A3G500-AF48-51

EC axial fan - HyBlade

sickled blades (S series)



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
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**A3G500-AF48-51**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	870
Power input	W	180
Current draw	A	1.2
Max. back pressure	Pa	70
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	65

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	39	29
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		50	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.18
09 Air flow q_v	m^3/h	3880
09 Pressure increase p_{fs}	Pa	58
10 Speed (rpm) n	min^{-1}	880
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-118060

EC axial fan - HyBlade

sickled blades (S series)

Technical features

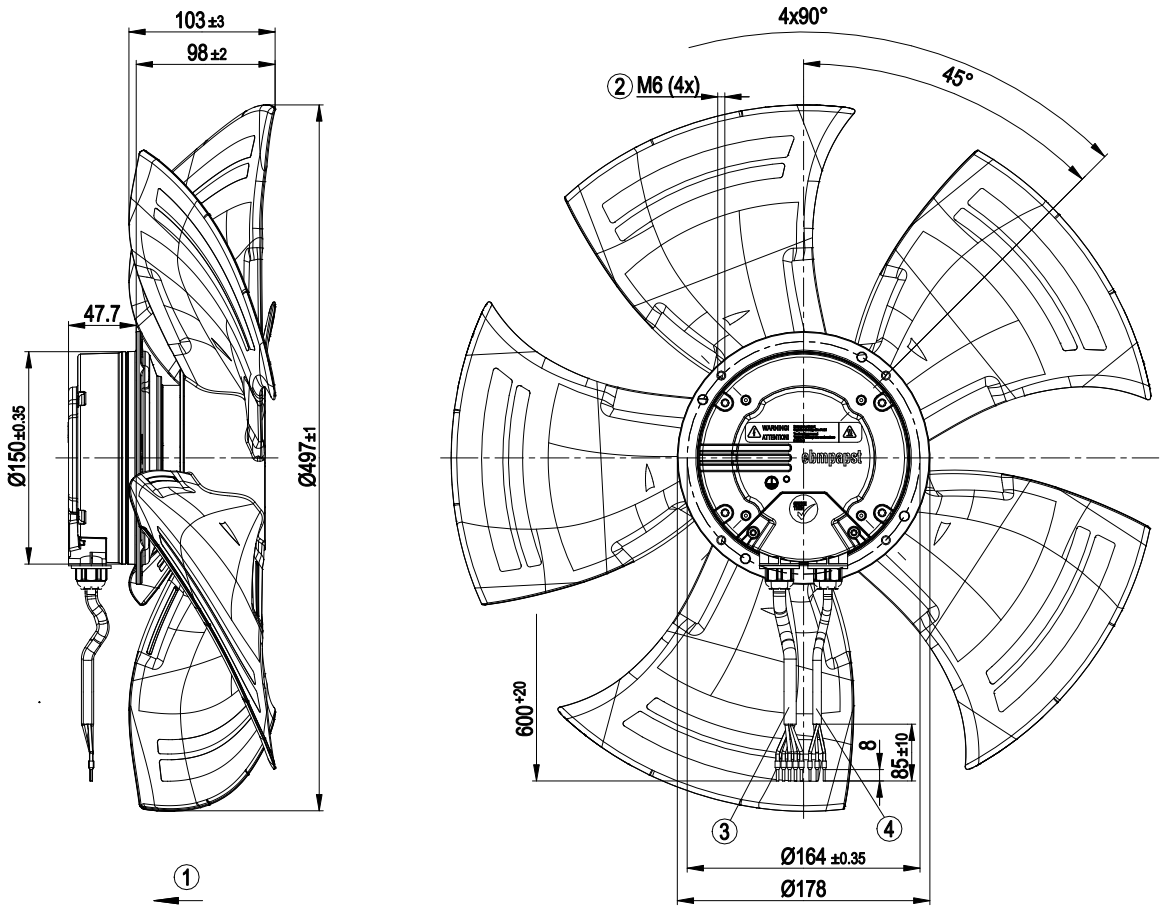
Mass	4.3 kg
Size	500 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	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 10 VDC, max. 10 mA - Alarm relay - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor
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 61000-6-3 (household 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; CE
Approval	EAC

