## torro

## Motorization and control sollutions

Torro brand was launched on the market in $\mathbf{2 0 1 3}$ as an answer to the growing requirement for automatization and daily life comfort enhancement.
Reliable controls and motors for window shades has been positively welcome by the customers and they are a foundation for furter

## torro

 development of our offer.Range of Torro products is constantly broadening. They combine modern solutions, smart design and a decent price. We are official dealer of Torro brand and we do our best to help you choose the most appropriate product to your needs.
This catalogue was meant to share with you our best knowledge about Torro controls. We hope it will let you quickly get familiar with the whole assortment, and it will also comprehensively support you during connecting and installation.


Torro 2018.05

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## CONNECTION DIAGRAMS

- INDIVIDUAL AC MOTOR CONTROL AC / DX2-LSR
- AC405-01
- AC226-01
- AC212-01
- AC125-02 | AC126-02
- DX1-3-T
- AC407-01
- AC801-01
- AC227-03 / AC228-03
- DX3-24VDC-PS
- DX4
- CONNECTIONS WITH FIBARO SYSTEM TORRO-FIBARO


## TUBE ADAPTATIONS

- TUBE ADAPTATIONS

Controls


## |Types of controls

## 230V AC - PHASE (LINE SWITCHING)

Control voltage 230V AC grom the building power network is passed to one of the wires of motor/controller. The motor has two control phases L1, L2, neutral wire N and depending on version/supplier - grounding wire PE (earth). In case of phase motors control is a power supply at the same time.

Control source: Main power supply 230 V AC 50 Hz
Control: Supply voltage to one of the 2 control wires L1, L2


## RF - RADIO

Wireless control with 433.92 MHz radio frequency. Remote controls, radio wall transmitters or multi-channel controlers are used. One remote control can be used to control multiple receivers. Also, one receiver/motor with built-in receiver can be controlled by multiple remotes/transmitters.

Control source: Radio waves sent by radio transmitter RF (remote)
Control: Press or touch the key on the remote control or transmitter


## 24V DC - CHANGING THE POLARITY

Cable control is reversing the polarity of the DC voltage at the input to the motor. When motor is not working, no voltage is applied. Operation of the motor in either direction causes the input to 24 V DC in the plus-minus polarity or negative-plus.

Control source: Power supply transforming voltage 230 V AC in 24 V DC
Control: Switch or radio receiver replacing "+" plus with "-" minus at the input to the motor


## RS232／RS485－SERIAL PORT

Control via serial RS232 or RS485．By a communication protocol data is transferred between devices．Two wires（RJ12 connector－con－ ductor 1 and 6 ）are used for the control．

Control source：logical value 1 or 0 based on voltage analysis Control：using a computer application or building management system．


## DCT（DRY CONTACT）－POTENTIAL－FREE

Potential－free control is connecting the wires in the low－voltage cable at the motor or controller input．
The voltage is transferred from the COM wire to the UP，DOWN，STOP．After the COM wire is connected to directional or STOP wire，motor start／stop working．Stop function can also be obtained by combining the COM wire with the UP and DOWN wires．

Control source：COM potential－free wire from motor，
Control：COM connection with UP，DOWN or STOP wires．


## RJ－12 plug



## |Overview of controls



$1=$
4 an

AM15-CH
charger for AM15EB RF

INSTALLATION ACCESSORIES


AC405-01
4 -motors group controller


DX1-T
230 V > DCT converter for Torro motors


DX1-S
230 V > DCT converter for Somfy motors


DX2-LSR
line switching relay


DX4
230 V AC / 24V DC converter


RJ11GN
connection box RJ11


RJ12GN-M


Compatibility table: motors - systems, motors - controls


| AC116 RF |
| :---: |
| AC129 RF |
| AC127 RF |
| AC133 RF |
| AC134 RF |
| AC125-01 RF |
| AC126-01 RF |
| AC128-01 RF |
| AC125-02 DCT |
| AC126-02 DCT |
| AC227-01 |
| AC228-01 |
| AC227-03 |
| AC228-03 |
| AM25-PS-24 |
| AC801-01 |
| AC226-01 RF |
| AC212-03 RF |
| AC405-01 |
| AC407-01 RF |
| AC520-01 RF |
| AC115-01 RF |
| AC302-02 RF |
| DX1 |
| DX2-LSR |
| DX4 |
| AC512-01 |



[^0]Power - maximum number of motors

|  | AM24 | AM24RF | AM25 | AM25RF | AM25EB RF |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AC227-03 | 1 |  | 1 |  |  |
| AM25-PS-24 | 2 | $2^{*}$ | 3 | $3^{*}$ |  |
| AC801-01 | 1 | 1 | 1 | 1 |  |
| AM25-CH-8.4 |  |  |  |  | 1 |
| AC601-01 |  |  |  |  | 1 |

* Requires the plug to be cut off and remain polarisation or to use power splitter.


## |RF Remotes



MINI REMOTE

- Acrylic coating for protection against scratches
- Micro USB charging
- Compact size


AC129-01 RF
AC129-04 RF
CHANNEL
CHANNELS 4


AC127-01 RF
CHANNEL $\square$ 1


AC127-02 RF
CHANNELS
2 2


AC127-06 RF
CHANNELS


RADIO REMOTE

- Acrylic coating for protection against scratches
- LED channel selection
- Hidden program button
- Available in two colors versions
- Magnetic holder included

CR2032

## |Wall switches RF

- Possibility to remove switch from the magnetic holder
- Low power consumption
- Signal LED light
- Mounting tape for easy installation
DIMENSIONS $86 \times 86 \times 12 \mathrm{~mm} \quad$ BATTERY $\quad 27 \mathrm{~A}$


## AC134-01 RF

AC134-02 RF
AC134-06 RF
CHANNEL
CHANNELS CHANNELS 6

- Surface mounted box included

| DIMENSIONS $86 \times 86 \times 12 \mathrm{~mm}$ | BATTERY | 27 A |
| :--- | :--- | :--- |

AC125-02 RF
AC126-02 RF
CHANNEL
CHANNELS 2

## AC128-01 RF

16-CHANNELS

- Illuminated LCD screen with clock and touch panel
- Timer
- Possibility to remove transmitter from the magnetic holder
- Channels may be split into 3 groups
- Option to set 6 time points per day
- Available in two colors (black \& white)

$$
\begin{array}{|l|l|l|}
\hline \text { DIMENSIONS } 86 \times 86 \times 16 \mathrm{~mm} & \text { BATTERY } & \text { CR2032 } \\
\hline
\end{array}
$$

## |Switches

AC125 DCT / AC126 DCT - Potential-free


AC125-02 RF

| CHANNELS | 1 |
| :---: | :---: |
| OUT. POWER | $24 \mathrm{~V} D C$ |



AC126-02 RF

Acrylic coating for protection against scratches

- Signal LED light
- Surface mounted box included
DIMENSIONS $86 \times 86 \times 12 \mathrm{~mm}$ VOLTAGE $\quad 230 \mathrm{VAC}$


## |Switches with built-in receiver



AC227-01 RF



AC227-03 RF

| CHANNELS | 1 |
| :---: | :---: |
| OUT. POWER | $24 \mathrm{~V} D C$ |



- Acrylic coating for protection against scratches
- Signal LED light
- Surface mounted box included
- Built-in 24 V power supply (AC227-03)

DIMENSIONS $86 \times 86 \times 46 \mathrm{~mm}$ VOLTAGE 230 VAC


AC228-01 RF

| CHANNELS | 2 |
| :---: | :---: |
| OUT. POWER | 230 VAC |



AC228-03 RF



Acrylic coating for protection against scratches
Signal LED light
Surface mounted box included

DIMENSIONS $86 \times 86 \times 46 \mathrm{~mm} \quad$ VOLTAGE $\quad 24 \mathrm{~V}$ DC

## Controler

## AC407－01 RF

## 16－CHANNELS

－Possibility of controlling window shutters by computer
■ Current channel number backlight
－High sensitivity antenna
－Compatible with all types of Torro controls
－Can be series connected with other AC407－01 controllers
－ $2 \times$ RJ 45 sockets， $1 \times$ RJ 9 socket

DIMENSIONS $140 \times 140 \times 25 \mathrm{~mm}$ VOLTAGE $\quad$ DC 12V

## |SMART Hub




## HOW DOES SMART HOME WORK?



Smart Home is the management of home automation, even during our absence. From anywhere on earth thanks to the global Internet network, our command immediately goes directly to your home/office and with the help of the Smart control unit is transferred to the controlled device.

WHAT ARE THE BENEFITS OF THE SMART HOME CONTROL UNIT?


CONVENIENCE OF USE


SAFETY


SAVINGS

## IN A WIDER PERSPECTIVE

The Smart Home hub opens the door to the world of home automation and enables to connect a multiple of peripheral devices that communicate using compatible radio or infrared protocols.

- Night lighting controlled by motion sensors will automatically adjust the illuminated area, analyzing the user's location.
- Door / window opening sensors will immediately inform the user when someone is trying to get into his apartment and the internal monitoring cameras start recording
- The system will automatically adjust the temperature in our house to the expected one. Temperature sensors analyzing the conditions will regulate work
- Dzięki zastosowaniu asystenta głosowego wywoływanie scen będzie możliwe za pomocą mowy, bez korzystania z telefonu.


## Weather sensors

## AC115-01 RF wind/motion sensor



- Automatically closes blind in case of the strong wind
- Detects system shocks
- Sensitivity adjustment potentiometer
- Maximum range up to 20 m
- Battery powering

| BATTERY TYPE | WORKING <br> TEMPERATURE | RADIO <br> FREQUENCY | TRANSMITTED <br> POWER | STANDBY | WORK | CLASS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{LRO} / \mathrm{AAA} \times 2$ | $-40^{\circ} \mathrm{C} \div 85^{\circ} \mathrm{C}$ | $433,92 \mathrm{MHz}$ | $\leq 10 \mathrm{~mW}$ | $\leq 1 \mu \mathrm{~A}$ | $\leq 10 \mathrm{~mA}$ | IP65 |

## AC302-01 RF wind/light/rain sensor



- Automatically closes blind in case of the strong wind
- Automatically closes blind in case of the strong sunlight
- LED display
- Powered by the built-in solar panel
- Adjustable wind speed sensitivity from $10 \mathrm{~km} / \mathrm{h}$ up to $50 \mathrm{~km} / \mathrm{h}$
- Adjustable sun sensitivity 0,2-10 kLux
- No cable power required

| POWER | WORKING TEMPERATURE | RADIO FREQUENCY | TRANSMITTED POWER | POWER CONSUMPTION |  | PROTECTION CLASS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | STANDBY | WORK |  |
| Panel + Battery | $-40^{\circ} \mathrm{C} \div 85^{\circ} \mathrm{C}$ | 433,92 MHz | $\leq 15 \mathrm{~mW}$ | $\leq 5 \mu \mathrm{~A}$ | $\leq 15 \mathrm{~mA}$ | IP55 |

## RF Connection

AC226-01 RF Radio receiver

| CHANNELS | RADIO <br> FREQUENCY | VOLTAGE | WORKING <br> TEMPERATURE | PROTECTION <br> CLASS | SUSTAINABLE <br> WORKING TIME | DIMENSIONS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 433.92 Mhz | 230 V AC | $-40^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$ | IP65 | 5 min | $128 \times 31 \times 22 \mathrm{~mm}$ |



## AC212-01 RF Receiver

- Possibility of independent control by DCT switch
- Continious move mode
- Possibility to pair up to 20 remotes

■ Range up to 200 m (in open area)

| CHANNELS | RADIO <br> FREQUENCY | VOLTAGE | WORKING | PROTECTION |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TEMPERATURE | CLASS | SUSTAINABLE <br> WORKING TIME | DIMENSIONS |  |  |  |
| 1 | 433.92 Mhz | $12 \mathrm{~V} \mathrm{50mA}$ | $-40^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$ | IP20 | 5 min | $50 \times 47 \times 27 \mathrm{~mm}$ |



| RADIO |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FREQUENCY | POWER | WORKING <br> TEMPERATURE | PROTECTION <br> CLASS | DIMENSIONS | CABLE LENGTH |
| 433.92 Mhz | 230 VAC | $-40^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$ | $1 P 20$ | $85 \times 60 \times 36 \mathrm{~mm}$ | 24 cm |



AM25-PS-24
Power supply for AM 24/25 RF

| Input voltage | $100-240 \mathrm{~V} \mathrm{AC}$ |
| :---: | :---: |
| Output voltage | $\mathrm{DC} 24 \mathrm{~V} / 1,7 \mathrm{~A}$ |
| Frequency | $50 / 60 \mathrm{~Hz}$ |
| Wire | $1,5 \mathrm{~m}$ |
| Plug | jack $5,5 / 2,1 \mathrm{~mm}$ |
| Dimensions | $102 \times 49 \times 34 \mathrm{~mm}$ |
| Mounting bracket | included |



## AC601-01

Solar panel for AM25EB RF

| Max. Power | 1 W |
| :---: | :---: |
| Voltage | $8,4 \mathrm{~V}$ |
| Working power | $0,08 \mathrm{~A}$ |
| Cable length | $2,3 \mathrm{~m}$ |
| Dimensions | $385 \times 58 \times 15 \mathrm{~mm}$ |



## AC899-01

Micro usb cable for AM15EB RF (3 m)

| Input voltage | 230 V AC |
| :---: | :---: |
| Cable length | 3 m |



## AC801-01

Power supply for AM 24/25 RF headrail V13

| Input voltage | $100-240 \mathrm{~V} \mathrm{AC}$ |
| :---: | :---: |
| Output voltage | DC $24 \mathrm{~V} / 1 \mathrm{~A}$ |
| Frequency of voltage | $50 / 60 \mathrm{~Hz}$ |
| Wire | none |
| Dimensions | $115 \times 24 \times 21 \mathrm{~mm}$ |


DC.SPL.0400.0035

3-way power splitter - jack

| Input voltage | 230 VAC |
| :---: | :---: |
| Max. Working power | 5 A |
| Cable length | $0,35 \mathrm{~m}$ |



## AM15-CH

Charger for AM15EB RF



AM25-CH-8.4
Charger for AM25EB RF

| Max. Power | $1,7 \mathrm{~W}$ |
| :---: | :---: |
| Voltage | $8,4 \mathrm{~V}$ |
| Working power | $0,3 \mathrm{~A}$ |
| Wire | $3,0 \mathrm{~m}$ |
| Socket | jack $5,5 / 2,1 \mathrm{~mm}$ |
| Dimensions | $115 \times 24 \times 24 \mathrm{~mm}$ |



DX3-24VDC-PS
4-way power splitter 24V DC


## |Installation accessories



AC405-01
Group controller - 4 motors


DX2-LSR
Line switching relay



DX1-3-T / DX1-3-S
Converter 230V > DCT (T) - Torro, (S) - Somfy.



## DX4

230V AC / 24V DC.
converter

| Input voltage | 230 V AC |
| :---: | :---: |
| Junction box | included |
| Dimensions | $130 \times 70 \times 30 \mathrm{~mm}$ |



## RJ11GN

Connection box for DCT switch installation.

| Socket | RJ11 |
| :---: | :---: |
| Dimensions | $57 \times 49 \times 21 \mathrm{~mm}$ |
| Cover | included |



## RJ12GN

Connection box for DCT switch installation.

| Socket | RJ12 |
| :---: | :---: |
| Dimensions | $58 \times 43 \times 24 \mathrm{~mm}$ |
| Cover | included |



## AM24-ELS

Middle motor AM 24 limit switch

| Hole | 6 mm hex |
| :---: | :---: |
| Wire | $2,4 \mathrm{~m}$ |
| Dimensions | $126 \times 25 \times 25 \mathrm{~mm}$ |

## Tubular motors



## GENERAL INFORMATION

## MOTOR NAMES

In order to make it easier for you to choose appropriate motor, we decided to unify the names so that the basic parameters can be concluded basing on the motor name. The following is an example of how to interpret motor names:

AM35 QMEL 3/28 RF 5W 230V AC

| AM | 35 | Q | MEL | M | E | ER-E | S | R | EB | 3/28 | RF | 5W | LS | 230V AC/24V DC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{\stackrel{\sim}{2}}{\sim}$ | $\underset{\stackrel{N}{n}}{\stackrel{0}{2}}$ |  |  |  |  |  | $\begin{aligned} & \stackrel{\pi}{0} \\ & \frac{2}{\omega} \end{aligned}$ |  |  |  |  |  |  | $\begin{aligned} & \stackrel{0}{0} \\ & \frac{0}{\#} \\ & \stackrel{7}{0} \end{aligned}$ |

## PURPOSE

## Indoor blinds



Horizontal blinds


- Roller blinds


Pleated blinds

Roman blinds

## Outdoor blinds

- STRONG Motors



## How to prepare the installation for Torro motors?

Cables with min. $0.75 \mathrm{~mm}^{2}$. Number of wires depends on the motor type and control: Phase motors: 4 wires (with grounding), radio motors: 3 wires, potential-free: 3 wires + twisted-pair, always with reference to wiring diagrams included in this catalogue.

## How to change the rotation direction of the 24 V motor?

If motor have built-in radio receiver, just reprogram it with a remote control as instructed. In case of control with polarity change the sequence of connecting the power supply cables need to be changed.

## How to change the rotation direction of the slats in horizontal blind?

You can change the installation side from left to right or lower bottom end postion till slats are pulled on the other side. Afterwards both end positions have to be properly set and move directions have to be reversed on the remote control.

## How many motors can be connected to the same phase/radio controlled line?

Line switching-controlled motors should be connected individually or in groups using appropriate separators or relays. Radio controlled motors should be connected depending on network parameters.

## Can motors be programmed to automatically open/close without human interference, eg when away from home?

Yes, use radio controlled motors and AC128-01RF radio wall switch with timer. In case of phase-controlled motors they should be equipped with radio receivers and also add timer. It will be possible then to program up to 6 time points per day for 16 channels.

## Can I use phase control for radio motors?

Yes, if you have the potential-free control (DCT) after using the DX1-3-T converter or grouped with the DX1-3-T converter and the AC405-01 radio controller.

## Can I use radio control for phase motors?

Yes, after equipping the motors with AC212-01 RF or AC226-01 radio receivers or using phase switches with radio receiver or any electrical equipment supplier.

## Is it possible to control by the both, phase and radio?

| Phase-controlled motors should be equipped with radio receivers if connected properly, phase and radio control will be available.

## Which Torro motors are compatible with the Fibaro system?

All tubular and curtain motors with phase control are able to use Fibaro Roller Shutter 2 with full functionality. Other connection schemes are also possible but this may result in lack of full functionality (only close/open without motor feedback).

Is it possible to simultaneously control the motor using Fibaro system and Torro radio remote control?
| Yes, you have to equip a motor additional AC226-01 or AC212-01 RF radio receiver.

## |AM35 - line switching



- Overload and high temperature automatic shutdown
- Mechanical limit setting
- Max number of circles between limits - 45
- 10x10 mm adapter included


## PARAMETERS

|  |  |  | STRONG |  |
| :---: | :---: | :---: | :---: | :---: |
|  | AM35Q | AM35Q | AM35 | AM35 |
| Torque [ Nm ] | 3 | 6 | 6 | 10 |
| Revolutions per minute [rpm] | 28 | 18 | 28 | 14 |
| Voltage | 230 V AC | 230 V AC | 230 V AC | 230 V AC |
| Power consumption [A] | 0,38 | 0,49 | 0,49 | 0,49 |
| Power [W] | 85 | 115 | 115 | 115 |
| Diameter [mm] | 35 | 35 | 35 | 35 |
| Length [mm] | 502 | 518 | 507 | 597 |
| Silent run | - | - |  |  |
| Built-in radio receiver |  |  |  |  |
| Electronic limit setting |  |  |  |  |
| Potential-free |  |  |  |  |
| $\begin{aligned} & \text { Limits } \\ & \text { (main \| intermediate)) } \end{aligned}$ | $2 \mid 0$ | 210 | 210 | 210 |
| IP protection class | IP44 | IP44 | IP44 | IP44 |
| Working temperature | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ |
| Cable length [m] | 0,95 | 0,95 | 0,95 | 0,95 |

## DIMENSIONS




## WIRE

## AM35

－Overload and high temperature automatic shutdown
■ Built－in radio receiver
－Compatible with all types of Torro controls
－ $10 \times 10 \mathrm{~mm}$ adapter included
－Possibility of potential－free or serial control（RJ12 plug）
－Maximum work time 4 min

## PARAMETERS

|  |  |  |  |  | STRONG | STRONG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM35QMEL RF | AM35QMEL RF | AM35E | AM35MEL RF | AM35E | AM35MEL RF |
| Torque ［ Nm ］ | 3 | 6 | 6 | 6 | 10 | 10 |
| Revolutions per minute ［rpm］ | 28 | 18 | 28 | 28 | 14 | 14 |
| Voltage | 230 V AC | 230 V AC | 230 V AC | 230 V AC | 230 V AC | 230 V AC |
| Power consumption $[\mathrm{A}]$ | 0，38 | 0，49 | 0，49 | 0，49 | 0，49 | 0，49 |
| Power ［W］ | 85 | 115 | 115 | 115 | 115 | 115 |
| Diameter ［mm］ | 35 | 35 | 35 | 35 | 35 | 35 |
| Length $[\mathrm{mm}]$ | 507 | 518 | 597 | 507 | 597 | 509 |
| Silent run | － | $\bullet$ |  |  |  |  |
| Built－in radio receiver | － | － | $\bullet$ | － | $\bullet$ | － |
| Electronic limit setting | － | － |  | － |  | $\bullet$ |
| Potential－free | －＊ | －＊ |  | －＊ |  | $\bullet$ |
| $\begin{gathered} \text { Limits } \\ \text { (main \| intermediate)) } \end{gathered}$ | $2 \mid 4$ | $2 \mid 4$ | 2 | $2 \mid 4$ | 2 | 2 |
| IP protection class | IP44 | IP44 | IP44 | IP44 | IP44 | IP44 |
| Working temperature | $-10 \div 60{ }^{\circ} \mathrm{C}$ | $-10 \div 60{ }^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60{ }^{\circ} \mathrm{C}$ | $-40 \div 85^{\circ} \mathrm{C}$ | $-40 \div 85^{\circ} \mathrm{C}$ |
| Cable length ［m］ | 0，95 | 0，95 | 0，95 | 0，95 | 0，95 | 0，95 |

＊Motors available in versions with potential－free control（RJ12 plug）or without．


## DIMENSIONS

## WIRE



## |AM45 - line switching



- Overload and high temperature automatic shutdown
- Maximum work time 4 min

■ Precise limit switches (+/- $2^{\circ}$ )

- $10 \times 10 \mathrm{~mm}$ adapter included
- Reinforced brake mechanism

■ Max number of circles between limits - 55

## PARAMETERS

|  |  | STRONG | STRONG | STRONG | STRONG | STRONG | STRONG | STRONG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM45Q | AM45 | AM45 | AM45 | AM45 S | AM45 QP | AM45 QP | AM45 QP |
| Torque [ Nm ] | 6 | 10 | 20 | 30 | 10 | 10 | 20 | 30 |
| Revolutions per minute [rpm] | 28 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Voltage | 230 V AC | 230 VAC | 230 V AC | 230 V AC | 230 V AC | 230 V AC | 230 V AC | 230 V AC |
| Power consumption <br> [A] | 0,49 | 0,51 | 0,74 | 0,89 | 0,51 | 0,51 | 0,74 | 0,89 |
| Power [W] | 115 | 135 | 170 | 200 | 115 | 115 | 170 | 200 |
| Diameter [mm] | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Length [mm] | 708 | 522 | 564 | 584 | 455 | 542,5 | 562,5 | 580,5 |
| Silent run | - |  |  |  |  | - | - | - |
| Built-in radio receiver |  |  |  |  |  |  |  |  |
| Electronic limit setting |  |  |  |  |  | $\bullet$ | - | $\bullet$ |
| Potential-free |  |  |  |  |  |  |  |  |
| $\underset{(\text { main \| intermediate) })}{\substack{\text { Limits } \\ \hline}}$ | 210 | 210 | 210 | $2 \mid 0$ | $2 \mid 0$ | 210 | $2 \mid 0$ | $2 \mid 0$ |
| IP protection class | IP44 | IP44 | IP44 | IP44 | IP44 | IP44 | IP44 | IP44 |
| Working temperature | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ |
| Cable length [m] | 0,90 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 |

## DIMENSIONS



## WIRE



## |AM45 - additional crank control (NHK)



## |AM45 - RF radio control



- Overload and high temperature switch
- Maximum work time 4 min

■ Precise limit switches $\left(+/-2^{\circ}\right)$

- $10 \times 10 \mathrm{~mm}$ adapter included
- Electronic limit setting (AM45 ER-E)
- Reinforced brake mechanism


## PARAMETERS

|  |  | STRONG | STRONG | STRONG | STRONG | STRONG | STRONG |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM45QMEL RF | AM45 E | AM45 E | AM45 E | AM45 ER-E | AM45 ER-E | AM45 ER-E |
| Torque [ Nm ] | 6 | 10 | 20 | 30 | 10 | 20 | 30 |
| Revolutions per minute [rpm] | 28 | 17 | 17 | 17 | 17 | 17 | 17 |
| Voltage | 230 V AC | 230 V AC | 230 V AC | 230 V AC | 230 V AC | 230 V AC | 230 V AC |
| Power consumption [A] | 0,49 | 0,51 | 0,74 | 0,89 | 0,51 | 0,74 | 0,89 |
| Power [W] | 115 | 115 | 170 | 200 | 115 | 170 | 200 |
| Diameter [mm] | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Length [mm] | 718 | 622 | 667 | 682 | 708 | 708 | 708 |
| Silent run | - |  |  |  |  |  |  |
| Built-in radio receiver | - | - | - | - | - | - | - |
| Electronic limit setting | - |  |  |  | - | - | - |
| Potential-free |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Limits } \\ \text { (main \| intermediate)) } \end{gathered}$ | $2 \mid 4$ | $2 \mid 0$ | $2 \mid 0$ | $2 \mid 0$ | $2 \mid 4$ | $2 \mid 4$ | $2 \mid 4$ |
| IP protection class | IP44 | IP44 | IP44 | IP44 | IP44 | IP44 | IP44 |
| Working temperature | $-10 \div 60{ }^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60{ }^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ |
| Cable length [m] | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 | 0,95 |

## DIMENSIONS



## WIRE

## ｜AM25－24V DC powering



CONTROLS

## AM25

－Mechanical limit setting
－Precise limit switches（ $+/-2^{\circ}$ ）
■ Max number of circles between limits－ 26
－Low energy usage

|  | AM25 | AM25 RF |
| :---: | :---: | :---: |
| Torque ［ Nm ］ | 1 | 1 |
| Revolutions per minute ［rpm］ | 30 | 30 |
| Voltage | 24 V DC | 24 V DC |
| Power consumption ［A］ | 0，45 | 0，45 |
| Power ［W］ | 11 | 11 |
| Diameter ［mm］ | 25 | 25 |
| Length ［mm］ | 325，2 | 289，7 |
| Silent run |  |  |
| Built－in radio receiver |  | － |
| Electronic limit setting |  | － |
| Potential－free |  |  |
| Limits （main｜intermediate）） | $2 \mid 0$ | $2 \mid 4$ |
| IP protection class | IP44 | IP44 |
| Working temperature | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ |
| Cable length ［m］ | 1，85 | 1，35 |

## WIRE

## DIMENSIONS


－Low energy usage


## PLUG

## |AM25EB RF - battery motor

## AM25EB RF



■ Built-in rechargeable battery

- Compatible with all types of Torro controls

■ Precise limit switches (+/- $2^{\circ}$ )

- Max number of circles between limits - 26

■ Low energy usage
■ Up to half a year battery life (with 1 open-close per day)

PARAMETERS

|  | AM25EB RF |
| :---: | :---: |
| Torque [ Nm ] | 1,2 |
| Revolutions per minute [rpm] | 30 |
| Voltage | 7,4V DC battery |
| Power consumption <br> [A] | 0,9 |
| Power [W] | 6,7 |
| Diameter [mm] | 25 |
| Length [mm] | 451 |
| Silent run |  |
| Built-in radio receiver | - |
| Electronic limit setting | - |
| Potential-free |  |
| Limits <br> (main \| intermediate) | $2 \mid 4$ |
| IP protection class | IP44 |
| Working temperature | $-10 \div 60^{\circ} \mathrm{C}$ |
| Cable length [m] | 0,1 |

## DIMENSIONS



## POWER



Charger
AM25-CH-8.4


Solar Panel
AC601-01

## PLUG

## ｜AM24－24V DC powering



## AM24

－Power and control by the cable－changing the polarity
－Limits adjustment via limit switch
－ 6 mm hex adapter－for venetian blinds 5 mm square adapter－for roman blinds 5 mm square adapter－for pleated blinds
－Integral rubber rail adaptation minimizes vibration
■ Max number of circles between limits－ 60

## AM24 RF

－Built－in radio receiver
－ 6 mm hex adapter－for venetian blinds 5 mm square adapter－for roman blinds 5 mm square adapter－for pleated blinds

■ Soft START／STOP
■ Overload switch

■ Maximum work time－7 min
－Smooth adjustment of slats angle

## PARAMETERS

|  | AM24 | AM24RF |
| :---: | :---: | :---: |
| Torque ［ Nm ］ | 0，8 | 0，8 |
| Revolutions per minute ［rpm］ | 34 | 34 |
| Voltage | 24V DC | 24V DC |
| Power consumption <br> ［A］ | 0，65 | 0，65 |
| Power ［W］ | 16 | 16 |
| Diameter ［mm］ | 24 | 24 |
| Length ［mm］ | 201，4 | 201，4 |
| Silent run |  |  |
| Built－in radio receiver |  | － |
| Electronic limit setting |  | － |
| Potential－free |  |  |
| Limits <br> （main｜intermediate） | $2 \mid 0$ | $2 \mid 0$ |
| IP protection class | IP III | IP III |
| Working temperature | $-10 \div 60^{\circ} \mathrm{C}$ | $-10 \div 60^{\circ} \mathrm{C}$ |
| Cable length ［m］ | 1，45 | 1，5 |

## WIRE

## DIMENSIONS


type RS（5mm square－for roman blinds）

type PB（ 5 mm square－for pleated blinds）


## |AM15EB RF - battery motor



## AM15EB RF

- Built-in rechargeable battery
- Compatible with all types of Torro controls
- Low energy usage
- Overload and high temperature switch
- Up to four months battery life (with 1 open-close per day)


## PARAMETERS

AM15EB RF

|  | AM15EB RF |
| :---: | :---: |
| Torque [ Nm ] | 0,3 |
| Revolutions per minute [rpm] | 35 |
| Voltage | 5V DC battery |
| Power consumption <br> [A] | 0,8 |
| Power [W] | 4,0 |
| Diameter [mm] | 15,5 |
| Length [mm] | 355 |
| Silent run |  |
| Built-in radio receiver | - |
| Electronic limit setting | - |
| Potential-free |  |
| (main $\left\lvert\, \begin{aligned} & \text { Limits } \\ & \text { intermediate) }\end{aligned}\right.$ | $2 \mid 4$ |
| IP protection class | IP44 |
| Working temperature | $-10 \div 60^{\circ} \mathrm{C}$ |
| Cable length [m] | - |

DIMENSIONS


## POWER*



* We recommend using a dedicated charger (AM15-CH)
or other according to the recommended parameters $-5 \mathrm{~V} / 0,5 \mathrm{~A}$
Using a charger with other parameters may have a negative impact on the motor battery life.


## |Tubular motors - summary

| MOTOR |  |  |  |  | CONTROL |  |  |  |  | LIMITS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TORQUE <br> [ Nm ] | REVOLUTIONS PER MINUTE [rpm] | SILENT RUN | REBOUND WHEN MEET RESISTANCE | RF (RADIO) | PHASE | $\begin{gathered} \text { DCT } \\ \text { (POTENTIAL-FREE) } \end{gathered}$ | CHANGING THE POLARITY | $\begin{aligned} & \text { SERIAL } \\ & \text { PORT } \end{aligned}$ | ELECTRONICAL | MECHANICAL |
| AM15EB RF | 0,3 | 35 |  |  | - |  |  |  |  | - |  |
| AM24 | 0,8 | 34 |  |  |  |  |  | - |  |  | -* |
| AM24RF' | 0,8 | 34 |  |  | - |  |  |  |  |  | - |
| AM25 | 1 | 30 |  |  |  |  |  | - |  |  | - |
| AM25 RF | 1 | 30 |  |  | - |  |  |  |  | - |  |
| AM25EB RF | 1,2 | 30 |  |  | - |  |  |  |  | - |  |
| AM35 6/28 | 6 | 28 |  |  |  | $\bullet$ |  |  |  |  | $\bullet$ |
| AM35E 6/28 | 6 | 28 |  |  | - |  |  |  |  |  | - |
| AM35 10/14 | 10 | 14 |  |  |  | - |  |  |  |  | $\bullet$ |
| AM35E 10/14 | 10 | 14 |  |  | - |  |  |  |  |  | $\bullet$ |
| AM35MEL 10/14 RF | 10 | 14 |  |  | $\bullet$ |  | $\bullet$ |  | $\bullet$ | - |  |
| AM35MEL 3/28 RF | 3 | 28 |  |  | - |  | - |  | - | - |  |
| AM35MEL 6/28 RF | 6 | 28 |  |  | - |  | - |  | $\bullet$ | - |  |
| AM35Q 3/28 | 3 | 28 | - |  |  | - |  |  |  |  | - |
| AM35Q 6/18 | 6 | 18 | $\bullet$ |  |  | - |  |  |  |  | $\bullet$ |
| AM35QMEL 3/28 RF | 3 | 28 | - |  | - |  | - |  | $\bullet$ | - |  |
| AM35QMEL 6/20 RF | 6 | 20 | $\bullet$ |  | - |  | - |  | $\bullet$ | $\bullet$ |  |
| AM35QMEL 6/18 RF | 6 | 18 | - |  | - |  | - |  | - | - |  |
| AM45Q 6/28 | 6 | 28 | $\bullet$ |  |  |  |  |  |  |  | $\bullet$ |
| AM45QMEL 6/28 RF | 6 | 28 | - |  | - |  |  |  |  | $\bullet$ |  |
| AM45 10/17 | 10 | 17 |  |  |  | - |  |  |  |  | $\bullet$ |
| AM45 20/17 | 20 | 17 |  |  |  | - |  |  |  |  | - |
| AM45 30/17 | 30 | 17 |  |  |  | $\bullet$ |  |  |  |  | $\bullet$ |
| AM45 S 10/17 | 10 | 17 |  |  |  | $\bullet$ |  |  |  |  | $\bullet$ |
| AM45 E 10/17 | 10 | 17 |  |  | - |  |  |  |  |  | $\bullet$ |
| AM45 E 20/17 | 20 | 17 |  |  | - |  |  |  |  |  | - |
| AM45 E 30/17 | 30 | 17 |  |  | - |  |  |  |  |  | - |
| AM45-QP 10/17 | 10 | 17 | $\bullet$ |  |  | $\bullet$ |  |  |  | $\bullet$ |  |
| AM45-QP 20/17 | 20 | 17 | - |  |  | - |  |  |  | $\bullet$ |  |
| AM45-QP 30/17 | 30 | 17 | - |  |  | - |  |  |  | - |  |
| AM45 ER-E 10/17 | 10 | 17 |  | $\bullet$ | - |  |  |  |  | - |  |
| AM45 ER-E 20/17 | 20 | 17 |  | $\bullet$ | - |  |  |  |  | - |  |
| AM45 ER-E 30/17 | 30 | 17 |  | $\bullet$ | $\bullet$ |  |  |  |  | - |  |
| AM45 M 20/17 | 20 | 17 |  |  |  | - |  |  |  |  | - |
| AM45 M 30/17 | 30 | 17 |  |  |  | $\bullet$ |  |  |  |  | - |
| AM45 ME 20/17 | 20 | 17 |  |  | - |  |  |  |  |  | - |
| AM45 ME 30/17 | 30 | 17 | 龶 |  | $\bullet$ |  |  |  |  |  | - |

[^1]
## Curtain Motors





Special runners and tape sewn in the fabric create ripple effect on a curtain.

Touch Motion


Start the motor by simply pulling the fabric. It is not possible to stop the curtain track with this function.

UP


Solution for suspended ceiling enabling installation of the motor and cabling over the ceiling. Option offered without surcharge.

INSTALLATION DIMENSIONS

Single rail installation



Double rails installation （two fabric curtains）
＊in the case of double bent rails

## GLIDERS

## RAIL

standard
$\qquad$
bearing



| DIMENSIONS


## AM68 LS

- Emergency manual control in case of power failure
- Automatic limit position adjustment

■ Soft START/STOP

## WIRE


potential-free control, RF (radio control), RS485


## PARAMETERS

|  | AM68 LS | AM68 RF |
| :---: | :---: | :---: |
| Torque [ Nm ] | 1 | 1 |
| Revolutions per minute [rpm] | 80 | 80 |
| Voltage | 230 V AC | 230 V AC |
| Power consumption [A] | 0,3 | 0,3 |
| Power [W] | 65 | 65 |
| Dimensions [mm] | $290 \times 68 \times 50$ | $290 \times 68 \times 50$ |
| Silent run |  |  |
| Built-in radio receiver |  | - |
| Electronic limit setting |  |  |
| Potential-free |  | - |
| $\begin{aligned} & \text { Limits } \\ & \text { (main \| intermediate) } \end{aligned}$ | $2 \mid 0$ | $2 \mid 0$ |
| IP protection class | IP44 | IP44 |
| Working temperature | $0 \div 50^{\circ} \mathrm{C}$ | $0 \div 50^{\circ} \mathrm{C}$ |
| Cable length [m] | 1,2 | 1,2 |
| Wire | Permanent | Permanent |

## AM68 RF

- Touch Motion
- Manual control in case of power failure
- Automatic limit position adjustment
- Soft START/STOP
- Comfort position


## AM68



## SYSTEM DIMENSIONS



$x$ - packet width in open position
135 - standard
235 - ripple fold $80 \%$
265 - ripple fold $100 \%$

## BOUNDARY DIMENSIONS

| maximum width | 1200 cm | maximum load per 1 m of rail | $12,5 \mathrm{~kg}$ |
| :--- | :---: | :--- | :---: |
| maximum width <br> (without rail connector) | 700 cm | maximum load of a glider | 1 kg |
| sliding speed | $10 / 12,5 / 16 \mathrm{~cm} / \mathrm{s}$ | maximum system load | 50 kg |

MAXIMUM SYSTEM LOAD

|  | Rail type |  | Loading (fabric weight - kg ) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | up to 4 m | up to 8 m | up to 12 m |
| AM68 LS AM68 RF | straight rail | $\longrightarrow$ | 50 | 45 | 40 |
|  | 1 curve | $\left.2^{30}\right)^{2}$ | 40 | 35 | 30 |
|  | 2 curves |  | 30 | 25 | 20 |
|  | large curve |  | 21 | 16 |  |
| AM68 LS <br> Tandem <br> AM68 RF <br> Tandem | straight rail | W | 70 |  |  |
|  | 1 curve | $2^{3^{3} 0^{2}} \$$ | 50 |  |  |
|  | 2 curves |  | 40 |  |  |
|  | large curve |  | 23 |  |  |


| DIMENSIONS


## AM75 LS

- Emergency manual control in case of power failure
- Automatic limit position adjustment
- Soft START/STOP


## WIRE



PARAMETERS

|  | AM75 LS | AM75 RF | AM75 RF-5W |
| :---: | :---: | :---: | :---: |
| Torque [ Nm ] | 1,5 | 1,5 | 1,5 |
| Revolutions per minute [rpm] | 100 | 100 | 100 |
| Voltage | 100-240V AC | $100-240 \mathrm{~V}$ AC | 100-240V AC |
| Power consumption [A] | 0,3 | 0,3 | 0,3 |
| Power [W] | 65 | 65 | 65 |
| Dimensions [mm] | $297 \times 67 \times 53$ | $297 \times 67 \times 53$ | $297 \times 67 \times 53$ |
| Silent run | - | - | - |
| Built-in radio receiver |  | - | - |
| Electronic limit setting |  | - |  |
| Potential-free | - | - | - |
| (main $\|$Limits <br> intermediate) | $2 \mid 0$ | $2 \mid 0$ | $2 \mid 0$ |
| IP protection class | IP20 | IP20 | IP20 |
| Working temperature | $0 \div 50^{\circ} \mathrm{C}$ | $0 \div 50^{\circ} \mathrm{C}$ | $0 \div 50^{\circ} \mathrm{C}$ |
| Cable length [m] | 1,2 | 1,2 | 1,2 |
| Wire | Permanent | Permanent | Permanent |

## AM75 RF

- Touch Motion
- Manual control in case of power failure
- Automatic limit position adjustment
- Soft START/STOP


## AM75 RF-5W

- Touch Motion
- Manual control in case of power failure
- Automatic limit position adjustment
- Soft START/STOP


## AM75



## SYSTEM DIMENSIONS [MM]



## BOUNDARY DIMENSIONS

| maximum width | 1200 cm | maximum load per 1 m of rail | $12,5 \mathrm{~kg}$ |
| :--- | :--- | :--- | ---: |
| maximum width <br> (without rail connector) | 700 cm | maximum load of a glider | $1,25 \mathrm{~kg}$ |
| sliding speed | $12,5 \mathrm{~cm} / \mathrm{s}$ | maximum system load | 56 kg |

## MAXIMUM SYSTEM LOAD

|  | Rail type |  | Loading (fabric weight - kg ) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | up to 4 m | up to 8 m | up to 12 m |
| AM75 LS <br> AM75 RF AM75 RF-5W | straight rail | $\longrightarrow$ | 50 | 56 | 50 |
|  | 1 curve |  | 50 | 43 | 37 |
|  | 2 curves |  | 37 | 31 | 25 |
|  | large curve |  | 26 | 20 |  |
| AM75 LS Tandem | straight rail | $\longrightarrow$ | 50 | 87 |  |
| AM75 RF Tandem | 1 curve | $2^{3^{3} v^{2}} \$$ | 50 | 62 |  |
|  | 2 curves |  | 37 |  |  |
| AM75 RF-5W Tandem | large curve |  | 23 |  |  |



## DIMENSIONS

## PARAMETERS



## AM95 RF

- Adjustable speed
- Automatic limit position adjustment
- Touch Motion
- Possibility to mount the motor upside down (UP)
- High sensitivity antenna (up to 100 m )
- Manual control in case of power failure
- Soft START/STOP
- Editable limit positions
- Remote control and/or DCT control


## AM95 RF-5W

- Adjustable speed
- Automatic limit position adjustment
- Touch Motion
- Possibility to mount the motor upside down (UP)
- High sensitivity antenna (up to 100 m )
- Manual control in case of power failure
- Soft START/STOP
- Editable limit positions
- Multiple connection variants



## SYSTEM DIMENSIONS [MM]



## torro

## Connection diagrams



## WARNING!

## AC MOTORS

## |Individual AC motor control

COMPATIBLE MOTORS:
AM35 | AM35 Q | AM45 | AM45 Q | AM45 S |AM45 QP | AM45 M | AM68 LS | AM75 LS | AM75 RF-5W | AM95 RF-5W


## DX2-LSR

LINE SWITCHING RELAY - SINGLE
power
230 V AC $50-60 \mathrm{~Hz}$


## AC405-01

4-CHANNELS CONTROLER

## COMPATIBLE MOTORS:

AM35 | AM35 Q|AM45 | AM45 Q|AM45 S | AM45 QP \| AM45 M | AM68 LS | AM75 LS | AM75 RF-5W | AM95 RF-5W



continious move (roller) and dot move (horizontal) mode available.

## AC212-03

Radio Receiver 230V ac RF

## COMPATIBLE MOTORS:

AM35 | AM35 Q | AM45 | AM45 Q|AM45 S | AM45 QP \| AM45 M | AM68 LS | AM75 LS | AM75 RF-5W | AM95 RF-5W

only continious move (roller) available

## AC125-02 | AC126-02 <br> PULSING SWITCH

COMPATIBLE MOTORS:
AM35 MEL RF | AM35 QMEL RF | AM68 RF | AM75 LS | AM75 RF | AM75 RF-5W | AM95 RF | AM95 RF-5W


## AC227-01 | AC228-01

Wall Switch With built-IN Radio reciver

## COMPATIBLE MOTORS:

AM35 | AM35 Q|AM45 | AM45 Q|AM45 S \| AM45 QP \| AM45 M | AM68 LS | AM75 LS | AM75 RF-5W | AM95 RF-5W


## DX1-3-T

230V > DCT CONVERTER

## COMPATIBLE MOTORS:

AM35 MEL RF | AM35 QMEL RF \| AM68 RF | AM75 LS |AM75 RF | AM75 RF-5W | AM95 RF | AM95 RF-5W


## AC407-01

16-CHANNELS RF CONTROLER

COMPATIBLE MOTORS:


power
230 V AC $50-60 \mathrm{~Hz}$

motor 230V AC

motor 230 V AC

## NAPEDY DC

## AC801-01

DC Power Supply


## AC227-03

Wall Switch with built-in radio reciver

## COMPATIBLE MOTORS:

AM24 / AM25

$\qquad$
$\qquad$ $+$


M motor DC 24 V

## AC228-03

Wall SWITCH WITH BuILT-IN RADIO RECIVER
COMPATIBLE MOTORS
AM24 / AM25


## DX3-24VDC-PS

## COMPATIBLE MOTORS:

AM24 / AM25


COMPATIBLE MOTORS:
AM24 RF / AM25 RF


## DX4

Converter 230V AC/24V DC
COMPATIBLE MOTORS:
AM24 / AM25


## |CONNECTIONS WITH FIBARO SYSTEMS

Fibaro Roller Shutter 2 - general connection


Fibaro - AC405 con
power
230V AC $50-60 \mathrm{~Hz}$

(*) it is necessary to set sustainable valid working time RS2.
The module does not recognize the limit positions.

continious move (roller) and dot move (horizontal) mode available.

Simultaneous control: Fibaro, remote control and Torro switch
power
230 V AC $50-60 \mathrm{~Hz}$


With remote control - only continious move (roller) mode available.

(*) it is necessary to set sustainable valid working time RS2. The module does not recognize the limit positions.

Podłączenie Fibaro - AM68LS

(*) it is necessary to set sustainable valid working time RS2.
The module does not recognize the limit positions.

## |Tube adaptations


<


[^0]:    Some controls may be not compatible with systems despite engine compatibility. Before ordering, we recommend consult the technical department.

[^1]:    * Mechanical brake required

