EC axial fan

W3G500-GC25-63 ebmpapst Datasheet
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Nominal data

Type	**W3G500-GC25-63**
Motor	**M3G084-FA**

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}	970
Power consumption	W	240
Current draw	A	1.6
Max. back pressure	Pa	80
Max. back pressure	in. wg	0.32
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	43.8	29.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.24
09 Air flow q_v	m^3/h	4065
09 Pressure increase p_{fs}	Pa	83
10 Speed (rpm) n	min^{-1}	980
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-177023

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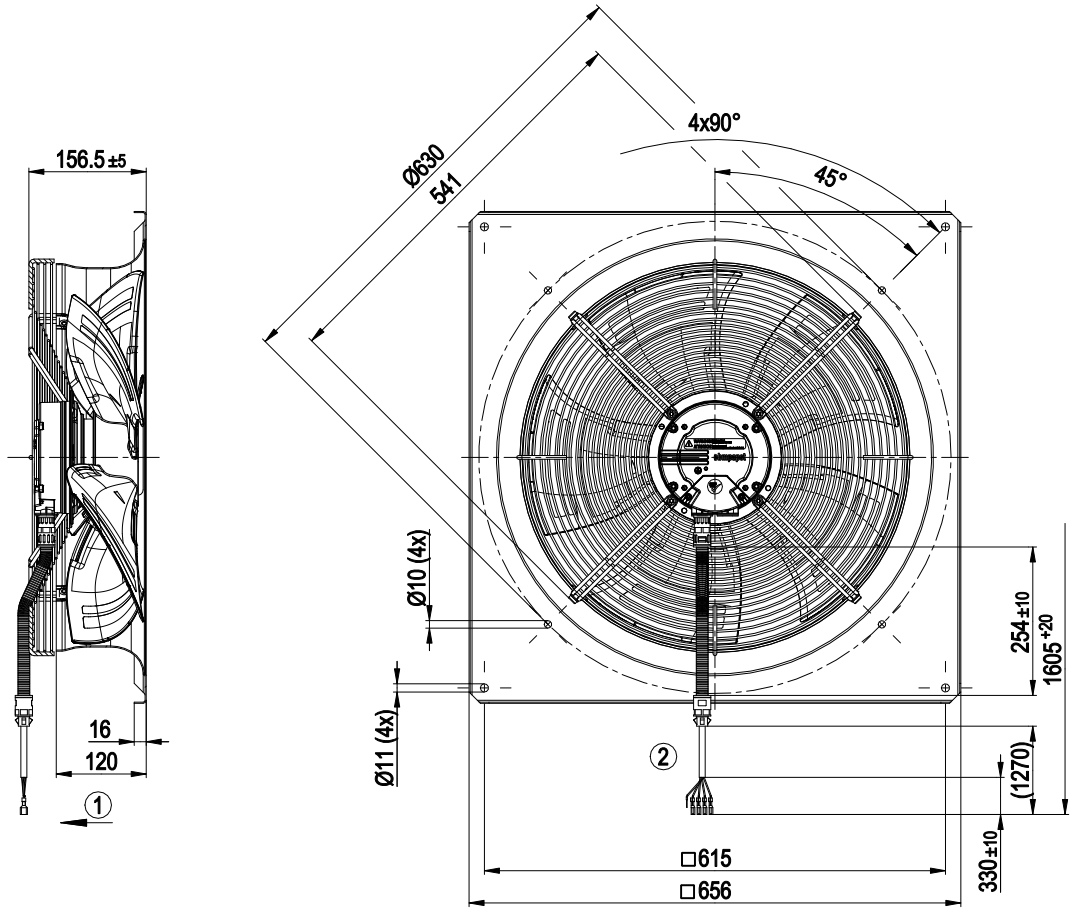
Technical description

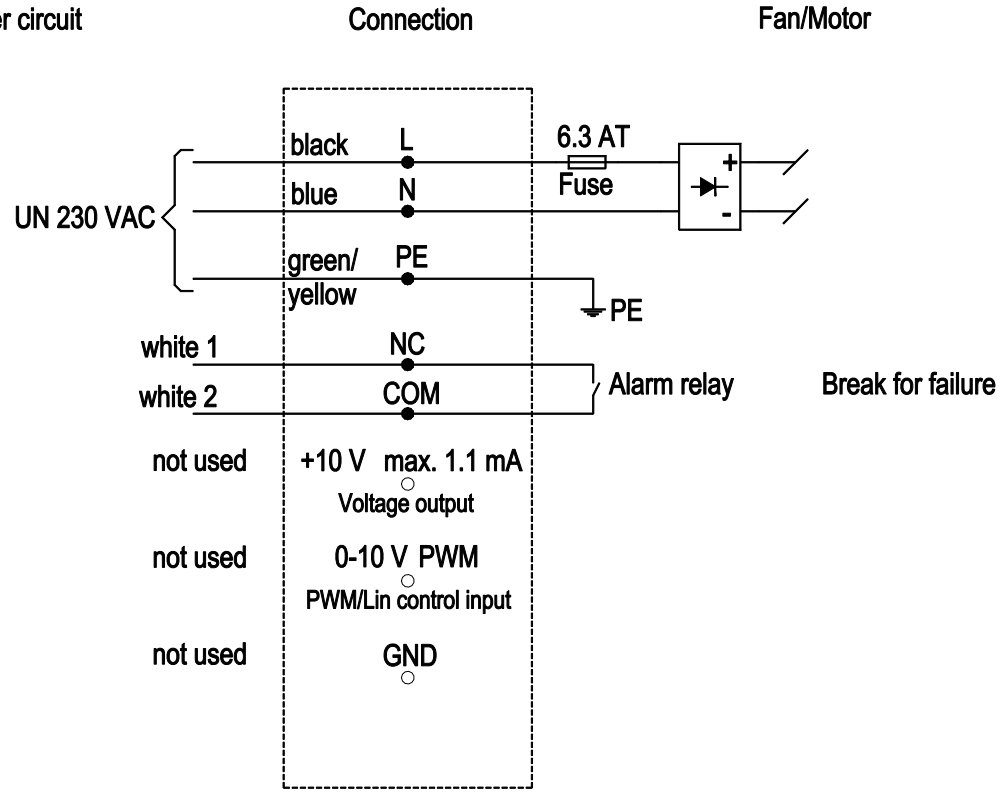
Weight	11.6 kg
Fan size	500 mm
Rotor surface	Painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - PFC, passive - 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 detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77; UL 1004-3; EAC

Product drawing



1	Airflow direction "V"
2	Cable PVC AWG18 5G, 4x TE flat push-on receptacle 2-520183-4 and 1x crimped splice

Connection diagram



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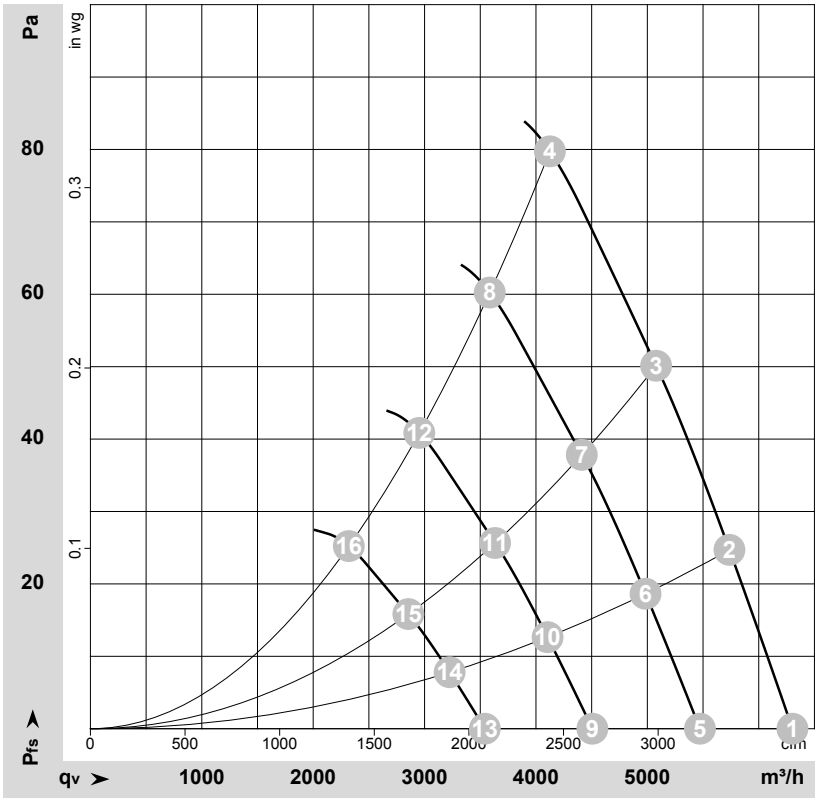
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-177023-1

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

	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	970	175	1.21	59	66	65	6305	0	3710	0.00
2	230	50	970	197	1.35	57	64	63	5735	25	3375	0.10
3	230	50	970	217	1.48	56	63	62	5080	50	2990	0.20
4	230	50	970	240	1.60	57	64	63	4125	80	2430	0.32
5	230	50	850	114	0.79	56	62	61	5470	0	3220	0.00
6	230	50	850	129	0.88	54	60	59	4985	19	2935	0.08
7	230	50	850	143	0.97	52	59	58	4410	38	2595	0.15
8	230	50	850	158	1.06	53	60	59	3585	61	2110	0.24
9	230	50	700	64	0.44	51	57	56	4505	0	2655	0.00
10	230	50	700	72	0.49	49	55	55	4105	13	2415	0.05
11	230	50	700	80	0.54	47	54	53	3635	26	2140	0.10
12	230	50	700	88	0.59	48	55	54	2955	41	1740	0.16
13	230	50	550	31	0.21	45	51	50	3540	0	2085	0.00
14	230	50	550	35	0.24	43	49	48	3225	8	1900	0.03
15	230	50	550	39	0.26	41	48	47	2855	16	1680	0.06
16	230	50	550	43	0.29	42	49	48	2320	26	1365	0.10

U = Power supply · 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