W3G500-KM07-I3

EC axial fan - AxiCool

sickle-shaped 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
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**W3G500-KM07-I3**
Motor	**M3G084-GF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	1200
Power consumption	W	430
Current draw	A	1.9
Max. back pressure	Pa	135
Max. back pressure	in. wg	0.54
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	65

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}	%	47.3	31.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.42
09 Air flow q_v	m^3/h	4625
09 Pressure increase p_{fs}	Pa	143
10 Speed (rpm) n	min^{-1}	1205
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_{fs} / 100 000 Pa

LU-187993

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Technical description

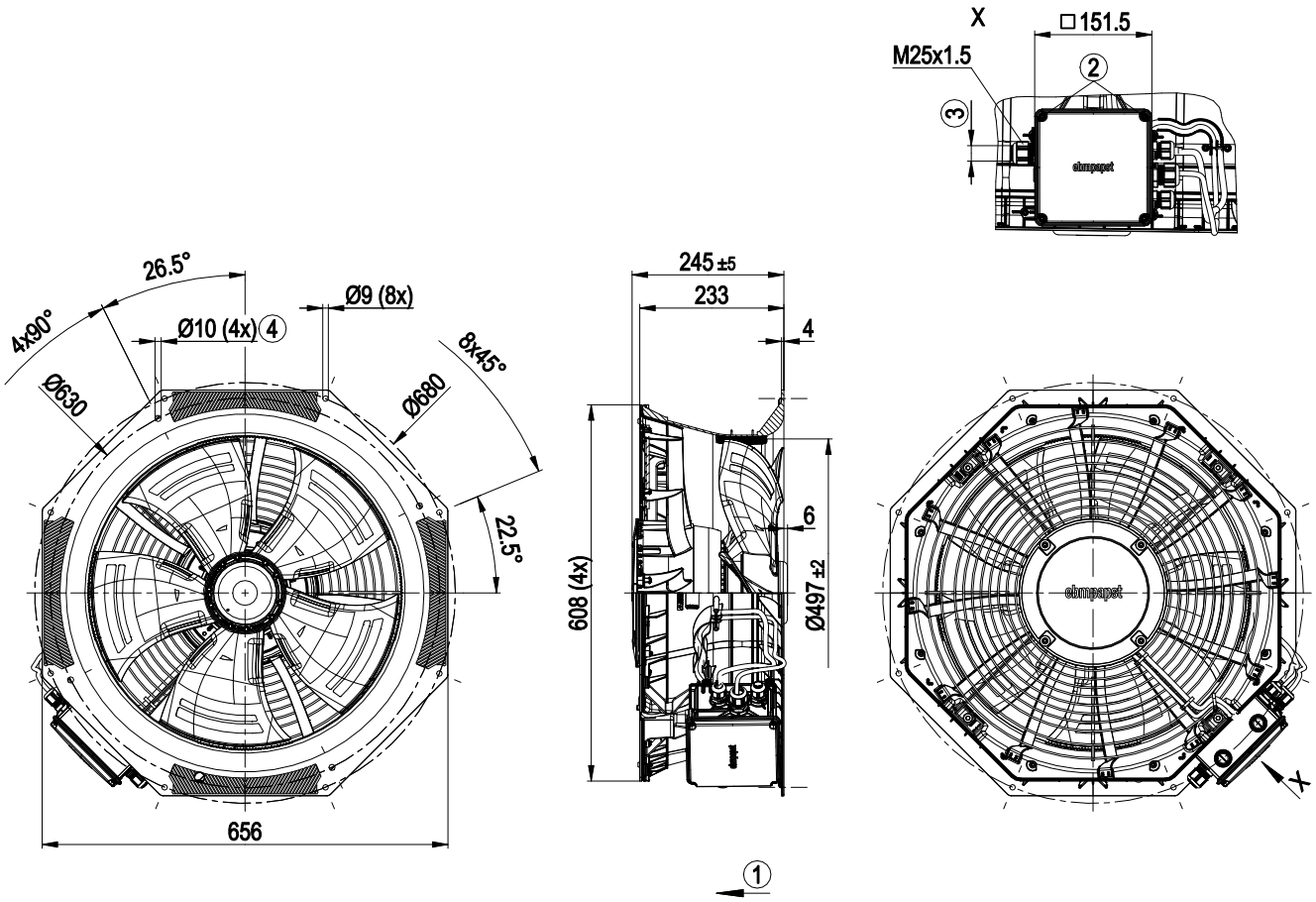
Weight	11.2 kg
Size	500 mm
Motor size	84
Rotor surface	Painted black
Terminal box material	PP plastic
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	PP plastic
Material guide vanes	PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+70 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	See fitting instructions
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - 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 / phase failure detection
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
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; EN 61800-5-1; CE
Approval	EAC; UL 1004-7 + 60730; CSA C22.2 No. 77 + CAN/CSA-E60730-1

