S3G450-LA14-72

EC axial fan

sickle-shaped blades (S series)

with guard grille for short nozzle

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S3G450-LA14-72**
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}	1220
Power consumption	W	310
Current draw	A	2.0
Max. back pressure	Pa	120
Max. back pressure	inH2O	0.48
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}	%	44.1	30.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.7	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.3
09 Air flow q_v	m^3/h	3605
09 Pressure increase p_{fs}	Pa	121
10 Speed (rpm) n	min^{-1}	1220
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

LU-71846

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Technical description

Weight	7.5 kg
Fan size	450 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Sheet steel, painted black
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Direction of rotation	"A"
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
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. 1.1 mA - Alarm relay - Motor current limitation - PFC, passive - 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
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; CSA C22.2 No. 77; UL 2111

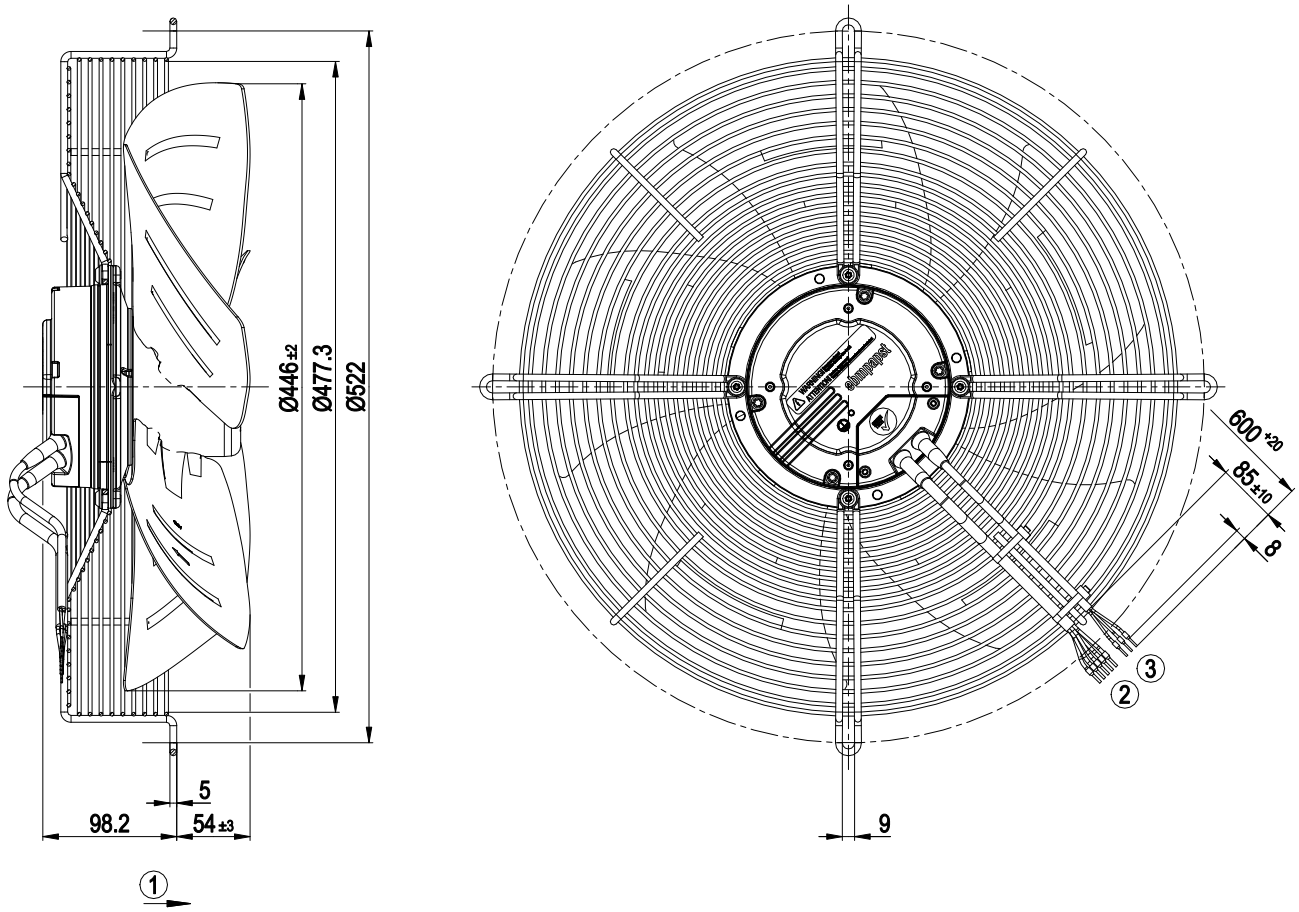
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Product drawing



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

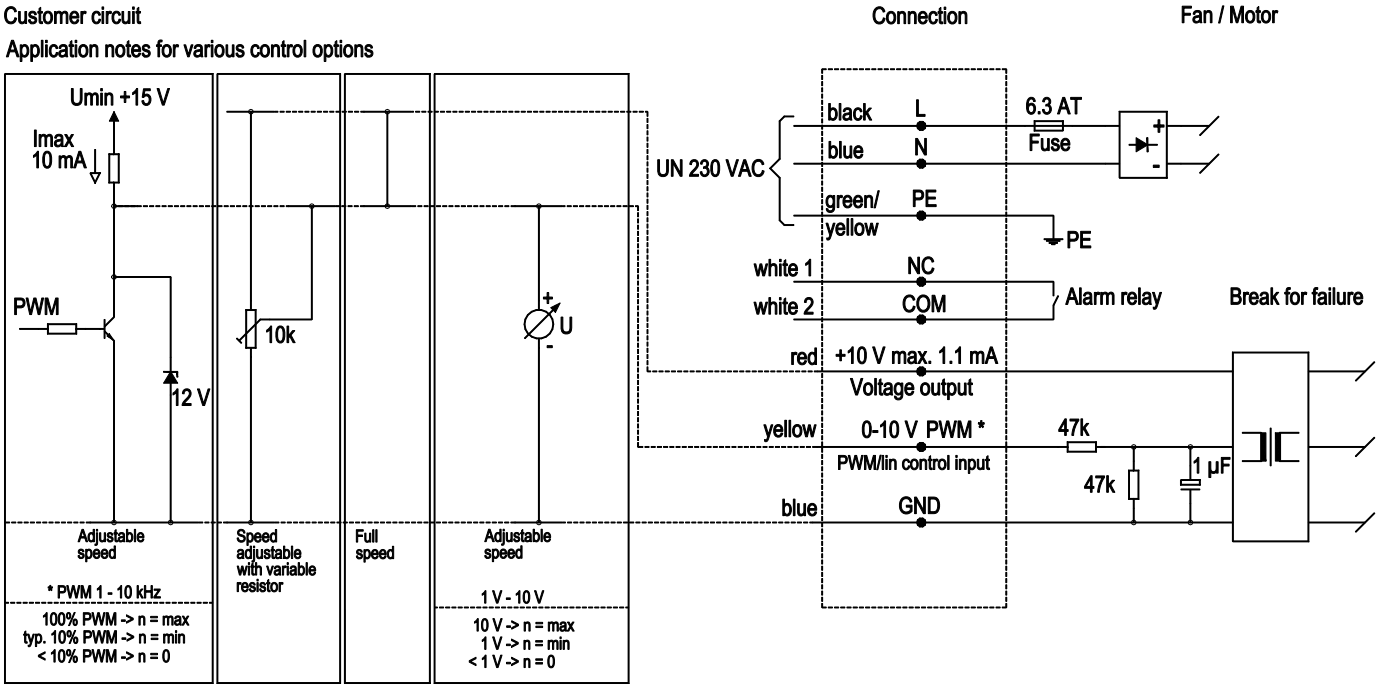
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Connection diagram



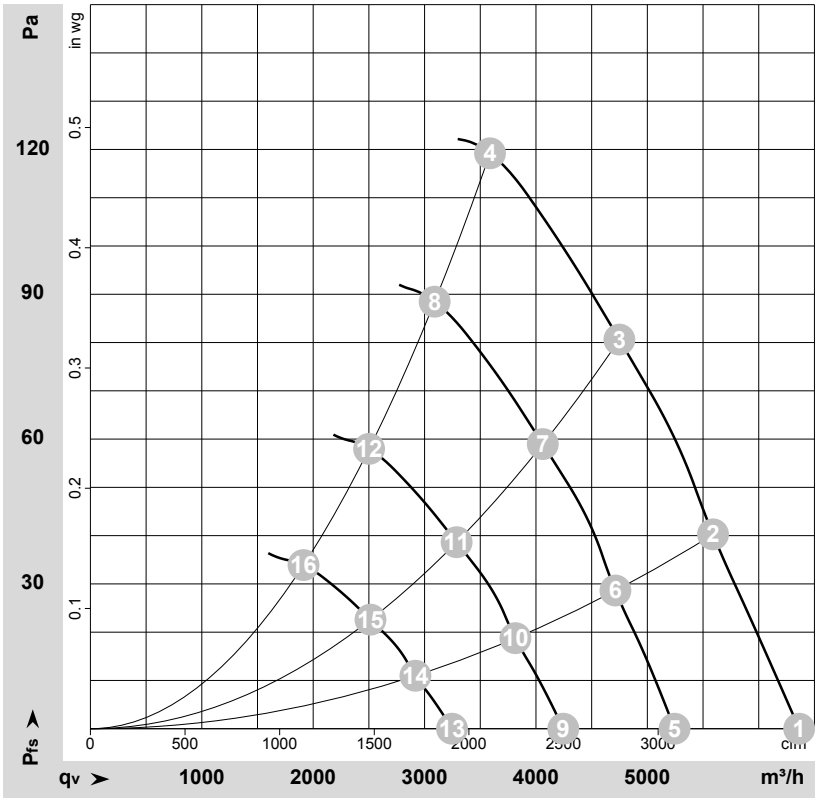
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-71846-1

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	1275	267	1.68	6365	0	3745	0.00
2	230	50	1245	282	1.79	5590	40	3290	0.16
3	230	50	1230	300	1.89	4750	80	2795	0.32
4	230	50	1220	310	2.00	3590	120	2110	0.48
5	230	50	1050	149	0.94	5245	0	3085	0.00
6	230	50	1050	169	1.07	4715	28	2775	0.11
7	230	50	1050	188	1.18	4060	59	2390	0.24
8	230	50	1050	197	1.25	3090	90	1820	0.36
9	230	50	850	79	0.50	4245	0	2500	0.00
10	230	50	850	90	0.57	3815	18	2245	0.07
11	230	50	850	100	0.63	3290	39	1935	0.16
12	230	50	850	104	0.67	2500	59	1475	0.24
13	230	50	650	35	0.22	3245	0	1910	0.00
14	230	50	650	40	0.25	2920	11	1715	0.04
15	230	50	650	45	0.28	2515	23	1480	0.09
16	230	50	650	47	0.30	1915	34	1125	0.14

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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