

SATION

KNX Curtain Motor User Manual



Product model:

SATION-WD0221.1214

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Version Description

Version number	Release date	Instructions
V1.0	March 23, 2022	First RELEASE

What to Watch for

- Please read the relevant contents of this manual carefully before using the product.
- This product is only suitable for indoor use.
- Ensure that the product is installed in a relatively dry and ventilated environment.
- Before the product is powered on, please confirm that the input voltage range meets the requirements of the manual.
- If the shell is found to be damaged before use, please do not continue to use this product to avoid accidents.
- This power supply product is only suitable for use in the EIB/KNX system bus.
- Other notes: The symbol below indicates that this product should not be treated as ordinary household garbage or waste. In order to prevent possible uncontrolled waste from causing damage to the environment and human health, it must be recycled to promote the recycling of limited resources. Therefore, after this product is discarded, please contact the relevant local garbage collection and disposal department to ensure that this product can be put into the correct waste disposal process.



1 Product Introduction

This manual provides you with detailed information on the SATION KNX curtain opening and closing motor product WD0221, including installation and how to use it.

The SATION KNX curtain opening and Closing motor, forms an intelligent building control system with other KNX devices via KNX bus. WD0221 has the functions of light pull start, power failure hand pull, stop when encountering obstacles, fabric rebound correction, electronic travel control and so on. It can not only solve the problems of sunlight radiation, heat insulation, glare, privacy and so on, but also easily create a comfortable and warm, intelligent and convenient living environment for you.

Using engineering debugging tool software ETS, it is convenient to complete the debugging of this system. The allocation of physical address and the setting of parameters are completed by ETS.

2 Scope of application

This product is suitable for flat curtain.

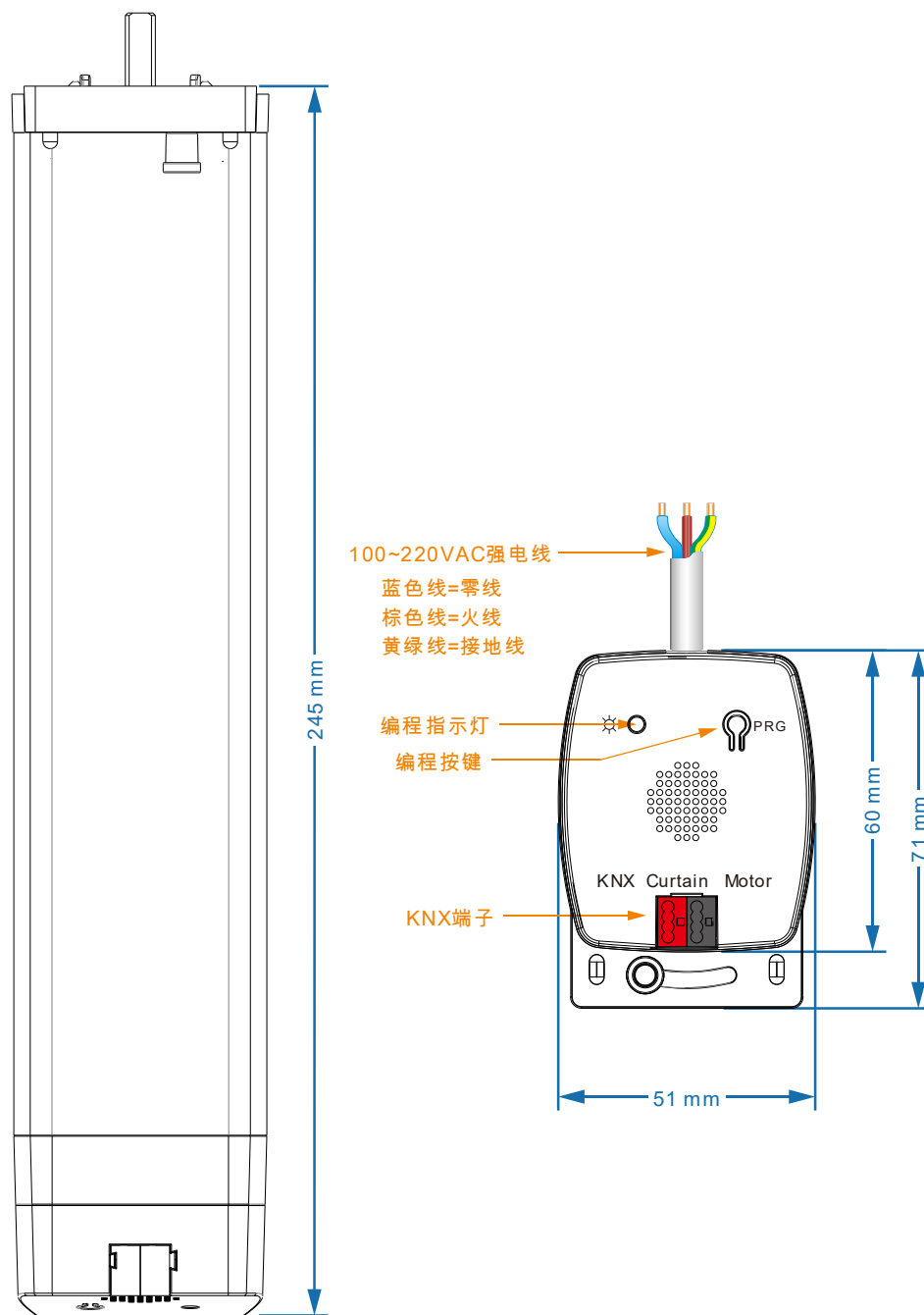
3 Functional Features

- 1) Wide voltage design: applicable to all countries of the world voltage.
- 2) Block stop function: when running, it will automatically stop to protect the whole system when it encounters certain resistance.
- 3) Pull start function: when the power is on, gently pull the curtain to move 5CM, and the curtain will automatically start to run.
- 4) Power failure pull function: Power failure can be like ordinary manual curtain by manual to open or close the curtain.
- 5) Multiple control interfaces: KNX system, RF remote control.
- 6) Information feedback function: real-time feedback curtain status.
- 7) Automatic memory travel function: the motor can automatically remember the position of the curtain travel when it is powered on for the first time.
- 8) Cloth rebound stroke correction function: when the travel is blocked, the motor automatically remembers the position of the rebound as the travel point, which can effectively avoid squeezing the cloth every time the curtain is opened.
- 9) Hardware check function: after power off, pull the curtain at will. After power on again, the trip setting before power off can be restored as long as the obstruction is encountered once.

4 Technical parameters

WD0221.1214 curtain opening and closing motor	
KNX voltage	21~30VDC
KNX current	<5mA
Control mode	KNX /RF remote control (frequency 433MHz)
Rated torque	1.2 N · m
Speed of opening and closing	14cm/s
Class of protection	IP20
Operating temperature	-10 C to +55 C
Input voltage	100 ~ 240V AC
Motor rated power	45W
Maximum load	50Kg
Running time	>4min
Minimum width	0.9 m
Maximum width	12m
Motor mass	0.55 Kg
Running noise	33dB

5 Product size

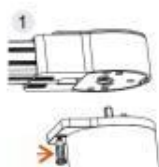


100~220VAC Wire:

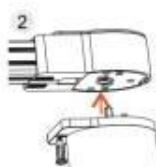
Blue wire = N wire; Brown wire = L wire; Yellow green wire = GND wire;

6 Installation and removal

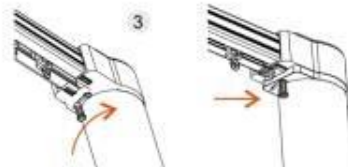
6.1 Installation



Check whether the head lock rod is in the schematic position. If it is on the right side of the diagram, pull the head lock rod and pull it to the left.



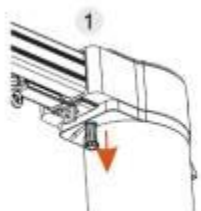
The motor is plugged into the main transmission box.



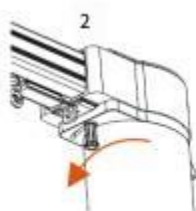
Pull the head lock lever to the right until the head falls into the right limit hole.

Note: The ceiling on which the motor is installed must be strong enough to withstand the full weight including the guide rail, motor, curtain cloth.

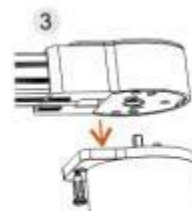
6.2 Disassembly



Pull the head lock bar down to slide the tip out of the limit hole



Pull the head lock lever to the left.



Remove the motor.

7 Remote operation

7.1 Remote control

Remote control is optional, no remote control can be used to control this product using KNX panel.

7.2 To code



Energize the motor

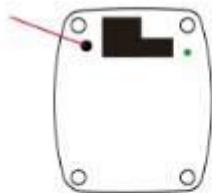


Release after holding down the function key of the motor for more than 3 seconds



Press the open or close key of the remote control, and the code is successfully matched

7.3 Delete code

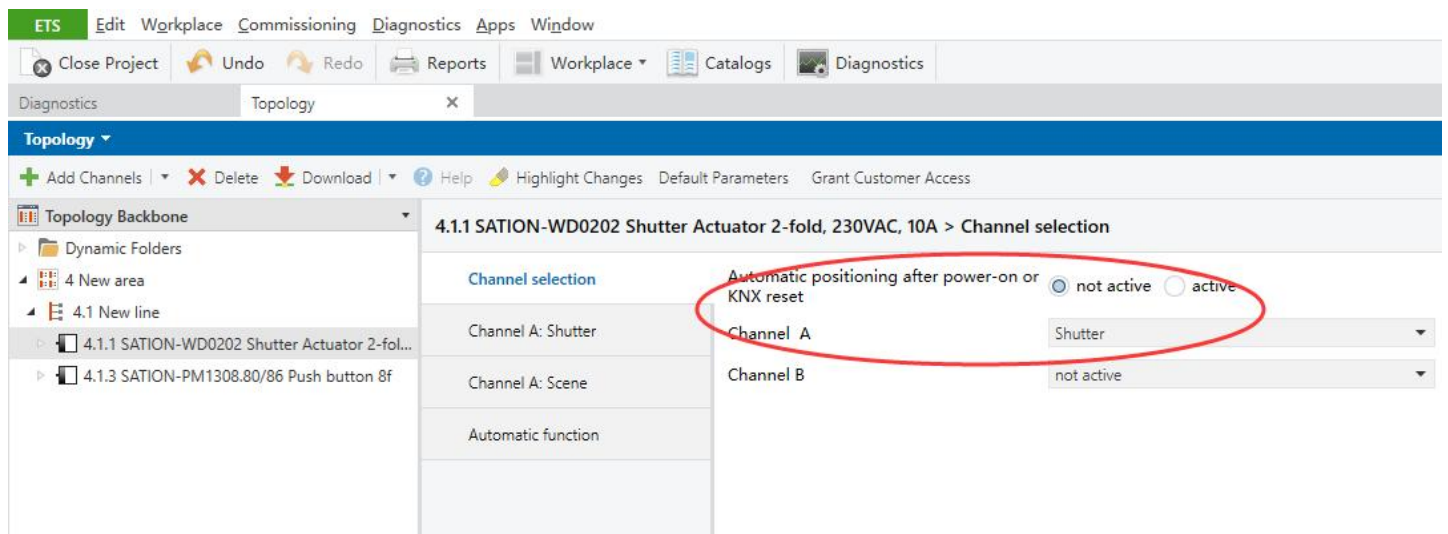


Hold down the function key for more than 5 seconds and wait until the indicator blinks quickly to clear the function

8 KNX debugging

KNX commissioning should be set before the opening and closing curtain motor travel.

- 1) The opening and closing curtain motor is powered on first, and then inserted into the KNX bus.
- 2) Press the programming button PRG, the programming indicator light is on. ☀
- 3) Import the database file "SATION-WD0202 Shutter Actuator 2-fold" into ETS software and select "channel A".



- 4) Configure the parameters needed for the control, complete download, after the download is completed, the programming indicator light will be off. ☀

The screenshot shows the ETS software interface with the 'Parameters' table open for the device '4.1.1 SATION-WD0202 Shutter Actuator 2-fold, 230VAC, 10A'. The table lists various parameters for Channel A, including 'Shutter up/down', 'Stop', 'Scene', 'Status current direction', 'Absolute position', 'Status current position', 'Current position valid', 'Start driving to reference', 'Status upper Position', and 'Status lower Position'. The 'Shutter up/down' parameter is highlighted with a red circle.

Name	Object Function	Number	Description	Length	Group Address	R	W	T	U	Data Type
all Channels	Blinds up/down	0		1 bit	-	W	-	-	-	up/down
all Channels	Slats adjustment /Stop	1		1 bit	-	W	-	-	-	open/close
all Channels	Stop	2		1 bit	-	W	-	-	-	switch
all Channels	Absolute position	3		1 byte	-	W	-	-	-	percentage (0..100%)
all Channels	Absolute position of slats	4		1 byte	-	W	-	-	-	percentage (0..100%)
Channel A	Shutter up/down	13	上下移动	1 bit	1/1/1	-	W	-	-	up/down
Channel A	Stop	15	停止移动	1 bit	1/1/2	-	W	-	-	switch
Channel A	Scene	16	窗帘场景	1 byte	1/1/16	-	W	-	-	scene control
Channel A	Status current direction	17	当前方向	1 bit	1/1/5	R	-	T	-	up/down, up/down
Channel A	Absolute position	18	指定行程位置	1 byte	1/1/3	-	W	-	-	percentage (0..100%)
Channel A	Status current position	20	当前行程反馈	1 byte	1/1/4	R	-	T	-	percentage (0..100%)
Channel A	Current position valid	22		1 bit		R	-	T	-	boolean
Channel A	Start driving to reference	23		1 bit		-	W	-	-	switch
Channel A	Status upper Position	25	上位置状态	1 bit	1/1/25	R	-	T	-	
Channel A	Status lower Position	26	下位置状态	1 bit	1/1/26	R	-	T	-	

- 5) Configure the KNX panel, KNX panel can control the KNX curtain opening and closing motor after the associated address.

9 Packing for shipment

WD0221 curtain opening and closing motor	
Packing	Single pack
Inner bag	Kraft paper box
Inner pack	292(L)*112(W)*62(H)mm

10 Troubleshooting

Phenomenon of failure	Failure analysis	Solutions
The control switch is pressed and the motor does not respond	Motor wiring is correct	Wire correctly according to the wiring instructions
The motor is running and the curtain is not moving	Rail installation is correct	Check and adjust the clearance between track gear and belt
Curtain running automatically	Another transmitter misread the code	Delete the whole code and learn the code again
You can't pull the curtains	1. Sudden power failure when the motor is running 2. The position of the hand is wrong, resulting in the block stuck	1, pull in the opposite direction, and then pull back 2. Move the hand position back 10CM

11 Contact information

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