K3G097-AS82-82

EC dual centrifugal fan

forward-curved, with brushless DC motor
with housing, for rail applications



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Nominal data

Type	**K3G097-AS82-82**
Motor	**M3G084-BF**

Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Frequency	Hz	DC
Method of obtaining data		ml
Speed (rpm)	min^{-1}	4680
Power consumption	W	740
Current draw	A	28
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}	%	45.4	35.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.2	44
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.4
09 Air flow q_v	m^3/h	725
09 Pressure increase p_{fs}	Pa	817
10 Speed (rpm) n	min^{-1}	5510
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-175168

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Technical description

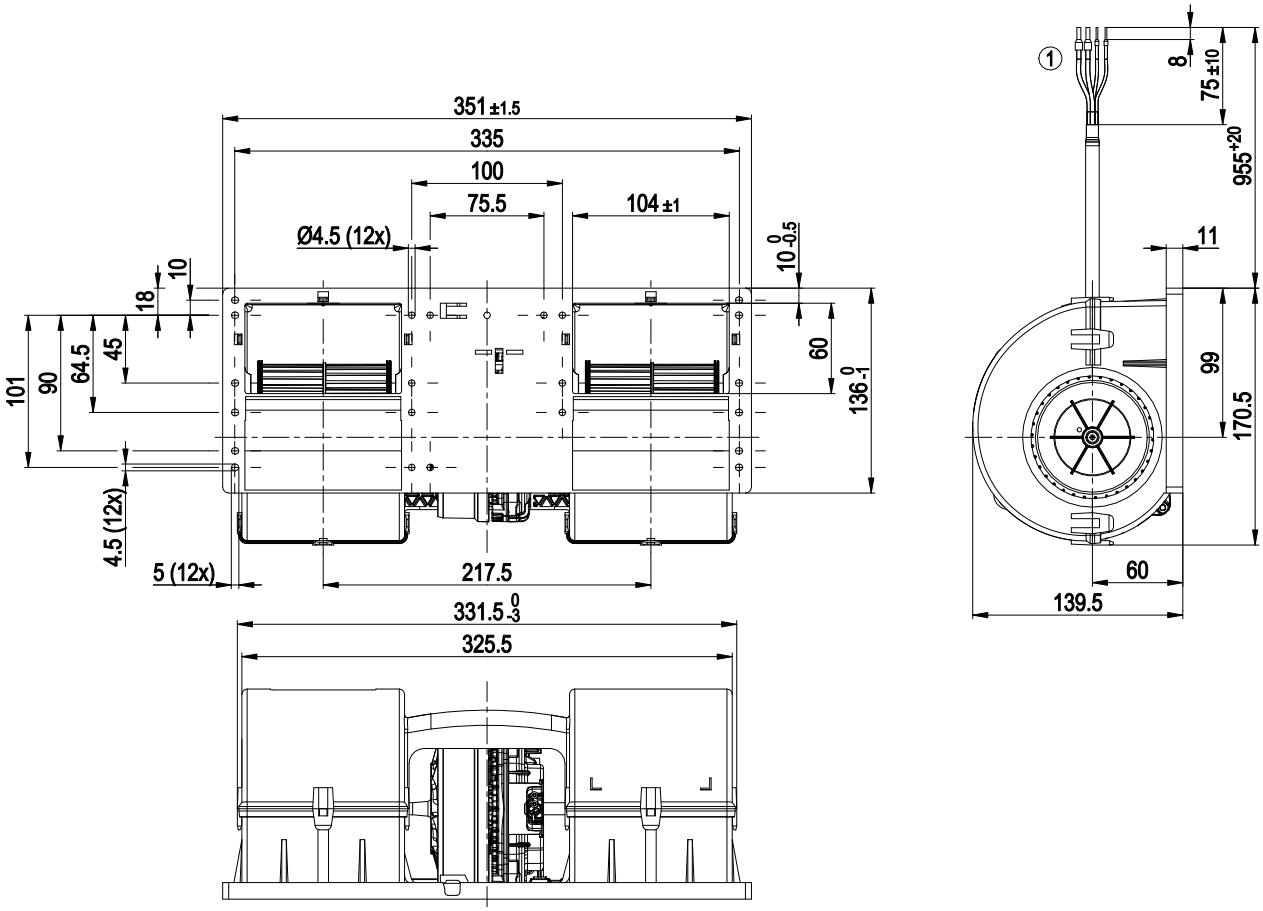
Weight	2.3 kg
Size	97 mm
Motor size	84
Impeller material	PA plastic UL94 V0
Housing material	PA plastic UL94 V0
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H3
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
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancy	40,000 h (typical)
Technical features	- Fault output (open collector) - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Temperature derating (Fault message via diagnostic output in derating operation) - Overvoltage detection - Thermal overload protection for electronics - Reverse polarity protection
EMC regulations	According to EN 50121-3-2
Electrical hookup	Standby current less than 500 µA
Protection class assignment	III; Requires supply with safety extra-low voltage SELV. This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 15085-1, CPC3; EN 45545-2, HL3; EN 50155; EN 61373, Cat. 1B; CE
Approval	EAC

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Product drawing



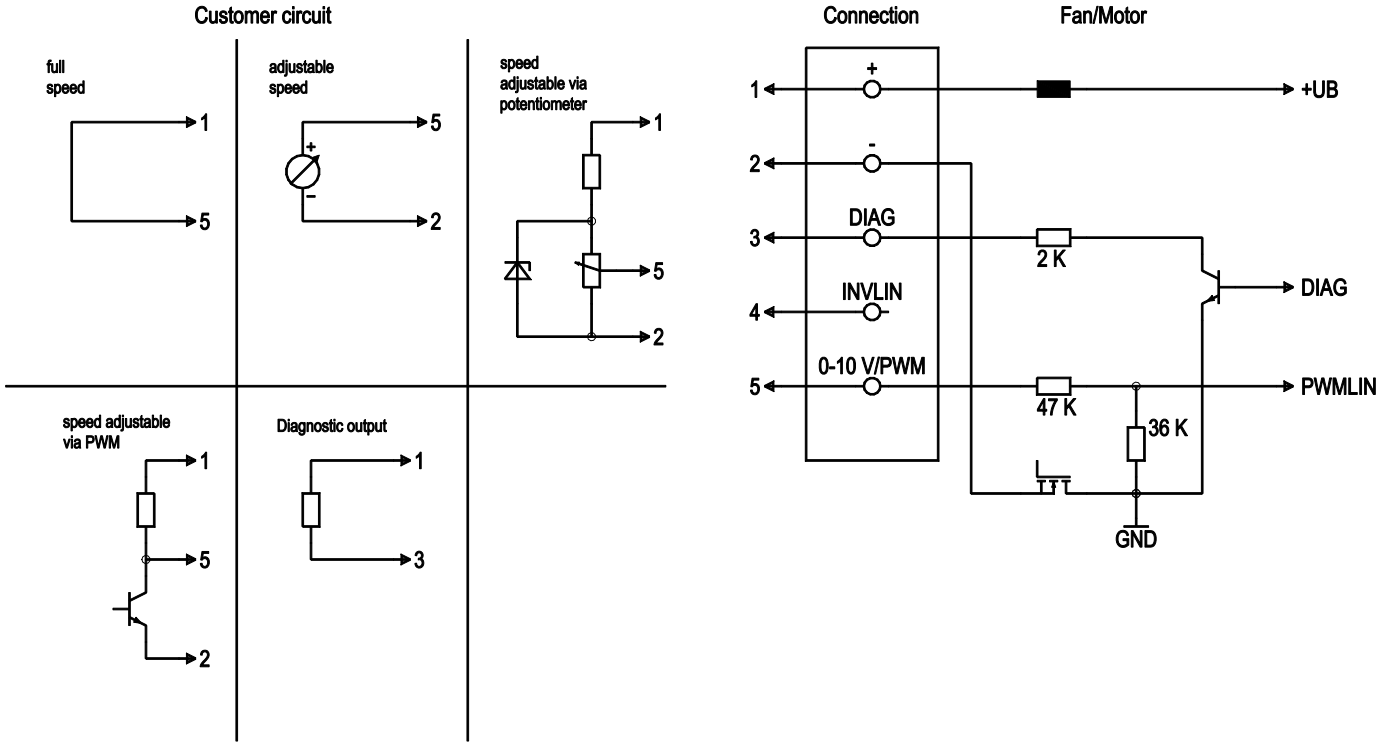
1	Cable, halogen-free, railway application EN 45545, 2x 6.0 mm², 2x 1.0 mm²
	4x wire-end ferrule

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Connection diagram



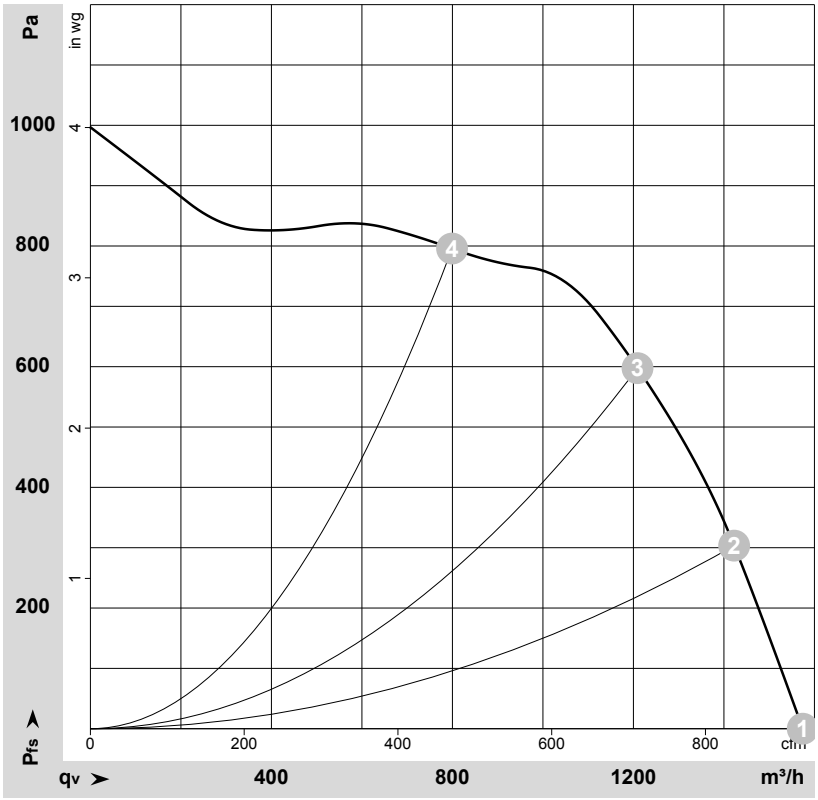
No.	Conn.	Designation	Color	Function/assignment
	1	+	black	Power supply, see nameplate for voltage range
	2	-	brown	Power supply, see nameplate for voltage range
	3	DIAG	white	Diagnostic output: Open collector, Isink max = 10 mA, Ri > 50 Ω Fan OK -> High; Fan Error -> Low
	4	INVLIN		not used
	5	0-10 V / PWM	yellow	Control input: Ri > 47 kΩ 0-10 V (typ. < 1 V -> n=0; 1.5 V -> n=min; > 10 V -> n=max) PWM (amplitude 10 V; 1-50 kHz; typ. < 5 % -> n=0; 15% -> n=min; > 100% -> n=max)

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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-175168-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	26	4680	740	28.00	78	88	1575	0	925	0.00
2	26	5025	740	28.00	76	87	1425	300	840	1.20
3	26	5380	659	25.31	75	85	1210	600	710	2.41
4	26	5500	441	16.92	73	84	800	800	470	3.21

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

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