devices of the Z-Wave network in which is included, when an event of overcurrent, overvoltage or events on the Push Button occur.

META Smart Plug can control devices such as relays or dimmers. META Smart Plug supports 5 association groups, each of which supports the association of up to 8 devices:

1-Lifeline: Nodes belonging to this groups will receive changes related to the relay status and power consumption;

2-Over Current: Nodes belonging to this groups will be controlled by a basic set if over current event occurs;

3-Over Voltage: Nodes belonging to this groups will be controlled by a basic set if over voltage event occurs;

4-Control 1 Click: Nodes belonging to this groups will be controlled by a basic set if the button receives one click;

5-Control 2 Clicks: Nodes belonging to this groups will be controlled by a basic set if the button receives two clicks.



TIP: META Smart Plug can control up to 8 devices for every group. In order to prevent the network from slowing down it is advisable to limit the associated devices to no more than 5 per group.

CONFIGURATIONS

Parameter No. 1: Local load control (1 Byte)

Defines which sequences of clicks control the local load.

Configuration	Result
1	ONE_CLICK 1 click turn ON/OFF the local load
2	TWO_CLICKS 2 clicks turn ON/OFF the local load
3 (Default Value)	ONE_CLICK or TWO_CLICKS 1 click or 2 clicks turn ON/OFF the local load

Controlling the associated devices

Parameter No. 2: Level used to control the devices associated to group 4 (1 Byte).

Defines how to control the devices associated to 1 click event.

Configuration	Result
0	SWITCH_OFF The associated devices are switched OFF
-1	SWITCH_ON The associated devices are switched ON
1 - 99	LEVEL The associated devices are set to the indicated level
100 (Default Value)	RELAY_STATUS If the relay is ON/OFF, the associated devices are ON/OFF

Parameter No. 3: Level used to control the devices associated to group 5 (1 Byte).

Defines how to control the devices associated to 2 clicks event.

Configuration	Result
0	SWITCH_OFF The associated devices are switched OFF
-1	SWITCH_ON The associated devices are switched ON
1 - 99	LEVEL The associated devices are set to the indicated level
100 (Default Value)	RELAY_STATUS If the relay is ON/OFF, the associated devices are ON/OFF

Overvoltage Alarm

Parameter No. 4: Overvoltage level (2 Byte).

Defines the voltage level (in Volts) beyond which an overvoltage event is identified and the overvoltage timer is activated. The timer is reset when the event ceases, i.e. when the voltage returns below the overvoltage level. As soon as an overvoltage event occurs, the LED starts a BLUE blinking. If the overvoltage event ceases before the overvoltage timer expires, the blue blinking is stopped, otherwise the alarm is generated and the blinking reset is established by parameter 6.

Configuration	Result
110 - 260 253 (Default Value)	Defines the overvoltage level (in Volts)

Parameter No. 5: Overvoltage Timer (2 Byte).

Defines the time (seconds) in which the voltage must persist above the overvoltage level so that an alarm is generated.

Configuration	Result
1 - 3600 5 (Default Value)	Overvoltage time interval (in seconds) after which an alarm is generated

Parameter No. 6: Overvoltage Alarm Reset (1 Byte).

Defines how to reset the overvoltage alarm and breaks off the blue blinking.

Configuration	Result
0 (valore di Default)	MANUALE When the relay change its state through the Push Button
1	OVER_VOLTAGE_END When the overvoltage event is terminated

Parameter No. 7: Level used to control the devices associated to group 3 (1 Byte).

Defines how to control the devices associated to the overvoltage alarm.


Configuration	Result
0 (Default Value)	SWITCH_OFF The associated devices are switched OFF
-1	SWITCH_ON (Acceso) The associated devices are switched ON
1 - 99	LEVEL The associated devices are set to the indicated level

Overcurrent Alarm

Parameter No. 8: Overcurrent level (1 Byte).

Defines the current level (in Amps) beyond which an overcurrent event is identified and the overcurrent timer is activated. The timer is reset when the event ceases, i.e. when the current returns below the overcurrent level. As soon as an overcurrent event occurs, the LED starts a GREEN blinking. If the overcurrent event ceases before the overcurrent timer expires, the GREEN blinking is stopped, otherwise the alarm is generated and the blinking reset is established by parameter 10.

Configuration	Result
1 - 12 12 (Default Value)	Defines the overcurrent level (in Amps)

 **INFO:** If the current exceeds the maximum threshold of 12A, the timer is reset and the alarm is immediately generated and the relay is opened.

Parameter No. 9: Overcurrent Timer (2 Byte).

Defines the time (seconds) in which the current must persist above the overcurrent level so that an alarm is generated and the relay is opened.

Configuration	Result
1 - 3600 10 (Default Value)	Overcurrent time interval (in seconds) after which an alarm is generated

Parameter No. 10: Overcurrent Alarm Reset (1 Byte).

Defines how to reset the over-current alarm and breaks off the green blinking.

Configuration	Result
0	MANUAL When the relay change its state through the Push Button
1 (Default Value)	OVER_CURRENT_END When the over-voltage event is terminated

Parameter No. 11: Level used to control the devices associated to group 2 (1 Byte). Defines how to control the devices associated to the overcurrent alarm.

Configuration	Result
0 (Default Value)	SWITCH_OFF The associated devices are switched OFF
-1	SWITCH_ON The associated devices are switched ON
1 - 99	LEVEL The associated devices are set to the indicated level

SUPPORTED COMMAND CLASSES

Supported: Supported only non-secure mode

Supported: Only in secure mode

Supported: In Secure and non-secure mode

N°	Command Class	Non Secure added Supported only in non-secure mode	Securely added	
			CC Non-secure in Secure and non-secure mode	CC Secure Supported only in secure mode
1	COMMAND_CLASS_ZWAVEPLUS_INFO	X	X	
2	COMMAND_CLASS_SWITCH_BINARY	X		
3	COMMAND_CLASS_METER	X		X
4	COMMAND_CLASS_ASSOCIATION	X		X
5	COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION	X		X
6	COMMAND_CLASS_ASSOCIATION_GRP_INFO	X		X
7	COMMAND_CLASS_TRANSPORT_SERVICE	X	X	
8	COMMAND_CLASS_VERSION	X		X
9	COMMAND_CLASS_MANUFACTURER_SPECIFIC	X		X
10	COMMAND_CLASS_POWERLEVEL	X		X
11	COMMAND_CLASS_CONFIGURATION	X		X
12	COMMAND_CLASS_SECURITY		X	
13	COMMAND_CLASS_SECURITY_2		X	
14	COMMAND_CLASS_SUPERVISION	X		X
15	COMMAND_CLASS_FIRMWARE_UPDATE_MD	X	X	X

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