

AC centrifugal fan

forward-curved, dual-intake
with housing (large flange)

D4D225-GH02-05 ebmpapst Datasheet
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Nominal data

Type	D4D225-GH02-05		
Motor	M4D094-LA		
Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Y	Y
Frequency	Hz	50	60
Method of obtaining data		fa	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min ⁻¹	1230	1360
Power consumption	W	1140	1280
Current draw	A	2.1	2.3
Min. back pressure	Pa	0	150
Min. back pressure	in. wg	0	0.6
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	70	50
Starting current	A	4.6	4

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 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_e	%	44.8	40.4	09 Power consumption P_e	kW	0.44
02 Measurement category		B		09 Air flow q_v	m³/h	1920
03 Efficiency category		Total		09 Pressure increase p_f	Pa	371
04 Efficiency grade N		53.4	49	10 Speed (rpm) n	min ⁻¹	1420
05 Variable speed drive		No		11 Specific ratio*		1.00

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

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

LU-42109



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Technical description

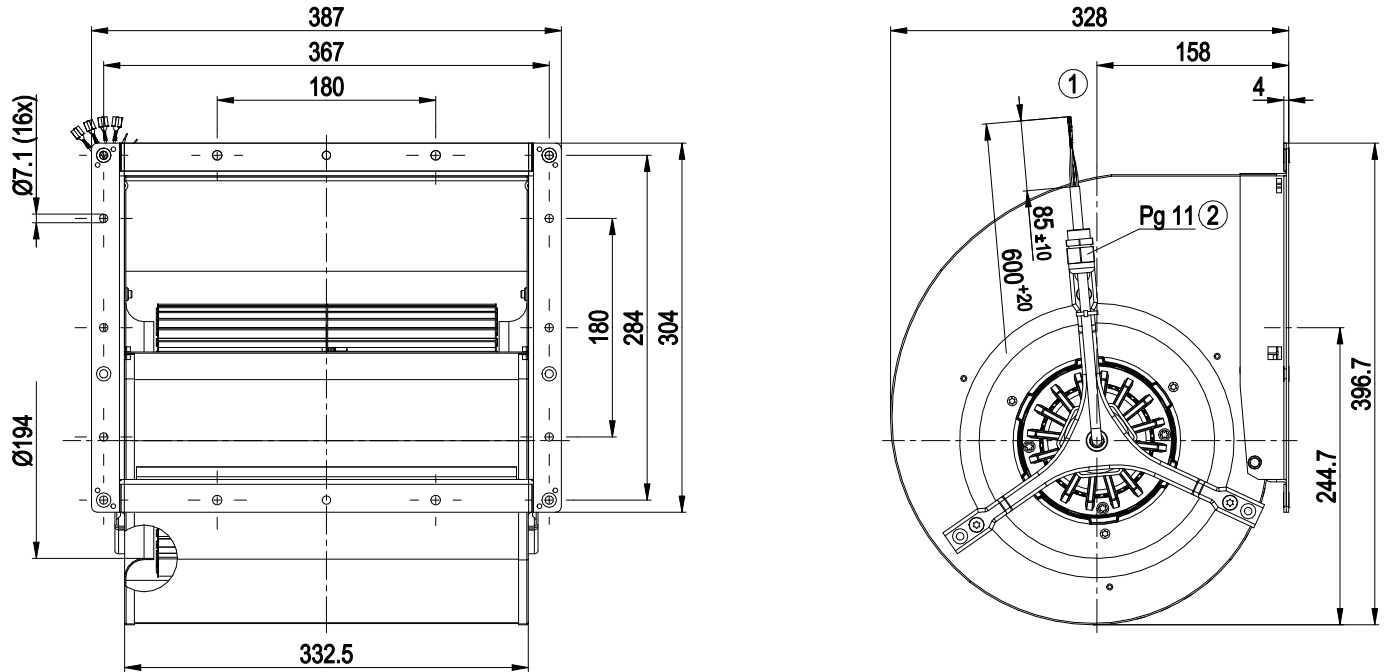
Weight	16.4 kg
Size	225 mm
Motor size	94
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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, open rotor
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	EAC



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Product drawing

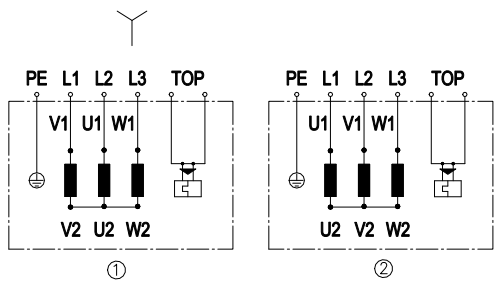


- | | |
|---|--|
| 1 | Cable 4x ETFE AWG18, 2x PFA AWG18 |
| | 2x splice (gray), 4x flat push-on receptacle 6.3x0.8 |
| 2 | Cable diameter min. 4 mm, max. 10 mm, tightening torque 2±0.3 Nm |

