S3G250-BD54-01

EC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S3G250-BD54-01**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3050
Power consumption	W	170
Current draw	A	1.25
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	43.3	28.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.5	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.17
09 Air flow q_v	m^3/h	1355
09 Pressure increase p_{fs}	Pa	176
10 Speed (rpm) n	min^{-1}	2875
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-127645

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Technical description

Weight	2.7 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, painted black
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	9
Direction of rotation	"A"
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
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
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for motor
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	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CCC; UL 2111; CSA C22.2 No. 77

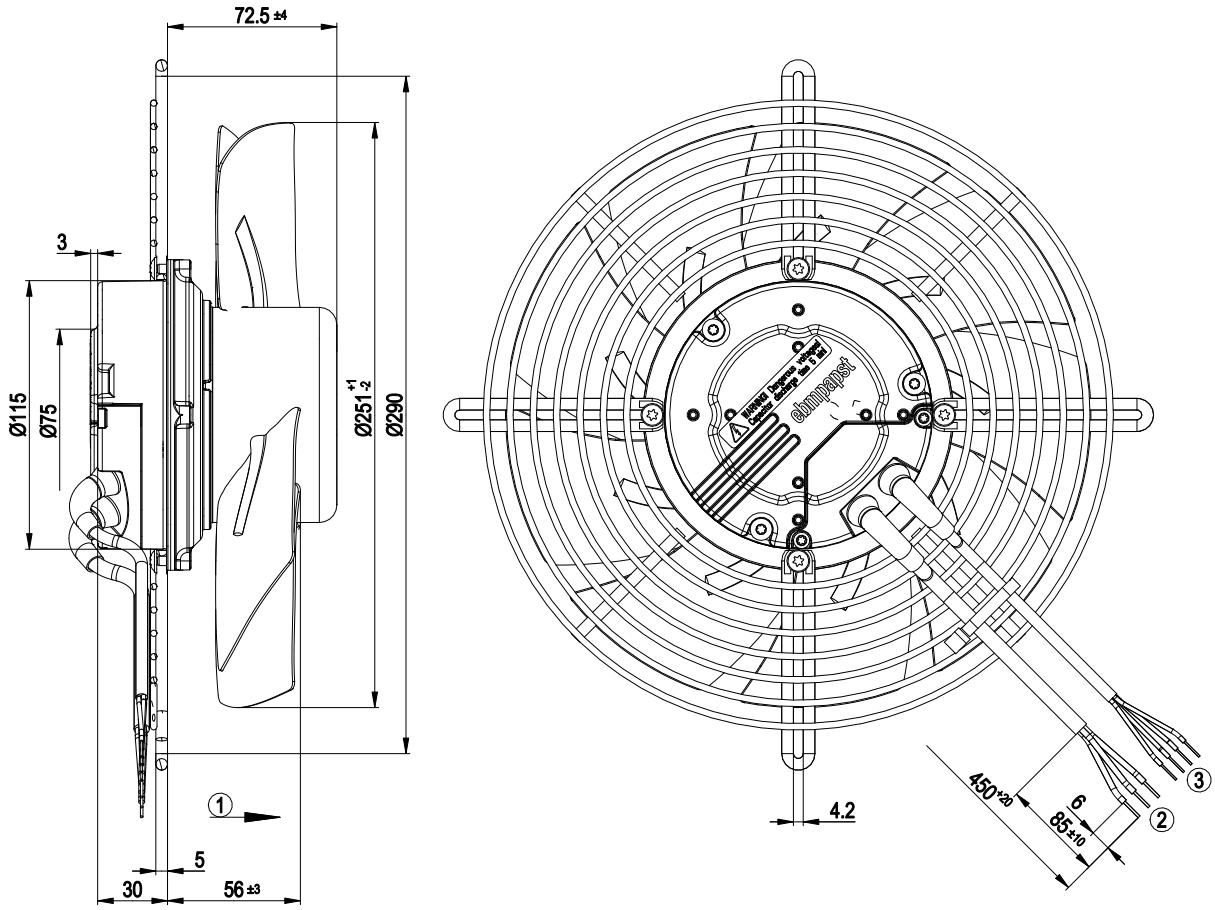
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Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG18, 3x crimped splices
3	Cable PVC AWG22, 4x crimped splices

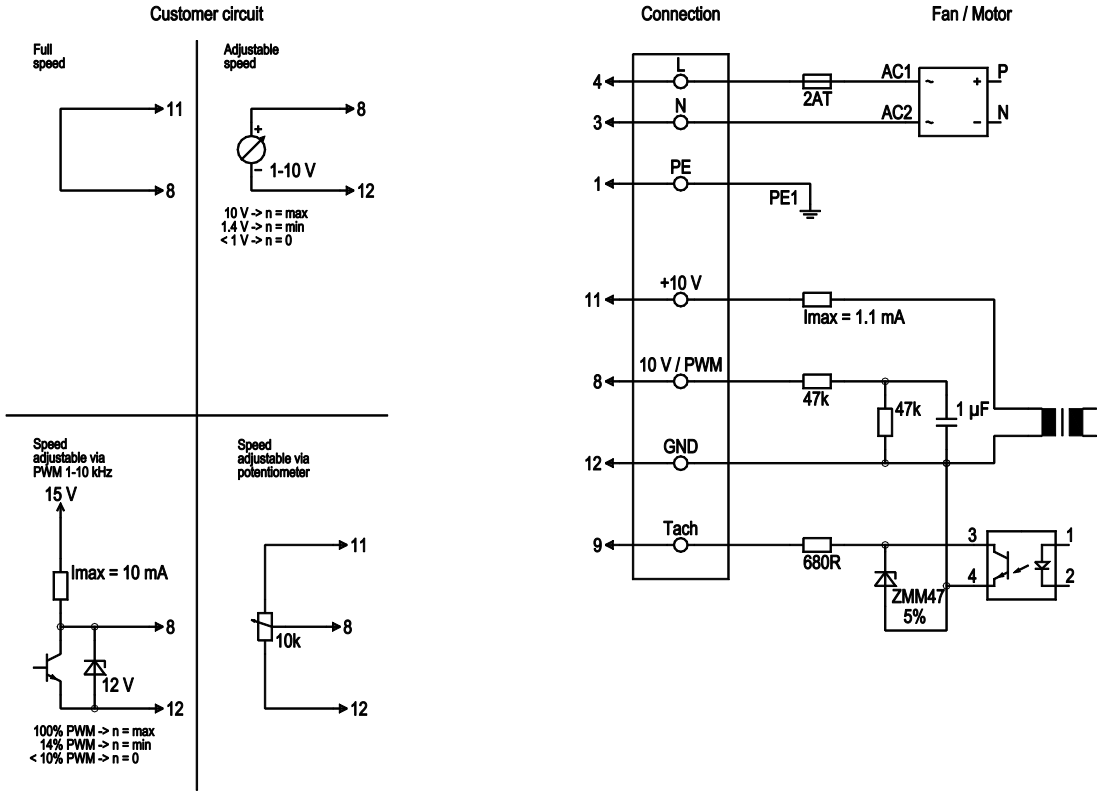
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max. 1.1 mA	red	Voltage output 10 V / max. 1.1 mA, electrically isolated
	12	GND	blue	GND connection for control interface

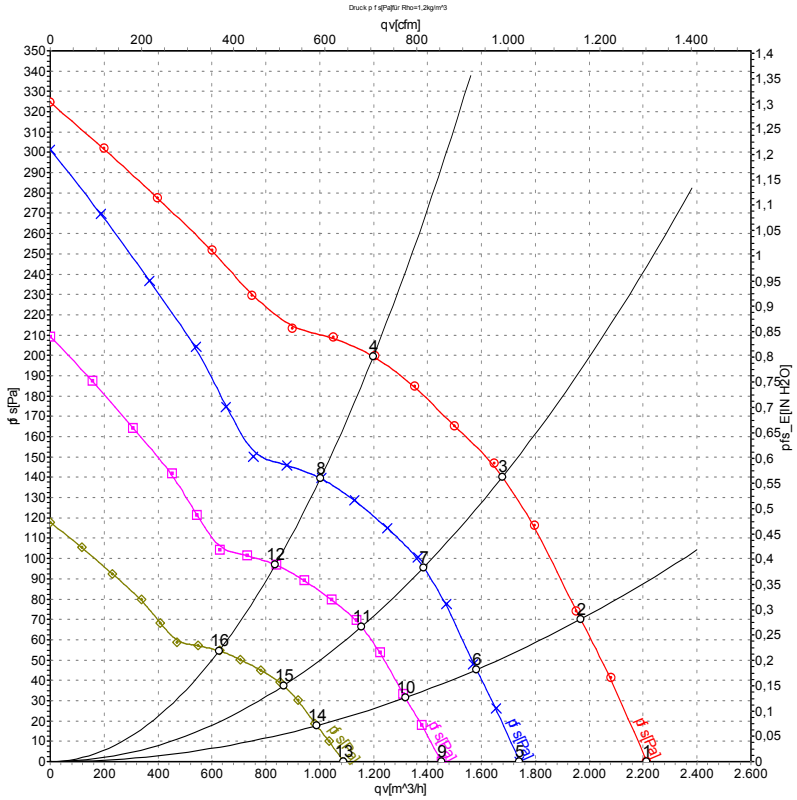
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Curves: Air performance 50 Hz



Measurement: LU-127645-1

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_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	3050	170	1.25	72	78	2215	0	1305	0.00
2	230	50	2985	170	1.37	73	80	1970	70	1160	0.28
3	230	50	2905	170	1.38	74	81	1680	140	990	0.56
4	230	50	2870	170	1.37	74	82	1200	200	705	0.80
5	230	50	2400	82	0.65	66	73	1740	0	1025	0.00
6	230	50	2400	91	0.71	68	75	1580	45	930	0.18
7	230	50	2400	99	0.78	70	77	1385	96	815	0.39
8	230	50	2400	101	0.80	71	78	1005	140	590	0.56
9	230	50	2000	47	0.38	62	69	1450	0	855	0.00
10	230	50	2000	52	0.41	64	71	1320	31	775	0.12
11	230	50	2000	57	0.45	66	73	1155	67	680	0.27
12	230	50	2000	58	0.47	67	74	835	97	490	0.39
13	230	50	1500	20	0.16	56	63	1090	0	640	0.00
14	230	50	1500	22	0.17	58	65	990	18	580	0.07
15	230	50	1500	24	0.19	59	67	865	38	510	0.15
16	230	50	1500	25	0.20	60	68	625	55	370	0.22

U = Power supply · 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
qv = Air flow · p_{fs} = Pressure increase

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