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Product drawing

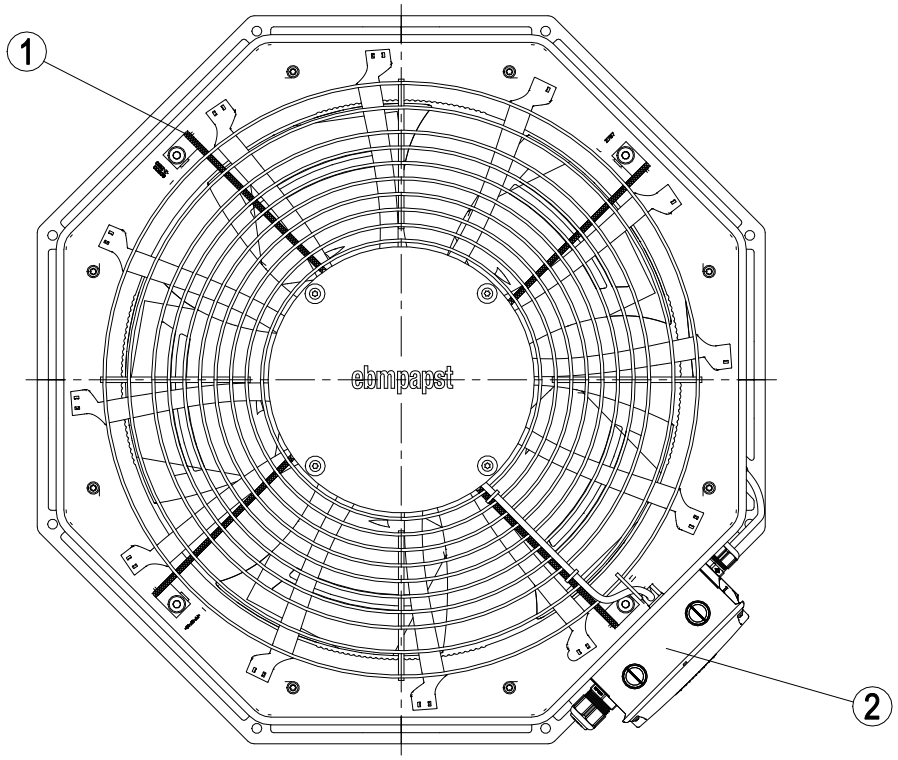


1	Airflow direction "V"
2	Tightening torque 1.8±0.3 Nm
3	Cable diameter min. 9 mm, max. 16 mm, tightening torque 2.5±0.4 Nm
4	Mounting holes for FlowGrid

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1	Installation position: Shaft horizontal (install support struts only in X-position as illustrated) or rotor on bottom
2	For horizontal shaft installation position, the terminal box must be at the bottom right.

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Connection diagram



— shaded gray => terminals not used

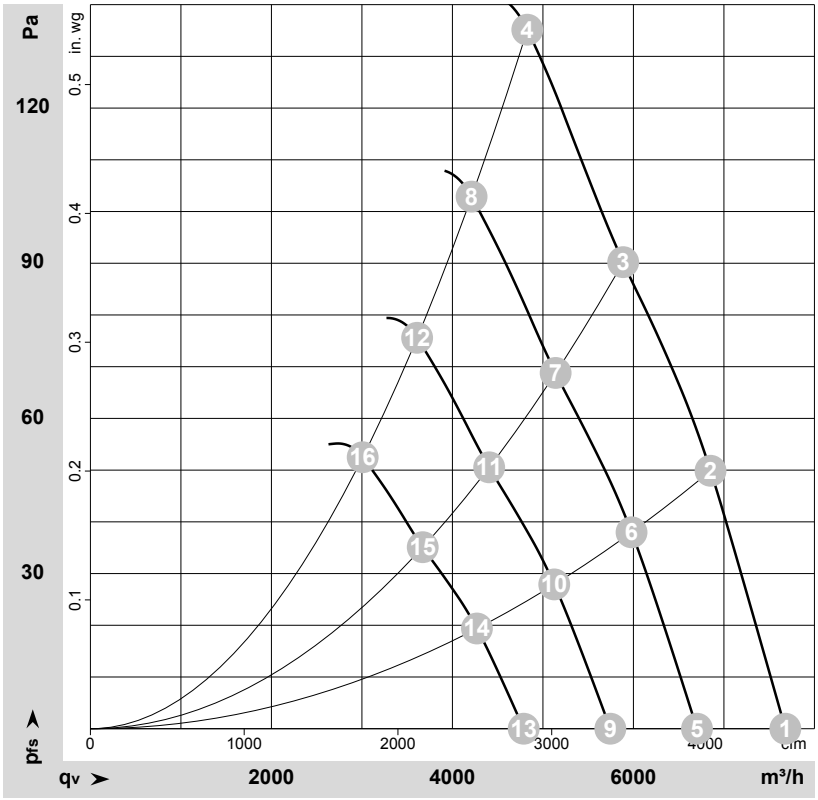
No.	Conn.	Designation	Color	Function/assignment
1		L1/N	black 1	Power supply, neutral conductor
1		L2/L	blue	Power supply, phase
1		L3	-	not used
3		COM	white 2	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
3		PE	green/yellow	Protective earth
3		NC	white 1	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
2		GND	blue	Reference ground for control interface, SELV
2		RSA	white	RS485 interface for MODBUS, RSA; SELV
2		RSB	brown	RS485 interface for MODBUS, RSB; SELV
2		0-10 V	yellow	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
2		+10 V	red	Fixed voltage output 10 VDC, SELV, +10 V +/-3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometers)
2		-	-	not used
2		-	-	not used
2		-	-	not used
2		-	-	not used

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-187993-1

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

	Wired	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	1~	230	50	1200	314	1.40	68	76	77	7680	0	4520	0.00
2	1~	230	50	1200	366	1.63	65	73	74	6850	50	4035	0.20
3	1~	230	50	1200	400	1.78	64	72	73	5885	90	3465	0.36
4	1~	230	50	1200	430	1.90	65	73	74	4825	135	2840	0.54
5	1~	230	50	1050	209	0.93	65	72	73	6700	0	3945	0.00
6	1~	230	50	1050	243	1.08	62	69	71	5980	38	3520	0.15
7	1~	230	50	1050	267	1.18	60	68	69	5140	69	3025	0.28
8	1~	230	50	1050	285	1.26	62	69	70	4210	103	2480	0.41
9	1~	230	50	900	131	0.59	61	68	70	5745	0	3380	0.00
10	1~	230	50	900	153	0.68	58	65	67	5125	28	3015	0.11
11	1~	230	50	900	168	0.75	56	64	66	4405	50	2595	0.20
12	1~	230	50	900	179	0.80	58	65	67	3610	76	2125	0.31
13	1~	230	50	750	76	0.34	57	64	65	4785	0	2820	0.00
14	1~	230	50	750	89	0.40	53	61	62	4270	19	2515	0.08
15	1~	230	50	750	97	0.43	52	60	61	3670	35	2160	0.14
16	1~	230	50	750	104	0.46	53	61	62	3010	52	1770	0.21

Wired = Wiring · 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

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