

EC axial fan

sickled blades (S series)
with guard grille for short nozzle

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County court Stuttgart · HRA 590344

General partner: Elektrobau Mulfingen GmbH · Headquarters Mulfingen

County court Stuttgart · HRB 590142



Nominal data

Type	S3G560-AQ41-02	
Motor	M3G112-GA	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min ⁻¹	1350
Power input	W	945
Current draw	A	1.5
Max. back pressure	Pa	180
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 integrated	Integrated
Specific ratio*	1,00

* Specific ratio = $1 + p_b / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		42,9	29,5	33,5
Efficiency grade N		49,4	36	40
Power input P_{ed}	kW	0,93		
Air flow q_v	m ³ /h	7890		
Pressure increase p_{fs}	Pa	168		
Speed n	min ⁻¹	1360		

Data established at point of optimum efficiency



Technical features

Mass	13 kg
Size	560 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
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 54
Insulation class	"B"
Humidity class	F4-1
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 10 VDC, max. 10 mA - Tach output - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
EMC harmonics	Acc. to EN 61000-3-2/3
Leakage current	<= 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

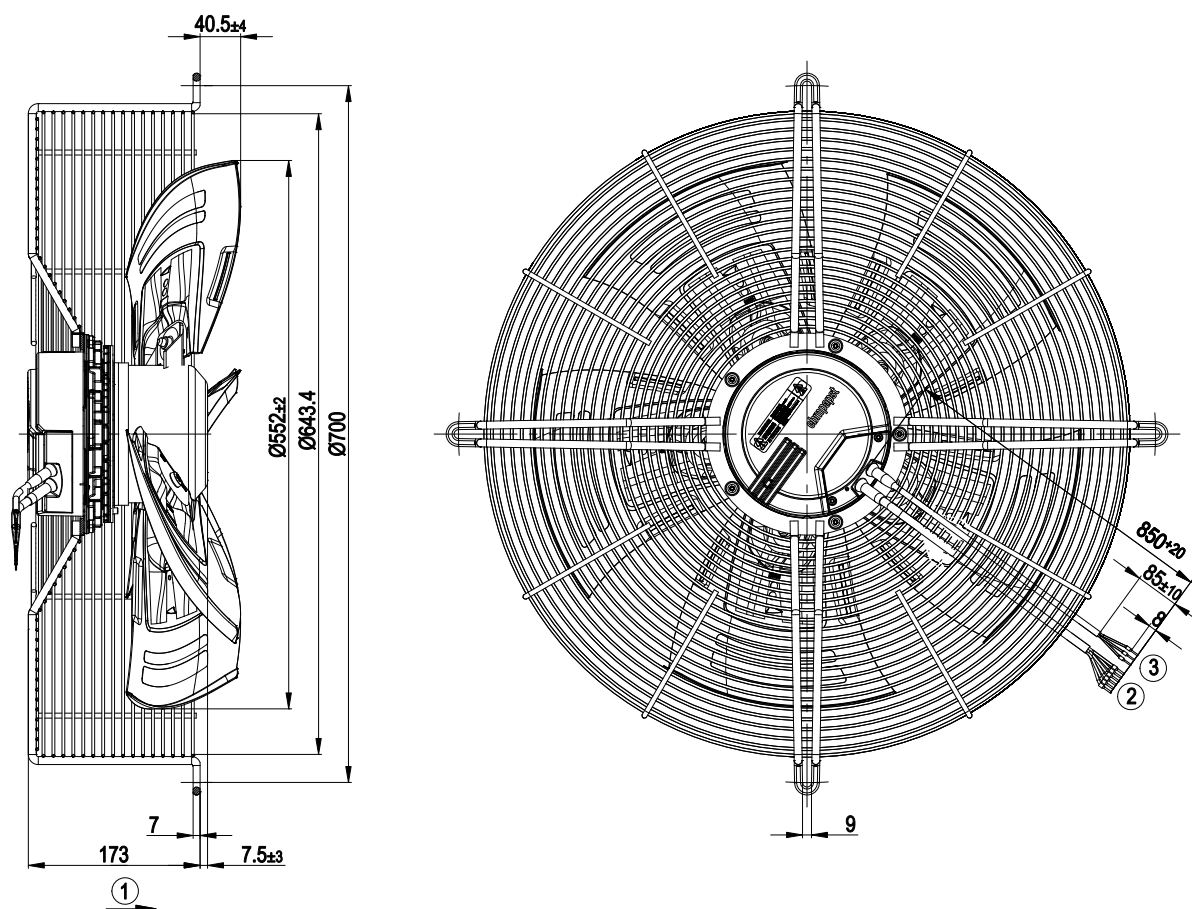


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Product drawing



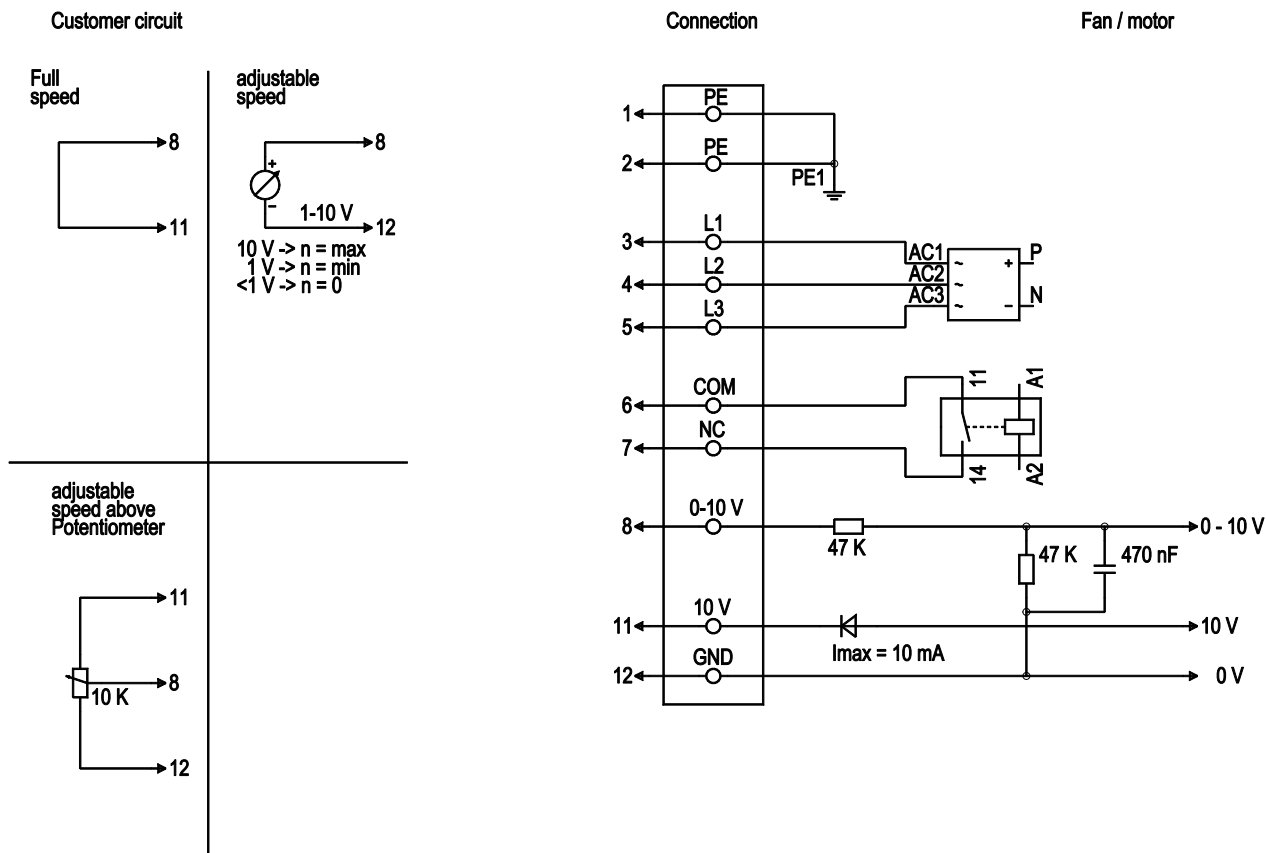
1	Direction of air flow "A"
2	Connection line AWG 18, 6 x crimped core-end sleeves
3	Connection line AWG 22, 3 x crimped core-end sleeves



