



SPECIFICATION

MODEL
K-EC900-S380-10

1. Technical conditions

- 1-1 Requirement of production standard and safety regulations:GB/T 12350,JB/T 10562。
- 1-2 All material accord with RoHS。
- 1-3 At $1000 \pm 10\%$ r/min running speed , the residual unbalance of the fan not less than G6.3(-balancing precision grade) in each plane,according with JB/T9101.
- 1-4 Vibration speed virtual value of fans accord with JB/T 8689.
- 1-5 Life time
Fan life expectance 30000 hours, determined when at nominal supply voltage,running at full speed,environment temperature of 40°C.
- 1-6 Outlet conditions: recommended lead wire specifications, not less than 1.0mm², Cable diameter Φ8-12mm.

2. Rated data

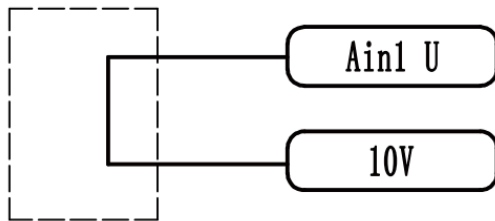
Phase		3~
Rated voltage	VAC	380
Rated voltage range	VAC	380~480
Frequency	Hz	50/60
ERP2020 Standard	N	40
ERP2020 Measured	N	49.8 (A,static)
Speed	r/min	1005
Power input	W	2605
Static pressure	Pa	182
Static pressure EFF	%	46.12

3. Technical data

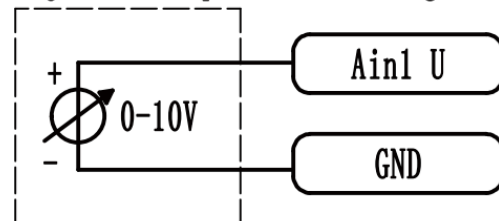
Net weight	/
Size	Φ900
Surface of motor	Coated in black
Material of electronics housing	SPHC
Material of impeller	Plastic
Number of blades	5
Direction of rotation	Counter clockwise,see on the leads
Insulation class	F
Humidity range	5% ~ 95%RH
Operating temperatures	-25°C~+65°C
Storaging temperatures	-35°C ~ +75°C
Installation position	Shaft horizontal or rotor on the bottom
Operation mode	S1
Type of protection	IP54
Type protection of the fan	Current limitation,Stall protection, Soft start protection,Open phase protection,Overheating protection, Over/Under voltage protection

3-1 Input voltage for regulating speed 0-10VDC ($\pm 0.2V$) or PWM Control, PWM Frequency 0.1k-1kHz, amplitude 10-12V, duty cycle 0%-100% ($\pm 2\%$);

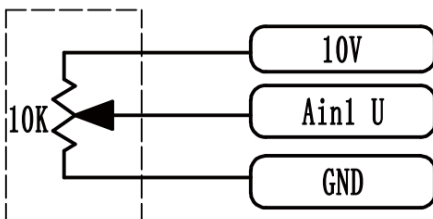
Full speed



Adjustable speed via voltage/PWM



Adjustable speed via potentiometer

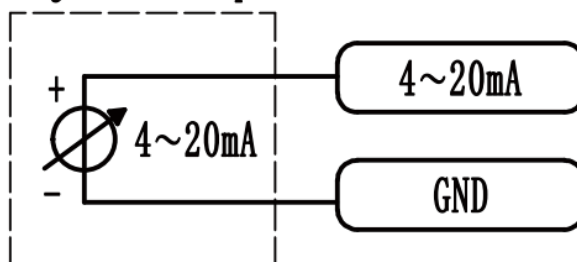


$\geq 9.5V$ --- $n = \max$
 $1.2V$ --- $n = \min$
 $\leq 0.8V$ --- $n = 0$

frequency 0.1-1kHz $\geq 95\% \text{ PWM}$ --- $n = \max$
 amplitude 10-12V $12\% \text{ PWM}$ --- $n = \min$
 duty cycle 0-100% $\leq 8\% \text{ PWM}$ --- $n = 0$

3-2 Input current for regulating speed 4-20mA ($\pm 0.2mA$) /DC Control:

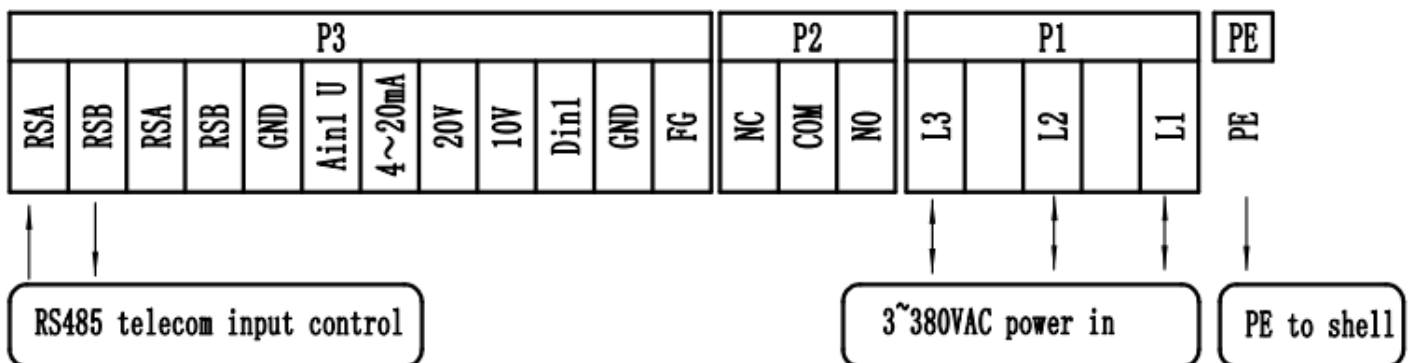
Adjustable speed via current



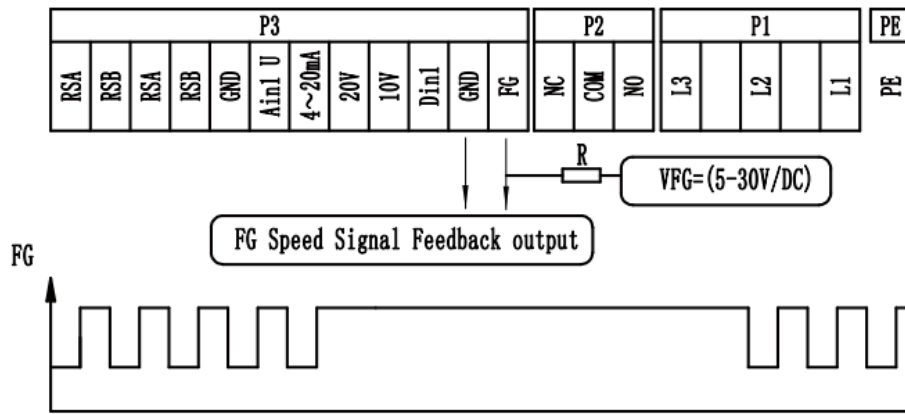
$\geq 20mA$ --- $n = \max$
 $4.5mA$ --- $n = \min$
 $\leq 3.2mA$ --- $n = 0$

3-3 RS485 telecommunication input control:

Through RS485 communication and using MODBUS protocol, one host computer can control multiple fans at the same time; the host computer can control the start and stop of the fans and set the fan speed; at the same time, the fan feedbacks status information to the host computer; speed or fault status.



3-4 FG Speed Signal Feedback output:



When the fan stand by, the Tacho signal outputs low voltage; when the fan fault, the Tech signal outputs high voltage; when the fan is in normal operation, the Tacho signal generates square waves of 50% duty cycle. The motor has 5 polar couples,the fan outputs 5 pulses per revolution.

3-5 Soft start

The motor start at low speed, to reduce current surges being drawn to the power supply.

3-6 The fan is designed with a rated operating voltage of 380 VAC, a voltage range of 3 ~380-480VAC, undervoltage protection320V, and overvoltage protection 520V.

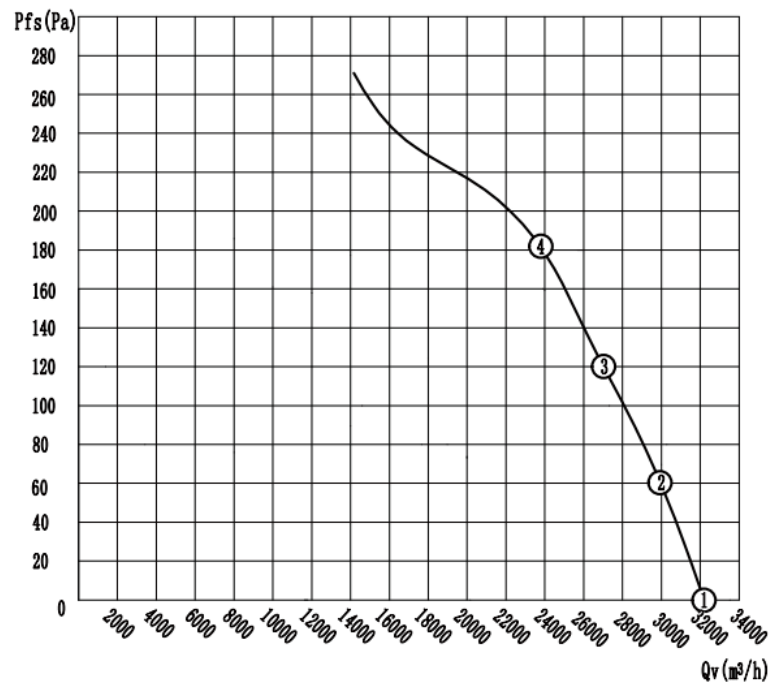
3-7 When the temperature of the motor IPM module exceeds 105 ° C, the motor will stop after p rotection. When the temperature drops to 85 ° C, the motor automatically resumes running.

