S3G560-EL12-H3

EC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S3G560-EL12-H3**
Motor	**M3G084-FA**

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}	770
Power consumption	W	140
Current draw	A	0.64
Max. back pressure	Pa	55
Max. back pressure	in. wg	0.22
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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	45.6	28.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		57.4	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.13
09 Air flow q_v	m^3/h	4225
09 Pressure increase p_{fs}	Pa	48
10 Speed (rpm) n	min^{-1}	765
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	6.64 kg
Size	560 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
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
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. 10 mA - Operation and alarm display - Tach output - 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 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

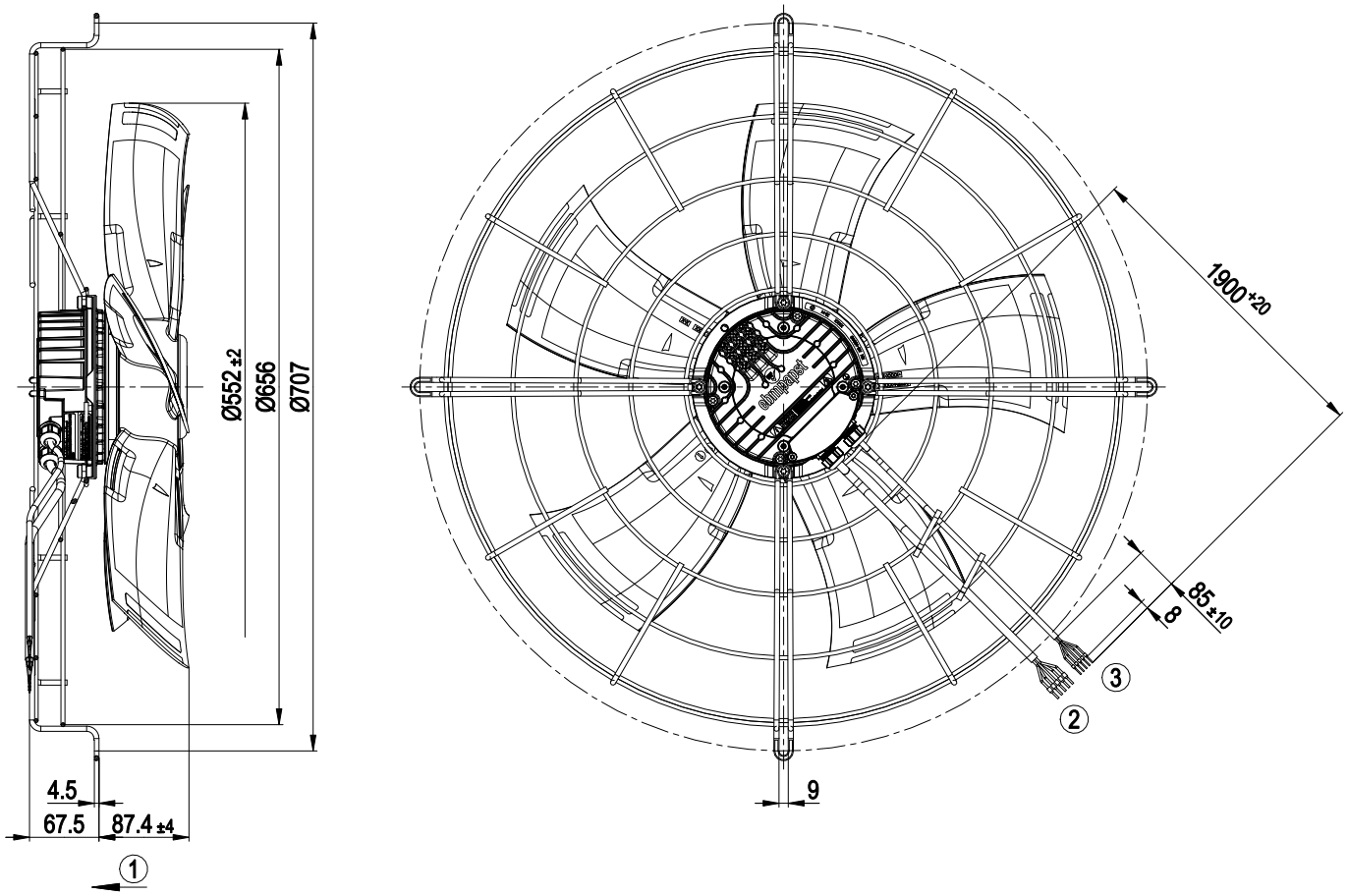
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Product drawing



1	Airflow direction "V"
2	Cable PVC AWG18
	5x wire-end ferrule
3	Cable PVC AWG22
	6x wire-end ferrule

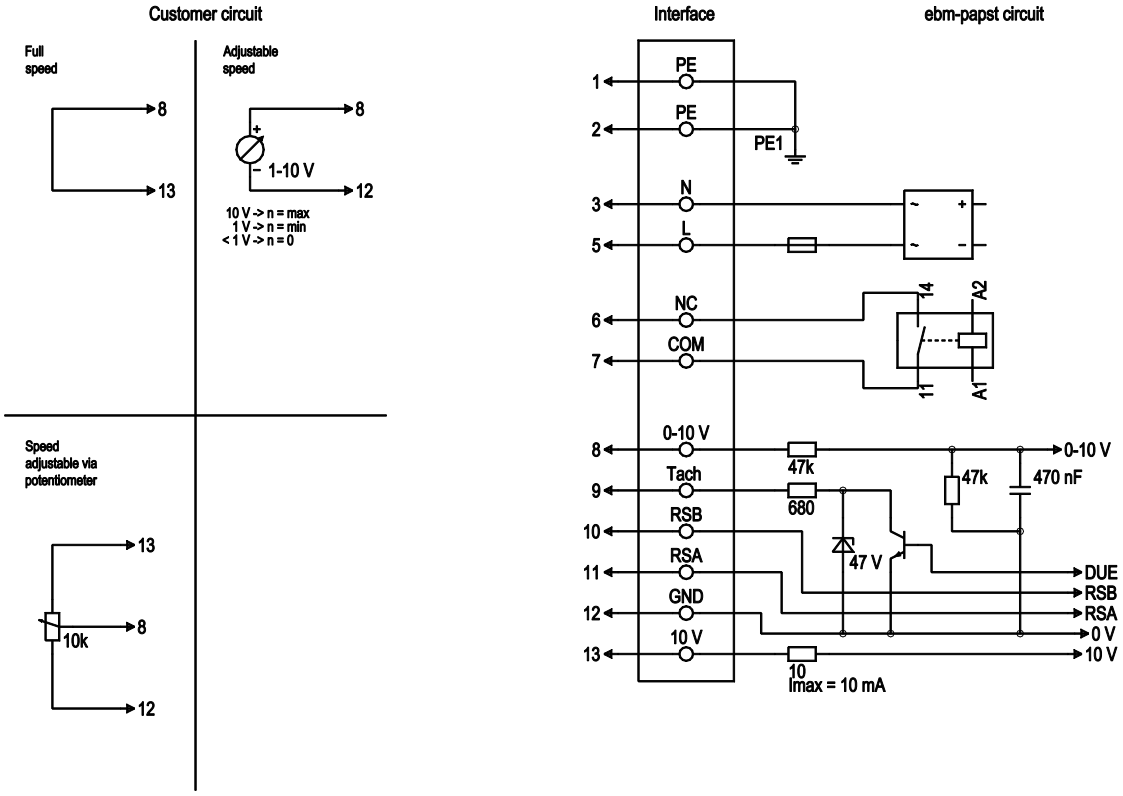
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Connection diagram



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 / 2 A (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, 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	8	0-10 V	yellow	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
2	9	Tacho	gray	Tach output: open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
2	10	RSB	brown	RS485 interface for MODBUS, RSB; SELV
2	11	RSA	white	RS485 interface for MODBUS, RSA; SELV
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10 V	red	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof power supply for external devices (e.g. pot); SELV

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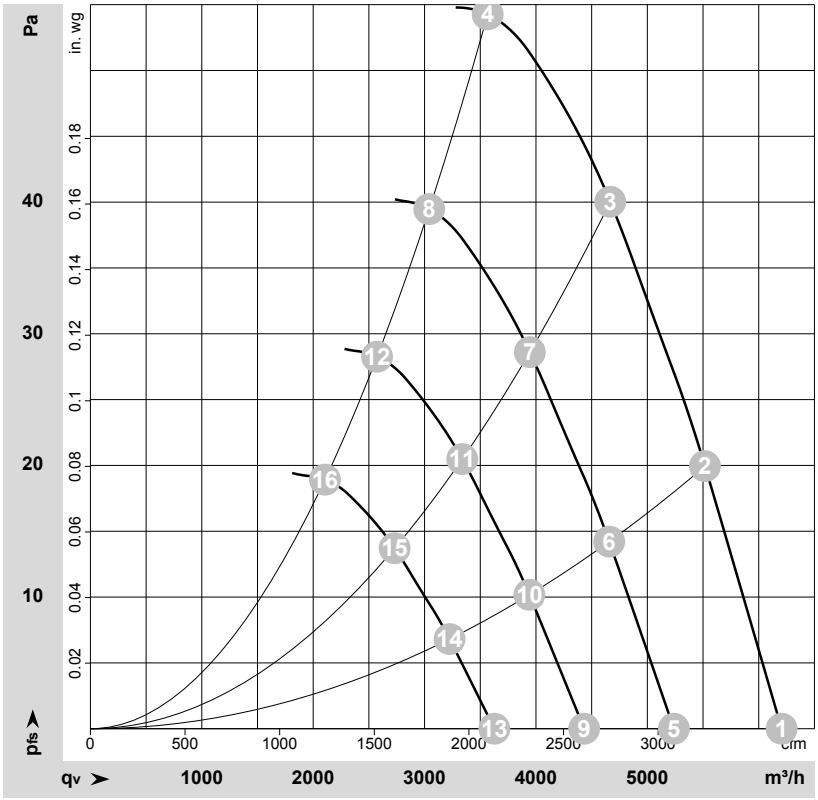
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-202729-1

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	770	104	0.49	55	61	61	6205	0	3650	0.00
2	1~	230	50	770	120	0.55	54	60	59	5515	20	3245	0.08
3	1~	230	50	770	134	0.61	53	59	59	4665	40	2745	0.16
4	1~	230	50	770	140	0.64	55	62	62	3565	55	2100	0.22
5	1~	230	50	650	62	0.29	51	57	57	5240	0	3085	0.00
6	1~	230	50	650	72	0.33	50	55	55	4655	14	2740	0.06
7	1~	230	50	650	81	0.37	49	55	55	3945	29	2320	0.12
8	1~	230	50	650	88	0.40	51	58	58	3040	40	1790	0.16
9	1~	230	50	550	38	0.18	47	53	52	4430	0	2610	0.00
10	1~	230	50	550	44	0.20	46	51	51	3940	10	2320	0.04
11	1~	230	50	550	49	0.22	45	51	50	3340	21	1965	0.08
12	1~	230	50	550	53	0.24	47	54	54	2575	29	1515	0.12
13	1~	230	50	450	21	0.10	42	48	47	3625	0	2135	0.00
14	1~	230	50	450	24	0.11	41	46	46	3225	7	1900	0.03
15	1~	230	50	450	27	0.12	40	46	45	2730	14	1605	0.06
16	1~	230	50	450	29	0.13	42	49	48	2105	19	1240	0.08

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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