

W3G450-SK19-R3 ebmpapst Datasheet

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## Nominal data

Type	W3G450-SK19-R3	
Motor	M3G084-DF	
Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min <sup>-1</sup>	1350
Power consumption	W	360
Current draw	A	3.1
Max. back pressure	Pa	110
Max. back pressure	in. wg	0.44
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

## Technical description

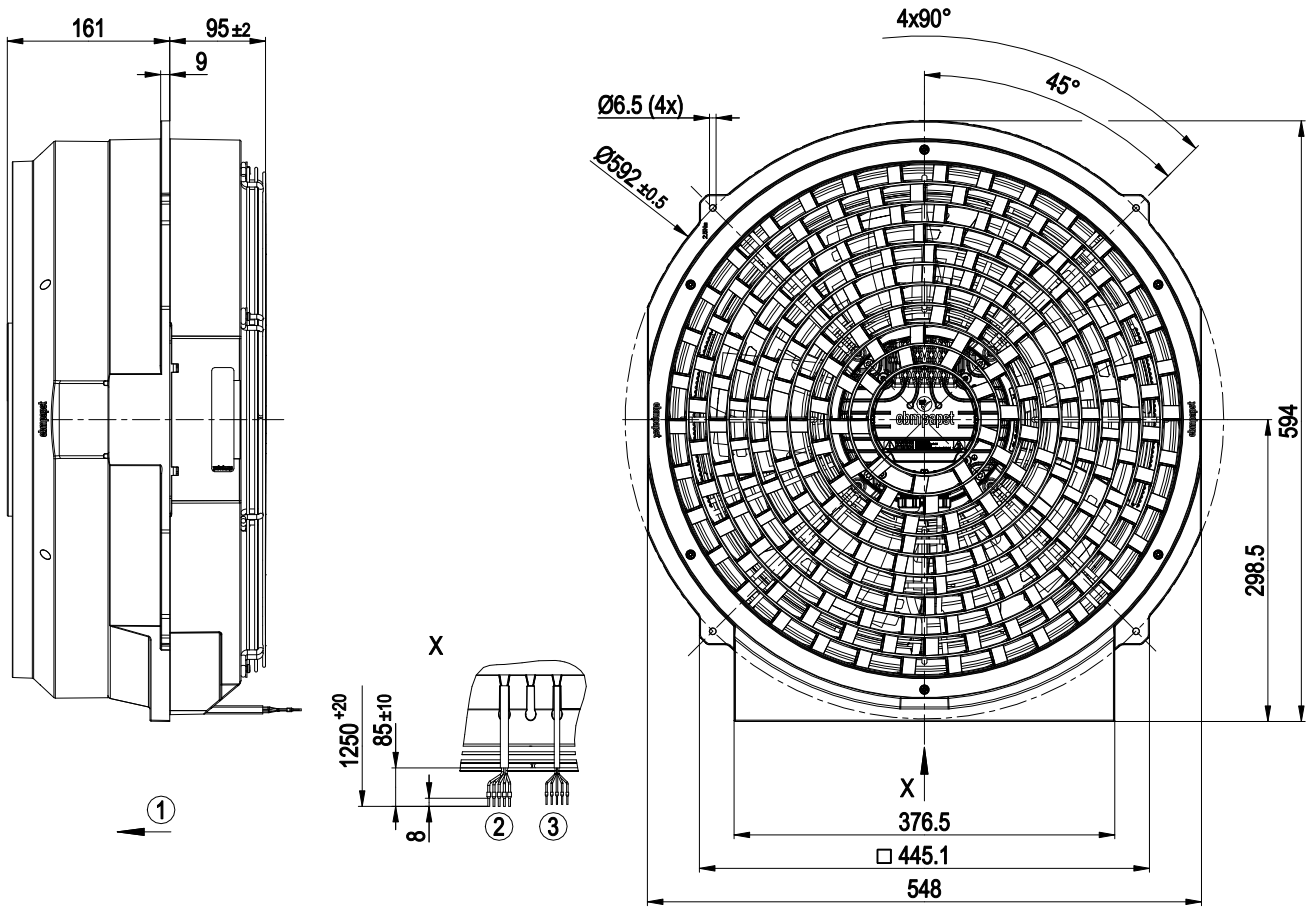
<b>Weight</b>	12.6 kg
<b>Fan size</b>	450 mm
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Press-fitted sheet steel blank, sprayed with PP plastic
<b>Fan housing material</b>	PP plastic, white
<b>Guard grille material</b>	Steel, coated with pure-white plastic (RAL 9010)
<b>Airflow direction</b>	"V"
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	IP55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H2+
<b>Ambient temperature note</b>	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings.
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing; (sealed)
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Operation and alarm display</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Power limiter</li> <li>- Motor current limitation</li> <li>- PFC, active</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 61800-5-1; CE
<b>Approval</b>	UL 1004-7 + 60730; C22.2 No.77 + CAN/CSA-E60730-1; EAC

# EC axial fan - AxiCool

sickle-shaped blades (S series)

Fan housing with guide vanes

## Product drawing



1	Airflow direction "V"
2	Cable PVC AWG18, 5x crimped ferrules
3	Cable PVC AWG22, 5x crimped ferrules

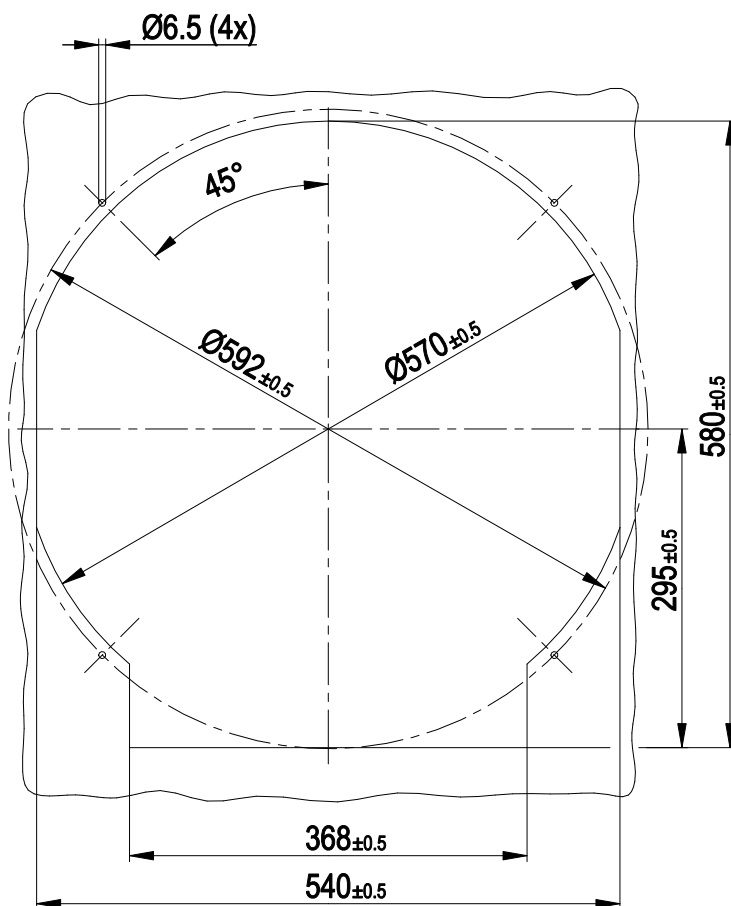


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## Mounting dimensions

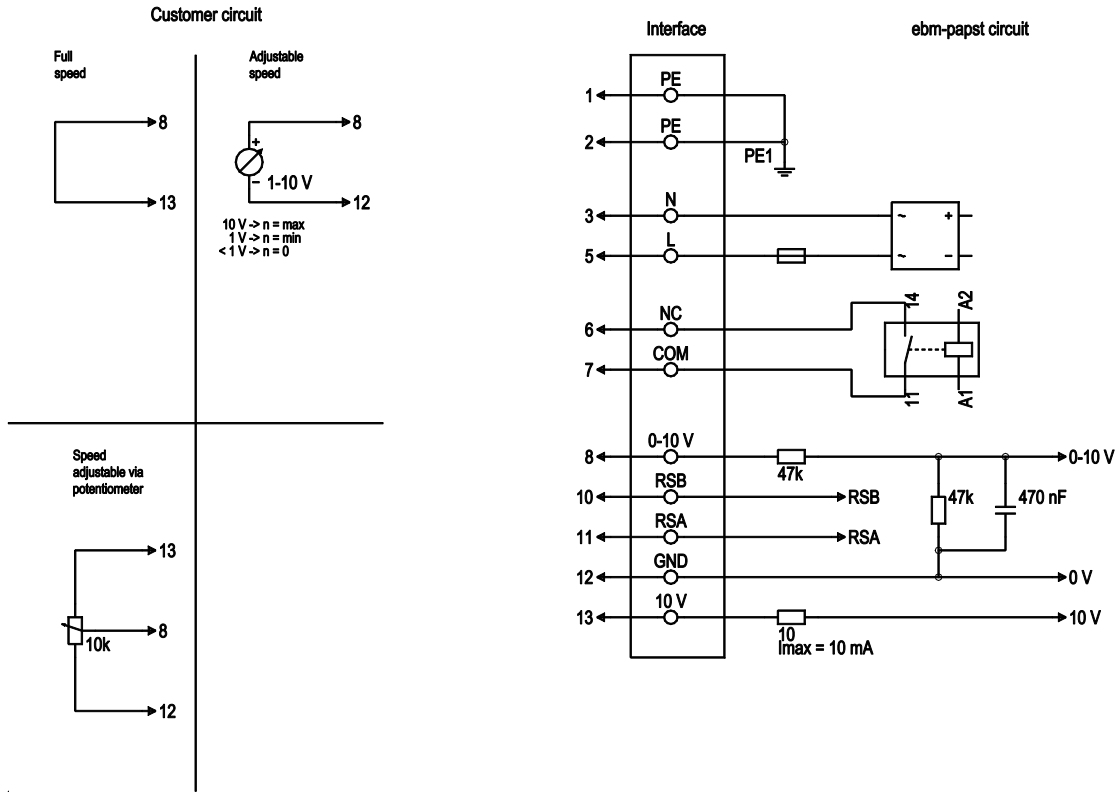


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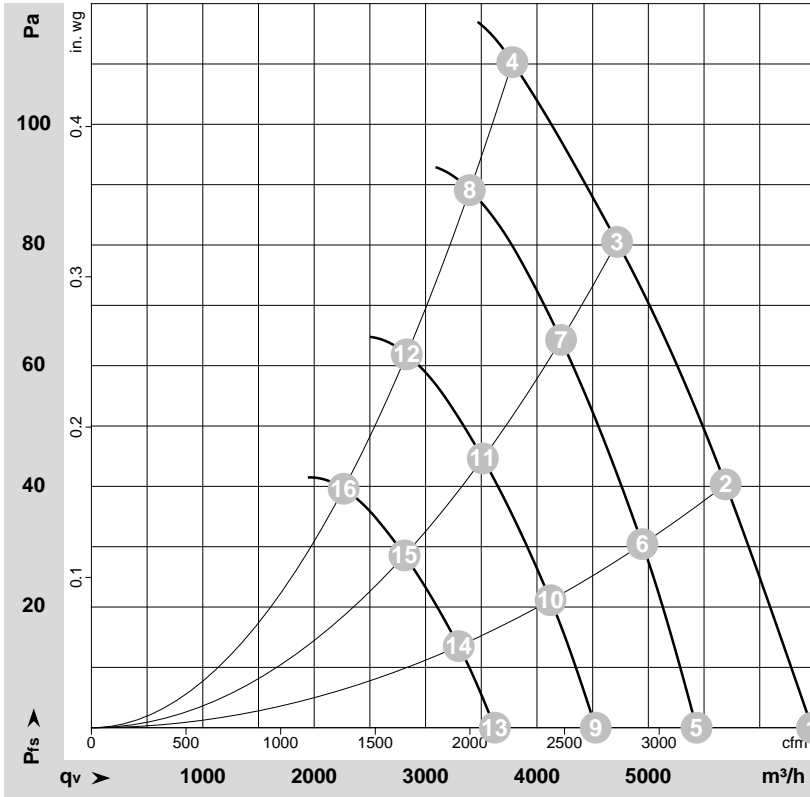
## Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; $R_i = 100\text{ k}\Omega$ ; adjustable curve
2	10	RSB	brown	RS485 interface for MODBUS, RSB
2	11	RSA	white	RS485 interface for MODBUS, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, +10 V $\pm 3\%$ ; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)



## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-185055-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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

	Wired	U	f	n	P <sub>ed</sub>	I	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
1	1~	115	50	1430	360	3.10	6470	0	3810	0.00
2	1~	115	50	1380	360	3.10	5695	40	3350	0.16
3	1~	115	50	1350	360	3.10	4720	80	2775	0.32
4	1~	115	50	1350	360	3.10	3780	110	2225	0.44
5	1~	115	50	1200	212	1.85	5435	0	3200	0.00
6	1~	115	50	1200	233	2.03	4945	30	2910	0.12
7	1~	115	50	1200	252	2.20	4215	64	2480	0.26
8	1~	115	50	1200	256	2.23	3395	89	2000	0.36
9	1~	115	50	1000	123	1.07	4525	0	2665	0.00
10	1~	115	50	1000	135	1.17	4120	21	2425	0.08
11	1~	115	50	1000	146	1.27	3515	45	2070	0.18
12	1~	115	50	1000	148	1.29	2830	62	1665	0.25
13	1~	115	50	800	63	0.55	3620	0	2130	0.00
14	1~	115	50	800	69	0.60	3300	14	1940	0.06
15	1~	115	50	800	75	0.65	2810	29	1655	0.12
16	1~	115	50	800	76	0.66	2265	40	1335	0.16

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

