W3G500-KK07-G1

EC axial fan - AxiCool

sickled blades (S series)

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Nominal data

Type	**W3G500-KK07-G1**
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}	970
Power input	W	250
Current draw	A	1.1
Max. back pressure	Pa	85
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	44.3	29.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.7	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.23
09 Air flow q_v	m^3/h	4110
09 Pressure increase p_{fs}	Pa	82
10 Speed (rpm) n	min^{-1}	970
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-177633

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Technical features

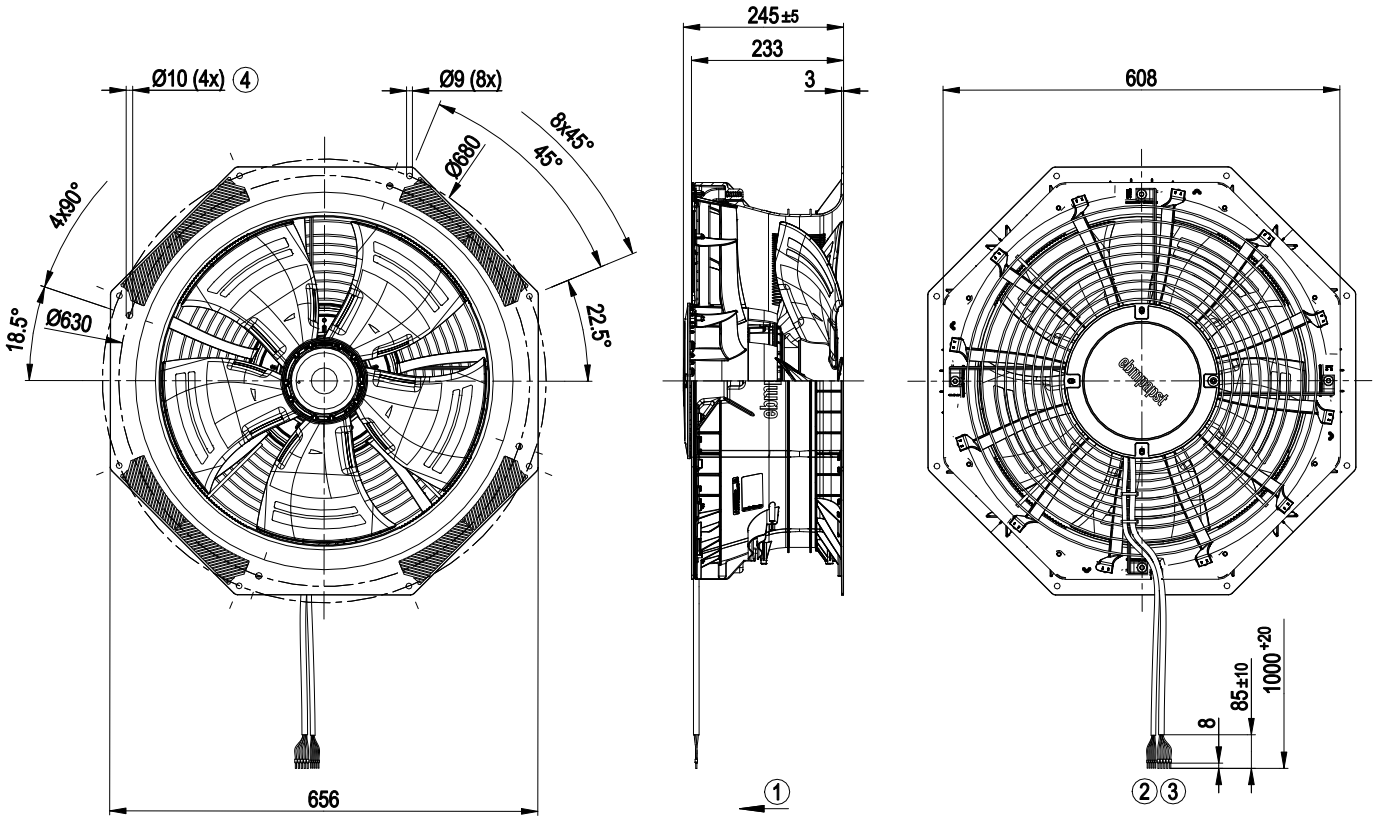
Mass	8 kg
Size	500 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of wall ring	PP plastic
Streamer material	PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H2
Note ambient temperature	If there is a risk of ice formation, the fan is only to be operated with heating tape in the wall ring. Contact ebm-papst for more details.
Max. permissible ambient motor temp. (transp./ storage)	+70 °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 with anti-freezing grease
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Tach output - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 MODBUS RTU - 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
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 60335-1; EN 61800-5-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730; EAC

