

Model:ECF(K)6E192-PLHDAJ1

Fan type:EC Backward curved centrifugal fan



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Fan Introduction

This product consist of outer rotor(EC)motor, backward curved centrifugal impeller, with features of compact structure, large airflow, high static pressure, low vibration, low noise, convenient installation, energy saving, high efficiency etc..

Scope of application

General purpose fan, can be widely used in purification of air conditioning systems, ventilation duct dust, environmental protection, refrigeration equipment and other fields.

Environmental requirements

- Operating ambient temperature range:-25℃~+50℃
- Working environment humidity range:≤90%
- Transportation and storage temperature range:-40℃~+80℃
- Transportation and storage environment humidity range:≤80%
- The storage place is well ventilated, corrosive gases not contained.

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Design, manufacturing, testing standards and certification

- JB-T10563 Technical specification for general purposes centrifugal fans
- GB/T 14711 General safety requirements for Medium and small rotary motor
- GB/T 755/IEC60034-1 rotary motor quota and performance
- GB 4706.32-2012/IEC 60335-2-40:2005 Household and similar electrical appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
- The level of balance is in accordance with ISO 1940, G6.3
- Vibration testing and velocity is performed according to JB/T8689.
- This product is certified by China CCC and EU CE
- ISO 9001 quality system certification

Technical features

Mass	1.95 kg
Size	φ192 mm
Impeller material	Plastic
Rotation	Counter-clockwise(Seen from cable exit)
Protection class	IP54
Insulation class	F
Mounting	Shaft horizontal or rotor on bottom; rotor on top on request
Mode of operation	S1(Continuous operation)
Bearings	Maintenance-free ball bearings
Controller	Controller integrated with motor, 0~10V or PWM control

Structures

Inlet type	Single Inlet
Impeller type	Backward curved impeller
Housing	Without housing; With inlet ring;

Technical parameters

Supply	1P,200~277V
Frequency	50/60 Hz

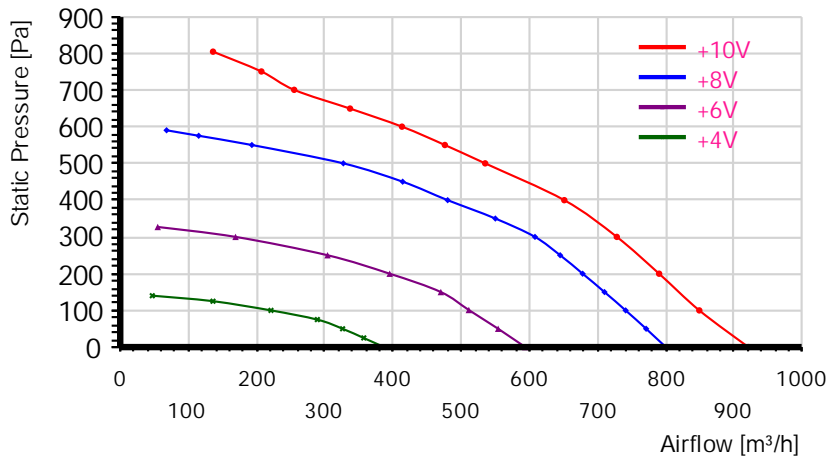
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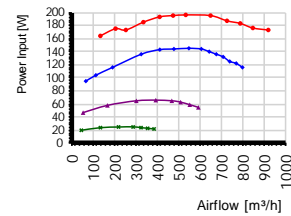
Rated voltage	230 VAC
Power input	196 W
Rated current	1.4 A
Rated speed	4200 r/min
Max airflow	920 m ³ /h (Static pressure=0Pa)
Acoustic	73 dB(A) measured at 1.0m from inlet side

Performance curve

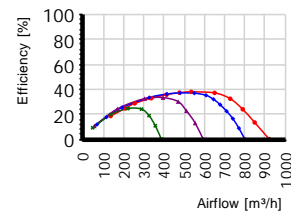
Airflow curve



Power input curve



Efficiency on static pressure



Performance test with reference to GB/T 1236-2017, equivalent to ISO 5801

TestID	2020011102			Control voltage	10 VDC	
Test environment						
Outlet size	Outlet area	Temperature	Humidity	Baropressure	Density	
183mm	0.0263m ²	14°C	84%	101.9kPa	1.2kg/m ³	

Test data										
Voltage	Frequency	Speed	Power input	Current	Airflow	Static pressure	Dynamic pressure	Total pressure	Pressure Differenc	Nozzle Size
V	Hz	r/min	W	A	m ³ /h	Pa	Pa	Pa	Pa	mm
231.5	50	4463	164	1.17	136	804	1	805	585	40
230.6	50	4395	175	1.27	207	750	3	753	560	30+40
230.7	50	4308	173	1.25	255	700	4	704	213	30+40+50
230.5	50	4262	185	1.32	337	649	8	657	371	30+40+50
230.9	50	4234	193	1.38	413	600	12	612	253	30+40+70
230.3	50	4201	195	1.4	476	550	16	566	335	30+40+70
230.9	50	4201	196	1.39	535	500	20	519	422	30+40+70
230.9	50	4200	195	1.39	651	400	29	429	350	30+40+50+70

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230.8	50	4215	187	1.33	728	300	36	336	438	30+40+50+70
231.4	50	4245	183	1.3	790	200	43	243	224	30+40+50+100
231.1	50	4264	176	1.26	849	100	50	149	259	30+40+50+100
230.9	50	4334	173	1.24	921	0	58	58	304	30+40+50+100

TestID		2020011103		Control voltage		8 VDC				
Test environment										
Outlet size		Outlet area	Temperature		Humidity		Baropressure		Density	
183mm		0.0263m ²	14℃		84%		101.9kPa		1.2kg/m ³	

Test data										
Voltage	Frequency	Speed	Power input	Current	Airflow	Static pressure	Dynamic pressure	Total pressure	Pressure Differenc	Nozzle Size
V	Hz	r/min	W	A	m ³ /h	Pa	Pa	Pa	Pa	mm
230.5	50	3780	95	0.72	68	590	0	591	466	30
231	50	3780	104	0.78	115	575	1	576	421	40
230.9	50	3780	116	0.85	193	550	3	552	263	30+50
231.1	50	3780	136	0.99	327	500	7	508	348	30+40+50
231.3	50	3780	143	1.04	414	450	12	462	254	30+40+70
231.8	50	3780	144	1.05	480	400	16	416	340	30+40+70
231.1	50	3780	145	1.07	550	350	21	370	251	30+40+50+70
230	50	3780	144	1.05	608	300	25	325	306	30+40+50+70
230.5	50	3780	140	1.03	645	250	28	279	344	30+40+50+70
230.6	50	3780	136	1	678	200	32	231	379	30+40+50+70
230.8	50	3780	132	0.97	710	150	34	185	415	30+40+50+70
230.5	50	3780	125	0.91	741	100	38	138	453	30+40+50+70
231	50	3780	122	0.9	771	50	41	91	490	30+40+50+70
230.4	50	3780	116	0.86	800	0	44	44	230	30+40+50+100

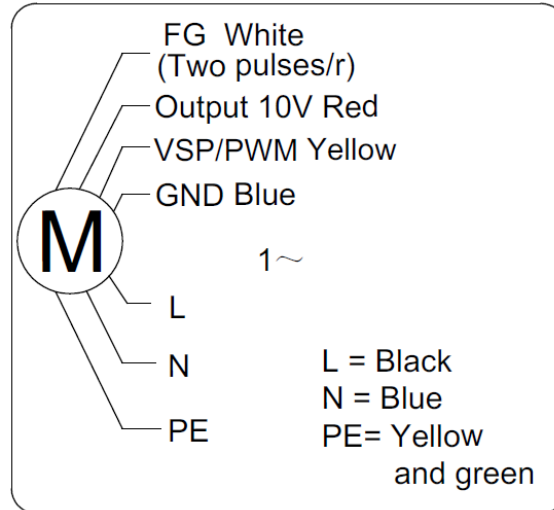
TestID		2020011104		Control voltage		6 VDC				
Test environment										
Outlet size		Outlet area	Temperature		Humidity		Baropressure		Density	
183mm		0.0263m ²	14℃		83%		101.9kPa		1.2kg/m ³	

Test data										
Voltage	Frequency	Speed	Power input	Current	Airflow	Static pressure	Dynamic pressure	Total pressure	Pressure Differenc	Nozzle Size
V	Hz	r/min	W	A	m ³ /h	Pa	Pa	Pa	Pa	mm
231.3	50	2810	47	0.37	55	327	0	327	311	30
231.1	50	2810	58	0.46	169	300	2	302	202	30+50
231.2	50	2810	65	0.5	304	250	6	257	301	30+40+50
231.3	50	2810	66	0.51	395	200	11	211	232	30+40+70
230.8	50	2810	65	0.5	470	150	15	165	327	30+40+70
230.4	50	2810	63	0.49	511	101	18	118	217	30+40+50+70
231.1	50	2810	59	0.47	554	50	21	71	254	30+40+50+70

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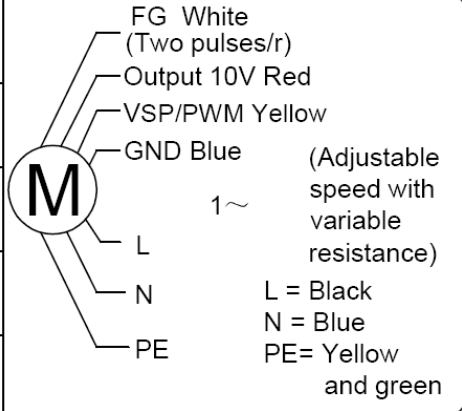


Wiring diagram



Electrical connections

Connection	Assignment/function
L、N	Single-phase supply connection, voltage range 200-277VAC, frequency 50/60Hz
PE	Protective earth
FG	Speed feedback pulse output, 2 pulses per revolution, can be customized
+10V	10VDC output,maximum output current 10mA
VSP/PWM	Speed control signal input connection, 0-10V voltage or PWM signal (amplitude 10-12V, frequency 1-10kHz)
GND	Signal ground for control interface

NamePlate

	ECF(K) 6E192-PLHDAJ1	 <p>(Adjustable speed with variable resistance) L = Black N = Blue PE= Yellow and green</p>
Volt.:220~240V	Freq.:50/60Hz Amp.:1.4A	
Input:196W	Speed:4200r/min Airflow:535m ³ /h	
Pst:500Pa Static Ip54 CL.F Erp2015		
Rotation : 		

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Attentions

- ★Please check the appearance and the accessories if there is no damage before use, check the model is consistent with requirements;
- ★Keep reliable grounding according to the wiring diagram. to avoid motor burning and personal accident, please check wiring is loose or fall off;
- ★Before connect the power supply, check whether the motor is reliable, otherwise it will cause motor damage and personal injury;
- ★It is forbidden to pull the power cable, if the power cable is damaged, to be repaired before use, to avoid the accident of electric shock;
- ★Drop or impact motor is forbidden;
- ★Washing motor with water is prohibited, it will reduce the motor insulation level, even lead to electric leakage even endanger personal safety;
- ★Special customized product is designed for specified requirements, please consult with our engineers before change useage;
- ★The temperature of the motor shell may be higher in a short time after the fan stopped, Please avoid direct contact with the motor surface. If necessary, please take protective measures to prevent scald;
- ★Do not contact the impeller when the fan running, you need to wait for all the parts stopped before operate it;
- ★When the fan is installed, check and ensure thers is no debris in the shell and other shell body, keep the fan clean;
- ★After the fan installation complete, before connected to supply, please confirm that there is no collision or interference or stuck.

Product life and maintenance, warranty

- The design life of this product is 40,000 hours. This data is derived from the expected life of L10 for general ball bearings at 40°C is 40,000 hours. The actual service life of the product is affected by the use environment (temperature, humidity, installation, bearing load, etc.).

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- According to the use of the environment, please make a clean maintenance every 3~6 months.
- From the date of purchase (order delivery date), The warranty period is one year. During this period, for failure due to the quality of the product itself, we provide free replacement or repairing. If the damage caused by improper disassembly, transportation, artificial damage or natural disasters, etc., is not in the scope of this warranty;