S3G250-BC71-01

EC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S3G250-BC71-01**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		me
Status		prelim.
Speed (rpm)	min^{-1}	2730
Power consumption	W	160
Current draw	A	2
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

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Technical description

Weight	2.4 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Sheet steel, painted black
Guard grille material	Steel, phosphated and coated with black plastic
Number of blades	7
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44
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 - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2
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	CSA C22.2 No. 77; UL 2111

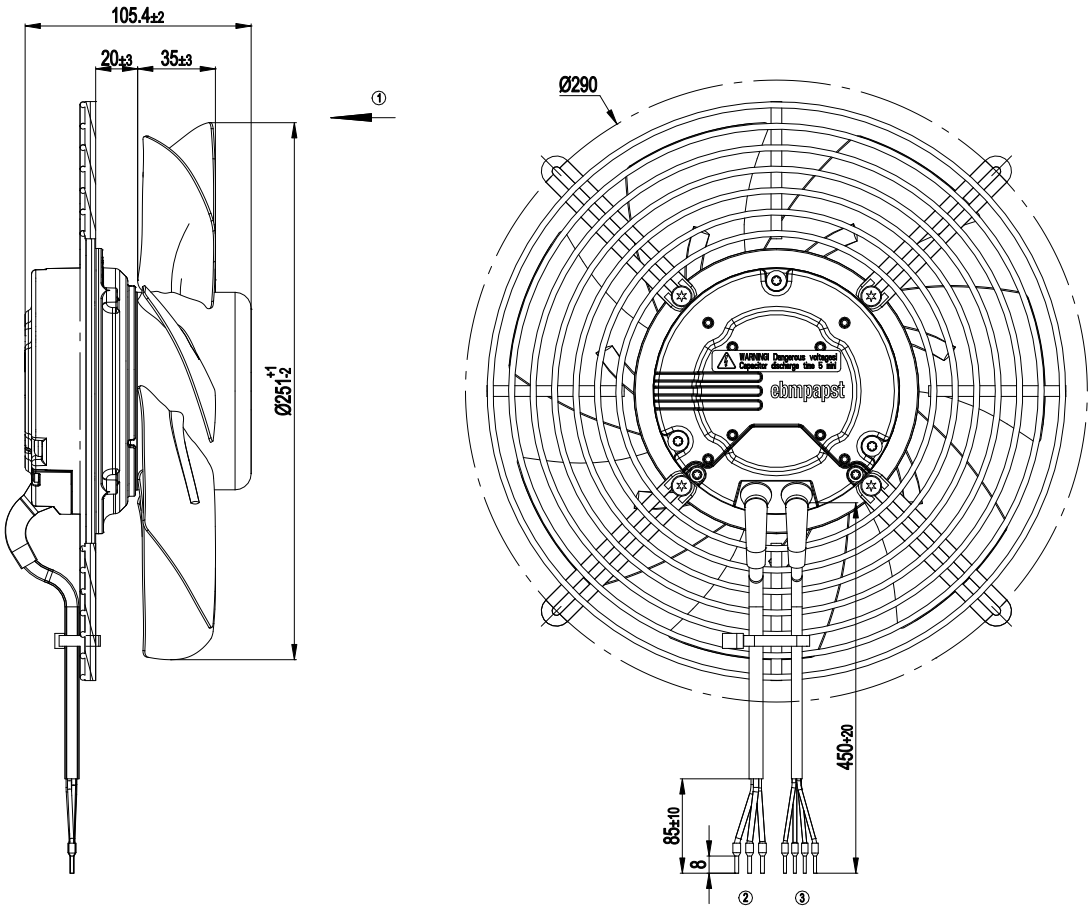
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Product drawing



1	Direction of air flow "V"
2	Cable AWG 18, 3x crimped sockets
3	Cable AWG 22, 4x crimped sockets

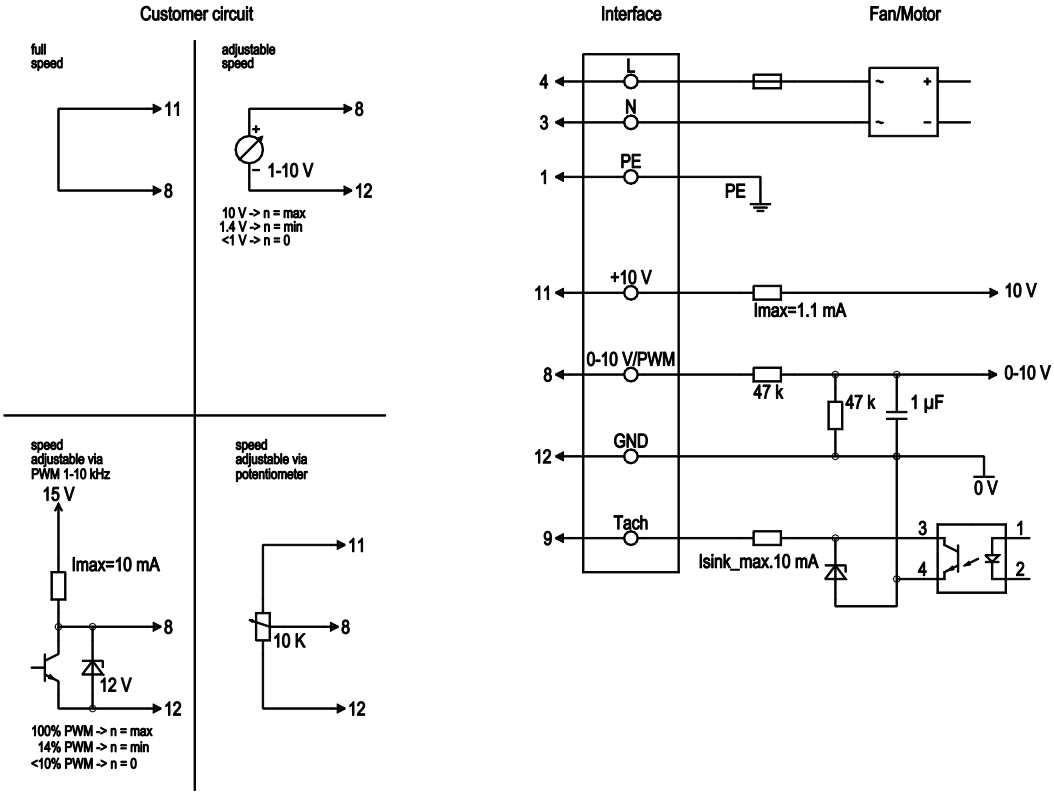
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Supply connection, power supply, phase, voltage range see nameplate, 50/60 Hz
	3	N	blue	Supply connection, power supply, neutral conductor, voltage range see nameplate, 50/60 Hz
	1	PE	green/yellow	Ground connection
	8	0-10 V / PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	9	Tacho	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	11	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax.= 1.1 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometers), SELV
	12	GND	blue	Reference ground for control interface, SELV

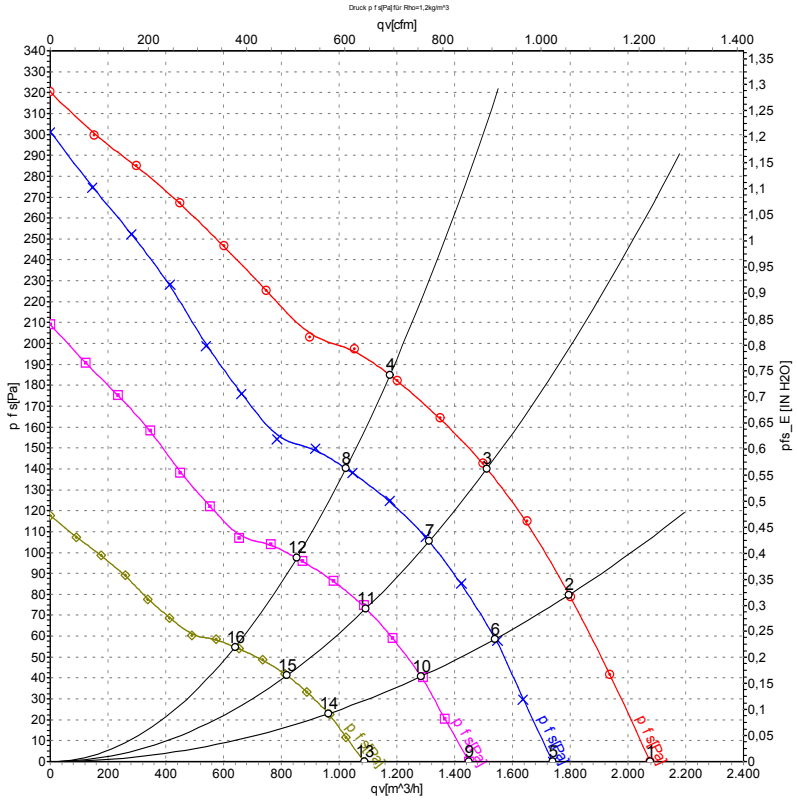
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Curves: Air performance 50 Hz



Measurement: LU-127641-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	115	50	2865	139	1.83	70	77	2080	0	1225	0.00
2	115	50	2795	151	1.96	72	79	1795	80	1060	0.32
3	115	50	2765	157	2.05	73	80	1510	140	890	0.56
4	115	50	2730	160	2.00	74	81	1175	185	690	0.74
5	115	50	2400	81	1.07	66	73	1740	0	1025	0.00
6	115	50	2400	95	1.24	68	75	1540	60	905	0.24
7	115	50	2400	102	1.34	70	77	1310	106	770	0.43
8	115	50	2400	104	1.36	71	78	1025	140	605	0.56
9	115	50	2000	47	0.62	62	69	1450	0	855	0.00
10	115	50	2000	55	0.72	64	71	1285	41	755	0.16
11	115	50	2000	59	0.77	66	73	1095	74	645	0.30
12	115	50	2000	60	0.79	67	74	855	97	500	0.39
13	115	50	1500	20	0.26	56	63	1085	0	640	0.00
14	115	50	1500	23	0.30	58	65	965	23	565	0.09
15	115	50	1500	25	0.33	60	67	820	41	485	0.16
16	115	50	1500	26	0.33	61	68	640	55	375	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
q_V = Air flow · p_{fs} = Pressure increase

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