

A3G910-AO83-01

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	A3G910-AO83-01	
Motor	M3G112-IA	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min ⁻¹	610
Power input	W	625
Current draw	A	1.1
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 = $1 + p_{fs} / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	45.5	28.2	32.2
Efficiency grade N		53.3	36	40
Power input P_{ed}	kW	0.59		
Air flow q_v	m ³ /h	11680		
Pressure increase p_{fs}	Pa	76		
Speed n	min ⁻¹	615		

Data definition with optimum efficiency. LU-120677
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



A3G910-AO83-01

EC axial fan - HyBlade®

sickled blades (S series)

Technical features

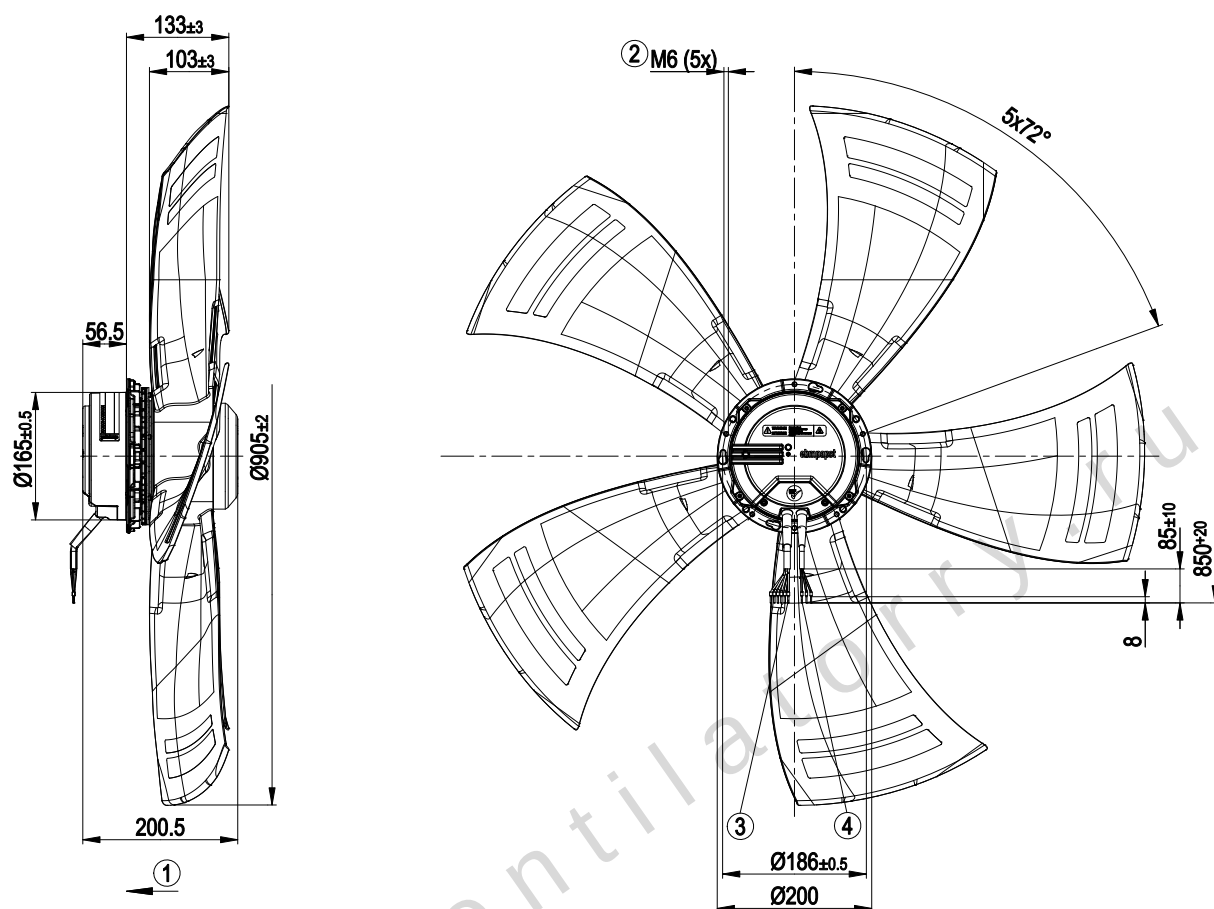
Mass	12.3 kg
Size	910 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"V"
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
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - 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
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CCC; EAC

