W3G250-CL53-33

EC axial fan

sickle-shaped blades (S series)

Fan housing with guard grille

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Nominal data

Type	**W3G250-CL53-33**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	2950
Power consumption	W	145
Current draw	A	1.2
Max. back pressure	Pa	160
Max. back pressure	in. wg	0.64
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 Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	41.4	28.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.14
09 Air flow q_v	m^3/h	1405
09 Pressure increase p_{fs}	Pa	135
10 Speed (rpm) n	min^{-1}	2940
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-191403

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Technical description

Weight	3.18 kg
Size	250 mm
Motor size	74
Rotor surface	Thick-film passivated
Blade material	PP plastic
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Number of blades	7
Airflow direction	A
Direction of rotation	Clockwise, 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	Shaft horizontal or rotor on bottom; rotor on top on request
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
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

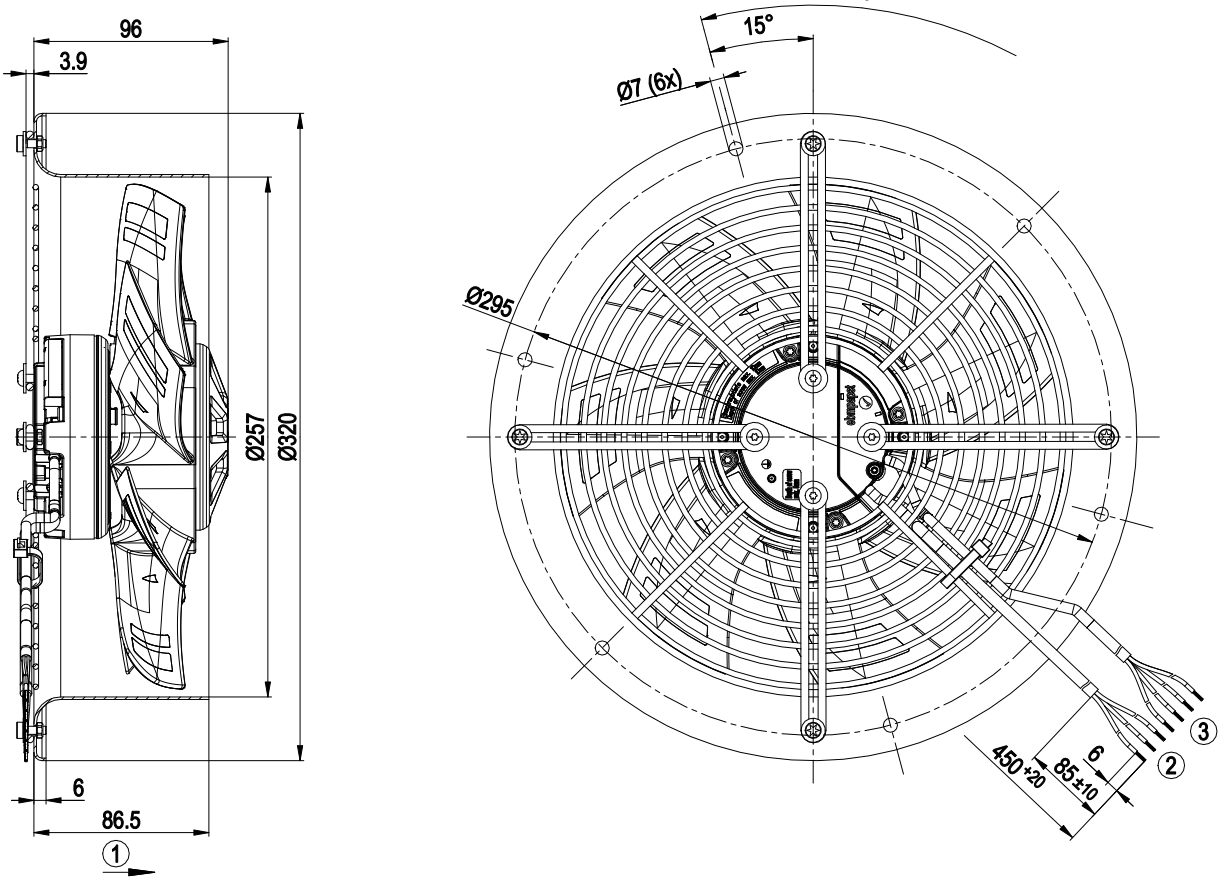
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Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG20
	3x splice
2	Cable PVC AWG22
	4x splice

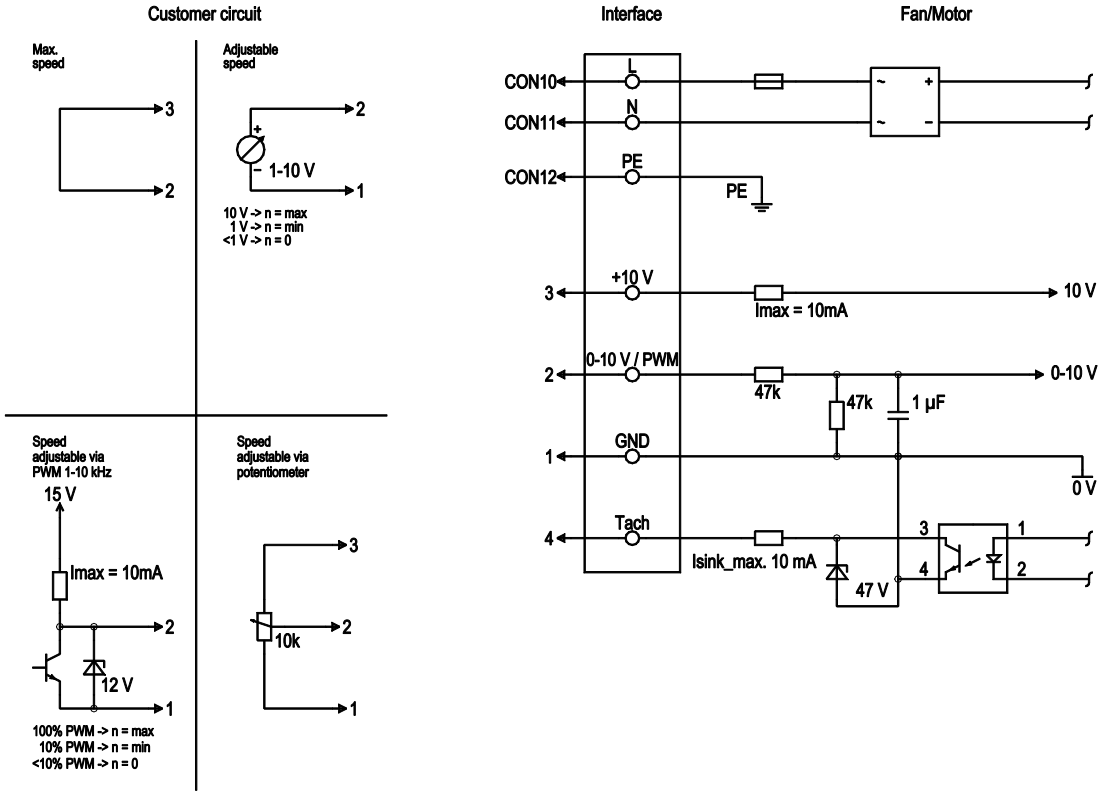
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Connection diagram



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

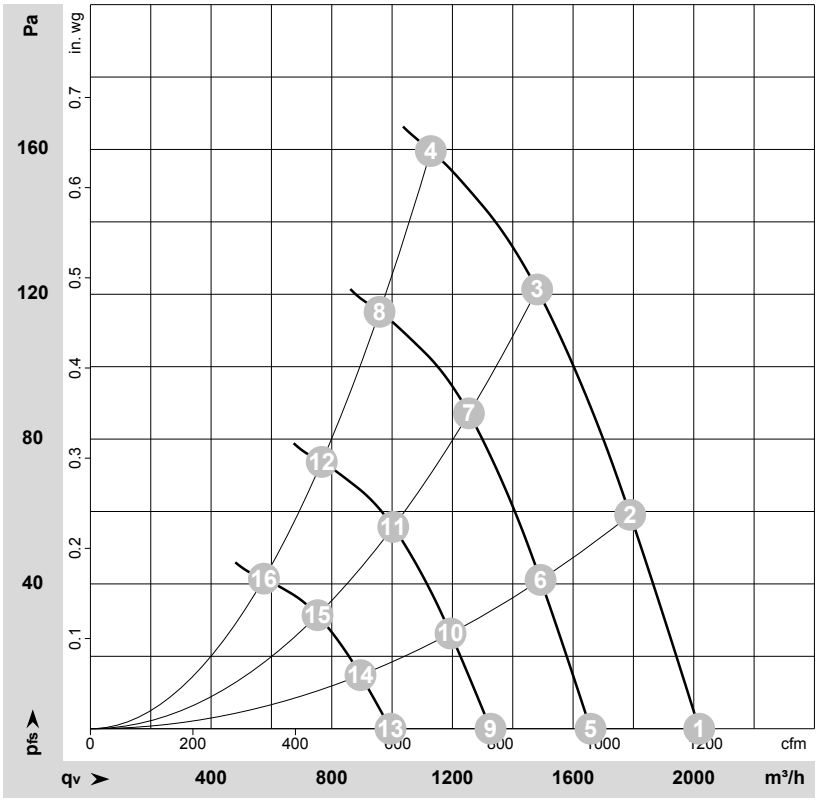
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-191403-1

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	3000	123	1.02	2020	0	1190	0.00
2	1~	230	50	3000	135	1.12	1790	60	1055	0.24
3	1~	230	50	2950	143	1.18	1480	120	870	0.48
4	1~	230	50	2950	145	1.20	1130	160	665	0.64
5	1~	230	50	2500	68	0.57	1660	0	975	0.00
6	1~	230	50	2500	78	0.65	1490	42	880	0.17
7	1~	230	50	2500	87	0.72	1255	87	740	0.35
8	1~	230	50	2500	89	0.73	960	115	565	0.46
9	1~	230	50	2000	35	0.29	1325	0	780	0.00
10	1~	230	50	2000	40	0.33	1195	27	705	0.11
11	1~	230	50	2000	45	0.37	1005	56	590	0.22
12	1~	230	50	2000	45	0.38	765	74	450	0.30
13	1~	230	50	1500	15	0.12	995	0	585	0.00
14	1~	230	50	1500	17	0.14	895	15	525	0.06
15	1~	230	50	1500	19	0.16	755	31	445	0.12
16	1~	230	50	1500	19	0.16	575	41	340	0.16

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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