TigerIoT

Perfect Control Device Achieve Smart Cities

TW... Electric Actuator Technical Data

Rev.1.0.2

TW... Electric Actuator

TW500…, suitable for valve stroke ≤20m, nominal output force 500N

Features Introduction

RS485 Remote Control

The actuator is equipped with RS485 communication interface. The valve can be remotely controlled by Mod-Bus protocol.

Supporting APP

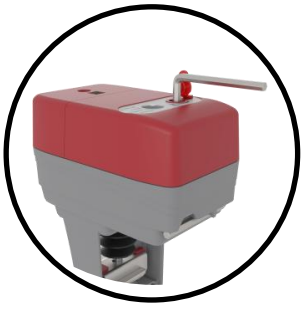
Supporting APP is offered to control the valve opening, set and read a number of parameters.

Self Stroking Function

It can automatically measure the max. valve stroke without debugging.

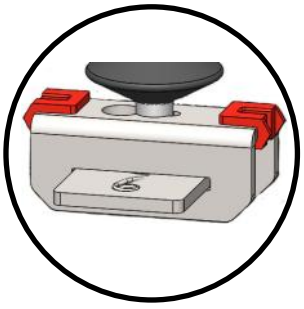
Speed Adjustability

The speed can be switched through Dip switch.



Manual Device

The actuator has the mechanical manual function for easy maintenance and debugging.



Seamless Connection

It adopts the seamless connection structure.
It can ensure there is no gap during the movement which let the actuator have a higher control precision.
The structure is simple and convenient to operate without tools.

TW... Electric Actuator

TW600…, suitable for valve stroke ≤20m, nominal output force 600N
TW1000…, suitable for valve stroke ≤20m, nominal output force 1000N
TW1001…, suitable for valve stroke ≤40m, nominal output force 1000N
TW3000…, suitable for valve stroke ≤40m, nominal output force 3000N
TW5000…, suitable for valve stroke ≤60m, nominal output force 5000N

Features Introduction

- **RS485 Remote Control**

The actuator is equipped with RS485 communication interface. The valve can be remotely controlled by ModBus protocol.

- **Fail Safe**

The position of the valve can be configured in the event of a power failure.

- **Supporting APP**

Supporting APP is offered to control the valve opening, set and read a number of parameters.

- **Staying in position at signal loss and Action at signal loss**

Staying in position and action and at signal loss can be selected through the DIP switch.
Staying in position at signal loss: the actuator at signal loss will remain in its current position (applicable to 2-10V or 4-20mA).
Action at signal loss: the actuator at signal loss will automatically run to the fully closed position (fully open position).

- **Self-caliberation Function**

It can automatically measure the max. valve stroke without debugging.

- **Speed Adjustability**

The speed can be switched through Dip switch.

- **Manual Device**

The actuator has the mechanical manual function for easy maintenance and debugging.

- **Local Mode (Electric manual function)**

The actuator has local control function which can control the valve opening and closing by the buttons on the plate.

- **Up to IP68**

The protection level has been upgraded to IP68, making it applicable to more application scenarios.

TW... Electric Actuator

TW16000…, suitable for valve stroke ≤100m, nominal output force 16000N

Features Introduction

RS485 Remote Control

The actuator is equipped with RS485 communication interface. The valve can be remotely controlled by ModBus protocol.

Supporting APP

Supporting APP is offered to control the valve opening, set and read a number of parameters.

Self Stroking Function

It can automatically measure the max. valve stroke without debugging.

Optional control/feedback signals

Four kinds of signals (0-10V, 2-10V, 0-20mA, 4-20mA) are optional. It can be selected via Dip switch.

Manual Device

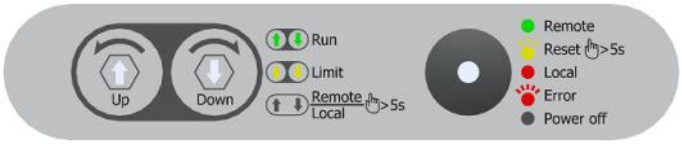
The actuator has the mechanical manual function for easy maintenance and debugging.

More reliable connection structure

The connection between actuator and valve stem adopts high strength connection mechanism to ensure the stability and avoid slippage.

Local Mode (Electric manual function)

The actuator has local control function which can control the valve opening and closing by the buttons on the plate.



LED Indicating Light

There are LED indicating lights on the actuator cover which is convenient to observe the actuator running status.

Type Summary

Force	Operating Voltage	Type	Control signal	Feedback signal	Stroke	Speed		Power	Rec. Transformer
						High	Low		
500N	24V	TW500-XD24-S.10	0(2)~10VDc, 0(4)~20mA	0(2)~10VDc, 0(4)~20mA	26mm	2s/mm	4s/mm	24VAC:10VA	30VA
								24VDC:5VA	15VA
		TW500-XD24-S485.10	0(2)~10VDc, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		2s/mm	4s/mm	24VAC:10VA	30VA
								24VDC:5VA	15VA
	110-220V	TW500-D220-SF2.10	Floating	2 SPDT feedback		2s/mm		15VA	/
600N	24V	TW600-XD24-S.12	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC,0(4)~20mA	30mm	1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
		TW600-XD24-S485.12	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
		TW600-XD24-SF2.12	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
	110V-220V	TW600-XD220-S.12	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC,0(4)~20mA		1s/mm	2s/mm	30VA	/
		TW600-XD220-S485.12	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	30VA	/
		TW600-XD220-SF2.12	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	30VA	/
1000N	24V	TW1000-XD24-S.12	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA	30mm	1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
		TW1000-XD24-S485.12	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
		TW1000-XD24-SF2.12	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
	110V-220V	TW1000-XD220-S.12	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA		1s/mm	2s/mm	30VA	/
		TW1000-XD220-S485.12	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	30VA	/
		TW1000-XD220-SF2.12	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	30VA	/
1000N	24V	TW1001-XD24-S.14	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA	50mm	1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
		TW1001-XD24-S485.14	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
		TW1001-XD24-SF2.14	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
	110V-220V	TW1001-XD220-S.14	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA		1s/mm	2s/mm	30VA	/
		TW1001-XD220-S485.14	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	30VA	/
		TW1001-XD220-SF2.14	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	30VA	/
3000N	24V	TW3000-XD24-S.14	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA	50mm	1s/mm	2s/mm	24VAC:40VA	60VA
								24VDC:20VA	50VA
		TW3000-XD24-S485.14	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	24VAC:40VA	60VA
								24VDC:20VA	50VA
		TW3000-XD24-SF2.14	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	24VAC:40VA	60VA
								24VDC:20VA	50VA
	110V-220V	TW3000-XD220-S.14	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA		1s/mm	2s/mm	50VA	/
		TW3000-XD220-S485.14	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		1s/mm	2s/mm	50VA	/
		TW3000-XD220-SF2.14	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		1s/mm	2s/mm	50VA	/
5000N	24V	TW5000-XD24-S.14	0(2)~10VDCC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA	70mm	2s/mm	4s/mm	24VAC:50VA	80VA
								24VDC:25VA	50VA
		TW5000-XD24-S485.14	0(2)~10VDC, 0(4)~20mA, RS485	0(2)~10VDc, 0(4)~20mA, RS485		2s/mm	4s/mm	24VAC:50VA	80VA
								24VDC:25VA	50VA
		TW5000-XD24-SF2.14	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		2s/mm	4s/mm	24VAC:50VA	80VA
								24VDC:25VA	50VA
	110v-220V	TW5000-XD220-S.14	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA		2s/mm	4s/mm	60VA	/
		TW5000-XD220-S485.14	0(2)~10VDC, 0(4)~20mA ,RS485	0(2)~10VDc, 0(4)~20mA, RS485		2s/mm	4s/mm	60VA	/
		TW5000-XD220-SF2.14	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		2s/mm	4s/mm	60VA	/
16000N	220V	TW16000-XD220-S.15	0(2)~10VDC, 0(4)~20mA	0(2)~10VDC, 0(4)~20mA	110mm	2.7s/mm		150VA	/
		TW16000-XD220-S485.15	0(2)~10VDC, 0(4)~20mA ,RS485	0(2)~10VDc, 0(4)~20mA, RS485		2.7s/mm		150VA	/
		TW16000-XD220-SF2.15	0(2)~10VDC, 0(4)~20mA Floating	0(2)~10VDC, 0(4)~20mA 2 SPDT feedback		2.7s/mm		150VA	/

Type Summary

- **Type for actuator with fail safe function**

Force	Voltage	Type	Control signal	Feedback signal	Stroke	Speed		Power	Rec. Transformer
						High	Low		
500N	24V	TW500-XD24-S.10C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA	30mm	2s/mm	4s/mm	24VAC:10VA	30VA
								24VDC:5VA	15VA
600N	24V	TW600-XD24-S.12C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA	30mm	1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
	110V-220V	TW600-XD220-S.12C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA		1s/mm	2s/mm	30VA	/
1000N	24V	TW1000-XD24-S.12C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA	30mm	1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
	110V-220V	TW1000-XD220-S.12C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA		1s/mm	2s/mm	30VA	/
1000N	24V	TW1001-XD24-S.14C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA	50mm	1s/mm	2s/mm	24VAC:33VA	50VA
								24VDC:12VA	30VA
	110V-220V	TW1001-XD220-S.14C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA		1s/mm	2s/mm	30VA	/
3000N	24V	TW3000-XD24-S.14C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA	50mm	1s/mm	2s/mm	24VAC:40VA	60VA
								24VDC:20VA	50VA
	110V-220V	TW3000-XD220-S.14C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA		1s/mm	2s/mm	50VA	/
5000N	24V	TW5000-XD24-S.14C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA	70mm	2s/mm	4s/mm	24VAC:50VA	80VA
								24VDC:25VA	50VA
	110v-220V	TW5000-XD220-S.14C	0(2)~10VDC，0(4)~20mA	0(2)~10VDC，0(4)~20mA		2s/mm	4s/mm	60VA	/

DIP Switch Instruction

- **TW500/600/1000/1001/3000/5000/16000...**

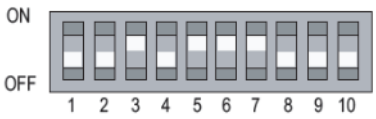
Switch	Function	Description	
S1-1	Starting of control/ feedback signal	ON	4~20mA or 2~10VDC
		OFF	0~20mA or 0~10VDC
S1-2	Type of control signal	ON	Current signal
		OFF	voltage signal
S1-3	Input impedance	ON	voltage signal
		OFF	Current signal
S1-4	Type of control signal	ON	Current signal
		OFF	voltage signal
S1-5	Operating mode	ON	When the control signal increases, actuator shaft extends; When the control signal decreases, actuator shaft retracts.
		OFF	When the control signal increases, actuator shaft retracts; When the control signal decreases, actuator shaft extends.
S1-6	Losing control signal mode	ON	When lose control signal (voltage type or current type), actuator will provide a min. control signal internally.
		OFF	1)When lose control signal (voltage type), actuator will provide a max. control signal internally. 2)When lose control signal (current type), actuator will provide a min. control signal internally.
S1-7	Self-stroking mode	ON	Power on each time, self-calibration starts automatically.
		OFF	Self-stroking starts only when press the self-calibration button manually.
S1-8	Control type (when S1-9 is OFF)	ON	Floating
		OFF	Modulating
S1-9	Control mode	ON	RS485 interface control (Modbus protocol)
		OFF	Modulating and floating type
S1-10	Staying in position at signal loss	ON	Actuator stays in position when signal loss (only applicable to input signal of 4~20mA)
		OFF	Actuator works as S1-6 setting

Function Introduction

- **Modulating type**

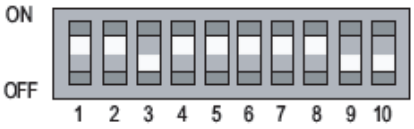
Control signal/feedback signal: 4~20mA

Control signal/feedback signal: 0~10VDC



When TW...is modulating type, terminal B,O is power input, actuator can be controlled by connecting terminal O,E, as shown above, when equipped with our TL.../TF.../TTF...series Globe Valve, DIP Switch S1-5 is DA mode:
Control signal at terminal O,E increasing: actuator shaft extends, valve stem retracts, valve tends to open.
Control signal at terminal O,E decreasing: actuator shaft retracts, valve stem extends, valve tends to close.
Control signal at terminal O,E has no changing, actuator shaft and valve stem stay in present position.
When voltage (or current) signal is disconnected, this is equivalent to input a min. control signal, actuator shaft retracts, valve closed.

- **Floating Type**



When Dip switch S1-8 is on, it is floating type. Terminal B,O is power input, control the actuator by the switch O,UP,DOWN:
O, UP connected: actuator shaft retracts, and valve stem extends
O, DOWN connected: actuator shaft extends, and valve stem retracts
Notes: Terminal E,Y doesn't work by this time!

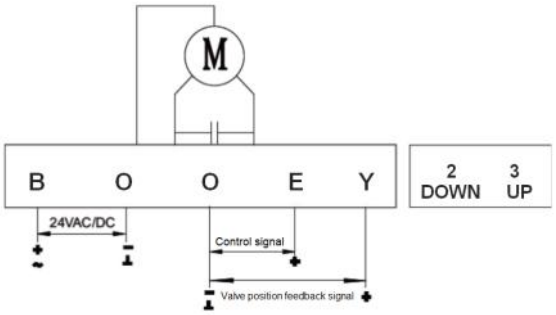
- **RS485 Bus Communication**

When Dip switch S1-9 is on, it is RS485 Bus communication type. Terminal B,O is power input, remote control by terminal 8,9:
Actuator can be controlled remotely by RS485 bus communication, actuator supports ModBus protocol.
Notes: Terminal O,E,Y,UP,DOWN doesn't work by this time!