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Product drawing



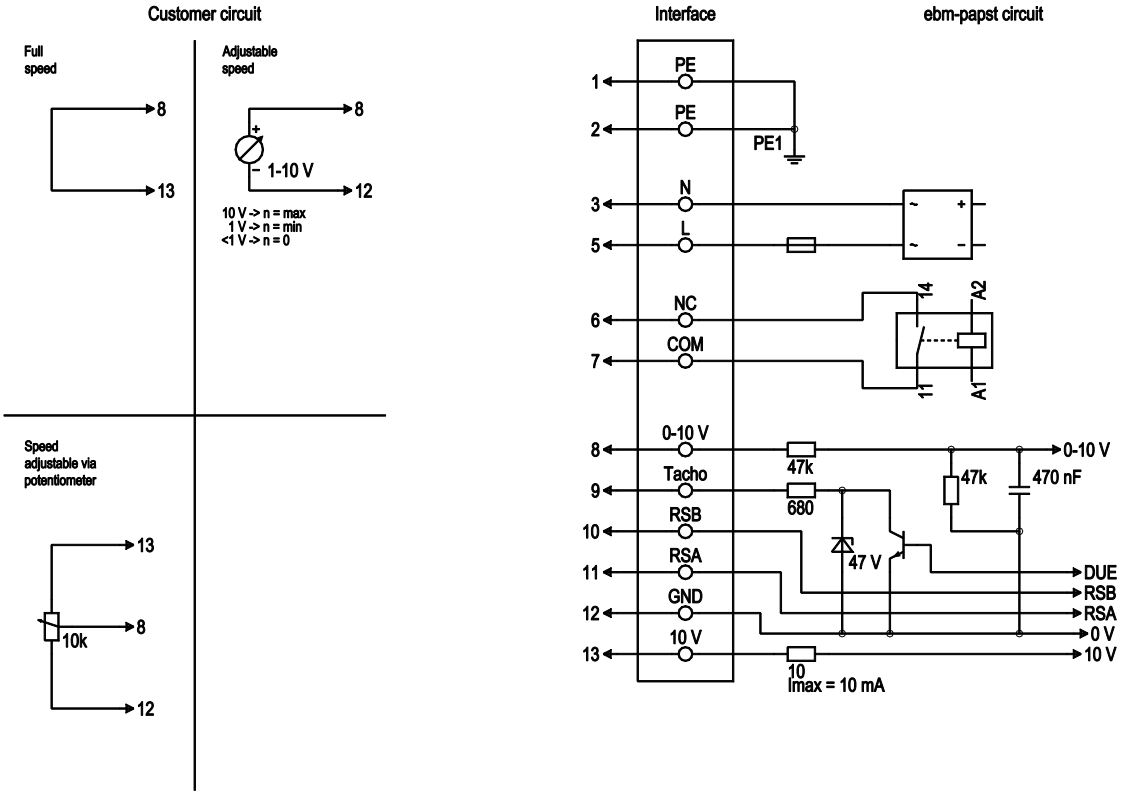
	Pay attention to installation position! The struts of the guard grille must be in X-position. See Section on Connection and Start-up in the operating instructions.
1	Direction of air flow "V"
2	Connection line PVC AWG22, 5x crimped core-end sleeves
3	Connection line PVC AWG18, 5x crimped core-end sleeves
4	Mounting holes for FlowGrid

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Connection screen



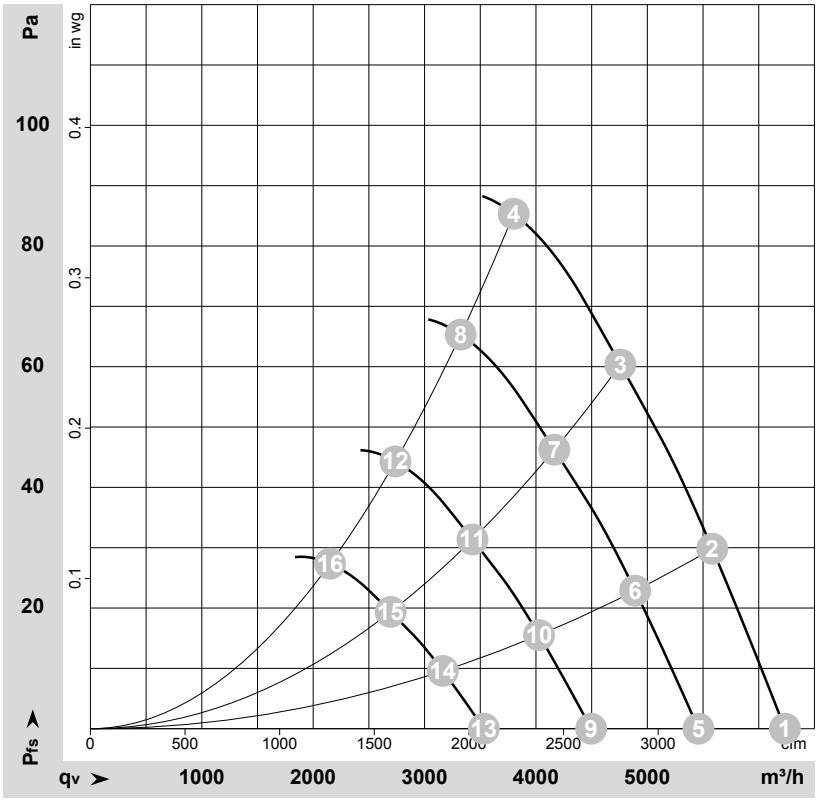
No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10 V	yellow	Analogue input (set value) SELV, 0-10 V, Ri=100kΩ, parametrisable curve
2	9	Tacho	grey	Tach output: Open collector, 1 pulse per revolution, Isink max = 10 mA; SELV
2	10	RSB	brown	RS-485 interface for MODBUS, RSB; SELV
2	11	RSA	white	RS-485 interface for MODBUS, RSA; SELV
2	12	GND	blue	Signal ground for control interface, SELV
2	13	+10 V	red	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometers); SELV

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-177633-1

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	970	170	0.75	65	72	73	6235	0	3670	0.00
2	230	50	970	197	0.87	60	67	68	5585	30	3285	0.12
3	230	50	970	223	0.98	57	65	66	4760	60	2800	0.24
4	230	50	970	250	1.10	60	68	69	3800	85	2235	0.34
5	230	50	850	114	0.51	61	68	69	5460	0	3215	0.00
6	230	50	850	133	0.58	57	64	65	4890	24	2880	0.10
7	230	50	850	150	0.66	54	61	63	4165	46	2450	0.18
8	230	50	850	158	0.69	57	65	66	3325	65	1955	0.26
9	230	50	700	64	0.28	57	63	64	4495	0	2645	0.00
10	230	50	700	74	0.33	52	59	60	4025	16	2370	0.06
11	230	50	700	84	0.37	49	57	58	3430	31	2020	0.12
12	230	50	700	88	0.39	52	60	61	2740	44	1610	0.18
13	230	50	550	31	0.14	51	57	58	3530	0	2080	0.00
14	230	50	550	36	0.16	46	53	54	3165	10	1860	0.04
15	230	50	550	41	0.18	43	51	52	2695	19	1585	0.08
16	230	50	550	43	0.19	46	54	55	2150	27	1265	0.11

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

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