

K3G097-AP26-12

# EC dual centrifugal fan

forward-curved, with brushless DC motor  
with housing, Automotive



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## Nominal data

Type	K3G097-AP26-12	
Motor	M3G084-BF	
Nominal voltage	VDC	13
Nominal voltage range	VDC	8 .. 16
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	3150
Power consumption	W	245
Current draw	A	19
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	75
-with power derating to	°C	85

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



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## Technical description

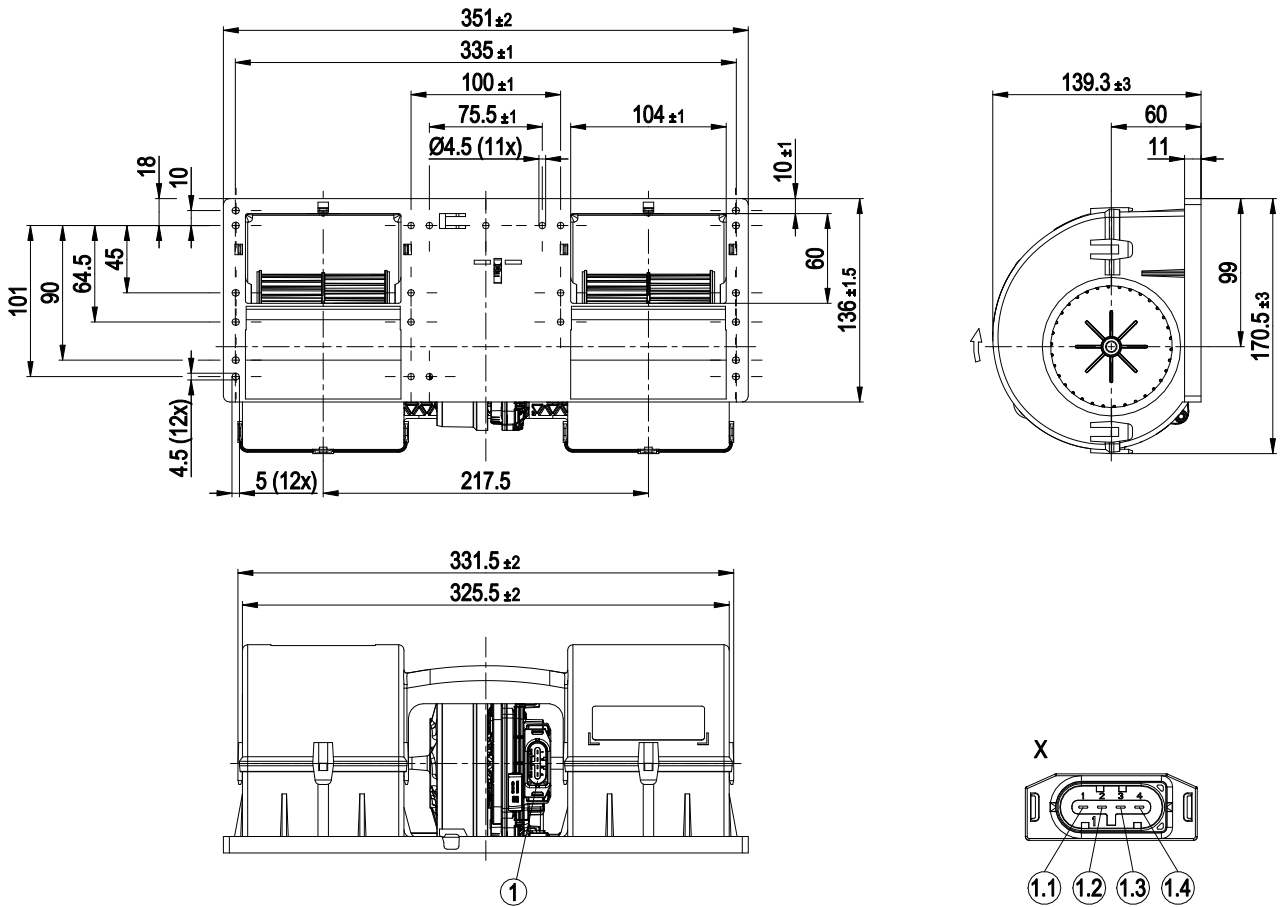
<b>Weight</b>	1.96 kg
<b>Size</b>	97 mm
<b>Motor size</b>	84
<b>Impeller material</b>	PA plastic
<b>Housing material</b>	PP plastic
<b>Balancing grade according to DIN ISO 21940-11</b>	G 2.5
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	Motor IP24 KM, electronics IP6K9K (mating connector installed)
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	H4
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+85 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None, open rotor
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing; (sealed)
<b>Life expectancy</b>	40,000 h (depending on load profile and ambient conditions)
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Locked-rotor detection</li> <li>- Error output (high-side switch)</li> <li>- Power limiter</li> <li>- Load dump protection</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Temperature derating</li> <li>- Thermal overload protection for electronics</li> <li>- Reverse polarity protection</li> </ul>
<b>Electrical hookup</b>	Plug; Standby current less than 500 µA
<b>Protection class assignment</b>	<p>III; Requires supply with safety extra-low voltage SELV.</p> <p>This component for installation may have several local protection classes. This information relates to this component's basic design.</p> <p>The final protection class is based on the component's intended installation and connection. If there is a PE connection point on the housing, it must not be visible after installation.</p>
<b>Comment on CE</b>	<p>Ecodesign Directive 2009/125/EC + Fan Regulation (EC) No. 327/2011 does not apply, as use only in means of transport for transporting persons or goods.</p>



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## Product drawing



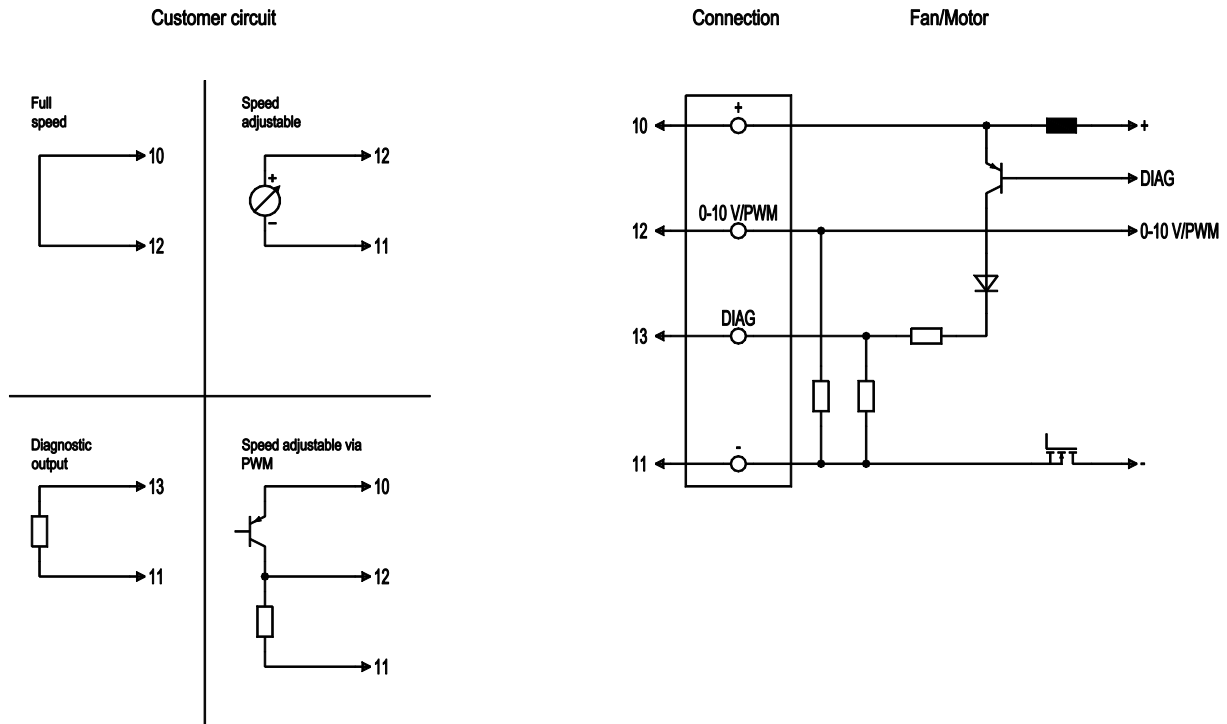
1	4-pole plug, pluggable with cable from accessories
1.1	Diagnostic output
1.2	PWM/LIN
1.3	+ UB
1.4	GND
Accessory part: Cable (460 mm) with mating connector, part no. 02040-4-1021 not included in scope of delivery 4-pole mating connector TE 1-1718628-1, 2x plug contact TE 1-968857-1, 2x plug contact TE 1-968855-1, 2x seal TE 828905-1, 2x seal TE 828904-1	



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## Connection diagram



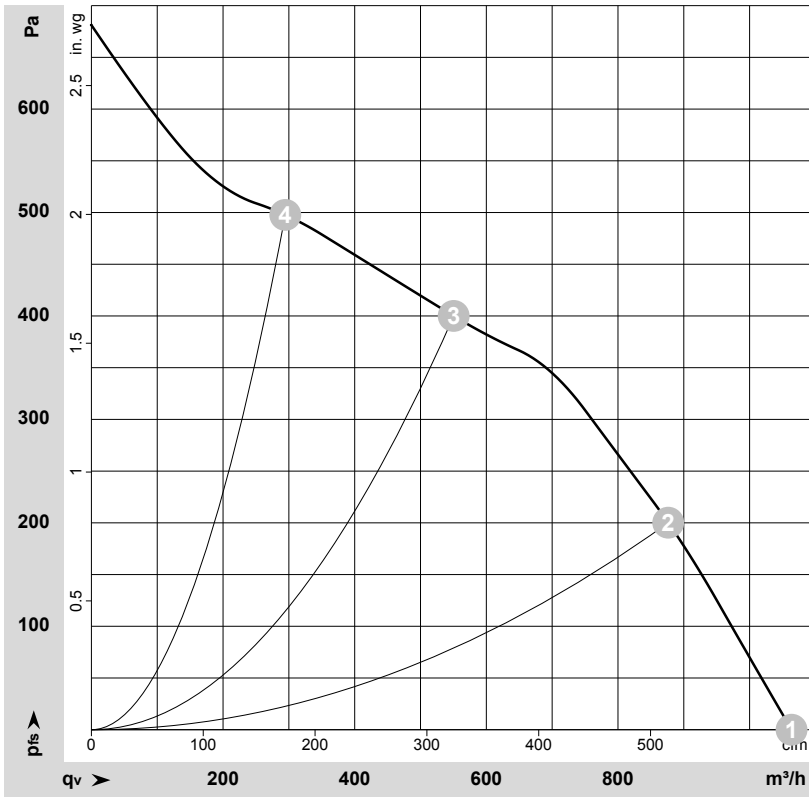
No.	Conn.	Designation	Function/assignment
10	1.3	+	Power supply +
11	1.4	-	Power supply -
12	1.2	0-10 V / PWM	Control input: $R_i > 27\text{ k}\Omega$ 0-10 V: (typ. $< 0.5\text{ V} \rightarrow$ standby; $1.5\text{ V} \rightarrow n = \text{min.}$ ; $> 9.5\text{ V} \rightarrow n = \text{max.}$ ) or PWM: ( $12\text{ V} - U_b$ ; $1\text{ kHz} - 10\text{ kHz}$ ; typ. $< 1\% \rightarrow$ standby; $10\% \rightarrow n = \text{min.}$ ; $> 95\% \rightarrow n = \text{max.}$ )
13	1.1	DIAG	Diagnostic output: Open Collector, $I_{\text{source max}} = 10\text{ mA}$ , $R_{\text{source}} = 2\text{ k}\Omega$ ; $R_{\text{sink}} = 100\text{ k}\Omega$ fan OK $\rightarrow$ low; fan error $\rightarrow$ high



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## Curves: Air performance



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

Measurement: LU-203914-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	13	3150	245	19.00	1065	0	625	0.00
2	13	3475	210	16.06	875	200	515	0.80
3	13	3920	153	11.72	550	400	325	1.61
4	13	4220	105	8.06	295	500	175	2.01

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

