S3G500-BD01-53

EC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S3G500-BD01-53**
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}	1100
Power consumption	W	360
Current draw	A	2.2
Max. back pressure	Pa	100
Max. back pressure	inH2O	0.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	40.8	30.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		49.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.36
09 Air flow q_v	m^3/h	4585
09 Pressure increase p_{fs}	Pa	106
10 Speed (rpm) n	min^{-1}	1105
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-114485

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Technical description

Weight	7.5 kg
Fan size	500 mm
Rotor surface	Painted black
Terminal box material	PC/ABS plastic
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with 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	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
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 - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage 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
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC

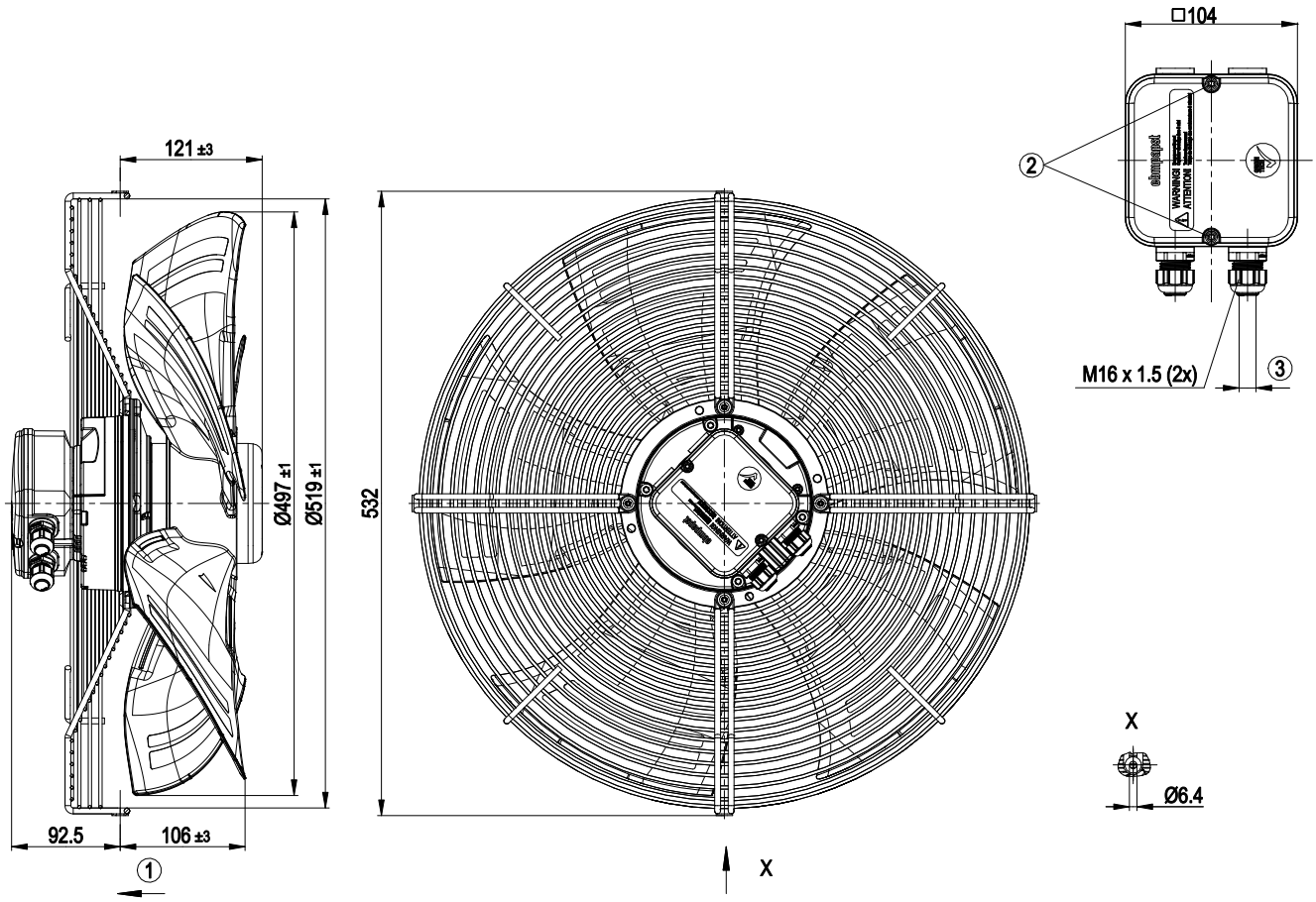
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Product drawing



1	Airflow direction "V"
2	Tightening torque 1.5±0.2 Nm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5±0.4 Nm

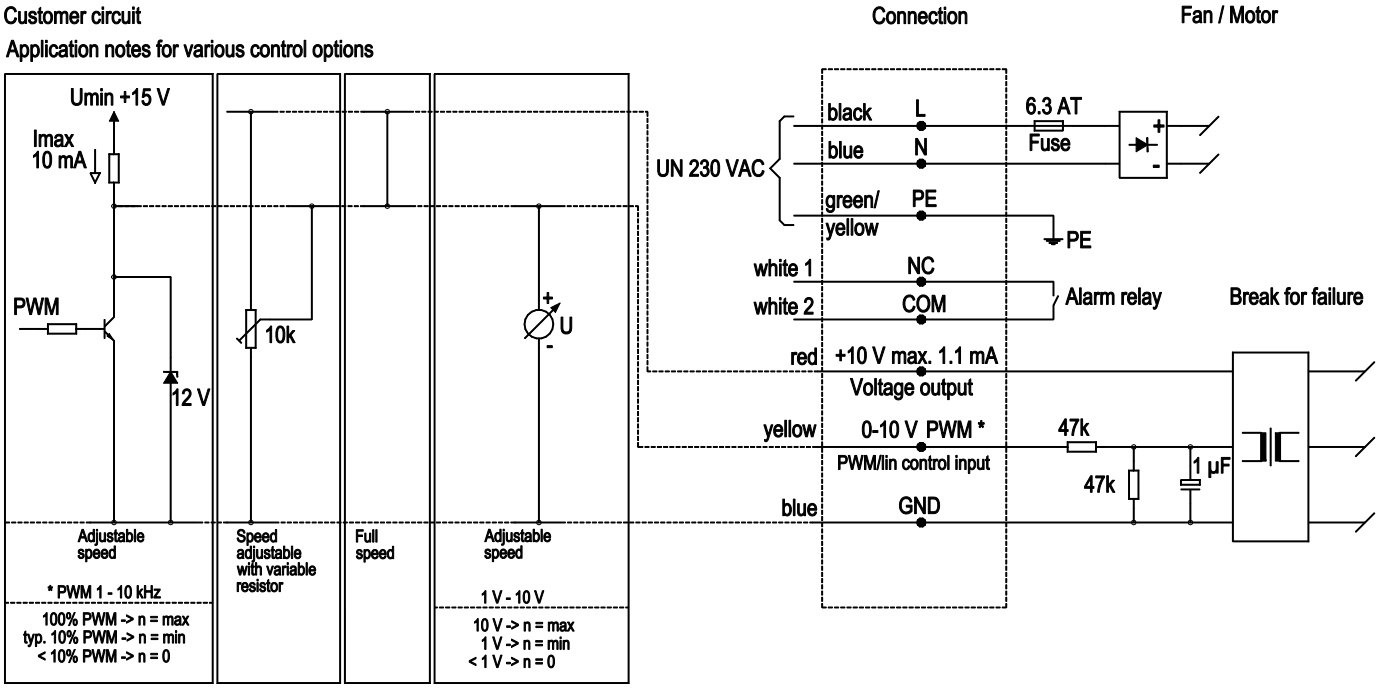
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Connection diagram



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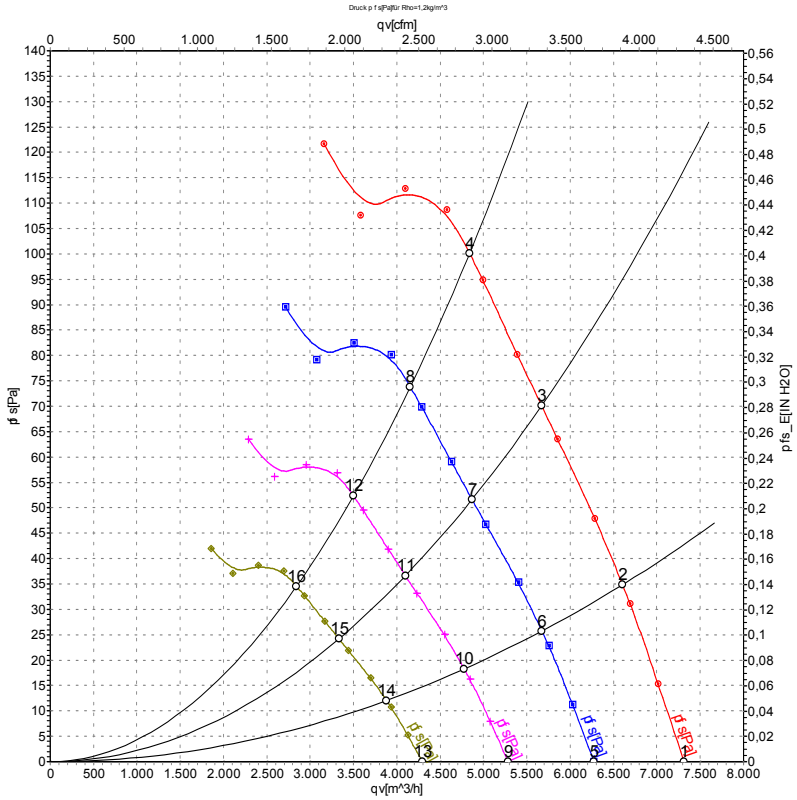
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Curves: Air performance 50 Hz



Measurement: LU-114485-1

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	inH2O
1	230	50	1100	264	1.62	61	68	68	7315	0	4305	0.00
2	230	50	1100	301	1.82	60	66	66	6605	35	3885	0.14
3	230	50	1100	336	2.02	59	65	65	5670	70	3335	0.28
4	230	50	1100	360	2.20	60	66	66	4840	100	2850	0.40
5	230	50	950	166	1.02	58	65	64	6270	0	3690	0.00
6	230	50	950	191	1.15	56	63	62	5675	26	3340	0.10
7	230	50	950	213	1.27	55	62	62	4870	52	2865	0.21
8	230	50	950	228	1.37	56	63	62	4155	74	2445	0.30
9	230	50	800	99	0.61	54	61	61	5280	0	3110	0.00
10	230	50	800	114	0.69	53	59	59	4775	18	2810	0.07
11	230	50	800	127	0.76	52	58	58	4100	37	2415	0.15
12	230	50	800	136	0.82	53	59	59	3500	52	2060	0.21
13	230	50	650	53	0.33	50	56	56	4290	0	2525	0.00
14	230	50	650	61	0.37	48	55	54	3880	12	2285	0.05
15	230	50	650	68	0.41	47	54	53	3330	24	1960	0.10
16	230	50	650	73	0.44	48	55	54	2840	34	1675	0.14

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

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