W1G180-AB47-22

EC axial compact fan

W1G180-AB47-22 ebmpapst Datasheet
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Nominal data

Type	**W1G180-AB47-22**
Motor	**M1G074-BF**

Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min^{-1}	4600
Power consumption	W	100
Current draw	A	2.3
Max. back pressure	Pa	380
Max. back pressure	in. wg	1.53
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

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Technical description

Weight	1.8 kg
Size	180 mm
Motor size	74
Rotor surface	Galvanized
Impeller material	PA66 plastic, glass-fiber reinforced
Fan housing material	Die-cast aluminum, painted black
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection
EMC immunity to interference	According to EN 61000-6-2
EMC interference emission	According to EN 55022 (Class B)
Electrical hookup	Connector with cable
With cable	Lateral
Protection class assignment	III; Requires supply with safety extra-low voltage SELV. This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 62368-1
Approval	CSA C22.2 No. 77; CCC; UL 1004-1

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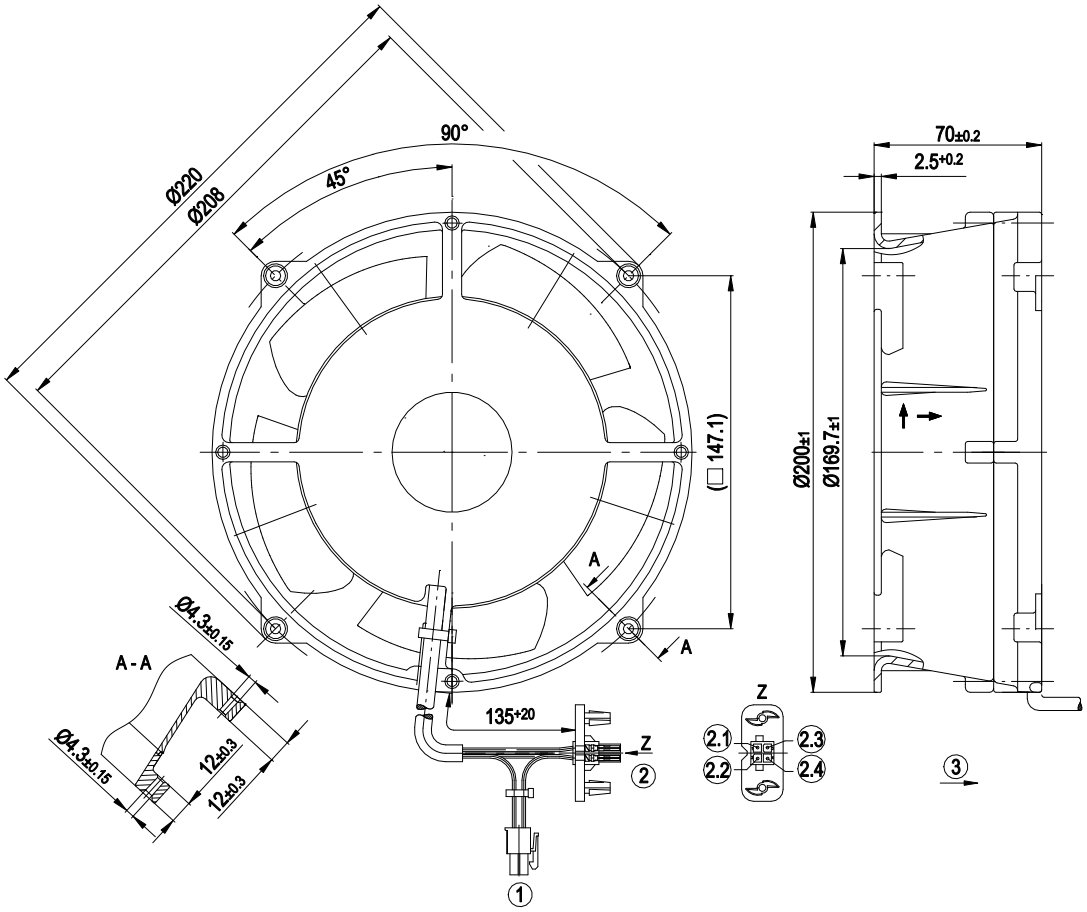
Product drawing



Z	View Z
1	Connector housing Molex no. 39-01-2025; mating connector (not included in scope of delivery); cable AWG20 with 2 sockets Molex no. 39-00-0163
1.1	red (switching contact)
1.2	red (switching contact)
2	Connector housing Molex no. 15-06-0041; mating connector (not included in scope of delivery); cable AWG20 with 4 sockets Molex no. 39-00-0163
2.1	blue (-)
2.2	yellow (control input)
2.3	white (s)
2.4	red (+)
3	Airflow direction "V"

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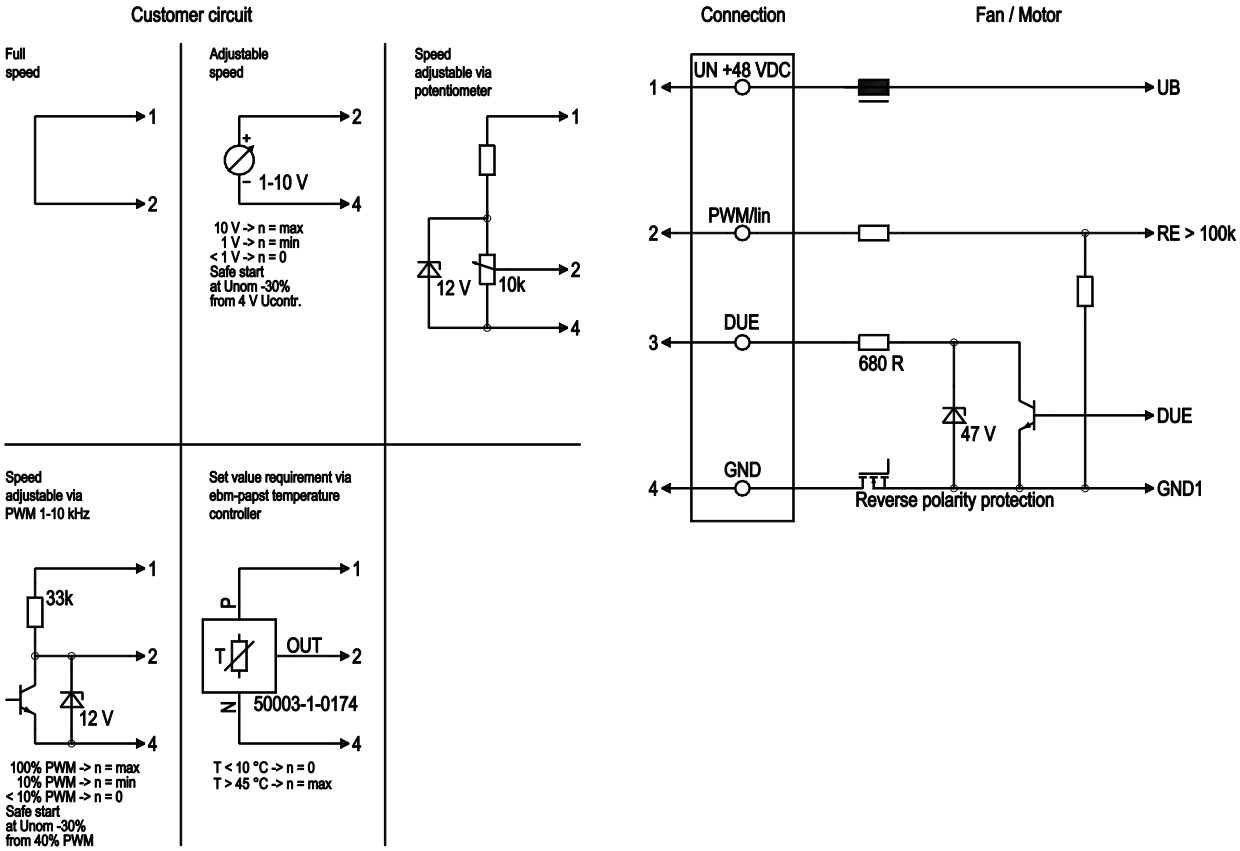
Connection diagram



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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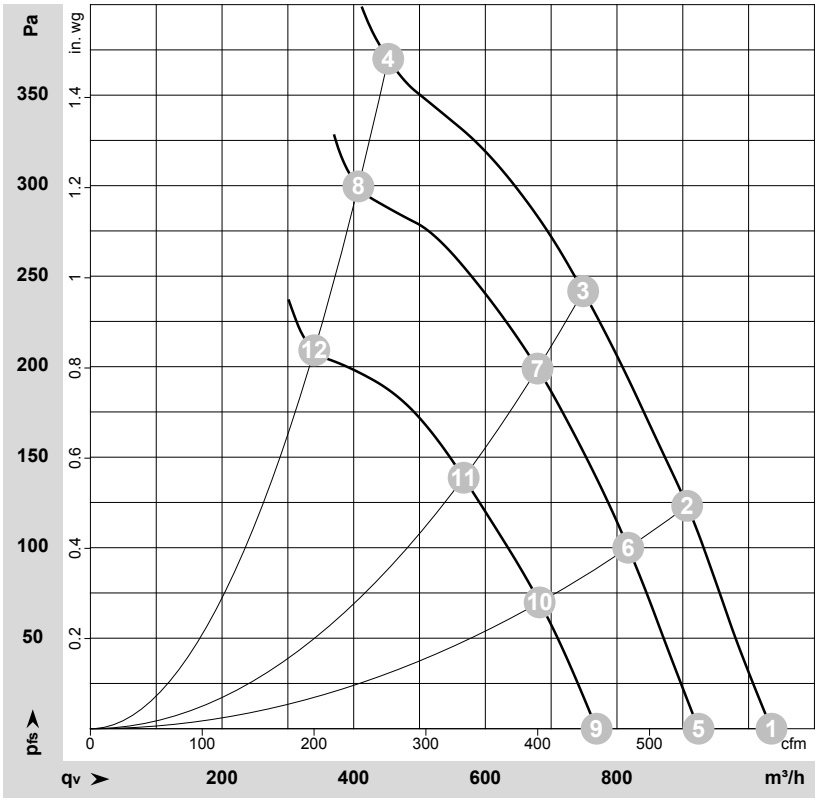
Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-50668-1
Measurement: LU-50667-1
Measurement: LU-50670-1

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	57	5170	134	2.65	1035	0	610	0.00
2	57	4980	141	2.83	905	124	535	0.50
3	57	4800	147	2.96	750	242	440	0.97
4	57	5000	141	2.81	450	369	265	1.48
5	48	4600	100	2.30	925	0	545	0.00
6	48	4505	106	2.47	815	100	480	0.40
7	48	4370	112	2.63	680	200	400	0.80
8	48	4555	105	2.45	405	300	240	1.20
9	36	3900	60	1.89	770	0	455	0.00
10	36	3780	64	2.00	685	70	400	0.28
11	36	3685	67	2.10	565	139	335	0.56
12	36	3820	63	1.96	340	207	200	0.83

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