S3G450-KA45-60

EC axial fan

sickled blades (S series)

with guard grille for full nozzle

S3G450-KA45-60 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**S3G450-KA45-60**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	1250
Power input	W	350
Current draw	A	1.5
Max. back pressure	Pa	110
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		44.1	26.7	30.7
Efficiency grade N		53.4	36	40
Power input P_{ed}	kW	0.34		
Air flow q_v	m^3/h	4195		
Pressure increase p_{fs}	Pa	119		
Speed n	min^{-1}	1280		

Data established at point of optimum efficiency

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Technical features

Mass	12 kg
Size	450 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of blades	Sheet steel, coated in black
Material of guard grille	Steel, phosphated and coated in black plastic
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 15 VDC, max. 30 mA - Integrated PID controller - Motor current limit - PFC, active - RS485 ebmBUS - Soft start - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1

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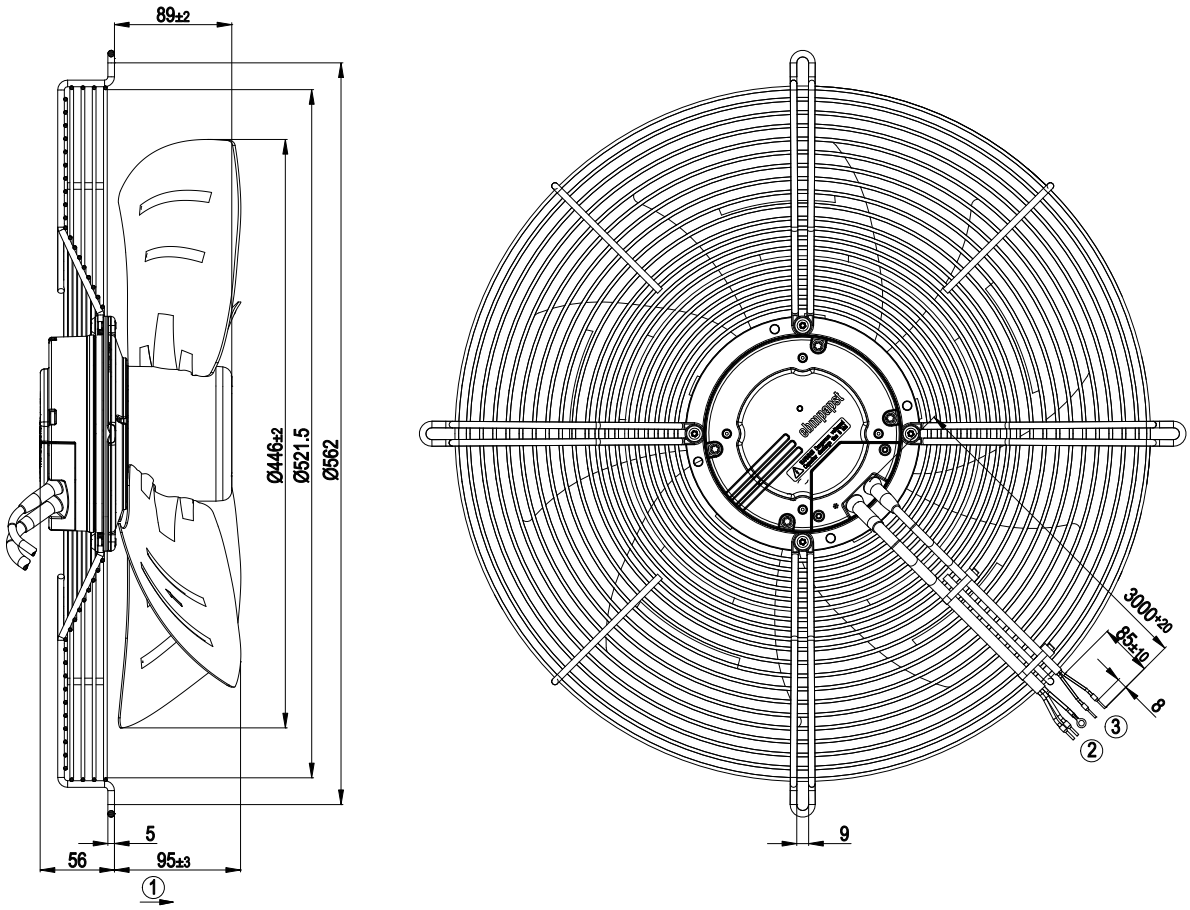
Product drawing



1	Direction of air flow "A"
2	Connection line AWG 18, 2 x core-end sleeve and 1 x contact stud, crimped
3	Connection line AWG 22, 2x crimped core-end sleeves

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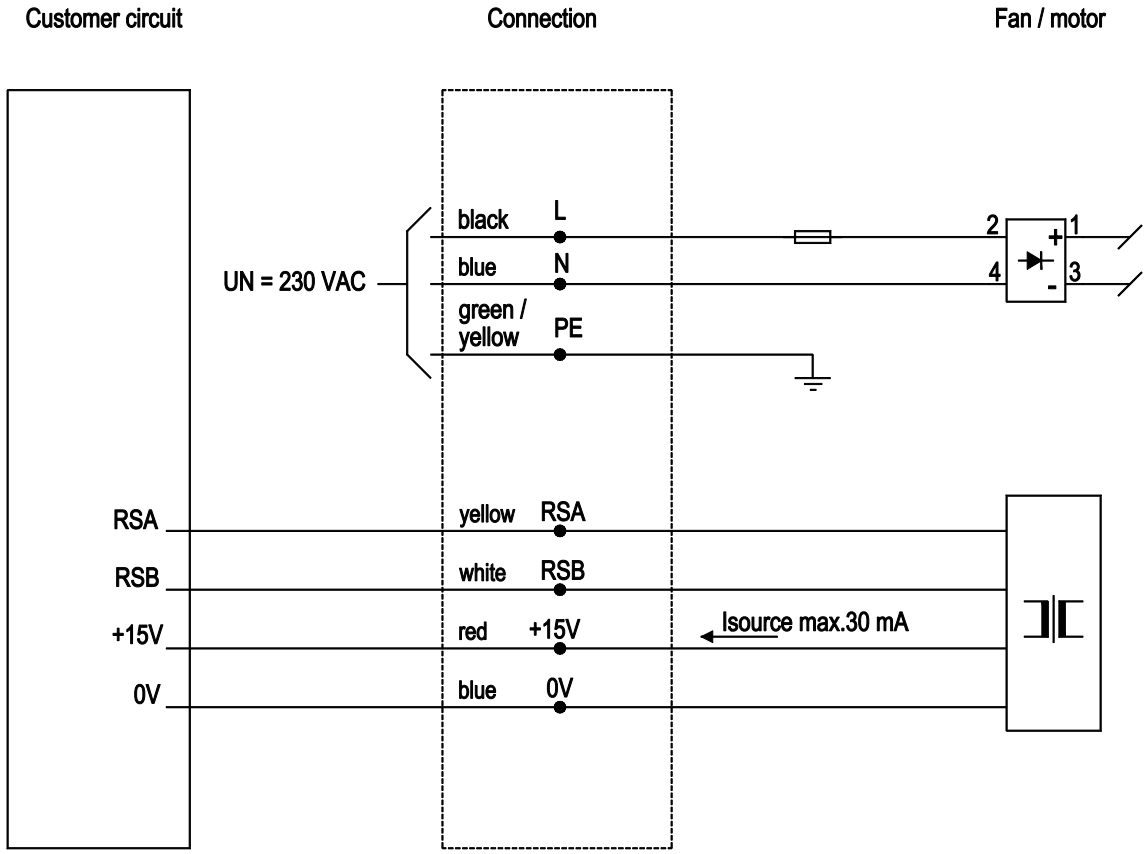
Connection screen



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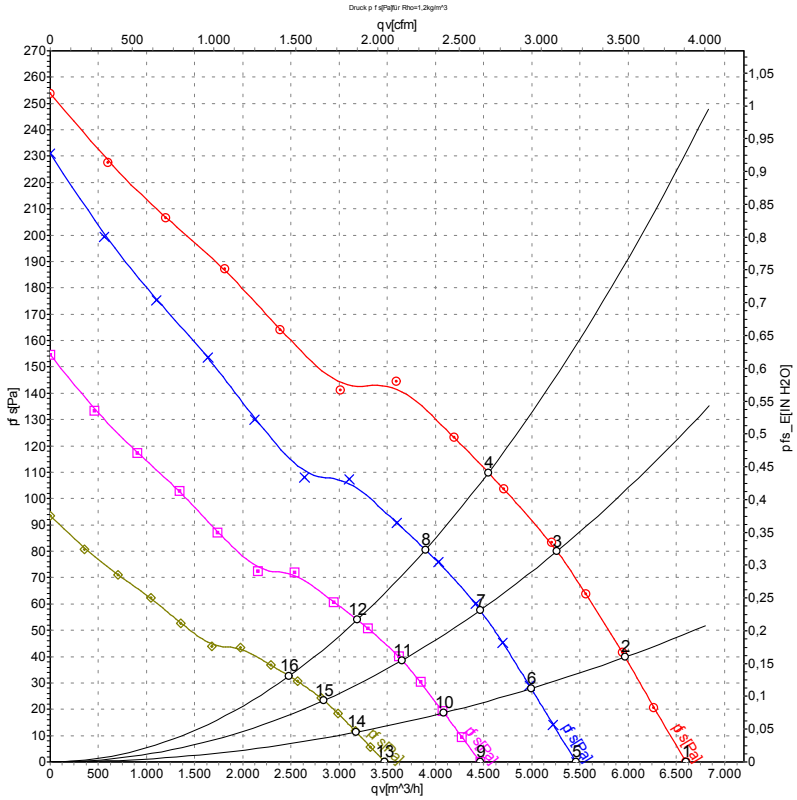
Charts: Air flow 50 Hz



Measurement: LU-105755

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	1330	301	1.31	6600	0
2	230	50	1315	319	1.39	5965	40
3	230	50	1295	336	1.47	5260	80
4	230	50	1250	350	1.50	4545	110
5	230	50	1100	170	0.74	5460	0
6	230	50	1100	187	0.82	4995	28
7	230	50	1100	205	0.89	4465	58
8	230	50	1100	218	0.95	3895	81
9	230	50	900	93	0.41	4465	0
10	230	50	900	102	0.45	4085	19
11	230	50	900	112	0.49	3650	39
12	230	50	900	119	0.52	3185	54
13	230	50	700	44	0.19	3475	0
14	230	50	700	48	0.21	3175	11
15	230	50	700	53	0.23	2840	23
16	230	50	700	56	0.24	2480	33

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase