EC axial fan - ESM

sickle-shaped blades (S series), single-intake

ESM guard grille

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	**S1G300-GP01-11**
Motor	**M1G055-DF**

Phase		1~	1~	1~	1~
Nominal voltage	VAC	230	230	230	230
Nominal voltage range	VAC	200 .. 240	200 .. 240	200 .. 240	200 .. 240
Frequency	Hz	50/60	50/60	50/60	50/60
Method of obtaining data		ml			
Speed (rpm)	min^{-1}	1600	1400	1200	1000
Power consumption	W	80			
Current draw	A	0.7			
Max. back pressure	Pa	50			
Max. back pressure	in. wg	0.2			
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	40	40	40	40

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	1.6 kg
Size	300 mm
Motor size	55
Rotor surface	Thick-film passivated
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Guard grille material	PP plastic
Number of blades	5
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 70 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing with low-temperature lubricant
Technical features	- Speed setting input (230 V) - Power limiter - Motor current limitation - Soft start - Thermal overload protection for motor
Speed levels	4
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	EAC

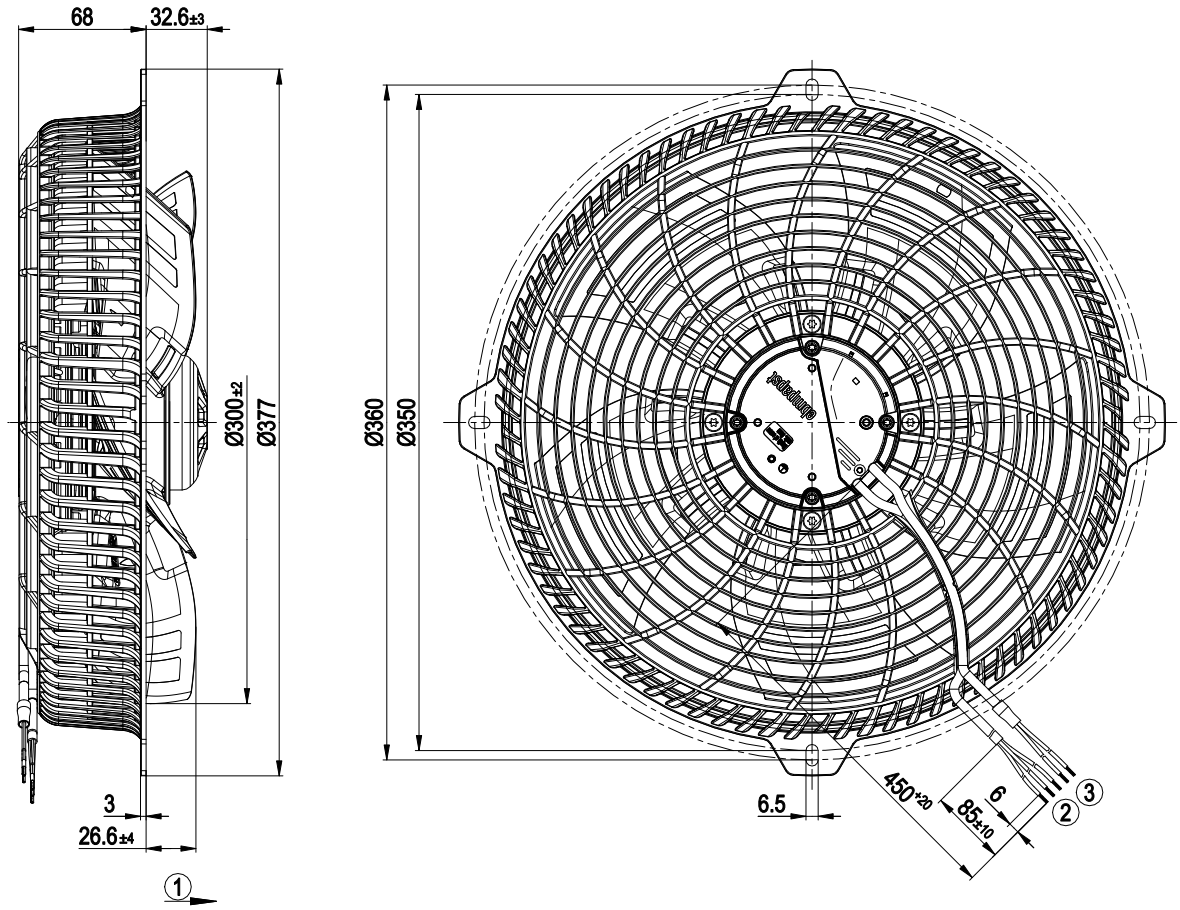
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Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG20
	3x splice
3	Cable PVC AWG22
	2x splice

