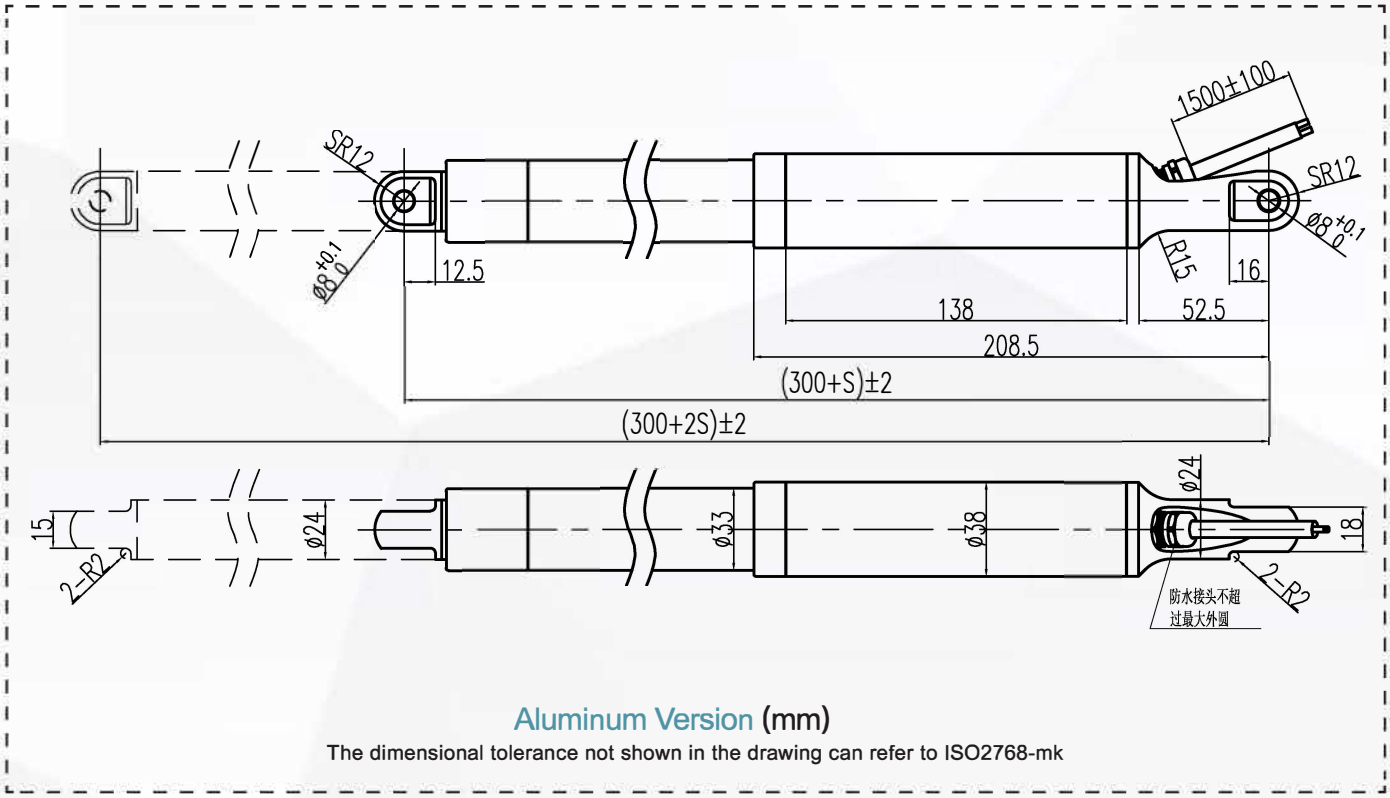
13PBR-38O

FEATURES AND BENEFITS

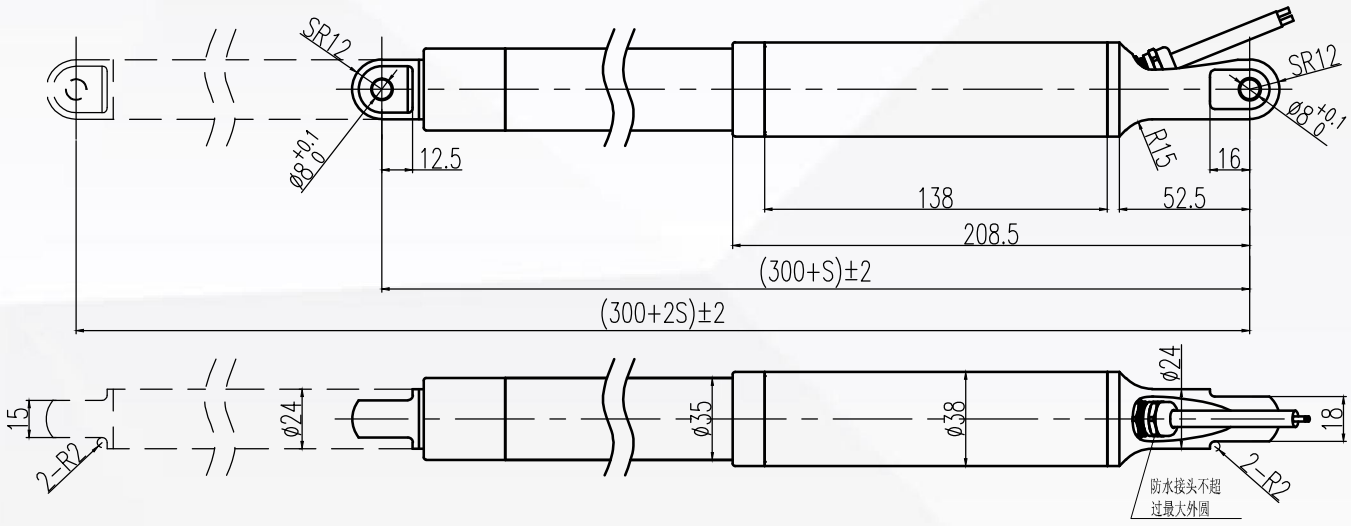
- 13PBR-38O is created specially for the bioclimatic pergola, where the water proof, elegant design, trouble free, compact size are crucial.
- With max load capacity 2500N, customized stroke length and forces, the 13PBR-38O can be used for different types and sizes of the bioclimatic pergolas.
- 13PBR-38O can withstand very harsh environments because of its IP67M, IP69K protection design and special materials used to fit the pergola market.
- Maintenance-free, Easy Installation, Trouble free are also the main features.
- 13PBR-38O can work smoothly , quietly and precisely to guarantee its excellent performance on world famous brands pergola.
- 5 years warranty is offered.

DIMENSION



Aluminum Version (mm)

The dimensional tolerance not shown in the drawing can refer to ISO2768-mk



Stainless Steel Version （mm）

The dimensional tolerance not shown in the drawing can refer to ISO2768-mk

SPECIFICATIONS AND OPTIONS

Voltage	12VDC	24VDC	**Duty cycle**	10%, 2 minutes continuous use followed by 18 minutes in rest
No load current	≤1.2A	≤0.6A	**Life time**	≥10000 cycles
Load current	≤3.8A	≤1.8A	**Working temperature**	-20°C ~ 60°C
Max power	50W		**Storage temperature**	-40°C ~ 70°C
Stroke	20-400mm (stroke can be customized)		**Material of lead screw**	# 45 steel
Limit switches	Built- in		**Material of push rod**	SUS316
Installation length(min)	300+S(“S” for stroke)		**Material of push nut**	Engineering plastic
Noise level on load	≤56dB		**Standard color**	Metal color
Protection class	IP67M/IP69K		**Standard cable length**	1.5m (cable length can be customized)
Backlash	0.5-1mm		**Certification**	CE

Options: Over current protection , Hall sensor feedback, Aluminum version, Stainless steel version

FORCES AND SPEEDS

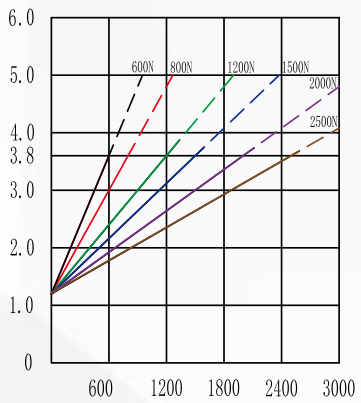
Push force	Pull force	Self-locking force	Speed on load	No load speed
600	600	600	10.5	13
800	800	800	7	8.5
1200	1200	1200	4.5	5
1500	1500	1500	4	5
2000	2000	2000	3.5	5
2500	2500	2500	2.3	3.3

CURVE

Accuracy of speed or current : ±15%, in general, applications in the dashed are not recommended.

CURVE(Force/ current)

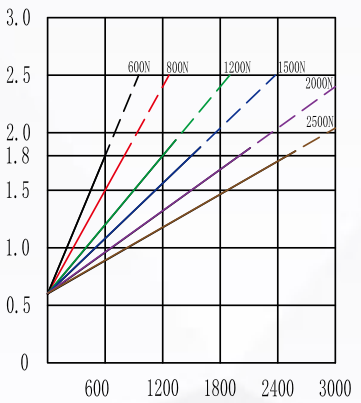
Current(A)-12VDC



Force(N) Pull-push force

CURVE(Force/ current)

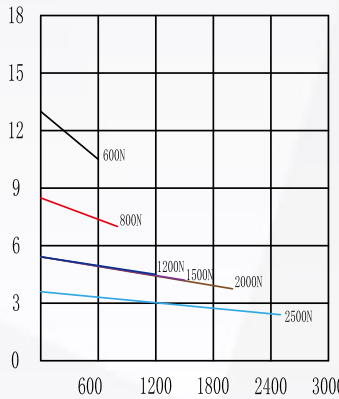
Current(A)-24VDC



Force(N) Pull-push force

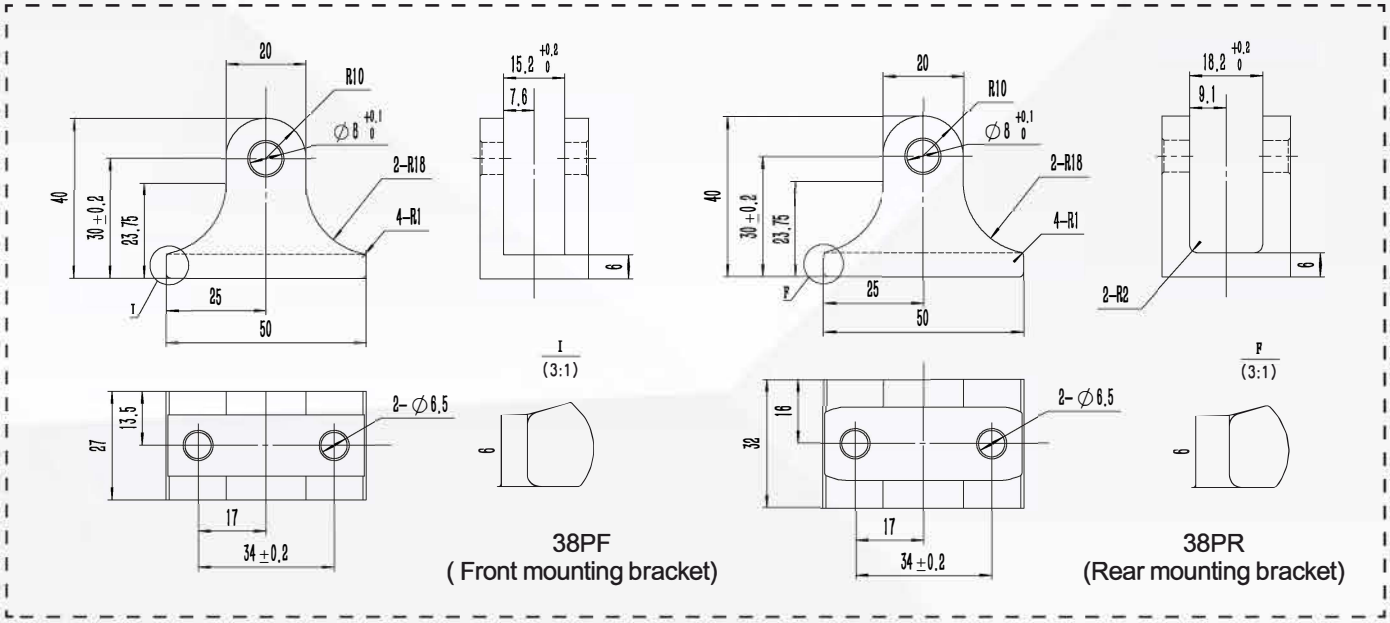
CURVE(Speed/force)

Speed （mm/s）



Force(N) Pull-push force

MOUNTING BRACKETS



OVER CURRENT PROTECTION

FUNCTION

Over current protection can be added to the actuator,when the actuator extends to full stroke or overloaded,it will protect the actuator by limiting motor's current.The function of over current protection is to protect the actuator from damage.

SPECIFICATIONS

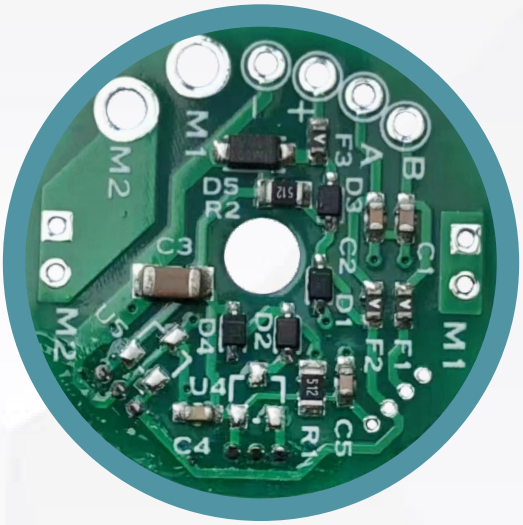
(Circuit breaking current A)

Voltage/Model	13PBR-38O
DC12V	4.5A
DC24V	2.5A

Notes

- The anode(+) and cathode(-) for input and output circuit can be interchangeable, input voltage is DC12V or DC24V.
- The circuit breaking response time is 0.1-0.5s.
- The ambient temperature range must be -20°C to 60°C and storage temperature is -40°C to +70°C.
- Max duty cycle is 10% or 2 minutes in use followed by 18 minutes rest.

HALL SENSOR



WIRE DIAGRAM

White	Hall sensor B Vout
Green	Hall sensor A Vout
Red	Hall sensor VCC +
Black	Hall sensor GND -
Blue	Motor-
Brown	Motor+

- Two channel Hall sensor PNP type
- Input 5-12v
- Output 5-12v

Hall sensor can be added to the actuator and the function of hall sensor is to provide a signal feedback to the receiver to judge the motor speed.

If we know how many signals hall sensor can produce in one circle,we will know how many signals the hall sensor can provide to the receiver when the motor runs one circle and then we can control the actuator speed and stroke precisely.

CALCULATION

Hall sensor resolution=Lead screw pitch/ gear ratio/ pulses per revolution

Force(N)	600	800	1200	1500	2000	2500
pulses/mm	17.9	26.85	47.44	47.44	47.44	71.16