S2D250-AI14-12

AC axial fan

straight blades (A series), single-intake
with guard grille for full nozzle

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**S2D250-AI14-12**
Motor	**M2D068-CF**

Phase		3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	460	460
Wiring		Y	Y	Y	Y	Y
Frequency	Hz	50	60	60	60	60
Method of obtaining data		fa	fa	fa	fa	fa
Valid for approval/standard		CE	UL 2111	CE	CE	UL 2111
Speed (rpm)	min^{-1}	2460	2580	2580	2750	2750
Power consumption	W	110	140	140	160	180
Current draw	A	0.19	0.22	0.22	0.23	0.24
Max. back pressure	Pa	100	100	100	120	120
Max. back pressure	inH2O	0.4	0.4	0.4	0.48	0.48
Min. ambient temperature	°C	-25	-25	-25	-25	-25
Max. ambient temperature	°C	80	60	60	60	60

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

AC axial fan

straight blades (A series), single-intake
with guard grille for full nozzle

Technical description

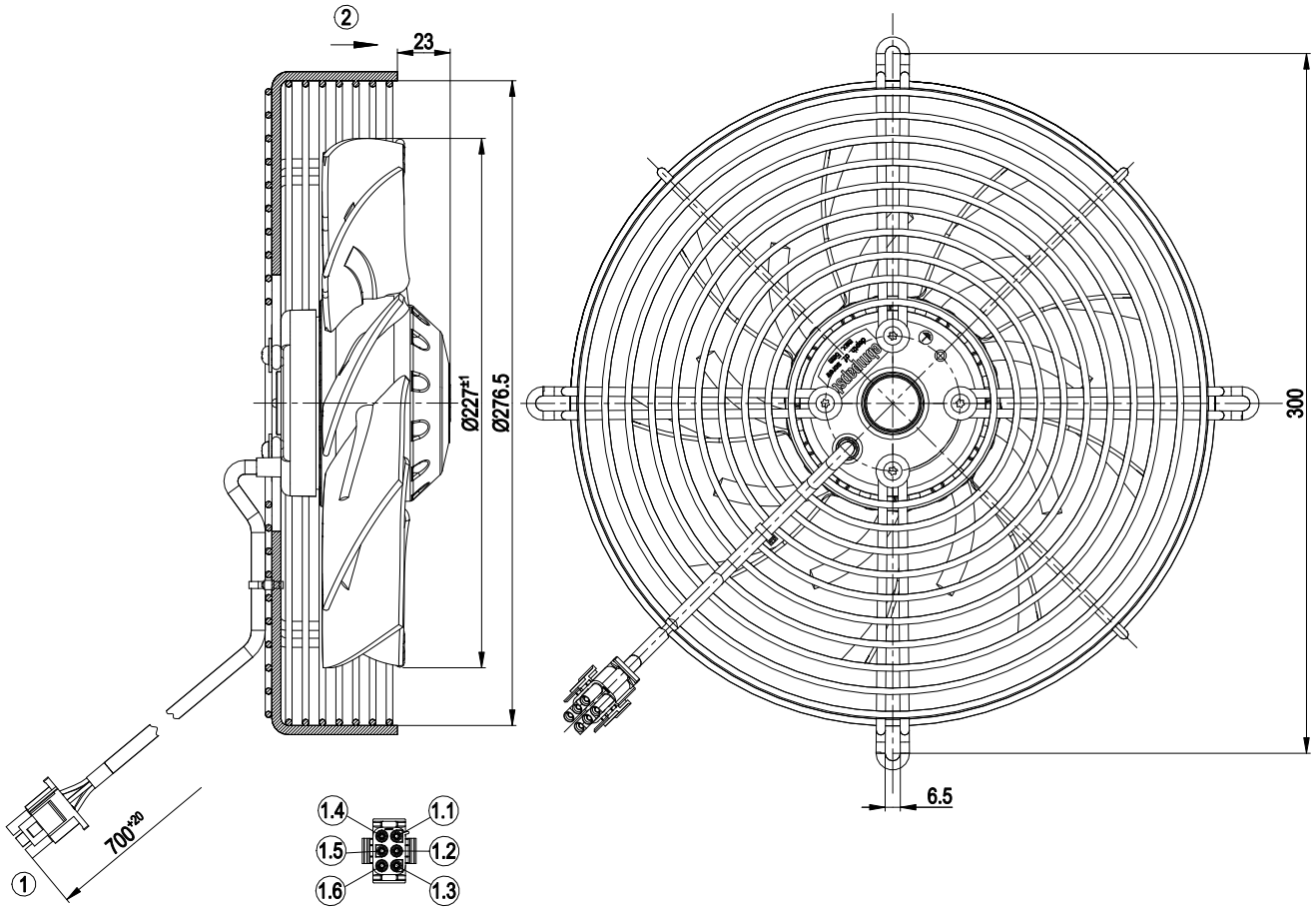
Weight	2.7 kg
Fan size	250 mm
Number of blades	9
Airflow direction	"A"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F2-2
Max. permitted 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
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	CE
Approval	CSA C22.2 No. 100; UL 1004-1

