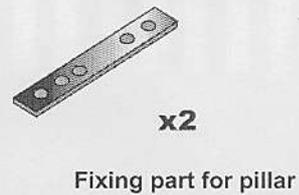# USER'S MANUAL

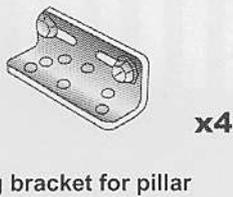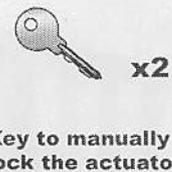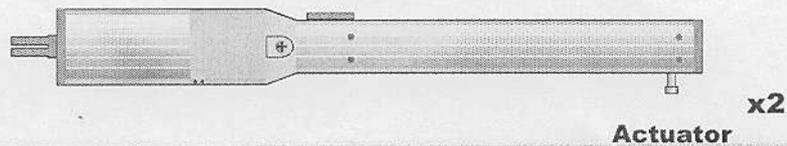# SWING GATE OPENER
SW430 SERIES
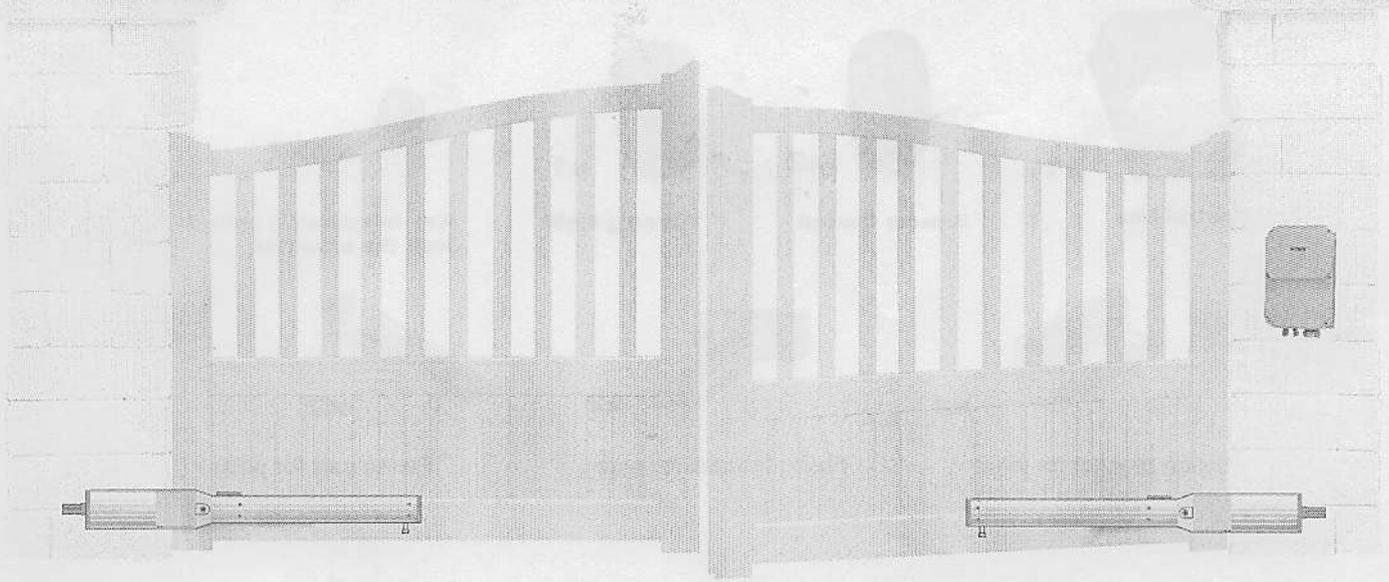
3.00m max.
200kg max.

3.00m max.
200kg max.

Important Safety Advice:

1. Knowledge of the relevant electro-technical regulations is required.
2. Training in use and maintenance of safety equipments is necessary.
3. Professional assistance is required when some mechanism adjustment is needed.
4. Always lay mains and control cables separately.
5. Test every equipment before initial operation.
6. Make familiar with the use of the system before initial operation.

Content of the Kit:

x2
Actuator

x1
Control Box

x2
Remote Control

x1
Warning Light

x2
Key to manually unlock/lock the actuator

x4
Fixing bracket for pillar

x2
Fixing bracket for gate

x2
Fixing part for pillar

Wiring Diagram:

Actuator

Garden Lamp

Warning Light

Control Box
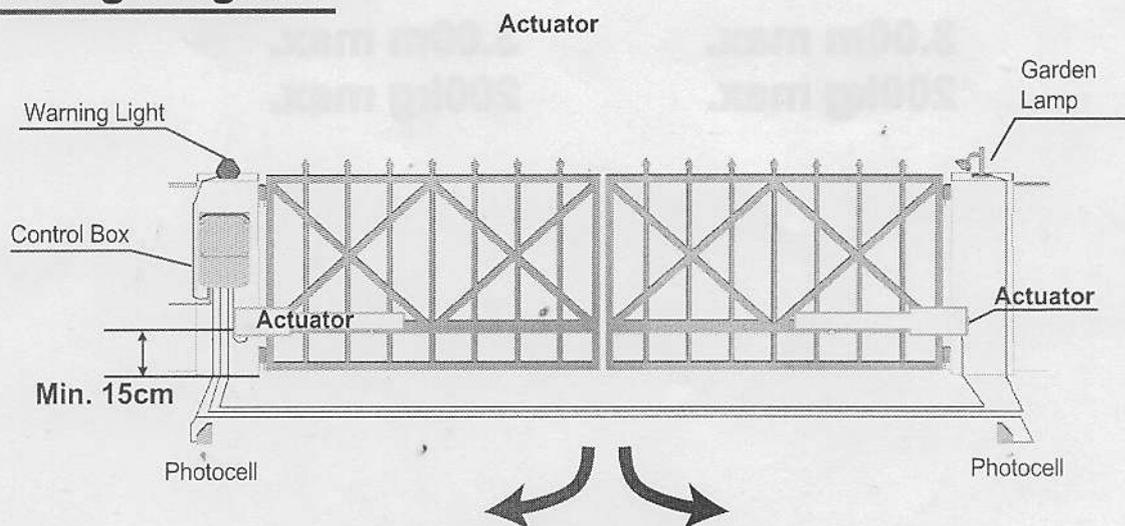
Actuator

Actuator

Min. 15cm

Photocell

Photocell

Important Safety Advice:

1. Knowledge of the relevant electro-technical regulations is required.
2. Training in use and maintenance of safety equipments is necessary.
3. Professional assistance is required when some mechanism adjustment is needed.
4. Always lay mains and control cables separately.
5. Test every equipment before initial operation.
6. Make familiar with the use of the system before initial operation.
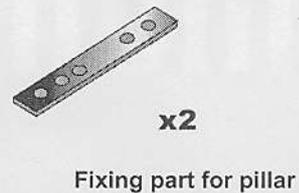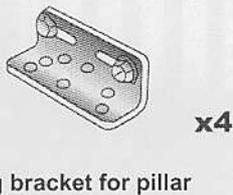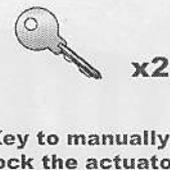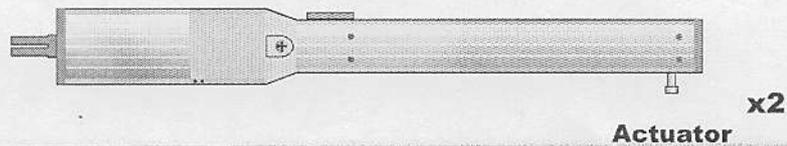
Content of the Kit:

x2
Actuator

x1
Control Box

x2
Remote Control

x1
Warning Light

x2
Key to manually unlock/
lock the actuator

x4
Fixing bracket for pillar

x2
Fixing bracket for gate

x2
Fixing part for pillar

Wiring Diagram:

Actuator

Warning Light

Garden Lamp

Control Box

Actuator

Actuator

Min. 15cm

Photocell

Photocell

Instruction of Installation:

1. Assemble the metal fixing brackers for the gate pollars.
   And then fix the bracket to the pillar.

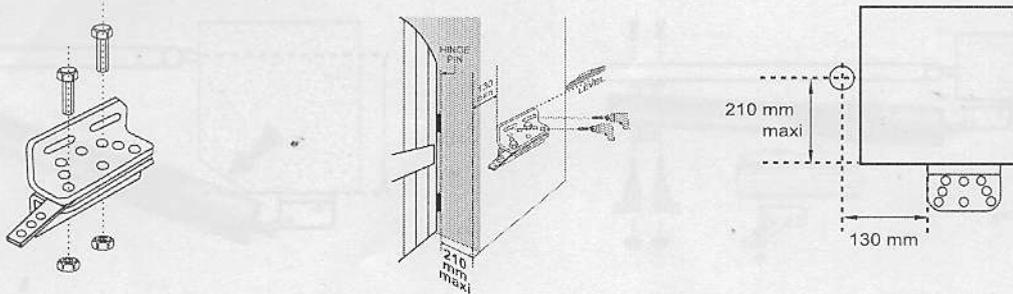**IMPORTANT:**

If the hinge of your gate is more than 210mm from the edge of the pillar, it is necessary to adapt the pillar to ensures the hinge is less than 210mm from the edge of the pillar.
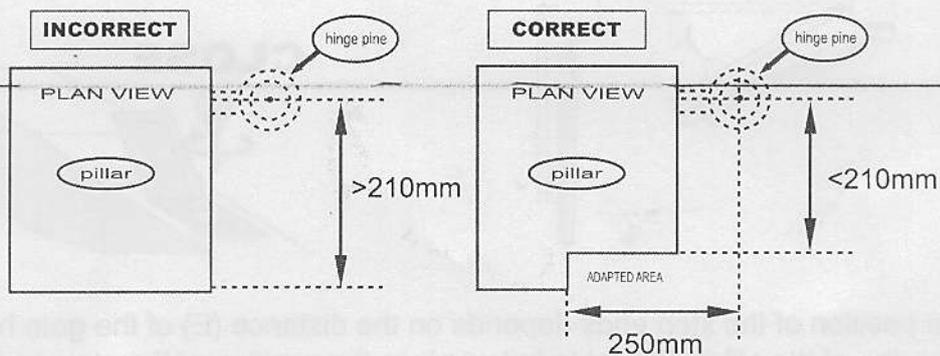
2. Fix the actuator to the fixing bracket.
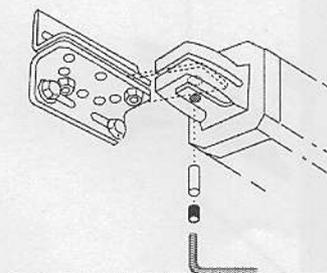
3. Unlock the actuator and adjust the stem of the actuator.
   Normally, the factory preset is already 10mm from the end of the stroke.
   if it is difficult to move the stem by hand, drive it electrically to avoid damage to the gate or kit.
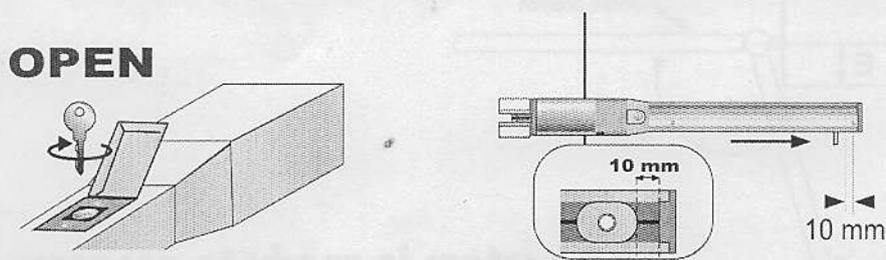
OPEN

4. Fix the metal bracket on the gate and check that the actuator does not touch the pillar.
   If this is the case, it will be necessary to make a notch in the corner of the pillar.
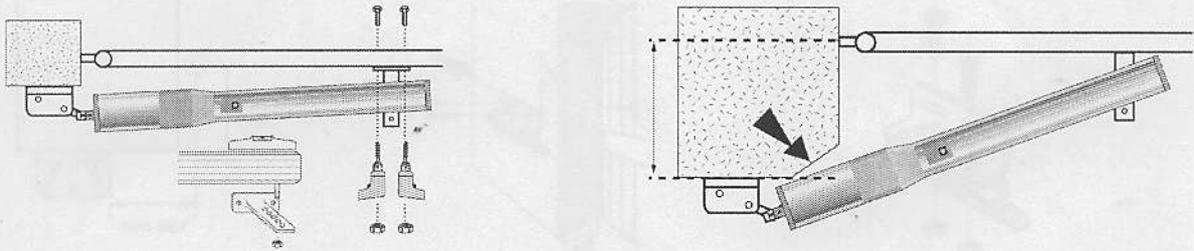
5. Test the opening of the gate manually. It must move freely by itself.
   If not, you must insert the stem of the actuator in another of the fixing bracket..
   If no problem, lock the actuator.

CLOSE
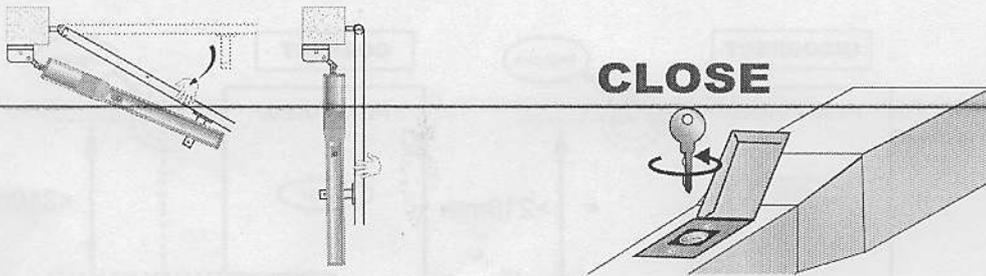
6. The position of the stop ends depends on the distance (E) of the gate hinge from
   the edge of the pillar. The table below gives the position of the stop end according to (E).
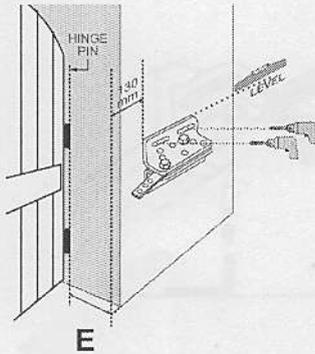
E	angle
E<12mm	120°
12mm<E<67mm	110°
67mm<E<123mm	100°
123mm<E<210mm	90°

closed position

E

angle

stop end
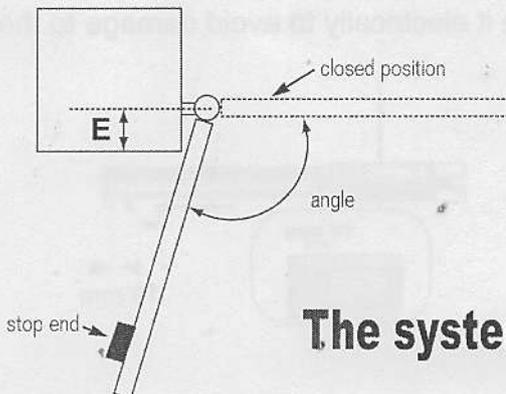
The system is ready to program and operate.

Connection Diagram

Thermal Fuse

to transformer
(230V AC)

230 V AC in

Backup battery

230 V AC out
for Garden Lamp

12 VDC input from main PCB

To transformer
(12V AC)

To Backup Battery
(12V DC)

Dip Switches

Auto

RF
Clear

RF lamp

**Color indication for
motor wire:**

Black wire for -
Red wire for +
12V DC

Actuator2
Actuator1
Warning Light

+12V
Ground
Sensor

Antenna
Ground
To external open/close switch
To external Garden Lamp switch
For external LED display
Garden Lamp Manual Button
Open/close Manual Button
12V DC output to small PCB

PHOTOCELL SENDER	PHOTOCELL RECEIVER

OPTIONAL

DC GND
+12V

DC GND NO NC COM
+12V

+12V
GND

+12V
GND

NC
COM

Transformer

AC 230V in

AC Wiring :

Inside of the control box, the wiring should be like the photo on the left.

Opening / Closing Learning:

Please proceed this function before using this product, otherwise the system will drive the gates improperly. E.g.: The gate can't close completely or can't open to the intended degree with some stroke length left unused.

To activate this function, press " Auto" button on the PCB for 3 seconds while the PCB is on. After release the "Auto" button, it will enter the opening/closing learning mode as below:

1. The system will close the gates first.
   Please remove any obstacle could possibly block the gate.
   Before the actuators start, the warning light will blink for 3 seconds.
   Then Actuator 2 will close first, and then Actuator close 1 second later.
2. After 3 seconds, Actuator 1 will open the gate 1 fully,
   waiting for 3 seconds, Actuator 2 will open the other gate 2 fully.
3. After 3 seconds Actuator 2 will close fuly first, waiting for 3
   seconds, Actuator 1 will close fully.
4. System repeats the actions of point 2 and 3 one more time.
5. After 3 seconds, system checks operation of Actuator 1 and Actuator 2 together.
6. After learning process succeeded, the system is ready for use.
   If the system blinks after this learning mode, which means learning in vain,
   please make sure that there's no obstacle on the way,
   then try again to trigger the learning mode.

Auto
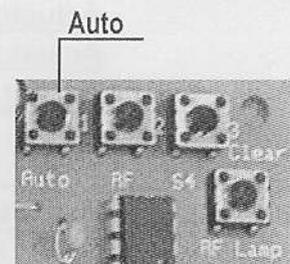
NOTE:

The Opening/Closing Learning couldn't be done successfully due to the over-weight of the gates. Then, the Current Limit needs to be adjusted. Please refer to P7 of this manual. If any assistance is needed, please contact the technicians of our agent.

Copyright©

Remote Learning (activation of remote control for gate and lamp operation):

To activate the remote control service, please proceed the following steps:

A. RF gate learning: (for Open/Close the Gates)

1. Press "RF" key on the PCB for over 2 seconds
   while the PCB is on.
2. You'll see the LED light on (learning mode entered),
   please press any key on the remote control,
   LED will now blink for 3 times (learning succeeded)
   or light off after 10 seconds without blinking
   (learning failed, please try again the whole process).
3. Please repeat the step 1 and 2 to activate another
   remote control, otherwise the unlearnt remote control won't
   be recognized by the system.
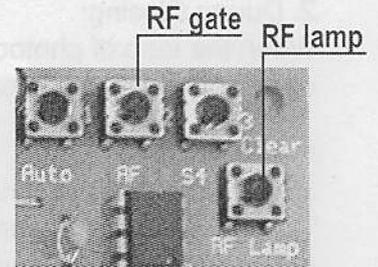
B. RF lamp learning:(for Turning On/Off the Garden Lamp)

Proceed with "RF lamp" key on the PCB and another key on the remote control as step 1~3 above.

**Note: Up to 8 different RF remote control keys can be learnt for each function
       by this system (gates & Garden Lamp).**

Remote Control:

**Choose two of the four keys to proceed RF learning.
The rest of the keys are available for other purposes such as
Garage Door Opener.**

The remote control has 4 keys on it, and choose two of them to proceed RF learning for
one-key gate control and lamp control separately.

Operation (open, close and stop) by remote control:

The remote operation is very simple: one key press will open the gate, next press to stop, next to
close the gate, next to stop...and so on.

When opening the gates:

1. Warning light will blink for 3 seconds, then Actuator 1 opens, 4 seconds later the Actuator 2 opens.
2. If the gate hits something, Actuators reverse for 3 seconds warning light blinks until next command
   received.

When closing the gates:

1. Warning light will blink for 3 seconds, then Actuator 2 closes, 4 seconds later the Actuator 1 closes.
2. If the gate hits something, Actuators reverse for 3 seconds warning light blinks until next command
   received.

Lamp control (on and off) by remote control:

Simply switch on and off the lamp by the key which had proceeded the "RF lamp" learning.

Remark:The gate operation works properly only after sucessful Opening/Closing Learning.

Photocell (Optional):

1. During Opening:
When the loop of photocells has been intercepted, system will:
A. ignore, if the Actuator 2 has been activated. OR
B. halt, if the Actuator 2 hasn't been activated yet.

2. During Closing:
When the loop of photocells has been intercepted, system will stop closing the gates and then open both gates simultaneously until the set position.

Auto close:

30 seconds or 60 seconds later (only when this function is enabled, depends on your setting of key 1 of dip switch), warning light will blink for 3 seconds then Actuator 2 closes, 4 seconds later Actuator 1 closes. When the process finished, warning light will be switched off.

Manual gates control on the PCB:

1. The operation is the same as remote: one key press will open the gate, next press to stop, next to close the gate, next to stop...and so on.
2. Optional handset or external wall button is available.(Connected to O/C & GND terminals)

Manual lamp on:

Simply switch on and off the lamp by the "Manual lamp on" key.

Clear RF memory:

Press "Clear" key on the PCB for over 2 seconds while the PCB is on.
You'll see the LED blinking for 2.5 seconds then the RF memory has been cleared.

Reset:

Press "Clear" key on the PCB and input AC power; keep pressing "Clear" key for over 2 seconds.
You'll see the LED blink for 2 seconds and light on for 3 seconds then light off.
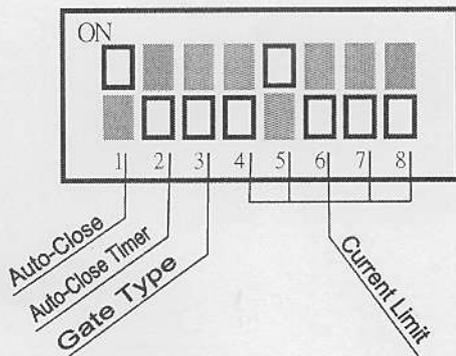Once the mentioned actions have been carried out, all RF data will be cleared.

Quick release:

Use the Key to unlock the actuator to move the gates manually.

Clutch adjustment:

The SW430 series feature a clutch mechanism inside the actuator as an additional protection.
Any adjustment for the clutch requires professional assistance.

Settings of Dip Switches:

The default setting of dip switches.

| Key No.	Function	ON	OFF
1	Auto-Close	Yes	No
2	Auto-Close Timer	60 Sec	30 Sec
3	Gate Type	Heavy Gate	Light Gate
4~8	Current Limit	selected	unselected

NOTE:
The current limit setting could be needed to adjustment according the weight of the gates during Opening/Closing Learning.

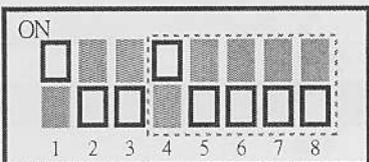## Approx. current limit values for different dip switch setting:

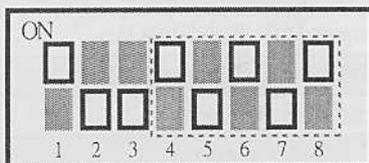| switch 4	switch 5	switch 6	switch 7	switch 8	All off
1.0A	2.0A	3.0A	3.7A	4.5A	5.2A
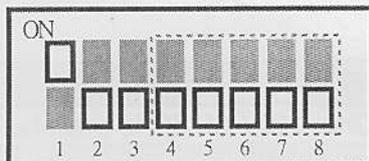
Maximum Current Limit (means also the worst sensibility, could shorten the life of motor, please try lower current limit first)
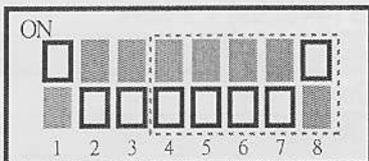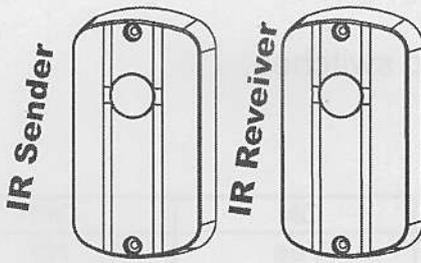
Second Highest Current Limit

Minimum Current Limit

When user switches several switches on, for safety reason, system will choose the lowest (switch 4instead of switch 6 or 8) current limit setting automatically.

Optional Accessories:

1 Set of Photocell

Operation of Photocell:

Select a proper installation site, where the sender and receiver can be along the same line and at the same height.   Connect to the opener's PCB as wiring diagram above. Power on the system, try and see if it works properly by interruptting the IR between the sender and receiver for times. The relay in the receiver should respond accordingly while LED switches ON and OFF.

With photocell well installed, while it's triggered during opening the gates, the gates will ignore the interruption and open. While it's triggered during closing the gates, the gates will reverse for 3 seconds and stop and warming light will keep blinking untill next command sent .

Specifications :

Model	SW430
Power Supply	230V AC ±10% 50Hz; 110V AC 60Hz available
Power for Motor	12 VDC
Maximum Gate Weight	200KGS (440Lbs) x 2 Max.
Maximum Gate Width	3.0M + 3.0M (20Feet)
Stroke Length	350mm (15in)
Drive	ACME
90° Operating Time	around 15 Sec
Open Range	120° Max.
Duty Cycle	20%
Operation Temperature	-20~65°C
Overload Protection	Yes
Backup Recharging Battery Foundation	Yes (Not Including Battery 12V,7AH)
Auto Gate Close	Adjustable timer (off/ 30/ 60sec)
Extension Terminal	Warning Light / Photocell / Back-up Battery
RF Carriage	315 MHz/ 433.92 MHz
Control Range	Approx. 30~50 Meters