



# AWNING BLINDS

FOR VERTICAL AND ROOF WINDOWS

2016

**25**  
YEARS  
OF INNOVATION

 **FAKRO®**

# TAKE A REST IN THE SHADE

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Who does not rejoice at the arrival of long-anticipated sunny days? But the sun, so pleasant a companion when it comes to basking on the beach, can be also a real nuisance. On scorching hot days, solar radiation floods the interior which, inevitably, leads to a significant increase not only in the temperature in the loft but the whole building as well. The best protection against the bothersome heat is provided by external accessories (awning blinds, shutters). The use of such external accessories is therefore, of particular importance in predominately southern or westerly orientated rooms.



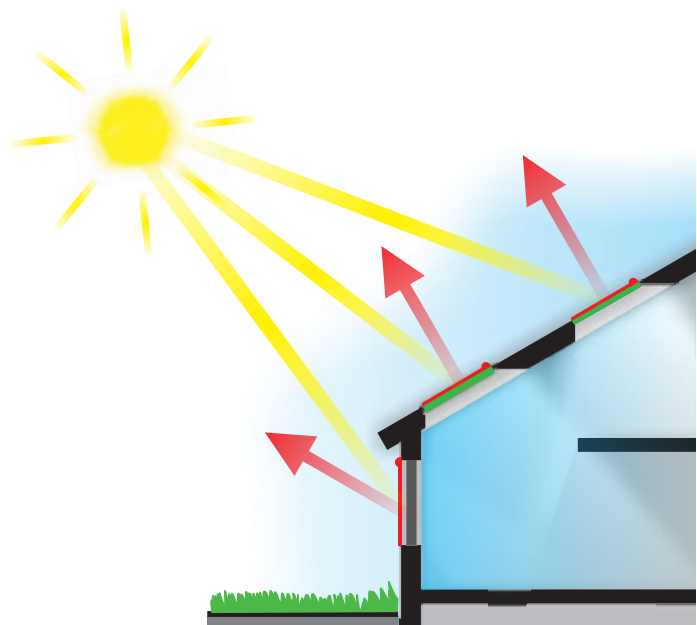
The temperature in the loft room on a hot day depends on the type of protective accessories used.



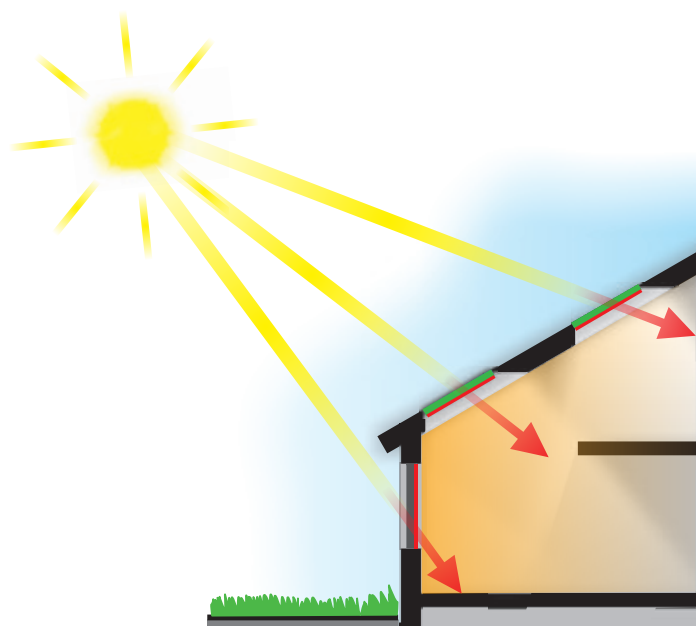
**Awning blinds – 8 times more effective**

protection against heat gain in comparison with internal shading devices

**External accessories protect against** the heat of the sun. They absorb solar radiation even before it reaches the window and emit it outside, thus preventing an increase of temperature in the room.



**Thermal radiation which passes through the glass is absorbed** by an internal screen. Then, it turns into the long wave infrared radiation (heat) which is not transmitted through the window glass to the outside - the screen radiates heat into the room acting as a heater. This leads to an undesirable heat gain in the room, especially from the south on sunny, hot days. Internal accessories are used predominantly to control incoming light and decorate the interior.



# AWNING BLINDS

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## FOR VERTICAL WINDOWS

- VMZ, VMZ Z-Wave, VMZ Solar, VMB Z-Wave, VMB Solar

## FOR ROOF WINDOWS

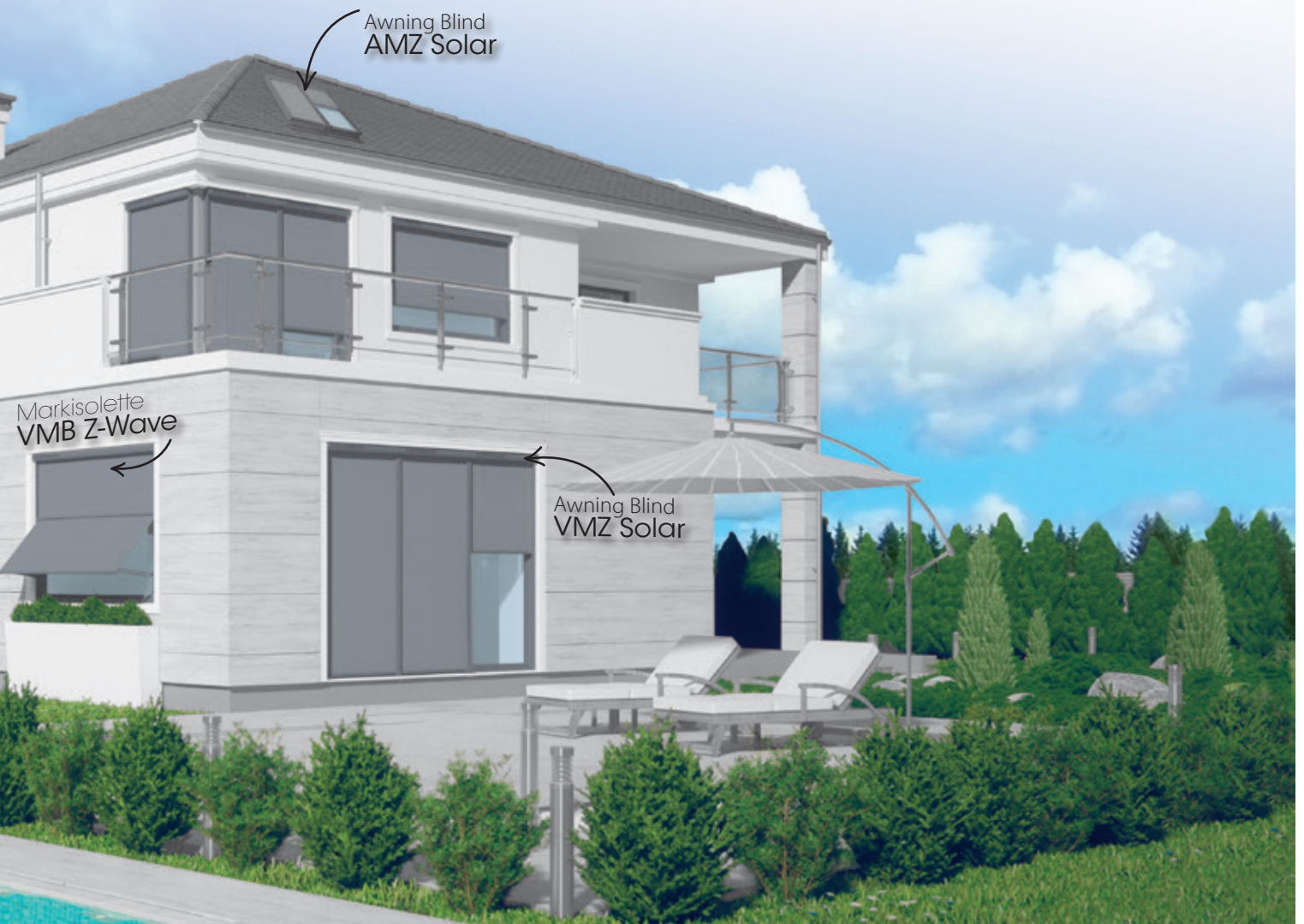
- AMZ, AMZ Z-Wave, AMZ Solar



- VMZ Awning Blinds and VMB Markisolette have been designed specifically for vertical windows. The VMB Markisolette has a movable, tilting bar. This feature allows access to the external windowsill after unrolling the blind. Both these products are mounted externally onto

windows and doors (terrace or balcony) and are made of PVC, aluminium or wood. The awning blinds enable protection of the interior against overheating and provide uniform distribution of light intensity, hence improving the indoor occupant comfort.

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- AMZ Awning Blinds are intended for roof windows.



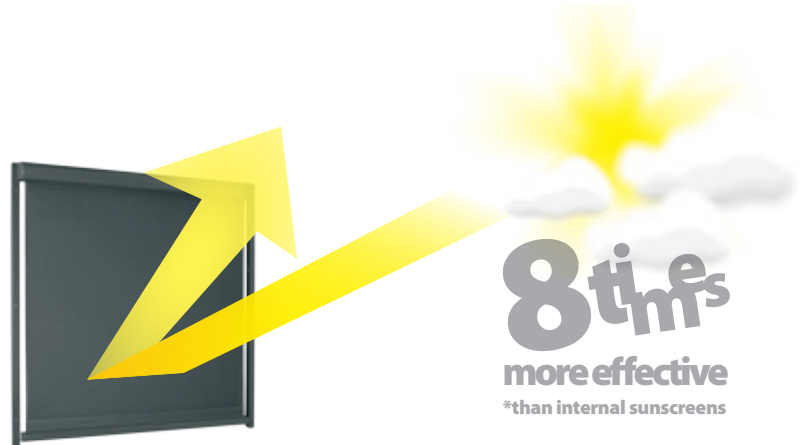


# WHY DO WE USE ACCESSORIES FOR VERTICAL AND ROOF WINDOWS?

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## EFFECTIVE PROTECTION AGAINST HEAT

Awning blinds constitute the optimal solution as a means of protection against excessive solar heat. They absorb solar radiation before it reaches the glass, emitting heat outside, thus on sunny days, they provide superior protection against bothersome temperatures inside the room. **The awning blind offers up to 8 times more effective protection in comparison with internal solar protection devices**, which in practice results in a temperature drop in the interior of as much as 10°C.

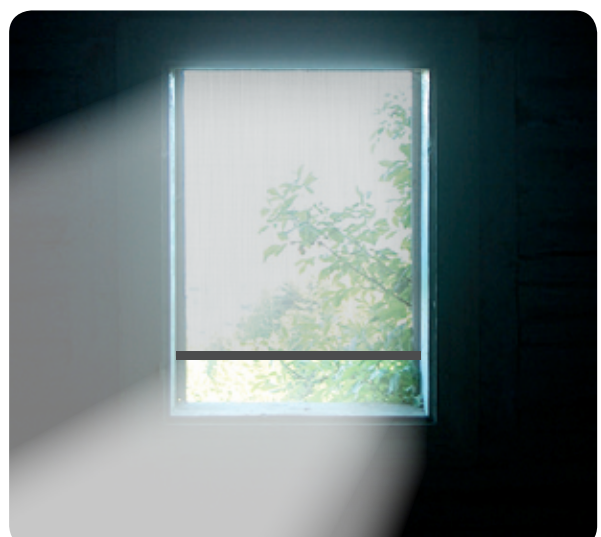


## ENERGY EFFICIENCY

The VMZ Awning Blind reduces energy consumption of air conditioning units, hence lowering their operating cost and cutting CO<sub>2</sub> emissions to the environment. The Solar Awning Blind does not consume any electricity from the grid as it is powered by a battery recharged by a solar panel. Moreover, unrolled awning blind protects the room against heat loss on cold nights by increasing U<sub>w</sub> heat transfer coefficient up to 16%. This ensures lower heating bills.

## INFLOW OF NATURAL LIGHT

Windows covered with the awning blinds, as opposed to eternal roller shutters, **allow the influx of natural light**. The awning blinds allow the passage of sufficient light so as not to necessitate the use of any additional light sources.



## 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 ergonomics in the workplace**. It allows for even distribution of light intensity, providing visual comfort to our eyes and protects them from the harmful effects of glare or reflections, which is especially important when working on the computer. In the room with the awning blinds pulled down the eyes do not get fatigued as much as in the room without such facility, where the light intensity distribution tends to be very uneven.



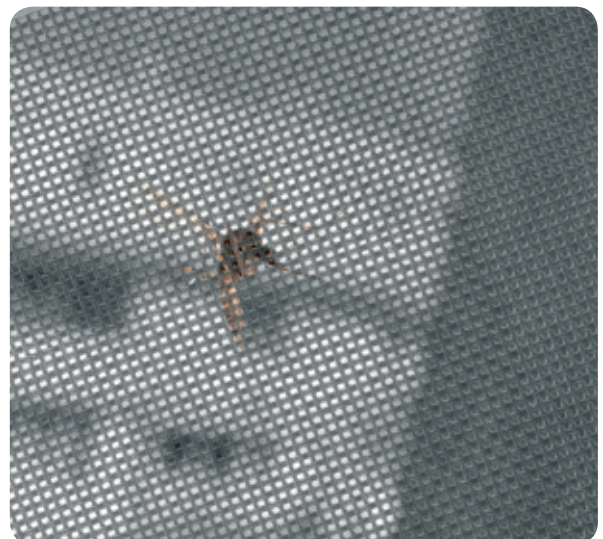
## PROTECTION AGAINST HARMFUL UV RADIATION

The awning blind limits the penetration of harmful UV radiation to the interior. When extended over a window, it helps to protect the objects and materials inside from harmful UV rays, which causes them to discolour.



## PROTECTION AGAINST INSECTS

The electric awning blind covering a vertical window, in addition to protection against excessive heat gain inside the room, acts as an **insect screen**. When the window is open, the awning blind prevents insects from entering the interior.



# AWNING BLINDS FOR VERTICAL WINDOWS

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## VMZ AWNING BLIND



**VMZ SOLAR**  
Awning Blind

- automatic control



**VMZ Z-Wave**  
Awning Blind

- remote control  
or wall switch



**VMZ**  
Awning Blind

- manual control by hand  
or via control rod (not included)

Electric awning blinds are also available in the following versions:

- VMZ Electro 230 – connected to the mains and operated by a wall switch
- VMZ Electro 12 – connected to the mains by means of 15V power supply and operated by a wall switch
- VMZ Electro Solar – powered by solar panels and operated by a wall switch
- VMZ Bluetooth – preparation in progress

Awning blinds available to special order.



## VMB MARKISOLETTE



**VMB Solar**  
Markisolette

- automatic control



**VMB Z-Wave**  
Markisolette

- remote control  
or wall switch

Electric awning blinds are also available in the following versions:

- VMB Electro 230 – connected to the mains and operated by a wall switch
- VMB Electro 12 – connected to the mains by means of 15V power supply and operated by a wall switch
- VMB Electro Solar – powered by solar panels and operated by a wall switch
- VMB Bluetooth – preparation in progress

Awning blinds available to special order.

# CONVENIENT CONTROL

The **VMZ Awning Blind** is available in three control variants, and the **VMB** in two variants:

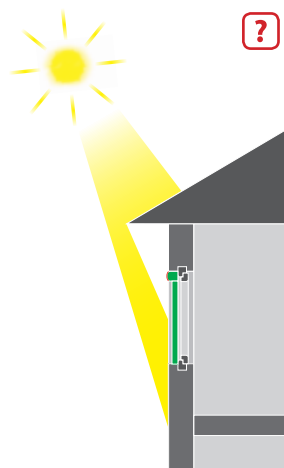
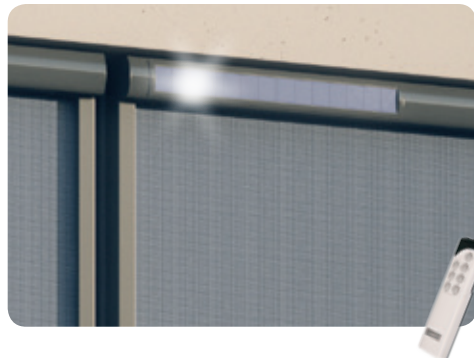
## VMZ Solar i VMB Solar

- Automatic control. The intelligent system controls the awning blind depending on the level of insolation. The function of a sensor is fulfilled by the solar panel which reacts directly to solar radiation. Under high insolation conditions, the awning blind is unrolled automatically. When permanent cloud cover appears, the awning blind rolls back up. The Solar type awning blind is powered by a 12VDC battery pack built into the cassette. The batteries are recharged by the solar panel. Rated current drawn by the motor is 1.4A.

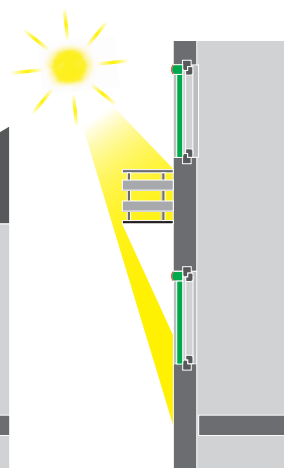
The Solar Awning Blind is equipped with a sensor for measuring the intensity of light and can be controlled in one of three modes:

- automatic (self-activating lowering and raising depending on the level of insolation),
- semi-automatic (self activating lowering, rising with the remote control),
- operation via the supplied remote control.

In special cases, the awning blind can be controlled with the service button.



1. When installing the VMZ Solar awning blinds under balconies or canopies, it is necessary to purchase an additional power panel or solar sensor.



2. The awning blind shaded by a balcony or eaves can be controlled automatically by another awning blind for vertical or roof windows which is exposed directly to the sun.

## VMZ Z-Wave i VMB Z-Wave

- Operates with the remote control or wall switch in the wireless Z-Wave system.



## VMZ

- Operated manually or by means of a control rod (may be purchased separately).



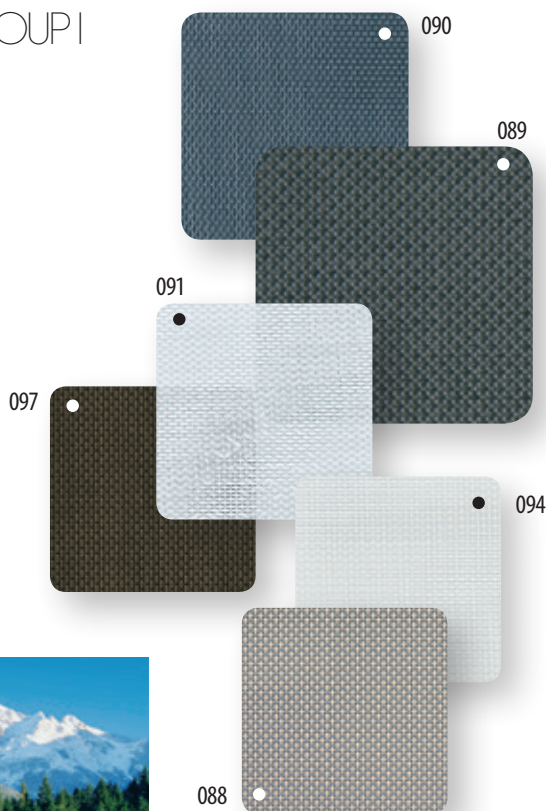


# AVAILABLE COLOURS AND FABRICS

The profiles of the awning blinds and VMB Markisolette are available in four colours (white, grey, black and brown). On request, they are available in any RAL colour. In addition to that, there are eight types of fabrics to choose: six with 10% relative open area and two with 1% open area.

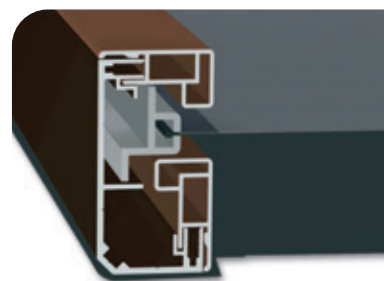
## VMZ, VMB GROUP I

Available in six colours  
(fabric with **10%**  
relative open area).



## STRUCTURE OF THE ELECTRIC AWNING BLIND FOR VERTICAL WINDOWS

The VMZ Awning Blind is made of durable, weather-resistant fibre glass fabric coated with PVC. The fabric is rolled up on the motor-driven shaft and inserted into the cassette made of aluminium profiles fitted to the window or external lining recess. The edges of the fabric are reinforced with a special sliding tape, which maintains proper fabric tension between the guides and prevents it from detaching. Such a fabric-to-profile connection greatly improves resistance to wind and forms an impenetrable barrier for insects. This solution is capable of withstanding gusts of wind up to 120km/h and lateral winds of up to 220km/h.

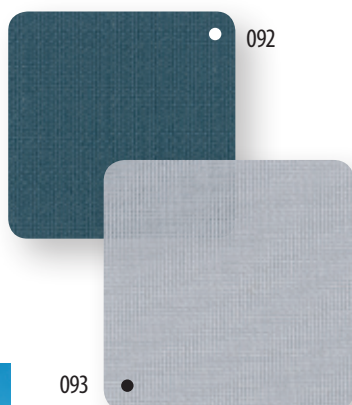


An additional advantage of this awning blind is the possibility of utilizing a full blackout fabric. In the electrically operated VMZ Solar Awning Blind, the solar panel with the light intensity sensor has been integrated into the cassette.



## VMZ, VMB GROUP II

Available in two colours  
(fabric with **1%**  
relative open area).



# AWNING BLINDS FOR FAKRO ROOF WINDOWS

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## AMZAWNING BLINDS

AMZ Awning Blinds are made of durable, weather resistant mesh. It is rolled up on the spring-loaded shaft and inserted into the aluminum cassette mounted above the window. This design allows for easy operation of the blind and enables the use of wider fabric, which shades the interior more effectively.



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

**Awning blinds – 8 times  
more effective protection**  
against heat gain than  
internal roller blinds





Awning blinds are recommended by FAKRO as the optimal protection against unwanted heat gain for the interior. They absorb solar radiation before it reaches the glass and emit heat to the outside, thus on sunny days the interior is very well protected from an increase of temperature. At the same time, they allow an influx of natural light, ensuring a uniform distribution of light and view to the external environment. In addition, they offer protection against UV rays and reduce the sound of falling raindrops.

Awning Blind  
AMZ Solar



- automatic control

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

Awning Blind  
AMZ Z-Wave



- remote control or wall switch

Awning Blind  
AMZ New Line



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

Electric awning blinds are also available in the following versions:

- AMZ Electro 230 – connected to the mains and operated by a wall switch
- AMZ Electro 12 – connected to the mains by means of 15V power supply and operated by a wall switch
- AMZ Electro Solar – powered by solar panels and operated by a wall switch
- AMZ Bluetooth – preparation in progress

Awning blinds available to special order.

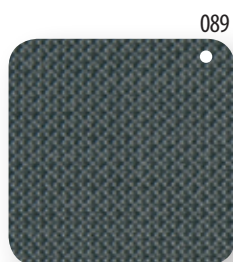
# AVAILABLE COLOURS AND FABRICS

The AMZ Awning Blinds come in three price groups, whereas the AMZ Z-Wave and AMZ Solar are available in two price groups.

## AMZ GROUP I

AMZ ZWave GROUP I

AMZ Solar GROUP I

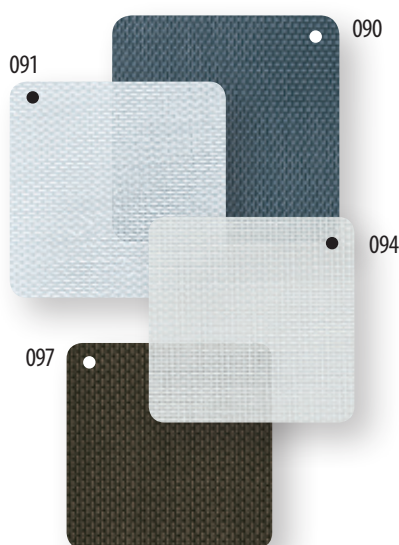


## AMZ GROUP II

AMZ ZWave GROUP II

AMZ Solar GRUPA II

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

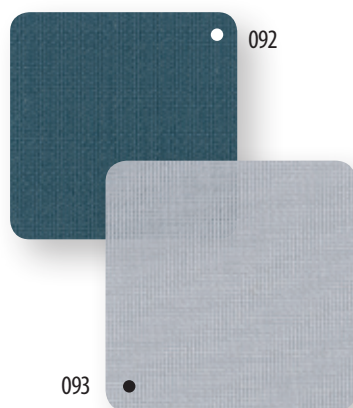


## AMZ GRUPA III

AMZ ZWave GROUP II

AMZ Solar GRUPA II

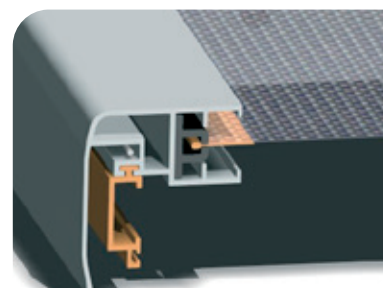
(fabric with **1%** relative open area).



Awning blinds in dark colours absorb heat better compared with white awning blinds. Looking out the window covered with the awning blind in dark colour does not produce dazzling effect as it is the case with awning blinds in white. In addition, awning blinds in dark colours are more resistant to dirt.

## STRUCTURE OF ELECTRIC AWNING BLIND

The AMZ Awning Blind is made of durable, weather-resistant fibre glass fabric coated with PVC. The fabric is rolled up on the motor-driven shaft and inserted into the cassette made of aluminium profiles mounted above the window. The edges of the fabric are reinforced with a special sliding tape which maintains proper fabric tension between the guides and prevents it from detaching. Such fabric-to-profile connection greatly improves resistance to wind. This solution is capable of withstanding gusts of wind up to 120 km/h and lateral winds of up to 220 km/h.



The awning blind can use a full blackout fabric and have the seals inserted into the slots already prepared in the aluminum profiles, which makes it possible to fully black out the window.



AMZ Solar Electric Awning Blind  
- solar panel with light intensity sensor integrated into the cassette enables operation of the awning blind in the automatic mode.

The AMZ Electric Awning Blind is intended for the majority of roof windows, be that of centre pivot, preSelect top hung and pivot or proSky high pivot structure. It can be used with both wooden and aluminium clad-plastic windows retaining its full functionality.



# AWNING BLINDS FOR ROOF WINDOWS

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FAKRO offer also awning blinds intended for roof windows of other manufacturers. To order such awning blinds, it is necessary to provide the following: name of manufacturer, name of window, size and year of production.

These awning blinds are available in the manual and solar versions.

The aluminium structure of the awning blind is in grey-brown colour - RAL 7022. On request, it can come in any other RAL colour.



The awning blinds for roof windows of other manufacturers are priced similarly to the awning blinds for FAKRO windows. When pricing awning blinds outside the FAKRO range, take the price of the closest, larger size (e.g. accept the price for 70x100 as for 78x118).

In the case of Brass windows, the awning blinds are installed from the outside. Operating the manual blind is possible after opening the window.

# WIRELESS CONTROL Z-WAVE

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For roof and vertical windows installed in hard-to-reach spots FAKRO offers electric accessories as standard equipped with the Z-Wave system.

The Z-Wave is a wireless radio protocol used for communication between electrical household devices. It is used to connect into a single network electric equipment such as lighting, thermostats, alarms, computers, telephones, air conditioning as well as electric windows and blinds. All electrical appliances equipped with the Z-Wave system module can be connected to the network.



# Z-WAVE ELECTRIC CONTROL ELEMENTS

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## ZWK 10

The **ZWK 10** wall keypad used for the remote control of many products separately or simultaneously: the Z-Wave window, ZWS230 or ZWS12 actuator for opening the window, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind, VMB Z-Wave roll-up awning.



## ZWP 10

The **ZWP 10** remote control used to control many products separately or simultaneously: the Z-Wave window, ZWS230 or ZWS12 actuator for opening the window, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind, VMB Z-Wave roll-up awning.



## ZWG 1

Modern **ZWG 1** touchscreen made of toughened glass is used to control one or many products simultaneously: the Z-Wave window, ZWS230 or ZWS12 actuator for opening the window, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind, VMB Z-Wave roll-up awning.



## ZWG 3

Modern **ZWG 3** touchscreen made of toughened glass is used to control many products separately or simultaneously: the Z-Wave window, ZWS230 or ZWS12 actuator for opening the window, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind, VMB Z-Wave roll-up awning.



## ZZ60

Ventilated 15VDC switched-mode power supply is used to power the Z-Wave devices. Output power – 60W. Suitable for mounting on the rail DIN TS35. It provides power for up to two external electric accessories.



## ZZ60h

Hermetic 15VDC switched-mode power supply is used to power the Z-Wave devices. Output power – 60W. Suitable for mounting on the rail DIN TS35. It provides power for up to two external electric accessories.



## ELECTRIC CONTROL ELEMENTS 230V

### 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.



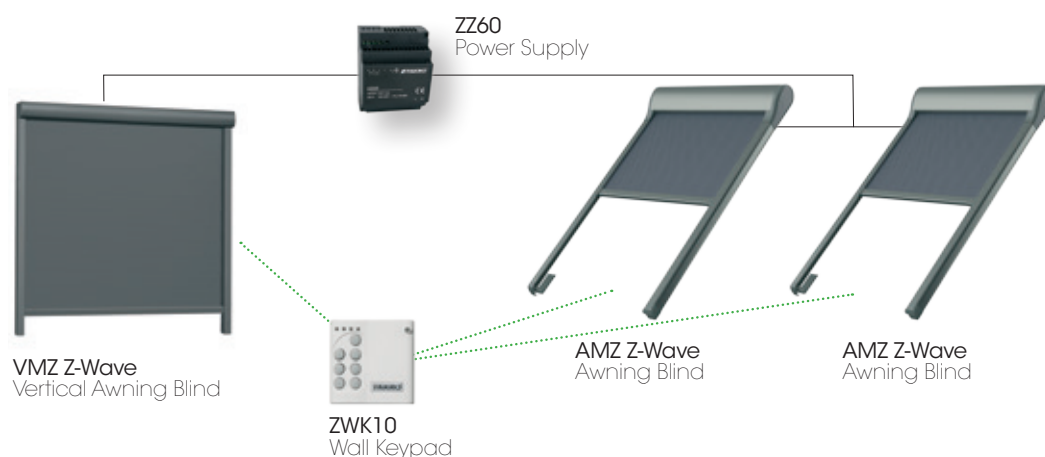
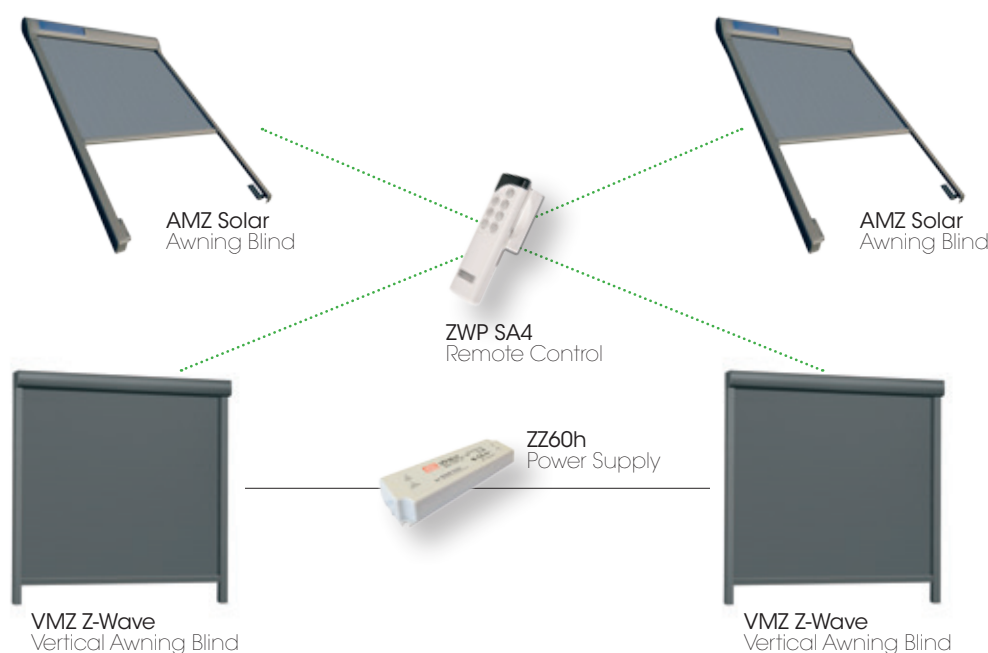
### ZKN

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



# SAMPLE CONFIGURATION

The **Z-Wave system** enables the control of many receivers (e.g. Z-Wave windows, ZWS12 or ZWS230 actuators, internal and external shutters, external blinds) by means of a multi-channel controller (ZWP10 remote control, ZWK10 wall keypad or ZWG3). Using this solution, you can simultaneously control several receivers (e.g. run 4 awning blinds) or control only one chosen receiver (e.g. the AMZ Z-Wave awning blind). One ZWP10 remote control or ZWK10 wall keypad can operate up to 10 receivers (group of receivers) separately or up to 231 receivers simultaneously. The AMZ Solar and VMZ Solar awning blinds are factory equipped with the ZWP SA4 remote control which enables the control of 4 awning blinds separately and (or) simultaneously.



## INSTALLATION

Connecting a set of Solar type awning blinds (both roof and vertical) requires only configuring products and assigning them to a certain number of controllers.

Connecting a set of the 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 (e.g. ZWK10, ZWG3) 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 ZWK10, ZWG3 or ZWG1 controllers can also be put in another freely chosen place as they are powered by a 3V DC battery.

# THE TENDER FORMS

At the builders' merchants there are available forms containing all the necessary information for selection and assembly of the awning blinds. Additional information for available palette of colours helps to match the awning blinds to the building appearance.

## REQUEST FOR QUOTATION FORM



### AWNING BLINDS for vertical windows VMZ Z-Wave, VMZ SOLAR

I submit form to request for quotation and pricing of products

I submit form to order products

Data of person submitting request for quotation:

Name & Surname / Company .....  
Address: .....  
Phone: ..... E-mail: .....