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan

straight blades (A series), single-intake
with guard grille for full nozzle

Product drawing



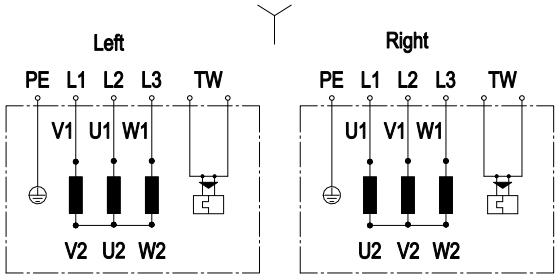
1	Cable PFA 6G 0.5 mm², 1x connector housing AMP and 6x socket AMP
1.1	black
1.2	blue
1.3	brown
1.4	green/yellow
1.5	gray
1.6	gray
2	Direction of air flow "A"

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan

straight blades (A series), single-intake
with guard grille for full nozzle

Connection diagram



Note: Change of rotation direction by reversing two phases

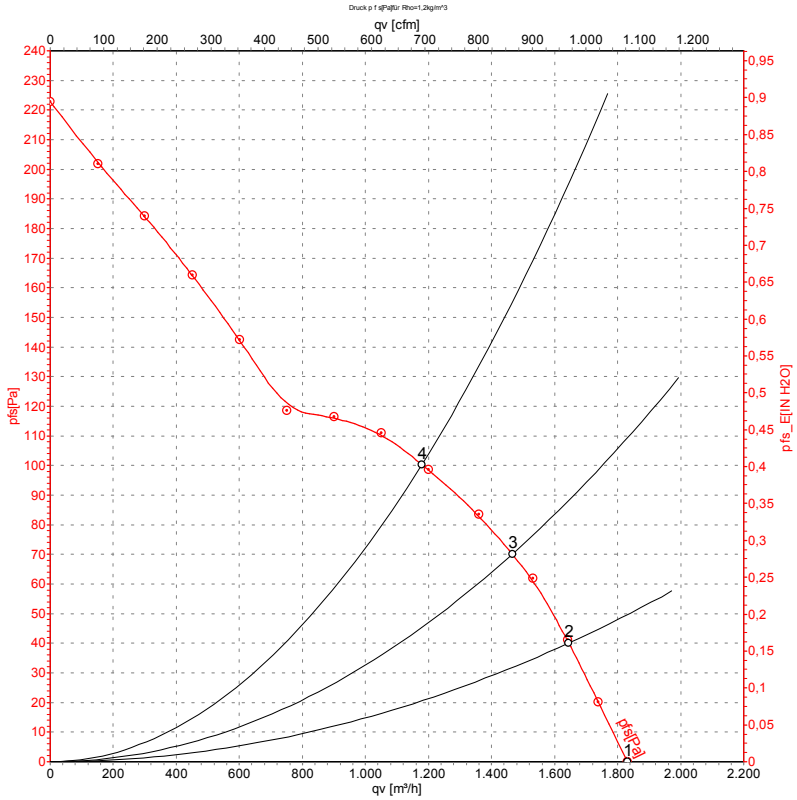
Y	Star connection	L1	=U1=black	L2	=V1=blue
L3	=W1=brown	TOP	2x gray	PE	green/yellow

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan

straight blades (A series), single-intake
with guard grille for full nozzle

Curves: Air performance 50 Hz Y



Measurement: LU-76487-1

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	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	Y	400	50	2460	110	0.19	1830	0	1080	0.00
2	Y	400	50	2395	113	0.20	1645	40	970	0.16
3	Y	400	50	2350	120	0.21	1465	70	865	0.28
4	Y	400	50	2290	126	0.22	1180	100	695	0.40

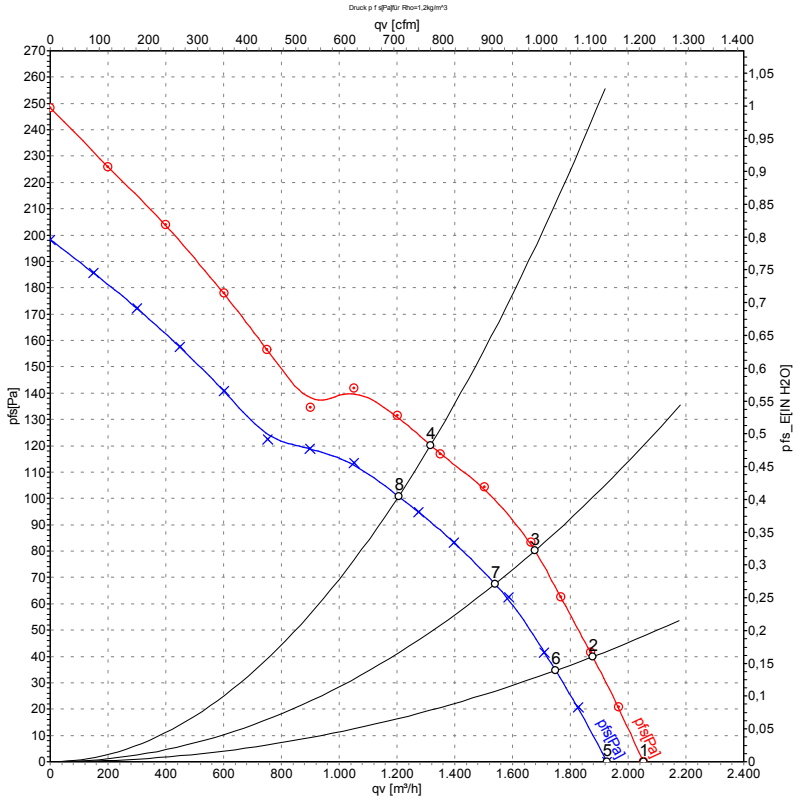
Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan

straight blades (A series), single-intake
with guard grille for full nozzle

Curves: Air performance 60 Hz Y



Measurement: LU-76489-1
Measurement: LU-76488-1

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	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	Y	460	60	2750	160	0.23	2055	0	1210	0.00
2	Y	460	60	2690	165	0.24	1875	40	1105	0.16
3	Y	460	60	2600	177	0.25	1675	80	985	0.32
4	Y	460	60	2515	187	0.26	1315	120	775	0.48
5	Y	400	60	2580	140	0.22	1925	0	1135	0.00
6	Y	400	60	2500	145	0.23	1750	35	1030	0.14
7	Y	400	60	2405	154	0.24	1540	68	905	0.27
8	Y	400	60	2310	161	0.26	1205	100	710	0.40

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com