W3G250-CD54-01

EC axial fan

sickle-shaped blades (S series)

with round full nozzle

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Nominal data

Type	**W3G250-CD54-01**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Speed (rpm)	min^{-1}	3050
Power consumption	W	170
Current draw	A	1.25
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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	40	28.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.1	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.17
09 Air flow q_v	m^3/h	1505
09 Pressure increase p_{fs}	Pa	157
10 Speed (rpm) n	min^{-1}	2875
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-127645

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Technical description

Weight	3.6 kg
Size	250 mm
Motor size	74
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Sheet steel, painted black
Fan housing material	Sheet steel, pre-galvanized and coated with black plastic
Guard grille material	Steel, phosphated and coated in black plastic
Number of blades	9
Airflow direction	A
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
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	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	PFC (passive), control input 0-10 VDC / PWM, output 10 VDC max. 1.1 mA, tach output, thermal overload protection for electronics/motor
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
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; CCC; EAC; UL 1004-3 + 60730-1

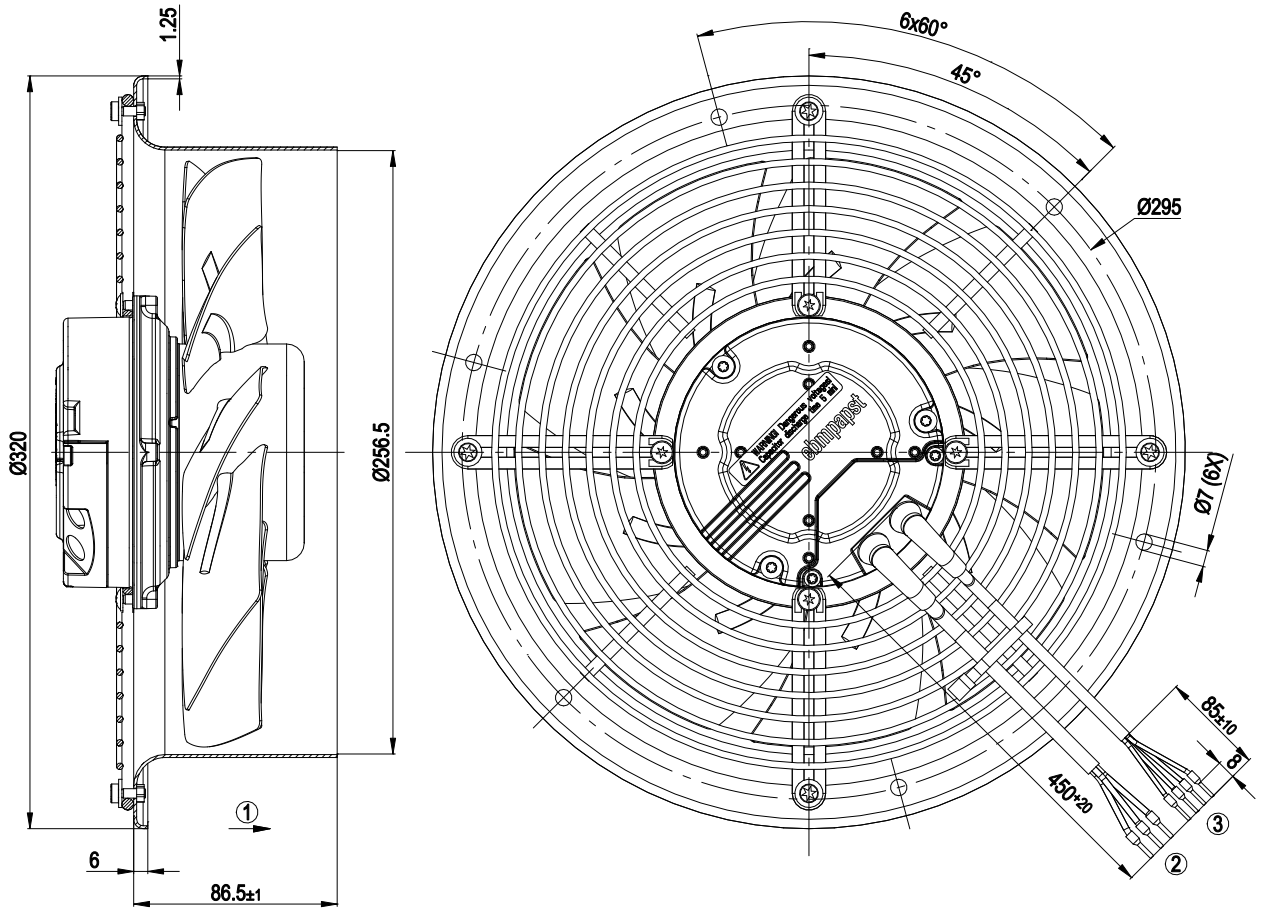
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Product drawing