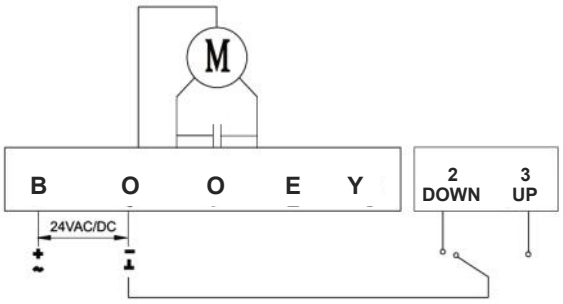
Wiring diagram

- **TW500**

TW500-XD24-S.10

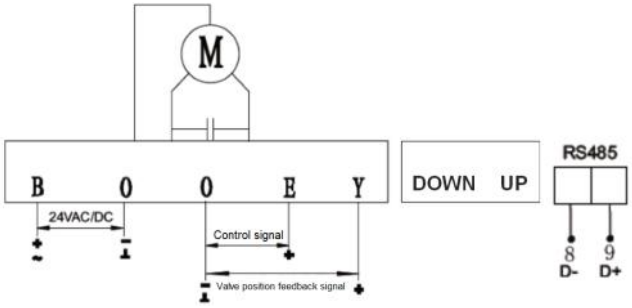


Modulating



Floating

TW500-XD24-S485.10



TW500-XD24-S485.10

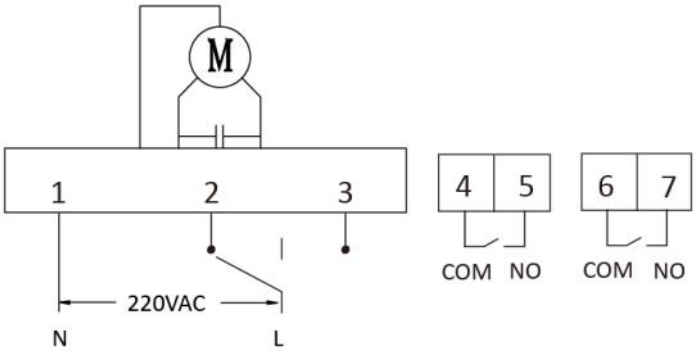
Note:

1) when wire the actuator of BX24 with RS485, only connect terminals B, O and RS485;

2) when wire the actuator of BX220 with RS485, only connect terminals L, N and RS485;

Wiring diagram

TW500-D220-SF2.10



Floating with 2 SPDT Feedback Function

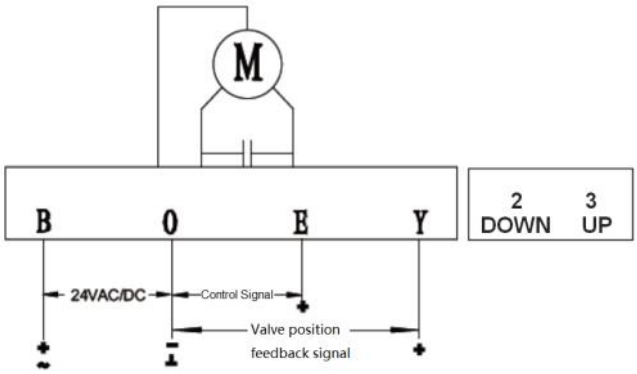
Notes:

Terminal 1, 2, and 3 are power input:
When terminal 1 and 2 power on, the actuator will run from 1 to 0.
When terminal 1 and 3 power on, the actuator will run from 0 to 1.

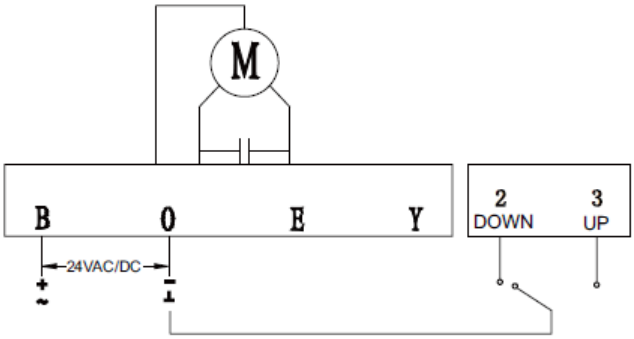
Terminal 4, 5, 6, and 7 are SPDT feedback:
When the actuator runs to limiting position 0, terminal 4 and 5 will conduct and output dry contact feedback.
When the actuator runs to limiting position 1, terminal 6 and 7 will conduct and output dry contact feedback.

