

W1G200-HH77-52

# EC axial compact fan

sickle-shaped blades (S series)



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## Nominal data

Type	W1G200-HH77-52	
Motor	M1G074-BF	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	2950
Power consumption	W	55
Current draw	A	2.6
Max. back pressure	Pa	120
Max. back pressure	in. wg	0.48
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

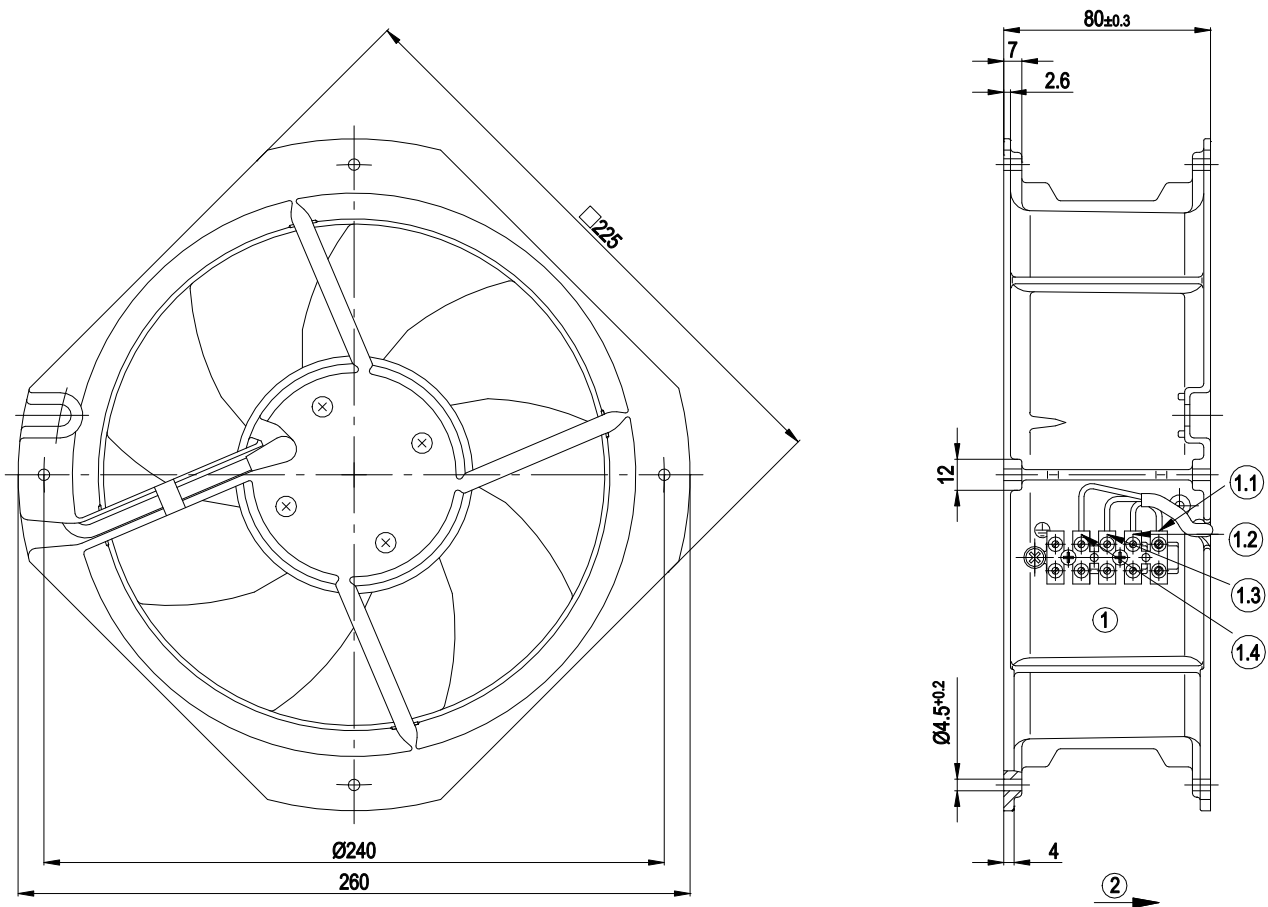
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



### Technical description

<b>Weight</b>	2.13 kg
<b>Size</b>	200 mm
<b>Motor size</b>	74
<b>Rotor surface</b>	Painted black
<b>Blade material</b>	Sheet steel, painted black
<b>Fan housing material</b>	Die-cast aluminum
<b>Number of blades</b>	9
<b>Airflow direction</b>	V
<b>Direction of rotation</b>	Counterclockwise, viewed toward rotor
<b>Degree of protection</b>	IP42
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	F0; H0 - dry environment
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<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> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 55022 (Class B)
<b>Electrical hookup</b>	Via terminal strip
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Conformity with standards</b>	EN 60335-1
<b>Approval</b>	EAC; UL 1004-1; CSA C22.2 No. 77

## Product drawing

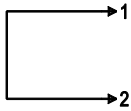


1	Connection: terminal strip with 5 terminals.
1.1	UN +24 VDC (red)
1.2	GND (blue)
1.3	DUE (white)
1.4	0-10 VDC (yellow)
2	Direction of air flow "V"

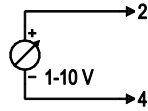
## Connection diagram

### Customer circuit

Full speed

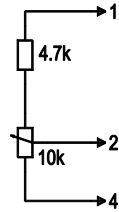


Adjustable speed

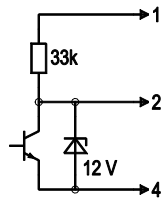


10 V → n = max  
1 V → n = min  
< 1 V → n = 0  
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable via potentiometer

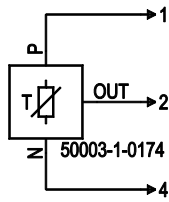


Speed adjustable via PWM 1-10 kHz



100% PWM → n = max  
10% PWM → n = min  
< 10% PWM → n = 0  
Safe start at Unom -30% from 40% PWM

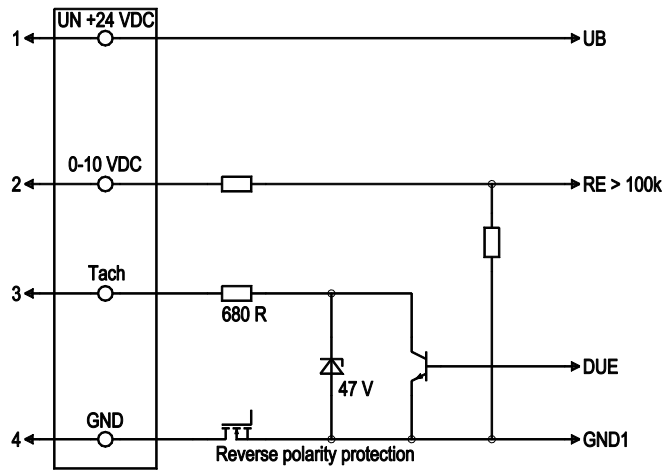
Set value requirement via temperature controller



T < 10 °C → n = 0  
T > 45 °C → n = max

### Connection

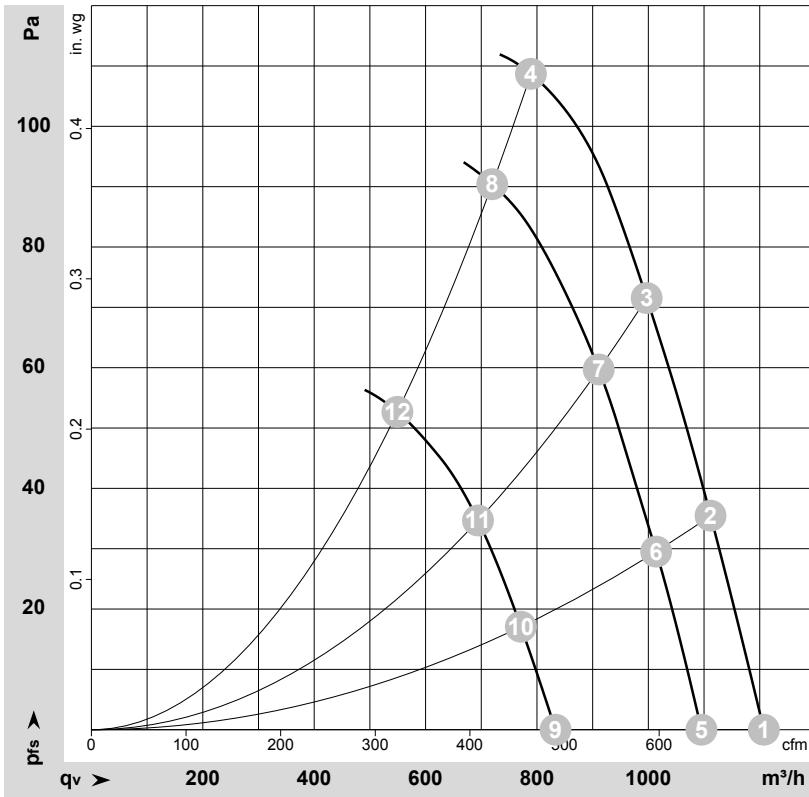
### Fan / Motor



No.	Conn.	Designation	Color	Function/assignment
1	1	Un +24 VDC	red	Power supply 24 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



## Curves: Air performance



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

Measurement: LU-48037-1  
 Measurement: LU-48036-1  
 Measurement: LU-48038-1

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 <sub>ed</sub>	I	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
1	28	3285	73	2.91	1205	0	710	0.00
2	28	3200	76	3.01	1110	37	655	0.15
3	28	3140	78	3.11	995	72	585	0.29
4	28	3060	83	3.27	790	109	465	0.44
5	24	2950	55	2.60	1095	0	645	0.00
6	24	2915	57	2.67	1015	30	595	0.12
7	24	2860	60	2.77	910	60	535	0.24
8	24	2785	63	2.89	720	90	425	0.36
9	16	2285	28	2.08	835	0	490	0.00
10	16	2245	28	2.10	770	18	455	0.07
11	16	2195	29	2.13	695	35	410	0.14
12	16	2145	30	2.18	550	53	325	0.21

U = Voltage · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

