W1G250-HJ87-02

EC axial compact fan

sickled blades (S series)

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Nominal data

Type	**W1G250-HJ87-02**	
Motor	**M1G074-BF**	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Type of data definition		fa
Speed (rpm)	min^{-1}	3070
Power input	W	128
Current draw	A	7
Max. back pressure	Pa	150
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	41.6	28.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.5	40
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.13
09 Air flow q_v	m^3/h	1355
09 Pressure increase p_{fs}	Pa	132
10 Speed (rpm) n	min^{-1}	2745
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-156909

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Technical features

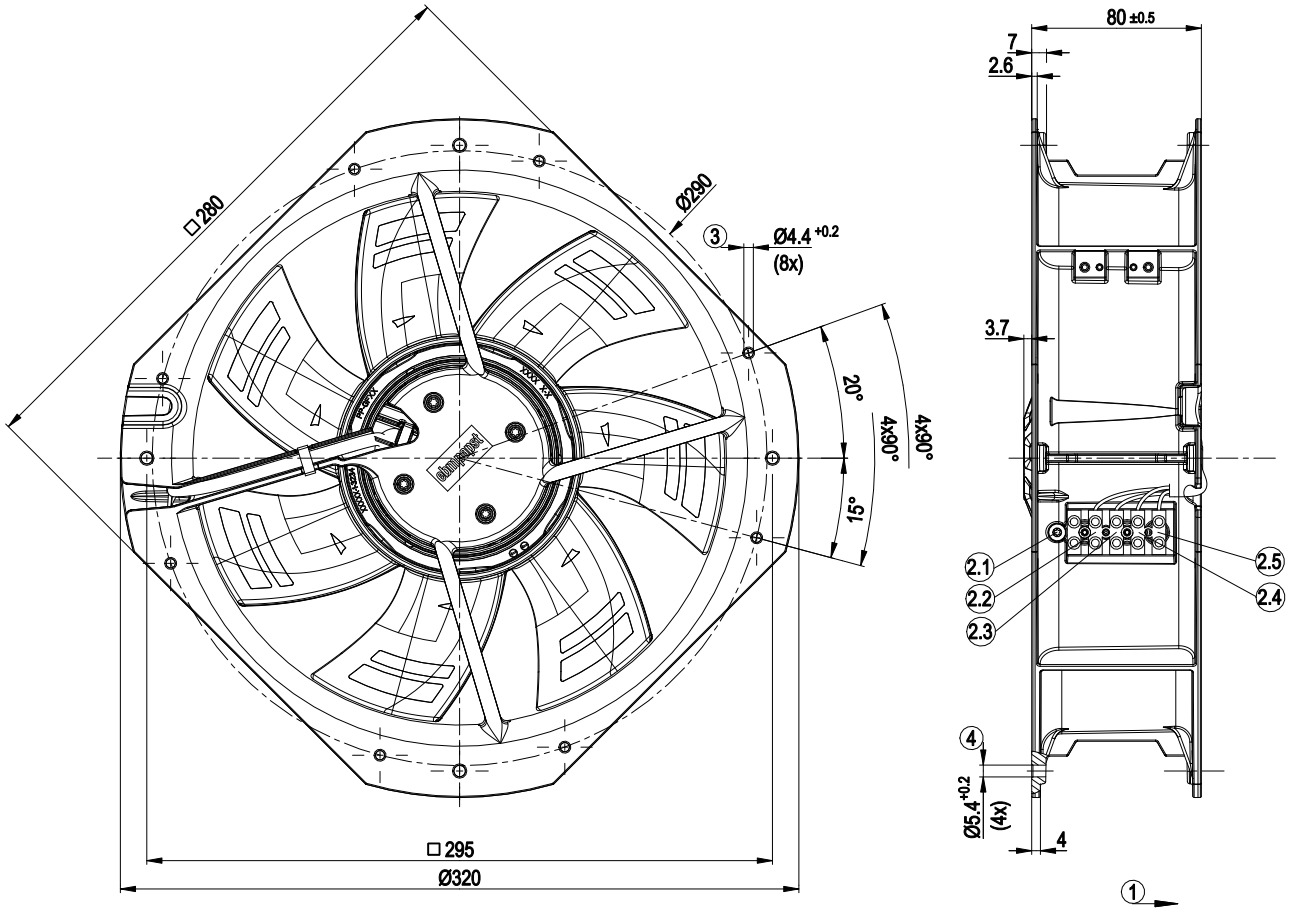
Mass	2.35 kg
Size	250 mm
Surface of rotor	Galvanised
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	PP plastic
Material of wall ring	Die-cast aluminium
Number of blades	7
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 24 KM; Electronics IP 66 / 69 K
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H2+
Note ambient temperature	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at ambient temperatures below -25°C (e.g. refrigeration applications) we recommend our fan version with special low-temperature bearings.
Max. permissible ambient motor temp. (transp./ storage)	+70 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection - Over-temperature protected electronics
Electrical leads	Via terminal strip
Motor protection	Reverse polarity and locked-rotor protection
Approval	UL 507; EAC

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Product drawing



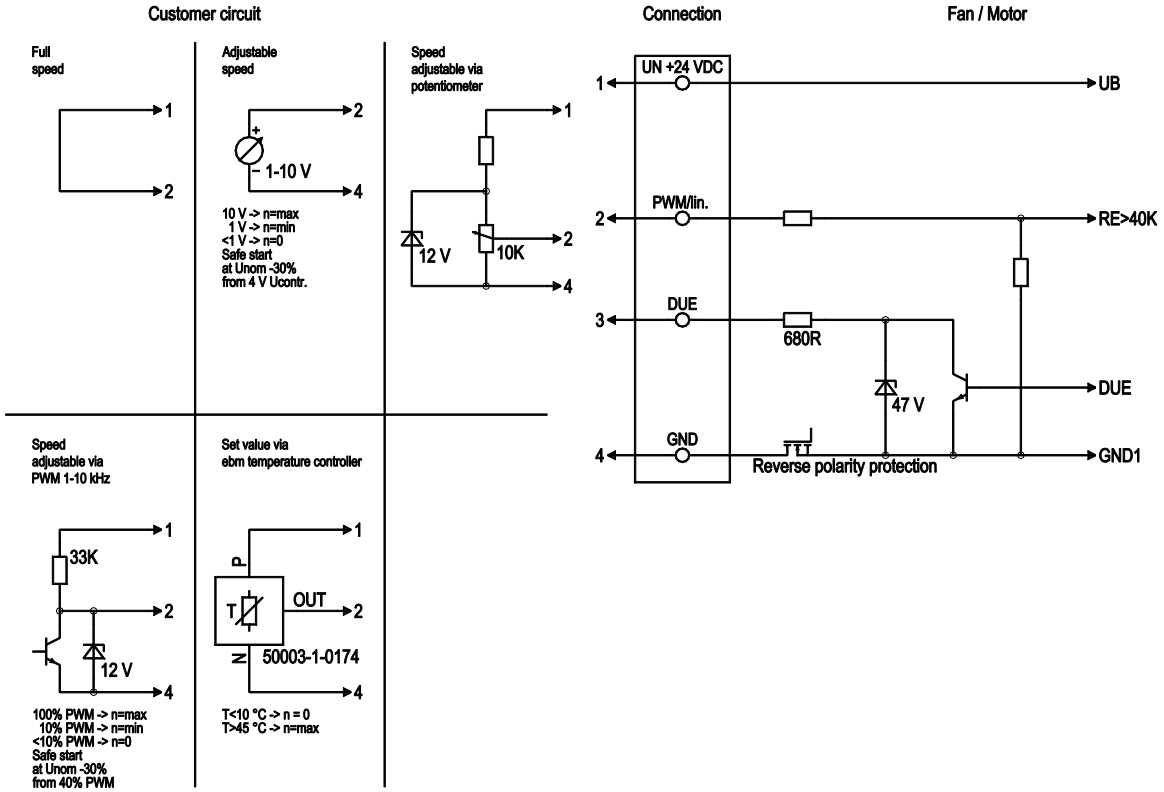
1	Direction of air flow "V"
2.1	Protective earth
2.2	Control input, yellow
2.3	Speed monitoring, white
2.4	(-) blue
2.5	(+) red
3	For self-tapping M5 screws
4	For self-tapping M6 screws

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Connection screen



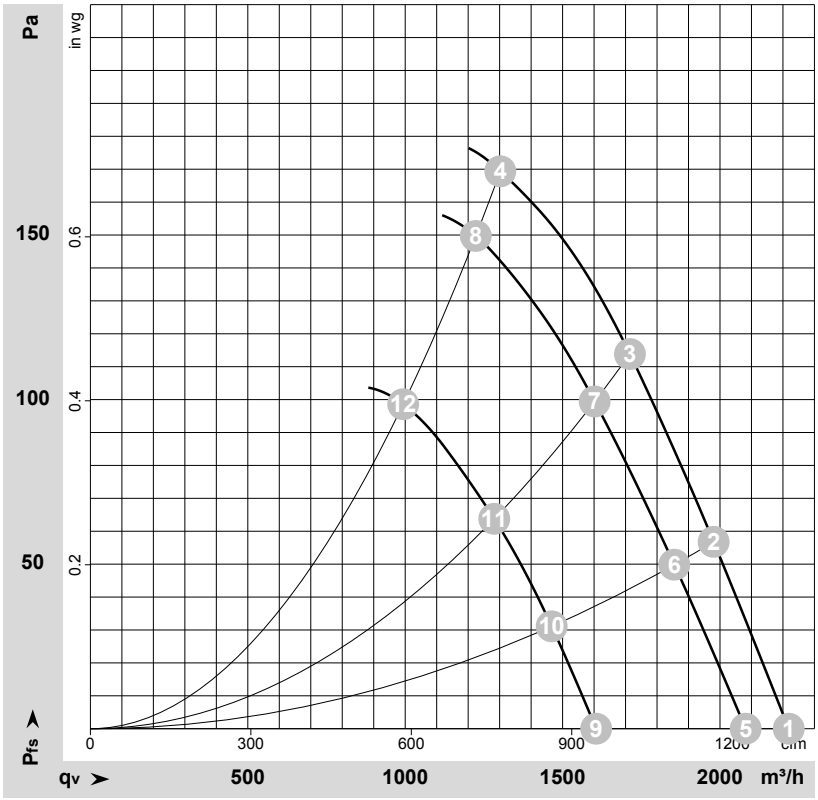
No.	Conn.	Designation	Colour	Function / assignment
	1	UN +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5 %
	2	PWM/LIN	yellow	Control input Re > 40k
	3	DUE	white	Speed monitoring output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference earth

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Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-172450-1
Measurement: LU-172294-1
Measurement: LU-172449-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	U	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	1~ BRUE	28	3270	156	7.76			2220	0	1305	0.00
2	1~ BRUE	28	3125	161	8.22			1980	57	1165	0.23
3	1~ BRUE	28	2985	167	8.67			1715	114	1010	0.46
4	1~ BRUE	28	2870	173	9.13			1300	169	765	0.68
5	1~ BRUE	24	3070	128	7.00	66	74	2080	0	1225	0.00
6	1~ BRUE	24	2935	131	7.35	66	73	1855	50	1090	0.20
7	1~ BRUE	24	2805	135	7.74	65	72	1600	100	945	0.40
8	1~ BRUE	24	2700	140	8.13	66	73	1225	150	720	0.60
9	1~ BRUE	16	2405	61	4.84			1605	0	945	0.00
10	1~ BRUE	16	2340	65	5.19			1465	31	860	0.12
11	1~ BRUE	16	2270	70	5.57			1285	64	755	0.26
12	1~ BRUE	16	2205	73	5.87			995	99	585	0.40

Conn. = Connection · U = Supply voltage · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
q_V = Air flow · p_{fs} = Pressure increase

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