S3G560-DP68-25

EC axial fan - HyBlade

sickle-shaped blades (S series)

with support ring

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Nominal data

Type	**S3G560-DP68-25**
Motor	**M3G112-EA**

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}	830
Power consumption	W	270
Current draw	A	1.3
Max. back pressure	Pa	70
Max. back pressure	inH2O	0.28
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	42.6	29.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		52.7	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.25
09 Air flow q_v	m^3/h	4505
09 Pressure increase p_{fs}	Pa	76
10 Speed (rpm) n	min^{-1}	835
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

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Technical description

Weight	10.3 kg
Fan size	560 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Sheet aluminum insert, sprayed with PP plastic
Support ring material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	-5°
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F4-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Rotor on top
Condensation drainage holes	On stator side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Motor current limitation - PFC, active - 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 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
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	EAC

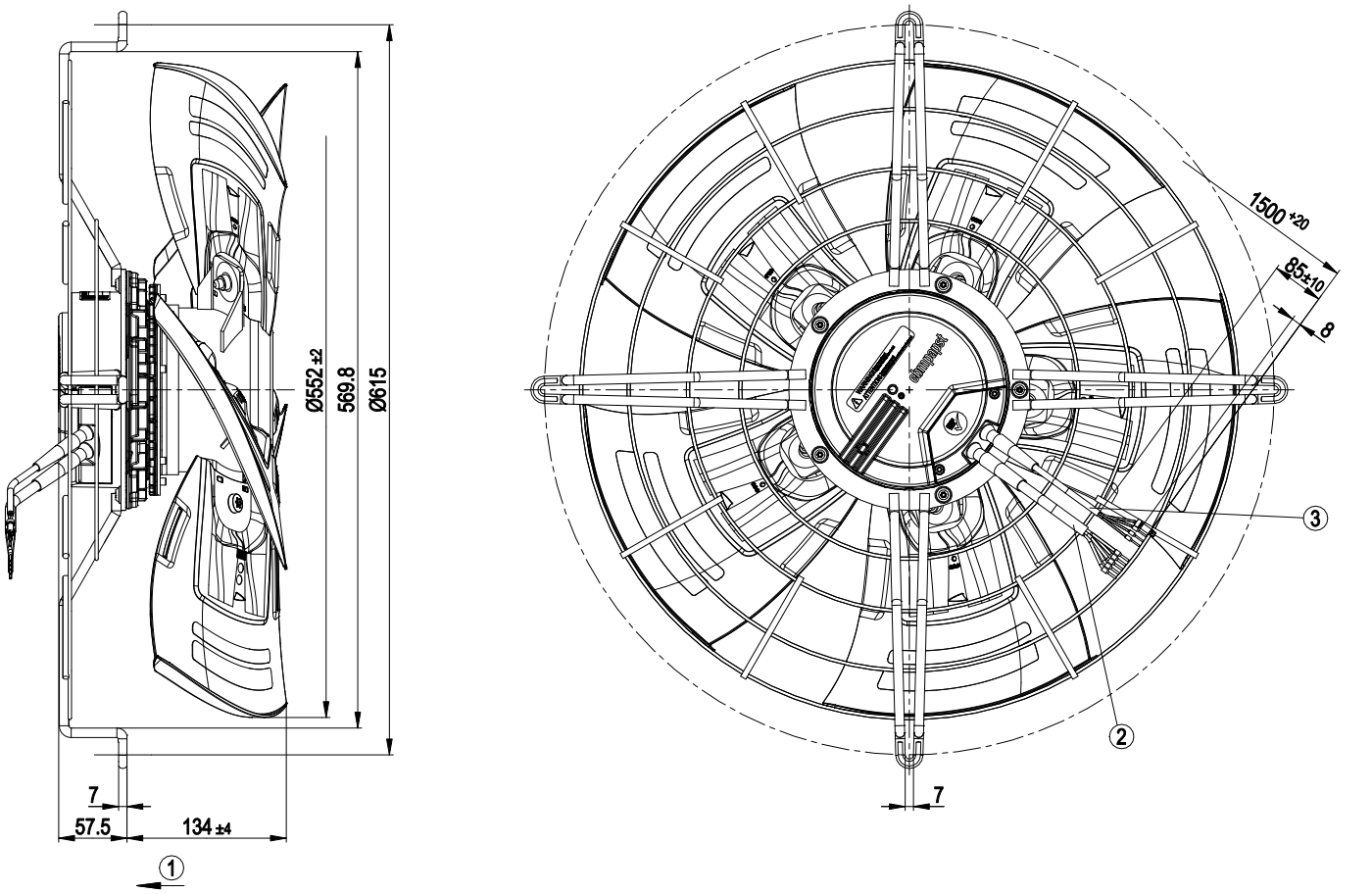
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Product drawing



