S2D250-BI14-09

AC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle, for rail applications

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Nominal data

Type	**S2D250-BI14-09**		
Motor	**M2D068-CF**		
Phase		3~	3~
Nominal voltage	VAC	400	440
Wiring		Y	Y
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	2460	2510
Power consumption	W	110	160
Current draw	A	0.19	0.23
Max. back pressure	Pa	100	110
Max. back pressure	in. wg	0.4	0.44
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	80	60
Starting current	A	0.47	0.47

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	2.2 kg
Size	250 mm
Motor size	68
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	9
Airflow direction	A
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
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
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61373, Cat. 1B: 2010
Approval	EAC; CCC

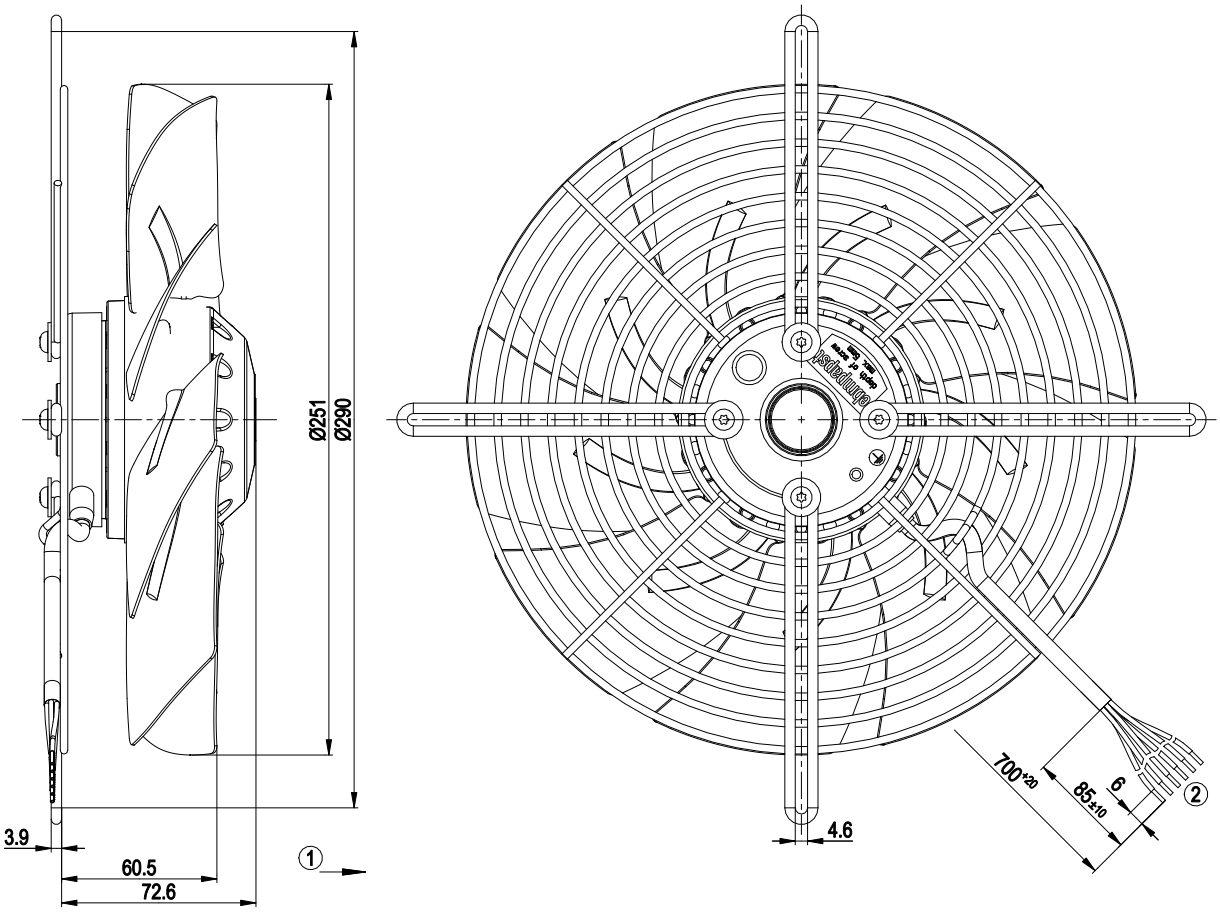
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Product drawing



1	Direction of air flow "A"
2	Cable, halogen-free, railway application EN 45545, 6G 0.5 mm²
	6x splice

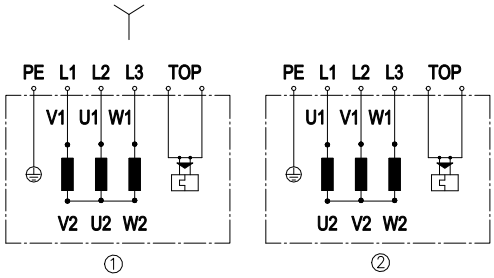
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Connection diagram



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

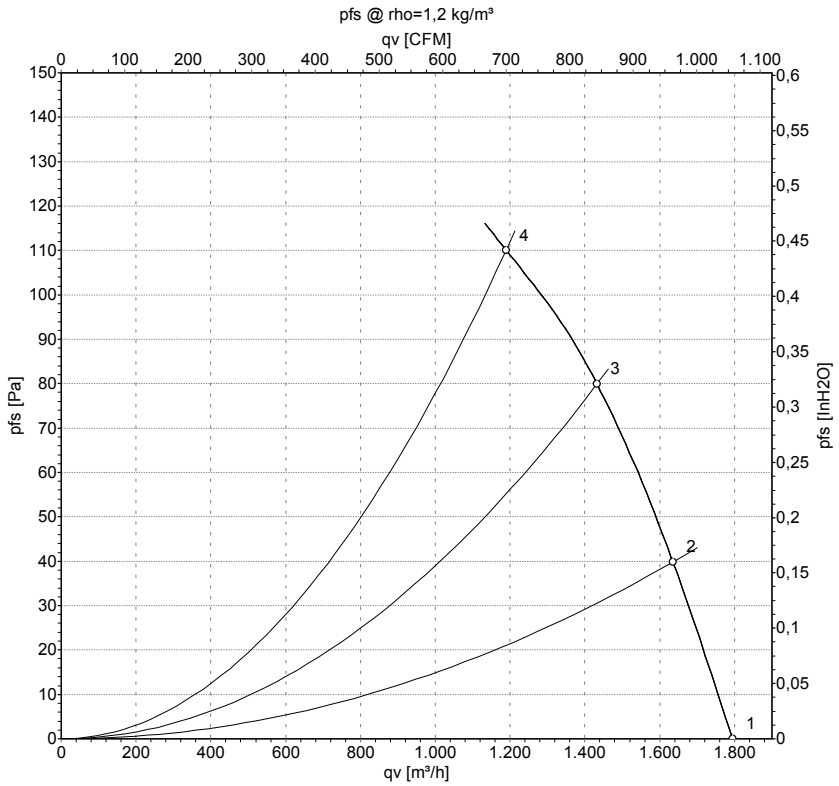
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Curves: Air performance 60 Hz



Measurement: LU-129447-1

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	440	60	2510	160	0.23	1795	0	1055	0.00
2	440	60	2420	171	0.25	1635	40	960	0.16
3	440	60	2330	180	0.26	1430	80	845	0.32
4	440	60	2245	185	0.27	1190	110	700	0.44

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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