S2D250-BA02-25

AC axial fan

straight blades (A series)

with guard grille for full nozzle, for railway applications

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Nominal data

Type	**S2D250-BA02-25**		
Motor	**M2D068-DF**		
Phase		3~	3~
Nominal voltage	VAC	400	400
Connection		Y	Y
Frequency	Hz	50	60
Type of data definition		fa	fa
Valid for approval / standard		CE	CE
Speed (rpm)	min^{-1}	2650	2950
Power input	W	110	160
Current draw	A	0.22	0.26
Max. back pressure	Pa	250	300
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	90	60

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

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Technical features

Mass	2.51 kg
Size	250 mm
Motor size	68
Surface of rotor	Coated in black
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	A
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP54; Depending on installation and position as per EN 60034-5
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	None
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	DIN IEC 60038
Approval	EAC; CCC

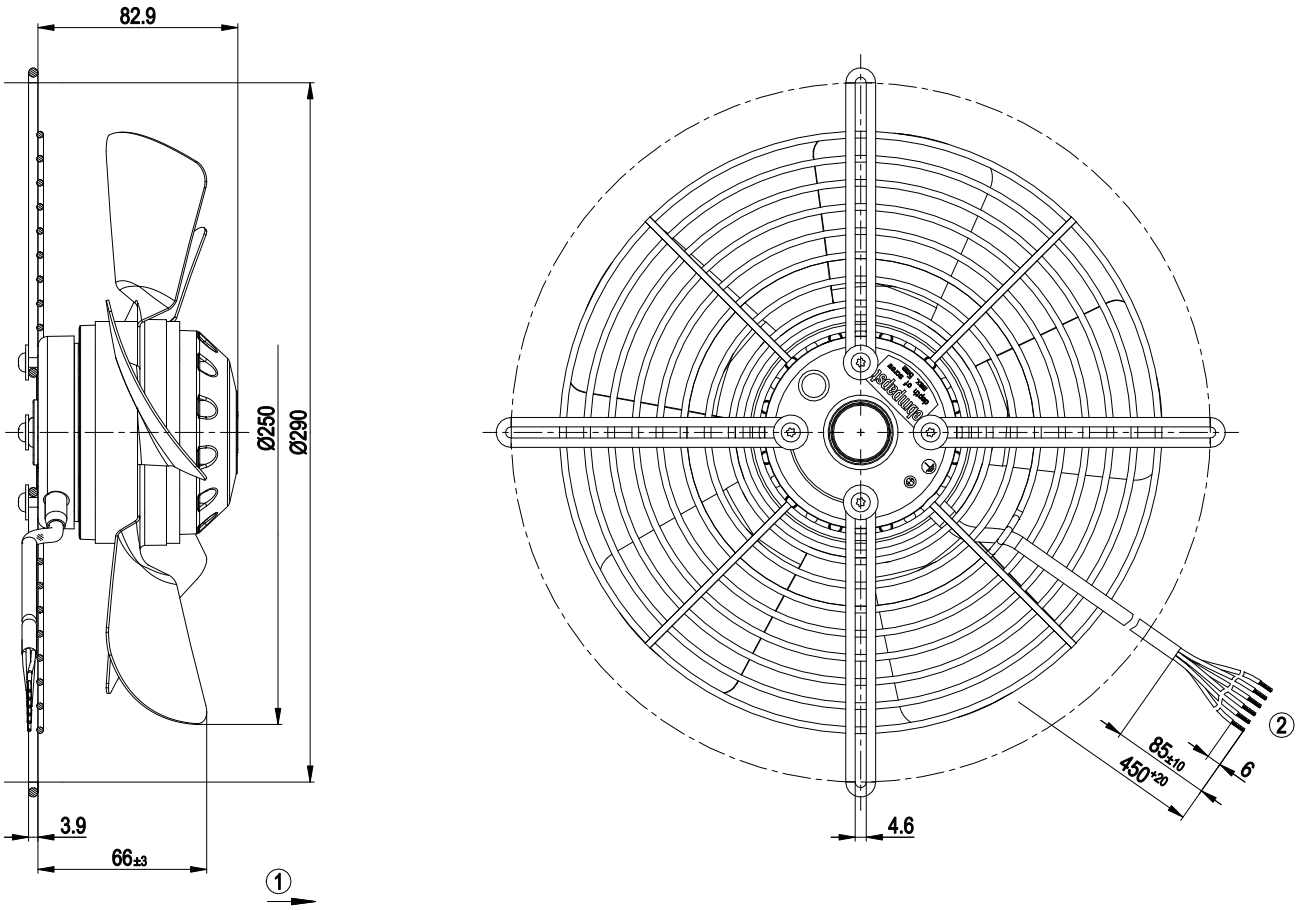
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Product drawing



1	Direction of air flow "A"
2	Connection line, halogen-free, railway application EN 45545, 6G 0.5 mm²
	6x lead tip

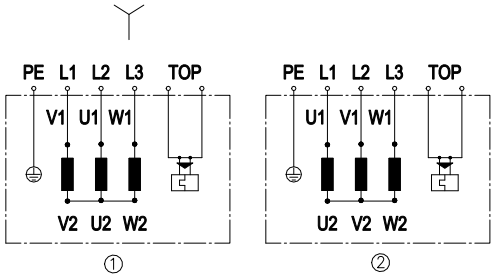
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Connection screen



