S3G250-AJ07-09

EC axial fan

sickle-shaped blades (S series)

with guard grille for short nozzle

S3G250-AJ07-09 ebmpapst Datasheet
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Nominal data

Type	**S3G250-AJ07-09**
Motor	**M3G055-DF**

Phase		1
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed	min^{-1}	3020
Power consumption	W	168
Current draw	A	1.4
Max. back pressure	Pa	165
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	42.3	28.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.7	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	1350
09 Pressure increase p_{fs}	Pa	166
10 Speed n	min^{-1}	3020
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-145714

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Technical description

Weight	2.9 kg
Fan size	250 mm
Rotor surface	Passivated
Blade material	PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	7
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
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, open rotor
Mode	S1
Motor storage	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/motor - Line undervoltage detection
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	Locked-rotor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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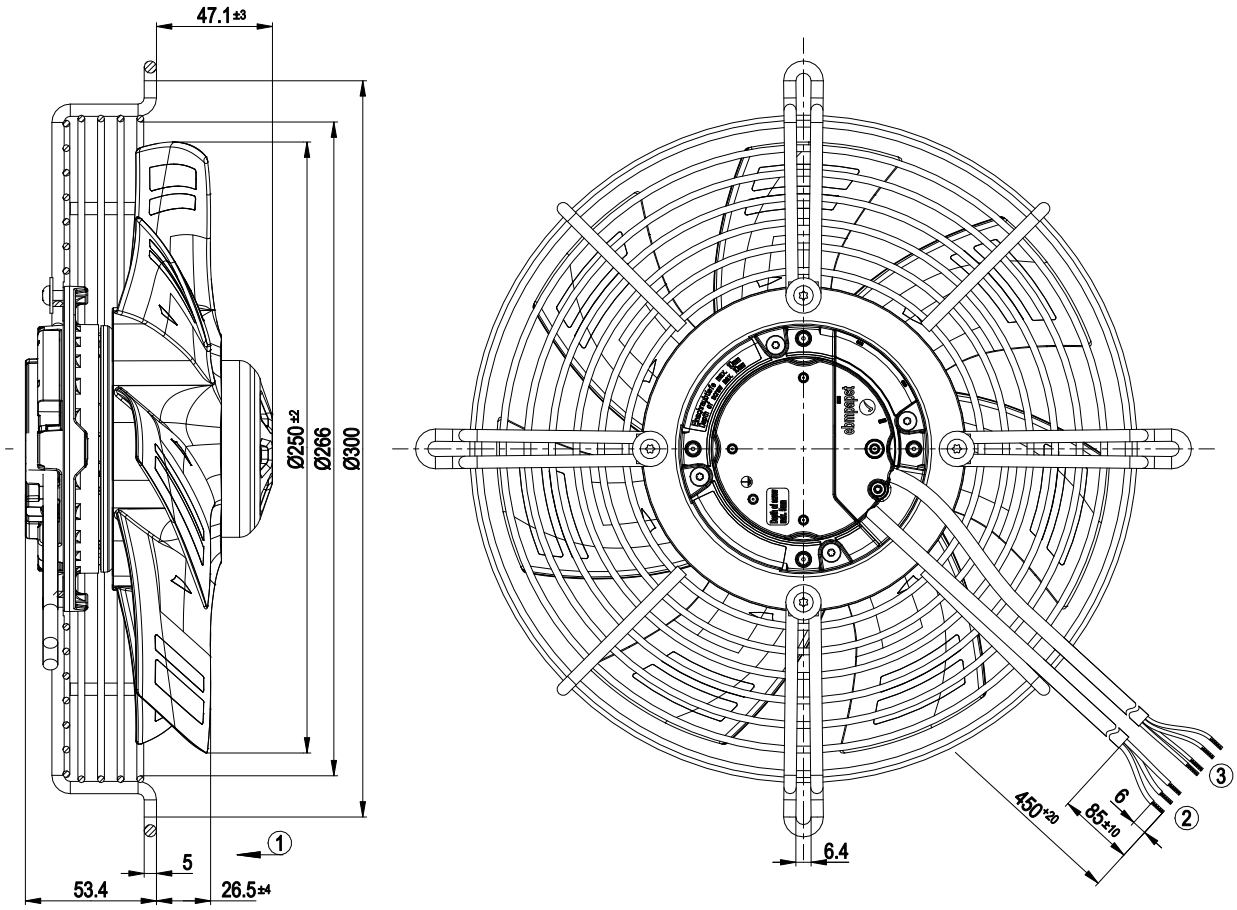
Product drawing



1	Direction of air flow "V"
2	Cable PVC 3G 0.5 mm², 3x crimped splices
3	Cable PVC 4x AWG22, 4x crimped splices

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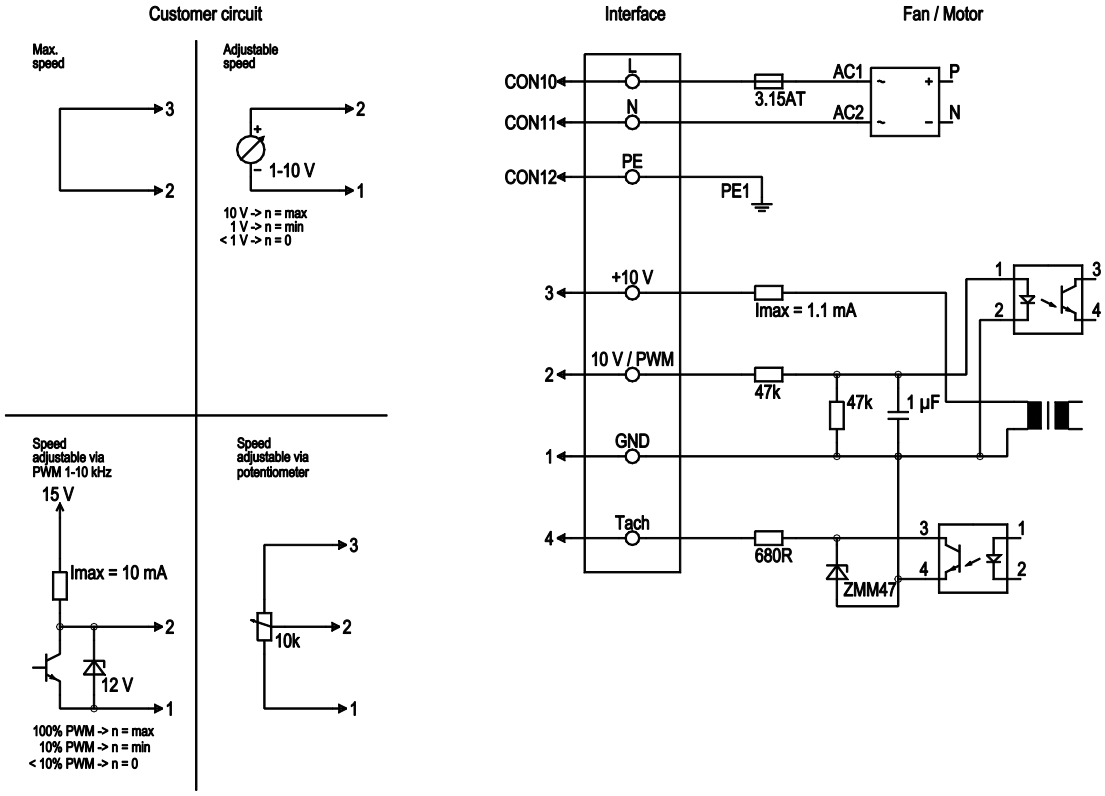
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof.
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

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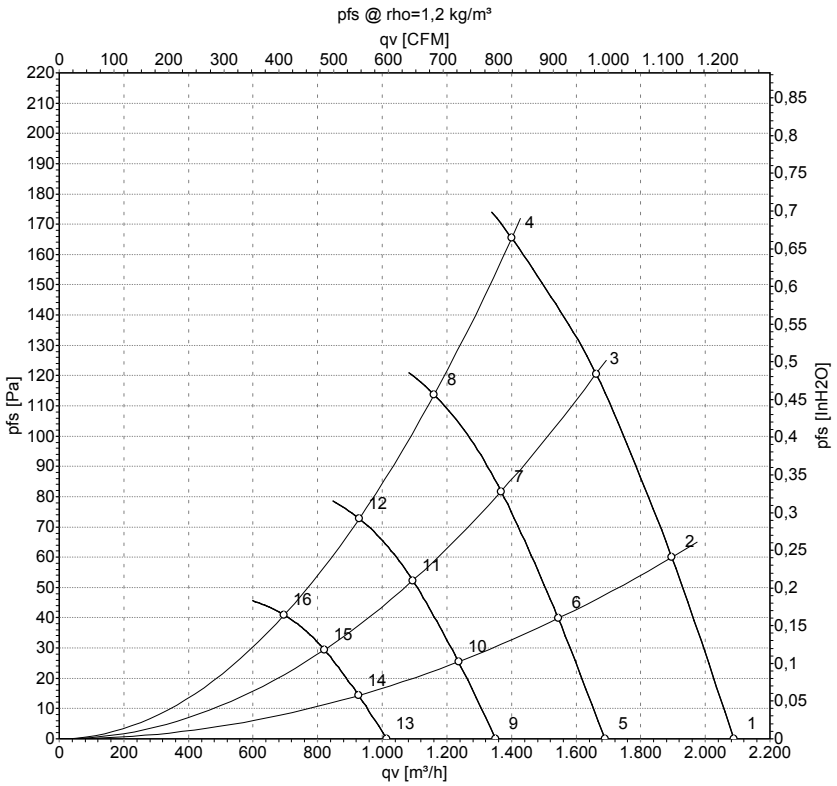
Curves: Air performance 50 Hz



Measurement: LU-145714

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_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	3090	146	1.22	70	76	2090	0
2	230	50	3070	159	1.34	71	78	1895	60
3	230	50	3035	163	1.34	73	80	1660	120
4	230	50	3020	168	1.40	75	82	1400	165
5	230	50	2500	77	0.64	64	71	1690	0
6	230	50	2500	86	0.72	66	73	1545	40
7	230	50	2500	91	0.75	68	75	1370	82
8	230	50	2500	95	0.78	70	77	1160	114
9	230	50	2000	39	0.33	59	65	1350	0
10	230	50	2000	44	0.37	61	67	1235	26
11	230	50	2000	47	0.38	62	69	1095	53
12	230	50	2000	49	0.40	64	71	930	73
13	230	50	1500	17	0.14	52	58	1015	0
14	230	50	1500	19	0.16	53	60	925	14
15	230	50	1500	20	0.16	55	62	820	30
16	230	50	1500	21	0.17	57	64	695	41

U = Power supply · f = Frequency · n = Speed · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase