D2D160-BE03-18

AC centrifugal fan

forward-curved, dual-intake

with housing (flange), for rail applications

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Nominal data

Type	**D2D160-BE03-18**
Motor	**M2D074-LA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	2800	2500	3250	2550
Power consumption	W	705	550	1090	785
Current draw	A	1.7	0.9	1.8	1.2
Min. back pressure	Pa	400	315	500	320
Min. back pressure	in. wg	1.61	1.26	2.01	1.28
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	75	80	80	60
Starting current	A	7.7	2.8	7.6	2.6

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

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Technical description

Weight	10.46 kg
Size	160 mm
Motor size	74
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Guard grille material	Steel, coated with white-aluminum plastic (RAL 9006)
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP00
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
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); EN 61373, Cat. 1B: 2010; CE
Approval	EAC

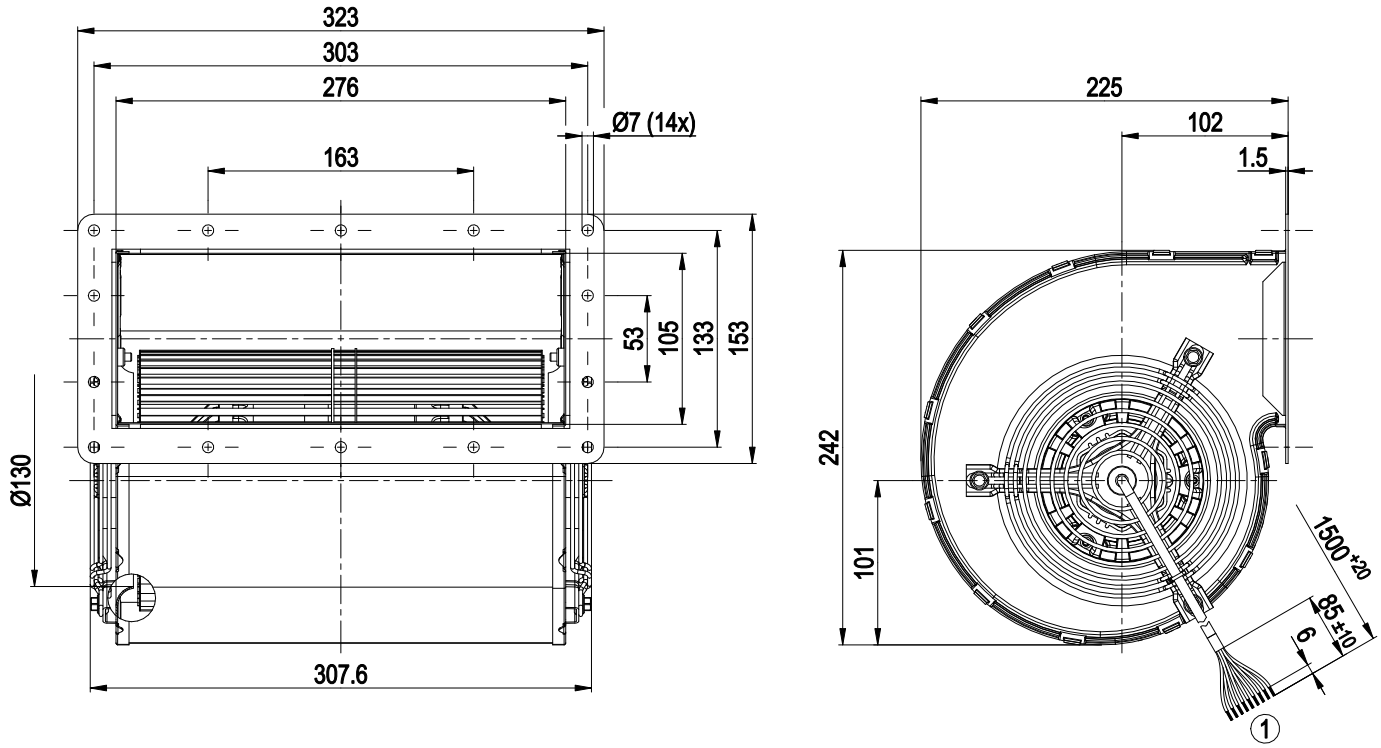
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Product drawing



1	Cable, halogen-free, railway application EN 45545, 9G 0.5 mm²
	9x splice

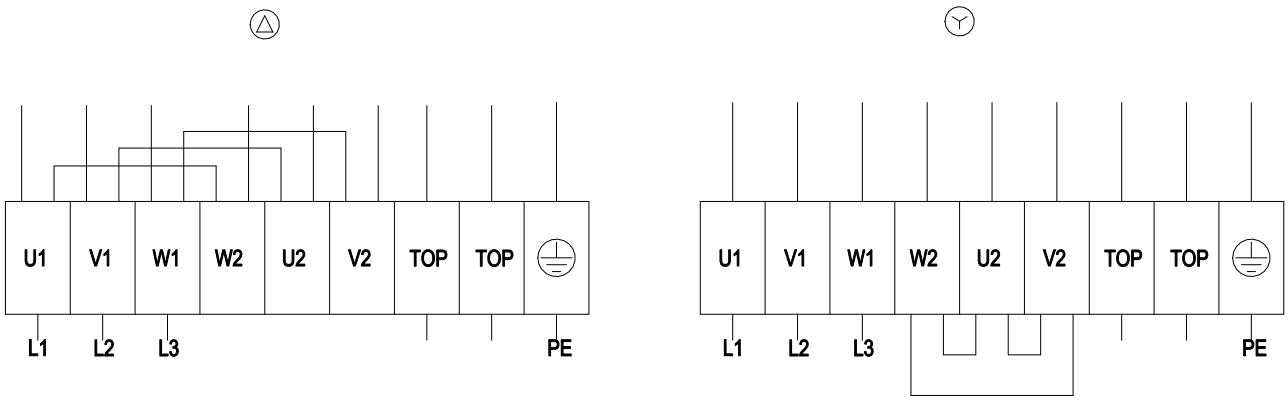
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Connection diagram



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

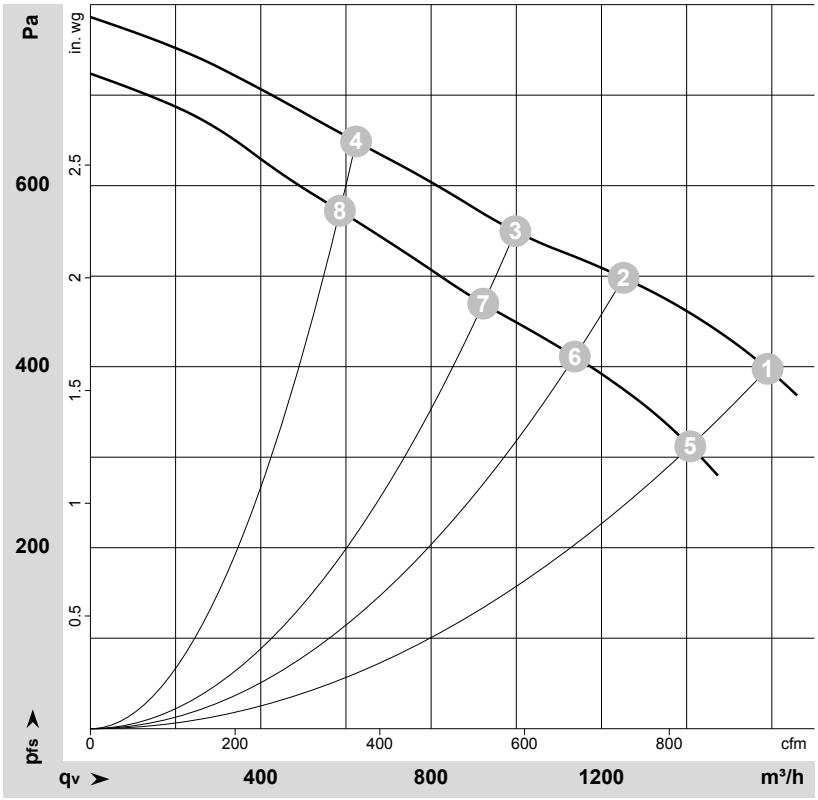
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-189025-1
Measurement: LU-188997-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	2800	705	1.70	70	82	1590	400	935	1.61
2	Δ	400	50	2860	585	1.59	68	81	1250	500	735	2.01
3	Δ	400	50	2880	509	1.54	68	80	1000	550	585	2.21
4	Δ	400	50	2905	439	1.50	70	82	625	650	365	2.61
5	Y	400	50	2500	550	0.90			1410	315	830	1.26
6	Y	400	50	2605	460	0.74			1135	411	670	1.65
7	Y	400	50	2665	401	0.66			920	469	545	1.88
8	Y	400	50	2735	335	0.56			585	572	345	2.30

