G4E280-BC23-05

AC centrifugal fan

forward-curved, single-intake

with housing (large flange)

G4E280-BC23-05 ebmpapst Datasheet
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Nominal data

Type	**G4E280-BC23-05**
Motor	**M4E094-HA**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1340	1410
Power consumption	W	690	980
Current draw	A	3.1	4.28
Capacitor	µF	18.5	18.5
Capacitor voltage	VDB	500	500
Capacitor standard		S2 (CE)	S2 (CE)
Min. back pressure	Pa	415	470
Min. back pressure	in. wg	1.67	1.89
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	45	45

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_e	%	41.4	41.4
02 Measurement category		B	
03 Efficiency category		Total	
04 Efficiency grade N		49	49
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.63
09 Air flow q_v	m^3/h	1605
09 Pressure increase p_f	Pa	574
10 Speed (rpm) n	min^{-1}	1345
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_f / 100 000 Pa

LU-143275

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Technical description

Weight	15 kg
Size	280 mm
Motor size	94
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP10
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal strip; Via terminal strip, capacitor connected
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S2
Conformity with standards	CE
Approval	CSA C22.2 No. 100; CCC; UL 1004-1; EAC

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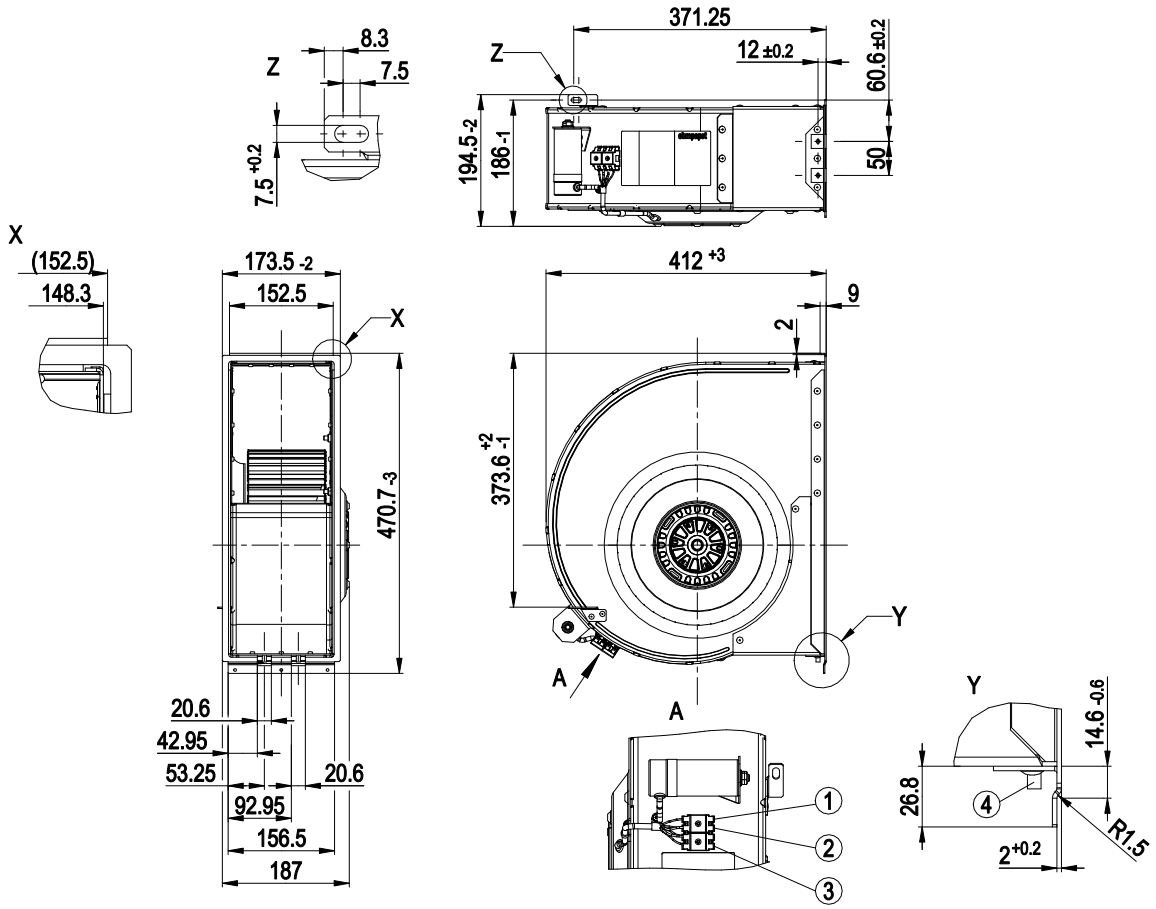
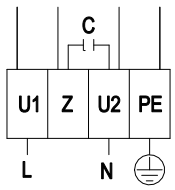
Product drawing



1	PE
2	N
3	L
4	Press-in threaded pin M6x12 (2x)

Connection diagram



L	= U1 = blue	Z	brown	N	= U2 = black
PE	green/yellow				

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Nameplate

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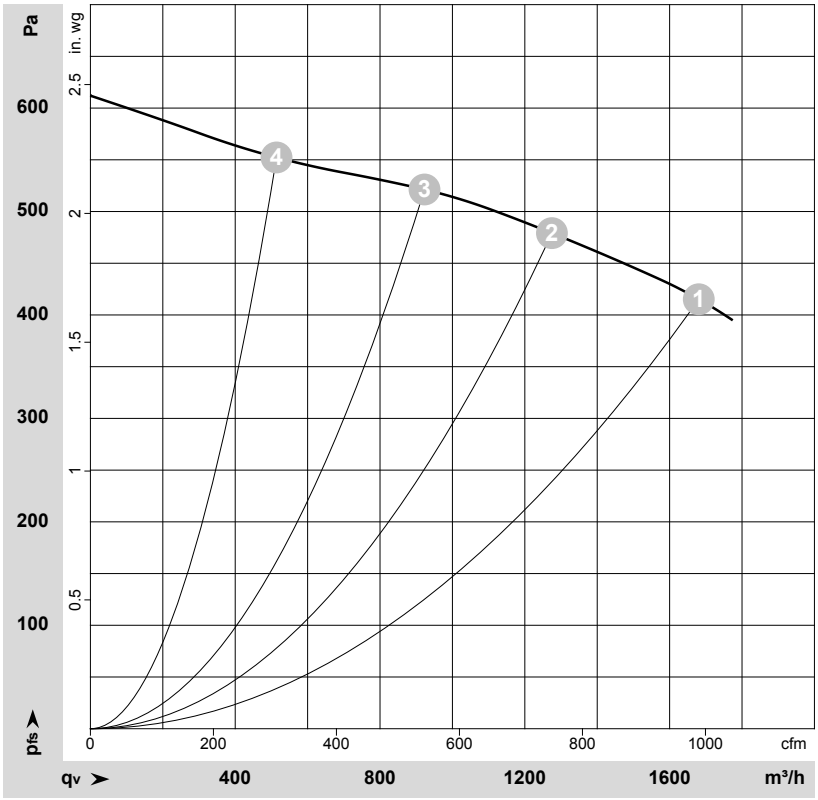
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-75911-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	1~	230	50	1340	690	3.10	1680	415	990	1.67
2	1~	230	50	1390	541	2.42	1275	480	750	1.93
3	1~	230	50	1415	471	2.14	925	520	545	2.09
4	1~	230	50	1435	412	1.92	515	550	305	2.21

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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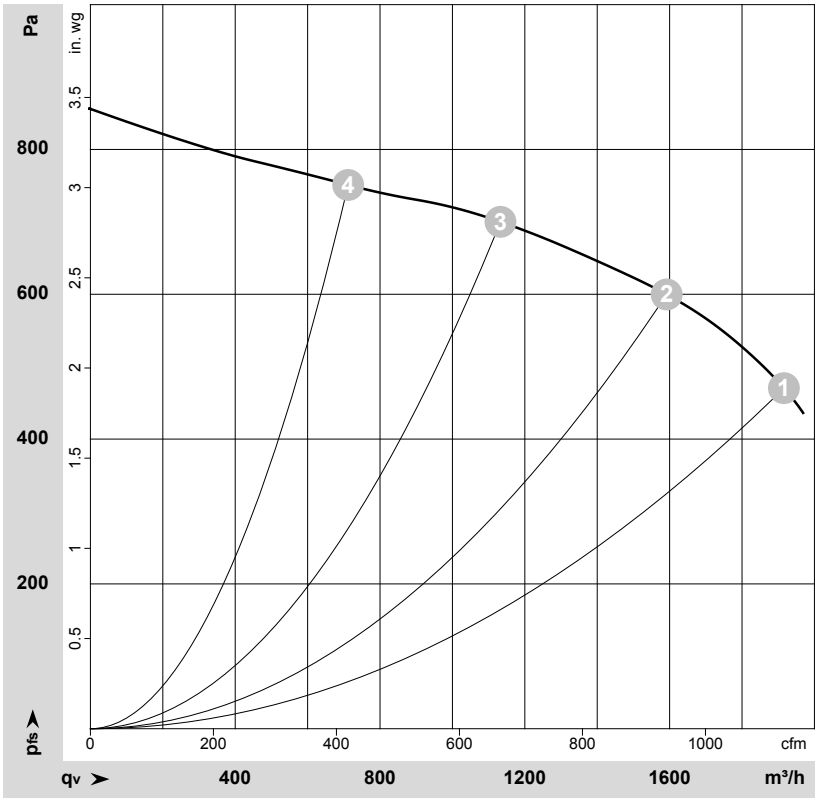
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-75912-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	1~	230	60	1410	980	4.28	1915	470	1130	1.89
2	1~	230	60	1570	875	3.84	1590	600	935	2.41
3	1~	230	60	1640	770	3.44	1135	700	665	2.81
4	1~	230	60	1680	680	3.09	710	750	420	3.01

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase