K3G097-AK32-42

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-AK32-42**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	13
Nominal voltage range	VDC	9 .. 15
Method of obtaining data		ml
Speed (rpm)	min-1	3630
Power consumption	W	195
Current draw	A	15
Min. back pressure	Pa	300
Min. back pressure	inH2O	1.2
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	32.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		57	44
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.15
09 Air flow q_v	m³/h	495
09 Pressure increase p_{fs}	Pa	447
10 Speed (rpm) n	min-1	4005
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-115537

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Technical description

Weight	2.4 kg
Fan size	97 mm
Impeller material	PA plastic UL94 HB (black)
Housing material	PP plastic (black)
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 - Tach output - Fault output (open collector) - Load dump protection - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics
Electrical hookup	Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Approval	EAC
Sound level	76 dB(A), sound power level according to ISO 13347
Comment	Short-duration operation up to 85 °C possible (<2 min)

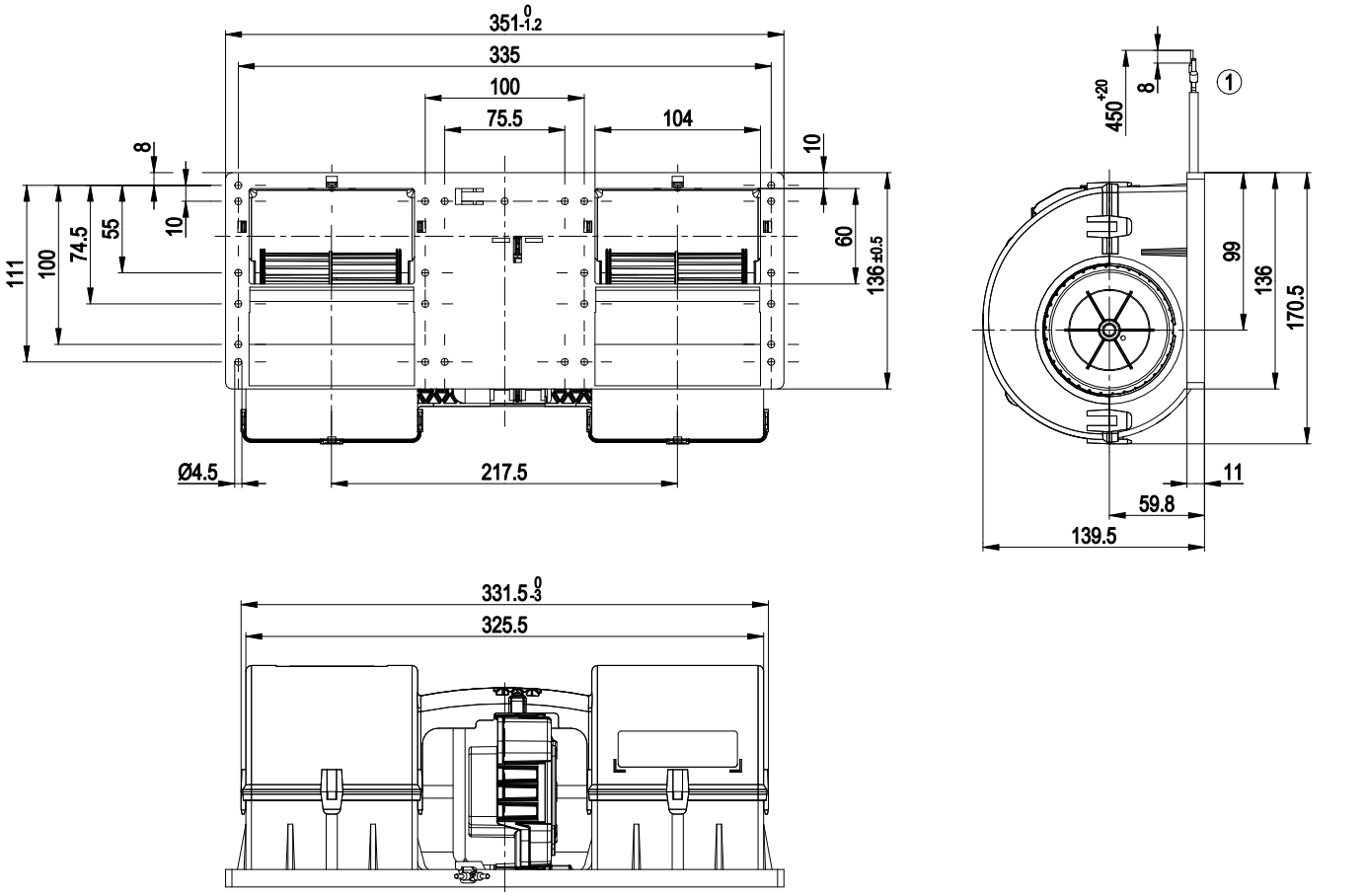
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Product drawing



1	Cable FLRY 2x 2.5 mm², FLRY 1x 0.75 mm², 3x crimped ferrules
	+ UB (black)
	PWM/LIN (yellow)
	GND (brown)

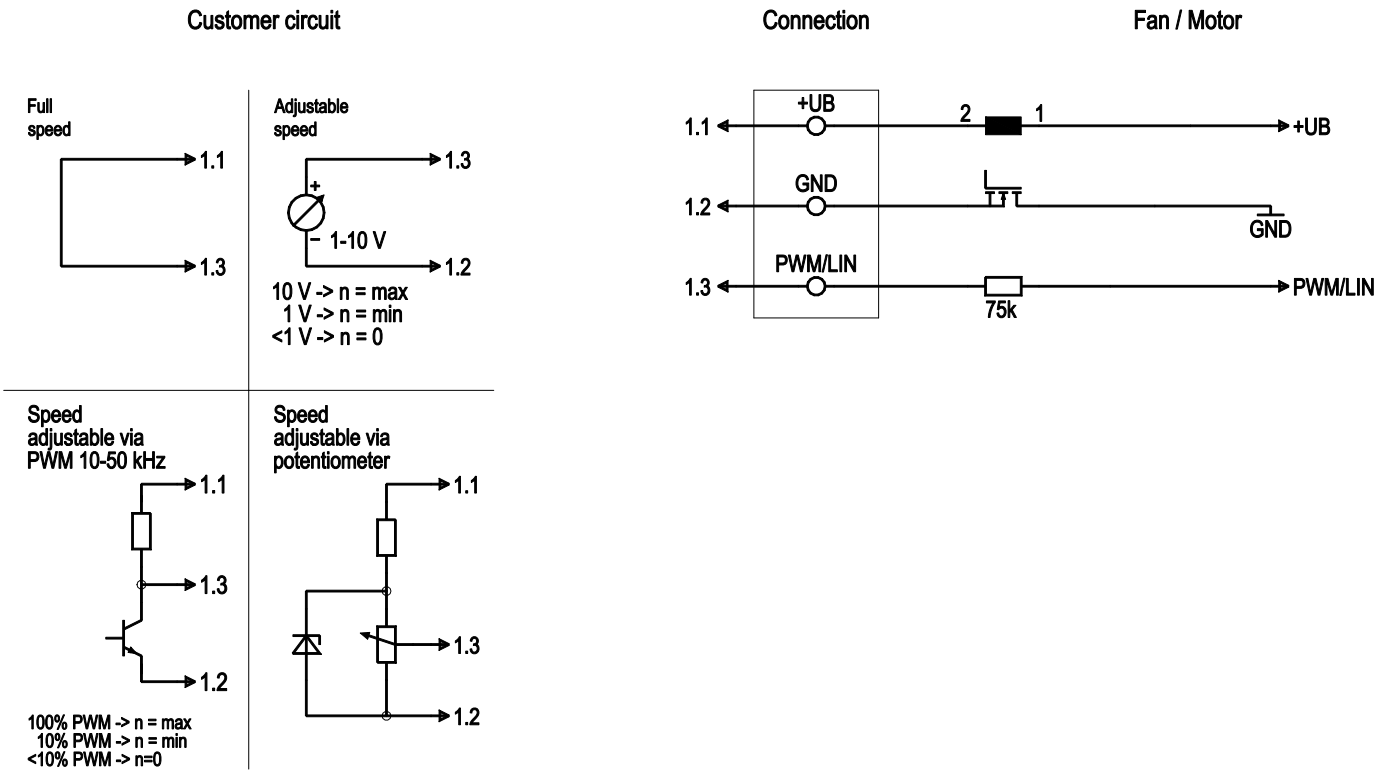
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	1.1	+UB	black	Power supply
	1.2	GND	brown	Power supply GND, reference ground
	1.3	PWM/LIN	yellow	Analog voltage control input 0-10 V or PWM

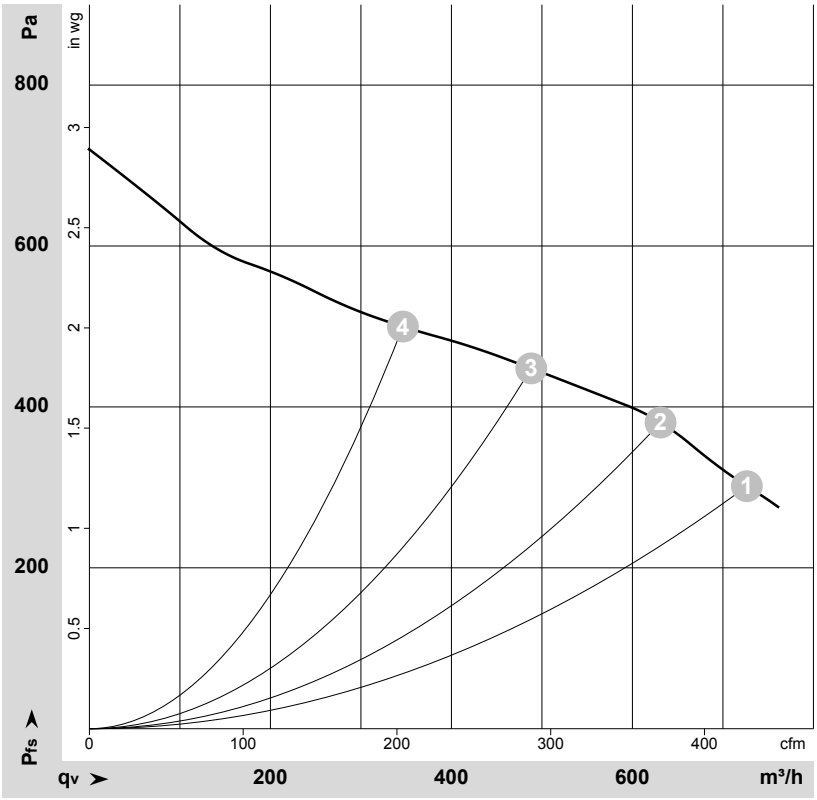
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Curves: Air performance



ρ = 1.176 kg/m³ ± 2 %

Measurement: LU-115537-1

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	qv	p_{fs}	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	13	3630	195	15.00	725	300	425	1.20
2	13	3825	182	13.96	630	380	370	1.53
3	13	4010	153	11.76	490	450	285	1.81
4	13	4240	132	10.15	345	500	205	2.01

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

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