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan - HyBlade

sickled blades (S series)

Product drawing



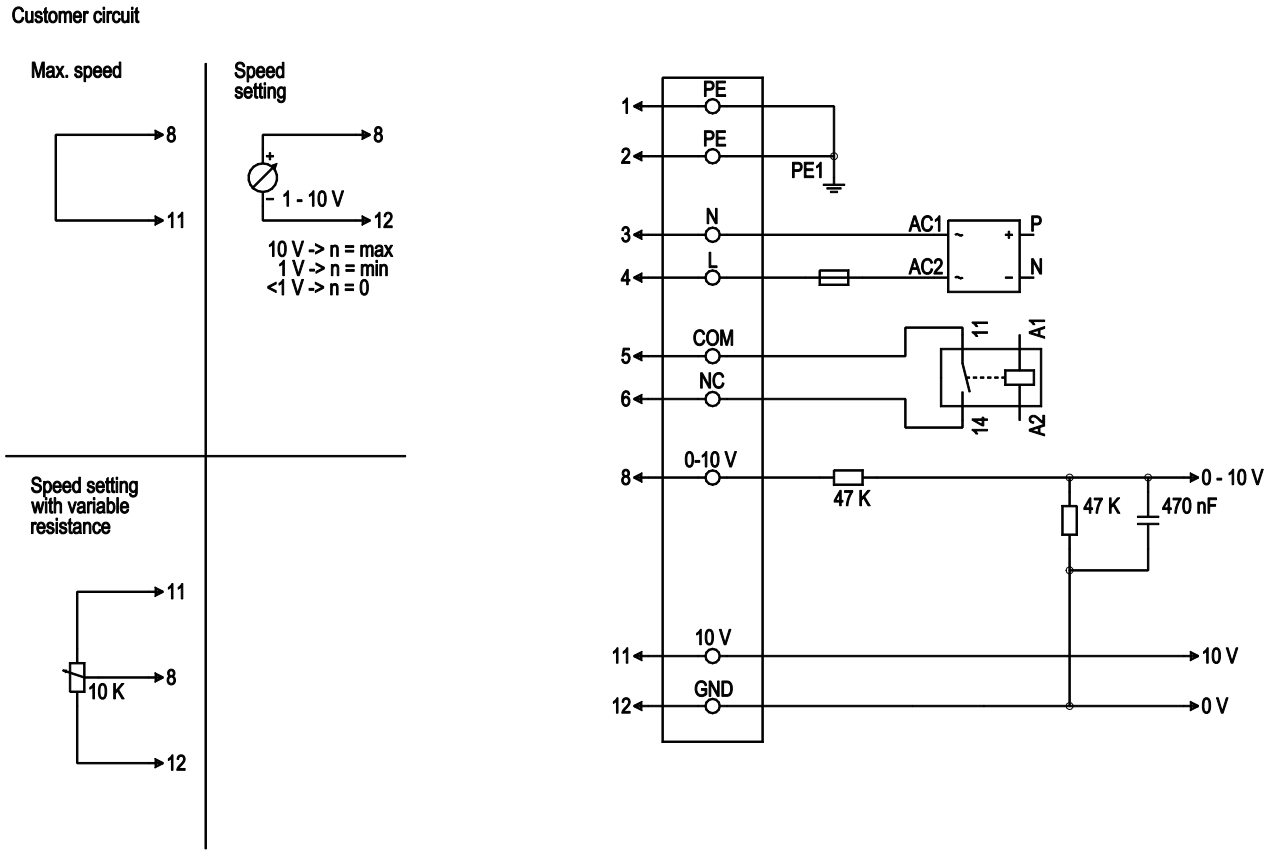
1	Direction of air flow "V"
2	Depth of screw max. 10 mm
3	Connection line PVC AWG 18, 5x crimped core-end sleeves
4	Connection line PVC AWG 22, 3x crimped core-end sleeves