A3G910-A083-01

EC axial fan - HyBlade®

sickled blades (S series)

Product drawing



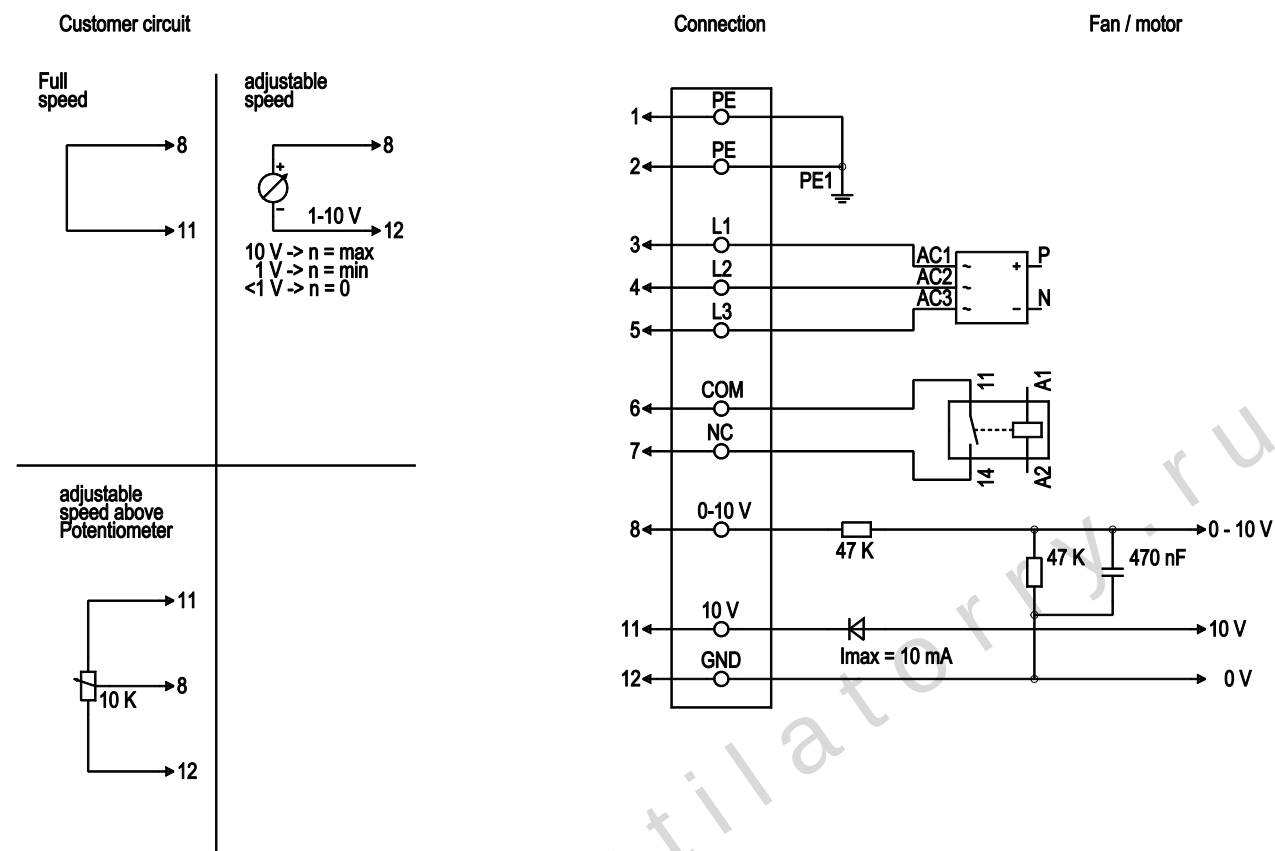
1	Direction of air flow "V"
2	Depth of screw 12 - 16 mm
3	Connection line PVC AWG18, 6x crimped core-end sleeves
4	Connection line PVC AWG22, 3x crimped core-end sleeves