Change direction of rotation by reversing two phases

	Three-phase motor
Y	Star connection
1	Anti-clockwise 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 grey

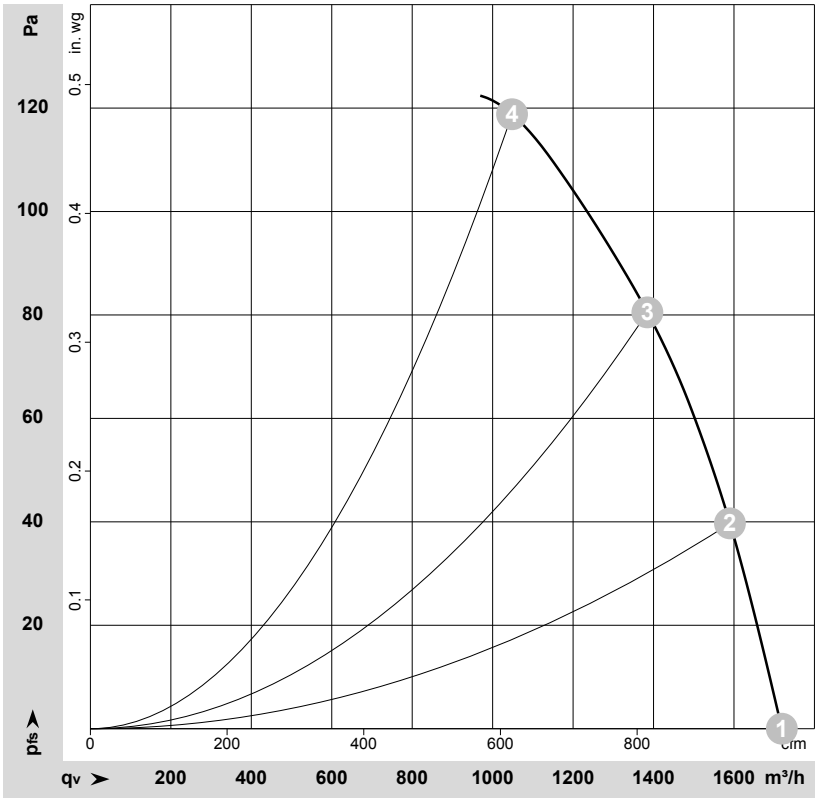
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-69121-1

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

	Conn.	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	2650	110	0.22	1720	0	1010	0.00
2	Y	400	50	2620	126	0.23	1590	40	935	0.16
3	Y	400	50	2600	131	0.24	1385	80	815	0.32
4	Y	400	50	2600	131	0.24	1050	120	615	0.48

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

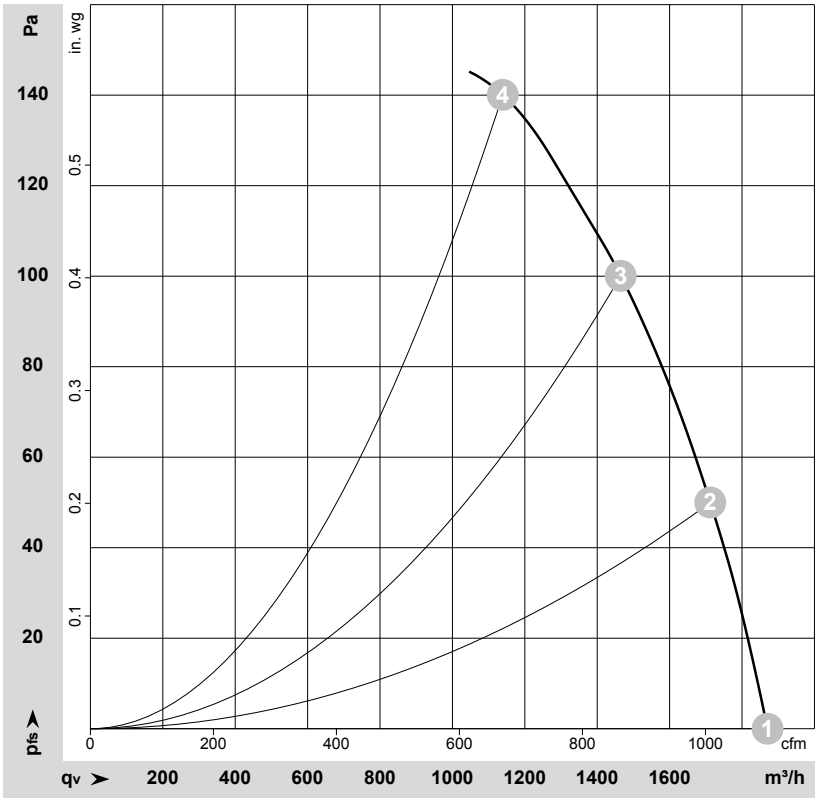
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Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-69123-1

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

	Conn.	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	60	2950	160	0.26	1870	0	1100	0.00
2	Y	400	60	2850	177	0.28	1710	50	1010	0.20
3	Y	400	60	2810	184	0.29	1465	100	860	0.40
4	Y	400	60	2815	182	0.29	1140	140	670	0.56

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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