

W3G250-HH53-03

# EC axial compact fan

sickle-shaped blades (S series)



W3G250-HH53-03 ebmpapst Datasheet

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## Nominal data

Type	W3G250-HH53-03	
Motor	M3G055-CF	
Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min <sup>-1</sup>	2040
Power consumption	W	56
Current draw	A	0.9
Max. back pressure	Pa	80
Max. back pressure	in. wg	0.32
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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



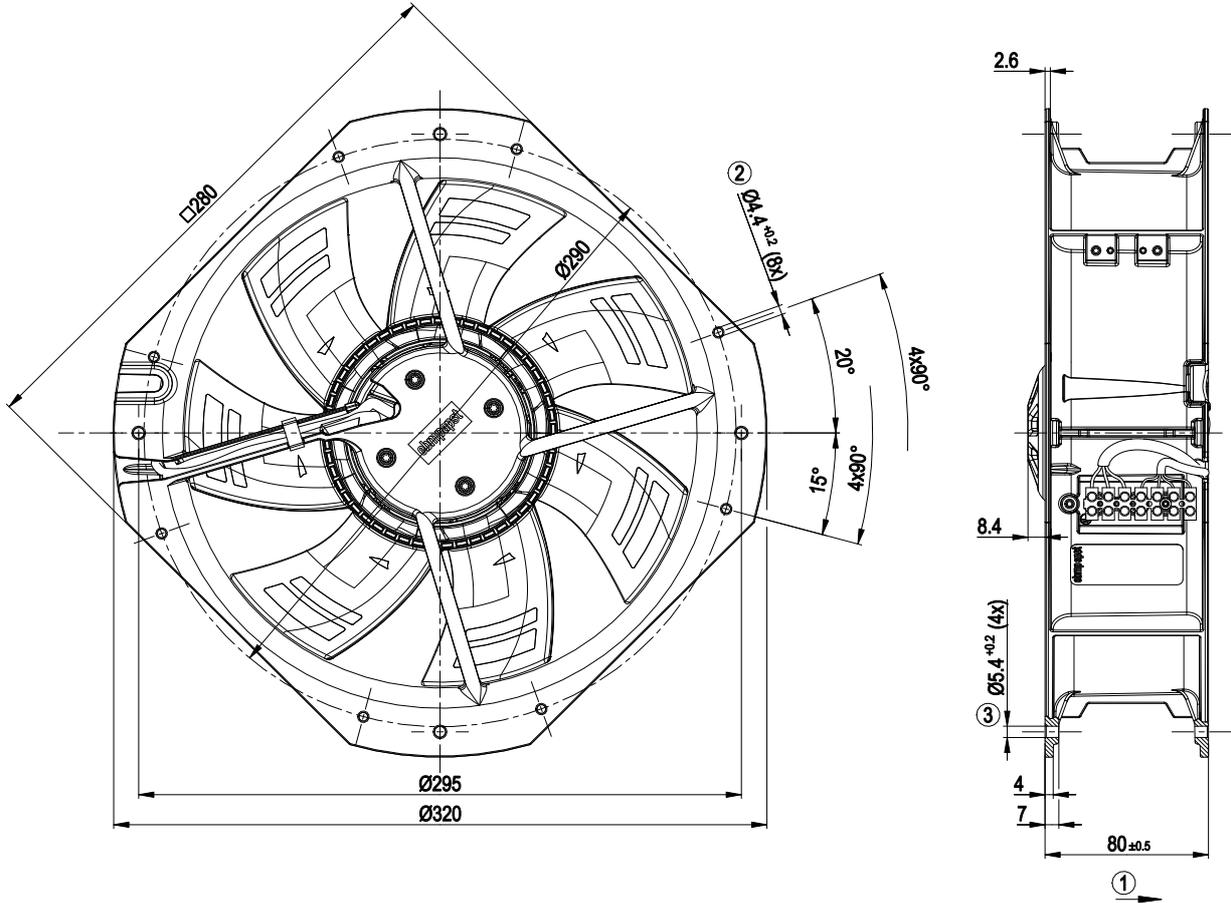
### Technical description

Weight	2.15 kg
Size	250 mm
Motor size	55
Rotor surface	Thick-film passivated
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	Die-cast aluminum
Number of blades	7
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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
Mode	S1
Motor bearing	Ball bearing
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal strip
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

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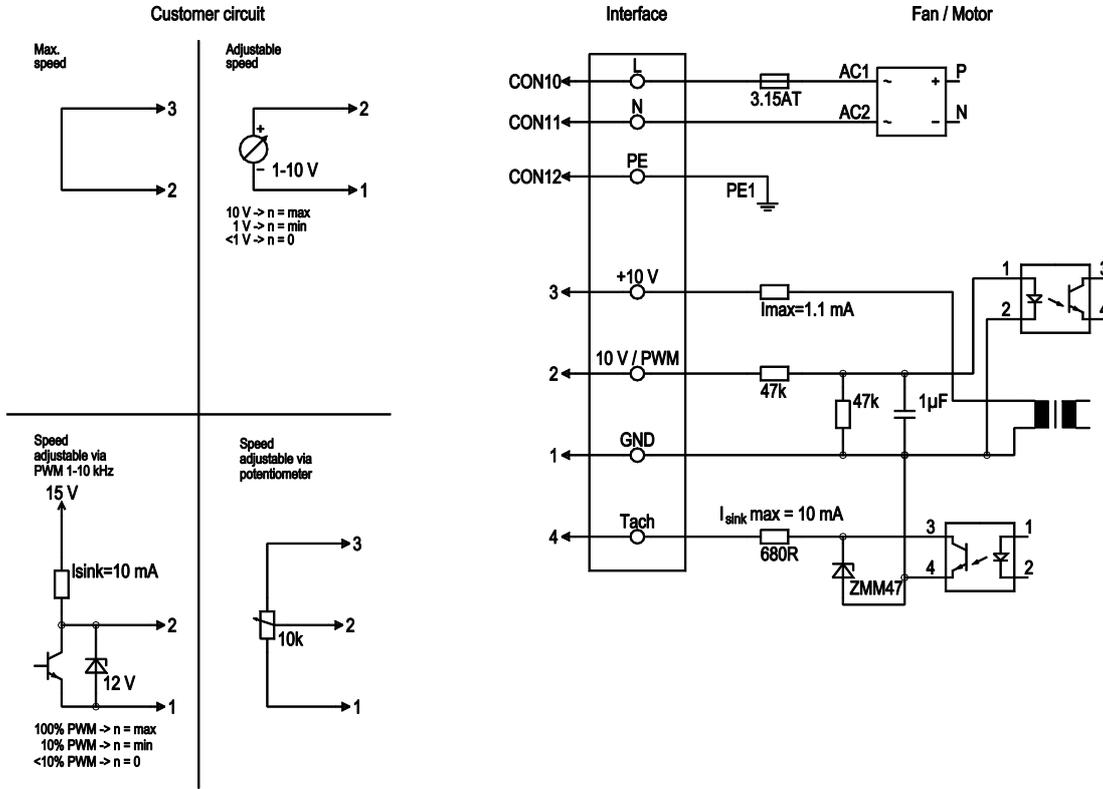
Product drawing



1	Direction of air flow "V"
2	For self-tapping M5 screws
3	For self-tapping M6 screws

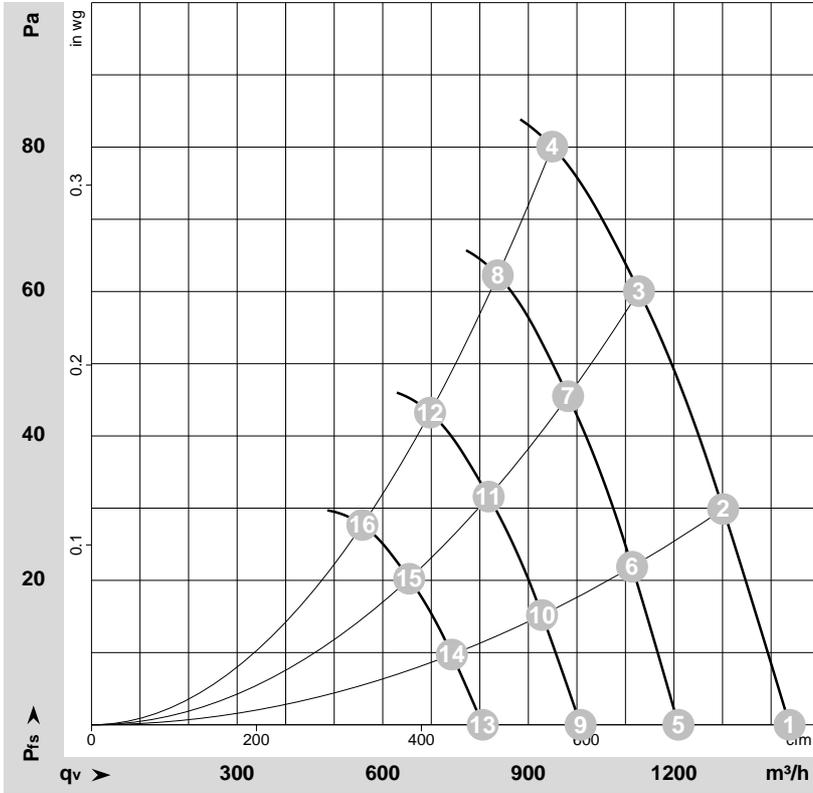


## Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 115 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, I <sub>sink max</sub> = 10 mA

## Curves: Air performance 50 Hz



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

Measurement: LU-171661-1

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

	U	f	n	P <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	115	50	2140	43	0.72	56	63	1440	0	845	0.00
2	115	50	2100	49	0.80	56	63	1300	30	765	0.12
3	115	50	2070	53	0.86	57	64	1130	60	665	0.24
4	115	50	2040	56	0.90	58	65	950	80	560	0.32
5	115	50	1800	26	0.43			1210	0	710	0.00
6	115	50	1800	31	0.50			1115	22	655	0.09
7	115	50	1800	35	0.57			980	46	580	0.18
8	115	50	1800	38	0.62			835	62	495	0.25
9	115	50	1500	15	0.25			1010	0	595	0.00
10	115	50	1500	18	0.29			930	16	545	0.06
11	115	50	1500	20	0.33			820	32	480	0.13
12	115	50	1500	22	0.36			695	43	410	0.17
13	115	50	1200	8.0	0.13			805	0	475	0.00
14	115	50	1200	9.0	0.15			740	10	435	0.04
15	115	50	1200	10.0	0.17			655	20	385	0.08
16	115	50	1200	11	0.18			560	28	330	0.11

U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
 q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

