S3G400-LA46-93

EC axial fan

sickle-shaped blades (S series)

with guard grille for short nozzle, for rail applications

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Nominal data

Type	**S3G400-LA46-93**
Motor	**M3G084-FA**

Nominal voltage	VDC	110
Nominal voltage range	VDC	77 .. 145
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1600
Power consumption	W	400
Current draw	A	3.6
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60

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

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Technical description

Weight	7 kg
Size	400 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Sheet steel, painted black
Support ring 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	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
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
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 the mains - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
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
Approval	EAC; CCC

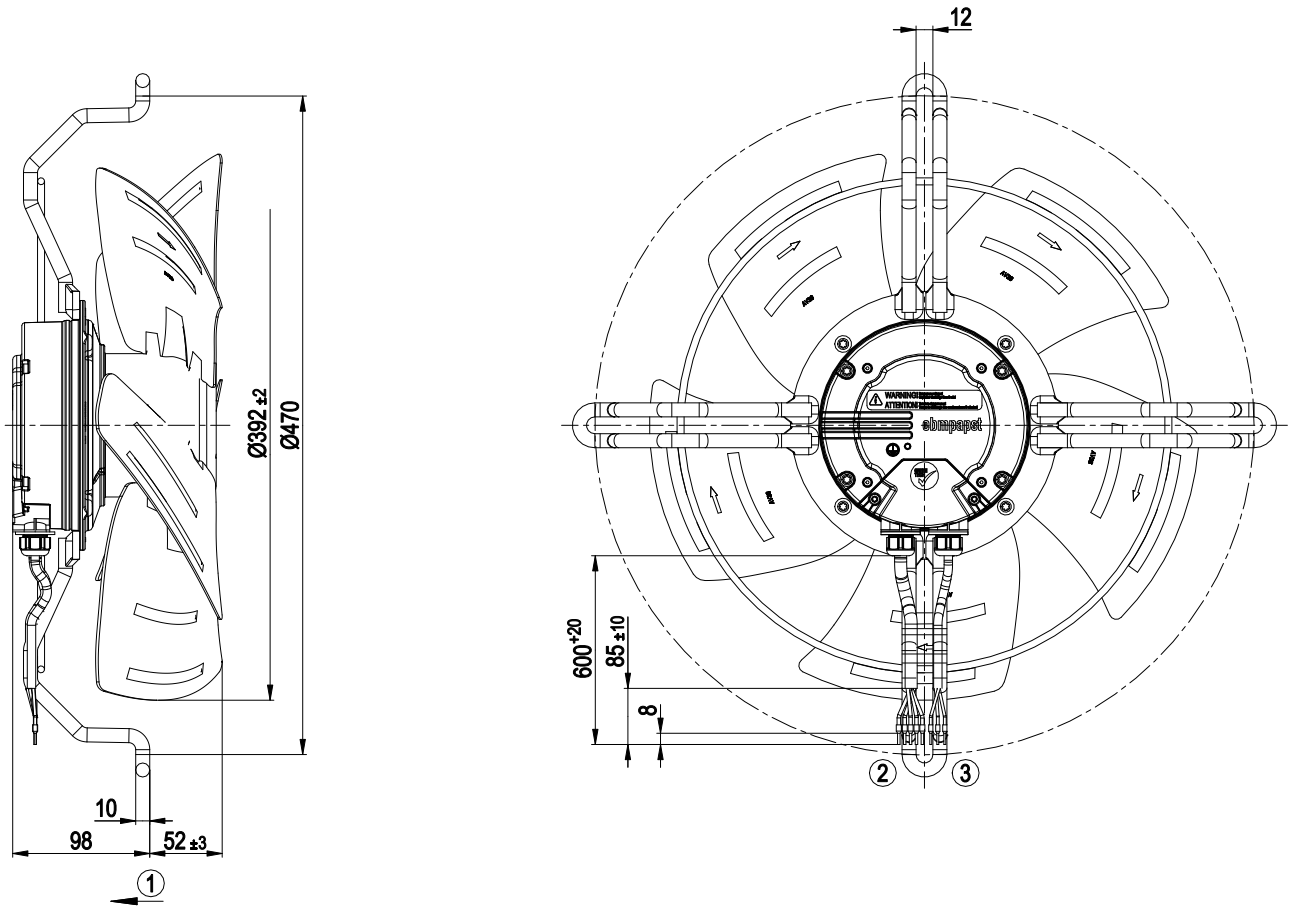
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Product drawing



1	Airflow direction "V"
2	Cable, halogen-free, railway application EN 45545, 5G 1.0 mm²
	5x wire-end ferrule
3	Cable, halogen-free, railway application EN 45545, 3x 0.33 mm²
	3x wire-end ferrule

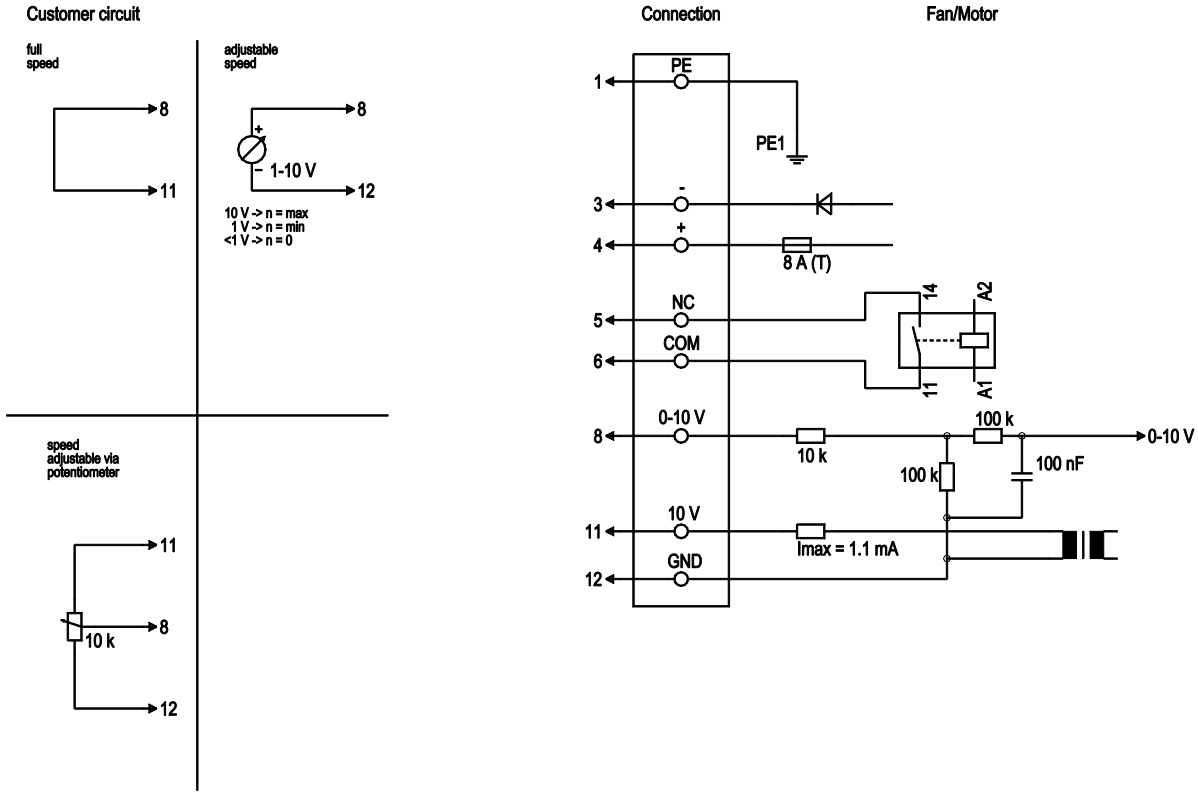
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	PE	green/yellow	Protective earth
1	3	-	blue	Power supply, GND (110 VDC)
1	4	+	black	Power supply, 110 VDC
1	5	NC	white 1	Floating status contact, break for failure
1	6	COM	white 2	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. potentiometers), SELV
2	12	GND	blue	Reference ground for control interface, SELV

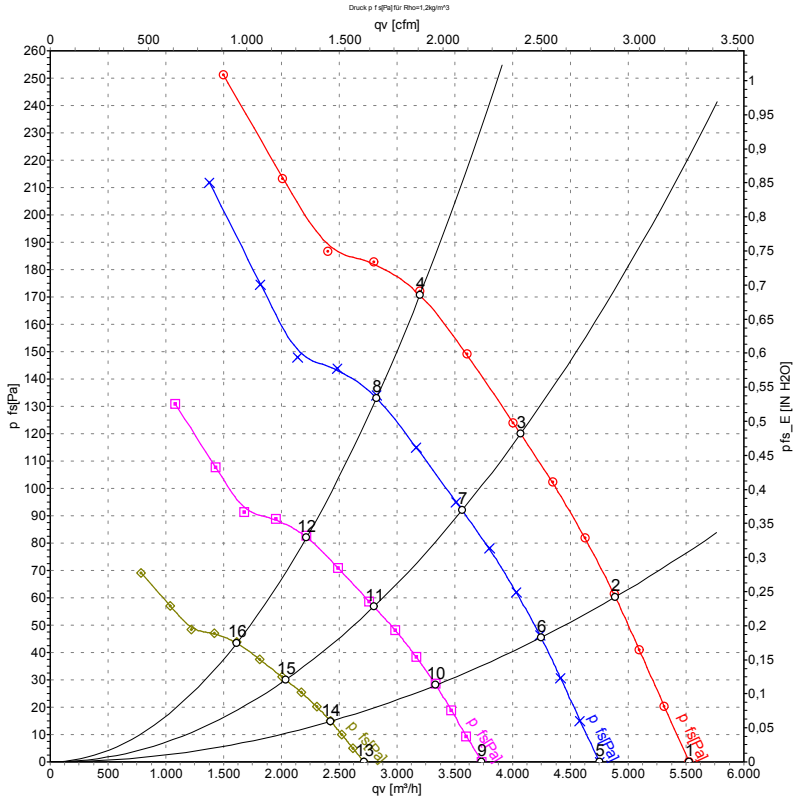
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Curves: Air performance



Measurement: LU-77668-1

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	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	110	1630	336	3.03	5525	0	3250	0.00
2	110	1610	361	3.26	4890	60	2875	0.24
3	110	1605	377	3.41	4070	120	2395	0.48
4	110	1600	400	3.60	3195	170	1880	0.68
5	110	1400	213	1.93	4750	0	2795	0.00
6	110	1400	236	2.14	4245	46	2500	0.18
7	110	1400	253	2.29	3565	92	2095	0.37
8	110	1400	274	2.48	2820	134	1660	0.54
9	110	1100	104	0.94	3735	0	2195	0.00
10	110	1100	115	1.04	3335	28	1965	0.11
11	110	1100	123	1.11	2800	57	1645	0.23
12	110	1100	133	1.20	2215	83	1305	0.33
13	110	800	40	0.36	2715	0	1600	0.00
14	110	800	44	0.40	2425	15	1430	0.06
15	110	800	47	0.43	2035	30	1200	0.12
16	110	800	51	0.46	1615	44	950	0.18

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

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