

K1G190-AD50-02

# EC centrifugal module - ESM

backward-curved  
with support bracket



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## Nominal data

Type	K1G190-AD50-02		
Motor	M1G055-BD		
Phase		1~	1~
Nominal voltage	VAC	115	115
Frequency	Hz	50/60	50/60
Method of obtaining data		ml	
Speed (rpm)	min <sup>-1</sup>	2000	1600
Power consumption	W	30	
Current draw	A	0.45	
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



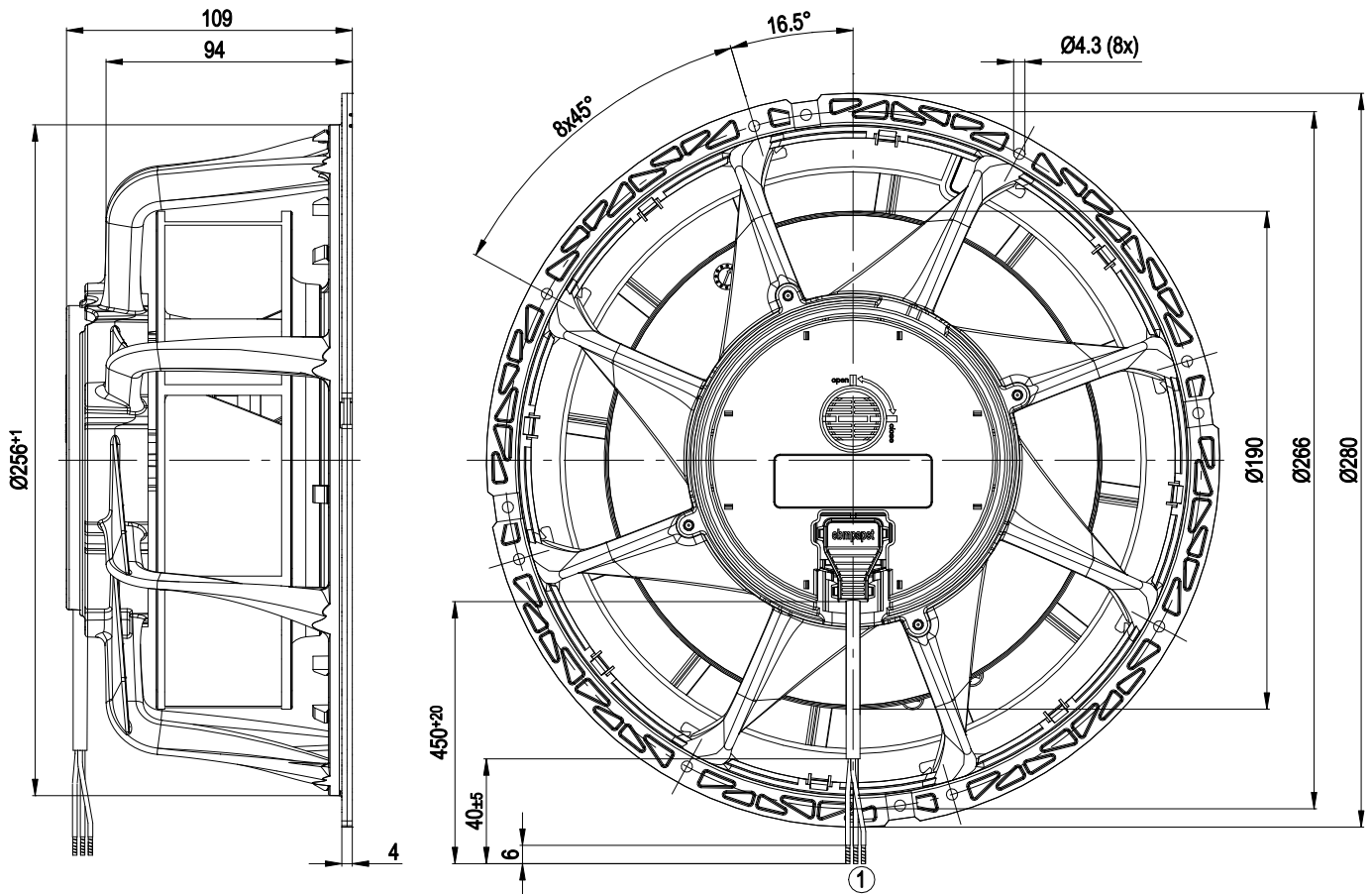
## Technical description

<b>Weight</b>	1.3 kg
<b>Fan size</b>	190 mm
<b>Rotor surface</b>	Galvanized
<b>Blade material</b>	PA plastic
<b>Support bracket material</b>	PA plastic
<b>Inlet nozzle material</b>	PA plastic
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP54
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	H1
<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>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Speed selection max./min.</li> <li>- ESM+ expandable with plug-in module</li> <li>- Soft start</li> <li>- Thermal overload protection for motor</li> </ul>
<b>Speed levels</b>	2
<b>EMC immunity to interference</b>	According to EN 61000-6-2
<b>EMC circuit feedback</b>	According to EN 61000-3-2/3
<b>EMC interference emission</b>	According to EN 61000-6-3 (household environment)
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected
<b>Protection class</b>	II
<b>Conformity with standards</b>	EN 60335-1; EN 60335-2-24; EN 60335-2-80; EN 60335-2-89; CE
<b>Approval</b>	UL 1004-3; VDE; EAC; CSA C22.2 No. 77

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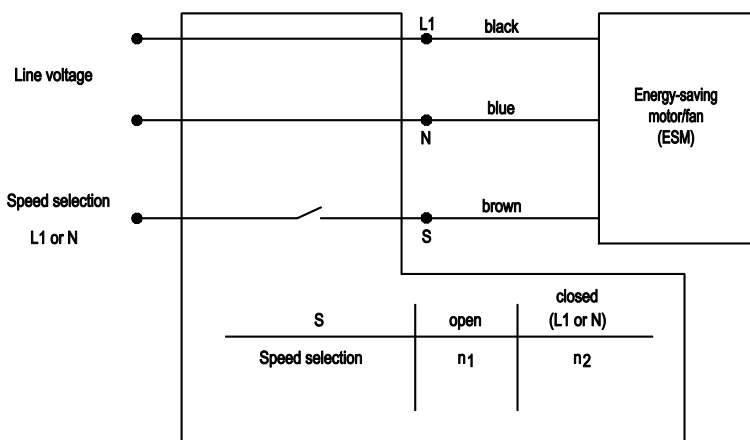
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## Product drawing

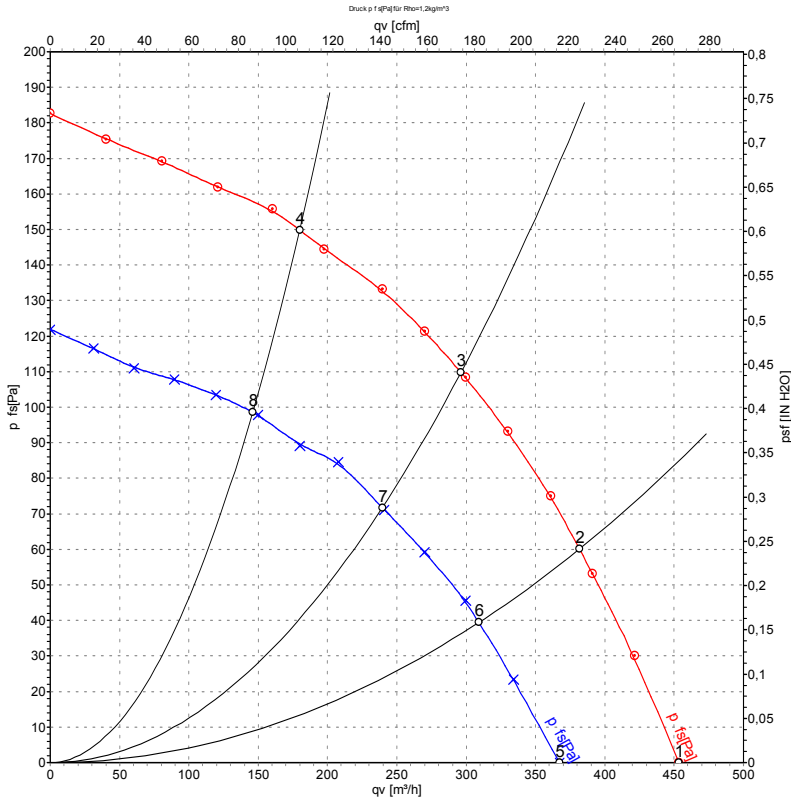


1 Cable AWG20, 3x crimped splices

## Connection diagram



## Curves: Air performance 50 Hz



Measurement: LU-135445-1  
Measurement: LU-135450-1

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 <sub>ed</sub>	I	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	inH <sub>2</sub> O
1	115	50	2000	21	0.34	455	0	265	0.00
2	115	50	2000	25	0.38	380	60	225	0.24
3	115	50	2000	30	0.45	295	110	175	0.44
4	115	50	2000	26	0.39	180	150	105	0.60
5	115	50	1600	13	0.19	365	0	215	0.00
6	115	50	1600	15	0.25	310	40	180	0.16
7	115	50	1600	17	0.27	240	72	140	0.29
8	115	50	1600	15	0.26	145	99	85	0.40

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

