W1G230-EB89-31

EC axial fan - ESM

sickle-shaped blades (S series)

ESM fan housing

W1G230-EB89-31 ebmpapst Datasheet
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Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**W1G230-EB89-31**		
Motor	**M1G055-BD**		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50/60	50/60
Method of obtaining data		ml	
Speed (rpm)	min^{-1}	1500	1000
Power consumption	W	26	
Current draw	A	0.2	
Max. back pressure	Pa	36	
Max. back pressure	in. wg	0.14	
Min. ambient temperature	°C	-30	-30
Max. ambient temperature	°C	50	50

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	0.98 kg
Size	230 mm
Motor size	55
Blade material	PA plastic
Fan housing material	PP plastic
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1+
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	- Speed setting input (230 V) - ESM+ expandable with plug-in module - Soft start - Thermal overload protection for motor
Speed levels	2
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Lateral
Protection class	II
Conformity with standards	EN 60335-1; EN 60335-2-24; EN 60335-2-80; EN 60335-2-89; EN 60034-1; EN 60204-1; CE
Approval	VDE; CSA C22.2 No. 77; EAC; UL 1004-3

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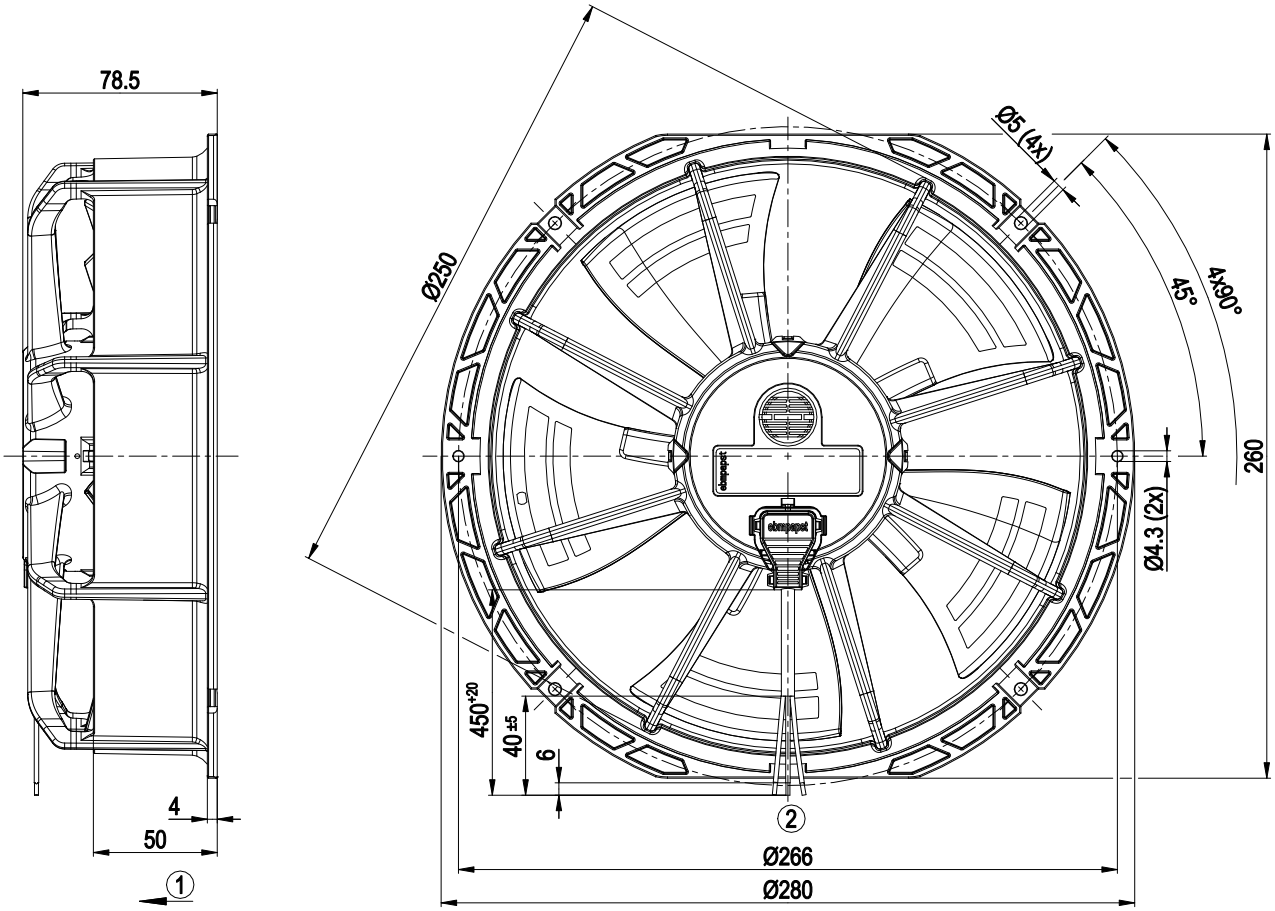
Product drawing



