W1G250-HJ20-02

EC axial fan

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Nominal data

Type	**W1G250-HJ20-02**
Motor	**M1G074-BF**

Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min^{-1}	3100
Power consumption	W	130
Current draw	A	3.8
Max. back pressure	Pa	140
Max. back pressure	in. wg	0.56
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}	%	43.7	28.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.5	40
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.13
09 Air flow q_v	m^3/h	1400
09 Pressure increase p_{fs}	Pa	134
10 Speed (rpm) n	min^{-1}	2730
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-184692

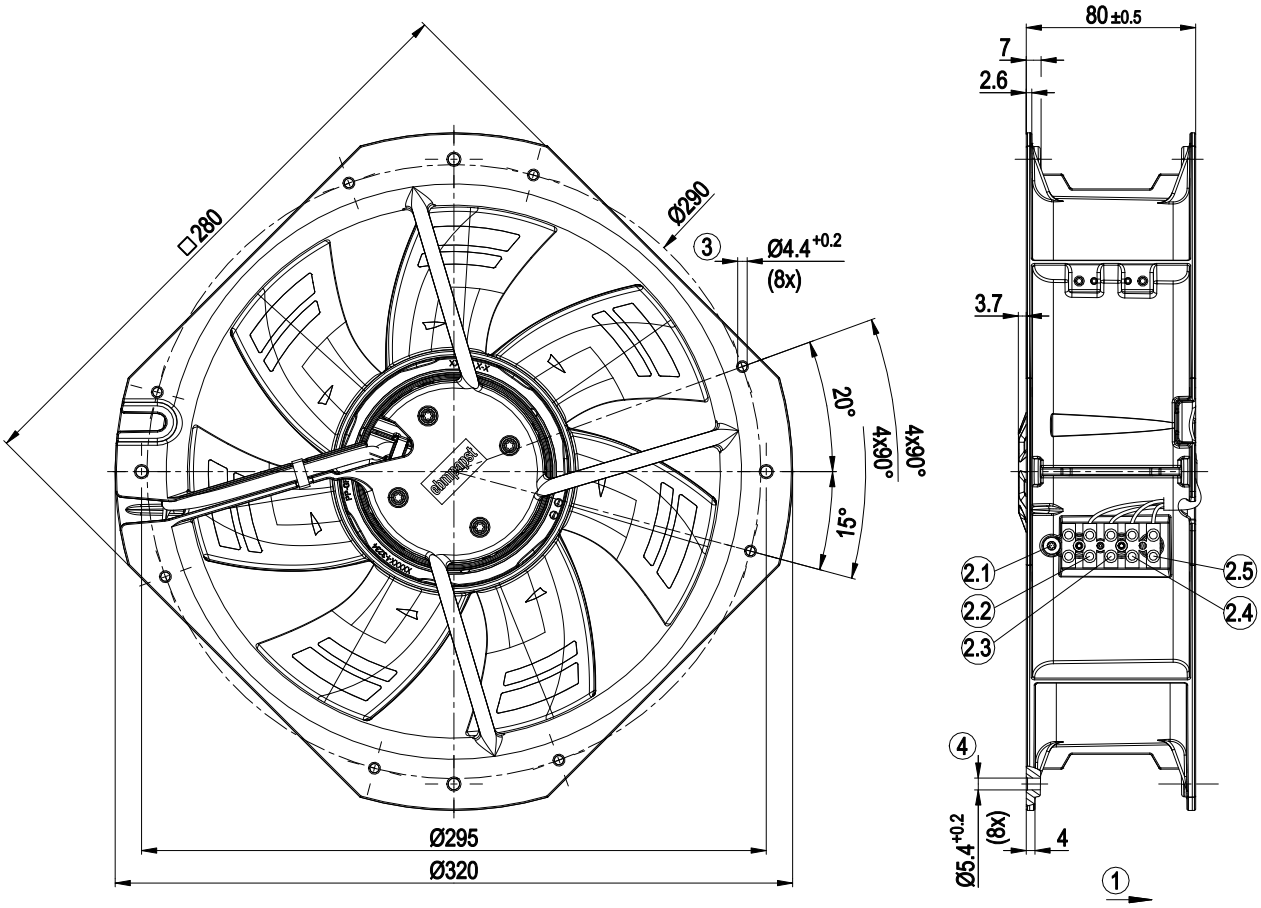
Technical description

Weight	2.35 kg
Size	250 mm
Motor size	74
Rotor surface	Galvanized
Electronics housing material	Die-cast aluminum, painted black
Impeller 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	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2+
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; (sealed)
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection - Thermal overload protection for electronics - Reverse polarity protection
Electrical hookup	Via terminal strip
Approval	UL 507; EAC; CSA C22.2 No. 113
Comment	The IP protection is valid up to the motor connection side interface

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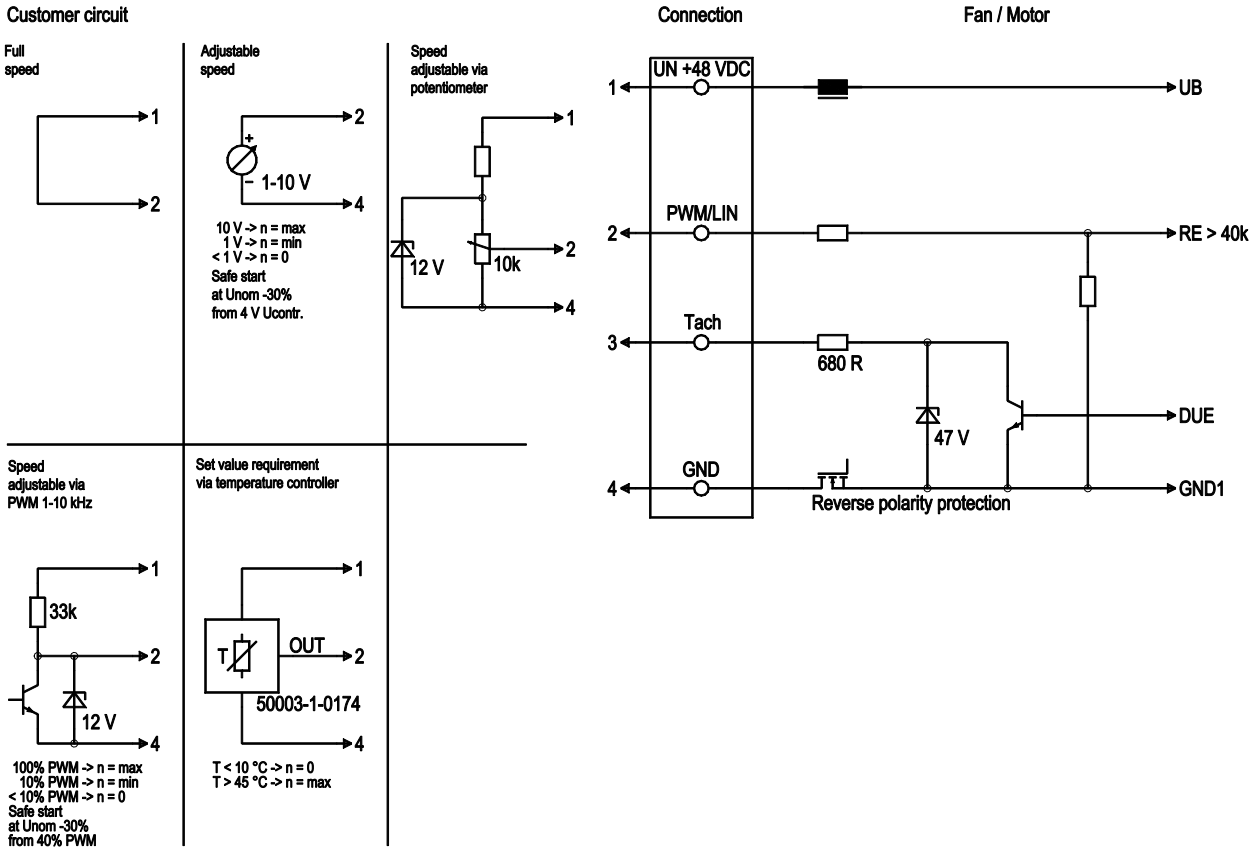
Product drawing



1	Airflow direction "V"
2.1	Ground connection point
2.2	Control input
2.3	Speed monitoring
2.4	-
2.5	+
3	For self-tapping M5 screws
4	For self-tapping M6 screws

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Connection diagram

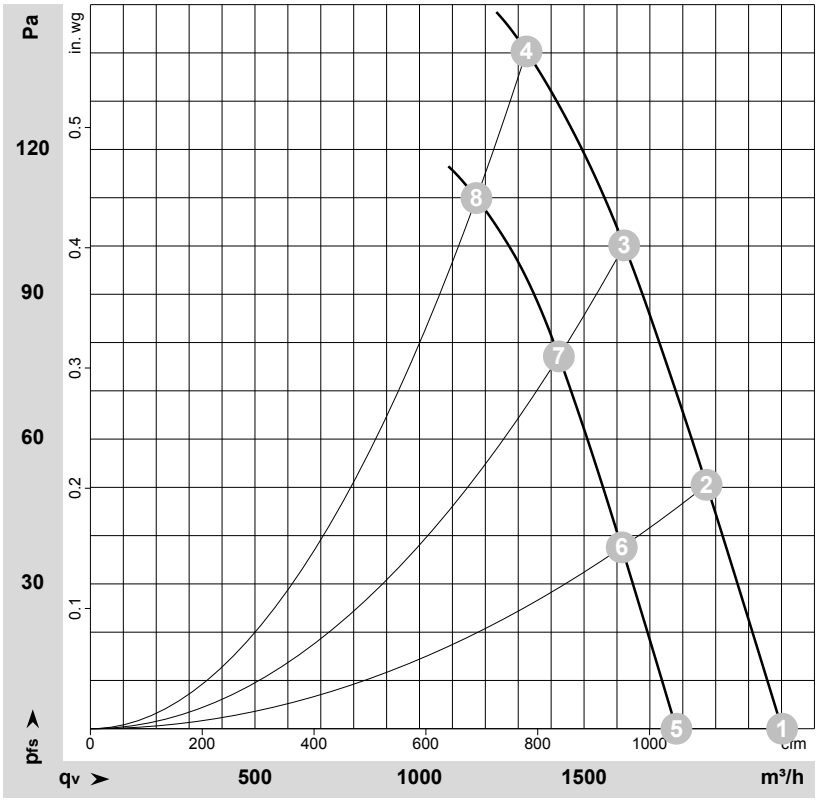


No.	Conn.	Designation	Color	Function/assignment
1	1	UN +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%
1	2	PWM/LIN	yellow	Control input Re > 100k
1	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-184692-1
Measurement: LU-184817-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	48-57	3100	130	3.80*	2100	0	1235	0.00
2	48-57	2945	133	4.10*	1870	50	1100	0.20
3	48-57	2810	135	4.20*	1620	100	955	0.40
4	48-57	2720	136	4.20*	1325	140	780	0.56
5	36	2640	81	3.14	1780	0	1050	0.00
6	36	2560	86	3.25	1615	38	950	0.15
7	36	2480	91	3.36	1425	77	840	0.31
8	36	2415	95	3.45	1175	110	690	0.44

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · * = Current measured at nominal voltage · q_V = Air flow · p_{fs} = Pressure increase

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