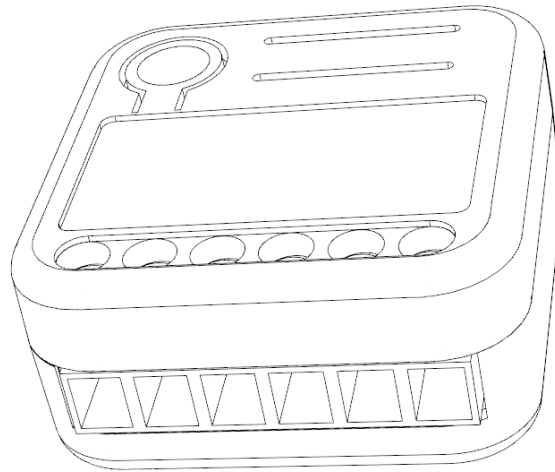




Energy Driven Switch



WPM 1.04 Installation and Operating Instructions

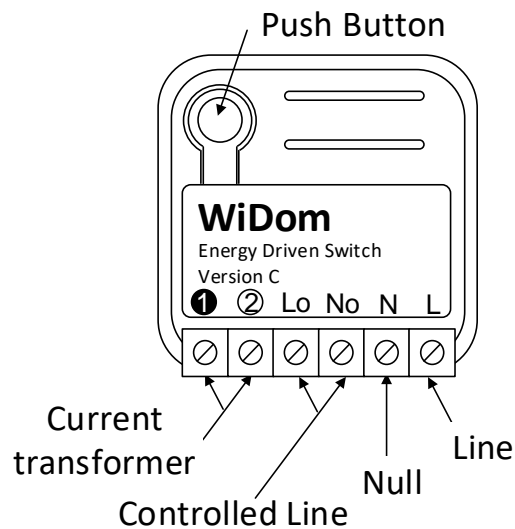


Revision History

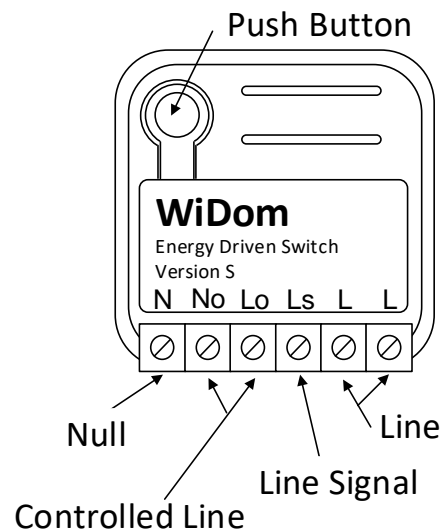
| Rev. Doc. | Date | Revisor | Page | Description |
|--------------|------------|---------|------|---------------|
| 1 | 20/01/2015 | RC | All | Initial Draft |

Device Description

Version C



Version S



| | |
|--------------------------|---|
| Line | Phase connection terminal |
| Null | Neutral connection terminal |
| Controlled Line | No and Lo Lines controlled by internal relay |
| Ls | External switch connection |
| Push Button | Service button: 1 click to add the device to the Z-Wave network, 3 clicks to remove it, 6 clicks to reset to factory settings |
| Power Supply Transformer | Connection terminals for external Current Transformer |

Technical Specifications

| | |
|-----------------------|---|
| Power Supply | 230 VAC±10% 50/60 Hz |
| Maximum Load on Relay | 3000 VA – 250VAC – 12.5 A |
| Work Temperature | -10 +40 °C |
| Radio Protocol | Z-Wave 868,4 MHz |
| Radio Range | Up to 100 m outdoor Up to 40 m indoor |
| Dimensions (HxWxD) | 37x37x17 mm |
| Consumption | < 260 mW in standby < 480 mW with working load |
| Electrical IP Rating | IP 20 |
| Actuator element | Relay |
| Conformity | CE, RoHS |

| Meter Specifications | |
|---|--|
| Parameters | Voltage RMS, Current RMS, Active Power, Power Factor, Energy |
| Meter Range | Voltage RMS: 250 V Current RMS: <ul style="list-style-type: none"> • 45 A – vers. C • 12 A – vers. S Active Power: <ul style="list-style-type: none"> • ± 11250 W – vers. C • ± 3000 W – vers. S Power Factor: ± 1.00 Energy: 2.000.000 kWh |
| Resolution | Voltage RMS: 0.1 V Current RMS: 0.01 A Active Power: 0.01 W Power Factor: 0.01 Energy: 0.001 kWh |
| Maximum Error (within the dynamic range) | Voltage (dynamic range 20:1): $\pm 0.95\%$ Current (dynamic range 1000:1): <ul style="list-style-type: none"> • $\pm 0.6\%$ - vers. S • $\pm 2.9\%$ - vers. C Active Power (dynamic range 4000:1): <ul style="list-style-type: none"> • $\pm 1.6\%$ - vers. S • PF=1: $\pm 4\%$ - vers. C • PF=0.8: $\pm 5.5\%$ - vers. C |

Introduction

WiDom Energy Driven Switch is a device designed to monitor all **parameters, usage, faults and overloads** of your electrical system. Unlike an ordinary energy meter, WiDom Energy Driven Switch can be installed to monitor an entire electricity network or a section of the latter.

- **Active Energy-saving management**

Automatically connects and disconnects a specific load if the established threshold limit is exceeded, or supplies the required power, momentarily excluding non-priority loads.

- **Management and prevention of electrical faults**

Identifies malfunctions based on irregular consumptions and to the maximum time of activity.

- **Electrical overload management**

Notifies or disconnects non-priority loads in the eventuality of system overloads.



External switch¹: External button or switch



Events: Actions performed on the external switch: click and hold.



Click: If the external switch is a button (when pressed it automatically returns to the initial position), a click corresponds to pushing and releasing the button. If the external switch is a regular switch (when pressed it does not return to the initial position), a single click corresponds to a single flip of the switch.

¹ Valid only for version S.

Installation



INFO: WiDom Energy Driven Switch is designed for installation in flush mounting boxes, close to the loads to be controlled, at the point of entry of the electric network sections to be monitored.



WARNING: WiDom Energy Driven Switch must be installed by electricians qualified to operate on electrical systems in compliance with safety requirements set out by current regulations.



DANGER: WiDom Energy Driven Switch must be connected to 230V AC voltage mains supplies; please ensure that the general switch is in the **OFF** position prior to carrying out any operation.



DANGER: Any operation requiring the use of service button (B) must only be carried out during the installation phase and must be considered as a service procedure to be performed by qualified personnel. This operation must be carried out by adopting all necessary precautions to operate on areas with a single level of isolation.



WARNING: Do not connect loads exceeding the maximum power load permitted by the relay contacts.



WARNING: All connections must be performed according to the electrical diagrams provided.




WARNING: WiDom Energy Driven Switch must be installed in norm-compliant systems suitably protected from overloads and short circuits.

WiDom Driven Switch Activation

- 1) Ensure that the main power switch is set in the OFF position
- 2) Connect the device following the diagrams provided
- 3) Shut the electrical box containing the device
- 4) Turn the main power switch back on
- 5) Include the device into the Z-Wave network

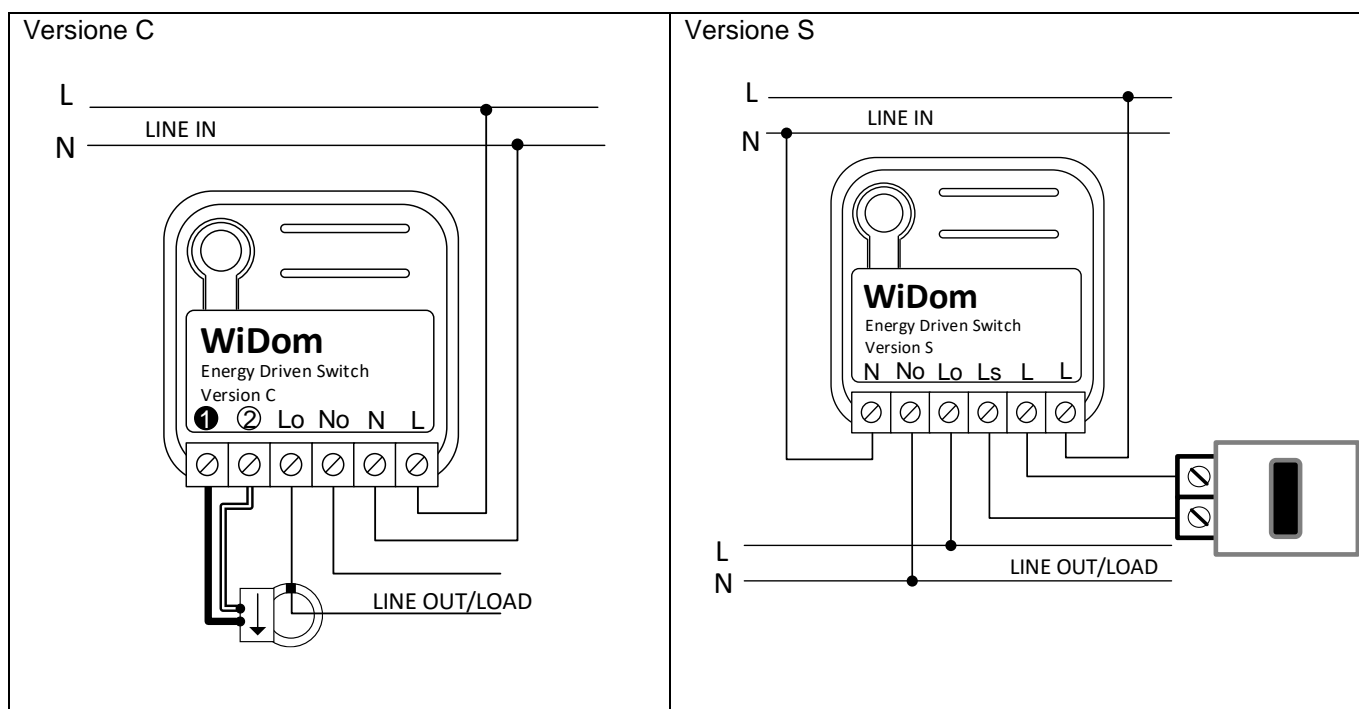
Electrical Connections

The device must be supplied by phase and neutral. Connections must be made according to one of the diagrams below.

 In devices requiring a current transformer, the latter must be connected by attaching the black wire to terminal 1 and the white wire to terminal 2. The current transformer must be clamped on the phase wire leading to the load and adjusted to have the arrow pointing towards the load to be monitored.

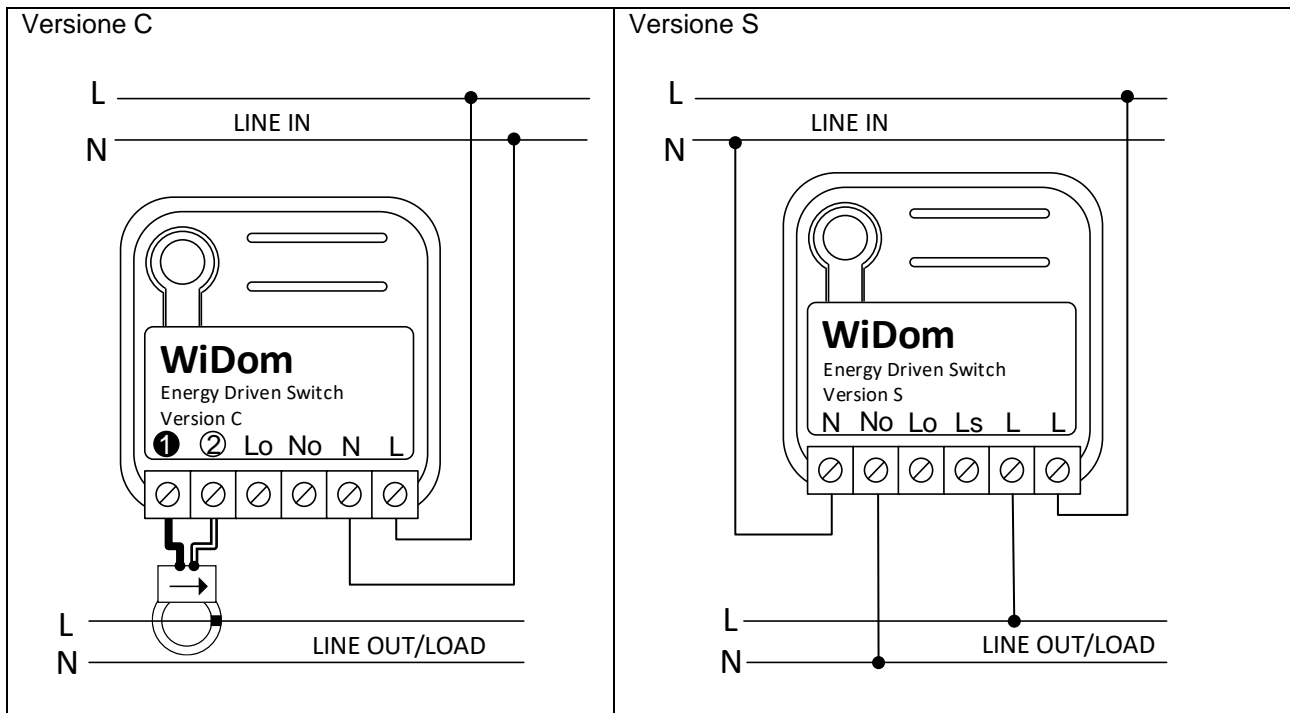
Local load control

In this mode the load is controlled directly by the internal relay. The opening and closing of the relay contacts are synchronized to take place, respectively, when a zero current or voltage is reached.



Remote load control

In this mode the device has no locally connected load, and the measures of current and power are based on all devices connected to the “LINE OUT” section of the system. The devices connected to the “LINE OUT” can be controlled individually based on the configured energy events.

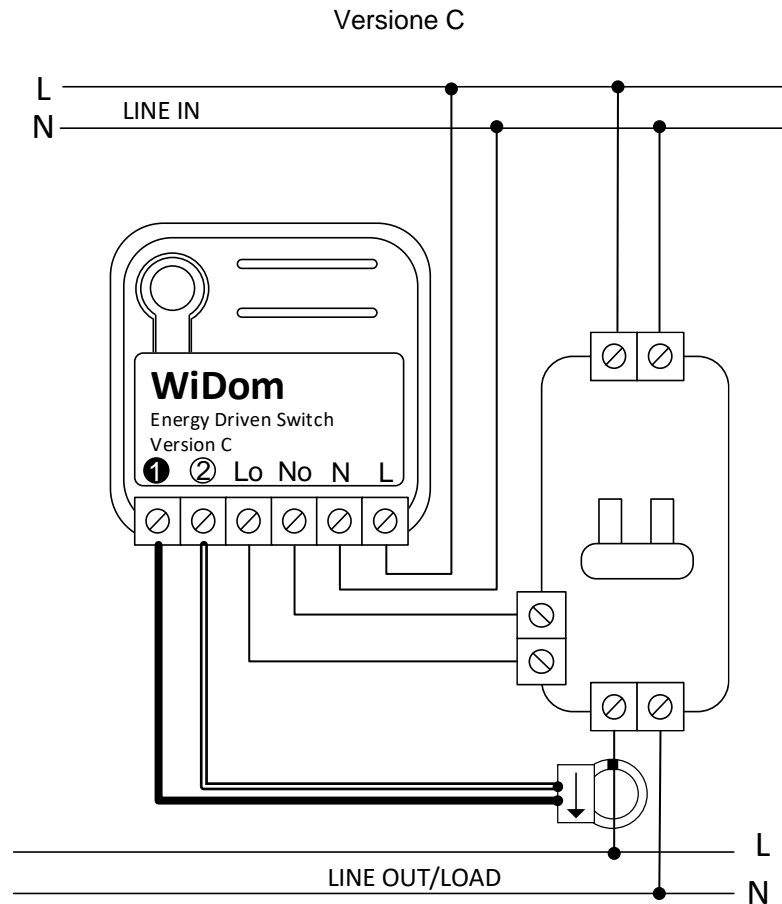


Load control by external contactor

This mode, available only for version C and the use of an external contactor, allows the management of loads up to 45A. The device supports two types of external contactors:

- Normally open (in the absence of signal from the relay the “LINE OUT” is disconnected)
- Normally close (in the absence of signal from the relay the “LINE OUT” is connected)

The load control mode and type of external contactor can be set up with parameter No. 63.



Reset to factory settings

The device can be reset to the original factory settings by means of one of the following methods:

Method 1: Remove the device from the Z-Wave network;

Method 2: Six consecutive clicks on (B) button or on the external switch within 1 minute from system start-up;

Method 3: Set the parameter 61 to 0 – FACTORY RESET (see Configuration Parameters).



INFO: Please use methods 2 and 3 only in the event that the primary controller is missing or otherwise inoperable.



INFO: If the device is reset when included in a network, the latter will notify its removal (**Device Reset Locally Notification**). Conversely, if WiDom Energy Driven Switch receives a notification of removal of another device from the network, this device will be removed from its associations.

Including the device into an existing Z-Wave network

WiDom Energy Driven Switch can be included into any Z-Wave network and operate with Z-Wave devices from any other manufacturer. WiDom Energy Driven Switch, used as a constantly powered node, will act as a signal repeater to increase the network reliability.

The device supports both the **Network Wide Inclusion** (which offers the opportunity of inclusion into a network even if the device is not directly connected to the controller) and the **Normal Inclusion** mechanisms.

If the device is not included into a Z-Wave network, a single click on the (B) button or on the external switch 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 lasting a variable amount of time between 15-30 seconds.



INFO: Through the inclusion procedure, activated with a single click on the external switch², the system determines the type of external switch (see parameter No. 62).

Excluding the device from a Z-Wave network

Only a controller can remove a device from the network. WiDom Energy Driven Switch is compatible with all Z-Wave certified controllers. After the exclusion procedure has been activated by the controller, the device can be removed, putting it in **Exclusion Mode** by three consecutive clicks on the (B) button or on the external switch, when available.

Associations

WiDom Energy Driven Switch can control other devices such as relays or dimmers. WiDom Energy Driven Switch supports three association groups, each of which supports the association of up to 8 devices:

| Group ID | Group Name | Profile | Commands received | Description |
|----------|------------------------|-------------------|--|--|
| 1 | LifeLine Group | General: LifeLine | Basic Report, Device Reset Locally Notification, Meter Report, Multilevel Sensor: Power Report | Devices to receive notifications on: status changes; energy and power levels; device local reset |
| 2 | Up Power Level Group | Sensor: Power | Basic Set | Devices controlled by the Up Power event |
| 3 | Down Power Level Group | Sensor: Power | Basic Set | Devices controlled by the Down Power event |



TIP: WiDom Energy Driven Switch 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.

² Applicable only to version S.

Controlling the device with external switch

When available, the external switch carries out the same function as the (B) button.

Controlling the device through Z-Wave network

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

The behaviour of the device based on its status and the commands received from the network can also be configured.

Switch ALL ON/OFF

By default, WiDom Energy Driven Switch accepts *Switch All ON/OFF* commands.

Overcurrent Protection

The device can be configured to react (opening/closing the integrated relay) to current overloads lasting over a configurable amount of time. See parameters 30 to 32.

Zero Crossing

Relay open/close switchings always take place when a zero of current or voltage occurs. In this way, electrical stress on the relay contacts is minimized, thus affording a longer duration.

Active Energy management

Energy Driven Switch is capable of implementing an active energy saving policy by managing electric loads in order to maximize the self-consumption during the greater production period of our wind power or photovoltaic plant, optimizing the net metering and the energy saving.

An upper and lower power threshold can be configured which, when exceeded, activates or deactivates the two groups of loads connected to the two thresholds.

Predefined loads can be disconnected when the power consumed exceeds a specific threshold for longer than a certain amount of time, or specific loads can be activated when the level of energy produced and not consumed exceeds a second threshold.

WiDom Energy Driven Switch allows you to detect irregular consumption in order to prevent or identify faults by means of specific alarms.

The product can also be used to set levels of total energy produced above which the user can be notified. This mode allows you, for instance, to manage programmed maintenance interventions based on the actual usage of the systems. For further details about these configurations, please refer to parameters 30 to 50.

Electric parameters reading

In addition to Power and Energy, the device also provides data for Voltage RMS, Current RMS and Power Factor. These values, together with power and energy measurements, can be obtained through the certified controllers that support the Meter Command Class version 3. These parameters can also be read by means of parameters 51 to 55.

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. The firmware update procedure must be enabled on the device with four consecutive clicks. The activation lasts 10 seconds, after which the firmware update procedure will need to be re-enabled if it has not been activated in the first instance.



WARNING: The system will be rebooted at the end of the firmware update procedure. If a load is connected to the relay output, it will be disconnected and reconnected, depending on the settings configured for system rebooting. It is advisable to carry out the firmware update procedure only when necessary and following careful planning of the intervention.

Configurations

Device Status

Controlling the relay by means of a single click on the external switch or on the integrated button.

Parameter No. 1: Device Status (1 byte)

| Configuration | Initial Status | Final Status |
|--------------------------------------|----------------|---|
| 1 – TOGGLE (Default Value) | ON | OFF |
| | OFF | ON |
| 2 – ON | ON | If the initial status is OFF the system switches to ON ; conversely, it maintains its status (ON). |
| | OFF | |
| 3 – OFF | ON | If the initial status is ON the system switches to OFF ; conversely, it maintains its status (OFF). |
| | OFF | |
| 4 – IGNORE | ON | The device maintains the initial status |
| | OFF | |

Controlling the device through Z-Wave network

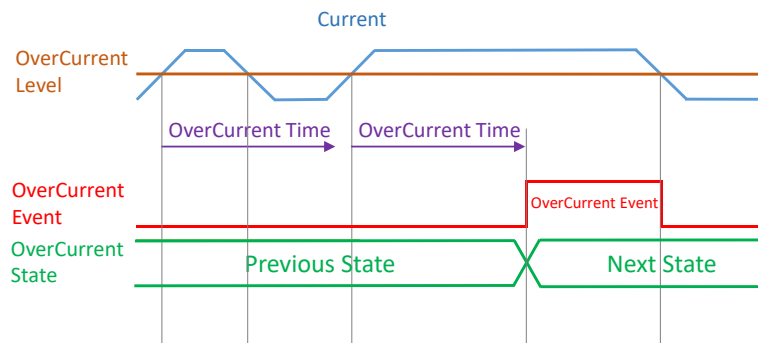
The final status achieved by the device when it receives a **Basic Set** command through the Z-Wave network.

Parameter No. 20 (0x14): Device status upon receipt of a Basic Set command (1 byte)

| Configuration | Command received | Final Status |
|---|------------------|------------------------------|
| 1 – AS RECEIVED (Default Value) | ON | ON |
| | OFF | OFF |
| 2 – IGNORE IF ON | ON | Maintains the initial status |
| | OFF | OFF |
| 3 – IGNORE IF OFF | ON | ON |
| | OFF | Maintains the initial status |
| 4 – IGNORE | ON | Maintains the initial status |
| | OFF | |

Overcurrent detector

The overcurrent detector determines when the current level remains over a threshold level (*OverCurrent Level*) for longer than a certain amount of time (*OverCurrent Time*). When this happens, an Overcurrent Event occurs and it can be associated, for instance, to opening of the relay contacts.



Parameter No. 30 (0x1E): Overcurrent level (2 byte) – Sets the current level above which the time spent above that level is measured.

Version C: From 0 to 4500³ hundredths of Amperes – Default Value: **4500 Hundredths of Amperes**

Version S: From 0 to 1250 hundredths of Amperes – Default Value: **1250 Hundredths of Amperes**

Parameter No. 31 (0x1F): Overcurrent time (2 byte) – Sets the time beyond which, in the case of overcurrent at a level higher than that established in parameter 30, an OverCurrent event occurs.

From 0 to 10800 Seconds (3 Hours) – Default Value: **10 Seconds**

Parameter No. 32 (0x20): Next State (1 byte) – Defines the next state of the device if an overcurrent event has occurred.

| Configuration | Next Status |
|--------------------------------------|--|
| 0 – IGNORE (Default Value) | The device maintains the initial status. |
| 1 – ON | If the initial status is OFF the system switches to ON ; conversely, it maintains its status (ON). |
| 2 – OFF | If the initial status is ON the system switches to OFF ; conversely, it maintains its status (OFF). |
| 3 – TOGGLE | If the initial status is ON/OFF the system switches to OFF/ON . |

³ Values above 1250 can only be managed with version C using the configuration “LOAD CONTROLLED BY EXTERNAL CONTACTOR”.

Energy Management

Parameter No. 33 (0x21): Meter Reset (4 byte)

Provides total operating time from last meter reset. When set to 0 it resets the cumulated values of energy and total operating time.

| Configuration | Final Status |
|---|---|
| 0 – RESET METER | Meter parameters, including total operating time, will be reset |
| Greater than 0 – IGNORE (Default value) | The meter will not be reset |

Parameter No. 34 (0x22): Energy flow (1 byte)

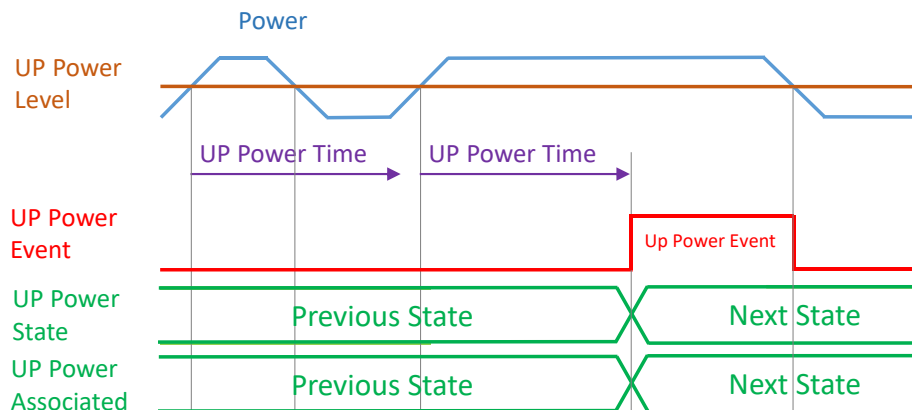
Determines whether energy events are related to energy consumed or energy produced.

| Configuration | Final Status |
|--|---|
| 1 – Consumed (Default value) | Events will be active for Consumed energy flows to which the positive sign will be attributed |
| 2 – Produced | Events will be active for Produced energy flows to which the negative sign will be attributed |

Upper Limit Power Threshold Detector

The upper limit power threshold detector determines when instantaneous power remains above the threshold point (UP Power Level) beyond a specified duration (UP Power Time). When this happens, a *UP Power Event* occurs.

The occurrence of a **UP Power** event can be configured in order to determine the *Next State* both of the device and of the devices associated to the **UP Power Group**.



Parameter No. 35 (0x23): UP Power Level (2 byte) – Sets the level of instantaneous power in Watts beyond which time of permanence above this level is calculated.

Version C: From 0 to 11250⁴ – Default value: **11250**

Version S: From 0 to 3000 – Default value: **3000**

Parameter No. 36 (0x24): UP Power Time (2 byte) – Sets the time in seconds beyond which, if instantaneous power remains at levels exceeding threshold defined by parameter 35, a UP Power event occurs.

From 0 to 10800 seconds (3 Hours) – Default value: **10 Seconds**

⁴ Values above 3000 may only be managed with the version C using the configuration of "LOAD CONTROLLED BY EXTERNAL CONTACTOR".

Parameter No. 37 (0x25): UP Power State (1 byte) – Defines the next status of the device in the case of a UP Power event occurring.

| Configuration | Next Status |
|--------------------------------------|--|
| 0 – IGNORE (Default Value) | The device maintains the initial status. |
| 1 – ON | If the initial status is OFF the system switches to ON ; conversely, it maintains its status (ON). |
| 2 – OFF | If the initial status is ON the system switches to OFF ; conversely, it maintains its status (OFF). |
| 3 – TOGGLE | If the initial status is ON/OFF the system switches to OFF/ON . |

Parameter No. 38 (0x26): UP Power Associated (1 byte) – Defines the status of associated devices in the presence of a UP Power event.

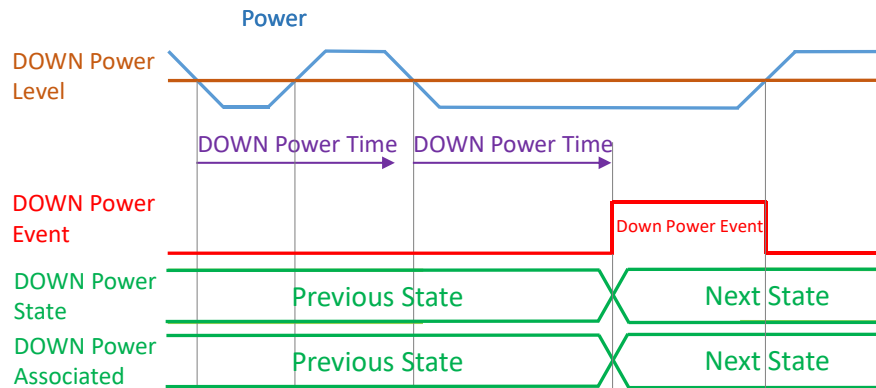
From: 1 to 99 for dimming purpose – 0 (OFF) and -1(ON) for switching ON/OFF.

Default: **0 – OFF**

Lower Limit Power Threshold Detector

The lower limit power threshold detector determines when instantaneous power remains below the threshold point (DOWN Power Limit) beyond a specified duration (DOWN Power Time). When this happens, a *DOWN Power Event* occurs.

The occurrence of a **DOWN Power** event can be configured in order to determine the next state both of the device and of the devices associated to the **DOWN Power Group**.



Parameter No. 39 (0x27): DOWN Power Level (2 byte) – Sets the level of instantaneous power beyond which the time of permanence below this level is calculated.

From 0 to 11250 Watt – Default value: **0 W**

Parameter No. 40 (0x28): DOWN Power Time (2 byte) – Sets the time beyond which, if instantaneous power remains at levels below threshold defined by parameter 39, a DOWN Power event occurs.

From 0 to 10800 Seconds (3 Hours) – Default value: **10 Seconds**

Parameter No. 41 (0x29): DOWN Power State (1 byte) – Defines the next state of the device in the case of a DOWN Power event occurring.

| Configuration | Next Status |
|--------------------------------------|--|
| 0 – IGNORE (Default Value) | The device maintains the initial status. |
| 1 – ON | If the initial status is OFF the system switches to ON ; conversely, it maintains its status (ON). |
| 2 – OFF | If the initial status is ON the system switches to OFF ; conversely, it maintains its status (OFF). |
| 3 – TOGGLE | If the initial status is ON/OFF the system switches to OFF/ON . |

Parameter No. 42 (0x2A): DOWN Power Associated (1 byte) – Defines the status of associated devices in the presence of a DOWN Power event.

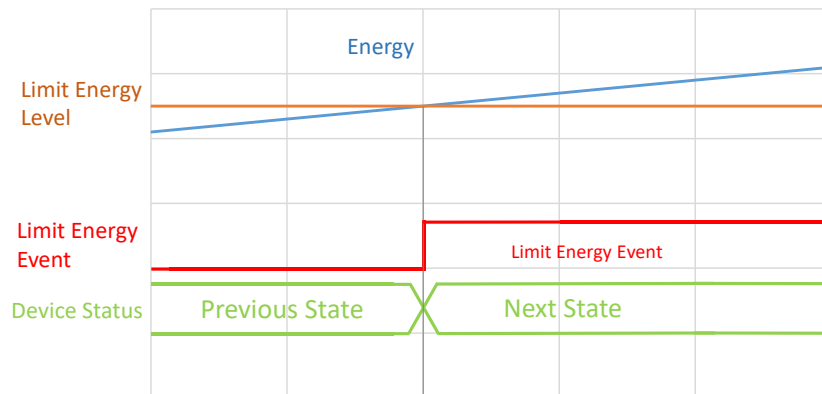
From: 1 to 99 for dimming purpose – 0 (OFF) and -1(ON) for switching ON/OFF.

Default: **0 – OFF**

Detection of exceeded Energy Limits

The detection of exceeded energy limits determines when total accumulated energy exceeds a specific threshold (Limit Energy). When this happens, a *Limit Energy Event* occurs.

The occurrence of a **Limit Energy** event can be configured in order to determine the *Next State* of the device.



Parameter No. 43 (0x2B): Energy Level (4 byte) – Sets the energy level that once exceeded an Energy Limit event occurs.

From 0 to 2.000.000 KWh – Default value: **2.000.000 KWh**

Parameter No. 44 (0x2C): Energy Limit State (1 byte) – Defines the next state of the device in the case of an Energy Limit event occurring.

| Configuration | Next Status |
|--------------------------------------|--|
| 0 – IGNORE (Default Value) | The device maintains the initial status. |
| 1 – ON | If the initial status is OFF the system switches to ON ; conversely, it maintains its status (ON). |
| 2 – OFF | If the initial status is ON the system switches to OFF : conversely, it maintains its status (OFF). |
| 3 – TOGGLE | If the initial status is ON/OFF the system switches to OFF/ON . |

Automatic meter notifications

The system can send automatic notifications listing the values obtained for Power, Energy, Voltage, Current and Power Factor. These reports may be sent following a specific event (over current, voltage out of limit, etc.); subsequent to a variation of one of the parameters beyond a given threshold; following an excessively long time since the sending of the previous report. The table below summarizes all instances covered by automatic notifications.

| Event | Reports sent | Configuration parameters affected |
|---|---|-----------------------------------|
| Percentage variation of instantaneous power | 3 Instantaneous Power Reports at a minimum interval of 3 seconds 1 Voltage Report 1 Current Report 1 Power Factor Report | 45 |
| Exceeding of Upper/Lower Power limit | 1 instantaneous Power Report 1 instantaneous Power Report for each remotely controlled device at a minimum interval of 3 seconds apart | Automatic |
| Exceeding of overcurrent limits | A series of current reports throughout the duration of the event at a minimum interval of 9 seconds | Automatic |
| Voltage out of permitted limits | A series of current reports throughout the duration of the event at a minimum interval of 12 seconds | 48, 49 |
| Maximum time from the last instantaneous power report | 1 Instantaneous Power Report at a minimum interval of 3 seconds 1 Voltage Report 1 Current Report 1 Power Factor Report | 46 |
| Variation of total energy | 1 Total Energy Report | 47 |

The maximum frequency for all reports, including those relating to change of state of the device, never exceeds 1 report every 3 seconds calculated over a 30-second period.

Parameter No. 45 (0x2D): Variation Instantaneous Power (1 byte) – Defines the percentage variation of instantaneous power determining the sending of the report.

From: 1 (1%) to 100 (100%) Default value: **10 – 10%**

Parameter No. 46 (0x2E): Report Time Frequency (1 byte) – Defines the maximum time in minutes since the previous report beyond which an Instantaneous Power Report will still be sent.

From: 1 to 100 minutes. Default value: **10 minutes**

Parameter No. 47 (0x2F): Variation Total Energy (1 byte) – Defines the increase of total energy required to generate a report listing the level of total energy to the devices associated to the Energy Notification Group.

| Configuration | Energy variation generating the issuing of a report |
|-----------------------------|---|
| 0 – IGNORE | No report provided |
| 1 | 1 thousandth of KWh |
| 2 | 1 hundredth of KWh |
| 3 (Default value) | 1 tenth of KWh |
| 4 | 1 KWh |

Parameter No. 48 (0x30): Nominal Voltage (2 byte) – Defines the nominal voltage value in tenths of volts. Together with parameter No. 49 this is used by the automatic notification system to send reports on variations of voltage.

Default value: **2300**

From: 1100 to 2500

Parameter No. 49 (0x31): Fall in maximum voltage (1 byte) – Defines, as a percentage, the nominal value for permitted fall in maximum voltage.

From: 1 (1%) to 100 (100%) Default value: **10 – 10%**

Parameter No. 50 (0x32): Electric parameters subjected to automatic notification (1 byte) – Defines which electric parameters, other than power, will be subjected to automatic notification.

The value to be set for this parameter must be calculated as the sum of values associated to the individual electric parameter indicated in the table.

| Scale | Value |
|---------------------------------|-------|
| Power | 0 |
| Energy | 2 |
| Voltage | 4 |
| Current | 8 |
| Power factor | 16 |
| Multilevel Sensor: Power Report | 32 |

To send report only for Power please set the value to 0.

To send report only for Power and Energy please set the value to 2 (0+2).

To send report for Power, Energy, Voltage, Current, Power Factor please set the value to 30 (0+2+4+8+16).

By default the report are sent for (Power, Energy, Voltage, Current, Power Factor) 0+2+4+8+16→30

Default value: **30**

Permitted values: From 0 to 62

Parameters for monitoring of the electrical network and system calibration.

In order to ensure maximum precision, each device is individually calibrated and the calibration values are permanently set on the system.

Values relating to Voltage, Current, Power Factor and Energy may also be read by consulting parameters 51 to 55, all of which are read-only parameters, which ignore all settings and return the value of the specific parameter at the time of the reading.

Parameter No. 51 (0x33): Voltage RMS value (2 byte)

Reading of this parameter returns the value of voltage RMS at the time of the reading expressed in tenths of Volts.

Parameter No. 52 (0x34): Current RMS value (2 byte)

Returns the value of current RMS expressed in hundredths of Amperes.

Parameter No. 53 (0x35): Power Factor (1 byte)

Returns the value of power factor as a percentage.

Parameter No. 54 (0x36): Total energy consumed (4 byte)

Returns the value of total energy consumed expressed in Wh (thousandths of KWh).

Parameter No. 55 (0x37): Total energy produced (4 byte)

Returns the value of total energy produced expressed in Wh (thousandths of KWh).

Other configuration parameters

Parameter No. 60 (0x3C): Start-up status (1 byte) – Defines the status of the device following a restart.

| Configuration | Device reaction |
|---|-------------------------|
| 1 – ON | Device on |
| 2 – OFF | Device off |
| 3 – PREVIOUS STATUS (Default value) | Status prior to restart |

Parameter No. 61 (0x3D): Configuration reset (1 byte) – Defines which parameters should be reset to default values.

| Configuration | Device reaction |
|--------------------------------------|---|
| 0 – FACTORY RESET | The device is reset to the original factory settings |
| 1 – ASSOCIATIONS RESET | All associations and only the associations are reset |
| 2 – CONFIGURATIONS RESET | The associations are maintained while all other configuration parameters are reset to the original factory settings, except for the specific configuration. |
| 4 – IGNORE (Default value) | No action is performed |

Parameter No. 62 (0x3E): Type of external switch (1 byte) – Defines the type of external switch connected to the device.

| Configuration | Device reaction |
|---|--|
| 0 – IGNORE | The external switch is not connected or not present. |
| 1 – BUTTON | The external switch is a normally open button |
| 2 – SWITCH | The external switch is a traditional switch |
| 4 – AUTOMATIC RECOGNITION (Default value) | After the first single click on the external switch, the system automatically determines the type of external switch used and sets the parameter with the new value accordingly. |

Parameter No. 63 (0x3F): Load control (1 byte) – Defines the load control mode.

| Configuration | Device reaction |
|--|---|
| 1 – DIRECT CONTROL (Default value) | The external load is controlled directly by the relay. Reference diagram local load control. |
| 2 – CONTROL BY MEANS OF A CONTACTOR WITH NORMALLY OPEN COMMAND | The external load is controlled by a contactor that in a resting state has open contacts (load control by means of external contactor). |
| 3 – CONTROL BY MEANS OF A CONTACTOR WITH NORMALLY CLOSED COMMAND | The external load is controlled by a contactor that in a resting state has closed contacts (load control by means of external contactor). |
| 4 – AS AN EXTERNAL INDICATOR | The relay is only used to control the ignition of an external warning light, as, for example, in the case of notification of excess loads and surges (remote load control). |

Disposing the devices



This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE).

This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment.

For further information, please contact your local or regional authorities.

Electronic products not included in the selective sorting process are potentially dangerous for the environment and human health due to the presence of hazardous substances.

Compliance with directives

WiDom devices are built in compliance with directives LVD 2006/95/EC, EMC 2004/108/CE and R&TTE

WiDom shall not be held responsible for any damage caused by these devices if they are used in a manner that is not compliant with the instructions in this manual. WiDom reserves the right to make any changes to the product that it considers necessary or useful without jeopardising its primary features.

Warranty

This warranty is provided by WiDom srl (hereinafter “**WiDom**”) based in Quartu S.Elena 09045 (CA), Italy (VAT number 03452490927).

WiDom warrants to the original purchaser (hereinafter “**Customer**”) that the device sold under this agreement (hereinafter “**Device**”) is free from defects in parts and workmanship under normal use for 12 months from date of purchase (“**Warranty Period**”).

The original purchase invoice or sales receipt, showing the date of purchase is the proof of date of purchase by the Customer.

If a Device, sold by WiDom to the Customer, has manufacturing defects or in any case of alleged lack of conformity, the Customer shall send within thirty (30) days from the day in which he discovers such defects, a claim form by using the web site (www.widom.it) informing WiDom on the full name of the Customer, the nature of the defects and the date in which the Devices has been purchased.

Warranty Claims received after the expiration of the Warranty Period shall not be considered valid.

Once WiDom, receives the Warranty Claim, it shall inform the Customer by e-mail or letter, if the Warranty is applicable and the address where the Device shall be sent in order to verify the defects (if any). Customer must prepay shipping and transportation charges as indicated by WiDom. The Device shall be sent by the Customer to WiDom at its own costs and expenses, by express courier or hand delivered, and with the original packaging, the supplied accessories (if any) and documents proving date of purchase. WiDom shall then inform the Customer about the defects and on its repair or replacement (where applicable). Should WiDom not evidence defects on the Device, the Device shall be returned to the Customer.

Should WiDom notices the defects, and this warranty is applicable, it will remove, at its sole discretion, any defect, free of charge, by repairing any defective components of the Device with new or regenerated components or by replacing the Device. The Warranty Period of the replaced or repaired Device shall not be extended.

WiDom will ship the repaired or a replaced Device to Customer freight prepaid.

WiDom will not be liable for damages to property caused by faulty device. WiDom will not be liable for indirect, incidental, special, consequential or punitive damages, or for any damage, including, inter alia, loss of profits, savings, data, loss of benefits, claims by third parties and any property damage or personal injuries arising from or related to the use of the Device.

If the Device cannot be replaced with another of the same type (e.g. the Device is no longer in production or no longer available for selling in the Customer's country), it may be replaced with a different one having similar technical specifications to the faulty one. Such replacement shall be considered as a total fulfilment of WiDom's obligations.

Warranty exclusion

- defects caused by normal wear of parts or especially subject to wear, such as parts that require periodic replacement during the normal operation of the system (e.g. Batteries);
- splits, cracks, scratches, dents, scratched or discolored surfaces and parts, breakage of plastic parts and in general of any other cosmetic damage;
- damages resulting from use of the system other than that provided, including but not limited to the failure to follow instructions contained in the operating manual;
- damages caused by accident, abuse, misuse, dirt, viruses, liquid contact, fire, earthquake, improper or inadequate maintenance or calibration, negligence or other external causes;

- environmental damage and / or defects caused by smoke, dust, dirt, soot, or other external influences;
- damages caused by modifications and alterations in the functionality or features without the written permission of WiDom;
- damages resulting from transportation or inadequate packaging when returning the product to a WiDom or to an authorize service center;
- defects caused by force majeure events such as lightning, floods, fires, incorrect voltage, improper ventilation;
- damages caused by malfunctioning software, computer virus attack, or by failure to update the software as recommended by WiDom;
- damages resulting from surges in the power and/or telecommunication network, improper connection to the grid in a manner inconsistent with the operating manual, or from connecting other devices not recommended by WiDom;
- damages caused by operating or storing the device in extremely adverse conditions, i.e. high humidity, dust, too low (freezing) or too high ambient temperature;
- products whose serial number has been removed, damaged or rendered illegible;
- expiration of the Warranty Period.

If a defect is not covered by the Warranty, WiDom will inform the Customer about the extra expenses for the repair or replacement.

This warranty may be subject to changes. Please check at www.widom.it the newest warranty claim procedure.

This guarantee shall not exclude, limit or suspend the Customer rights when the provided product is inconsistent with the purchase agreement.

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