W1G250-HH53-44

EC axial compact fan

sickle-shaped blades (S series)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W1G250-HH53-44**	
Motor	**M1G074-BF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 60
Method of obtaining data		fa
Speed (rpm)	min-1	3050
Power consumption	W	146
Current draw	A	4
Max. back pressure	Pa	180
Max. back pressure	inH2O	0.72
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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	38.6	28.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		50.1	40
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.15
09 Air flow q_v	m³/h	1400
09 Pressure increase p_{fs}	Pa	138
10 Speed (rpm) n	min-1	2725
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-129034

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Technical description

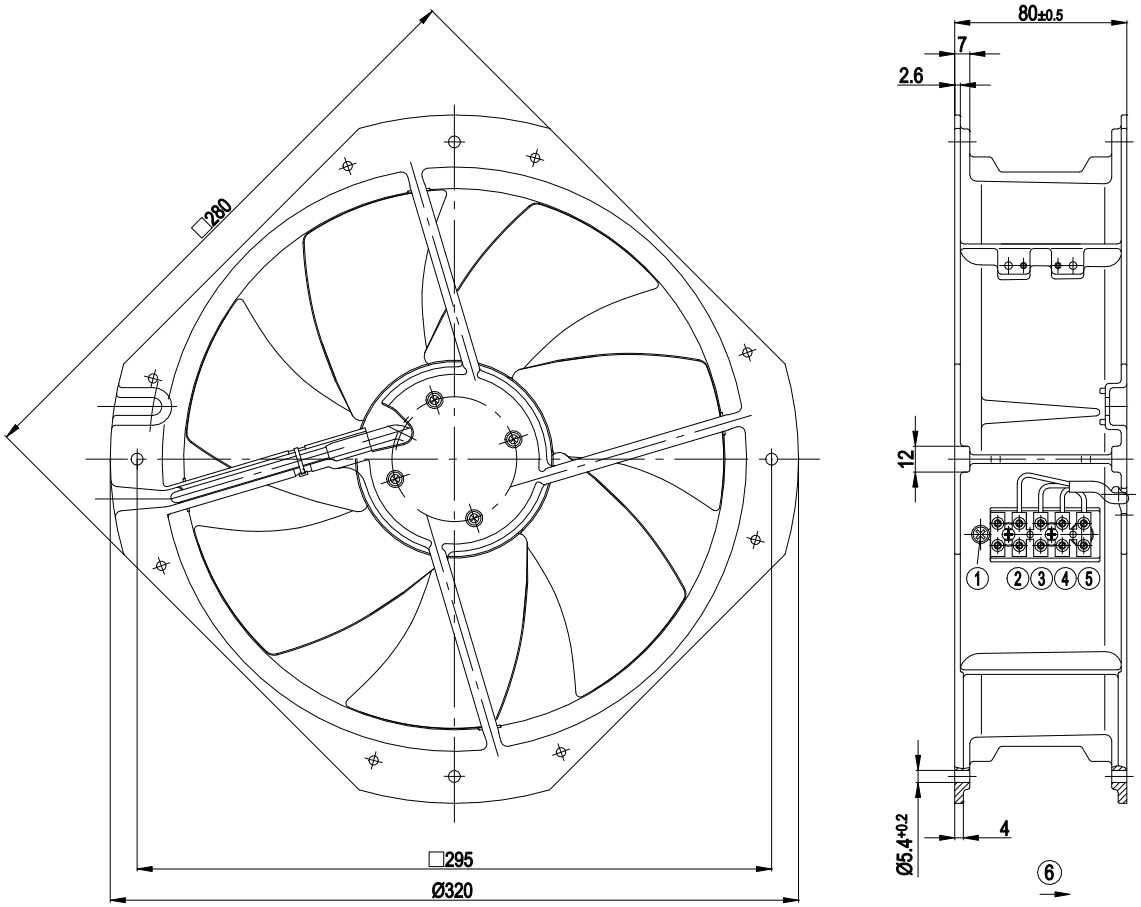
Weight	2.38 kg
Fan size	250 mm
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Fan housing material	Die-cast aluminum
Number of blades	7
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F0
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Tach output - Motor current limitation - Soft start
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 55022 (Class B)
Electrical hookup	Via terminal strip
Motor protection	Reverse polarity and locked-rotor protection
Conformity with standards	EN 60950-1
Approval	UL 1004-1; CSA C22.2 No. 77

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Product drawing



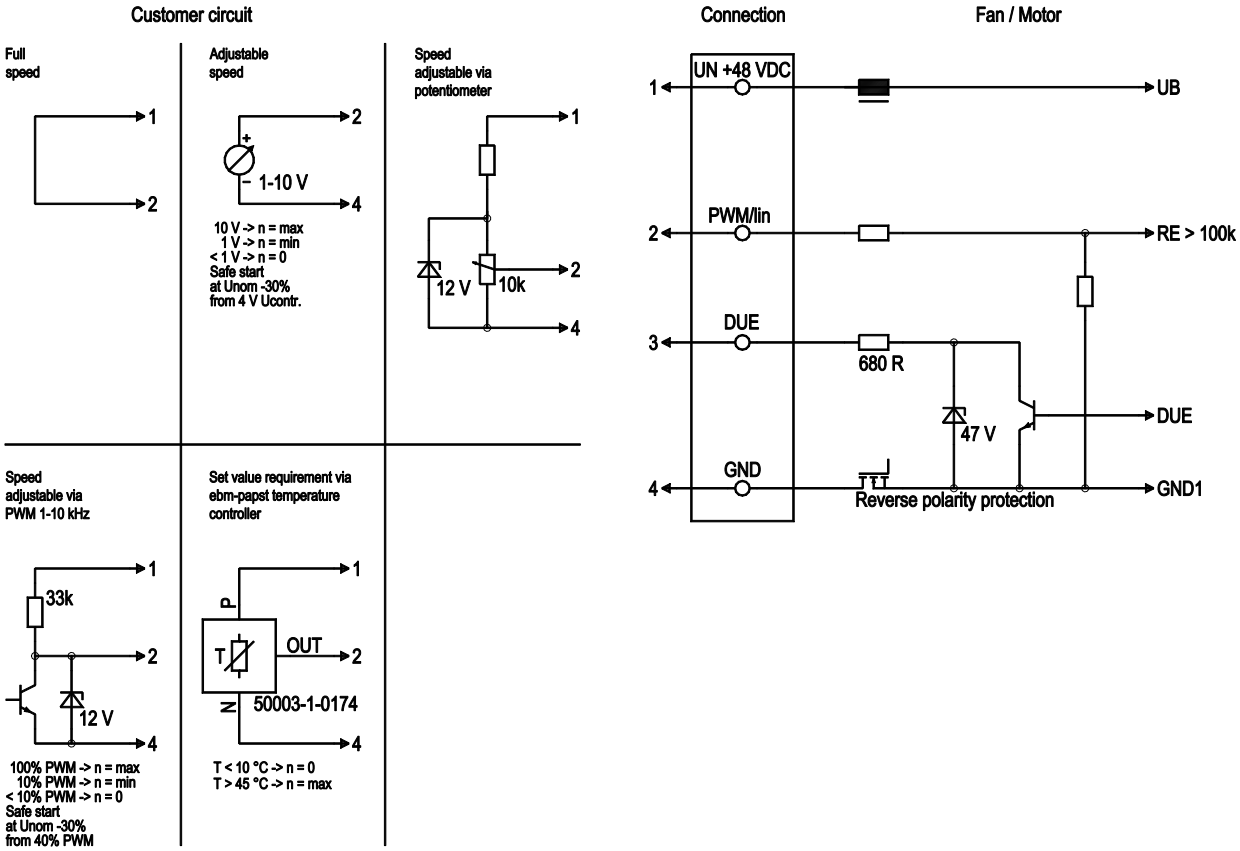
1	Protective earth
2	Control input yellow
3	Speed monitoring white
4	(-) blue
5	(+) red
6	Direction of air flow "V"

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Connection diagram



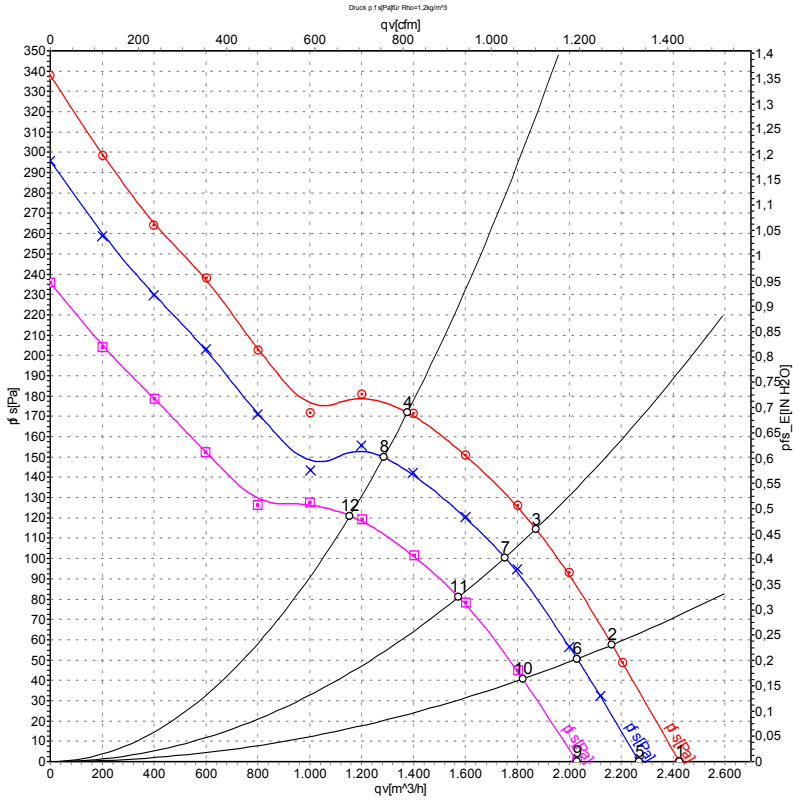
No.	Conn.	Designation	Color	Function/assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%
1	2	0-10 VDC	yellow	Control input Re > 100k
1	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

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Curves: Air performance



Measurement: LU-129037-1
Measurement: LU-129034-1
Measurement: LU-129036-1

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	n	P_{ed}	I	qv	p_{fs}	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	57	3260	181	4.52	2425	0	1425	0.00
2	57	3120	188	4.81	2165	58	1275	0.23
3	57	2995	195	5.10	1870	115	1100	0.46
4	57	2895	202	5.40	1375	173	810	0.69
5	48	3050	146	4.00	2270	0	1335	0.00
6	48	2925	151	4.19	2030	50	1195	0.20
7	48	2810	154	4.39	1750	100	1030	0.40
8	48	2720	158	4.59	1285	150	755	0.60
9	36	2750	104	3.38	2030	0	1195	0.00
10	36	2625	106	3.52	1820	42	1070	0.17
11	36	2525	108	3.64	1575	82	925	0.33
12	36	2440	110	3.76	1155	121	680	0.49

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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