- **TW600/1000/1001/3000/5000/16000**

TW600/1000/1001/3000/5000-XD24

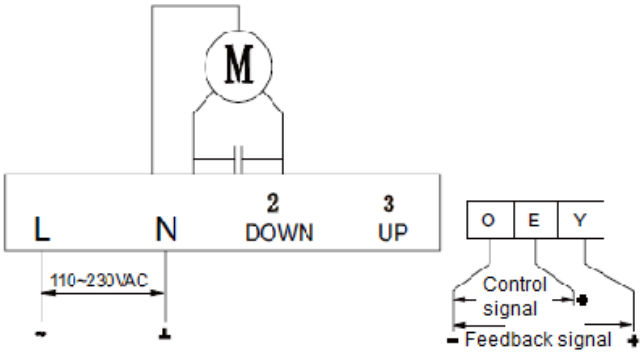


Modulating

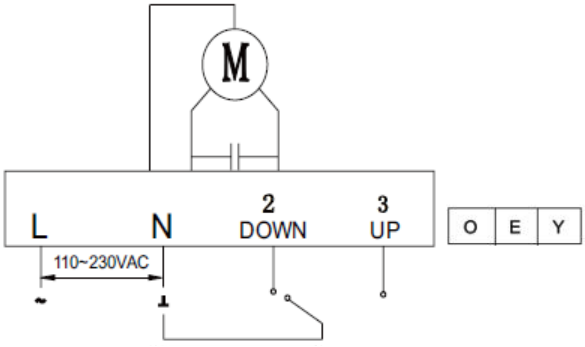


Floating

TW600/1000/1001/3000/5000/16000-XD220...



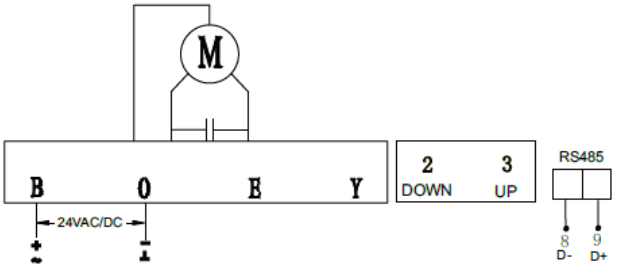
Modulating



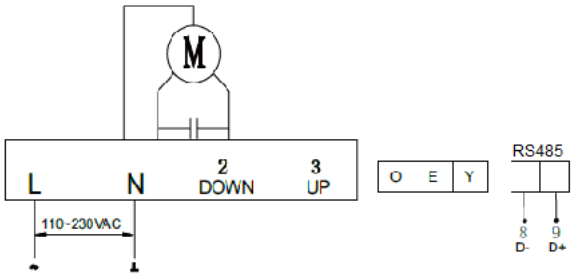
Floating

Wiring diagram

TW600/1000/1001/3000/5000-... –S485...



TW...-XD24-S485...



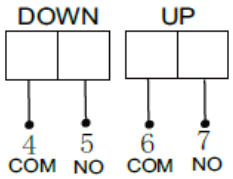
TW...-XD220-S485...

Note:

1) when wire the actuator of BX24 with RS485, only connect terminals B, O and RS485;

1) when wire the actuator of BX220 with RS485, only connect terminals L, N and RS485;

TW600/1000/1001/3000/5000-... –SF2...



Note:
When TW...is 2 SPDT, terminal 4,5,6,7 are normally open contact, contact capacitance ≤30VDC:
When the actuator runs to lower limit position, terminal 4,5 connect.
When the actuator runs to upper limit position , terminal 6,7 connect.

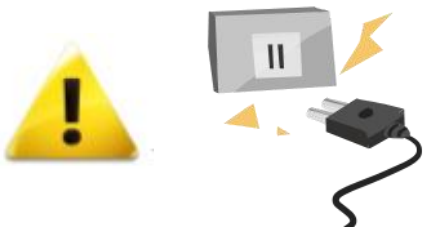
Wiring instruction

1. Please cut off power supply during wiring in order to ensure personal safety!

2. Carefully check the power voltage when wiring, wire according to the product parameter, if not, it may cause fire and endanger personal safety in severe case!

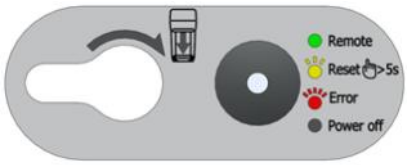
3. Open the cover when wiring, prohibit disassembling other spare parts!

4. After wiring, please install the cover to the original position to avoid electric shock!



Indicating Light

- **TW500**



Reset	Status	Description
Green	Always	Normal mode
Orange	Flashing	Self-stroking
Red	Quick flashing	Alarming

- **TW600/1000/1001/3000/5000/16000**

Reset	Status	Description
Green	Always	Normal mode
Red	Always	Local mode
Orange	Flashing	Self-stroking
Red	Quick flashing	Alarming

UP	Status	Description
Green	Always	Normal mode
Red	Always	Local mode
Orange	Always	Reach upper limit position
Red	Flashing	Alarming

DOWN	Status	Description
Green	Always	Normal mode
Red	Always	Local mode
Orange	Always	Reach lower limit position
Red	Flashing	Alarming

Debugging Instruction

A. Connect actuator and valve body, wiring according to wiring diagram.

B. Automatic self-stroking (factory default setting): actuator will repeat automatic self-stroking when power on each time, the process is as follows:

1) The Reset yellow indicating light will keep flashing, actuator shaft extends to lower limit position firstly and then, it retracts to upper limit position, actuator will not be controlled by signal by this time.

2) Reset yellow light stop flashing, self-stroking stops. By then, actuator running direction can be controlled by control signal.

3) If the Reset red light is quick flashing during the self-stroking, it means the self-stroking status is not correct and the actuator will start alarming. The actuator can not match with the valve's max. stroke.

Remarks: If you don't need automatic self-stroking function , you can set the 7th switch to OFF, it will change into manual self-stroking.

C. Manual self-stroking function: If self-stroking is need in a power-on state, press down the Reset button over 5 seconds, and then the actuator starts self-stroking. The phenomenon is the same as step B.

D. RS485 function:

RS485 adopts standard Modbus protocol, the following parameters can be set through supporting APP:

RS485 address: the default address is 1.

Band rate:2400/4800/9600(Default) /19200

Byte format: 8bit Data Bits, No Parity (Default)/odd check/even check, 1 stop bit

E. Cellphone supporting APP: Open the mobile APP client and close to the actuator scanning area. After connected, it can set the actuator parameters.

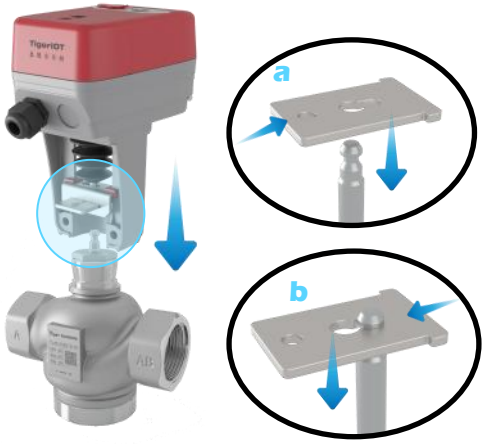
Notes:

Current type actuator can't set signal division, please use the function after setting voltage type.

Assembling instruction

Warning!
1. Prohibit installing outdoors to avoid PCB damage due to the condensation and water.
2. Rain cover(TRAIN-1) and heating belt(THOT-3) are necessary in case of outdoor installation.

- **TW500...**



1.

Loosen the slider under the actuator bottom with Allen wrench, then press the pallet in direction a as shown above and let the valve stem pass through the hole of the pallet, when the two connecting faces keep coinciding, loosen the pallet as show in b above, fix the stem in the slot.

2.

Place the slot into the actuator, then tighten the screws.

3.

This is how the valve and actuator should look after correct assembly.

- **TW600/1000/1001/3000/5000...**

1.

Loosen the slider and clip, then put the actuator on the valve body and keep the two connecting faces coinciding, fix the screws on the slit with Allen wrench.

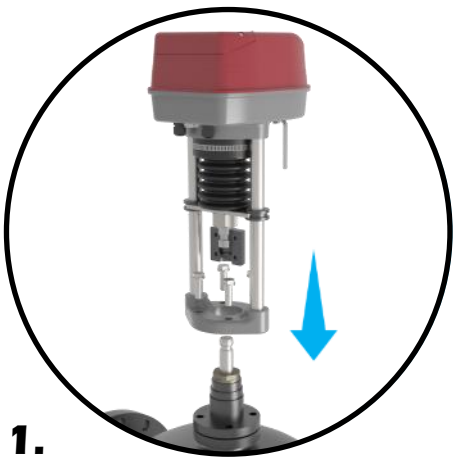
2.

Place the slot into the actuator and tighten the two screws.

3.

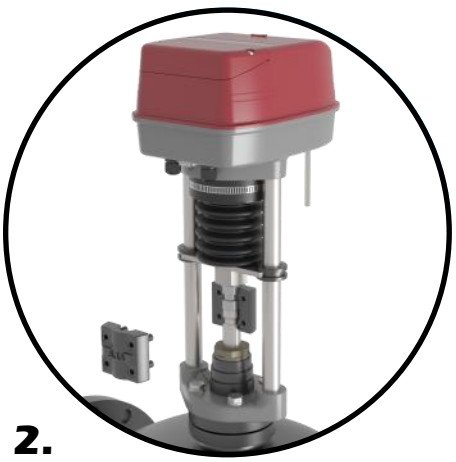
This is how the valve and actuator should look after correct assembly.

- **TW16000...**



1.

Align actuator bracket with flange on valve body, tighten 4 mounting bolts.



2.

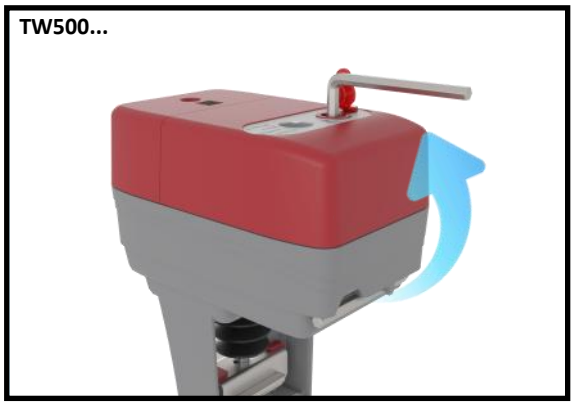
Make the main shaft contact with valve stem and make them on the same axis, then install

3.

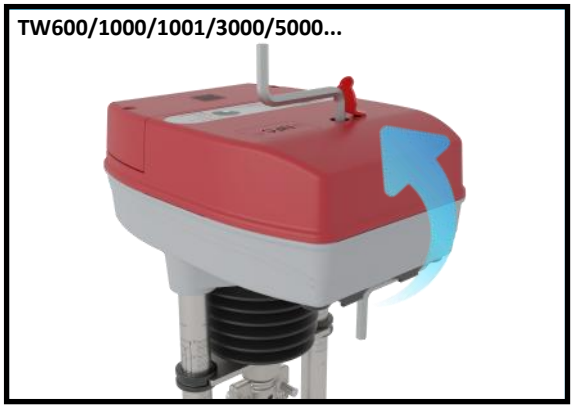
This is how the valve and actuator should look after correct assembly.

Manual Device Operation

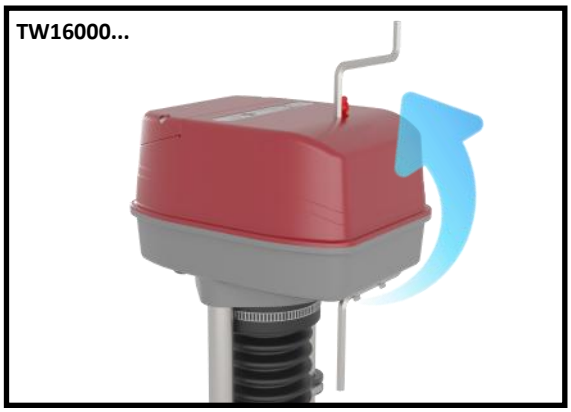
TW500...



TW600/1000/1001/3000/5000...



TW16000...



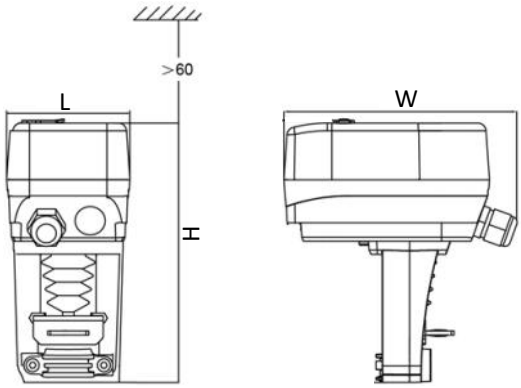
1. Shut off and prepare for manual operation.
2. Insert the Allen wrench into the manual hole on the top of the cover.
3. Turn the Allen wrench anticlockwise, the actuator shaft retracts;
   Turn it clockwise, the actuator shaft extends.
4. Manual operation is done, take out the wrench and cover tightly the red plug.

Note: In the case of power off, the actuator needs self-stroking again after the manual operation is completed.

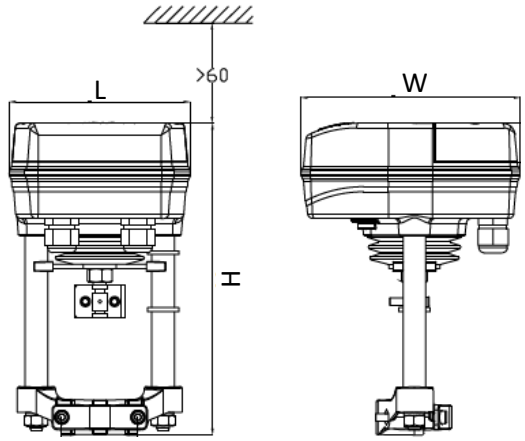
Manual self-stroking method: press the Reset button on the actuator cover over 5s, actuator will enter self-stroking!

Dimension

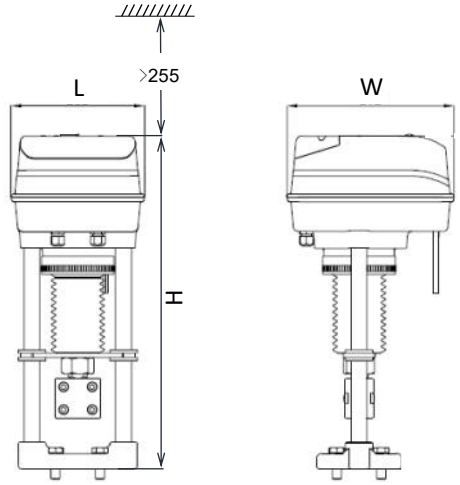
TW500...



TW600/1000/1001/3000/5000...



TW16000...



TW series	L mm	W mm	H mm
TW500...	97	170	192
TW600...	143	173	255
TW1000...	143	173	255
TW1001...	143	173	275
TW3000...	143	193	285
TW5000...	143	193	305
TW16000...	232	292	583

• Operating Parameters	
Rated output power	500N / 600N / 1000N / 3000N / 5000N / 16000N
Operating Voltage TW...-XD24... TW...-XD220… TW500 TW600/1000/1001/3000/5000 TW16000	 24VAC±15%,24VDC±15% 220VAC ± 15% 110VAC -220VAC ± 15% 220VAC ± 15%
Control sensibility	Modulating: 0.8% RS485: 0.2% (default setting)
Dead zone (only for modulating type)	2% (default setting)
Impedance (only for modulating type) voltage input impedance current input impedance	 〉100K 〈0.2K
Load requirements (only for modulating type) voltage output load requirement current output load requirement	 〉2K 〈0.5K (For TW500 〈0.4K)
Degree of protection	TW500: IP54 TW600/1000/1001/3000/5000: IP68 TW16000: IP65
Cable connector	PG13.5
Life time	100 thousand cycles

• Spare Parts Material	
Cover	TW500: PC TW600/1000/1001/3000/5000: PC TW16000: Aluminum die casting
Body	TW500: PC TW600/1000/1001/3000/5000: Aluminum die casting TW16000: Aluminum die casting
Bracket	TW500: Aluminum die casting TW600/1000/1001/3000/5000: stainless steel TW16000: stainless steel
Seat	TW500: Aluminum die casting TW600/1000/1001/3000/5000: Aluminum die casting TW16000: casting iron

• Environment Parameter	
Running	
Ambient temperature	-25~+65℃
	-25~+50℃ (for fail safe actuator)
Ambient humidity	≤95% RH non-condensation
Storage	
Ambient temperature	-40~+65℃
	-25~+50℃ (for fail safe actuator)
Ambient humidity	≤95% RH non-condensation

• Certificate	
CE certificate	
EMC directive	2014/30/EU
Low Voltage Directive	2014/35/EU
Machinery directive	2006/42/EC
System Certification	
QMS	GB/T19001-2016 / ISO9001:2015
EMS	GB/T24001-2016 / ISO14001:2015
OHSAS	GB/T45001-2020 / ISO 45001:2018

Hazardous Substances

Hazardous Substances						
Parts	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Metal	×	○	○	○	○	○
Rubber	○	○	○	○	○	○
PCB	×	○	○	○	○	○
Package	○	○	○	○	○	○

This form is created in accordance with the SJ/T11364 standard.

o :Indicates that the concentration of the hazardous substance contained in all the homogeneous materials of this part is below the limit requirement of the GB/T 26572.

x :Indicates that the concentration of the hazardous substance contained in all the homogeneous materials of this part is above the limit requirement of the GB/T 26572.

WeChat Official Account

Channels

TigerIoT

Website: www.tigeriot.com Welcome to follow the "Tige IoT" related platform for more information