S3G450-ES15-12

EC axial fan

sickled blades (S series)

with support ring

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Nominal data

Type	**S3G450-ES15-12**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	600
Power input	W	45
Current draw	A	0.45
Max. back pressure	Pa	20
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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Technical features

Mass	3.3 kg
Size	450 mm
Surface of rotor	Coated in black
Material of blades	PP plastic
Material of mounting ring	Steel, coated in black plastic (RAL 9005)
Number of blades	3
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

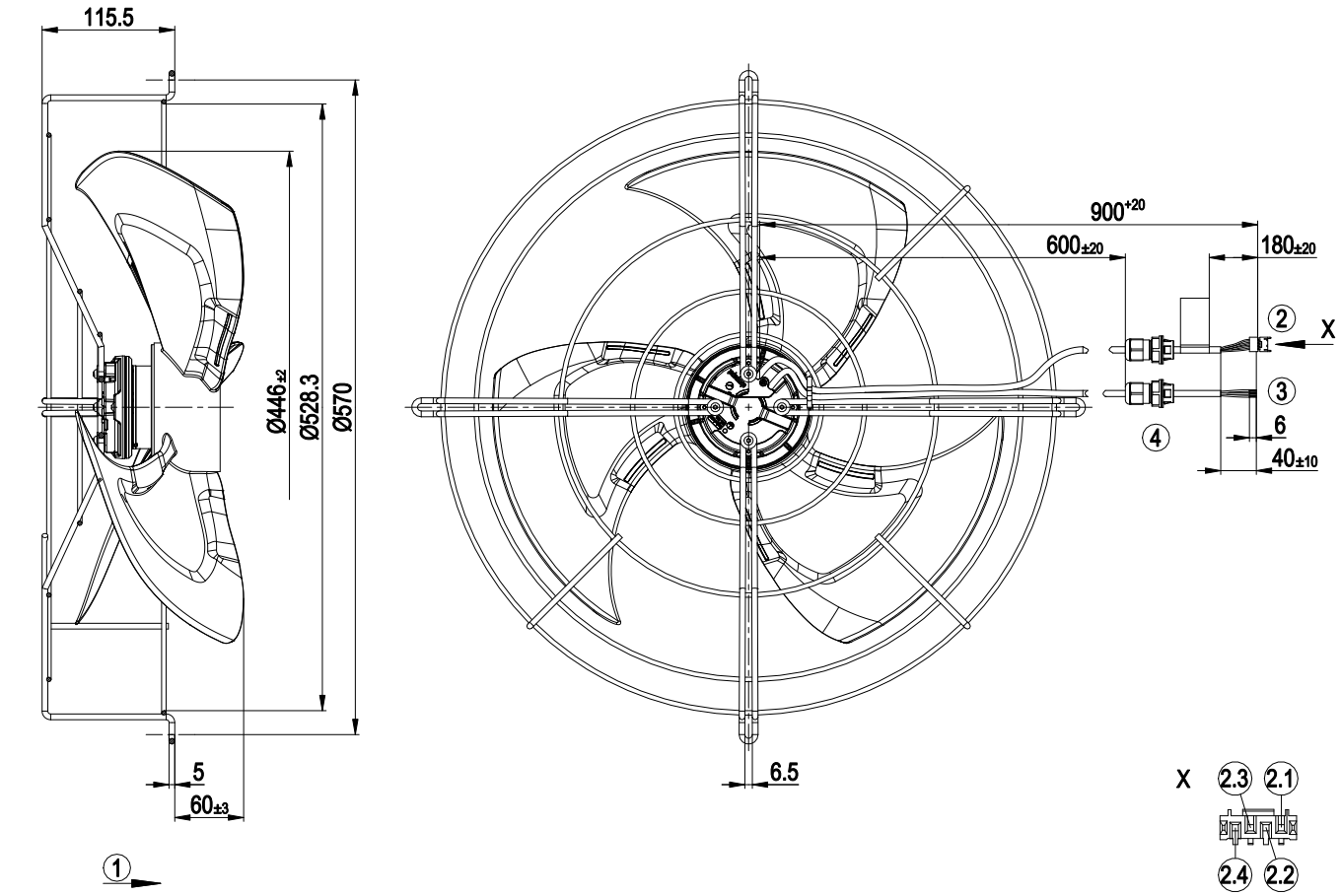
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Product drawing



1	Direction of air flow "A"
2	Connection line PVC AWG22, 4-pole connector housing Lumberg 3823 04 30 01, 4x plug pin Lumberg 3111 03 G crimped
2.1	+10 V (red)
2.2	0-10 V PWM (yellow)
2.3	Tach (white)
2.4	GND (blue)
3	Connection line PVC AWG20, 3x lead tips crimped
4	2x cable gland LAPP 53112686

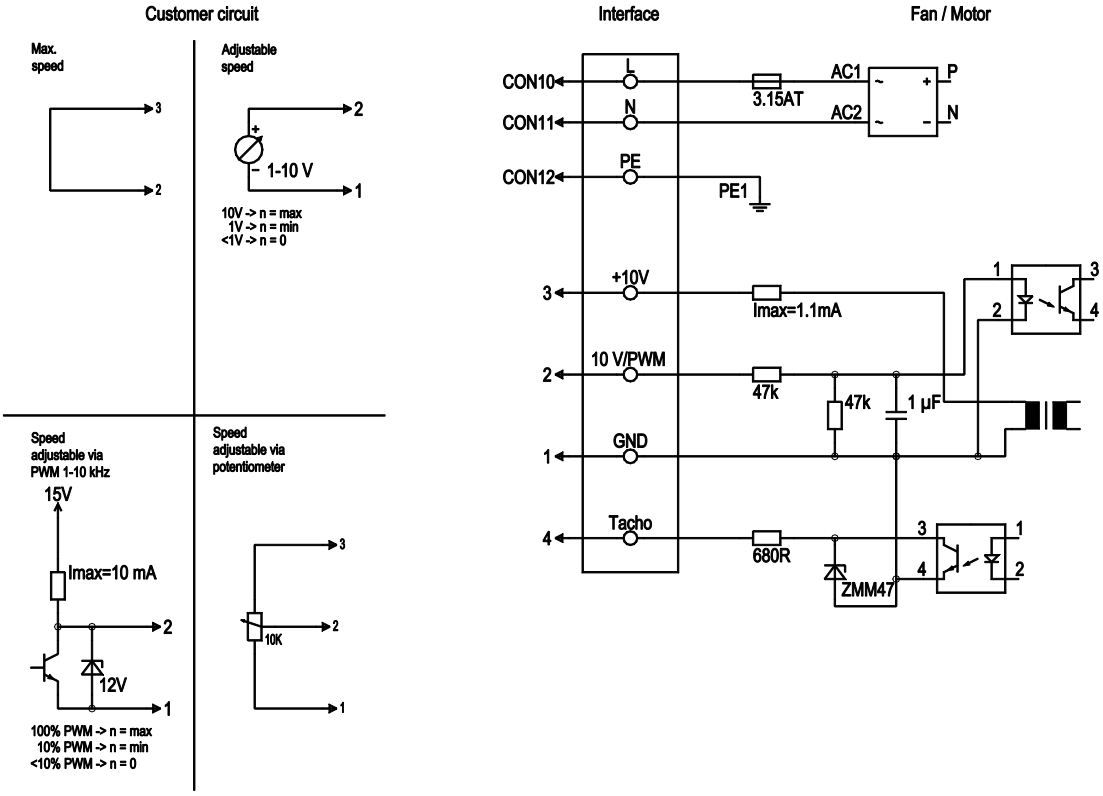
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0-10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10 V / max. 1,1 mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tacho	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated

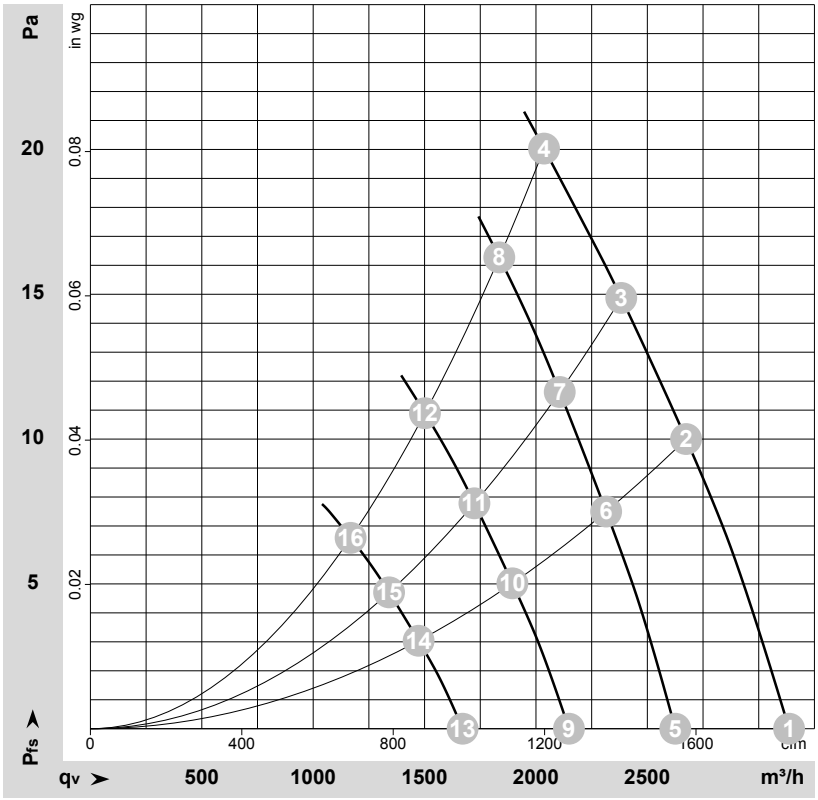
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-178113-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	655	45	0.45	43	50	3135	0	1845	0.00
2	230	50	635	45	0.45	41	49	2675	10	1575	0.04
3	230	50	620	45	0.45	39	47	2385	15	1405	0.06
4	230	50	600	45	0.45	38	46	2035	20	1200	0.08
5	230	50	550	28	0.27	39	46	2625	0	1545	0.00
6	230	50	550	30	0.29	37	45	2315	8	1365	0.03
7	230	50	550	33	0.31	36	43	2105	12	1240	0.05
8	230	50	550	35	0.33	36	44	1835	16	1080	0.06
9	230	50	450	15	0.15	33	41	2150	0	1265	0.00
10	230	50	450	17	0.16	32	40	1895	5	1115	0.02
11	230	50	450	18	0.17	31	38	1725	8	1015	0.03
12	230	50	450	19	0.18	31	38	1500	11	885	0.04
13	230	50	350	7.0	0.07	27	35	1670	0	985	0.00
14	230	50	350	8.0	0.08	26	34	1475	3	865	0.01
15	230	50	350	8.0	0.08	24	32	1340	5	790	0.02
16	230	50	350	9.0	0.09	24	32	1170	7	685	0.03

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

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