Data for the invoice (in case of ordering the product)

Name & Surname / Company .....  
Address: .....  
Tax Identification Number: .....

Data for the product delivery (if different than above)

Name & Surname / Company .....  
Address: .....  
Phone: ..... E-mail: .....

I attach to the form:

Attachment 1 Measurement card: AWNING BLINDS for vertical

Attachment 2 Measurement card: AWNING BLINDS for balcon

Pursuant to article 24, paragraph 1 of the Act of 29 August 1997 on personal data protection (as amended), I hereby inform that:

- 1) Administrator of your personal data is the company FAKRO sp. z o.o. with headquarters based in Nowy Sącz (33-100) ul. ...
- 2) Your personal data will be processed for the purposes of placing an order or submitting a request for quotation (subcontractors) to perform these services. Subcontractors will have access only to the data necessary for the performance of the services.
- 3) You have the right to access your data, correct them and request their removal.
- 4) Providing personal data is voluntary with the reservation that submitting them is necessary to conclude the contract.

I hereby agree to processing my personal data by FAKRO SP. Z O.O. with headquarters based in Nowy Sącz (33-100) ul. ... for the purposes of marketing purposes.

YES NO

I hereby agree to receiving from FAKRO SP. Z O.O. with headquarters based in Nowy Sącz (33-100) ul. ... Group marketing information by means of electronic communication.

YES NO

Note:

Form with attachments should be sent by E-mail to: [info@fakro.pl](mailto:info@fakro.pl) or by post to: FAKRO AWNING BLINDS or contact with our Technical Consultant in the nearest FAKRO branch. The list of Technical Consultants and points of sale of FAKRO products is available on the website [www.fakro.pl](http://www.fakro.pl).

page 1

## Attachment 1



### Measurement card: AWNING BLINDS FOR VERTICAL WINDOWS (VMZ Z-WAVE, VMZ SOLAR)

#### DIMENSIONS OF VERTICAL WINDOWS

Dimensions	Window 1	Window 2	Window 3	Window 4	Description	Notes
A (mm)					Width of the lining recess	Minimum A width for Z-Wave version = 480 mm Minimum A width for Solar version = 645 mm Maximum width A max = 4000 mm
B (mm)					Height of the lining recess	Minimum height: B min = 500 mm For 480 mm ≤ A ≤ 3000 mm B max = 3500 mm For 480 mm ≤ A ≤ 4000 mm B max = 2700 mm
C (mm)					Width of the visible frame element in the side section	C1 > 22 mm and C2 > 22 mm installation to the frame C1 < 22 mm and C2 < 22 mm installation only to the lining* * runners visible from the inside after window opening (for details see page 4)
C (mm)						

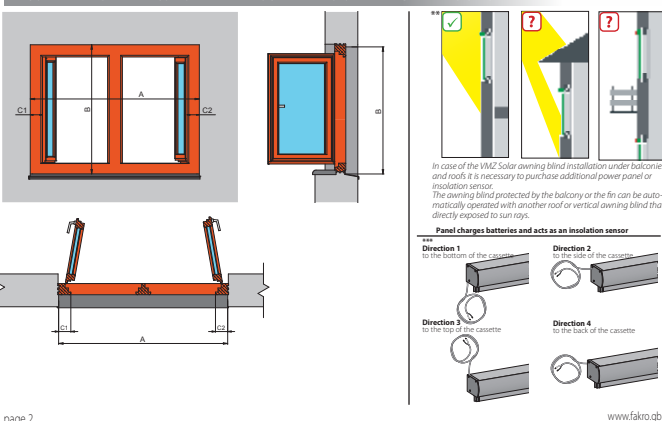
#### PARAMETERS OF THE AWNING BLIND

(information on page 5)

Type of the awning blind					Method of power supply	VMZ Z-Wave – it is necessary to purchase power supply and control device ( <a href="http://www.fakro.com">www.fakro.com</a> ) VMZ Solar** – remote control and battery included
Type of fabric					Type of fabric	Fabric with 10% open area: 088, 089, 090, 091, 094 Fabric with 1% open area: 092, 093 (page 5)
Colour of profiles					Colour of runners and box	Standard colours: RAL 7022, RAL 8003, RAL 9005, RAL 9010 It is possible to make profiles in any colour. Please provide colour from RAL spectrum (page 5)
Wire ***					Wire exit direction	The choice of direction: 1, 2, 3, 4 (description on the picture) *** only for VMZ Z-Wave
Cassette 85mm*						* Available in the awning blinds with the following sizes: 480-1200 x 500-2400mm
Cassette 100mm**						** Available in any size

NOTE: For proper dimensioning of windows, selection and installation of awning blinds it is necessary to familiarize with installation special conditions before placing an order (see page 4)

#### ILLUSTRATIVE DRAWINGS TO TAKE MEASUREMENTS OF VERTICAL WINDOWS



page 2

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[www.fakro.com](http://www.fakro.com)

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