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan - HyBlade

sickled blades (S series)

Connection screen



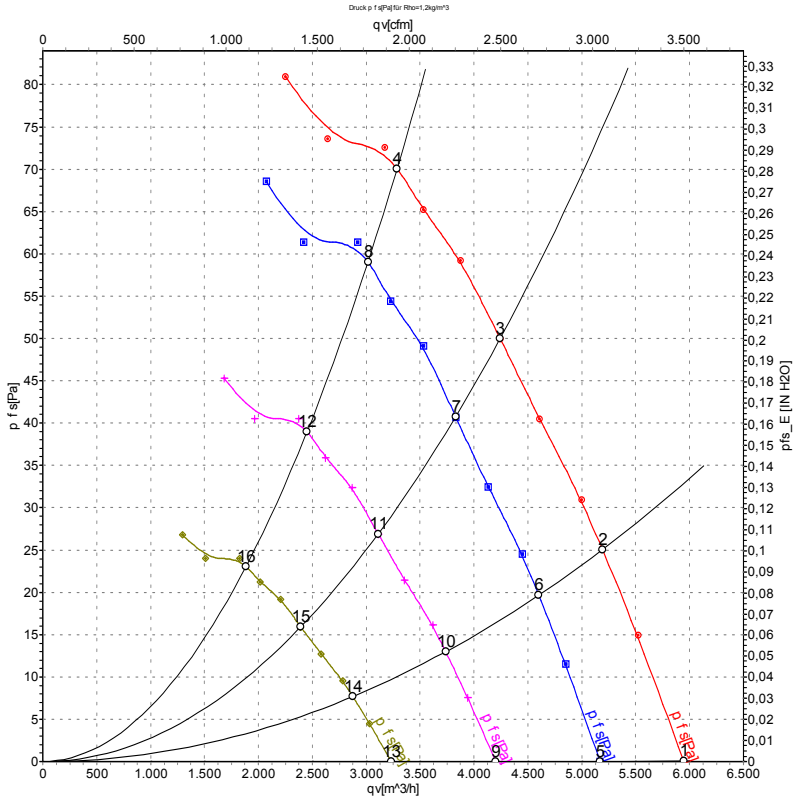
No.	Conn.	Designation	Colour	Function / assignment
1	1,2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	4	L	black	Supply voltage, phase, 50/60 Hz
1	5	COM	white 1	Floating status message contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	6	NC	white 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 VDC	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

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan - HyBlade

sickled blades (S series)

Charts: Air flow 50 Hz



Measurement: LU-118060-1

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}	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	inH2O
1	230	50	920	152	0.97	61	68	67	5945	0	3500	0.00
2	230	50	905	166	1.05	57	64	63	5190	25	3055	0.10
3	230	50	885	175	1.10	53	60	60	4240	50	2495	0.20
4	230	50	870	180	1.20	54	61	61	3285	70	1935	0.28
5	230	50	800	100	0.64	58	65	64	5170	0	3040	0.00
6	230	50	800	115	0.73	54	61	60	4600	20	2705	0.08
7	230	50	800	129	0.82	51	58	57	3830	41	2255	0.16
8	230	50	800	143	0.90	52	60	59	3015	59	1775	0.24
9	230	50	650	54	0.34	53	60	59	4200	0	2470	0.00
10	230	50	650	62	0.39	50	57	56	3740	13	2200	0.05
11	230	50	650	69	0.44	47	53	53	3110	27	1830	0.11
12	230	50	650	77	0.48	48	55	55	2450	39	1445	0.16
13	230	50	500	24	0.16	48	54	54	3230	0	1900	0.00
14	230	50	500	28	0.18	44	51	50	2875	8	1690	0.03
15	230	50	500	31	0.20	41	48	47	2395	16	1410	0.06
16	230	50	500	35	0.22	42	49	49	1885	23	1110	0.09

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com