

Model:ECF(K)6E250-PLHDAJ0

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	3.2 kg
Size	φ250 mm
Impeller material	Galvanised iron
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

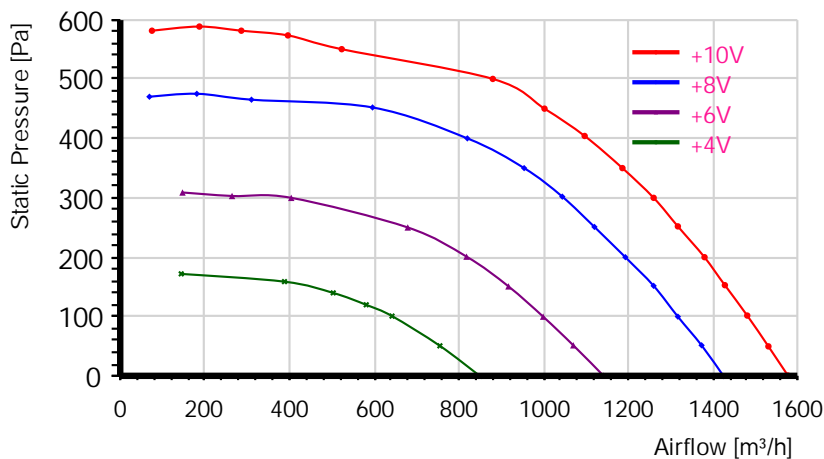
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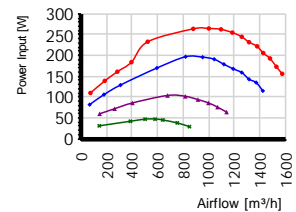
Rated voltage	230 VAC
Power input	270 W
Rated current	1.8 A
Rated speed	2800 r/min
Max airflow	1550 m ³ /h (Static pressure=0Pa)
Acoustic	72 dB(A) measured at 1.0m from inlet side
ErP level	2015

Performance curve

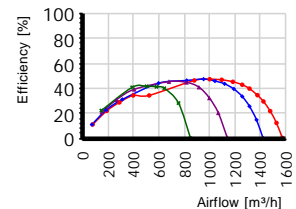
Airflow curve



Power input curve



Efficiency on static pressure



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

TestID	2016041306			Control voltage	10 VDC					
Test environment										
Outlet size	Outlet area	Temperature	Humidity	Baropressure	Density					
232mm	0.0423m ²	20°C	89%	101kPa	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
229.6	50	2770	110	0.8	75	581	0	581	553	30
229.8	50	2769	139	0.98	187	588	1	589	443	30+40
229.7	50	2768	161	1.14	286	581	2	583	260	30+40+50
230.2	50	2769	184	1.28	396	573	4	577	226	30+40+70
228.9	50	2770	233	1.69	523	550	7	558	392	30+40+70
230.4	50	2770	264	1.89	880	500	20	520	270	30+40+50+100

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230.7	50	2771	265	1.81	1002	450	26	476	349	30+40+50+100
230.8	50	2771	263	1.88	1097	404	31	435	238	30+40+50+70+100
230	50	2771	255	1.81	1186	350	36	386	278	30+40+50+70+100
229.8	50	2771	245	1.75	1260	300	41	341	313	30+40+50+70+100
229.8	50	2771	232	1.68	1317	252	45	296	342	30+40+50+70+100
229.6	50	2770	222	1.58	1380	200	49	249	375	30+40+50+70+100
229.5	50	2771	206	1.48	1428	153	52	205	402	30+40+50+70+100
229.7	50	2772	193	1.36	1481	102	56	158	432	30+40+50+70+100
229.8	50	2771	173	1.25	1531	50	60	110	461	30+40+50+70+100
230.4	50	2771	156	1.19	1577	1	64	65	489	30+40+50+70+100

TestID	2016041307				Control voltage	8 VDC				
Test environment										
Outlet size	Outlet area	Temperature	Humidity	Baropressure	Density					
232mm	0.0423m ²	20℃	91%	101kPa	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
230.7	50	2500	82	0.63	69	470	0	470	461	30
231.2	50	2499	106	0.79	181	475	1	476	416	30+40
230.9	50	2500	129	0.96	310	465	2	467	304	30+40+50
230.9	50	2499	170	1.24	596	452	9	461	286	30+40+50+70
229.3	50	2502	197	1.45	820	400	17	417	235	30+40+50+100
229.9	50	2500	196	1.4	954	350	23	374	316	30+40+50+100
230.2	50	2501	191	1.38	1044	302	28	330	216	30+40+50+70+100
230.1	50	2501	179	1.28	1120	251	32	283	248	30+40+50+70+100
229.9	50	2501	168	1.19	1193	200	37	237	281	30+40+50+70+100
228.9	50	2501	159	1.16	1260	152	41	193	314	30+40+50+70+100
229.1	50	2501	143	1.06	1317	100	44	145	342	30+40+50+70+100
228.8	50	2501	135	1.01	1373	52	48	101	372	30+40+50+70+100
230.1	50	2500	115	0.89	1425	0	52	53	400	30+40+50+70+100

TestID	2016041401				Control voltage	6 VDC				
Test environment										
Outlet size	Outlet area	Temperature	Humidity	Baropressure	Density					
232mm	0.0423m ²	19℃	91%	101.7kPa	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	2006	60	0.46	147	309	1	309	276	30+40
231.9	50	2005	72	0.55	264	303	2	304	224	30+40+50

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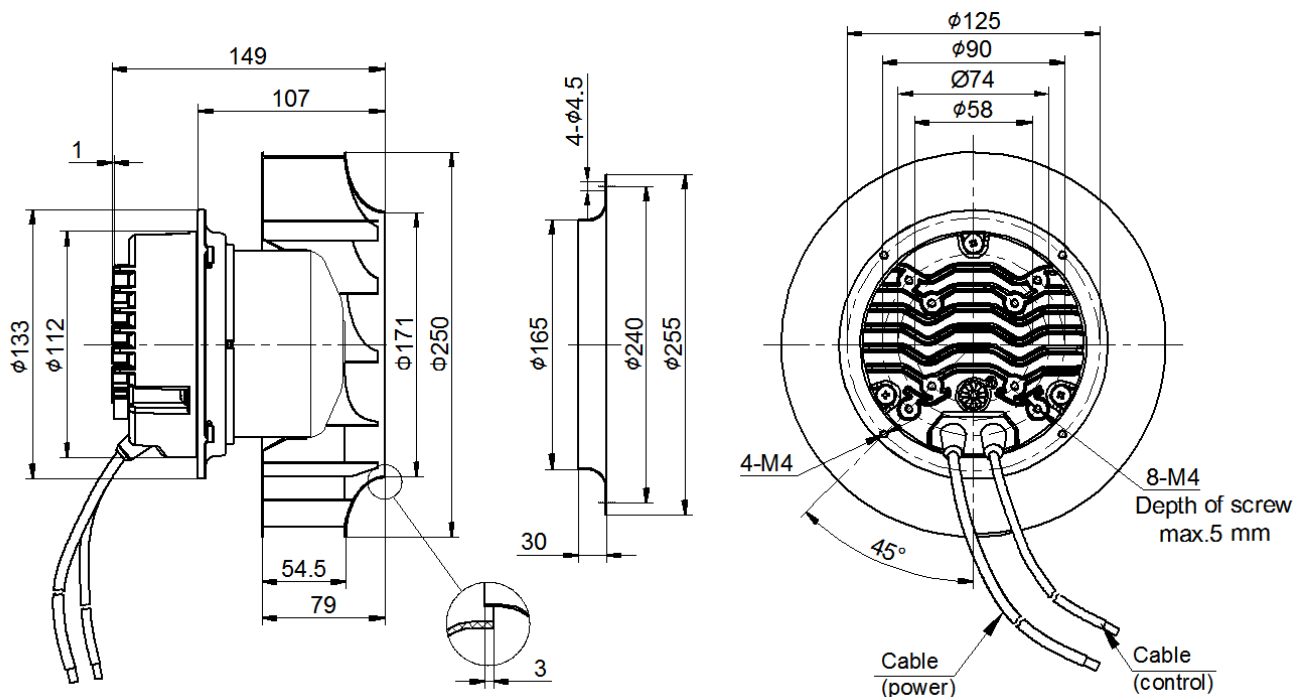
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231.5	50	2004	86	0.63	404	300	4	304	236	30+40+70
231.7	50	2003	104	0.79	679	250	12	262	372	30+40+50+70
232	50	2005	102	0.76	818	201	17	218	235	30+40+50+100
230.9	50	2004	94	0.72	917	151	22	172	294	30+40+50+100
229.3	50	2004	86	0.66	999	100	26	126	200	30+40+50+70+100
230.1	50	2002	76	0.59	1070	52	30	82	228	30+40+50+70+100
230.9	50	2003	64	0.5	1141	1	34	34	259	30+40+50+70+100

TestID	2016041402		Control voltage		4 VDC	
Test environment						
Outlet size	Outlet area	Temperature	Humidity	Baropressure	Density	
232mm	0.0423m ²	19℃	90%	101.7kPa	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
232.1	50	1501	31	0.26	144	172	0	172	267	30+40
230.8	50	1502	42	0.34	388	159	4	163	219	30+40+70
231.7	50	1501	47	0.36	503	140	7	147	206	30+40+50+70
231.1	50	1502	47	0.37	581	120	9	129	273	30+40+50+70
229.9	50	1501	45	0.35	642	101	11	112	333	30+40+50+70
229.6	50	1501	38	0.31	755	51	15	66	200	30+40+50+100
230.2	50	1501	29	0.25	850	0	19	19	254	30+40+50+100

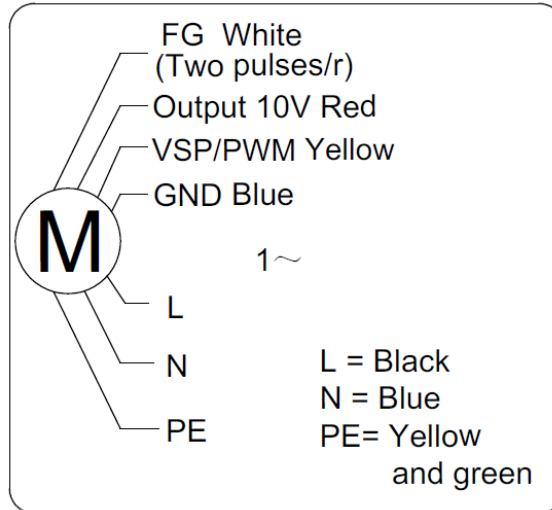
Dimensions(in mm)



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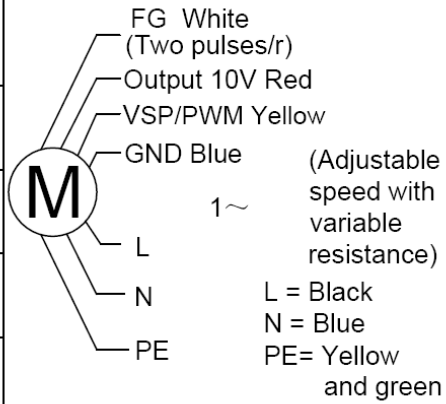


Wiring diagram



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) 6E250-PLHDAJ0		 <p>(Adjustable speed with variable resistance) L = Black N = Blue PE= Yellow and green</p>
Volt.:220~240V	Freq.:50/60Hz	Amp.:1.8A	
Input:270W	Speed:2800r/min	Airflow:1000m ³ /h	
Pst:450Pa	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;