S3G450-KF48-74

EC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S3G450-KF48-74**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	950
Power consumption	W	127
Current draw	A	0.8
Max. back pressure	Pa	60
Max. back pressure	inH2O	0.24
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	5.4 kg
Fan size	450 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic, glass-fiber reinforced
Guard grille material	Steel, phosphated and coated with black plastic
Number of blades	3
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
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. 10 mA - Alarm relay - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/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

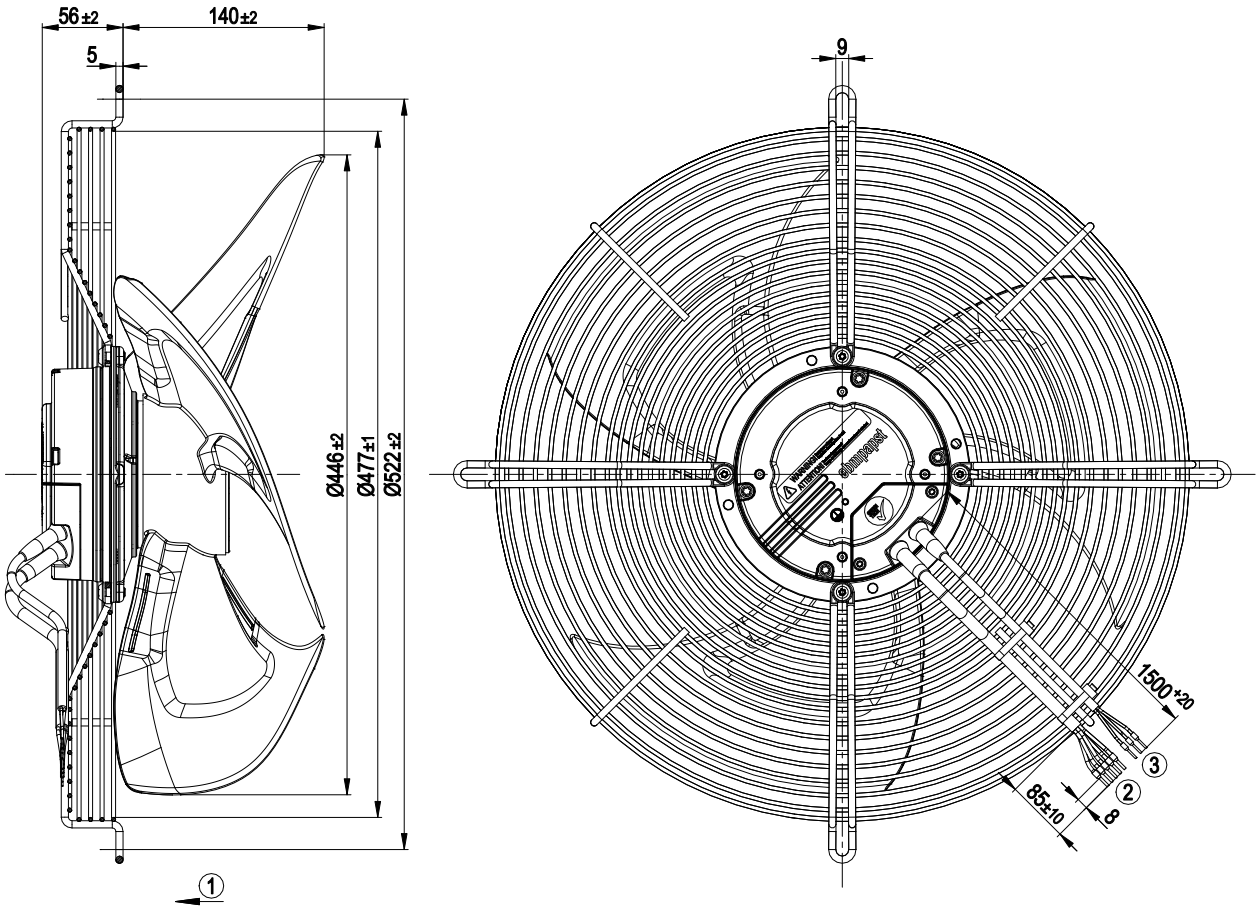
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Product drawing



1	Direction of air flow "V"
2	Cable, PVC AWG18, 5 x crimped ferrules
3	Control cable, PVC AWG22, 3 x crimped ferrules

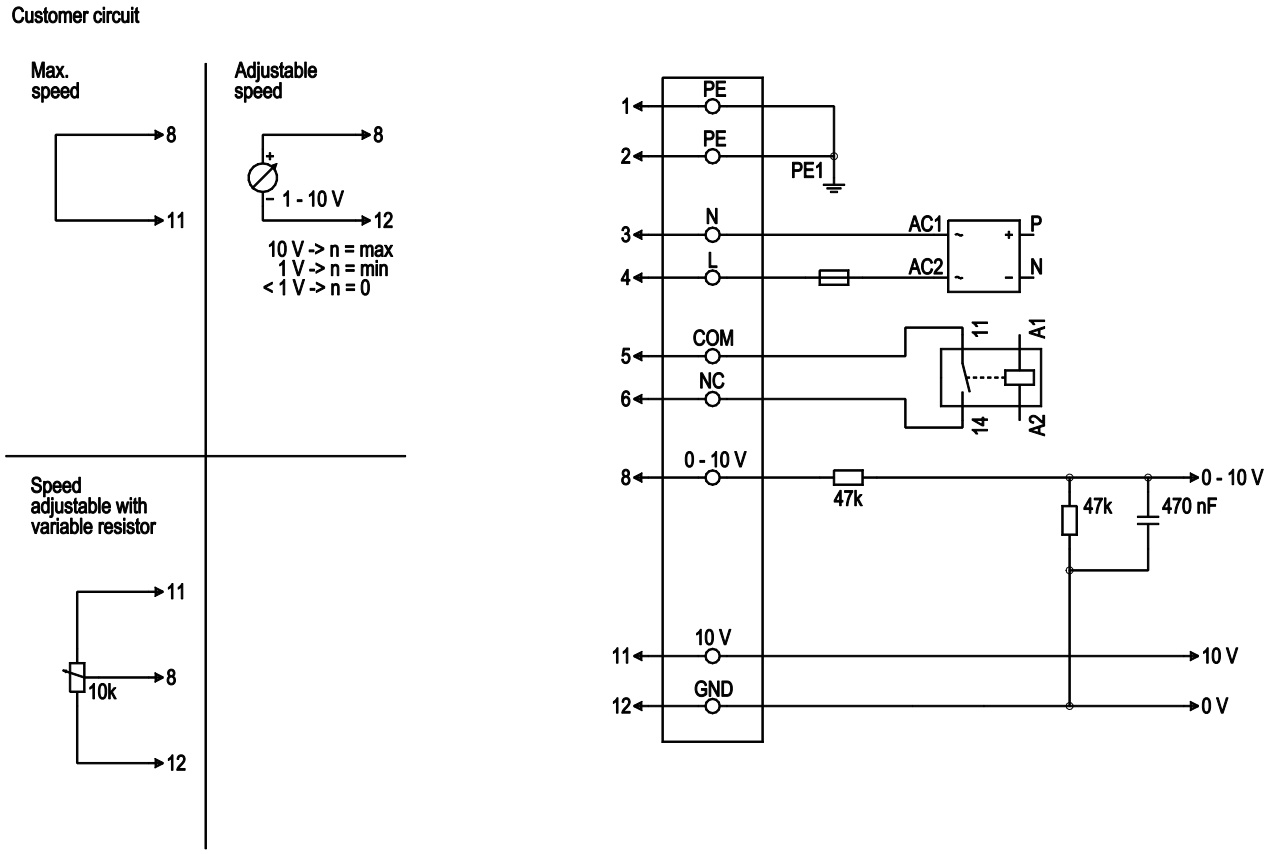
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1,2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	4	L	black	Power supply, phase, 50/60 Hz
1	5	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	6	NC	white 2	Floating status contact, break for failure
2	8	0 - 10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kOhm, SELV
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometers), SELV
2	12	GND	blue	Reference ground for control interface, SELV

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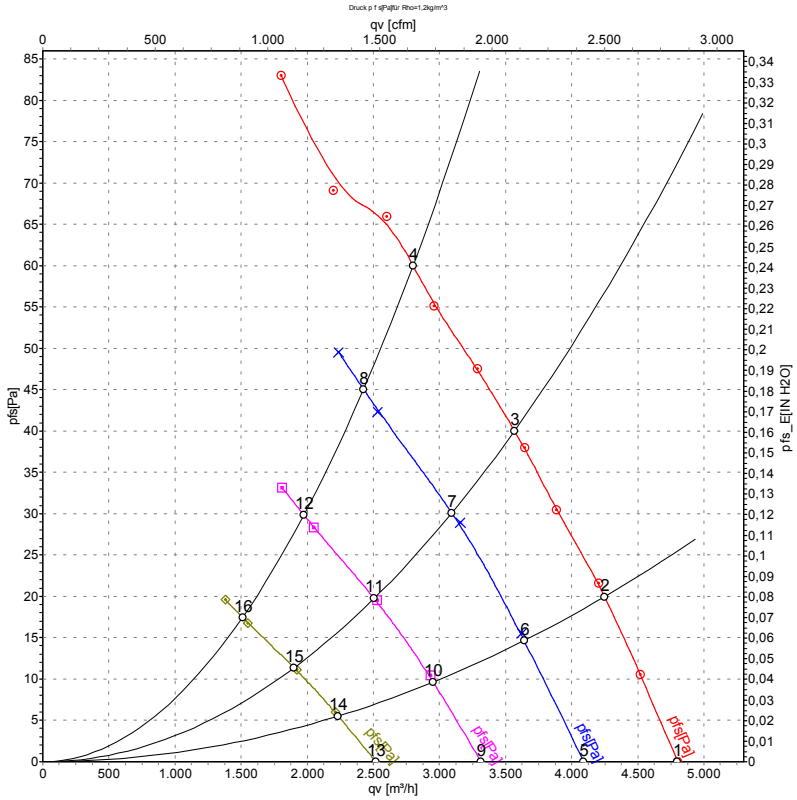
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Curves: Air performance 50 Hz



Measurement: LU-116856-1
Measurement: LU-135889-1
Measurement: LU-135890-1
Measurement: LU-135891-1

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}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	975	110	0.73	59	65	64	4800	0	2825	0.00
2	230	50	965	116	0.77	58	65	64	4245	20	2500	0.08
3	230	50	960	123	0.81	54	60	60	3565	40	2100	0.16
4	230	50	950	127	0.80	52	59	58	2800	60	1650	0.24
5	230	50	830	69	0.48	55	61	61	4090	0	2405	0.00
6	230	50	825	74	0.51	54	60	60	3640	15	2140	0.06
7	230	50	820	77	0.53	49	56	55	3090	30	1820	0.12
8	230	50	815	80	0.54	48	55	54	2425	45	1430	0.18
9	230	50	675	39	0.29	50	57	56	3315	0	1950	0.00
10	230	50	670	42	0.30	47	54	53	2950	10	1735	0.04
11	230	50	670	45	0.32	43	51	50	2505	20	1475	0.08
12	230	50	665	45	0.32	43	50	50	1975	30	1160	0.12
13	230	50	515	21	0.17	40	49	48	2520	0	1485	0.00
14	230	50	515	21	0.17	38	47	47	2235	6	1315	0.02
15	230	50	510	23	0.18	36	45	45	1900	11	1120	0.04
16	230	50	510	23	0.19	37	46	46	1510	17	890	0.07

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
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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