FAKRO®

AWNING BLINDS

FOR VERTICAL AND ROOF WINDOWS

2019

TAKE A REST IN THE SHADE

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, particularly through roof windows. 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.

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

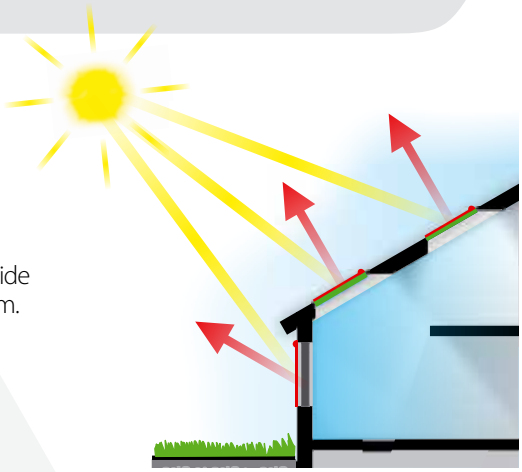
8 times
more effective
*than internal sunscreens

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

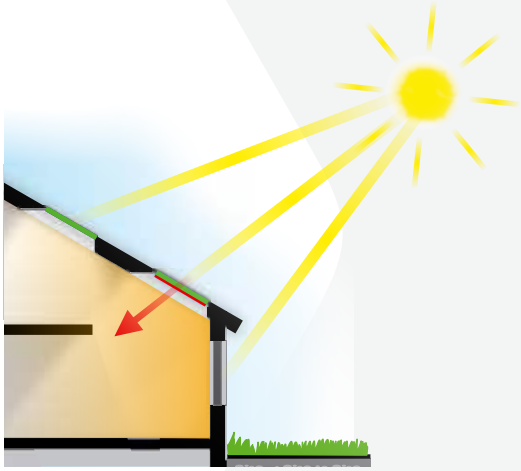
In accordance with DIN 5034-1 standard, rooms should be protected from excessive heat of the sun not by means of internal accessories, but rather external shields (awning blinds, roller shutters).

"...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?

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 reduce 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 CO2 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

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 INSECTS

In addition to providing protection against heat gain, the electric awning blind 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

FOR VERTICAL WINDOWS

VMZ, VMZ ZIP, VMZ Z-WAVE, VMZ SOLAR, VML Z-WAVE, VML SOLAR, VMB Z-WAVE, VMB SOLAR

FOR ROOF WINDOWS

AMZ, AMZ Z-WAVE, AMZ SOLAR

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

VMZ AWNING BLIND

VMZ SOLAR

- automatlc control

VMZ Z-WAVE

- remote control or wall switch

VMZ

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

VMZ ZIP

- manual control

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 Wifi - connected to the mains by means of 15V power supply and operated using a smartphone app.

Awning blinds available to special order. Get more information at: www.fakro.com

VML

VML AWNING BLIND

VML SOLAR

- automatlc control

VML Z-WAVE

- remote control or wall switch

Electric awning blinds are also available in the following versions:

- VML Electro 230 - connected to the mains and operated by a wall switch
- VML Electro 12 - connected to the mains by means of 15V power supply and operated by a wall switch
- VML Electro Solar - powered by solar panels and operated by a wall switch
- VML Wifi - connected to the mains by means of 15V power supply and operated using a smartphone app.

Awning blinds available to special order. Get more information at: www.fakro.com

VMB

VMB ROLL-UP AWNING

VMB SOLAR

- automatlc control

VMB Z-WAVE

- remote control or wall switch

Electric roll-up awnings 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 Wifi - connected to the mains by means of 15V power supply and operated using a smartphone app.