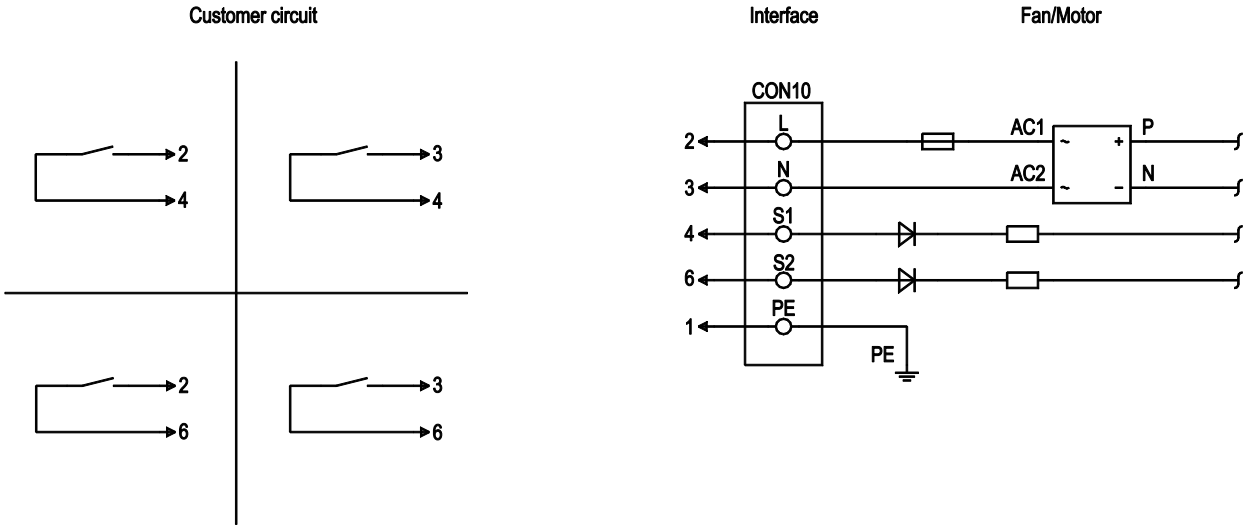
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Connection diagram



switch closed = 1
switch open = 0

S1	S2	level of rotation speed
0	0	1
1	0	2
0	1	3
1	1	4

No.	Conn.	Designation	Color	Function/assignment
2	L		black	Power supply, phase, see nameplate for voltage range
3	N		blue	Power supply, neutral conductor, see nameplate for voltage range
1	PE		green/yellow	Protective earth
4	S1		yellow	Speed selection: see table
6	S2		white	Speed selection: see table

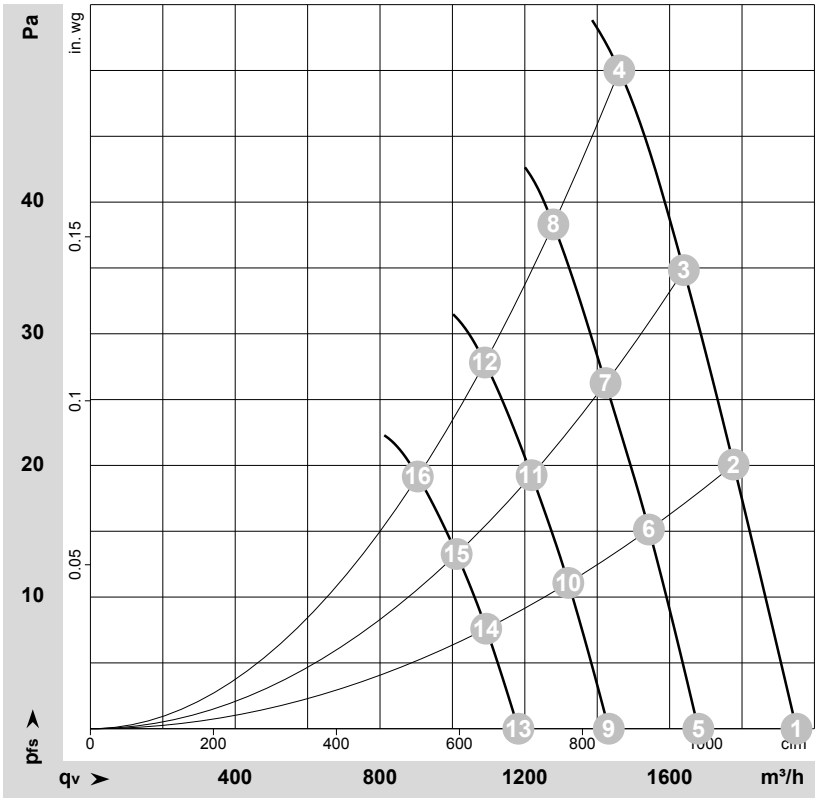
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-187130-1
Measurement: LU-187493-1
Measurement: LU-187520-1
Measurement: LU-187521-1

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

	Stage	Wired	U	f	n	P_{ed}	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	1	1~	230	50	1600	65	0.55	63	73	1950	0	1150	0.00
2	1	1~	230	50	1600	72	0.62	63	72	1775	20	1045	0.08
3	1	1~	230	50	1600	76	0.65	62	72	1640	35	965	0.14
4	1	1~	230	50	1600	80	0.70	62	72	1460	50	860	0.20
5	2	1~	230	50	1400	45	0.42	60	68	1680	0	990	0.00
6	2	1~	230	50	1400	50	0.45	59	67	1545	15	910	0.06
7	2	1~	230	50	1400	52	0.47	58	67	1425	26	840	0.10
8	2	1~	230	50	1400	56	0.50	58	66	1280	38	755	0.15
9	3	1~	230	50	1200	29	0.28	57	65	1430	0	845	0.00
10	3	1~	230	50	1200	32	0.30	57	65	1320	11	775	0.04
11	3	1~	230	50	1200	34	0.31	57	64	1220	19	715	0.08
12	3	1~	230	50	1200	35	0.33	57	65	1090	28	640	0.11
13	4	1~	230	50	1000	18	0.17	50	59	1180	0	695	0.00
14	4	1~	230	50	1000	19	0.18	50	58	1095	8	645	0.03
15	4	1~	230	50	1000	20	0.19	49	58	1010	13	595	0.05
16	4	1~	230	50	1000	21	0.19	49	57	905	19	530	0.08

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = 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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