D2D160-BE02-21

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

D2D160-BE02-21 ebmpapst Datasheet
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County court Stuttgart · HRA 590344

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County court Stuttgart · HRB 590142

ErP2013 EXCEEDS THE NORM

Nominal data

Type	**D2D160-BE02-21**
Motor	**M2D074-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	2700	3000	2700	3000
Power input	W	700	1055	700	1055
Current draw	A	2.22	2.94	1.28	1.7
Min. back pressure	Pa	400	500	400	500
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	75	75	75	75
Starting current	A	9.25	9.6	5.34	5.54

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.01

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		32.4	28.5	35.5
Efficiency grade N		40.9	37	44
Power input P_e	kW	0.46		
Air flow q_v	m^3/h	1000		
Pressure increase p_{fs}	Pa	538		
Speed n	min^{-1}	2820		

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	11.2 kg
Size	160 mm
Surface of rotor	Coated in black
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Material of guard grille	Steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Motor suspension	Motor mounted anti-vibration on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 00
Insulation class	"F"
Humidity class	F2-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 1004-1; CSA C22.2 Nr.100

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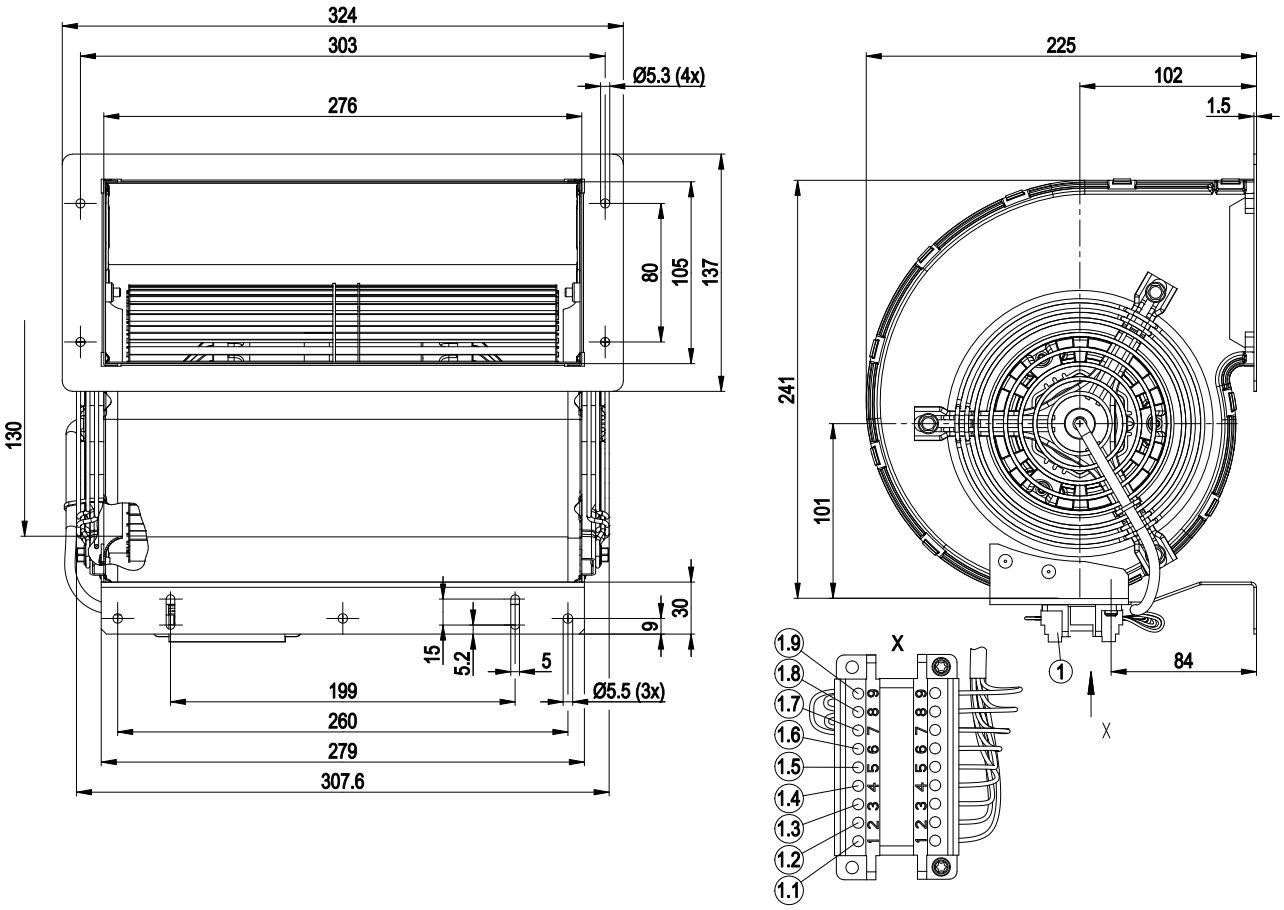
Product drawing



1	Connection line PFA AWG20, strip Weidmüller STV S 9 SS and 9x lead tips crimped. Connector housing Weidmüller STV S 9 SB
1.1	black
1.2	blue
1.3	brown
1.4	grey
1.5	green/yellow
1.6	grey
1.7	green
1.8	white
1.9	yellow

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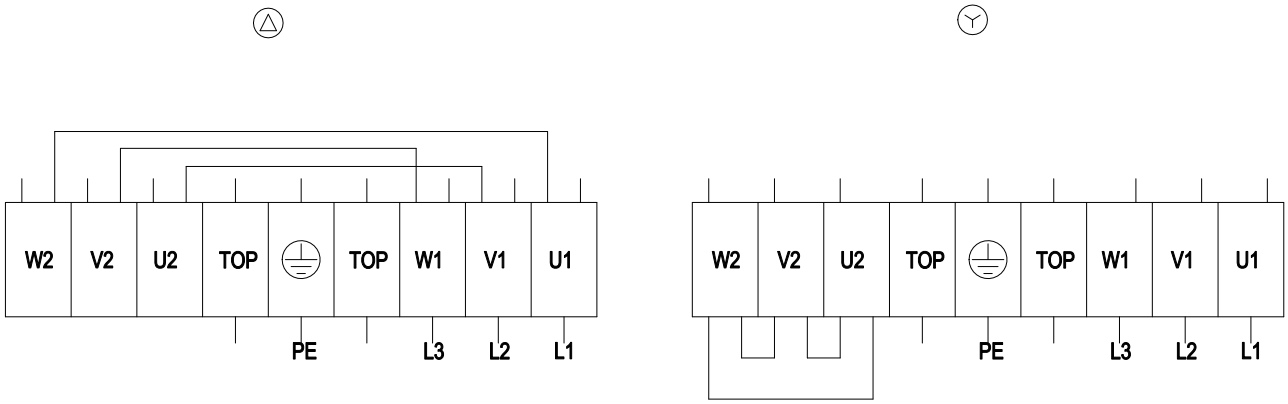
Connection screen



Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	TOP	2 x grey
PE	green / yellow	U2	green	V2	white
W2	yellow				

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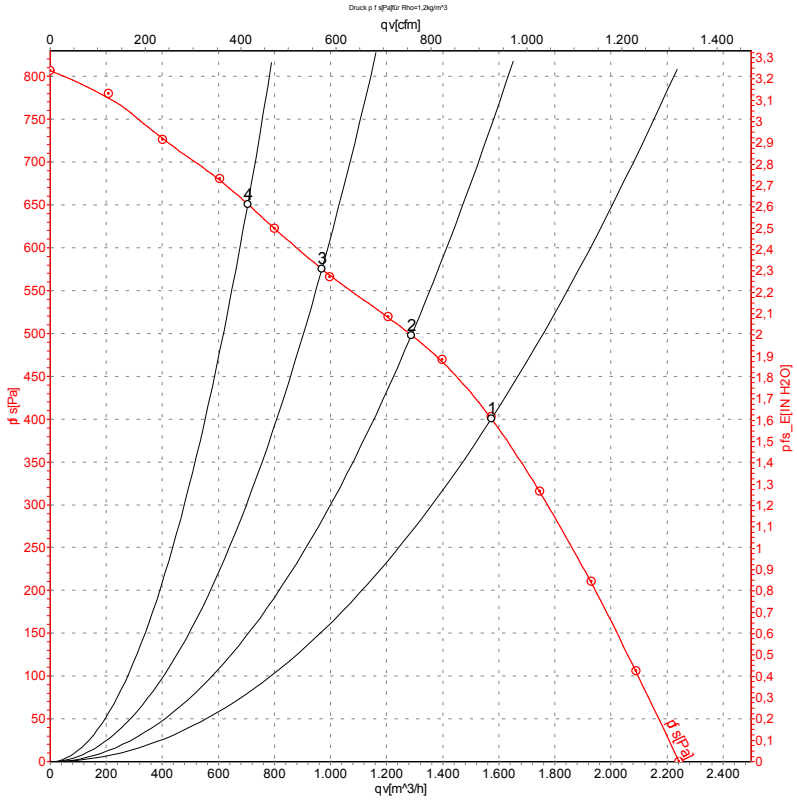
Charts: Air flow 50 Hz



Measurement: LU-112482

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	50	2700	700	1.28	1575	400
2	400	50	2775	564	1.10	1290	500
3	400	50	2825	454	0.96	970	575
4	400	50	2855	387	0.89	705	650

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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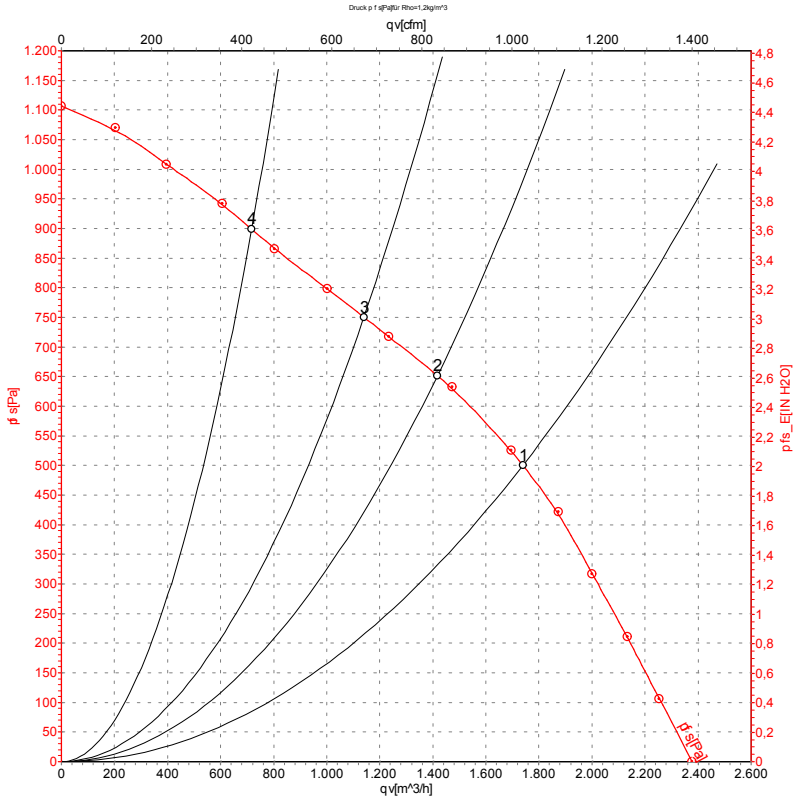
Charts: Air flow 60 Hz



Measurement: LU-112483

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	60	3000	1055	1.70	1740	500
2	400	60	3130	851	1.39	1415	650
3	400	60	3215	728	1.21	1140	750
4	400	60	3300	592	1.01	715	900

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase