

S3G500-AD01-58

EC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle

ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.ebmpapst.com

www.ebmpapst.com

Limited partnership · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	S3G500-AD01-58	
Motor	M3G084-GF	
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	1100
Power consumption	W	360
Current draw	A	2.2
Max. back pressure	Pa	100
Max. back pressure	in. wg	0.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	40.8	30.9	09 Power consumption P_{ed}	kW	0.36
02 Measurement category		A		09 Air flow q_v	m ³ /h	4585
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	106
04 Efficiency grade N		49.9	40	10 Speed (rpm) n	min ⁻¹	1105
05 Variable speed drive		Yes		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 = $1 + p_b / 100\,000\text{ Pa}$

LU-114485



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Technical description

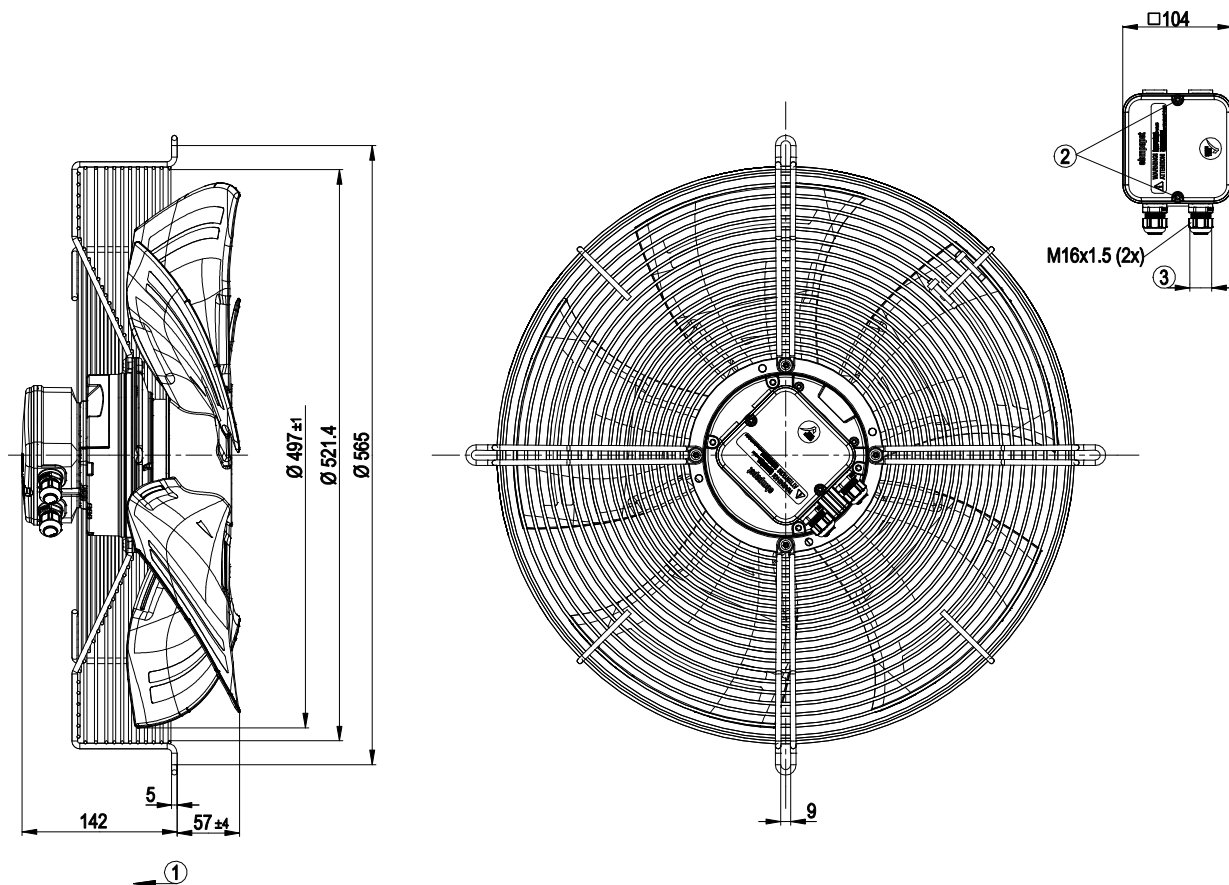
Weight	8.3 kg
Size	500 mm
Motor size	84
Rotor surface	Painted black
Terminal box material	PC/ABS plastic
Electronics housing material	Die-cast aluminum
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2
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
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - PFC, passive - 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 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 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3,5 mA
Electrical hookup	Terminal box
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
Approval	EAC



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Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm

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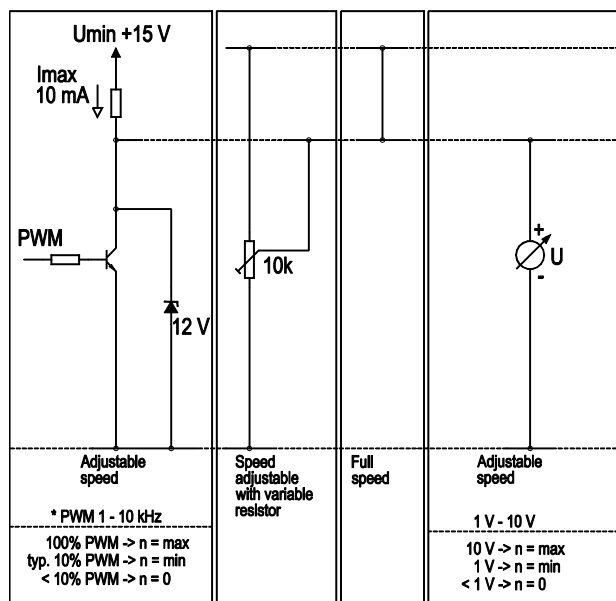
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Connection diagram

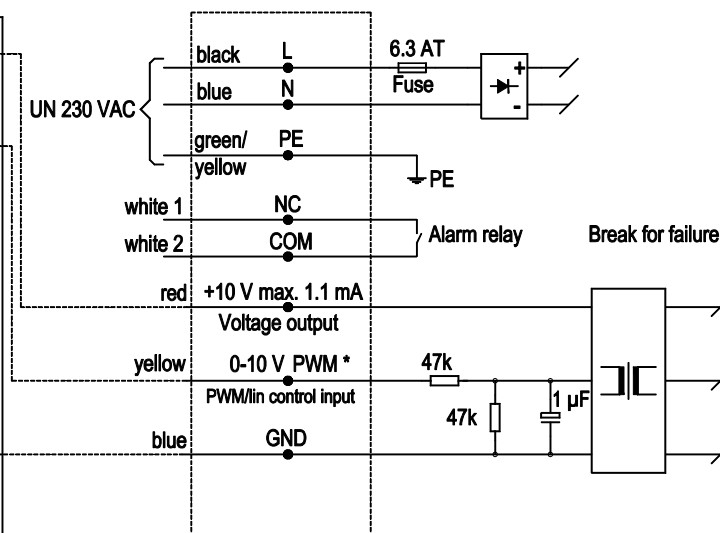
Customer circuit

Application notes for various control options



Connection

Fan / Motor

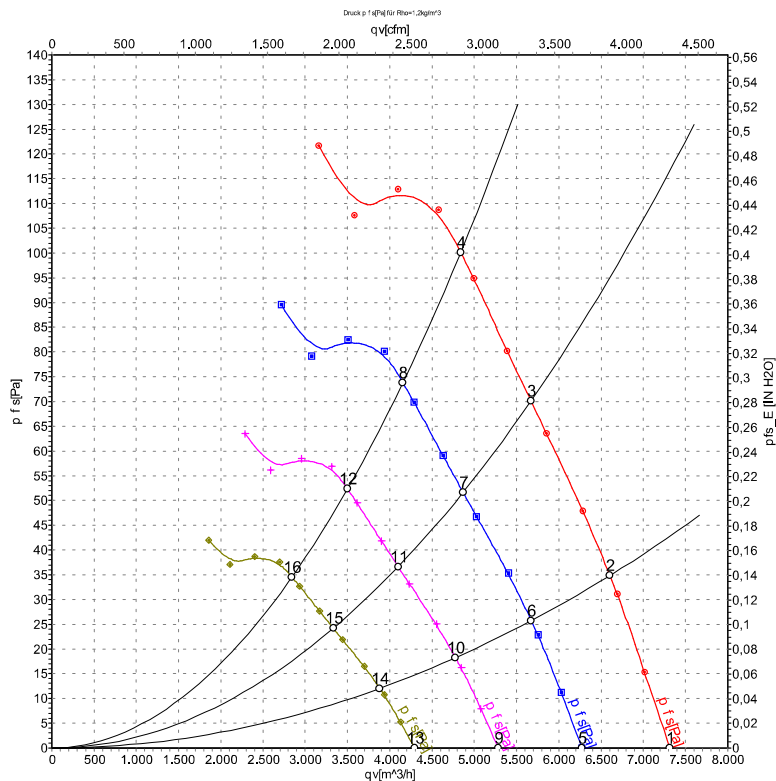


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Curves: Air performance 50 Hz



Measurement: LU-114485-1

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}	q _v	P _{fs}	q _v	P _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m ³ /h	Pa	cfm	in. wg
1	230	50	1100	264	1.62	61	68	68	7315	0	4305	0.00
2	230	50	1100	301	1.82	60	66	66	6605	35	3885	0.14
3	230	50	1100	336	2.02	59	65	65	5670	70	3335	0.28
4	230	50	1100	360	2.20	60	66	66	4840	100	2850	0.40
5	230	50	950	166	1.02	58	65	64	6270	0	3690	0.00
6	230	50	950	191	1.15	56	63	62	5675	26	3340	0.10
7	230	50	950	213	1.27	55	62	62	4870	52	2865	0.21
8	230	50	950	228	1.37	56	63	62	4155	74	2445	0.30
9	230	50	800	99	0.61	54	61	61	5280	0	3110	0.00
10	230	50	800	114	0.69	53	59	59	4775	18	2810	0.07
11	230	50	800	127	0.76	52	58	58	4100	37	2415	0.15
12	230	50	800	136	0.82	53	59	59	3500	52	2060	0.21
13	230	50	650	53	0.33	50	56	56	4290	0	2525	0.00
14	230	50	650	61	0.37	48	55	54	3880	12	2285	0.05
15	230	50	650	68	0.41	47	54	53	3330	24	1960	0.10
16	230	50	650	73	0.44	48	55	54	2840	34	1675	0.14

U = Voltage · 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 · q_v = Air flow · P_{fs} = Pressure increase

