

K3G097-AK28-75

EC dual centrifugal fan

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



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Nominal data

Type	K3G097-AK28-75	
Motor	M3G074-CF	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min ⁻¹	3600
Power consumption	W	345
Current draw	A	13.2
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	47.3	33.1	09 Power consumption P_e	kW	0.18
02 Measurement category		A		09 Air flow q_v	m ³ /h	425
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	677
04 Efficiency grade N		58.2	44	10 Speed (rpm) n	min ⁻¹	4950
05 Variable speed drive		Yes		11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-215252

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).



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Technical description

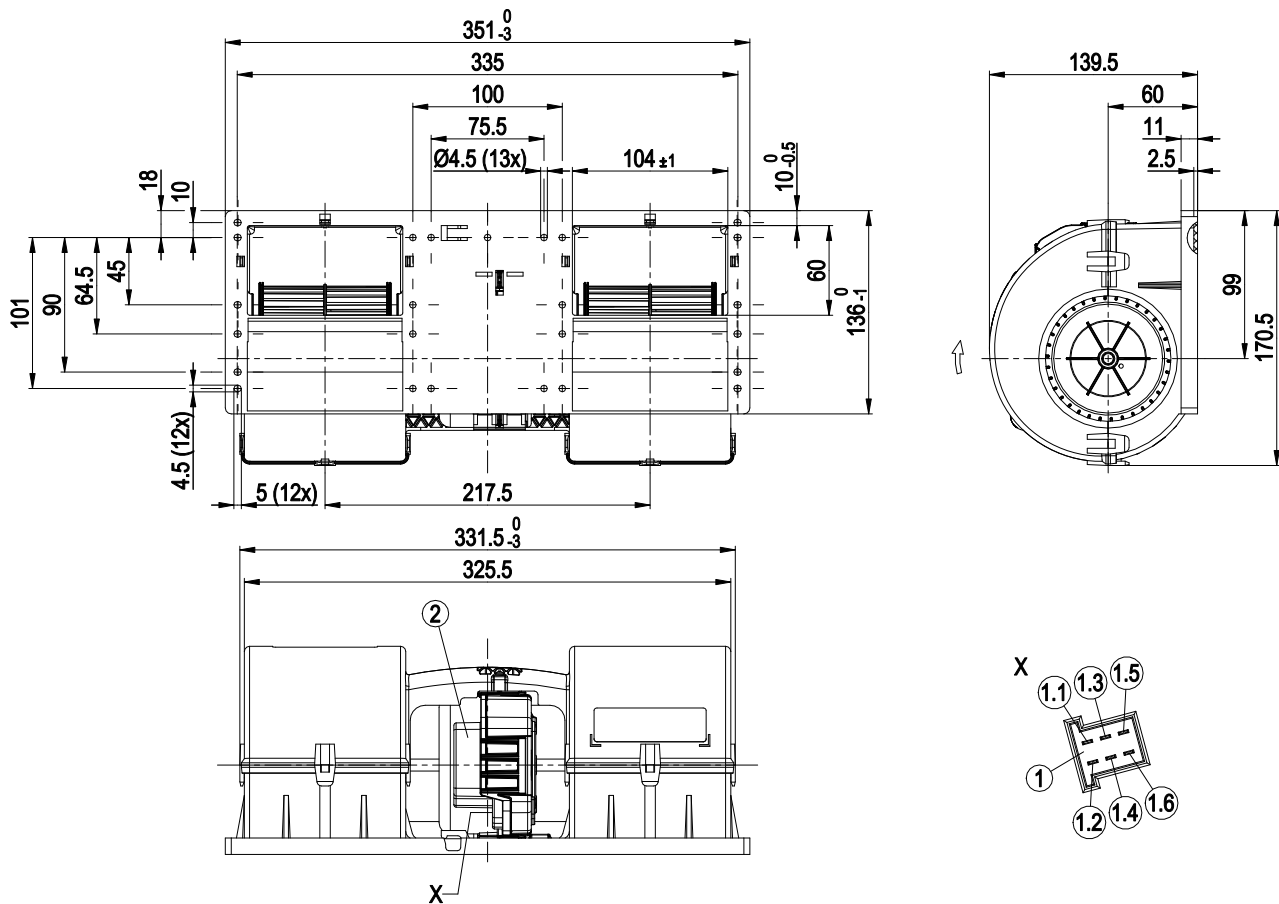
Weight	2.2 kg
Size	97 mm
Motor size	74
Impeller material	PA plastic UL94 HB (black)
Housing material	PP plastic (black)
Balancing grade according to DIN ISO 21940-11	G 6.3
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+85 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancy	40,000 h (typical)
Technical features	<ul style="list-style-type: none"> - Locked-rotor detection - Power limiter - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Overvoltage detection - Thermal overload protection for electronics - Line undervoltage detection
Electrical hookup	Plug; Standby current less than 500 µA
Motor protection	Passive reverse polarity and locked-rotor protection
Protection class assignment	<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.</p>



