



2016

KNX Shutter Actuator Manual



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1 Content

1	Technical data.....	3
2	Overview Functions.....	4
3	Device Technology.....	5
3.1	Appearance.....	5
3.2	Dimension drawing.....	5
3.3	Circuit diagram.....	6
4	Contact Us.....	7
5	Appendix.....	8

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Versions

Number	Date	Note
V1.0	2014.12.17	The first version

1. Please carefully read this manual before using the product
2. This product is used in indoor environment and installed in electrical control box
3. Please install this product in a dry and ventilated place
4. Before power on, please confirm the input voltage according to the manual; after power on, please confirm the normal output voltage before connecting to the control bus
5. Please make sure the secure shell is in good condition, if the shell is damaged, please stop using to avoid accident
6. The power lead and ground lead must meet the requirement of Electrical Installation Standard
7. Only used indoor, model number need to be changed for outdoor use
8. This product is NOT a toy, please make sure it is out of childrens' touch
9. Only be suitable for EIB/KNX system bus
10. Others:

The below sign indicates this product can't be dealt as ordinary family rubbish, in order to avoid the possible environment and human health harm caused by the electrical waste, this product must follow recovery processing. Please contact the local recycling department after this product is scrapped, to make sure it can go as the right waste processing procedure



1 Technical data

Power supply Characteristics	KNX-Bus feed	DC 21V...31V
	Supply current	< 12mA
	Consumption	<360mW
	Control ways	2 channel(WD0202)
	Rated operational voltage	110~400V AC(50/60Hz)
	Power loss of every input	1.5W
Working life	Switch mechanical life	>2000000 times
	Contact electrical life	comply with IEC 60947-4-1
	$\mu=0.8/240V$	>100000 times
	$\mu=0.45/240V$	>30000 times
External connection	EIB/KNX Bus	paired cable comply with KNX standard are required EIB/KNX bus terminal (diameter 0.8mm)
	Load-end terminal	minimum 0.6Nm torque are required for termination
Operation and display interface	Programming button and corresponding indicator	Button distributes address,program Red LED flicker indicates proper function
	Status indication of switch position	Green LED indicates corresponding operation
Enclosure protection	IP20\concealed cooling channel	EN60529
Safety level	II	EN61140
Insulated isolation	Overvoltage	EN60664-1 III
	Electric network pollution	EN60664-1 2
KNX safety level	SELV	24V DC
Temperature range	Operation temperature	-5°C...+45°C (3K5type)
	Long-term storage temperature	-25°C...+55°C
	Transportation temperature	-30°C...+70°C
Environmental requirement	Maximum humidity	93%,(condensation is exclusive)
Mechanical parameter	Size	4TE
	Weight	0.3 kg
	Installation	35mm U-shape rail (EN60715 EN50022)
Appearance	Gary-white, PVC panel	
Certification	KNX EN50090-1\2	
CE certified	Refer to appendix	
EMC index	Refer to appendix	

2 Overview Functions

This booklet provides all the details for SATION Curtain Actuator products, including the installation and the usage explanation

SATION Curtain Actuator connect the KNX bus and other equipments to form the building electrical equipments control system, and it can control the AC load without additional power. The AC motor need to be rotated clockwise and anti-clockwise at the same time. The Curtain Actuator is implemented for switching 2 ways independent AC load. The maximum load current for output of each control point is 10A (AC) or 2A(DC 48V)\8A(DC 30V),each circuit could be adjusted manually,the switch status are externally visible.

Applying the engineering debugging tool ETS can easily complete the debugging of the entire system. The distribution of the physical address and parameter setting can be done by using the engineering design tool software ETS (more than ETS3 V1.3) with the VD3/VD4 files, VD4 file need to be installed in case of using ETS 4 software.

The following functions can be set single way:

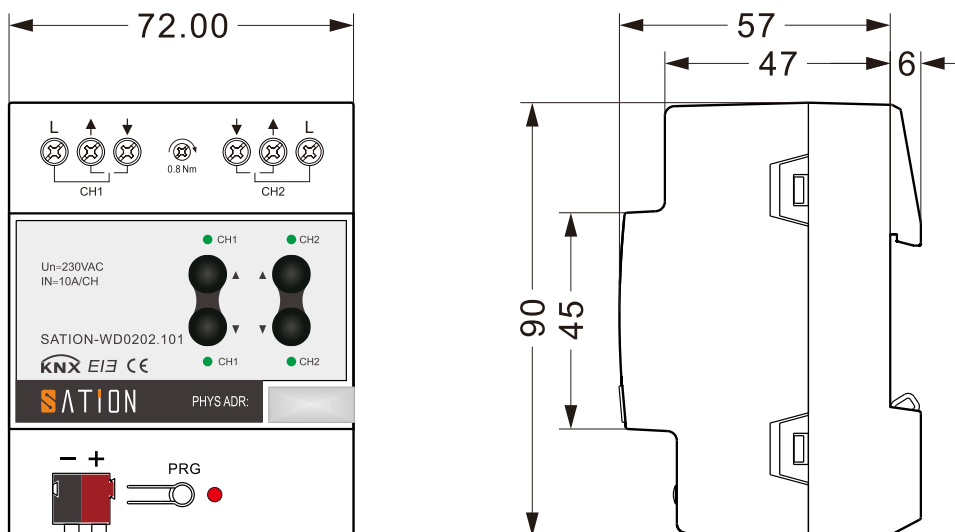
- Curtain control function: control the clockwise and anti-clockwise operation of curtain motor
- Time control function: ON/OFF with adjustable latency time
- Scene and pre-set control: 8 or 1
- Manual operation and safety function
- Self -recovery of relay switch location after bus voltage disconnection and recovery

3 Device Technology

3.1 Appearance



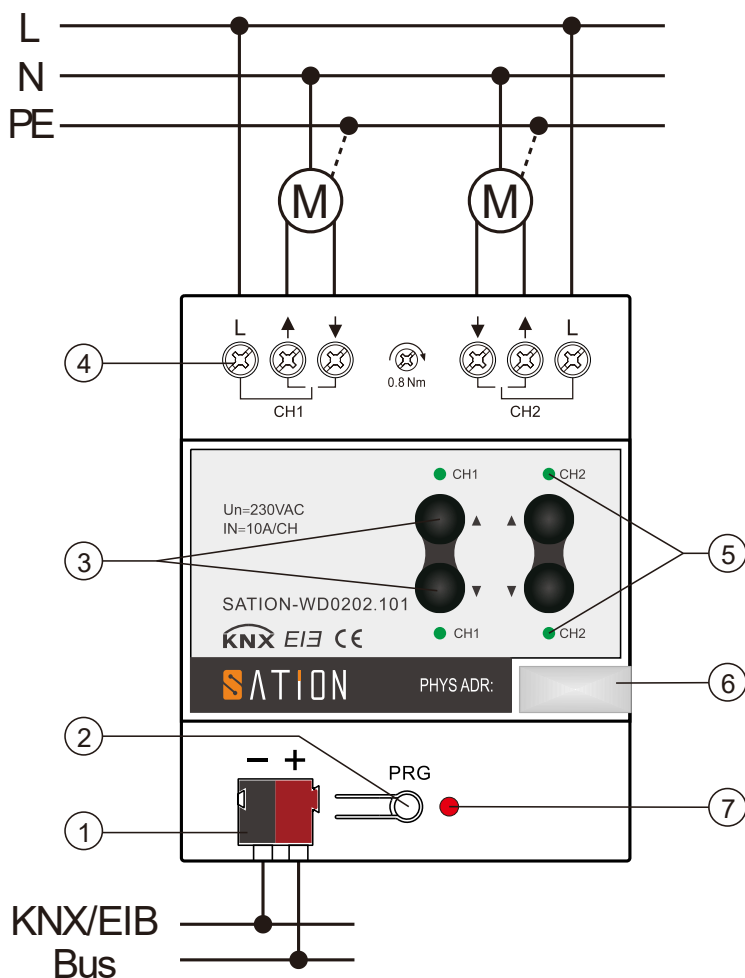
3.2 Dimension drawing



Note: 1 All the size is in mm

2. Comply with EN 60715 installation standard, installed in the 35 mm rail

3.3 Circuit diagram



1 KNX bus port

2 Equipment programming button

3 Manual control and test button

4 Output control terminal

5 Indicator of button operation (green)

6 Address label screen

7 Indicator light of programming (red)

Note: ↑ indicates the anti-clockwise rotation of motor, ↓ indicates the clockwise rotation of motor, the common port of motor is connected with zero line N. Customer can confirm the wiring according to the practical motor operation, please be in strict accordance with the silk signs on the shell, the L line of 2 way control output is independent, the customer can choose different phase lines for every circuit.



4 Contact Us

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5 Appendix

I. The chart shows the SATION Curtain Actuator CE standard.

Items	Executive standard	Requirement level	Performance criteria	Remarks							
ESD (EN61000-4-2)	EN61000-6-1	Contact 4KV/ Air 8KV	B								
RS (EN61000-4-3)		80MHz-2GHz: 3V/m 2G-2.7GHz: 1V/m	A								
EFT (EN61000-4-4)		±1KV	B								
SURGE (EN61000-4-5)		L-N ±1KV L-PE ±2KV	B								
C/S (EN61000-4-6)		3V	A								
M/F (EN61000-4-8)		3V/m	A								
DIPS Voltage dips(EN61000-4-11)		<table><tr><td>0 0.5</td><td>% residual voltage cycle</td></tr><tr><td>0 1</td><td>% residual voltage cycle</td></tr><tr><td>70 25/30 at 50/60Hz</td><td>% residual voltage cycle</td></tr><tr><td>0 250/300 at 50/60Hz</td><td>% residual voltage cycle</td></tr></table>	0 0.5	% residual voltage cycle	0 1	% residual voltage cycle	70 25/30 at 50/60Hz	% residual voltage cycle	0 250/300 at 50/60Hz	% residual voltage cycle	B & C
0 0.5	% residual voltage cycle										
0 1	% residual voltage cycle										
70 25/30 at 50/60Hz	% residual voltage cycle										
0 250/300 at 50/60Hz	% residual voltage cycle										
Conduction Interference	EN61000-6-3	66dB(μV) - 56 dB(μV) QP 56dB(μV) - 46 dB(μV) AV	A	0.15MHz-0.5MHz							
		56 dB(μV) QP 46 dB(μV) AV	A	0.5MHz-5MHz							
		60dB(μV) QP 50dB(μV) AV	A	5MHz-30MHz							
Radiation Interference		40 dB(μV/m)	A	30MHz-230MHz							
		47 dB(μV/m)	A	230MHz-1000MHz							
Harmonic Current	EN61000-3-2		A								
Voltage Flicker	EN61000-3-3		B								

Remark 1: Above captioned requirement refers to KNX standard chapter 4-2

Remark 2: Performance criteria A: equipment transmission and functional error-free

Performance criteria B: some error allows



II. The chart shows the SATION Curtain Actuator CE standard.

Items	Executive standard	Requirement level	Performance criteria	Remarks
	EN60947-3			
Isolation strength test	√	2	--	
Fire retardant test	√	2	--	
Temperature test	√	2	A	
Anti-corrosion test	√	2	A	
Electrical endurance test	√	2	A	
On-off capacity test	√	2	A	
Normal operation test	√	2	A	