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

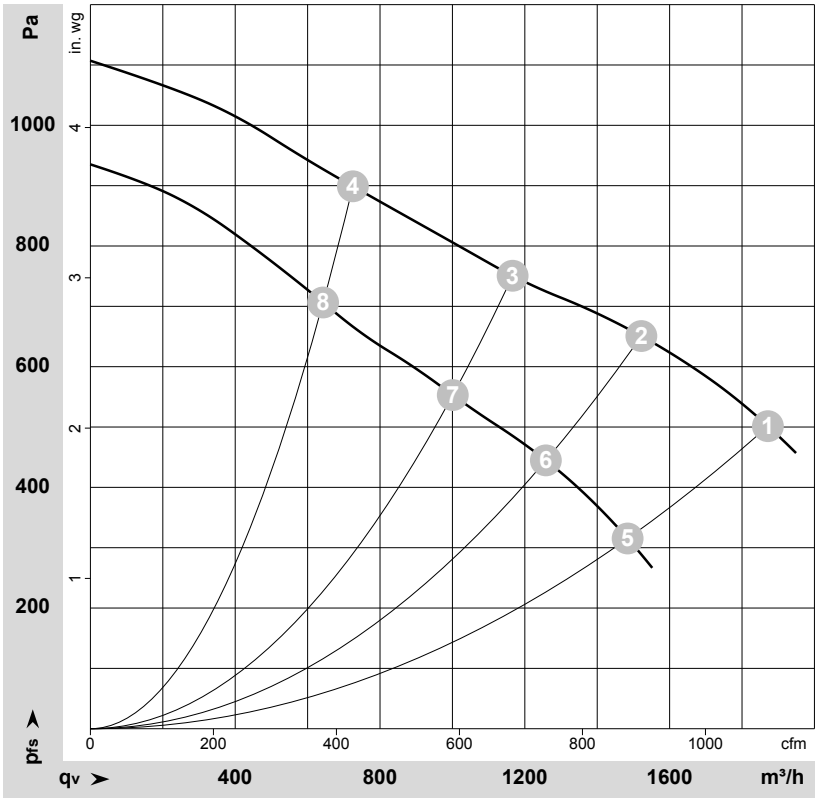
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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-189026-1
Measurement: LU-189023-1

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	Δ	400	60	3250	1090	1.80	1870	500	1100	2.01
2	Δ	400	60	3310	895	1.57	1520	650	895	2.61
3	Δ	400	60	3365	750	1.39	1165	750	685	3.01
4	Δ	400	60	3410	621	1.23	725	900	425	3.61
5	Y	400	60	2550	785	1.20	1485	320	875	1.28
6	Y	400	60	2745	687	1.08	1260	445	740	1.79
7	Y	400	60	2895	597	0.94	1000	553	590	2.22
8	Y	400	60	3030	511	0.81	645	707	380	2.84

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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