S3G400-LA46-93

EC axial fan

sickled blades (S series)

with guard grille for short nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S3G400-LA46-93**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	110
Nominal voltage range	VDC	77 .. 145
Type of data definition		ml
Speed	min^{-1}	1600
Power input	W	400
Current draw	A	3.6
Min. ambient temperature	°C	-40
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

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		42.4	27	31
Efficiency grade N		51.4	36	40
Power input P_e	kW	0.38		
Air flow q_v	m³/h	3610		
Pressure increase p_{fs}	Pa	146		
Speed n	min^{-1}	1595		

Data established at point of optimum efficiency

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Technical features

Mass	7 kg
Size	400 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Sheet steel, coated in black
Material of mounting ring	Steel, coated in black plastic (RAL 9005)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1

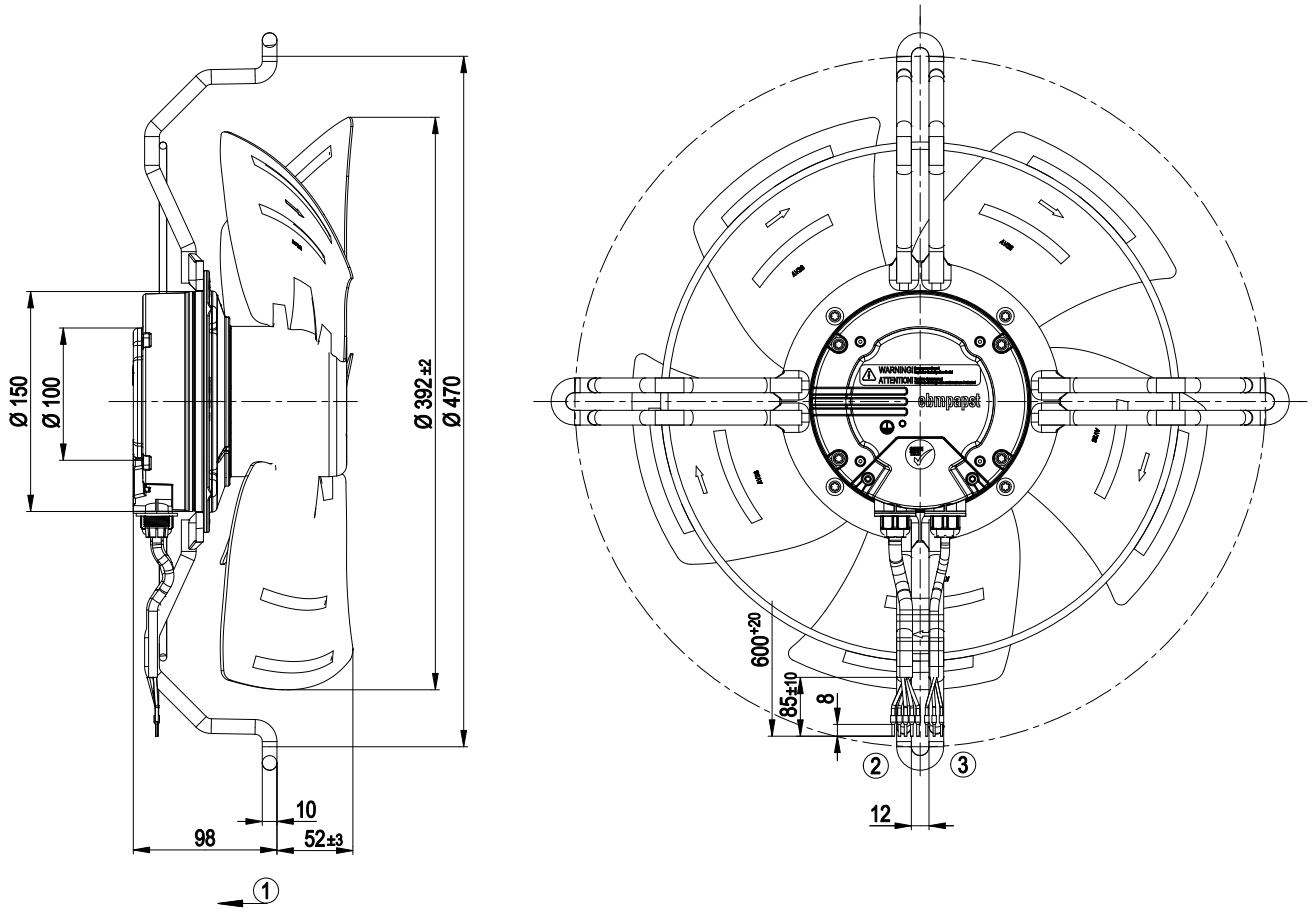
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Product drawing



1	Direction of air flow "V"
2	Connection line halogen-free 5G 1.0 mm², 5 x crimped core-end sleeves
3	Control line halogen-free 3X 0.34 mm², 3 x crimped core-end sleeves

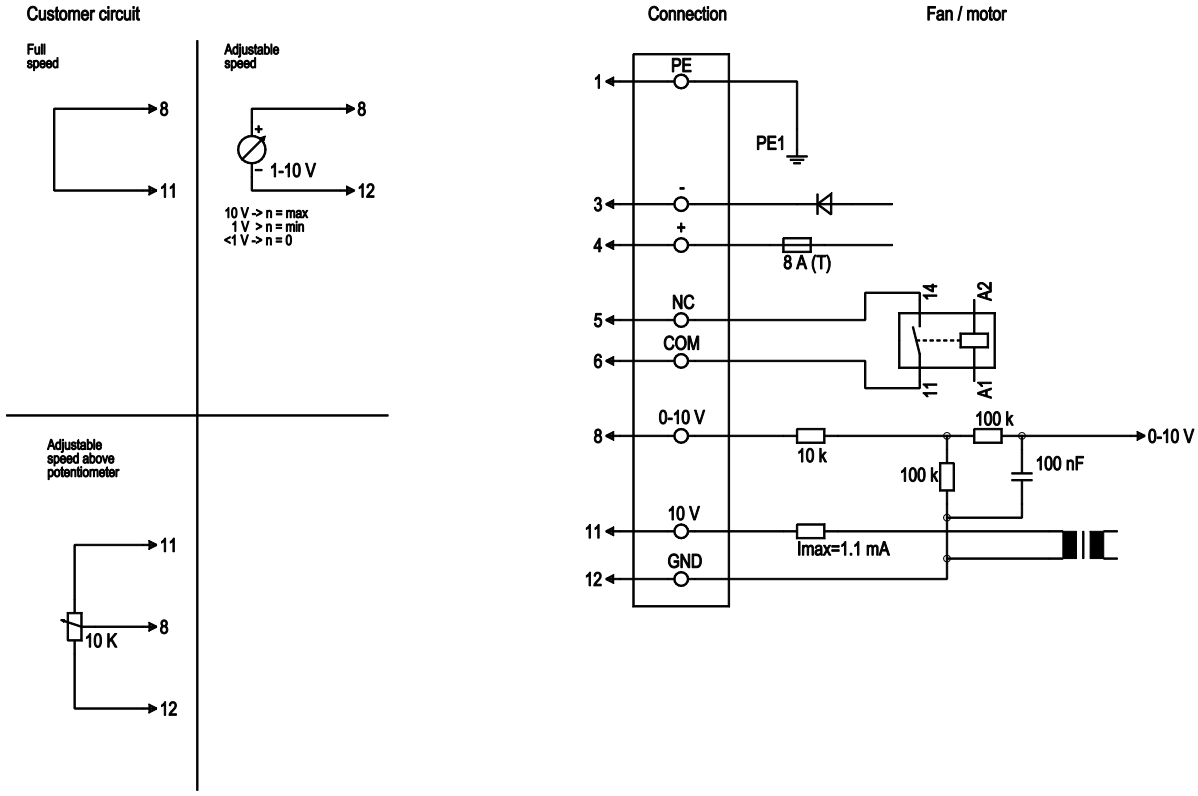
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Connection screen



Line	No.	Signal	Colour	Function / assignment
1	1	PE	green/yellow	Protective earth
1	3	-	blue	Supply voltage, GND (110 VDC)
1	4	+	black	Supply voltage, 110 VDC
1	6	NC	white 2	Floating status contact, break for failure
1	5	COM	white 1	Floating status contact, break for failure (0.6 A-110 VDC, 1 A-80 VDC, 3 A-30 VDC)
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. 1.1 mA, power supply for external devices (e.g. potentiometer), SELV
2	12	GND	blue	Signal ground for control interface, SELV

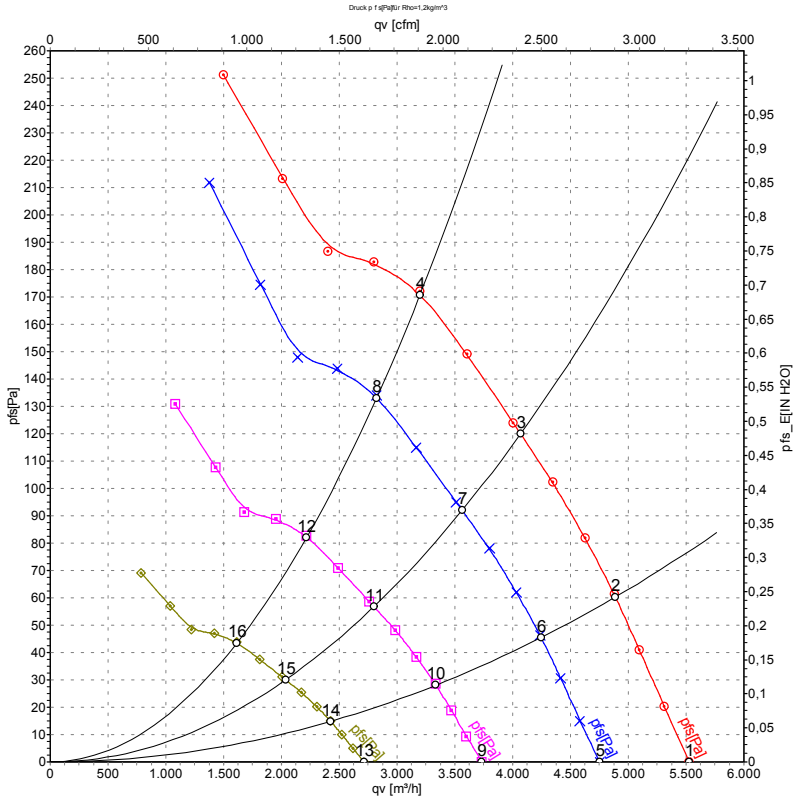
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Charts: Air flow



Measurement: LU-77668

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	n	P_{ed}	I	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa
1	110	1630	336	3.03	5525	0
2	110	1610	361	3.26	4890	60
3	110	1605	377	3.41	4070	120
4	110	1600	400	3.60	3195	170
5	110	1400	213	1.93	4750	0
6	110	1400	236	2.14	4245	46
7	110	1400	253	2.29	3565	92
8	110	1400	274	2.48	2820	134
9	110	1100	104	0.94	3735	0
10	110	1100	115	1.04	3335	28
11	110	1100	123	1.11	2800	57
12	110	1100	133	1.20	2215	83
13	110	800	40	0.36	2715	0
14	110	800	44	0.40	2425	15
15	110	800	47	0.43	2035	30
16	110	800	51	0.46	1615	44

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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