

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Ningbo Longwell Electric Technology CO.,LTD

NO.100, Ditang District ,Yuyao,Zhejiang Province,China 315400

Phone 86 574 6218 9863

Fax 86 574 6218 9863

sales@zjlongwell.com

www.longwellfans.com

Model No.:	LWBE3G280-102NS-50-00
Version Number:	A0
Make :	GUO
Review :	HE
Approvd :	ZHANG
Date:	20260427

技术专用
朗伟电器

Version number	Notes Remarks	Reason content	Revised by	Date

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Nominal Data

Project1	Unit	Rating
Nominal Voltage :	[VAC]	230
Voltage Range :	[VAC]	176~264
Frequency :	[Hz]	50/60
Speed :	[rpm]	3135
Current :	[A]	3.2
Power input :	[W]	700
Air flow (Max) :	[m3/h]	3182
	[CFM]	1872
Static pressure (Max) :	[Pa]	1072
Noise level :	dB(A)	82
Max.ambient Temp :	℃	60
Min.ambient Temp :	℃	-25
Insulation Class :		Class F
Protection Type :		IP44
Work system :		S1

Technical Features

Production Reference standard	GB12350 《Safety requirements of small power motors》 JB/T10563 《technical specification for general purposes centrifugal fans》 EN60335-1 《Household and similar electrical appliances-safety》 ISO5801-1997 《Industrial fans-performance testing using standardized airways》 GB/T2888 《Methods of Noise Measurement for Fans Blowers Compressors and Roots Blowers》
Certification	CE ETL (UL 507:2017 Ed.10+R:27May2020, CSA C22.2#113:2018 Ed.11)
Environmental protection	RoHS、Reach

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Technical Features

Service environment	Operating temperature: -25~60℃; Operating humidity: 0 ~ 85 % RH Storing temperature: -25 ~ 70℃; Storing humidity: 0 ~ 95 % RH Applicable altitude range: < 1000m
Life Expectance	40,000Hours(L10), At 40℃ room, humidity 15%~65%RH.
Balancing	According to JB/T 9101-1999 requirements G6.3
Vibration of the fan	Test method accord with JB/T 8689
Installation method	Horizontal or vertical installation
Material	Aluminum Alloy(Impeller)
Bearing	Maintenance-free deep groove ball bearings
Weight	/

Electrical Protection

Speed Control	Control input 0~10VDC/PWM
VSP Control	Control signal VSP voltage range $1\pm0.1\text{VDC}\sim9.5\pm0.2\text{VDC}$ (During normal operation, when the VSP voltage is below $1.0\pm0.1\text{VDC}$, the motor switches from operating mode to standby mode)
Signal Output	Tach output: 4 Pulse/R; FG internal open circuit output, external pull-up resistor R, pull-up voltage V+
Auxiliary power output	Output 10VDC, Max Current 10 mA
Protection	Current limiting protection 、 Over-temperature protection、 Over-current protection Locked-rotor protection' 、 Input power supply lacks phase protection
Soft start	Delay time <30 seconds to full speed
Insulation resistance	Test voltage 500 VDC, resistance value $\geq 50\text{M}\Omega$. Test site: Test between all leads of the motor and the motor housing.

LWBE3G280-102NS-50-00

Technical drawing of the L-500±20MM cable gland assembly, showing front, side, and detail views with dimensions.

Front View Dimensions:

- Overall width: 220.5
- Overall height: 170.5 ± 2
- Mounting hole diameter: Ø150
- Internal hole diameter: Ø190
- Internal hole diameter: Ø286
- Internal hole diameter: Ø180
- Internal hole diameter: Ø280

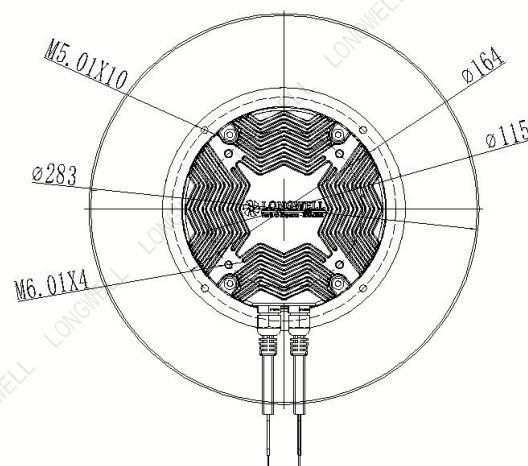
Side View Dimensions:

- Overall height: 170.5 ± 2
- Internal hole diameter: Ø190
- Internal hole diameter: Ø286
- Internal hole diameter: Ø180
- Internal hole diameter: Ø280

Detail View Dimensions:

- Detail view of the mounting hole: 49.5
- Detail view of the internal hole: 37.5
- Detail view of the internal hole: 93
- Detail view of the internal hole: 45.2

Label: L-500±20MM



EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Wiring Diagram

L	Color	Function	Functional description
L1	Yellow/Green	PE	Ground lead
	Brown	L	Live line
	Blue	N	Ground lead
L2	Yellow	Speed Control	Speed regulation signal input terminal,0-10VDC/PWM voltage
	White	FG	Velocity feedback pulse output 4 Pulse/R
	Red	+10VDC	Fixed voltage output 10VDC
	Blue	GND	Ground reference end of control signal

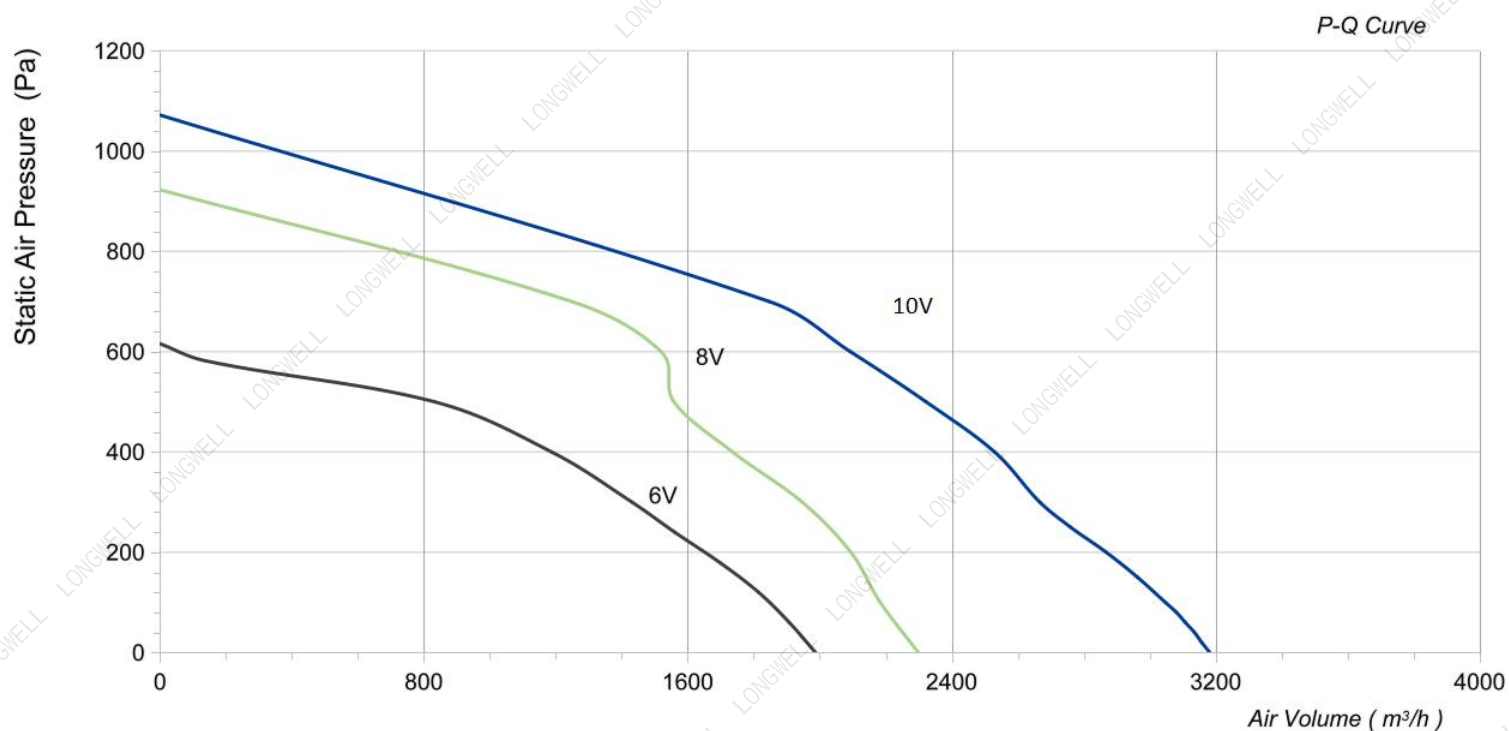
Label

Confirm by sales team when placing sample order or bulk order

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Charts :Air Flow (P-Q)



	电压 (Voltage)	电流 (Current)	频率 (Frequency)	功率 (Power)	静压 (Static pressure)	转速 (Speed)	风量 (Air flow)	静压 (Static pressure) 效率
	[V]	[A]	[Hz]	[W]	[Pa]	[RPM]	m³/h	[%]
10V	219.9	3.188	50.0	698.8	0	3135	3182.1	0.0
	219.9	3.240	50.0	708.8	20	3146	3157.9	2.4
	219.9	3.262	50.0	716.0	40	3143	3135.9	4.8
	219.9	3.321	50.0	727.2	60	3139	3108.0	7.0
	219.9	3.342	50.0	730.9	80	3136	3081.2	9.2
	219.9	3.367	50.0	737.4	100	3126	3047.6	11.3
	219.9	3.424	50.0	750.1	150	3115	2963.3	16.2
	219.9	3.448	50.0	755.5	200	3082	2868.2	20.8
	219.9	3.447	50.0	755.3	250	3053	2760.2	25.0
	219.9	3.437	50.0	755.2	300	3028	2667.0	29.0
	219.9	3.451	50.0	756.0	400	3012	2529.9	36.7
	219.9	3.455	50.0	757.1	500	2971	2322.2	42.0
	219.9	3.461	50.0	758.4	600	2945	2092.9	45.4
	219.9	3.463	50.0	758.9	700	2959	1847.0	46.7
	220.0	1.571	50.0	344.6	1072	3142	0.0	0.0

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

	电压 (Voltage)	电流 (Current)	频率 (Frequency)	功率 (Power)	静压 (Static pressure)	转速 (Speed)	风量 (Air flow)	静压 (Static pressure) 效率
	[V]	[A]	[Hz]	[W]	[Pa]	[RPM]	m³/h	[%]
8V	219.9	2.541	60.0	555.9	0	2833	2298.9	0.0
	219.9	2.666	60.0	582.8	100	2836	2183.4	10.4
	219.9	2.735	60.0	598.3	200	2834	2094.4	19.4
	219.9	2.769	60.0	605.7	300	2830	1946.8	26.7
	219.9	2.752	60.0	602.1	400	2833	1735.9	32.0
	219.9	2.766	60.0	605.2	500	2831	1558.3	35.7
	219.9	2.798	60.0	612.3	600	2835	1518.9	41.3
	219.9	2.736	60.0	598.8	700	2834	1248.6	40.5
	220.0	1.344	60.0	292.7	923	2835	0.0	0.0
6V	电压 (Voltage)	电流 (Current)	频率 (Frequency)	功率 (Power)	静压 (Static pressure)	转速 (Speed)	风量 (Air flow)	静压 (Static pressure) 效率
	[V]	[A]	[Hz]	[W]	[Pa]	[RPM]	m³/h	[%]
	220.0	1.232	50.0	268.2	0	2271	1987.4	0.0
	220.0	1.332	50.0	290.0	60	2274	1907.7	11.0
	220.0	1.329	50.0	289.9	120	2276	1814.9	20.9
	220.0	1.348	50.0	293.7	178	2275	1700.4	28.7
	220.0	1.403	50.0	306.0	240	2279	1560.5	34.1
	220.0	1.443	50.0	315.0	300	2275	1430.9	38.0
	220.0	1.473	50.0	321.6	400	2276	1187.4	41.2
	220.0	1.405	50.0	306.6	500	2275	832.7	37.9
	220.0	0.911	50.0	196.4	582	2269	136.9	11.3
	220.0	0.787	50.0	169.2	616	2277	0.0	0.0

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Label

Confirm by sales team when placing sample order or bulk order

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Warning:

1. The fan and motor must be used within the prescribed scope of temperature and humidity otherwise it will cause an unexpected damage.
2. Fan is not set wrong connection protection, Provide the right voltage and line sequence according to the nameplate otherwise it will damage the product.
3. Wiring depends on the wiring diagram and please connect the earth ground if required. We don't suggest to use the extension cord .Any wrong connection may cause the damage of the fan.
4. Be careful when moving the fan and do not take the blades as a handle because it will cause the distortion and chatter.
5. Connect the thermostat if required otherwise it would damage the motor because of the over temperature.
6. The length of the mounting screws shall not exceed the requirement, otherwise the fan will be damaged.
7. Do not disassemble the fan arbitrarily. It may hurt the capacity of water tightness and dynamic balance or cause other serious problems.
8. The over current protector is necessary in case the damage from the over current.
9. Install the fan as required, any other installing direction would affect the service life of the product.
10. The fan with inlet ring should be installed follow the requirements or it will affect the performance.
11. Users should use the standard cable when install the fan otherwise it will affect the water tightness.
12. The fan should keep away from the children especially the blade and electric parts .And the children are not allowed to operate the fan alone.
13. Do not connect the white signal cable directly to the red signal cable or the external DC power supply. Otherwise, the fan may be damaged.
14. Please do not perform extraction and insertion of the connector under revolution irrespective of power on and power on and power off , and the fan should not touch or move when running.
15. Do not lift the fan wire when taking the fan, and do not impact the bearing during the handling process.
16. The version change may not be notified, please ask our company for the latest version when necessary.
17. Please be informed that we are not responsible for any damage or accidents caused by violating above rules to install and operate the fan.

EC Backward Centrifugal Fan

LWBE3G280-102NS-50-00

Approval

CUSTOMER APPROVAL**CUSTOMER SIGNATURE:****DATE :****Product Data Confirm :****Speed Control System :**☐ 0-10V ☐ PWM**Accessories:**☐ Air Inlet Cone ☐ Pressure nozzle ☐ Custom wire length**Note :** Please check and mark the data when you sign the specification sheet .