

EC axial fan

sickle-shaped blades (S series), single-intake

ESM fan housing

W1G172-EC91-20 ebmpapst Datasheet

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Nominal data

Type	W1G172-EC91-20		
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	2500	1700
Power consumption	W	22	
Current draw	A	0.18	
Max. back pressure	Pa	60	
Max. back pressure	in. wg	0.24	
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



Technical description

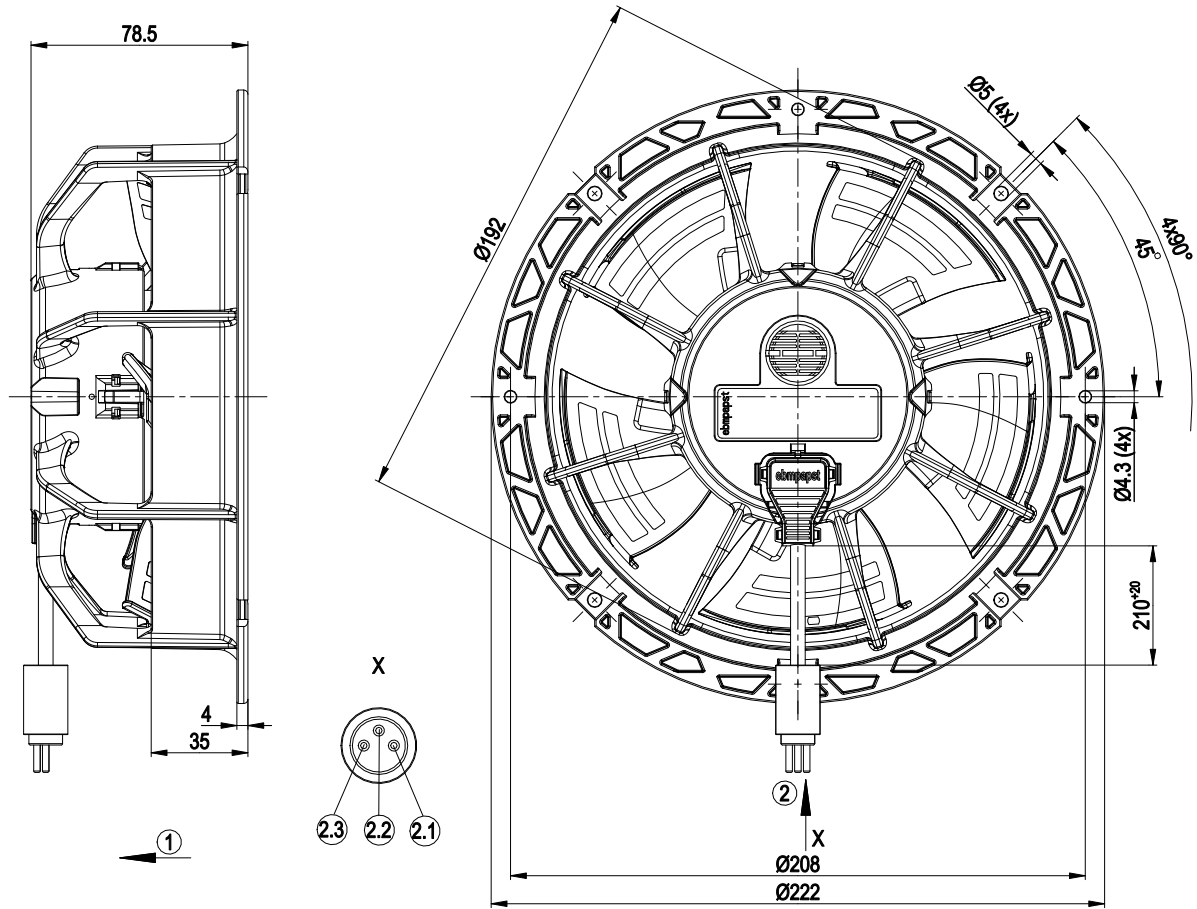
Weight	0.9 kg
Size	172 mm
Motor size	55
Blade material	PA plastic
Fan housing material	PP plastic
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1+
Max. 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	<ul style="list-style-type: none"> - Speed setting input (230 V) - ESM+ expandable with plug-in module - Soft start - Thermal overload protection for motor
Speed levels	2
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Electrical hookup	Connector with cable
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Lateral
Protection class	II
Conformity with standards	CE
Approval	CSA C22.2 No. 77; UL 1004-3

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Product drawing



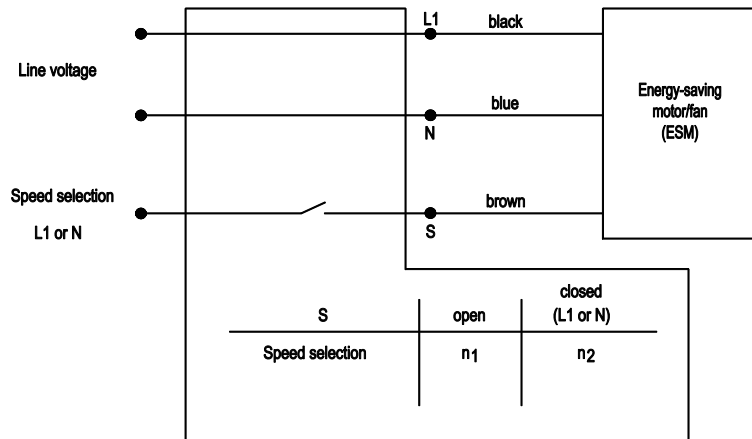
1	Direction of air flow "V"
2	Cable PVC AWG18, 3-pole connector housing EMF Corporation P-3-4-100, 3x plug contact HS United European 52 310 140
2.1	L (black)
2.2	Speed selection (brown)
2.3	N (blue)



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Connection diagram

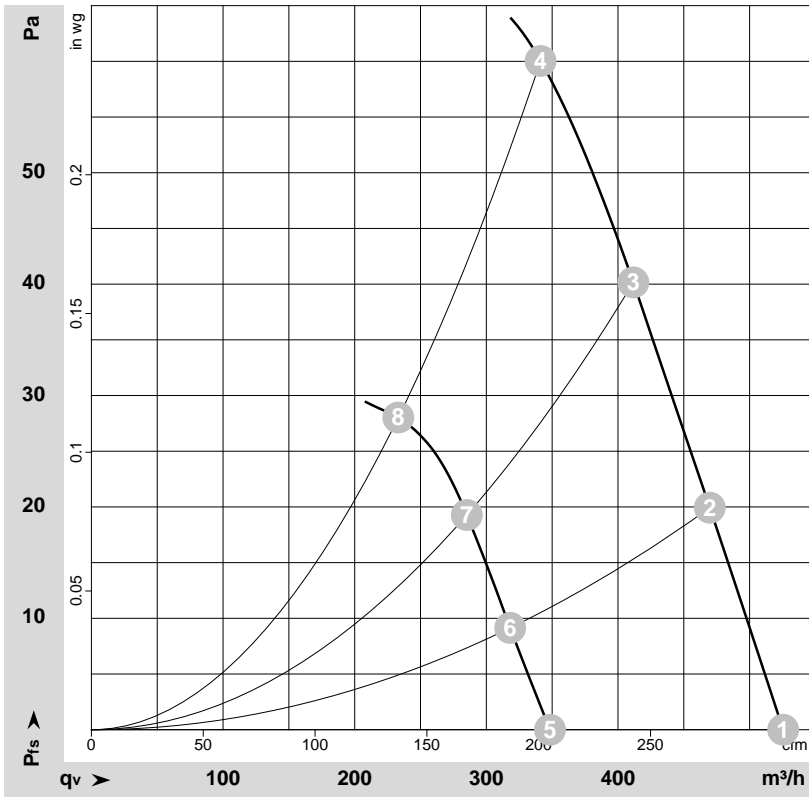


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Curves: Air performance 50 Hz



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

Measurement: LU-117884-1
Measurement: LU-117885-1

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

	Stage	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	2	230	50	2500	21	0.17	54	62	525	0	310	0.00
2	2	230	50	2500	22	0.18	55	63	470	20	275	0.08
3	2	230	50	2500	22	0.18	54	63	410	40	240	0.16
4	2	230	50	2500	22	0.18	55	63	340	60	200	0.24
5	1	230	50	1700	9.0	0.07	45	54	350	0	205	0.00
6	1	230	50	1700	10.0	0.08	44	53	320	9	185	0.04
7	1	230	50	1700	11	0.08	44	53	285	19	170	0.08
8	1	230	50	1700	10.0	0.08	45	54	235	28	135	0.11

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

