

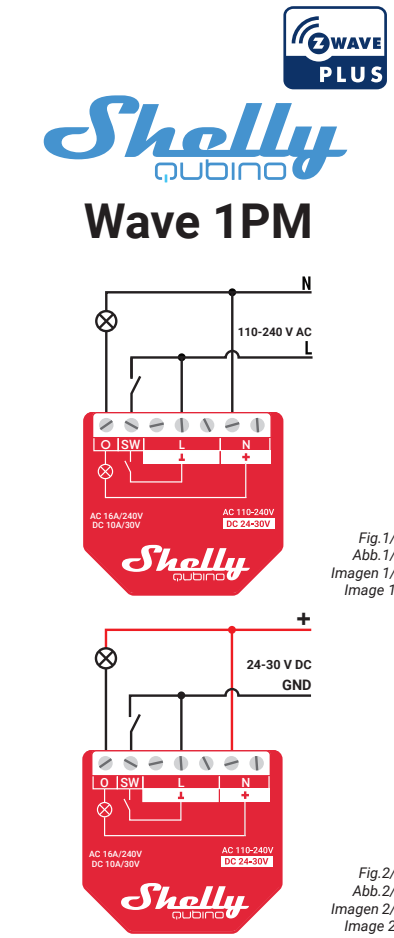


Fig. 1/
Abb. 1/
Imagen 1/
Image 1

Fig. 2/
Abb. 2/
Imagen 2/
Image 2

Fig. 3/
Abb. 3/
Imagen 3/
Image 3

EN

LEGEND

Device terminals:

- **N:** Live terminal (110–240 V AC)
- **L:** Live terminal (110–240 V AC)
- **SW:** Switch/push-button input terminal (controlling O)
- **O:** Load circuit output terminal
- **+**: 24–30 V DC positive terminals
- **–**: 24–30 V DC ground terminals
- **S:** S button (Fig. 3)

Wires:

- **N:** Neutral wire
- **L:** Live wire (110–240 V AC)
- **+**: 24–30 V DC positive wire
- **GND:** 24–30 V DC ground wire

DE

LEGENDE

Geräteschlüssel:

- **N:** Klemme für Neutralleiter
- **L:** Klemme für Phase (110–240 V AC)
- **SW:** Schalter-/Tastereingangsklemme (Steuerung O)
- **O:** Ausgangsklemme des Lastkreises
- **+**: 24–30 V DC positive Anschlussschleifen
- **–**: 24–30 V DC Erdungsschleifen
- **S:** Die S-Taste (Abb. 3)

Kabel:

- **N:** Neutralleiter
- **L:** Phasenleiter (110–240 V AC)
- **+**: 24–30 V DC Pluspolkabel
- **GND:** 24–30 V DC Massekabel

IT

LEGENDA

Terminali del Dispositivo:

- **N:** Terminale neutro
- **L:** Terminale sotto tensione (110–240 V CA)
- **SW:** Terminale di ingresso interruttore/pulsante (controllo O)
- **O:** Terminale di uscita del circuito di carico
- **+**: Terminali positivi 24–30 V CC
- **–**: Terminale di terra 24–30 V CC
- **S:** Pulsante S (Fig. 3)

Fili:

- **N:** Filo neutro
- **L:** Filo sotto tensione (110–240 V CA)
- **+**: Filo del positivo 24–30 V CC
- **GND:** Filo di terra 24–30 V CC

USER AND SAFETY GUIDE

Z-Wave™ smart switch with power measurement

READ BEFORE USE

This document contains important technical and safety information about the Device, its safe use and installation.

⚠ CAUTION! Before beginning the installation, please read carefully and entirely this guide and any other documents accompanying the device. Failure to follow the installation procedures could lead to malfunction, danger to your health and life, violation of law or refusal of legal and/or commercial guarantee (if any). Alterco Robotics EOOD is not responsible for any loss or damage in case of incorrect installation or improper operation of this Device due to failure of following the user and safety instructions in this guide.

TERMINOLOGY

Gateway – A Z-Wave™ gateway, also referred to as a Z-Wave™ controller, Z-Wave™ main controller, Z-Wave™ primary controller, or Z-Wave™ hub, etc., is a device that serves as a central hub for a Z-Wave™ smart home network. The term **gateway**™ is used in this document.

S button – The Z-Wave™ Service button, which is located on Z-Wave™ devices and is used for various functions such as adding (inclusion), removing (exclusion), and resetting the device to its factory default settings. The term **S button**™ is used in this document.

Device – In this document, the term **Device**™ is used to refer to the Wave 1PM device.

ABOUT SHELLY QUBINO

Shelly Qubino is a line of innovative microprocessor-managed devices, which allow remote control of electric circuits with a smartphone, tablet, PC, or home automation system. They work on Z-Wave™ wireless communication protocol, using a gateway. When the gateway is connected to the internet, you can control Shelly Qubino devices remotely from anywhere. Shelly Qubino devices can be operated in any Z-Wave™ network with other Z-Wave™ certified devices from other manufacturers. All main operations noted within the network will act as repeaters regardless of vendor to increase reliability of the network. Devices are designed to work with older generations of Z-Wave™ devices and gateways.

ABOUT THE WAVE 1PM

The Wave 1PM (Device) is a single product that enables the control of the on/off function for one electrical device such as bulb, ceiling fan, IR heater. It measures power consumption of the connected load. The Device is compatible with push-buttons and switches (default).

ELECTRICAL DIAGRAM (110–240 V AC / 24 V DC)

Connecting to the power grid with power supply 110–240 V AC (fig. 1), or 24–30 V DC (fig. 2).

INSTALLATION INSTRUCTIONS

The Device can control a various type of loads (e.g., bulbs) in one electrical circuit up to 3.5 kW / 240 V AC. It can be retrofitted into standard electrical wall boxes, behind power sockets and light switches or other places with limited space.

⚠ CAUTION! Danger of electrocution. Mounting/installation of the Device to the power grid has to be performed with caution, by a qualified electrician.

⚠ WARNING! Danger of electrocution. Every change in the connections has to be done after ensuring there is no voltage present at the Device terminals.

⚠ CAUTION! Use the Device only with a power grid and appliances that comply with all applicable regulations. A short circuit in the power grid or any appliance connected to the Device may damage it.

⚠ CAUTION! Do not connect the Device to appliances exceeding the given max. load!

⚠ CAUTION! Do not shorten the antenna.

⚠ RECOMMENDATION: Place the antenna as far away as possible from metal elements as they can cause signal interference.

⚠ CAUTION! Connect the Device only in the way shown in these instructions. Any other method could cause damage and/or injury.

⚠ CAUTION! Do not install the Device where it can get wet.

⚠ CAUTION! Do not use the Device if it has been damaged!

⚠ CAUTION! Do not attempt to service or repair the Device yourself!

⚠ RECOMMENDATION: Connect the Device using solid single-core wires with increased insulation heat resistance not less than PVC T105°C (221°F).

⚠ CAUTION! Before starting the mounting/installation of the Device, check that the breakers are turned off and there is no voltage on their terminals. This can be done with a phase tester or multimeter. When you are sure that there is no voltage, you can proceed to connecting the wires.

If you are using AC power supply connect the load to the **O** terminal of the Device and the **Neutral** wire, as shown on Fig. 1. Connect the **Live** wire to a **L** terminal of the Device.

Connect the **Neutral** wire to a **N** terminal of the Device. Connect a switch or a push-button to the Device **SW** terminal and any of the unused **L** terminals of the Device.

If you are using DC power supply, connect the wires as shown on Fig. 2. Connect the load to the **O** terminal of the Device and the **+** wire. Connect the **GND** wire to a **L** terminal of the Device.

Connect the **+** wire to a **+** terminal of the Device. Connect the switch/push-button to the **SW** and any of the unused **L** terminals of the Device.

⚠ CAUTION! Use only one phase AC circuit. Do not use mixed AC and DC circuits.

⚠ RECOMMENDATION: For inductive appliances that cause voltage spikes during switching on/off, such as electrical motors, fans, vacuum cleaners and similar ones, RC snubber (0.1 µF / 100 Ω / 1/2 W / 600 V AC) should be connected parallel to the appliance.

⚠ CAUTION! Do not allow children to play with the push-buttons/switches connected to the Device. Keep the devices for remote control of Shelly Qubino (mobile phones, tablets, PCs) away from children.

Z-WAVE™ ADDING/REMOVING (INCLUSION/EXCLUSION)

SmartStart adding (inclusion):

SmartStart enabled products can be added into a Z-Wave™ network by scanning the Z-Wave™ QR Code present on the Device with a gateway providing SmartStart inclusion. No further action is required, and the SmartStart device will be added automatically within 10 minutes of being switched on in the network vicinity.

- With the gateway activation scan the QR code on the Device label and add the Security 2 (S2) Device Specific Key (DSK) to the Provisioning List in the gateway.
- Connect the Device to a power supply.
- Check if the blue LED is blinking in Mode 1. If so, the Device is not added to a Z-Wave™ network.
- Adding will be initiated automatically within a few seconds after connecting the Device to a power supply, and the Device will be added to a Z-Wave™ network automatically.
- The blue LED will be blinking in Mode 2 during the adding process.
- The load connected to O will be blinking 1s on/1s off/1s on/1s off if the Device is successfully added to a Z-Wave™ network.
- The green LED will be blinking in Mode 1 if the Device is successfully added to a Z-Wave™ network.

⚠ LEARN MODE state allows the Device to receive network information from the gateway.

Adding (inclusion) with a switch/push-button:

- Connect the Device to a power supply.
- Check if the blue LED is blinking in Mode 1. If so, the Device is not added to a Z-Wave™ network.
- Enable add/remove mode on the gateway.
- Toggle the switch/push-button connected to the SW terminal 3 times within 3 seconds (this procedure puts the Device in LEARN MODE™). The Device must receive on/off signal 3 times, which means pressing the push-button 3 times, or toggling the switch on and off 3 times.
- The blue LED will be blinking in Mode 2 during the adding process.
- The load connected to O will be blinking 1s on/1s off/1s on/1s off if the Device is successfully added to a Z-Wave™ network.
- The green LED will be blinking in Mode 1 if the Device is successfully added to a Z-Wave™ network.
- *LEARN MODE state allows the Device to receive network information from the gateway.

Adding (inclusion) with the S button:

- Connect the Device to a power supply.
- Check if the blue LED is blinking in Mode 1. If so, the Device is not added to a Z-Wave™ network.
- Enable add/remove mode on the gateway.
- To enter the Setting mode, quickly press and hold the S button on the Device until the LED turns Solid blue.
- Quickly release and then press and hold (> 2s) the S button on the Device until the blue LED starts blinking in Mode 3. Releasing the S button will start the LEARN MODE.
- The blue LED will be blinking in Mode 2 during the adding process.
- The load connected to O will be blinking 1s on/1s off/1s on/1s off if the Device is successfully added to a Z-Wave™ network.
- The green LED will be blinking in Mode 1 if the Device is successfully added to a Z-Wave™ network.

Note! In case of Security 2 (S2) adding (inclusion), a dialog will appear asking you to enter the corresponding PIN code (5 underlined digits) that are written on the DSK label on the side of the Device and on the DSK label inserted in the packaging.

IMPORTANT: The PIN code must not be lost.

Removing (exclusion) with a switch/push-button:

- Connect the Device to a power supply.

2. Check if the green LED is blinking in Mode 1. If so, the Device is added to a Z-Wave™ network.

- Enable add/remove mode on the gateway.
- Toggle the switch/push-button connected to the SW terminal 3 times within 3 seconds (this procedure puts the Device in LEARN MODE™). The Device must receive on/off signal 3 times, which means pressing the push-button 3 times, or toggling the switch on and off 3 times.

5. The blue LED will be blinking in Mode 2 during the removing process.

6. The load connected to O will be blinking 1s on/1s off/1s on/1s off if the Device is successfully removed from a Z-Wave™ network.

7. The blue LED will be blinking in Mode 1 if the Device is successfully removed from a Z-Wave™ network.

Removing (exclusion) with the S button:

- Connect the Device to a power supply.
- Check if the green LED is blinking in Mode 1. If so, the Device is added to a Z-Wave™ network.
- Enable add/remove mode on the gateway.
- To enter the Setting mode, quickly press and hold the S button on the Device until the LED turns Solid blue.
- Quickly release and then press and hold (> 2s) the S button on the Device until the blue LED starts blinking in Mode 3. Releasing the S button will start the LEARN MODE.
- The blue LED will be blinking in Mode 2 during the removing process.
- The load connected to O will be blinking 1s on/1s off/1s on/1s off if the Device is successfully removed from a Z-Wave™ network.
- The blue LED will be blinking in Mode 1 if the Device is successfully removed from a Z-Wave™ network.
- Note!** In Setting mode, the Device has a timeout of 10s before entering again into Normal mode.

FACTORY RESET

After Factory reset, all custom parameters and stored values (KWH, associations, routings, etc.) will return to their default state. HOME ID and NODE ID assigned to the Device will be deleted. Use this reset procedure only when the gateway is missing or otherwise inoperable.

Factory reset with a switch/push-button:

Note! Factory reset with the switch/push-button is only possible within the first minute after the Device is connected to a power supply.

- Connect the Device to a power supply.
- Toggle the switch/push-button connected to the SW terminal 5 times within 3 seconds. The Device must receive on/off signal 5 times, which means pressing the push-button 5 times, or toggling the switch on and off 5 times.
- During factory reset, the LED will turn solid green for about 1s, then the blue and red LED will start blinking in Mode 3 for approx. 2s.
- The blue LED will be blinking in Mode 1 if the Factory reset is successful.

Factory reset with the S button:

Note! Factory reset with the S button is possible anytime.

- To enter the Setting mode, quickly press and hold the S button on the Device until the LED turns Solid blue.
- Press the S button multiple times until the LED turns Solid red.
- Press and hold (> 2s) S button on the Device until the red LED starts blinking in Mode 3. Releasing the S button will start the factory reset.
- During factory reset, the LED will turn solid green for about 1s, then the blue and red LED will start blinking in Mode 3 for approx. 2s.
- The blue LED will be blinking in Mode 1 if the Factory reset is successful.

NOTE: For more information about this Device refer to the Extended User Guide available at: <https://kb.shelly.cloud/>.

LED SIGNALIZATION

LED blinking modes		
Mode 1	0,5s On/2s Off	
Mode 2	0,5s On/0,5s Off	
Mode 3	0,1s On/0,1s Off	
Mode 4	(1x to 6x - 0,2s On/0,2s Off) + 2s Off	
Mode 5	0,2s On blue/0,2s On red	

Normal mode	Colour	LED mode
Removed/Excluded	Blue	Mode 1
Added/Included	Green	Mode 1

Setting mode (with S button)

Adding/Removing (Inclusion/Exclusion) menu selected

Adding/Removing (Inclusion/Exclusion) menu - while pressing S button - Adding/Removing (Inclusion/Exclusion) process selected

Factory reset menu selected

Factory reset - while pressing S button - Factory reset process selected

Setting in progress mode

Factory reset and reboot

Adding/Removing (Inclusion/Exclusion)

Checking power supply 230 V AC frequency or 24 V DC voltage

OTA firmware updating

Alarm mode

Over-current detected O

Overheat detected

Power supply fault (power supply 230 V AC frequency or 24 V DC voltage fault)

** The LED will turn solid green for about 1s, then the blue and red LED will start blinking in Mode 3 for approx. 2s.

LED will turn off 30 minutes after the power cycle. Every time you press on the S button, the LED will turn on for 30 minutes. If alarm is active, LED will not turn off.

OPERATIONAL INSTRUCTIONS

If the SW is configured as a switch (default), each toggle of the switch will change the output O state to the opposite state - on, off, on, etc.

If the SW is configured as a push-button in the Device settings, each press of the push-button will change the output O state to the opposite state - on, off, on, etc.

SUPPORTED LOAD TYPES

- Resistive (incandescent bulbs, heating devices)
- Capacitive (capacitor banks, electronic equipment, motor start capacitors)
- Inductive with RC Snubber (LED light drivers, transformers, fans, refrigerators, air-conditioners)

SPECIFICATIONS

Power supply	110–240 V AC / 24–30 V DC
Power consumption	< 0.3 W
Power measurement (W)	Yes
Max. switching voltage AC	240 V
Max. switching current AC	16 A
Max. switching voltage DC	30 V
Max. switching current DC	10 A
Overheating protection	Yes
Overload protection	Yes
Distance	Up to 40 m indoors (131 ft) (depends on local condition)
Z-Wave™ repeater	Yes
CPU	Z-Wave™ S800
Z-Wave™ frequency bands	868,4 MHz; 865,2 MHz; 869,0 MHz; 921,4 MHz; 908,4 MHz; 916 MHz; 919,8 MHz; 922,5 MHz; 919,7-921,7-923,7 MHz; 868,1 MHz; 920,9 MHz
Maximum radio frequency power transmitted in frequency band(s)	< 25 mW
Size (H x W x D)	37x42x16 ±0.5 mm / 1.46x1.65x0.63 ±0.02 in
Weight	27 g / 0.95 oz.
Mounting	Wall console
Screw terminals max. torque	0.4 Nm / 3.5 lbin
Conductor cross section	0.5 to 1.5 mm² / 20 to 16 AWG
Conductor stripped length	5 to 6 mm / 0.20 to 0.24 in
Shell material	Plastic

Color	Red
Ambient temperature	-20°C to 40°C / -5°F to 105°F
Humidity	30% to 70% RH
Max. altitude	2000 m / 6562 ft.

IMPORTANT DISCLAIMER

Z-Wave™ wireless communication may not always be 100% reliable. This device should not be used in situations in which life and/or valuables are solely dependent on its functioning. If the Device is not recognized by your gateway or appears incorrectly, you may need to change the Device type manually and ensure that your gateway supports Z-Wave Plus™ multiwerk mode.

ORDERING CODE: QNSW-001P16XX

XX – Values define product version per region.

DECLARATION OF CONFORMITY

Hereby, Alterco Robotics EOOD declares that the radio equipment type Wave 1PM is in compliance with Directive 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://shelly.link/Wave1PM-Doc>

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BENUTZER- UND SICHERHEITSHANDBUCH

Z-Wave™ Smart Switch mit Leistungsmessung

BITTE VOR GEBRAUCH DURCHLESEN

Dieses Dokument enthält wichtige technische und sicherheitsrelevante Informationen über das Gerät und seine sichere Verwendung und Installation.

⚠ ACHTUNG! Bevor Sie mit der Installation beginnen, lesen Sie bitte die Begleitdokumentation sorgfältig und vollständig durch. Die Nichtbeachtung der empfohlenen Verfahren kann zu Fehlfunktionen, Lebensgefahr oder Gesetzesverstößen führen. Alterco Robotics EOOD haftet nicht für Verluste oder Schäden im Falle einer falschen Installation oder Bedienung dieses Geräts.

TERMINOLOGIE

Gateway – Ein Z-Wave™-Gateway, auch als Z-Wave™-Controller, Z-Wave™-Hauptcontroller, Z-Wave™-Primärcontroller oder Z-Wave™-Hub usw. bezeichnet, ist ein Gerät, das als zentraler Hub für ein Z-Wave™-Smart-Home-Netzwerk dient. In diesem Dokument wird der Begriff **Gateway**™ verwendet.

S-Taste – Die Z-Wave™ Service-Taste, die sich auf Z-Wave™-Geräten befindet und für verschiedene Funktionen wie die Aufnahme (Hinzufügen), der Ausschluss (Entfernen) und das Zurücksetzen des Geräts auf die Werksinstellungen verwendet wird. In diesem Dokument wird der Begriff **S-Taste**™ verwendet.

Gerät – In diesem Dokument wird der Begriff **Gerät**™ für das Wave 1PM Gerät verwendet.

ÜBER SHELLY QUBINO

Shelly Qubino ist eine Reihe innovativer, mikroprozessorgesteuerter Geräte, die die Fernsteuerung von Stromkreisen mit einem Smartphone, Tablet, PC oder einem Hausautomatisierungssystem ermöglichen. Sie arbeiten mit dem drahtlosen Z-Wave™-Kommunikationsprotokoll unter Verwendung eines Gateways. Wenn das Gateway mit dem Internet verbunden ist, können Sie die Shelly Qubino Geräte von überall aus fernsteuern. Shelly Qubino Geräte können in jedem Z-Wave™ Netzwerk mit anderen Z-Wave™ zertifizierten Geräten anderer Hersteller betrieben werden. Alle netztribenen Knotenpunkte innerhalb des Netzwerks werden unabhängig vom Hersteller als Repeater fungieren, um die Zuverlässigkeit des Netzwerks zu erhöhen. Die Geräte sind so konzipiert, dass sie mit älteren Generationen von Z-Wave™-Geräten und Gateways funktionieren.