1	Direction of air flow "A"
2	Cable PVC 3G AWG18, 3 x crimped ferrules
3	Cable PVC 4X AWG22, 4 x crimped ferrules

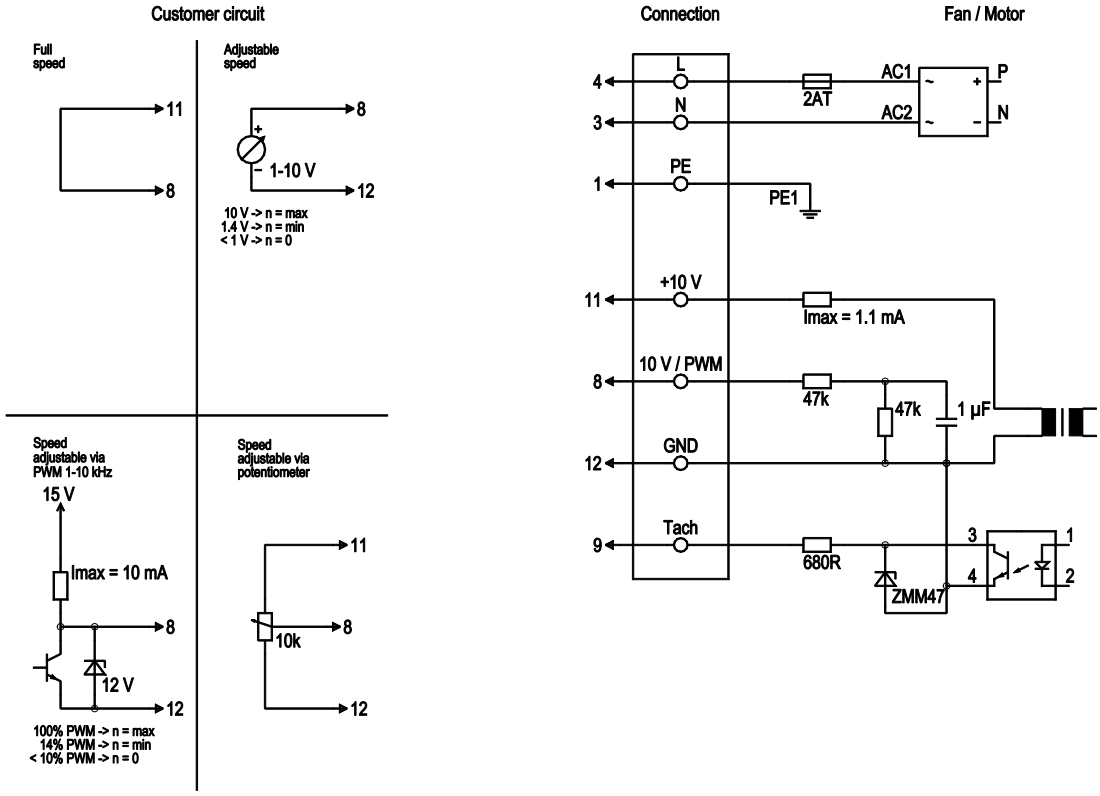
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V/max. 1.1 mA, electrically isolated
	12	GND	blue	GND connection for control interface

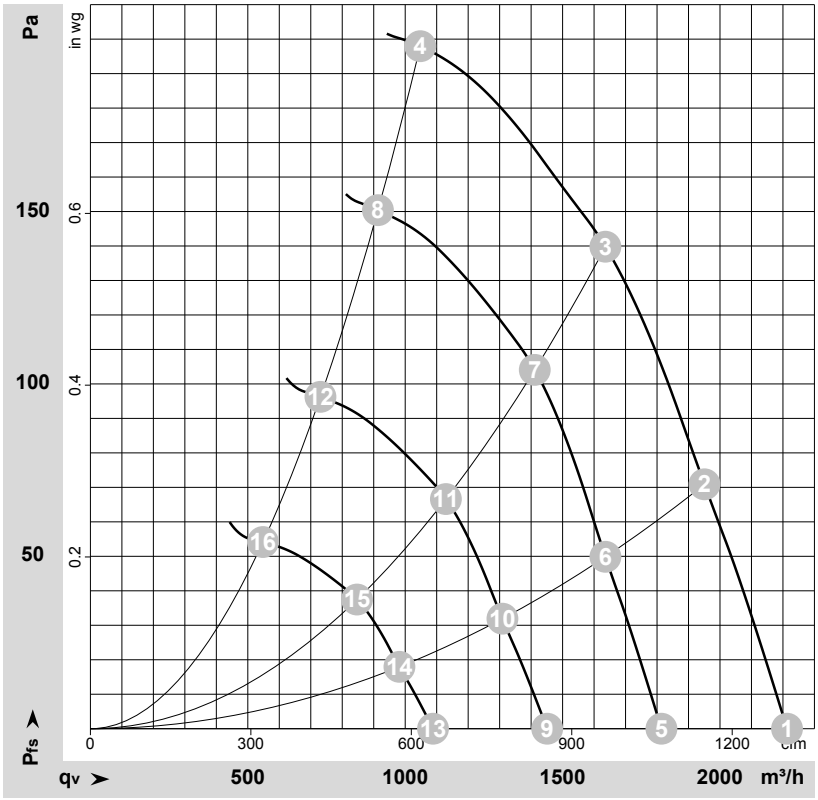
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-127645-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	3050	170	1.25	72	79	2215	0	1305	0.00
2	230	50	2980	170	1.37	73	80	1950	70	1150	0.28
3	230	50	2895	170	1.38	74	81	1635	140	965	0.56
4	230	50	2870	170	1.38	74	82	1050	200	615	0.80
5	230	50	2500	92	0.73	67	73	1815	0	1070	0.00
6	230	50	2500	103	0.81	68	75	1635	49	965	0.20
7	230	50	2500	113	0.89	70	77	1410	105	830	0.42
8	230	50	2500	116	0.91	71	79	915	151	535	0.61
9	230	50	2000	47	0.38	61	68	1450	0	855	0.00
10	230	50	2000	53	0.41	63	70	1310	32	770	0.13
11	230	50	2000	58	0.46	65	72	1130	67	665	0.27
12	230	50	2000	59	0.47	65	73	730	96	430	0.39
13	230	50	1500	20	0.16	54	61	1090	0	640	0.00
14	230	50	1500	22	0.17	55	62	980	18	580	0.07
15	230	50	1500	24	0.19	57	65	845	38	500	0.15
16	230	50	1500	25	0.20	58	66	550	54	325	0.22

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

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