Awning blinds available to special order. Get more information at: www.fakro.com

CONVENIENT CONTROL

The **VMZ awning blind** is available in three, while the **VML** awning blind and **VMB** roll-up awning come in two control modes:

VMZ Solar, **VML** Solar and **VMB** Solar

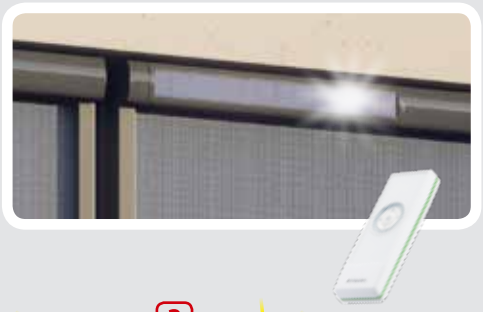
- Automatic control. An intelligent system which detects the level of insolation operates the blind. A photovoltaic panel which reacts to solar radiation acts as a sensor to activate the blind. High insolation level triggers the blind to unroll automatically, On cold days you can manually switch the 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 awning blind is powered by a 12V DC battery pack which is built into the cassette and recharged by the solar panel. The current drawn by the motor is rated at 1.4 Amps.

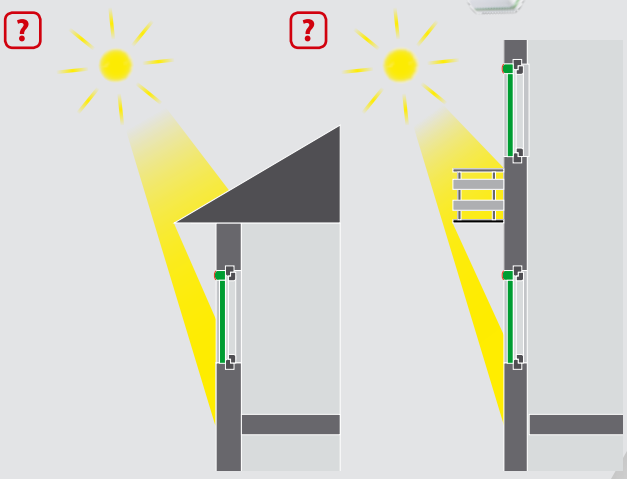
The awning blind and the Solar type roll-up awning can be controlled in one of three modes:

- 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.



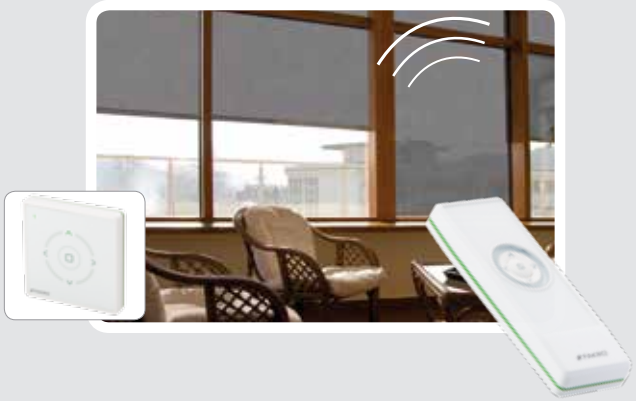


1. *When installing the VMZ Solar, VML Solar and VMB Solar blinds under balconies or canopies it is required to purchase an additional power panel.*

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.*

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

- control via a remote control or a wall switch in the wireless Z-Wave system



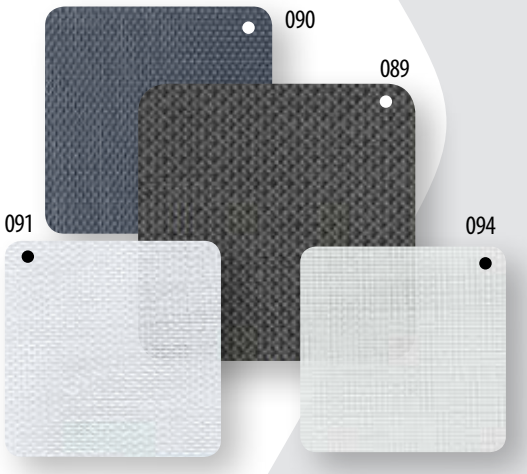
VMZ

- operated manually or by means of a control rod
  (rod purchased separately)

AVAILABLE COLOURS AND FABRICS

VMZ, VML, VMB
GROUP I

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

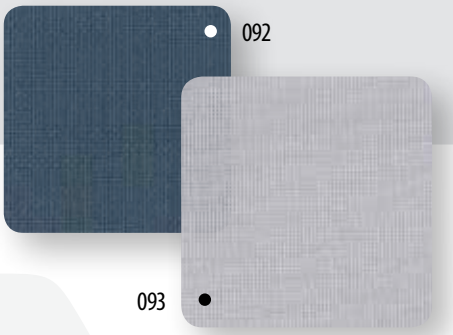


Awning blinds and roll-up awnings are available in four standard colours (white, grey, black and brown) or any RAL colour on request. The customer also has a choice of fabrics featuring different types of relative open area.