1	Airflow direction "V"
2	Cable PVC AWG20
	3x splice

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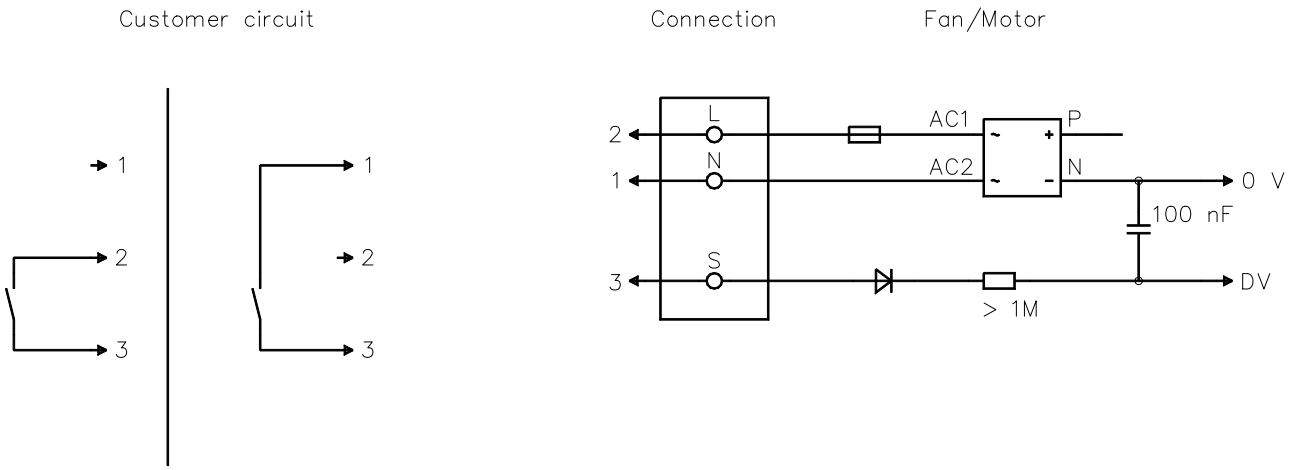
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	N		blue	Neutral conductor
2	L		black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
3	S		brown	Speed selection: switch open speed 1 (fast), switch closed speed 2 (slow)

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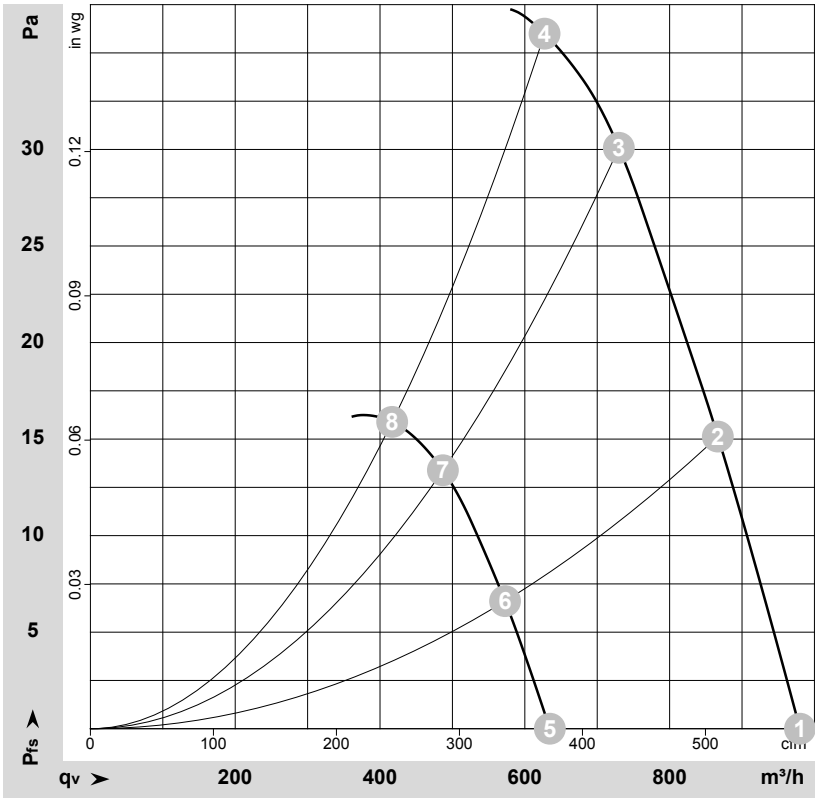
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-112479-1
Measurement: LU-112480-1

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	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	1500	24	0.19	51	58	980	0	575	0.00
2	230	50	1500	25	0.18	51	58	865	15	510	0.06
3	230	50	1500	25	0.19	50	58	730	30	430	0.12
4	230	50	1500	26	0.20	48	56	625	36	370	0.14
5	230	50	1000	10.0	0.09	39	48	635	0	375	0.00
6	230	50	1000	11	0.09	39	48	575	7	335	0.03
7	230	50	1000	11	0.10	40	48	485	13	285	0.05
8	230	50	1000	11	0.09	42	50	415	16	245	0.06

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase