

AC centrifugal fan

forward-curved, single-intake

with housing (flange)

G2D160-AF02-40 ebmpapst Datasheet

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Nominal data

Type	G2D160-AF02-40				
Motor	M2D068-EC				
Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Wiring		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min ⁻¹	2300	2550	2300	2550
Power consumption	W	305	335	305	335
Current draw	A	0.83	0.9	0.48	0.52
Min. back pressure	Pa	0	300	0	300
Min. back pressure	in. wg	0	1.2	0	1.2
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	50	40	50	40
Starting current	A	1.75	1.65	1.0	0.95

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_{es}	%	34	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		45.5	44
05 Variable speed drive		No	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_e	kW	0.15
09 Air flow q_v	m³/h	390
09 Pressure increase p_{fs}	Pa	501
10 Speed (rpm) n	min ⁻¹	2685
11 Specific ratio*		1.01

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-39223



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Technical description

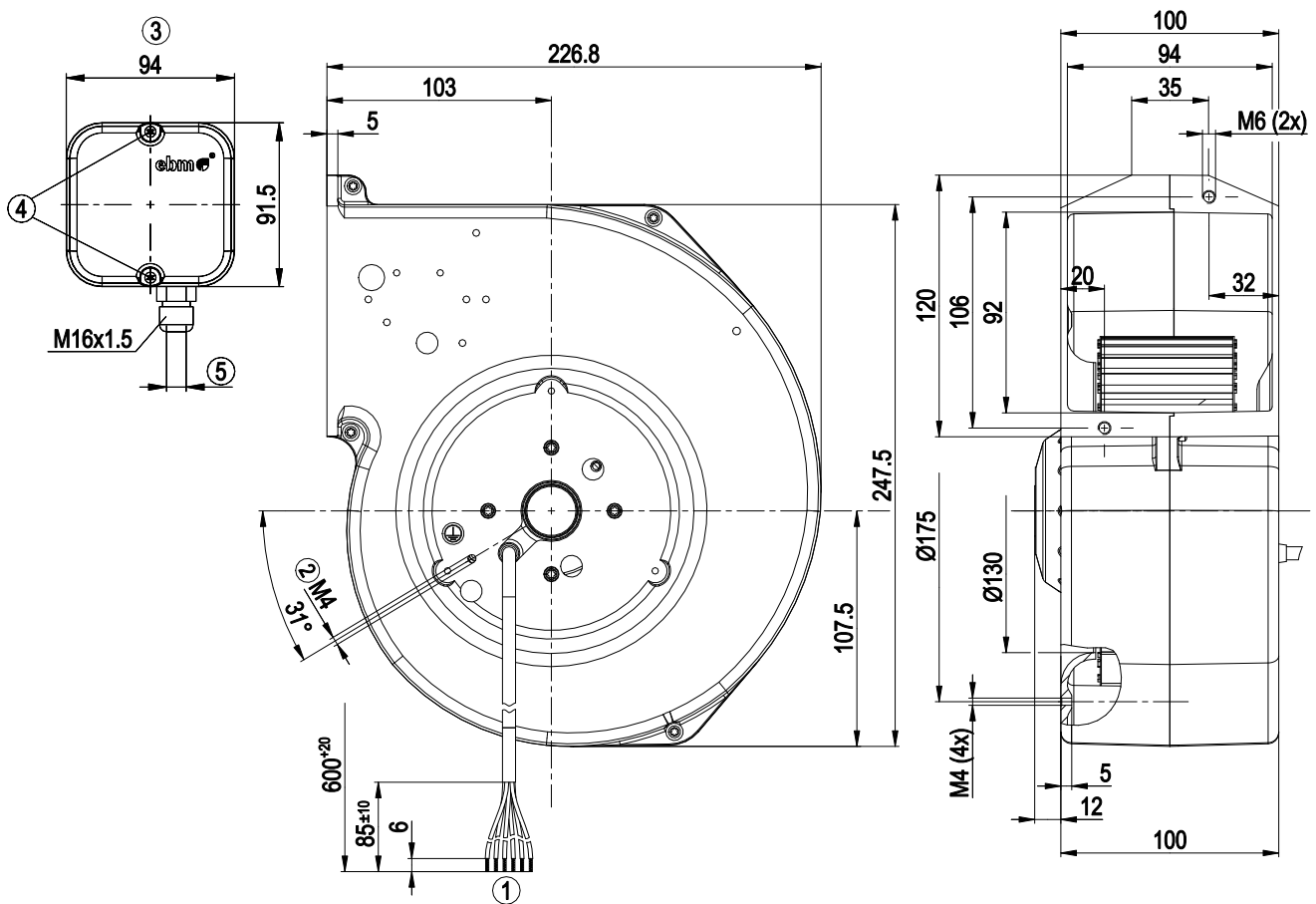
Weight	4 kg
Size	160 mm
Motor size	68
Rotor surface	Painted black
Terminal box material	Die-cast aluminum
Impeller material	Sheet steel, painted black
Housing material	Die-cast aluminum
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-1
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1; F2-2
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Protection class	I (if protective earth is connected by customer to the housing's connection point)
Conformity with standards	EN 60335-1, motor does not have factory-installed overheating protection; CE
Approval	CSA C22.2 No. 100; UL 1004-1



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Product drawing

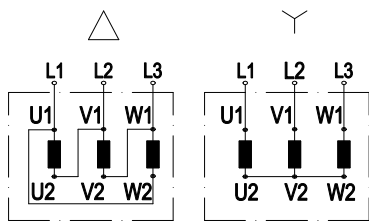


1	Cable PFA AWG20, 6x crimped splices
2	Max. clearance for screw 5 mm
3	Accessory part included separately
4	Tightening torque 0.5 ± 0.1 Nm
5	Cable diameter min. 5 mm, max. 9 mm, tightening torque 2.5 ± 0.4 Nm

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Connection diagram



Change of rotation direction by reversing two phases

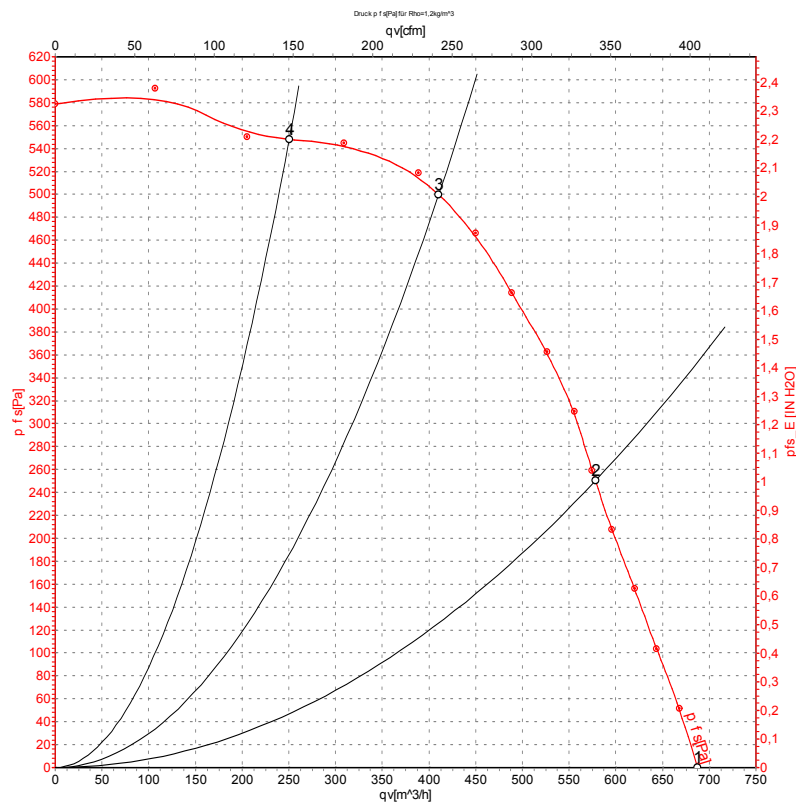
	Three-phase motor	Δ	Delta connection	Y	Star connection
L 1	= U1 = black	L2	= V1 = blue	L3	= W1 = brown
U2	green	V2	white	W2	yellow



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Curves: Air performance 50 Hz



Measurement: LU-39223-1

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

	U	f	n	P _e	I	q _v	p _{1s}	q _v	p _{1s}
	V	Hz	min ⁻¹	W	A	m³/h	Pa	cfm	in. wg
1	400	50	2300	305	0.48	690	0	405	0.00
2	400	50	2470	242	0.39	580	250	340	1.00
3	400	50	2665	168	0.29	410	500	240	2.01
4	400	50	2790	114	0.23	250	548	145	2.20

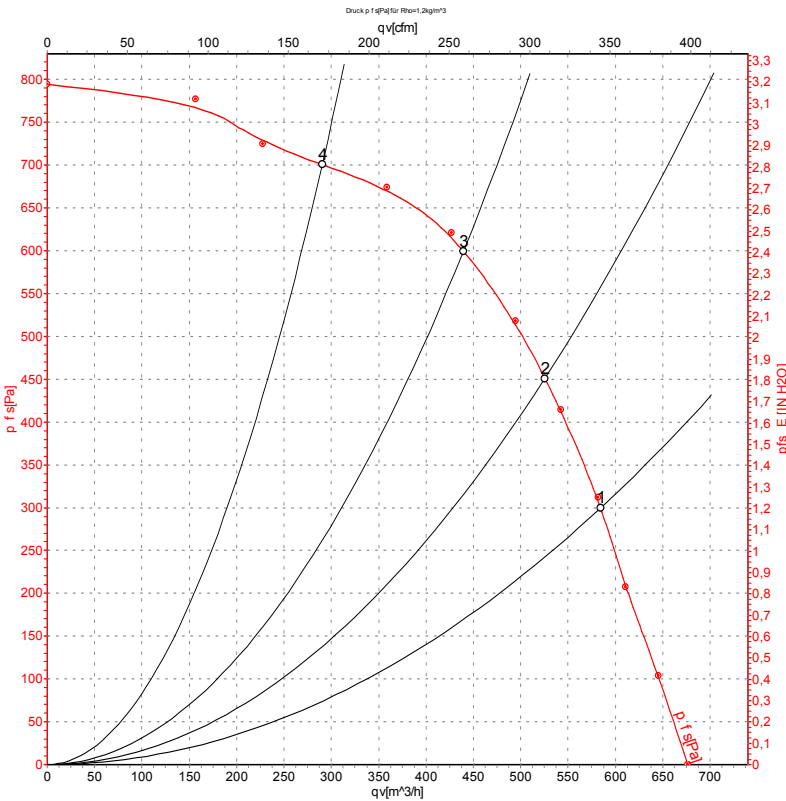
U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · p_{1s} = Pressure increase



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Curves: Air performance 60 Hz



Measurement: LU-39224-1

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

	U	f	n	P _e	I	q _v	P _{is}	q _v	P _{is}
	V	Hz	min ⁻¹	W	A	m³/h	Pa	cfm	in. wg
1	400	60	2550	335	0.52	585	300	345	1.20
2	400	60	2720	296	0.46	525	450	310	1.81
3	400	60	2905	247	0.39	440	600	260	2.41
4	400	60	3145	176	0.29	290	700	170	2.81

U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · P_{is} = Pressure increase

