S3G450-LA45-62

EC axial fan

sickle-shaped blades (S series)

with guard grille for short nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S3G450-LA45-62**
Motor	**M3G084-FA**

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}	1250
Power consumption	W	350
Current draw	A	1.5
Max. back pressure	Pa	110
Max. back pressure	inH2O	0.44
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	44.1	30.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.4	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.34
09 Air flow q_v	m^3/h	4195
09 Pressure increase p_{fs}	Pa	119
10 Speed (rpm) n	min^{-1}	1280
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-105755

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Technical description

Weight	7.5 kg
Fan size	450 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Sheet steel, painted black
Guard grille material	Steel, coated with black plastic (RAL 9005)
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	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 - PFC, active - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure 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 61000-6-4 (industrial 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 61800-5-1; CE

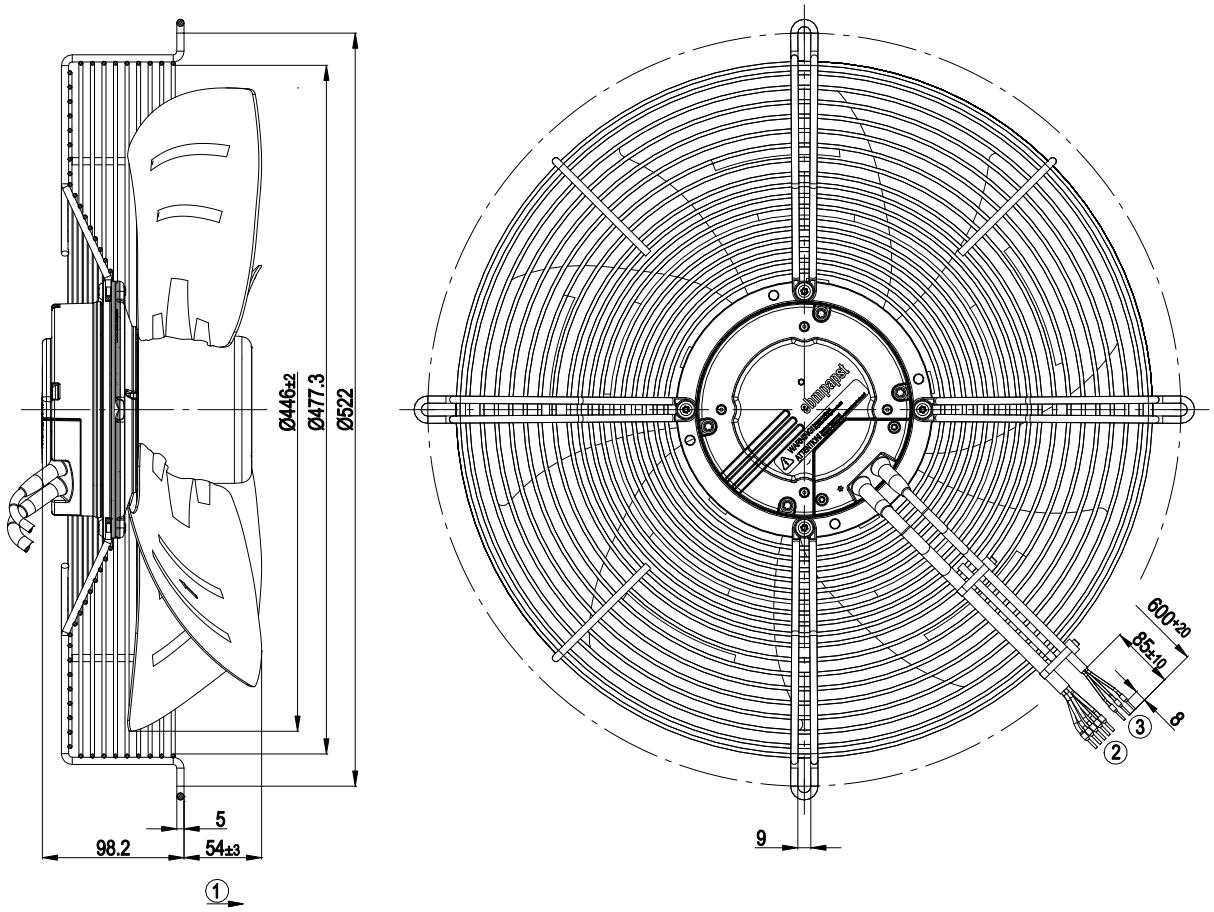
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Product drawing



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

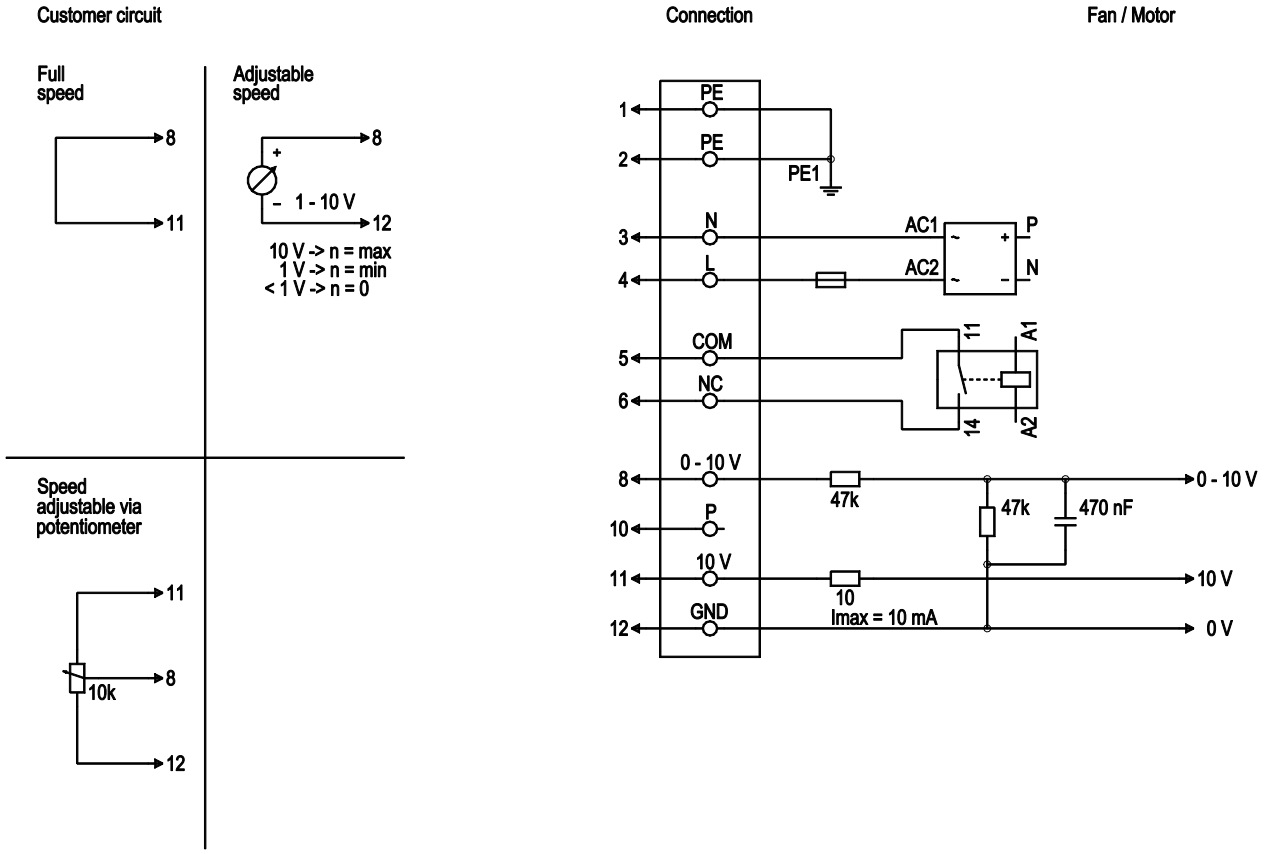
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, see nameplate for voltage range, 50/60 Hz
1	4	L	black	Power supply, phase, see nameplate for voltage range, 50/60 Hz
1	5	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA)
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	10	P	orange	not used
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

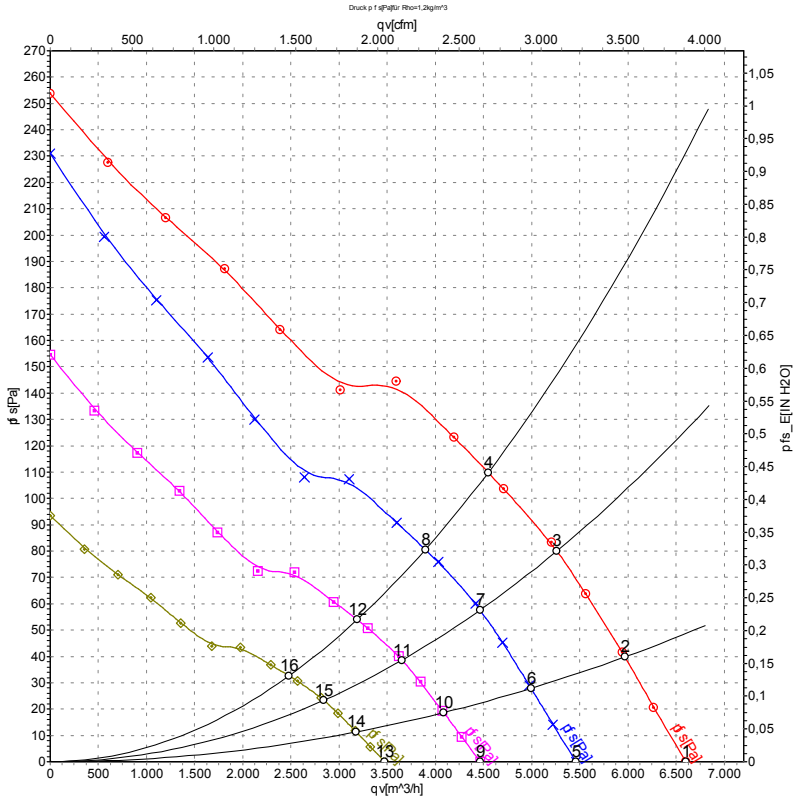
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Curves: Air performance 50 Hz



Measurement: LU-105755-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	1330	301	1.31	6600	0	3885	0.00
2	230	50	1315	319	1.39	5965	40	3510	0.16
3	230	50	1295	336	1.47	5260	80	3095	0.32
4	230	50	1250	350	1.50	4545	110	2675	0.44
5	230	50	1100	170	0.74	5460	0	3210	0.00
6	230	50	1100	187	0.82	4995	28	2940	0.11
7	230	50	1100	205	0.89	4465	58	2625	0.23
8	230	50	1100	218	0.95	3895	81	2295	0.33
9	230	50	900	93	0.41	4465	0	2630	0.00
10	230	50	900	102	0.45	4085	19	2405	0.08
11	230	50	900	112	0.49	3650	39	2150	0.16
12	230	50	900	119	0.52	3185	54	1875	0.22
13	230	50	700	44	0.19	3475	0	2045	0.00
14	230	50	700	48	0.21	3175	11	1870	0.04
15	230	50	700	53	0.23	2840	23	1670	0.09
16	230	50	700	56	0.24	2480	33	1460	0.13

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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