K3G097-BK34-65

EC dual centrifugal fan

forward-curved, with brushless DC motor

with housing, Automotive



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G097-BK34-65**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		ml
Speed (rpm)	min^{-1}	4040
Power consumption	W	344
Current draw	A	13.3
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	45.5	33.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.6	44
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.25
09 Air flow q_v	m³/h	705
09 Pressure increase p_{fs}	Pa	526
10 Speed (rpm) n	min^{-1}	4505
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-74436

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Technical description

Weight	2.2 kg
Fan size	97 mm
Impeller material	PA plastic
Housing material	PP plastic
Number of blades	34
Balancing grade according to DIN ISO 1940-1	G 2.5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP24 KM
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-2
Max. permitted ambient temp. for motor (transport/storage)	+85 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancy	40,000 h (typical)
Technical features	-Start at 85 °C (2 min) permitted - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection - Thermal overload protection for electronics - Line undervoltage detection
EMC regulations	According to ECE R10 Rev. 3
Electrical hookup	With plug; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Approval	EAC; E1
Sound level	76 dB(A), sound power level according to ISO 13347
Comment	Not approved for continuous operation at maximum back pressure and 85 °C; type approval number – 036432

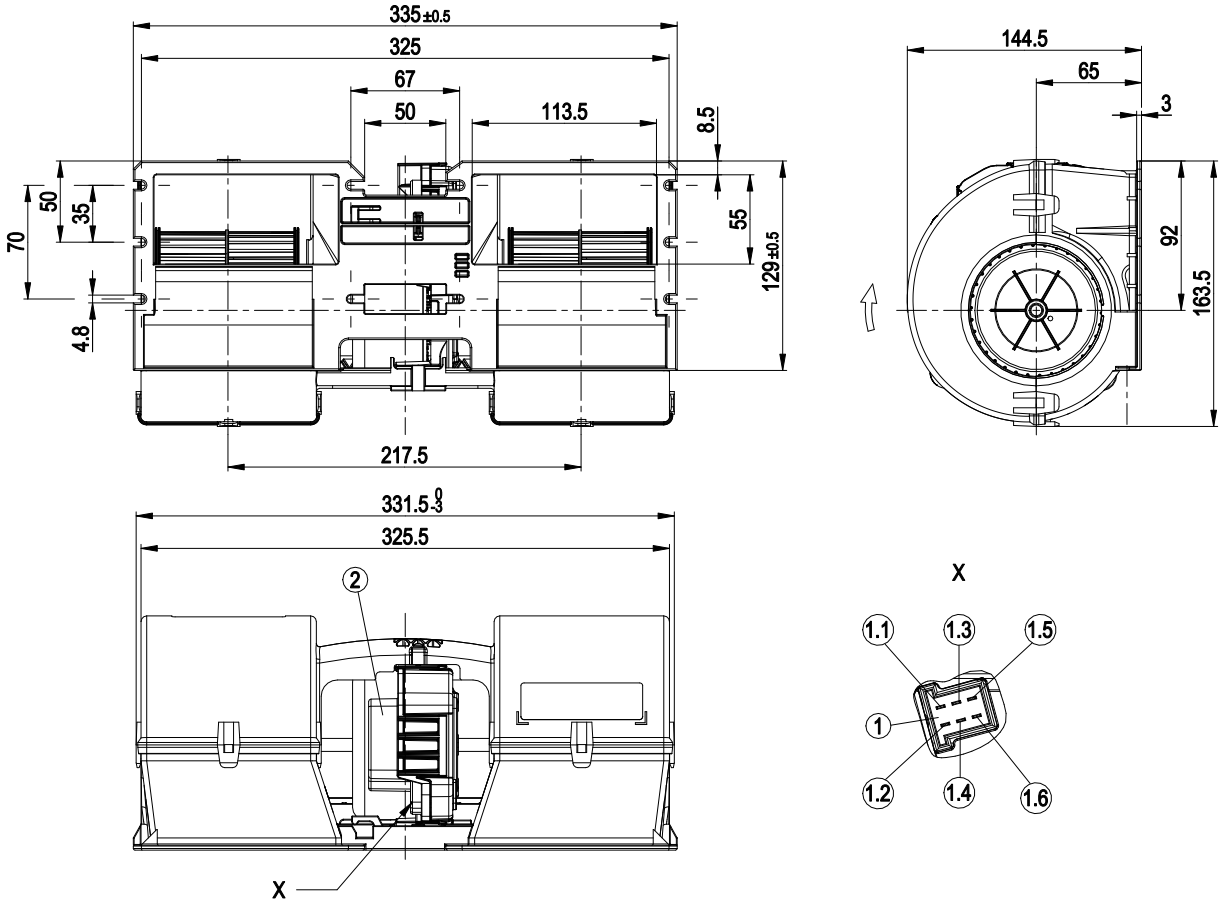
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Product drawing



1	6-pole coded header tyco Junior Power Timer
	cable (460 mm) with mating connector, part no. 02001-4-1021 not included in scope of delivery
1.1	+ UB
1.2	GND
1.3	PWM/LIN, 100% speed
1.4	80% speed
1.5	60% speed
1.6	not used
2	Electronics cover blue (RAL 5015)

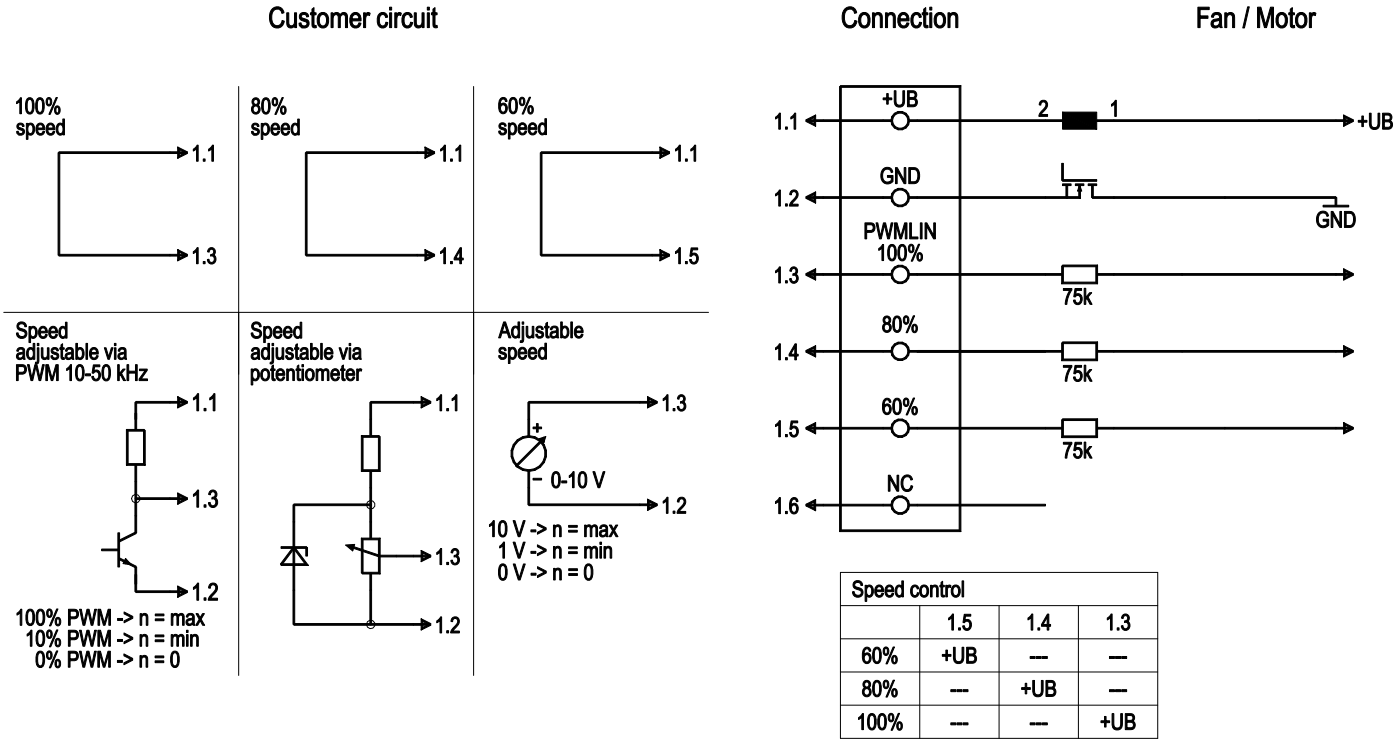
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Connection diagram



Speed control			
	1.5	1.4	1.3
60%	+UB	---	---
80%	---	+UB	---
100%	---	---	+UB

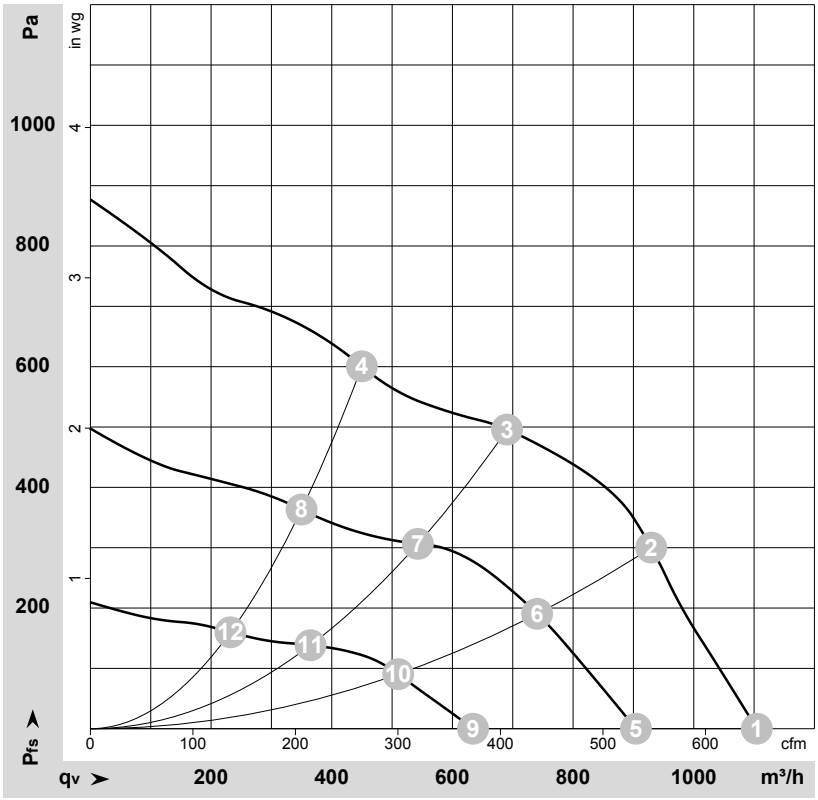
No.	Conn.	Designation	Function/assignment
	1.1	+UB	Power supply
	1.2	GND	Power supply GND, reference ground
	1.3	100%, PWM/LIN	100% speed, analog voltage control input 0-10 V or PWM
	1.4	80%	80% speed
	1.5	60%	60% speed
	1.6	NC	Not used / no function

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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-74386-1
Measurement: LU-74387-1
Measurement: LU-74388-1

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	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
		V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	3	26	4040	344	13.30	70	81	1105	0	650	0.00
2	3	26	4275	306	11.81	70	81	930	300	545	1.20
3	3	26	4595	251	9.68	69	80	690	500	405	2.01
4	3	26	4795	218	8.39	69	80	450	600	265	2.41
5	2	26	3305	186	7.18			905	0	530	0.00
6	2	26	3425	158	6.10			740	194	435	0.78
7	2	26	3615	128	4.95			545	306	320	1.23
8	2	26	3735	107	4.12			350	363	205	1.46
9	1	26	2325	67	2.58			635	0	375	0.00
10	1	26	2385	58	2.26			510	90	300	0.36
11	1	26	2455	45	1.72			365	139	215	0.56
12	1	26	2505	38	1.45			230	160	135	0.64

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

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