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Connection screen



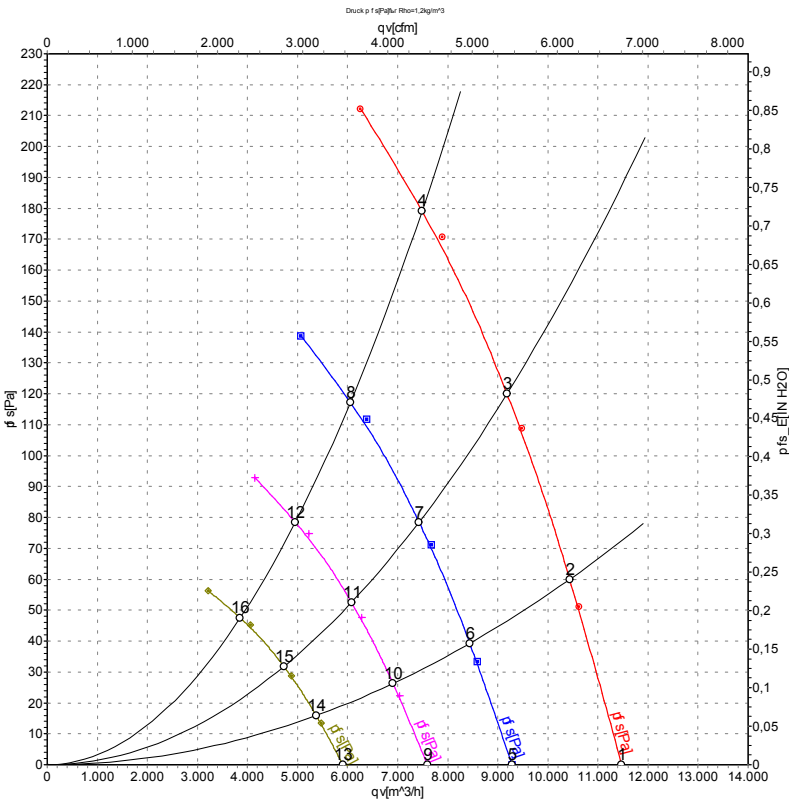
Line	No.	Signal	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3, 4, 5	L1, L2, L3	black	Supply voltage 50 / 60 Hz
1	6	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	7	NC	white 2	Floating status message contact, break for failure
2	8	0 - 10 V	yellow	Control input, set value 0 - 10 VDC, impedance 100 kOhm, SELV
2	11	+ 10 V	red	Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for ext. devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV



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Charts: Air flow 50 Hz



Measurement: LU-116554

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	LpA _{in}	LwA _{in}	LwA _{out}	qv	p _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m³/h	Pa
1	400	50	1350	672	1.10	68	75	75	11470	0
2	400	50	1350	781	1.25	67	74	74	10430	60
3	400	50	1350	872	1.38	67	73	73	9180	120
4	400	50	1350	945	1.50	71	78	77	7485	180
5	400	50	1100	356	0.58	64	70	70	9280	0
6	400	50	1100	413	0.66	63	69	69	8440	40
7	400	50	1100	461	0.73	62	69	69	7425	79
8	400	50	1100	498	0.79	67	73	73	6055	118
9	400	50	900	195	0.32	59	66	66	7595	0
10	400	50	900	226	0.36	58	65	65	6905	27
11	400	50	900	253	0.40	58	64	64	6075	53
12	400	50	900	273	0.43	62	69	68	4955	79
13	400	50	700	92	0.15	54	60	61	5905	0
14	400	50	700	106	0.17	53	59	60	5370	16
15	400	50	700	119	0.19	52	59	59	4725	32
16	400	50	700	128	0.20	57	63	63	3855	48