ÜBER DAS WAVE 1PM

Das Wave 1PM (Gerät) ist ein einzelnes Produkt, das die Steuerung der Ein/Aus-Funktion für ein elektrisches Gerät wie z. B. eine Glühlampe, einen Deckenventilator oder eine IR-Heizung ermöglicht. Es misst den Stromverbrauch des angeschlossenen Geräts. Das Gerät ist kompatibel mit Drucktasten und Schaltern (Standard).

ELEKTRISCHER SCHALTPLAN

(110–240 V AC / 24 V DC)

Anschluss an das Stromnetz mit Stromversorgung 110–240 V AC (Abb. 1) oder 24–30 V DC (Abb. 2).

INSTALLATIONSANLEITUNG

Das Gerät kann verschiedene Arten von Lasten (z. B. Glühlampen) in einem Stromkreis bis zu 3,5 kW/240 V AC steuern. Es kann in eine Standard-Unterputzkonsole nachgerüstet werden, hinter Steckdosen und Lichtschaltern oder an anderen Orten mit begrenztem Platz vorgesehen.

⚠ VORSICHT! Gefahr eines Stromschlages. Die Montage/Installation des Geräts an das Stromnetz muss von einem qualifizierten Elektriker mit Vorsicht durchgeführt werden!

⚠ VORSICHT! Es besteht Stromschlaggefahr. Bei jeder Änderung der Anschlüsse muss sichergestellt werden, dass an den Klemmen des Geräts keine Spannung anliegt!

⚠ VORSICHT! Verwenden Sie das Gerät nur mit einem Stromnetz und Geräten, die allen geltenden Vorschriften entsprechen. Ein Kurzschluss im Stromnetz oder in einem an das Gerät angeschlossenen Gerätes kann dieses beschädigen!

⚠ VORSICHT! Sie dürfen nicht Kinder nicht an Geräte an, die die angegebene Höchstlast überschreiten!

⚠ VORSICHT! Kürzen Sie die Antenne nicht!

⚠ EMPFEHLUNG: Stellen Sie die Antenne möglichst weit von metallischen Gegenständen auf, da diese Signalstörungen verursachen können.

⚠ VORSICHT! Schließen Sie das Gerät nur auf die in dieser Anleitung beschriebene Weise an. Jede andere Methode kann zu Schäden und/oder Verletzungen führen!

⚠ VORSICHT! Installieren Sie das Gerät nicht an einem Ort, an dem es nass werden kann!

⚠ VORSICHT! Verwenden Sie das Gerät nicht, wenn es beschädigt ist!

⚠ VORSICHT! Versuchen Sie nicht, das Gerät selbst zu warten oder zu reparieren!

⚠ EMPFEHLUNG: Schließen Sie das Gerät mit massiven eindrähtigen Kabeln mit erhöhter Isolationswärmebeständigkeit von mindestens PVC T105°C (221°F) an!

⚠ CAUTION! Bevor Sie mit der Installation/Montage des Geräts beginnen, prüfen Sie, ob die Stromkreis-Sicherheitsorgane (Sicherungen) ausgeschaltet sind und keine Spannung an den Klemmen anliegt. Dies kann mit einem Phasenprüfer oder Multimeter erfolgen. Wenn Sie sicher sind, dass keine Spannung anliegt, können Sie mit dem Anschluss der Kabel fortfahren!

⚠ CAUTION! Kürzen Sie die Antenne nicht!

⚠ EMPFEHLUNG: Stellen Sie die Antenne möglichst weit von metallischen Gegenständen auf, da diese Signalstörungen verursachen können.

⚠ VORSICHT! Schließen Sie das Gerät nur auf die in dieser Anleitung beschriebene Weise an. Jede andere Methode kann zu Schäden und/oder Verletzungen führen!

⚠ VORSICHT! Installieren Sie das Gerät nicht an einem Ort, an dem es nass werden kann!

⚠ VORSICHT! Versuchen Sie nicht, das Gerät selbst zu warten oder zu reparieren!

⚠ EMPFEHLUNG: Schließen Sie das Gerät mit massiven eindrähtigen Kabeln mit erhöhter Isolationswärmebeständigkeit von mindestens PVC T105°C (221°F) an!

⚠ CAUTION! Bevor Sie mit der Installation/Montage des Geräts beginnen, prüfen Sie, ob die Stromkreis-Sicherheitsorgane

