EC axial fan

sickle-shaped blades (S series)

A3G450-AQ03-54 ebmpapst Datasheet
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Amtsgericht (court of registration) Stuttgart · HRA 590344

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Nominal data

Type	**A3G450-AQ03-54**	
Motor	**M3G074-CF**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	870
Power consumption	W	115
Current draw	A	0.94
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

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Technical description

Weight	0.9 kg
Fan size	450 mm
Rotor surface	Galvanized
Blade material	PP plastic
Number of blades	3
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
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	Any
Condensation drainage holes	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Prepared for terminal box installation
Motor protection	PTC thermistor
Protection class	I (with customer connection of protective earth)
Conformity with standards	CE

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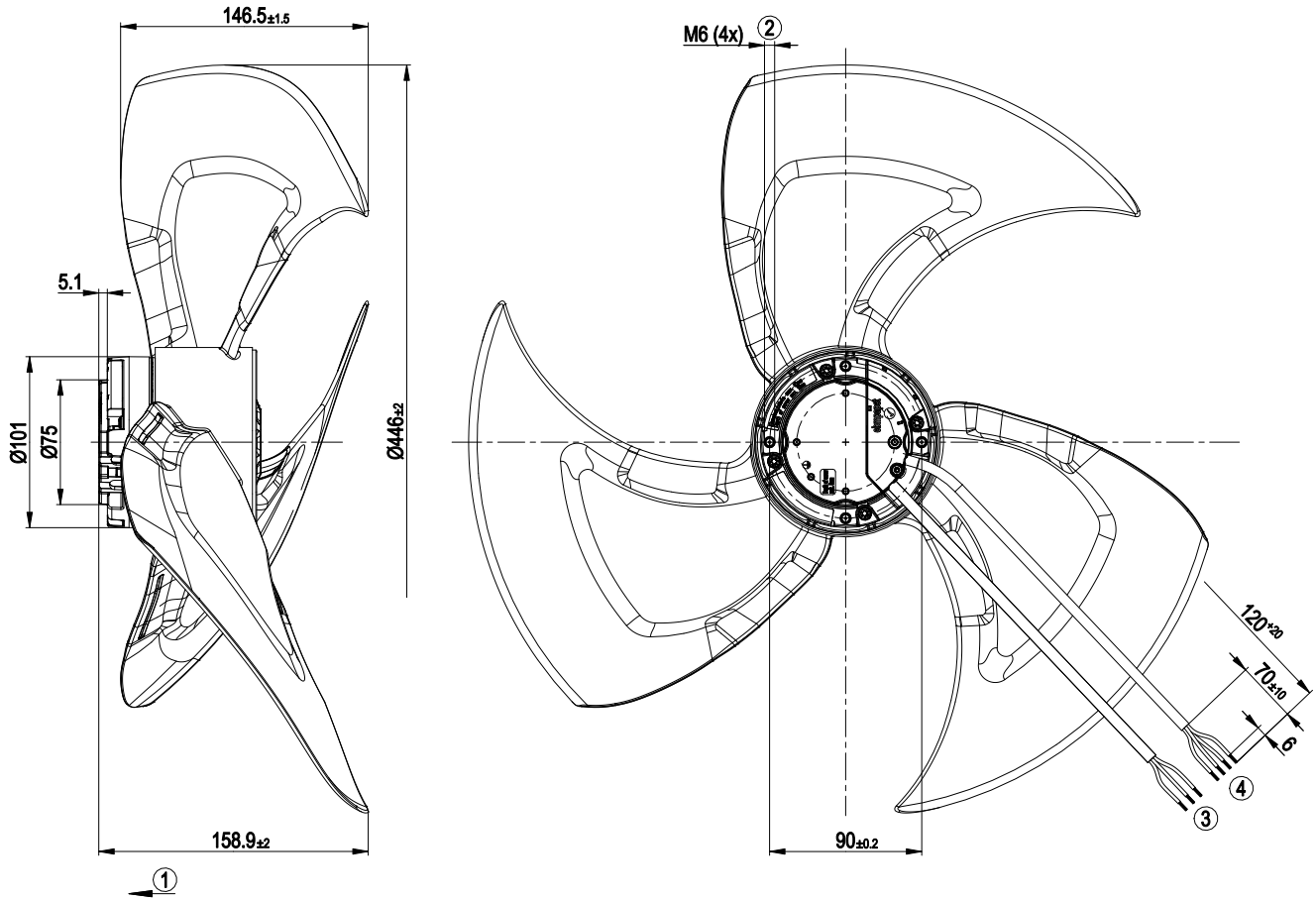
Product drawing



1	Direction of air flow "V"
2	Max. clearance for screw 10 mm
3	Cable PVC AWG20, 3x crimped splices
4	Cable PVC AWG22, 4x crimped splices
5	Accessory part: terminal box 64452-1-7612 included separately

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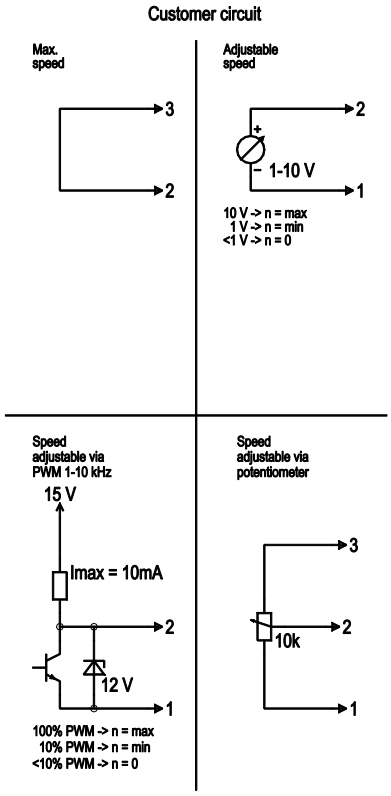
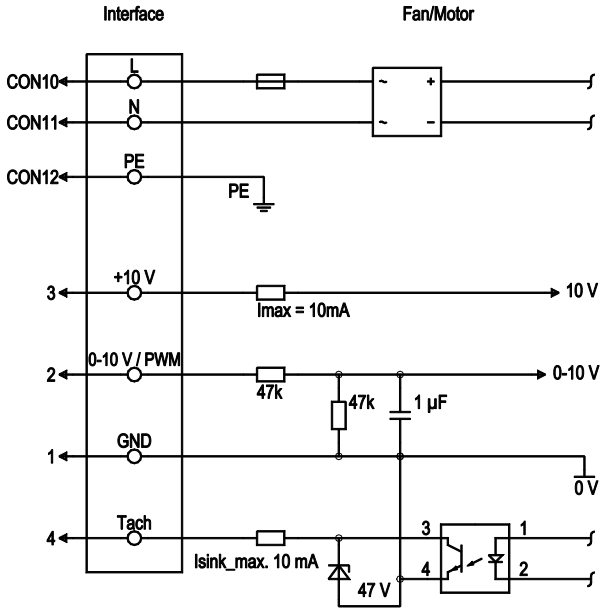
Connection diagram





No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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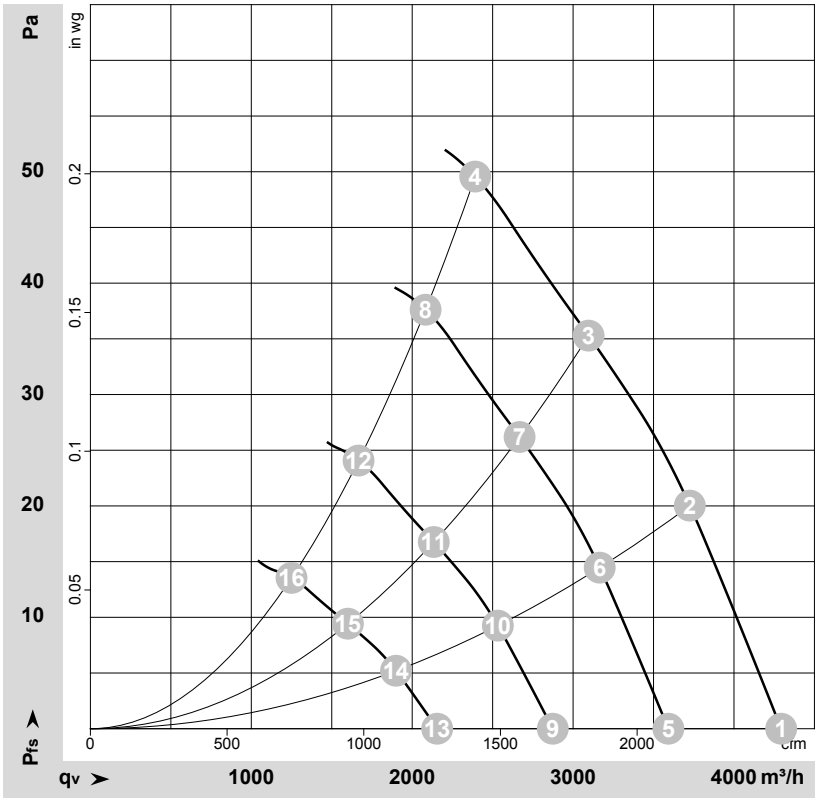
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-140882-1

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	895	95	0.80	4295	0	2525	0.00
2	230	50	885	100	0.84	3725	20	2190	0.08
3	230	50	870	104	0.87	3095	35	1820	0.14
4	230	50	870	115	0.94	2390	50	1410	0.20
5	230	50	750	56	0.47	3590	0	2115	0.00
6	230	50	750	61	0.52	3165	15	1865	0.06
7	230	50	750	67	0.55	2670	26	1570	0.10
8	230	50	750	72	0.59	2085	38	1225	0.15
9	230	50	600	29	0.24	2875	0	1690	0.00
10	230	50	600	31	0.26	2530	9	1490	0.04
11	230	50	600	34	0.28	2135	17	1255	0.07
12	230	50	600	37	0.30	1665	24	980	0.10
13	230	50	450	12	0.10	2155	0	1270	0.00
14	230	50	450	13	0.11	1900	5	1120	0.02
15	230	50	450	14	0.12	1600	9	940	0.04
16	230	50	450	15	0.13	1250	14	735	0.06

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