W3G250-HL53-50

EC axial compact fan

sickle-shaped blades (S series)

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Nominal data

Type	**W3G250-HL53-50**
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}	3000
Power consumption	W	165
Current draw	A	1.35
Max. back pressure	Pa	150
Max. back pressure	in. wg	0.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	36.6	28.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		47.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	1205
09 Pressure increase p_{fs}	Pa	155
10 Speed (rpm) n	min^{-1}	3015
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-186141

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Technical description

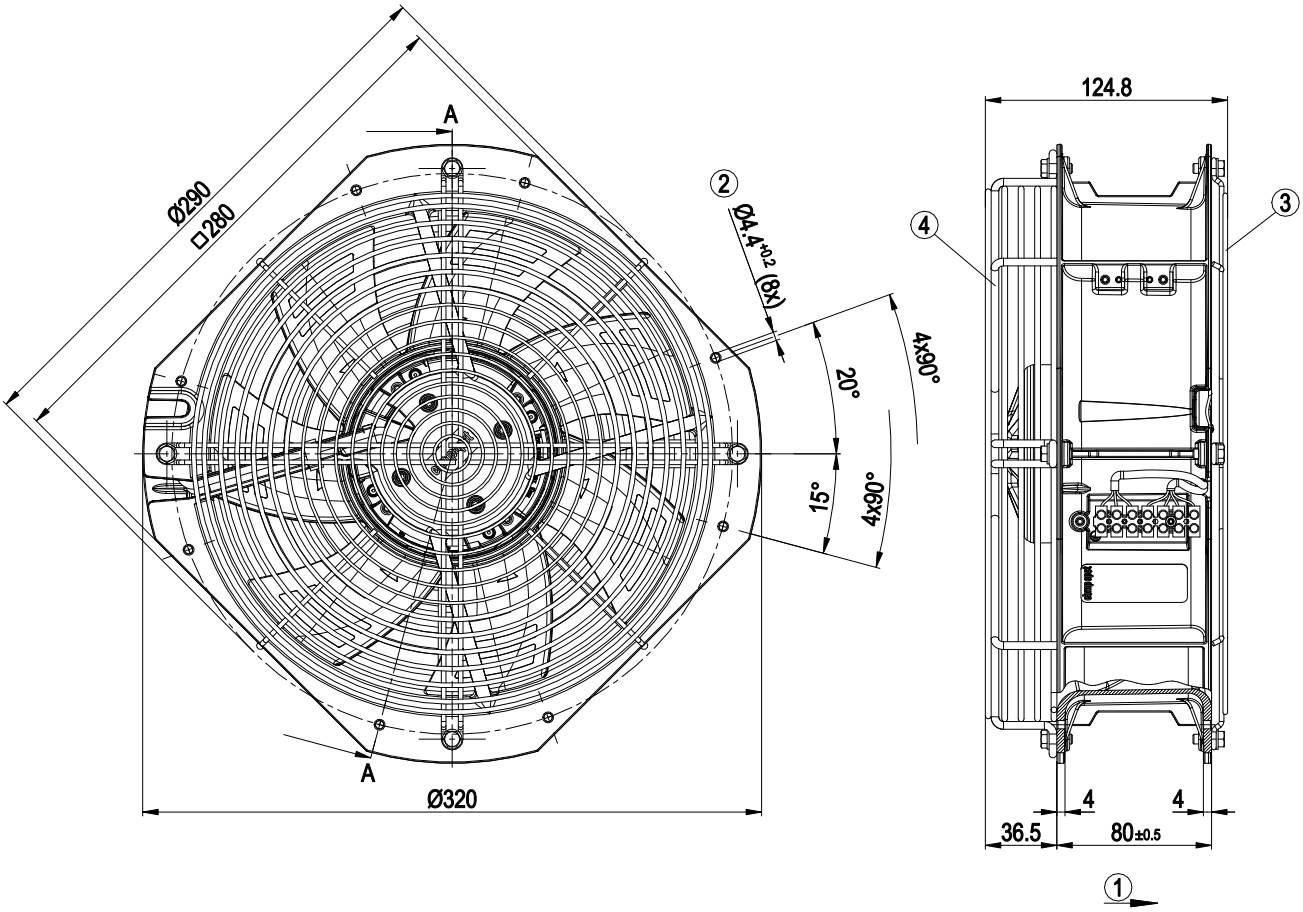
Weight	3.5 kg
Size	250 mm
Motor size	74
Rotor surface	Thick-film passivated
Blade material	PP plastic
Fan housing material	Die-cast aluminum
Number of blades	7
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54; installation- and position-dependent
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
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
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	UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1

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Product drawing



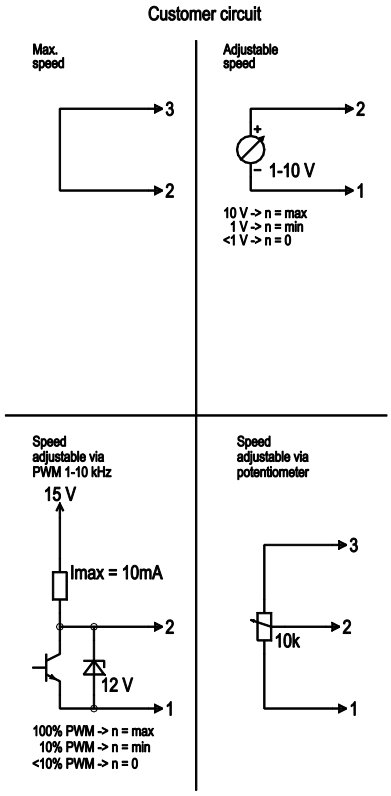
1	Airflow direction "V"
2	For self-tapping M5 screws
3	Guard grill (steel, coated with white-aluminum plastic RAL 9006)
4	Guard grill (steel, coated with black plastic RAL 9005)

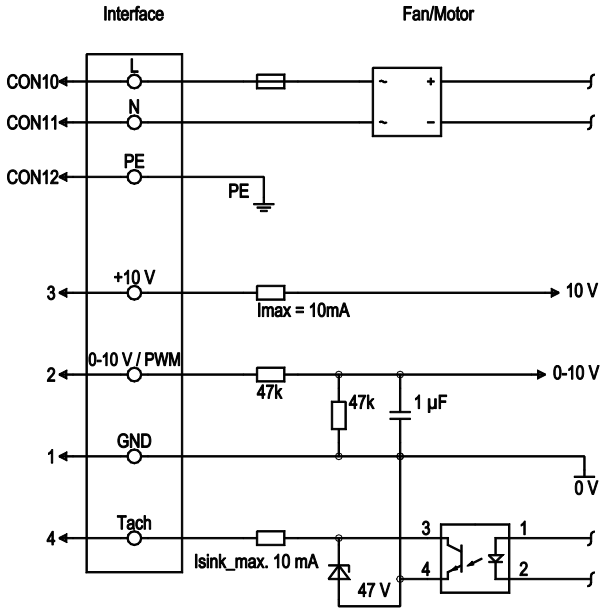
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Connection diagram





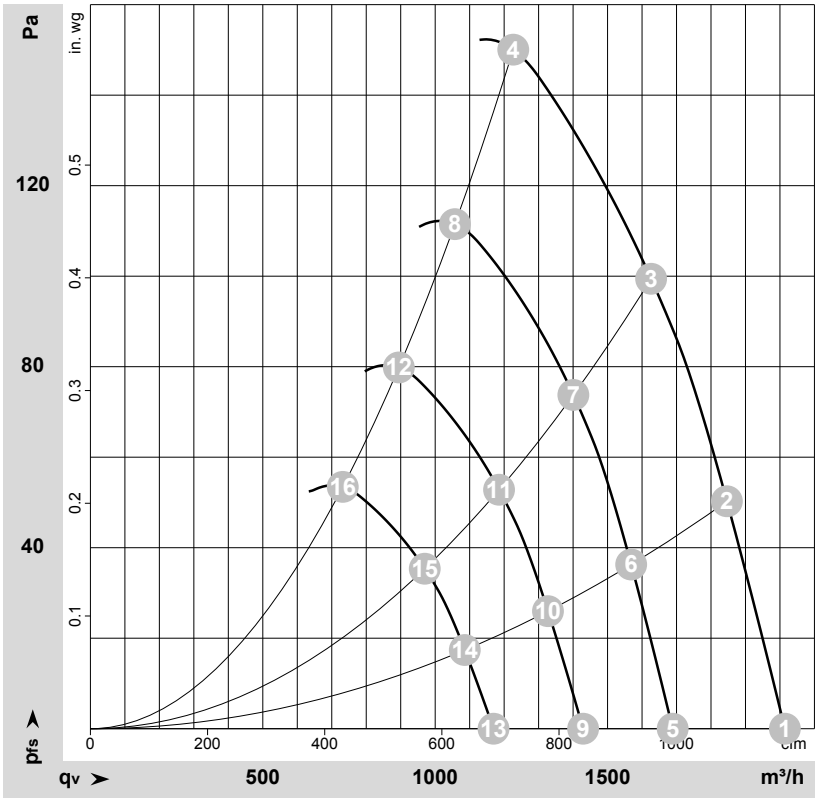
No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / 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-186141-1

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

	Wired	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	in. wg
1	1~	230	50	3100	139	1.15	2015	0	1185	0.00
2	1~	230	50	3060	151	1.24	1845	50	1085	0.20
3	1~	230	50	3015	160	1.31	1625	100	955	0.40
4	1~	230	50	3000	165	1.35	1225	150	720	0.60
5	1~	230	50	2600	82	0.68	1690	0	995	0.00
6	1~	230	50	2600	93	0.76	1570	38	925	0.15
7	1~	230	50	2600	103	0.84	1400	75	825	0.30
8	1~	230	50	2600	104	0.85	1055	113	620	0.45
9	1~	230	50	2200	50	0.41	1430	0	840	0.00
10	1~	230	50	2200	56	0.46	1325	27	780	0.11
11	1~	230	50	2200	62	0.51	1185	53	695	0.21
12	1~	230	50	2200	63	0.51	895	81	525	0.33
13	1~	230	50	1800	27	0.22	1170	0	690	0.00
14	1~	230	50	1800	31	0.25	1085	18	640	0.07
15	1~	230	50	1800	34	0.28	970	36	570	0.14
16	1~	230	50	1800	35	0.28	730	54	430	0.22

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

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