1	Direction of air flow "V"
2	Cable PVC AWG18, 5x crimped ferrules
3	Cable PVC AWG22, 3x crimped ferrules

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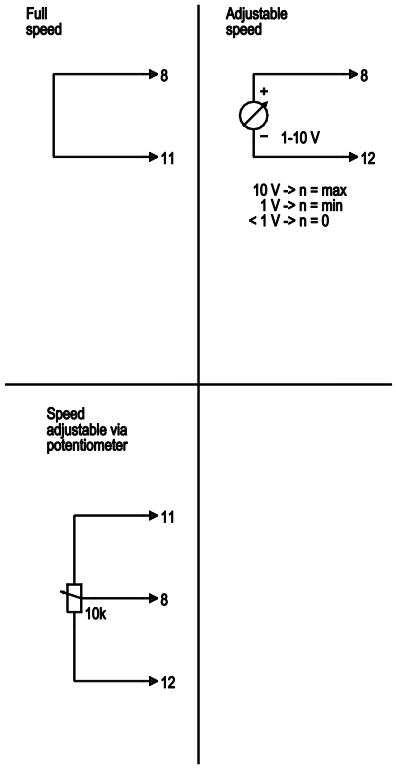
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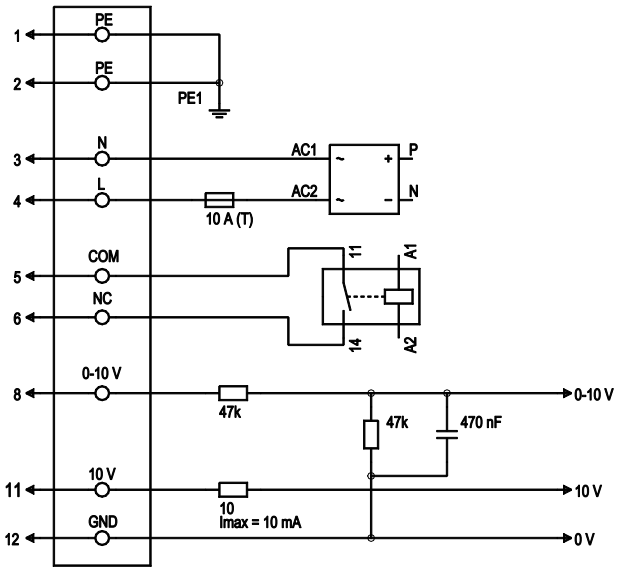
Connection diagram

Customer circuit



Connection

Fan / Motor



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	4	L	black	Power supply, phase, 50/60 Hz
1	5	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	6	NC	white 2	Floating status contact, break for failure
2	8	0-10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kΩ, SELV
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference ground for control interface, SELV

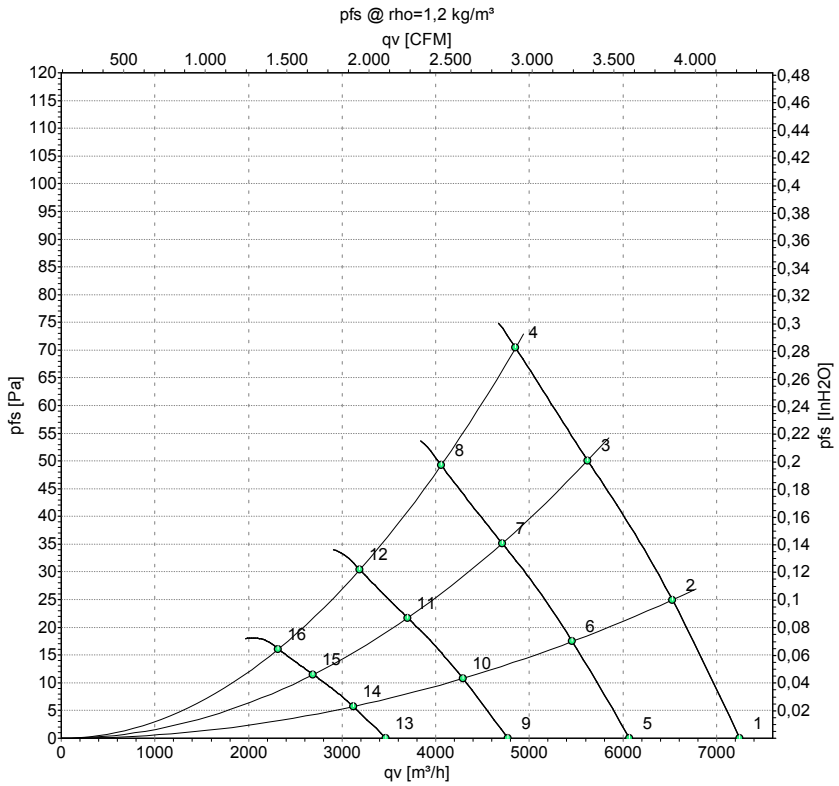
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Curves: Air performance 50 Hz



Measurement: LU-157143-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	830	181	0.90	7250	0	4265	0.00
2	230	50	830	209	1.03	6530	25	3840	0.10
3	230	50	830	233	1.13	5625	50	3310	0.20
4	230	50	830	270	1.30	4855	70	2855	0.28
5	230	50	700	106	0.53	6070	0	3575	0.00
6	230	50	700	122	0.60	5460	18	3215	0.07
7	230	50	700	137	0.67	4710	35	2770	0.14
8	230	50	700	143	0.69	4060	49	2390	0.20
9	230	50	550	52	0.26	4770	0	2810	0.00
10	230	50	550	59	0.29	4290	11	2525	0.04
11	230	50	550	66	0.32	3700	22	2180	0.09
12	230	50	550	69	0.34	3190	30	1875	0.12
13	230	50	400	20	0.10	3470	0	2040	0.00
14	230	50	400	23	0.11	3120	6	1835	0.02
15	230	50	400	25	0.12	2690	11	1585	0.04
16	230	50	400	27	0.13	2320	16	1365	0.06

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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