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Connection diagram



Change of rotation direction by reversing two phases

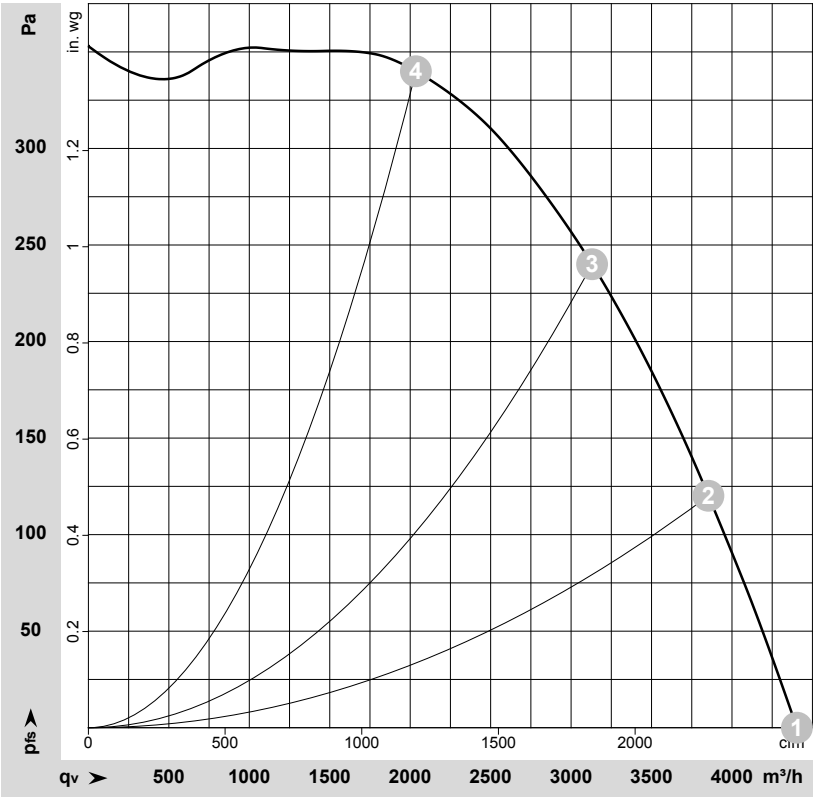
	Three-phase motor
Y	Star connection
1	Counterclockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	= U1 = black
L2	= V1 = blue
L3	= W1 = brown
PE	green/yellow
TOP	2x gray



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Curves: Air performance 50 Hz



$\rho = 1.177 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-42109-1

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	Y	400	50	1230	1140	2.10	4405	0	2590	0.00
2	Y	400	50	1300	928	1.76	3855	120	2270	0.48
3	Y	400	50	1355	721	1.46	3130	240	1845	0.96
4	Y	400	50	1415	464	1.15	2035	340	1200	1.36

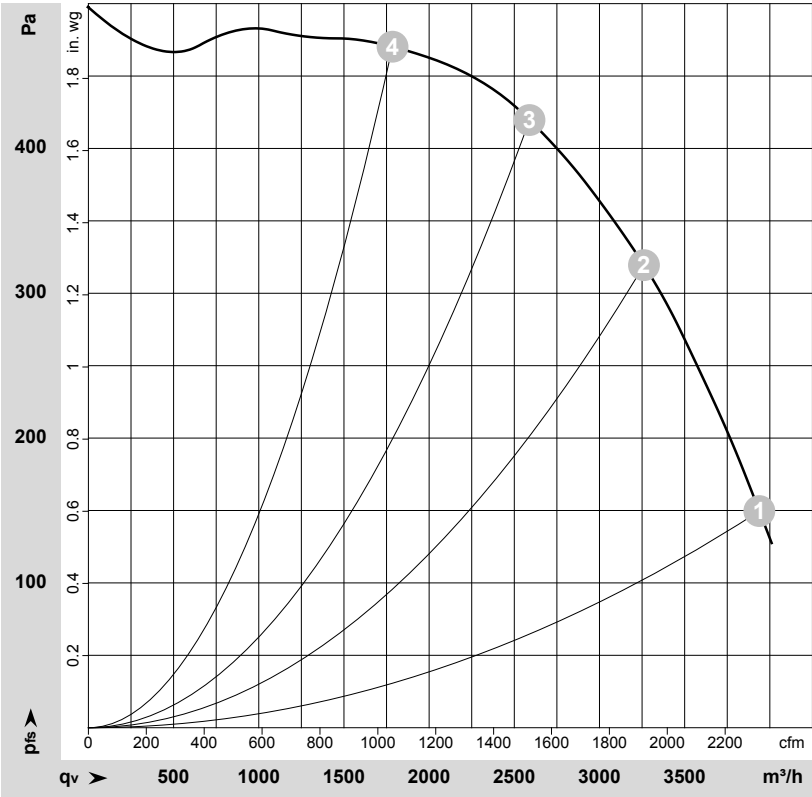
Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase



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Curves: Air performance 60 Hz



$\rho = 1.176 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-42110-1

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	m ³ /h	Pa	cfm	in. wg
1	400	60	1360	1280	2.30	3940	150	2320	0.60
2	400	60	1505	1005	1.81	3260	320	1920	1.28
3	400	60	1590	774	1.45	2590	420	1525	1.69
4	400	60	1665	562	1.13	1785	470	1050	1.89

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