4.Viring diagram

P3											P2			P1			PE			
RSA	RSB	RSA	RSB	GND	Ain1 U	4~20mA	20V	10V	Din1	GND	FG	NC	COM	NO	L3		L2		L1	PE

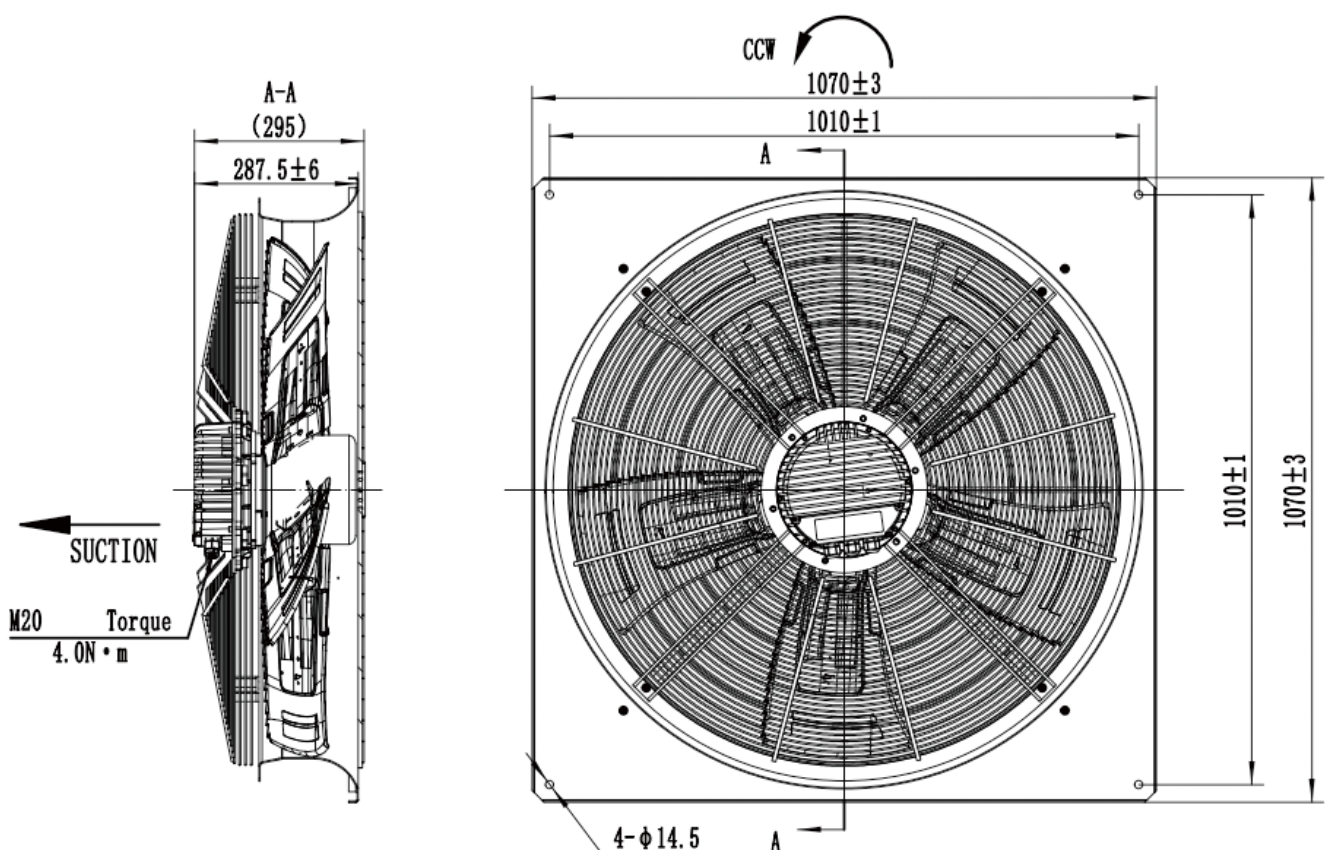
NO.	Signal	Assignment/Function	NO.	Signal	Assignment/Function
PE	PE	Protect earthing,ground	P3	RSA	Bus RS485;RSA;MODBUS RTU
P1	L3	AC power in,voltage input 3~380-480V;50/60Hz		RSB	Bus RS485;RSB;MODBUS RTU
	L2	AC power in,voltage input 3~380-480V;50/60Hz		GND	interface P3 for signal control,ground
	L1	AC power in,voltage input 3~380-480V;50/60Hz		Ain1 U	Controler input0~10VDC
P2	NO	State relay,alterable state contact; normally turn-on;turn-off when error		4~20mA	Analogue Control input 4~20mA
	COM	State relay,universal connectivity; contact rating 250VAC/2A		20V	Rated voltage output 20VDC (±10% max.50mA)
	NC	State relay,normally turn-off;turn-on when error;		10V	Rated voltage output 10VDC (±10% max.10mA)
				FG	Speed Signal Feedack
				Din1	Connection of Digital input 1 enabling of electronics enabling: opening pin or applied voltage 5-50V DC;
					disabling: bridge to GND or applied voltage<1V DC

5.Performance curve



	Pfs	Current input	Power input	Speed	Air flow	Note
	Pa	A	W	r/min	m³/h	
①	0	2.99	1776	1005	32190	
②	60	3.43	2042	1005	29949	
③	120	3.91	2342	1005	26997	
④	182	4.30	2605	1005	23779	

6.Product drawing



7.Other requirements on accessory

7-2 Inlet cones

☒ Yes, ☐ No, ☐ For Salers'request.

7-2 Annectent parts

linker (☐Yes、☒No) , model: /

terminal (☐Yes、☒No), model: /

7-3 Leads

Lead wire: /

Control wire: /

Length: /