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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
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	1370
Power consumption	W	650
Current draw	A	2.9
Max. back pressure	Pa	180
Max. back pressure	in. wg	0.72
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	40

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 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	46.9	32.5	09 Power consumption P_{ed}	kW	0.64
02 Measurement category		A		09 Air flow q_v	m ³ /h	5855
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	170
04 Efficiency grade N		54.4	40	10 Speed (rpm) n	min ⁻¹	1370
05 Variable speed drive		Yes		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 = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-178007



Technical description

Weight	11.165 kg
Size	500 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
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	If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. Further information can be obtained from ebm-papst. As fan only suitable for use with industrial evaporators
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 with low-temperature lubricant
Technical features	<ul style="list-style-type: none"> - 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
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
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

W3G500-KM03-I1

EC axial fan - AxiCool

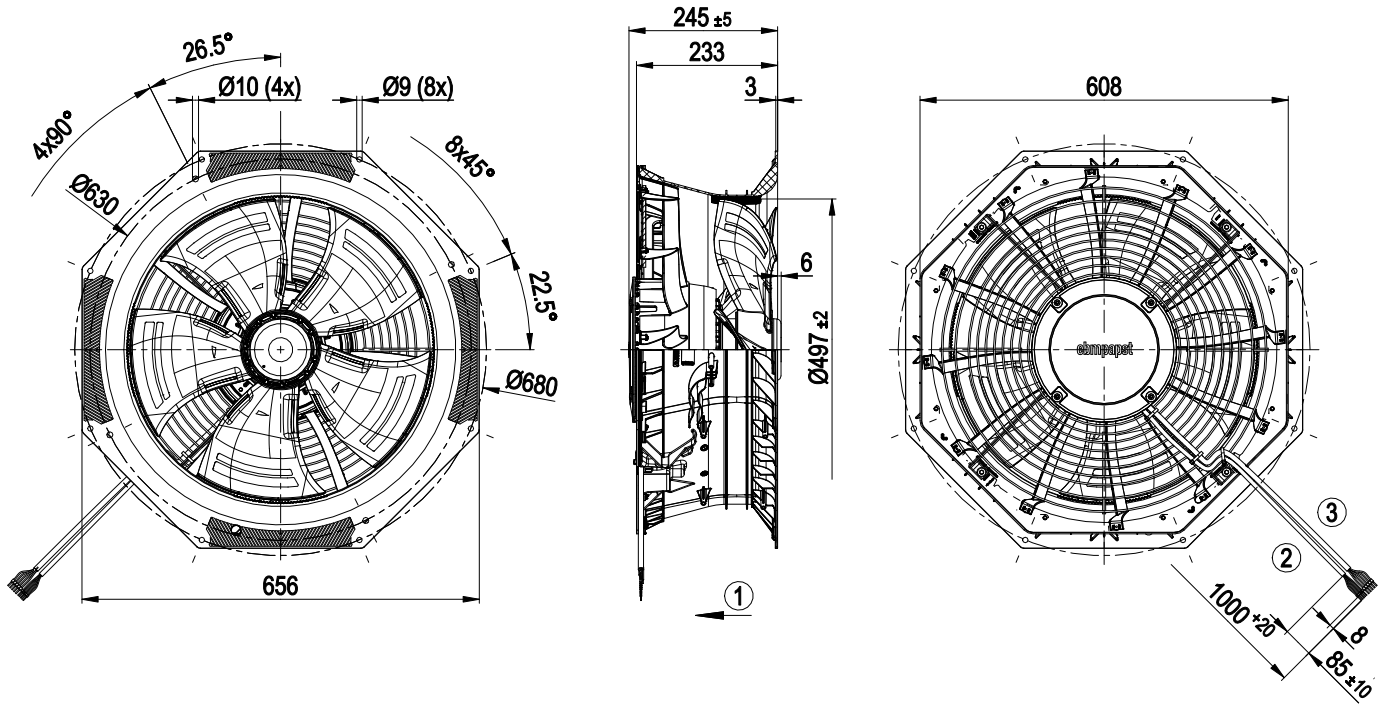
sickle-shaped blades (S series)

Approval

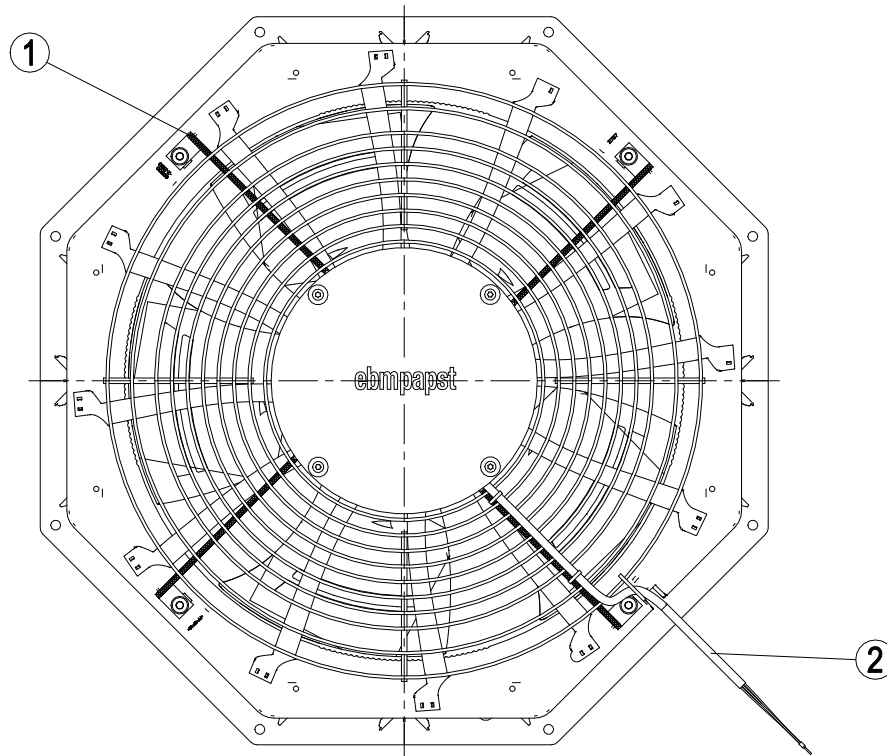
UL 1004-7 + 60730-1; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1