In awning blinds with 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).

VMZ, VML, VMB
GROUP II

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



In awning 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)

703

710

704

708

701

702

707

716

706

705

715

712

711

709

714

713

VMB
GROUP IV

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

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

AWNING BLINDS FOR FAKRO ROOF WINDOWS

AMZ AWNING BLINDS

The AMZ awning blind is made of durable, weather-resistant mesh. It is 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.

8 times more effective

*than internal sunscreens

Awning blinds - 8 times more effective protection against heat gain in comparison with internal shading devices

New **Generation** of Awning Blinds

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.

AMZ SOLAR

- automatlc control

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.

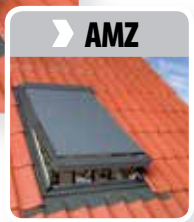
The Solar type awning blinds should be fitted in places with the solar panel positioned to direct sun exposure. It is recommended to install awnings on south, east and west-facing roofs. Installation in the north side may result in battery discharge and the inability to operate the blind.

AMZ Z-WAVE

- remote control or wall switch

AMZ NEW LINE

- manual control by hand or via 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 Electro 24 - intended for other control systems
- AMZ Wifi - connected to the mains by means of 15V power supply and operated using a smartphone app.

Awning blinds available to special order. Get more information at: www.fakro.com

AVAILABLE COLOURS AND FABRICS

The AMZ awning blind comes in three price groups.
The AMZ Z-Wave and AMZ Solar are available in two price groups.

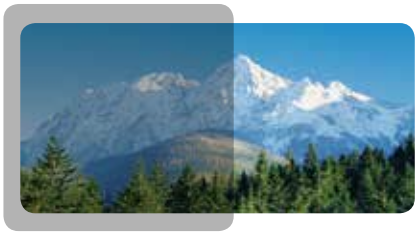
AMZ GROUP I

AMZ Z-Wave GROUP I
AMZ Solar GROUP I

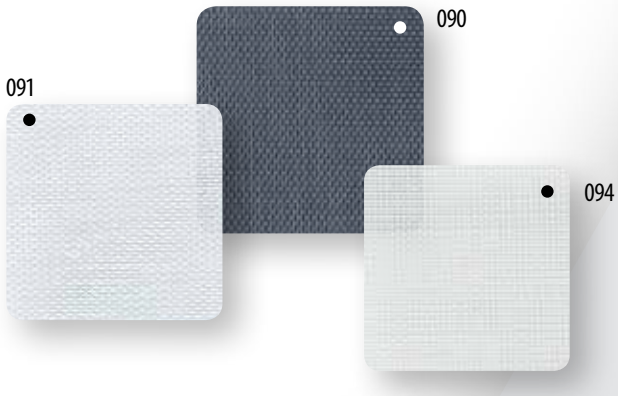
(fabric with **10%** relative open area)

AMZ GROUP II

AMZ Z-Wave GROUP I
AMZ Solar GROUP I



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



AMZ GROUP III

AMZ Z-Wave GROUP II
AMZ Solar GROUP II

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

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

AWNING BLINDS FOR OTHER ROOF WINDOWS

The FAKRO range also includes awning blinds for use with other roof window manufacturers' products. Simply give us the manufacturer, window name, size and year it was produced.

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

The aluminium casing of the awning blind is grey brown in colour (RAL 7022). It can, however, be supplied in any RAL colour on request.

Other manufacturers' awning blinds are priced similarly to those made by FAKRO, though sizes may vary slightly. When pricing it is always advisable to price the nearest larger size (e.g. accept the prize 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.

Z-WAVE WIRELESS CONTROL

For roof windows which are out of reach FAKRO offers Z-Wave wireless operation as standard.

Z-Wave is a wireless radio protocol used for communication between compatible electrical devices. It can connect appliances such as lights, thermostats, alarms, computers, TVs and air conditioning alongside roof windows, awnings and blinds into a single network.

ELECTRICAL CONTROL ELEMENTS

Z-WAVE CONTROL ELEMENTS

- **ZRW7**
  A multi-channel wall keypad that allows a remote control of Z-Wave devices, including FT-P-V Z-Wave window, ARZ Z-Wave roller shutter. 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 Z-Wave window, ZWS230 and ZWS12 actuator for opening windows, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind, VMB Z-Wave roll-up awning.

- **ZRS24**
  A multi-functional advanced Z-Wave remote control that allows configuration and operation of all devices in the Z-Wave network, including Z-Wave window, ZWS230 and ZWS12 actuator for opening windows, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, ARF Z-Wave internal blackout blind, ARP Z-Wave internal roller blind, AJP Z-Wave Venetian blind.

- **ZWL1**
  The ZWL1 consists of a wall switch and radio module placed in a flush-mounted box. It is used for the remote control of a single Z-Wave device or a group of up to 231 devices, including the ZWS 230 and ZWS 12 actuator, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind and VMB Z-Wave roll-up awning.

- **ZWL2**
  The ZWL 2 consists of a double wall switch and radio module placed in a flush-mounted box. It is used for the remote control of two Z-Wave devices independently or a group of up to 231 devices, including the ZWS 230 and ZWS 12 actuator, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind and VMB Z-Wave roll-up awning.

- **ZWL3**
  The ZWL 3 consists of a triple wall switch and radio module placed in a flush-mounted box. It is used for the remote control of three Z-Wave devices independently or a group of up to 231 devices, including the ZWS 230 and ZWS 12 actuator, ARZ Z-Wave external roller shutter, AMZ Z-Wave awning blind, VMZ Z-Wave vertical awning blind and VMB Z-Wave roll-up awning.

ELECTRICAL CONTROL ELEMENTS

ELECTRO 12, ELECTRO SOLAR CONTROL ELEMENTS

- LP1
  A single wall switch enables potential-free control of a single device such as the AMZ Electro 12, AMZ Electro Solar, VMZ Electro 12, VMZ Electro Solar or inputs of ZMWA or ZWMA1 conversion modules.

- LP2
  A double wall switch enables potential-free control of two devices independently such as the AMZ Electro 12, AMZ Electro Solar, VMZ Electro 12, VMZ Electro Solar or inputs of ZMWA or ZWMA1 conversion modules.

- LP3
  A triple wall switch enables potential-free control of three devices independently such as the AMZ Electro 12, AMZ Electro Solar, VMZ Electro 12, VMZ Electro Solar or inputs of ZMWA or ZWMA1 conversion modules.

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.

ELECTRIC CONTROL ELEMENTS 15V

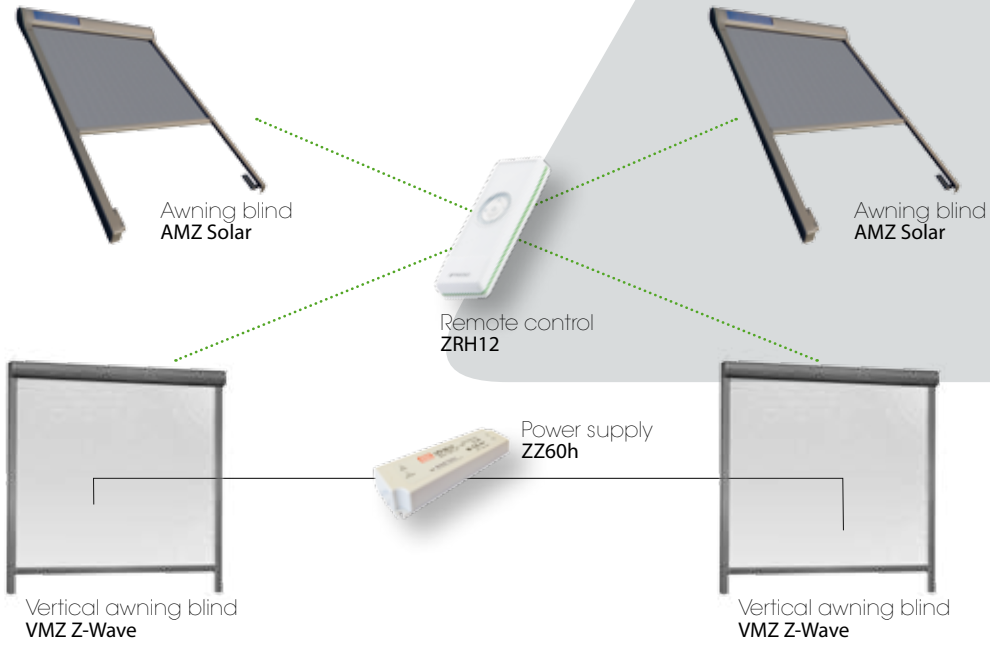
- ZZ60
  Ventilated switching the 15V DC power supply to power Z-Wave devices. Output power 60W. To be installed on DIN TS35 rail. It provides power for up to two external electrical accessories.

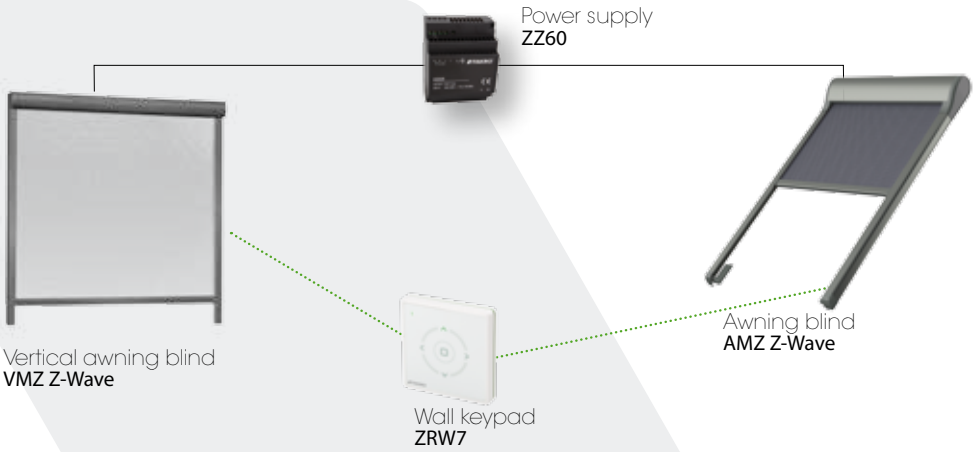
- ZZ60h
  Hermetic switching the 15V DC power supply to power Z-Wave devices. Output power 60W. It provides power for up to two external electrical accessories.

EXAMPLES OF Z-WAVE CONFIGURATION

The Z-Wave system enables many receivers to be controlled (e.g. Z-Wave windows, ZWS12 or ZWS230 actuators, internal and external shutters, external blinds) by means of a multi-channel controller (ZRH12 & ZRS24 remote control, ZRW7 wall keypad). With the use of this solution you can simultaneously control several receivers (e.g. run 4 awning blinds at the same time) or control only one chosen receiver (e.g. AMZ Z-Wave awning blind). One ZRH12 remote control or ZRW7 wall keypad can operate a group of up to 10 receivers (groups of receivers) or up to 231 receivers simultaneously.

The AMZ Solar and VMZ Solar awning blinds are factory-equipped with the ZRH12 remote control which enables the control of 4 awning blinds separately and (or) simultaneously.



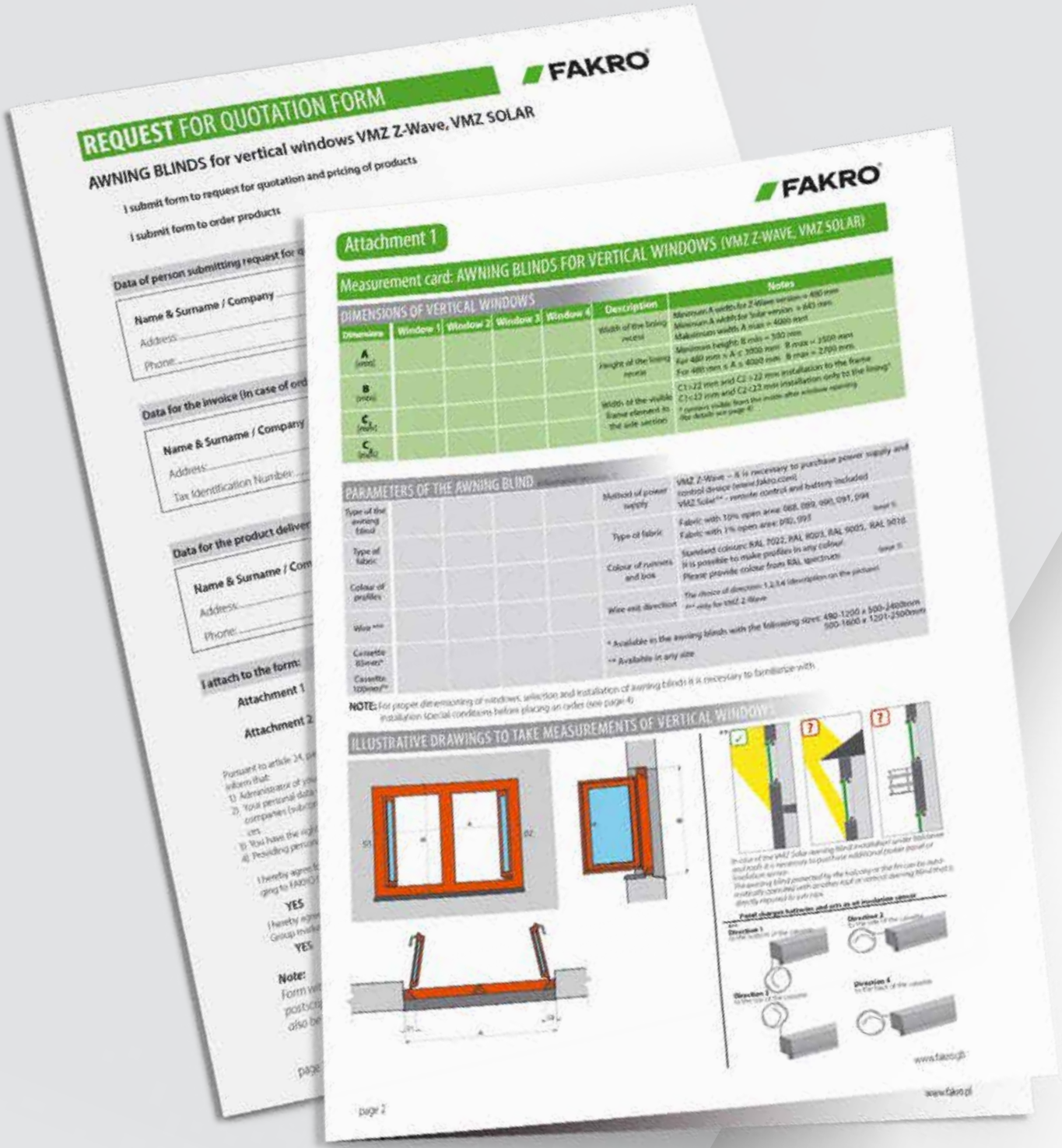


INSTALLATION

Connecting a set of Solar type awning blinds (both roof and vertical) requires 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 3VDC battery.

TENDER FORMS

Forms are available online and contain all the necessary information for selection and installation of awning blinds. Additional information on the available palette of RAL colours helps match the awning blind to design of the building.



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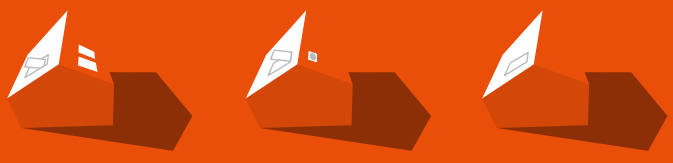

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