



**AWNING BLINDS**  
FOR VERTICAL  
AND ROOF WINDOWS  
2020



# RELAX



Most of us look forward to those hot, sunny days but the sun, while so pleasant on a beach, can also be a real nuisance in the home or workplace. Solar radiation flooding a room leads to a marked increase in temperature not only in the attic, but throughout the building. The best means of protection comes from use of external awning blinds and shutters, use of which is particularly valuable over south or west-facing roofs.



**8times**

**more effective**

**\*than internal sunscreens**

**Awning blinds - 8 times  
more effective protection**  
against heat gain compared  
with internal blinds

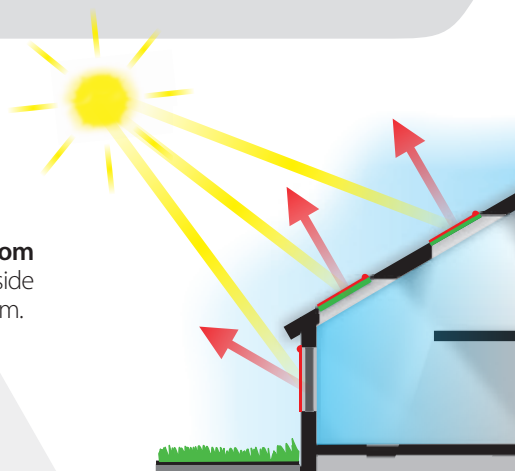
## THE TEMPERATURE OF ROOMS IN THE ROOF IS AFFECTED GREATLY BY THE TYPE OF BLIND USED

*In accordance with DIN 5034-1 standard, rooms should be protected from excessive heat of the sun not by means of internal accessories, but rather external shields (awning blinds, roller shutters).*

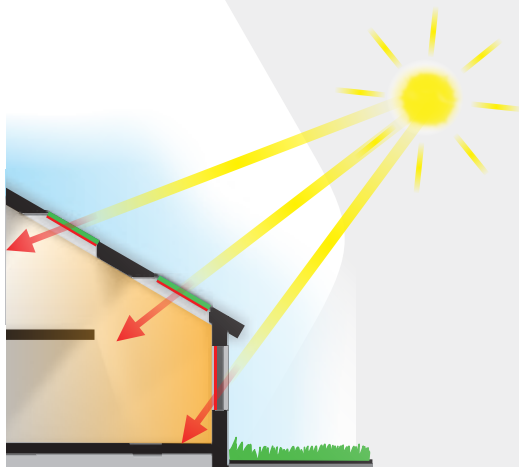
*"...constructional measures are necessary to prevent discomfort caused by the sun, such as excessive heating of the indoor air, especially during warm seasons, or the presence of glare [...]"*

*Suitable movable systems include external Venetian blinds, shutters or awnings." -  
**DIN 5034-1.***

**External accessories are the best protection from high temperatures.** They block UV radiation outside the pane, preventing warm air from entering the room.



**Solar radiation passes through the pane and is absorbed by an internal blind.** It then radiates heat to the interior in the form of long wave infrared radiation, effectively acting as a radiator. Internal accessories should really be used primarily as a means of shading and interior decoration.





# WHY DO WE USE ACCESSORIES FOR VERTICAL AND ROOF WINDOWS?



**8<sup>times</sup>**  
more effective  
\*than internal sunscreens

## EFFECTIVE PROTECTION AGAINST HEAT

Awning blinds constitute the optimal solution as a means of protection against excessive solar heat. The awning blind absorbs solar radiation before it reaches the glazing and emits the heat to the outside of the room, hence it ensures much better protection from tiresome heat on the sunny days. **By offering up to 8 times more effective protection than internal blinds** this can secure the internal temperature drop by as much as 10°C.



## ENERGY-EFFICIENCY

Awning blinds reduce energy consumption of air conditioning units, thus reducing operating costs and cutting CO<sub>2</sub> emissions. The Solar type consumes no electricity as it is powered by a photovoltaic cell. In the same way, it also protects against heat loss in cold temperatures by increasing the heat transfer coefficient up to 16%, contributing to lower heating bills.



## INFLOW OF NATURAL LIGHT

Windows with awning blinds rather than external roller shutters allow a free flow of light to the interior. Blinds allow enough light to pass through so that no additional lighting is required.



## VISIBILITY TO THE OUTSIDE AND PRIVACY

When pulled down, the awning blind ensures visual contact with the external environment. You can easily view the surroundings and yet have privacy from any observers who might be tempted to take a peek inside.



## IMPROVED ERGONOMICS

The unrolled awning blind improves the working environment by maintaining an even level of light and ensuring visual comfort. It protects against the type of intense light reflection which causes problems to those working on laptops or watching TV. The awning blind also protects the eyes from strain by providing even light distribution.



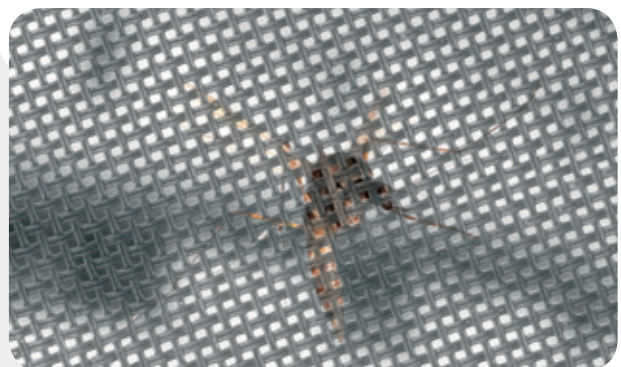
## PROTECTION AGAINST HARMFUL UV RADIATION

Awning blinds reduce the penetration of harmful UV radiation into the room. When pulled down, they prevent the room furnishings from fading or yellowing caused by UV rays.



## PROTECTION AGAINST INSECTS

In addition to providing protection against heat gain, the electric awning blind (Z-Wave, Solar WiFi) and VMZ ZIP version also act as an insect screen. When the window is open, unrolled awning blind does not let in annoying insects.



## QUICK AND EASY INSTALLATION

By using an additional VMX installation set, awning blinds can be installed by one person. This solution saves a lot of time and reduces costs. When purchasing the VMX set, the customer can carry out DIY installation of manual awnings in the full size range, while electric, solar and VMZ ZIP types up to the size of about 1.5 m x 1.5 m.





# AWNING BLINDS AND ROLL-UP AWNINGS

- VMZ FOR VERTICAL WINDOWS
- AMZ FOR ROOF WINDOWS



VMZ, VML awning blinds and VMB roll-up awnings are designed for use with vertical windows. The VMB roll-up awning has a movable, tilting bar which allows access to be gained to the sill when the blind is in use. Intended

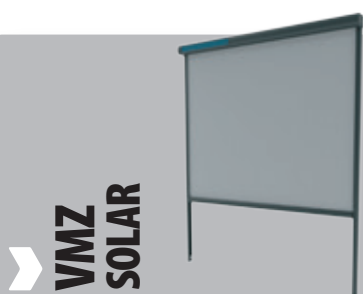
for external installation, these products are suitable for use with PVC, aluminium or timber windows and doors (balcony or terrace). Awning blinds protect against heat absorption while providing even distribution of light and improving

comfort of staying indoors.

AMZ awning blinds are designed for roof windows

**VMZ**

## AWNING BLIND TYPES



- automatic control



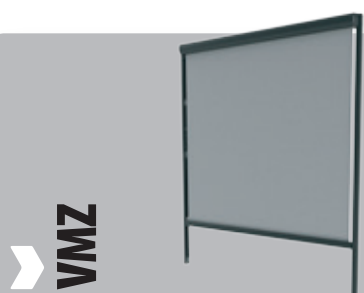
- remote control or wall switch



- control via smartphone app



- control via wall switch



- manual control by hand or via control rod (*purchased separately*)



- manual control



**VML**



## AWNING BLIND TYPES



**VML  
SOLAR**



- automatic control



**VML  
Z-WAVE**



- remote control or wall switch



**VML  
WIFI**



- control via smartphone app



**VML  
ELECTRO 230**

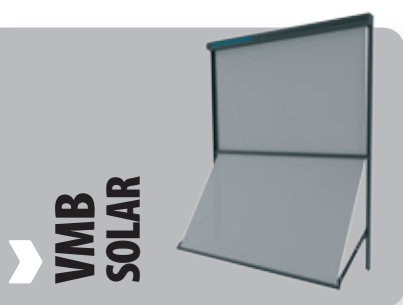


- control via wall switch

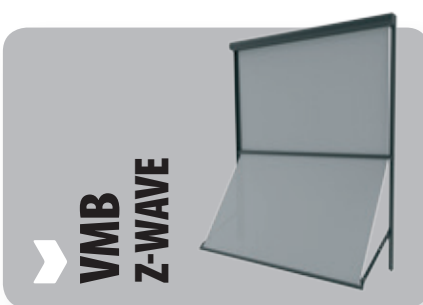


# VMB

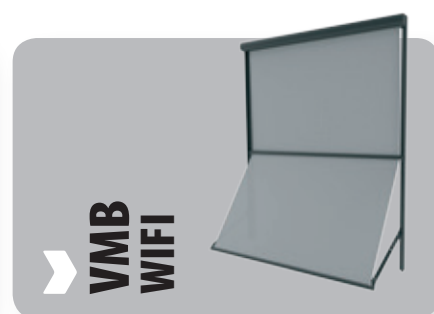
## ROLL-UP AWNING TYPES



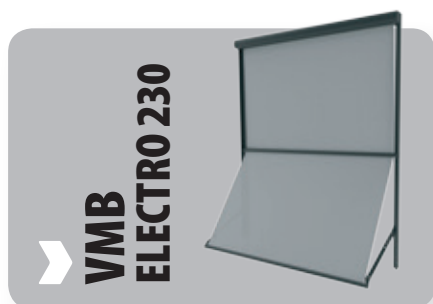
- automatic control



- remote control or wall switch



- control via smartphone app



- control via wall switch

# CONVENIENT CONTROL SYSTEMS



## SOLAR BLINDS

### VMZ Solar, VML Solar and VMB Solar

The Solar type blinds are powered by means of solar battery pack.

- Automatic control. An intelligent system which detects the level of insolation operates the blind. A photovoltaic panel which reacts to solar radiation acts as a sensor to activate the blind. High insolation level triggers the blind to unroll automatically. On cold days you can manually switch the Solar awning blind to winter mode. When the level of insolation is high, the blind rolls up to allow the inflow of warm sun rays, effectively providing a passive means of heating. In the evening, you can manually roll down the blind to protect the room against heat loss.

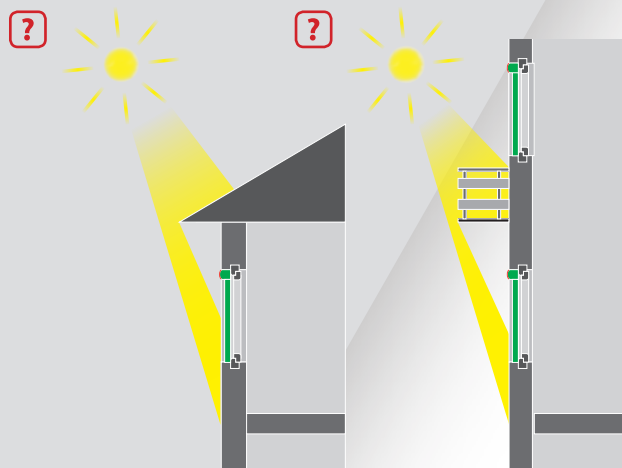


The Solar type awning blind and roll-up awning can be controlled in one of three modes:

- automatic (self-activating rolling up and unrolling dependent on the level of insolation)
- semi-automatic (self-activating unrolling, rolling-up via a remote control)
- operation via supplied remote control

In special cases, the awning can be controlled by means of a service button.

The Solar type awning blinds should be fitted in places with the solar panel positioned to direct sun exposure. It is recommended to install awnings on south, east and west facing roofs. Installation in the north side may result in battery discharge and the inability to operate the blind. To ensure correct operation of the automatic mode, the solar panel must be exposed to direct sunlight throughout the active operation mode.



1. When installing the VMZ Solar, VML Solar and VMB Solar blinds under balconies or canopies it is required to purchase an additional power panel.
2. The blind shaded by a balcony or eaves can be controlled automatically by another blind for vertical or roof windows which is exposed directly to the sun.





## Z-WAVE BLINDS

**VMZ** Z-Wave, **VML** Z-Wave and **VMB** Z-Wave

The Z-Wave type blinds are powered by 15V DC mains supply and operated by means of a remote control or wall switch in a wireless Z-Wave system.



## WIFI BLINDS

**VMZ** WiFi, **VML** WiFi and **VMB** WiFi

The WiFi type blinds are powered by 15V DC mains supply and operated by means of a smartphone using the wBox app in a wireless home WiFi network. It works with Google Assistant to enable voice control and create a virtual Google Home.



## MANUAL BLINDS

**VMZ**

The blind is controlled manually by hand or via control rod (purchased separately).



# FABRIC COLOURS

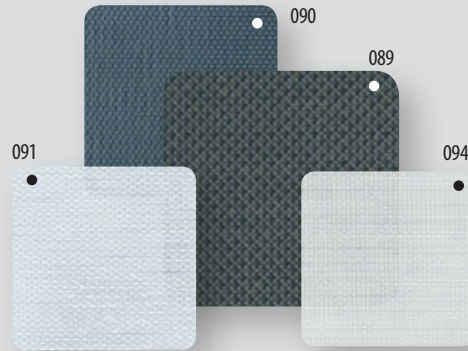


## VMZ, VML, VMB GROUP I



(fabric with **10%** relative open area)

In blinds with the 089 fabric in which width exceeds 2100 mm and height exceeds 1950 mm, the fabric consists of two parts connected in the middle (horizontal welded connection).



Profiles in awning blinds and roll-up awnings are available in four standard colours (white, grey, black and brown) or any RAL colour on request. The customer also has a choice of fabrics featuring different types of relative open area.



## VMZ, VML, VMB GROUP II



(fabric with **1%** relative open area)

In blinds with 1% relative open area in which width exceeds 2400 mm and height exceeds 2350 mm, the fabric consists of two parts connected in the middle (horizontal welded connection).



## VMZ, VML, VMB GROUP III



(fabric with **6%** relative open area)







## VMZ, VML, VMB

GROUP III

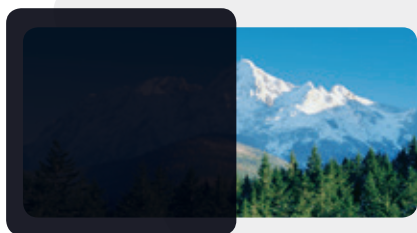


(fabric with **4%** relative open area)



## VMB

GROUP IV



(fabric with **0%** relative open area)



Following temperature changes or after a prolonged period of inactivity, the fabric used in VMZ blinds may gently wave. Once rolled down, the fabric should return to its original state.

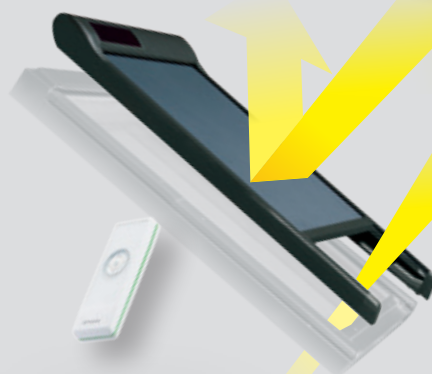
# AWNING BLINDS FOR FAKRO ROOF WINDOWS

## AWNING BLINDS

for FAKRO roof windows absorb solar radiation before it reaches the glazing and emit the heat to the outside of the room and therefore provide the best means of protection against heat absorption. Awning blinds are recommended by FAKRO as they also allow incoming light to pass through them whilst also providing an unrestricted view. Awning blinds improve ergonomic conditions when working, ensuring even distribution of light. They protect against solar radiation and reduce noise from weather when closed.

**8<sup>times</sup>**  
**more effective**  
\*than internal sunscreens

**Awning blinds - 8 times more effective protection**  
against heat gain compared with internal blinds



### AMZ SOLAR

- automatic control

### AMZ Z-WAVE

- remote control or wall switch

### AMZ WIFI

- control via smartphone app

### AMZ ELECTRO 230

- control via wall switch

### AMZ ELECTRO 24

- intended for other control systems

### AMZ NEW LINE

- manual control by hand or via control rod (included)

AMZ

Intelligent system controls the awning blind depending on the insolation. High insolation levels trigger the awning blind to unroll automatically. In cloudy weather, the awning blind rolls back up without any user intervention.

The Solar type awning blinds should be fitted in places with the solar panel positioned to direct sun exposure. It is recommended to install awnings on south, east and west-facing roofs. Installation in the north side may result in battery discharge and the inability to operate the blind.



## AMZ AWNING BLINDS

are made of durable, weather-resistant mesh. They are rolled up on a spring-loaded shaft and inserted into an aluminium cassette mounted above the window. This design ensures ease of operation and provides a wider fabric area to shade the interior more effectively.



## FABRIC COLOURS

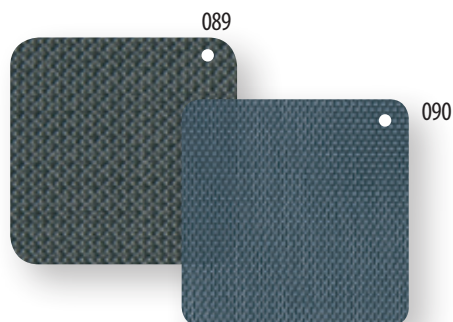
The AMZ awning blind comes in two price groups.



### AMZ GROUP I



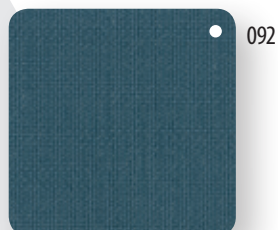
(fabric with **10%** relative open area)



### AMZ GROUP II



(fabric with **1%** relative open area)



# WIRELESS CONTROL

## WIFI CONTROL

µWiFi transmission protocol

- The µWiFi technology is based on radio wireless communication. It is characterized by resistance to interference, high throughput and the ability to connect devices to existing infrastructure networks based on standard WiFi Access Points.
- Operation of the system consists in the fact that a control device, eg smartphone sends a signal to the router which then distributes signals to individual devices. The failure of one device does not affect the operation of other devices, with all functional devices still available.
- Option for connections with all devices directly and using the existing WiFi network (eg private homes, businesses). WiFi roof windows, external WiFi roller shutters or WiFi awning blinds and internal ARF WiFi or ARP WiFi accessories can be connected to the network.
- The WiFi system is easy to install, expand and manage. It can be used at any stage of the building's operation. An additional benefit is the ability to obtain a remote access to devices via a router.
- Installation of the system does not require the use of any control panels or connecting cables between electrical devices, which clearly cuts down costs and installation time and ensures maximum comfort of operating the system.
- All devices in the WiFi system are operated via a smartphone. It is also possible to control them by means of dedicated WiFi button.
- WiFi products work with Google Assistant through the wBox app which allows to create a virtual Google Home and voice control of FAKRO products.



## Z-WAVE CONTROL

Z-Wave transmission protocol

- A system solution designed for intelligent buildings.
- The Z-Wave is a wireless radio protocol used for communication of home electrical appliances. All electrical devices that have the Z-Wave module can be connected to the network such as Z-Wave windows, standard windows fitted with actuators with the Z-Wave module, external ARZ Z-Wave roller shutters, AMZ Z-Wave awning blinds as well as internal accessories, including AJP Z-Wave, ARF Z-Wave and ARP Z-Wave.
- In addition, windows can be equipped with rain or window sensors and integrated with other home electrical appliances.
- Installation of the system does not require the use of any communication cables between electrical devices, which clearly cuts down costs and installation time.
- The Z-Wave system is easy to install, expand and manage. It can be used at any stage of the building's operation. It allows the user to create a wireless network and control products equipped with the Z-Wave module using a wireless keyboard, remote control, mobile phone or the Internet.
- FAKRO products equipped with the Z-Wave module work in conjunction with FIBARO devices. Using the FIBARO Home Center 2 Control Unit the user can create a smart home that can be controlled by means of a smartphone app from any place in the world within the Internet's reach.





## ELECTRICAL CONTROL ELEMENTS

### Z-WAVE CONTROL ELEMENTS

#### ZRW7



- A multi-channel wall keypad that allows a remote control of Z-Wave devices, including VMZ Z-Wave awning blind. The keypad can support up to 12 devices in each of 7 groups.

#### ZRH12



- An advanced radio controller that allows configuration and operation of a single or group of all devices in the Z-Wave network by means of an ergonomic joystick, including VMZ Z-Wave awning blind.

#### ZRS24



- A multi-functional advanced Z-Wave remote control that allows configuration and operation of all devices in the Z-Wave network, including VMZ Z-Wave awning blind.

#### ZWL1



- A Z-Wave radio controller used for the remote control of a single device or a group of Z-Wave devices.

#### ZWL2



- A Z-Wave radio controller used for the remote control of two Z-Wave devices independently or two groups of Z-Wave devices.

#### ZWL3



- A Z-Wave radio controller used for the remote control of three Z-Wave devices independently or three groups of Z-Wave devices.

### ELECTRO 230V CONTROL ELEMENTS

#### ZKP



- A single flush mounted wall switch with backup enables the control of a single device such as the AMZ Electro 230, VMZ Electro 230.

#### ZKN



- A single surface mounted wall switch with backup enables the control of a single device such as the AMZ Electro 230, VMZ Electro 230.

#### DZU



- A module designed for parallel connection of multiple drives, i.e. VMZ Electro 230 and their control with one central switch (ZKP/ZKN). Also intended to control one drive, i.e. VMZ Electro 230 with multiple switches (ZKP/ZKN).

## ELECTRIC CONTROL ELEMENTS 15V

#### ZZ60



- Ventilated switching the 15V DC power supply to power Z-Wave devices. Output power 60W. To be installed on DIN TS35 rail. It provides power for up to two external electrical accessories.

#### Z60h

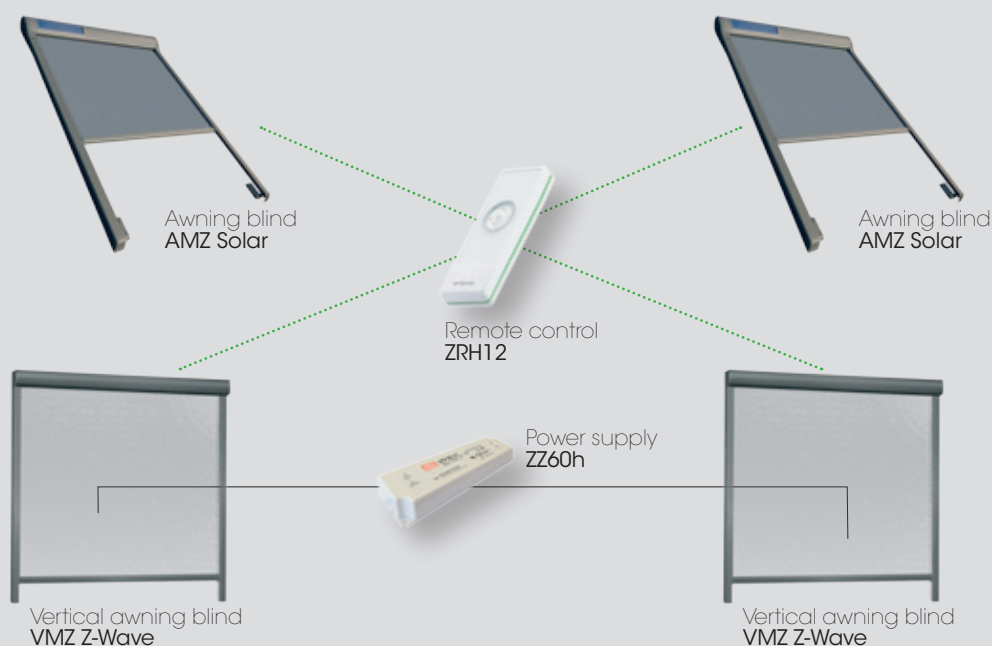


- Hermetic switching the 15V DC power supply to power Z-Wave devices. Output power 60W. It provides power for up to two external electrical accessories.

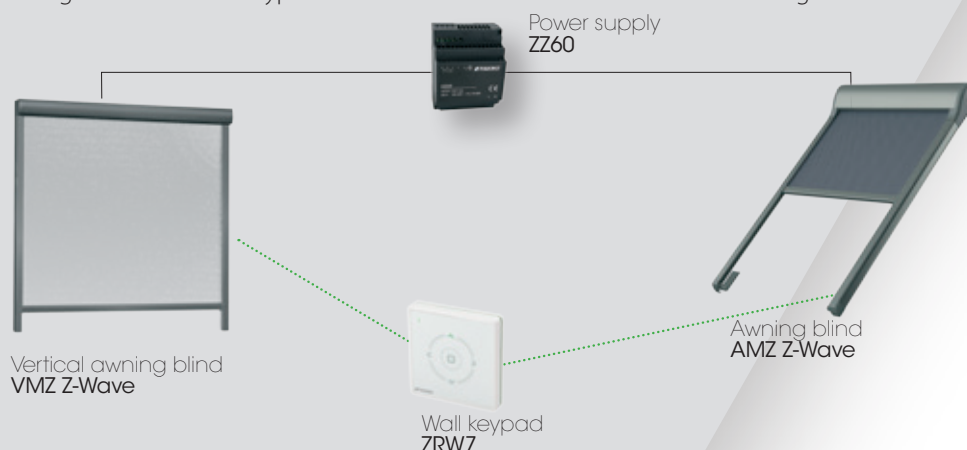
## SAMPLE CONFIGURATIONS

AMZ Solar awning blinds for roof windows are equipped with a battery pack recharged by a photovoltaic panel. VMZ Z-Wave awning blinds to be used with vertical windows are connected to the ZZ60h hermetic power supply.

A 12-channel ZRH12 remote control operates AMZ Solar and VMZ Z-Wave awning blinds individually and in groups based on the Z-Wave system.



AMZ Z-Wave and VMZ Z-Wave awning blinds are connected to the ZZ60 power supply installed in the main switchboard of the building. The ZRW7 wall keypad controls AMZ Z-Wave and VMZ Z-Wave awning blinds.



## INSTALLATION

Connecting a set of Solar type awning blinds (both roof and vertical) requires no more than for products to be configured and assigned to controllers.

Connecting a set of Z-Wave type awning blinds (both roof and vertical) consists in connecting products to the 15V ZZ60 or ZZ60h power supply. Next steps involve configuring products and assigning them to a certain number of controllers. Controllers are mounted to the wall or other flat surface by means of screws included in the mounting kit or by double-sided adhesive tape. The ZRH12, ZRS24, ZRW7 controllers can also be put in another freely chosen place as they are powered by a 3V DC battery.



# INSECT SCREEN FOR VERTICAL WINDOWS

## AMR INSECT SCREEN

protects the room against mosquitoes and other insects with the window left ajar. Aluminium frame, mesh and seal provide a tight connection to the window frame, therefore one can be sure that no insects will get inside. The AMR insect screen for vertical windows is available in sizes up to 1500 mm in width and 2000 mm in height.



- **Comfort and safety**  
Protection of the room against mosquitoes and other insects with the window left ajar.
- **Free air flow into the room**  
The fabric used in the insect screen mesh features 1.6x1.8 mm side openings to secure free air flow into the room.
- **Air filtration**  
Prevention of larger dirt from getting inside, especially during flowering of trees, grasses and flowers.
- **Robust structure and aesthetics**  
The insect screen frame is made of durable aluminium profiles connected by means of internal corners, thanks to which the screen has a durable connection and aesthetic finish. The mesh is made of PVC-coated fibreglass, which makes it resistant to harmful weather conditions. Hooks that ensure stability of the frame are made of stainless steel.
- **Easy installation**  
The product is assembled and ready to be fixed. The screen with the aluminium frame comes with a convenient holder for adjusting it to the window. The second step is to twist the hooks mounted on the aluminium profiles for a stable and durable connection. Maximum insect screen size is 1500 mm in width and 2000 mm in height.
- **Wide range of colours**  
The frame profiles are powder coated, white as standard. Any colour from the RAL Classic palette is available on request.



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FAKRO reserves the right to change specifications at any time.