A3G910-AO83-01

EC axial fan - HyBlade®

sickled blades (S series)

Connection screen



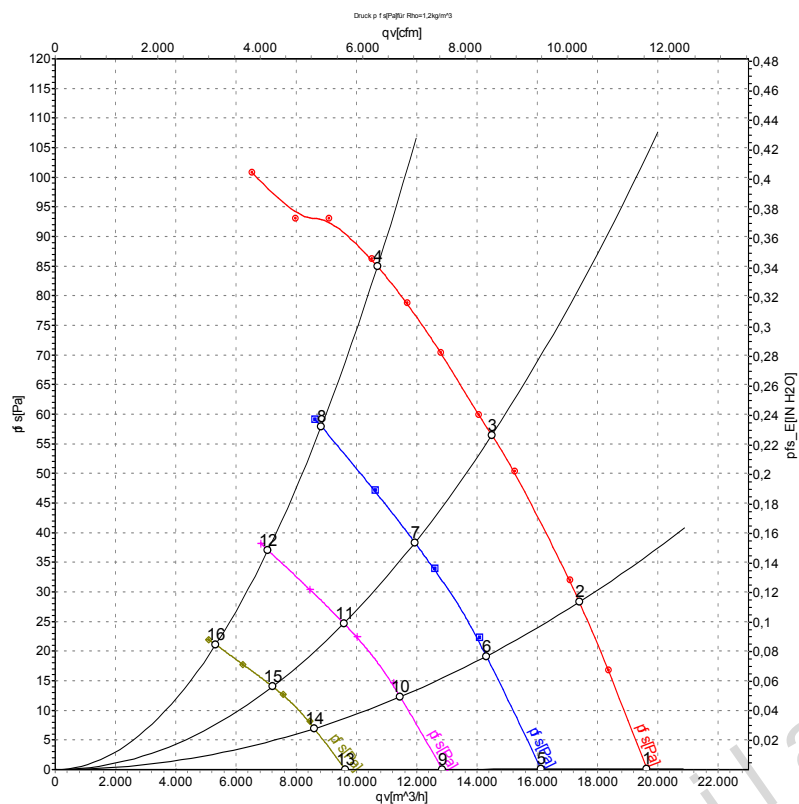
No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3, 4, 5	L1, L2, L3	black	Supply voltage 50 / 60 Hz
1	6	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	7	NC	white 2	Floating status message contact, break for failure
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

A3G910-AO83-01

EC axial fan - HyBlade®

sickled blades (S series)

Charts: Air flow 50 Hz



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	610	380	0.69	60	68	67	19630	0
2	400	50	610	463	0.77	59	66	65	17390	28
3	400	50	610	541	0.89	58	66	65	14480	56
4	400	50	610	625	1.10	62	70	70	10690	85
5	400	50	505	213	0.43	56	62	61	16120	0
6	400	50	505	259	0.51	55	61	60	14300	20
7	400	50	505	300	0.57	55	61	60	11930	38
8	400	50	505	340	0.63	56	63	63	8825	58
9	400	50	405	120	0.28	50	56	56	12830	0
10	400	50	405	143	0.32	52	56	55	11440	13
11	400	50	405	165	0.35	50	55	54	9575	25
12	400	50	405	185	0.38	50	57	57	7060	37
13	400	50	305	63	0.18	41	47	47	9625	0
14	400	50	305	71	0.20	43	49	49	8595	7
15	400	50	305	80	0.21	42	48	48	7215	14
16	400	50	305	89	0.22	42	48	49	5325	21

U = Supply voltage · f = Frequency · n = Speed · 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
qv = Air flow · p_{fs} = Pressure increase