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**Nominal data**

<b>Type</b>	<b>W1G250-HJ87-02</b>	
<b>Motor</b>	<b>M1G074-BF</b>	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	3070
Power consumption	W	128
Current draw	A	7
Max. back pressure	Pa	150
Max. back pressure	in. wg	0.6
Min. ambient temperature	°C	-40
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 $\eta_{es}$	%	41.6	28.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.5	40
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

<sup>\*</sup> Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$ 

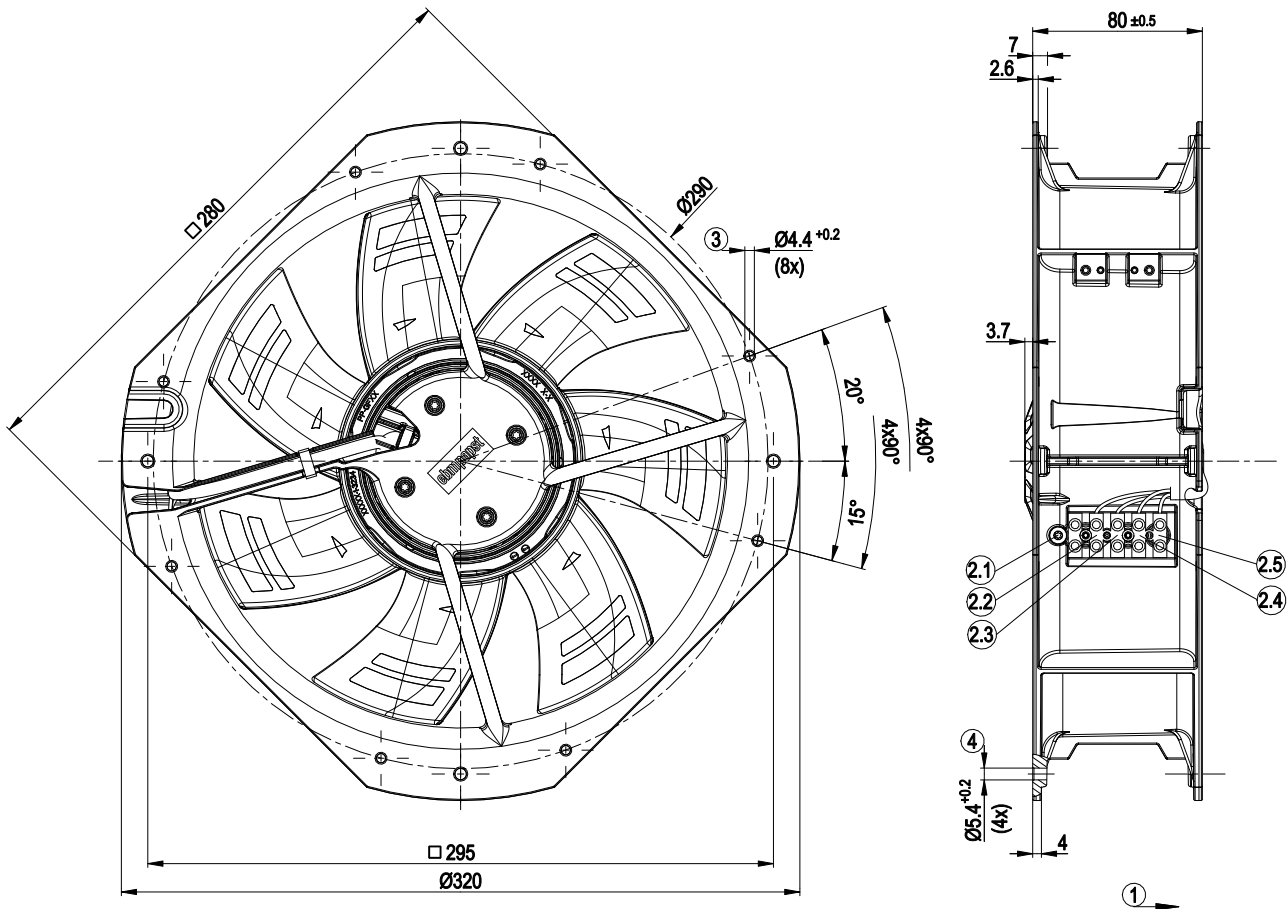
LU-156909



## Technical description

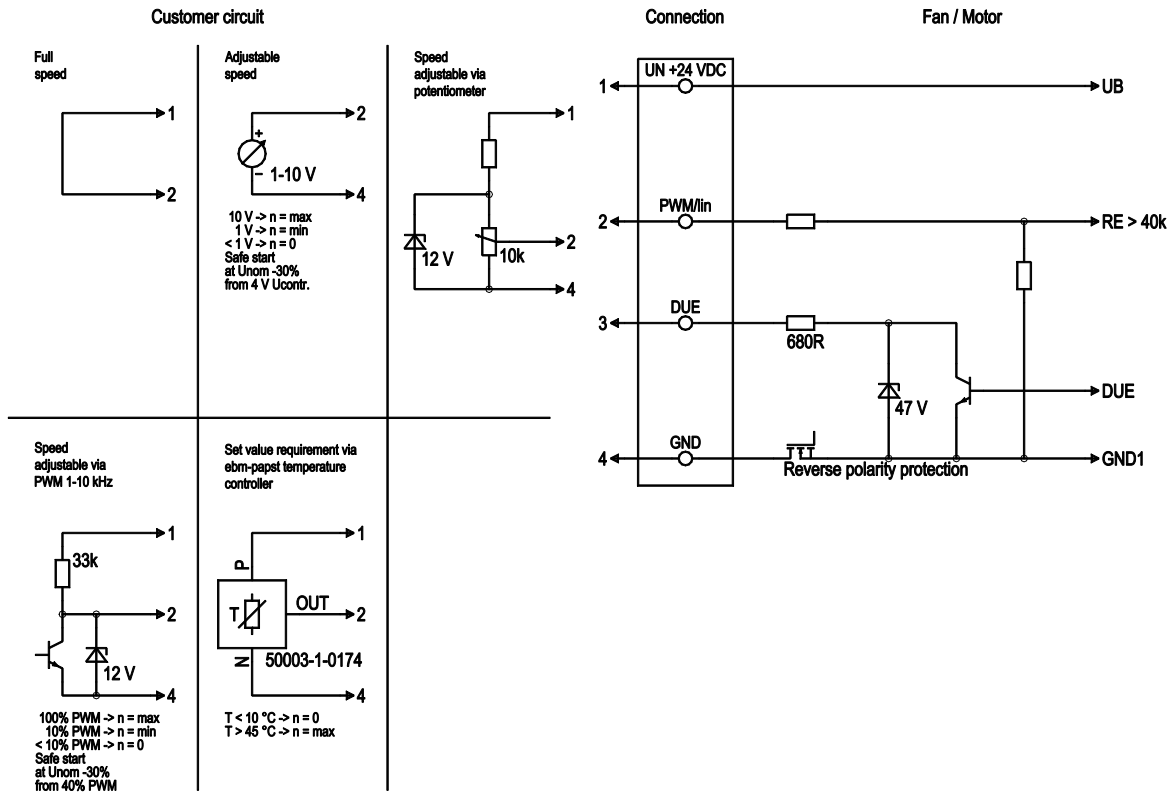
<b>Weight</b>	2.35 kg
<b>Size</b>	250 mm
<b>Motor size</b>	74
<b>Rotor surface</b>	Galvanized
<b>Electronics housing material</b>	Die-cast aluminum, painted black
<b>Impeller material</b>	PP plastic
<b>Fan housing material</b>	Die-cast aluminum
<b>Number of blades</b>	7
<b>Airflow direction</b>	V
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	Motor IP24 KM, electronics IP6K9K
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	H2+
<b>Ambient temperature note</b>	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings.
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+70 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing; (sealed)
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Overvoltage detection</li> <li>- Thermal overload protection for electronics</li> </ul>
<b>Electrical hookup</b>	Via terminal strip
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Approval</b>	UL 507; EAC

## 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

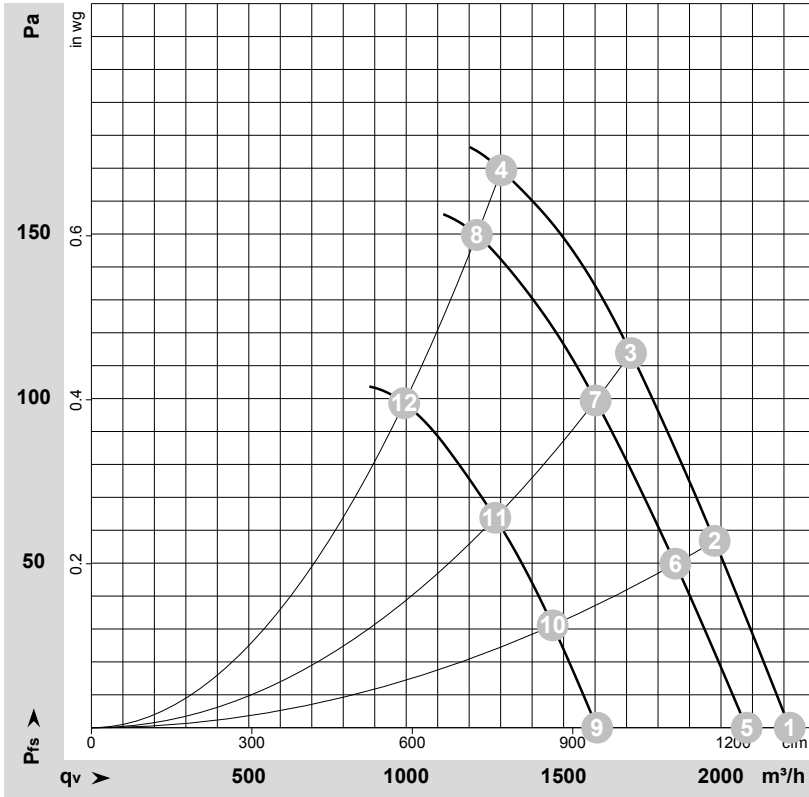
## Connection diagram



No.	Conn.	Designation	Color	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	Tach output, 3 pulses per revolution, Isink max = 10 mA
4	GND		blue	Reference ground



## Curves: Air performance



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

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

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	n	P <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
		V	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	1~	28	3270	156	7.76			2220	0	1305	0.00
2	1~	28	3125	161	8.22			1980	57	1165	0.23
3	1~	28	2985	167	8.67			1715	114	1010	0.46
4	1~	28	2870	173	9.13			1300	169	765	0.68
5	1~	24	3070	128	7.00	66	74	2080	0	1225	0.00
6	1~	24	2935	131	7.35	66	73	1855	50	1090	0.20
7	1~	24	2805	135	7.74	65	72	1600	100	945	0.40
8	1~	24	2700	140	8.13	66	73	1225	150	720	0.60
9	1~	16	2405	61	4.84			1605	0	945	0.00
10	1~	16	2340	65	5.19			1465	31	860	0.12
11	1~	16	2270	70	5.57			1285	64	755	0.26
12	1~	16	2205	73	5.87			995	99	585	0.40

Wired = Wiring · U = Voltage · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
 q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

