W3G500-KM03-I1

EC axial fan - AxiCool

sickled blades (S series)

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Nominal data

Type	**W3G500-KM03-I1**
Motor	**M3G084-GF**

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}	1370
Power input	W	650
Current draw	A	2.9
Max. back pressure	Pa	180
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	25

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}	%	46.9	32.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.5	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.64
09 Air flow q_v	m^3/h	5855
09 Pressure increase p_{fs}	Pa	170
10 Speed (rpm) n	min^{-1}	1370
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-178007

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Technical features

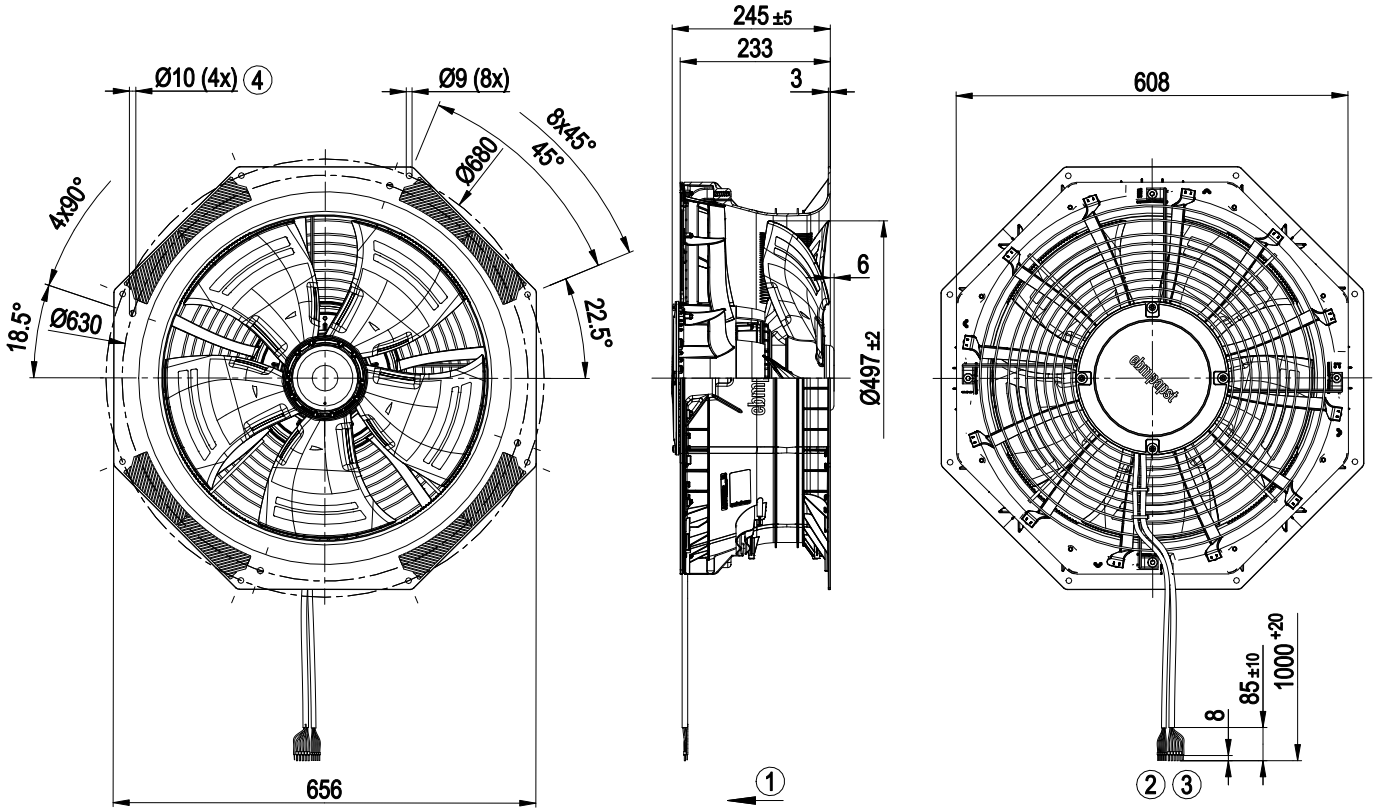
Mass	11.2 kg
Size	500 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of wall ring	PP plastic
Streamer material	PP plastic
Material of guard grille	Steel, coated 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 - 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



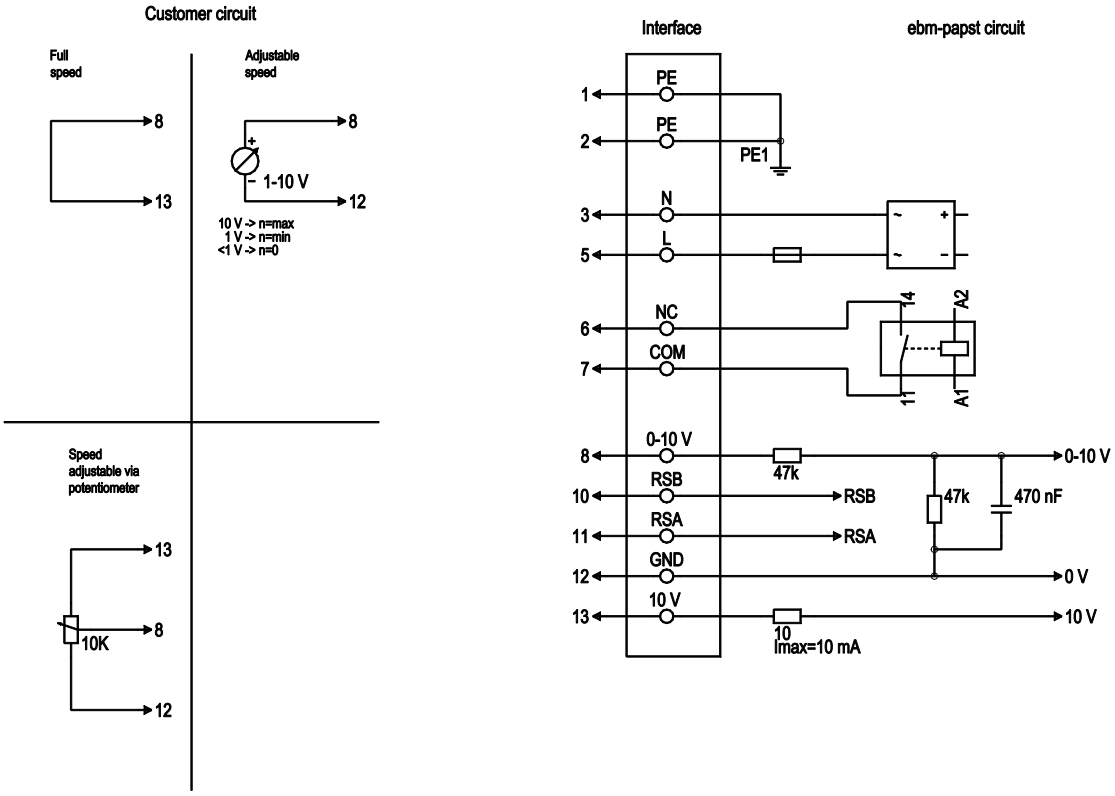
	Pay attention to installation position! The struts of the guard grille must be in X-position. See Section on Connection and Start-up in the operating instructions.
1	Direction of air flow "V"
2	Connection line PVC AWG22, 5x crimped core-end sleeves
3	Connection line PVC AWG18, 5x crimped core-end sleeves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

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Connection screen



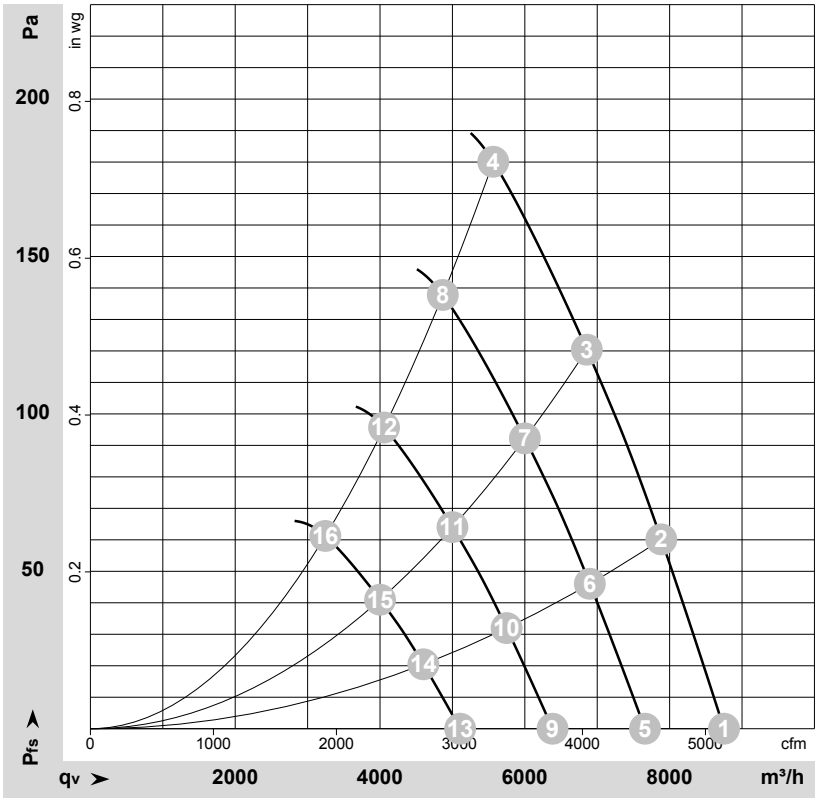
No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	5	L	black	Supply voltage, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analogue input 1 (set value); 0-10 V; Ri=100kΩ; parametrisable curve
2	10	RSB	brown	RS485 interface for Modbus, RSB
2	11	RSA	white	RS485 interface for Modbus, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. potentiometer)

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-178007-1

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	1370	467	2.05	71	79	81	8750	0	5150	0.00
2	230	50	1370	544	2.38	70	78	79	7885	60	4640	0.24
3	230	50	1370	607	2.65	68	76	77	6855	120	4035	0.48
4	230	50	1370	650	2.90	69	77	78	5565	180	3275	0.72
5	230	50	1200	313	1.37	68	76	78	7660	0	4510	0.00
6	230	50	1200	364	1.59	66	74	76	6900	48	4060	0.19
7	230	50	1200	407	1.78	65	73	74	6000	93	3530	0.37
8	230	50	1200	435	1.90	66	74	75	4865	138	2865	0.55
9	230	50	1000	181	0.80	63	71	73	6385	0	3755	0.00
10	230	50	1000	211	0.92	62	70	71	5750	33	3385	0.13
11	230	50	1000	235	1.03	60	68	69	5000	64	2945	0.26
12	230	50	1000	252	1.10	61	69	70	4055	96	2385	0.39
13	230	50	800	93	0.41	58	65	67	5105	0	3005	0.00
14	230	50	800	108	0.47	56	64	65	4600	21	2705	0.08
15	230	50	800	121	0.53	55	63	64	4000	41	2355	0.16
16	230	50	800	129	0.56	55	64	65	3245	61	1910	0.24

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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