D2D146-AA28-24

AC centrifugal fan

forward-curved, dual-intake

with housing (without flange), for rail applications

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Nominal data

Type	**D2D146-AA28-24**
Motor	**M2D068-EC**

Phase		3~
Nominal voltage	VAC	400
Wiring		Y
Frequency	Hz	50
Method of obtaining data		ml
Valid for approval/standard		CE
Speed (rpm)	min^{-1}	2050
Power consumption	W	345
Current draw	A	0.51
Min. back pressure	Pa	200
Min. back pressure	in. wg	0.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40
Starting current	A	1

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	4.4 kg
Size	146 mm
Motor size	68
Rotor surface	Painted black
Impeller material	Sheet steel, painted black
Housing material	Sheet steel, galvanized
Motor suspension	Motor mounted with brackets on one side
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
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
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1

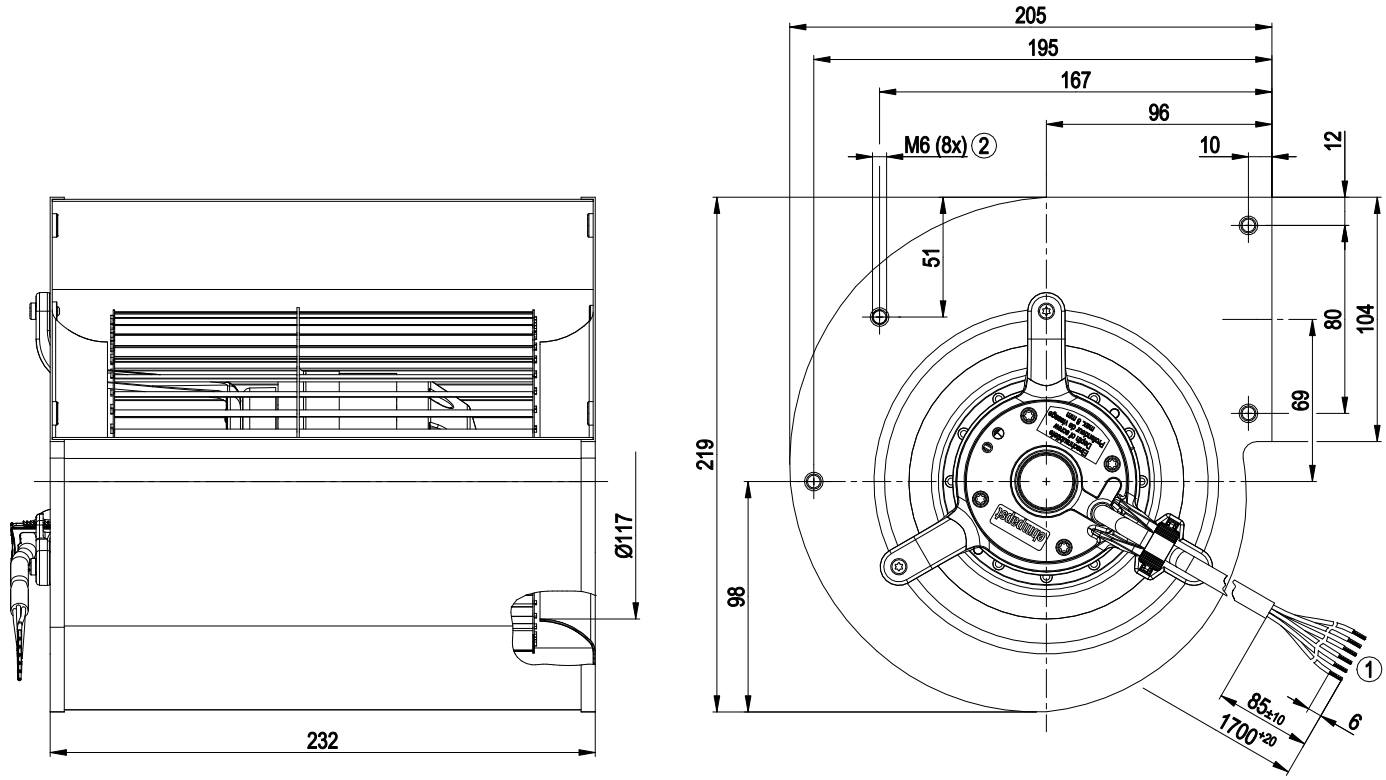
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Product drawing



1	Cable, halogen-free, railway application EN 45545, 6G 0.5 mm²
	6x splice
2	M6 rivet nut

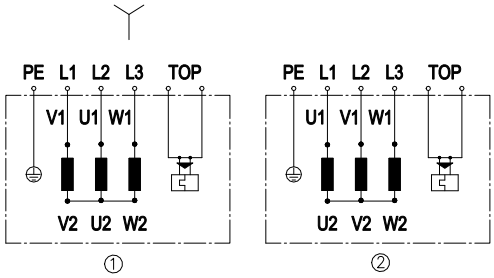
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Connection diagram



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

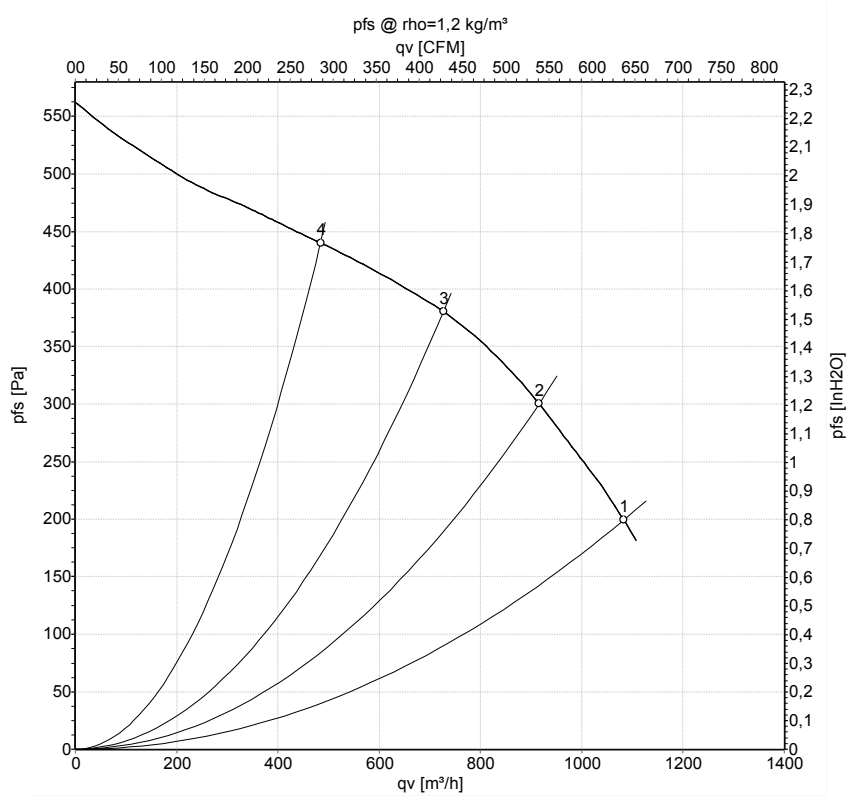
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Curves: Air performance 50 Hz



Measurement: LU-56685-1

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_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	400	50	2050	345	0.51	1085	200	635	0.80
2	400	50	2225	294	0.47	915	300	540	1.20
3	400	50	2430	235	0.38	725	380	430	1.53
4	400	50	2620	172	0.30	485	440	285	1.77

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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