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Product drawing



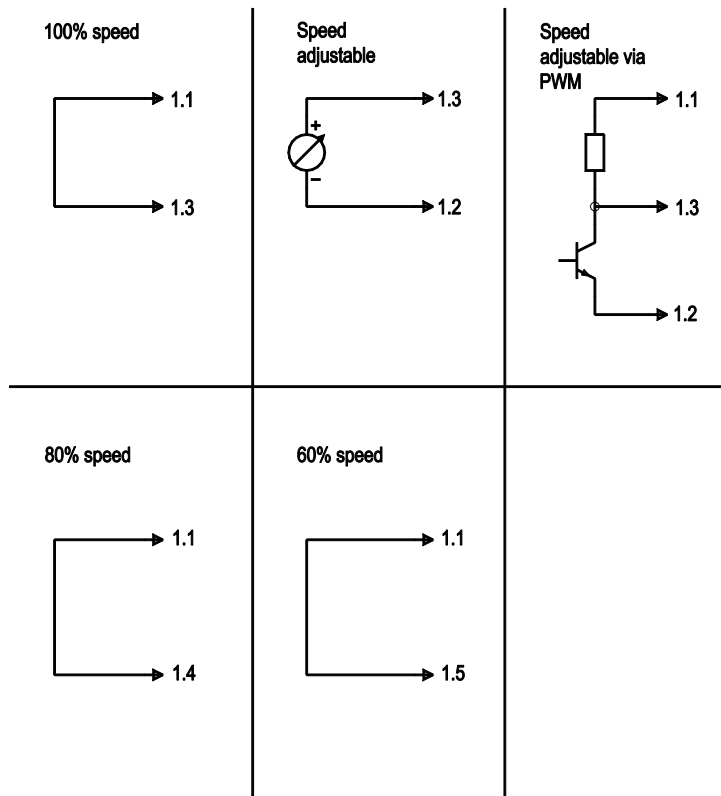
1	6-pole header TE Junior Power Timer WE_9901118
1.1	+ UB
1.2	GND
1.3	PWM/LIN, 100% speed
1.4	80% speed
1.5	60% speed
1.6	not used
Accessory part: Cable (460 mm) with mating connector, part no. 02001-4-1021 not included in scope of delivery 6-pole mating connector TE 929504-2, 4x plug contact TE 927771-1, 2x plug contact TE 927768-1	
2	Electronics cover blue (RAL 5015)

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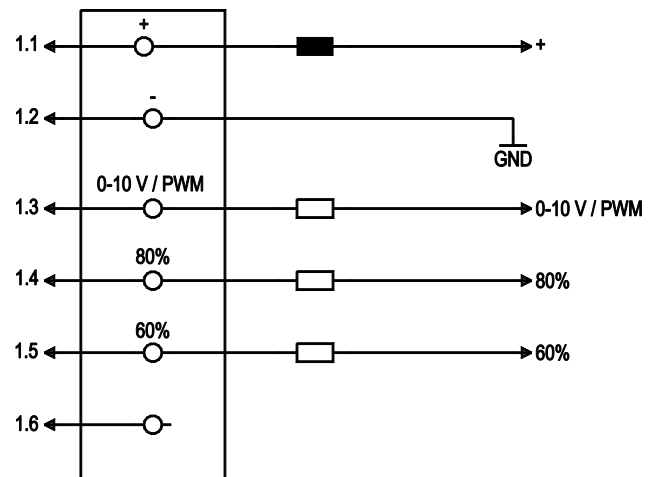
Connection diagram

Customer circuit



Connection

Fan/Motor

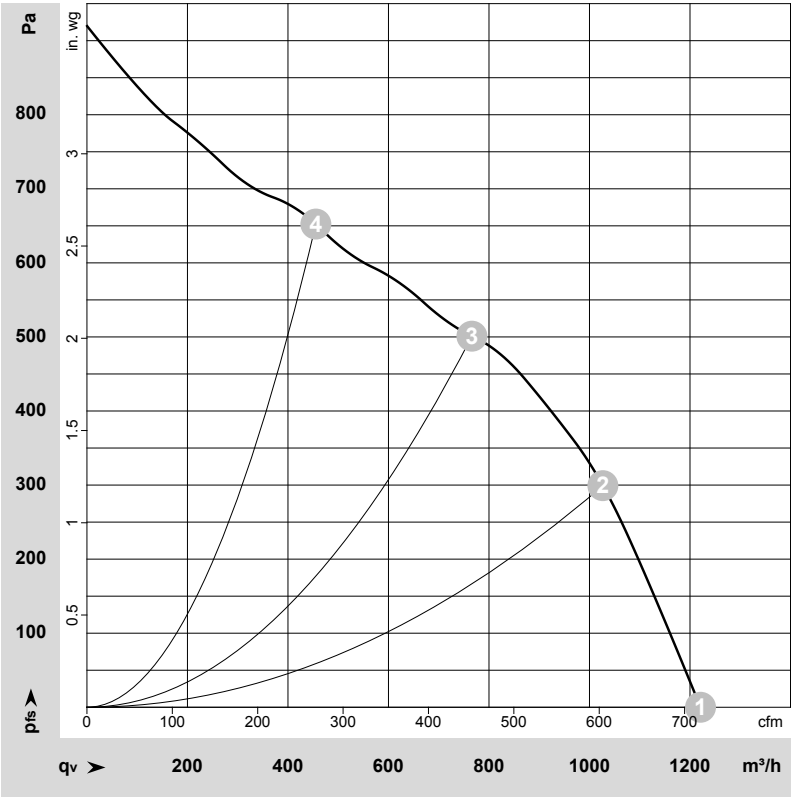


No.	Conn.	Designation	Function/assignment
	1.1	+	Power supply
	1.2	-	Power supply
	1.3	0-10 V / PWM	Control input: $R_i > 47\text{ k}\Omega$ 0-10 V (typ. $< 1\text{ V} \rightarrow n=0$; $1.2\text{ V} \rightarrow n=\text{min}$; $> 10\text{ V} \rightarrow n=\text{max}$) or PWM (amplitude = power supply; 10 kHz-50kHz)
	1.4	80%	Control input: $R_i > 47\text{ k}\Omega$ 80% speed level
	1.5	60%	Control input: $R_i > 47\text{ k}\Omega$ 60% speed level
	1.6		not used

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Curves: Air performance



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

Measurement: LU-215252-1

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	26	3600	345	13.20	1220	0	720	0.00
2	26	4220	345	13.20	1025	300	605	1.20
3	26	4540	277	10.65	765	500	450	2.01
4	26	4905	198	7.61	455	650	270	2.61

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