Product drawing

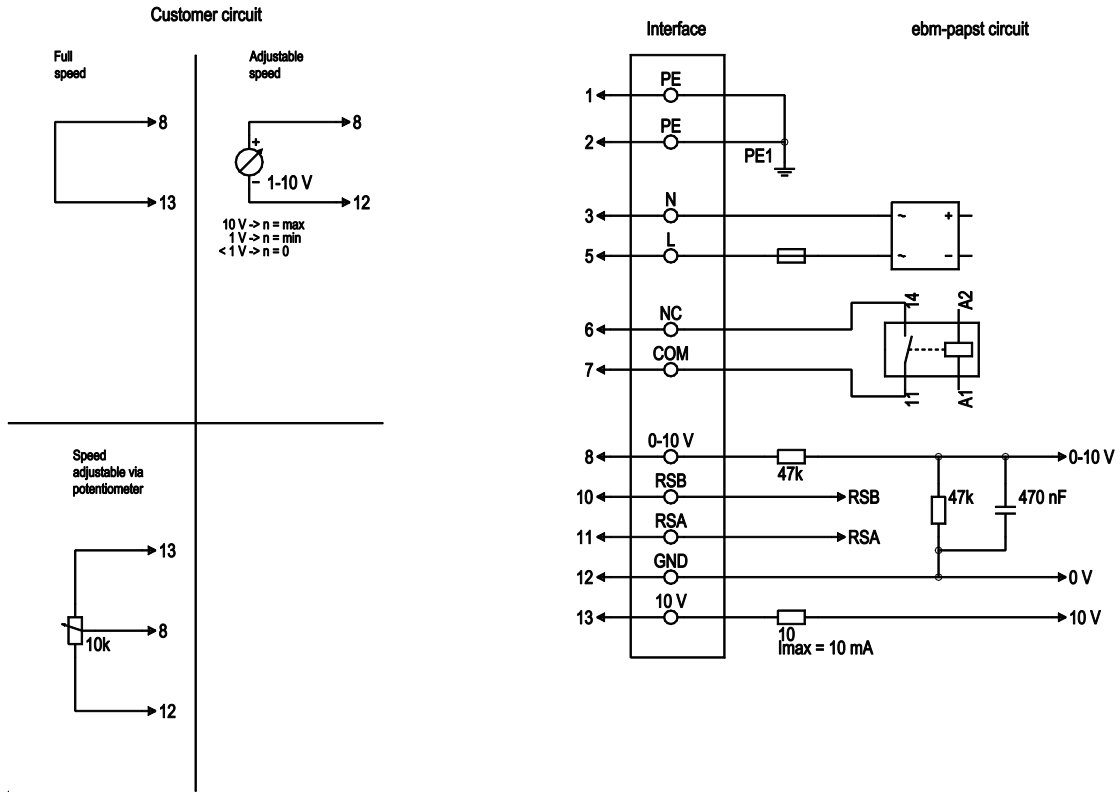


1	Airflow direction "V"
2	Cable PVC AWG22
	5x wire-end ferrule
3	Cable PVC AWG18
	5x wire-end ferrule



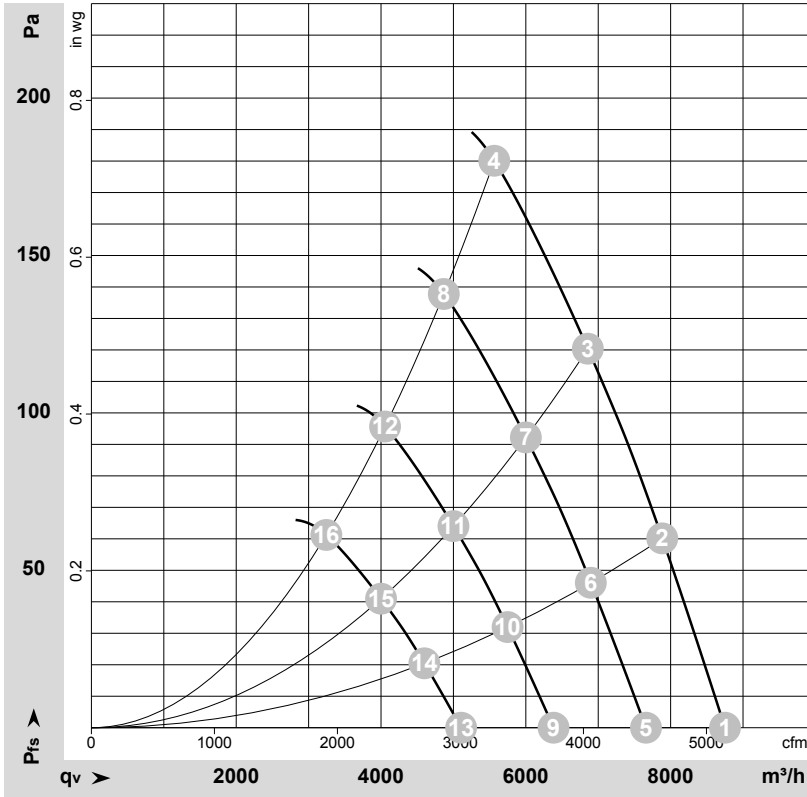
- | | |
|---|---|
| 1 | Installation position: Shaft horizontal (install support struts only in X-position as illustrated) or rotor on bottom |
| 2 | For horizontal shaft installation position, the cable exit must be at the bottom right. |

Connection diagram



No.	Conn.	Designation	Color	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 / 2A (AC1) / min. 10 mA, basic insulation on supply 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 supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; $R_i = 100\text{ k}\Omega$; adjustable 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 $\pm 3\%$; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)

Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-178007-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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

	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	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 = 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

