K3G097-AP46-01

EC centrifugal fan combination

forward-curved, dual-intake

with housing, Automotive

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Nominal data

Type	**K3G097-AP46-01**
Motor	**M3G084-BF**

Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min^{-1}	3500
Power consumption	W	320
Current draw	A	12.2
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	49.4	33.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		60.3	44
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.18
09 Air flow q_v	m^3/h	500
09 Pressure increase p_{fs}	Pa	592
10 Speed (rpm) n	min^{-1}	4600
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

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Technical description

Weight	2 kg
Size	97 mm
Motor size	84
Impeller material	PA plastic
Housing material	PP plastic
Balancing grade according to DIN ISO 1940-1	G 2.5
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	H4
Ambient temperature note	Over +75°C with power derating
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) - Power limiter - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Thermal overload protection for electronics - Reverse polarity protection
Electrical hookup	Plug; Standby current less than 500 µA
Approval	EAC

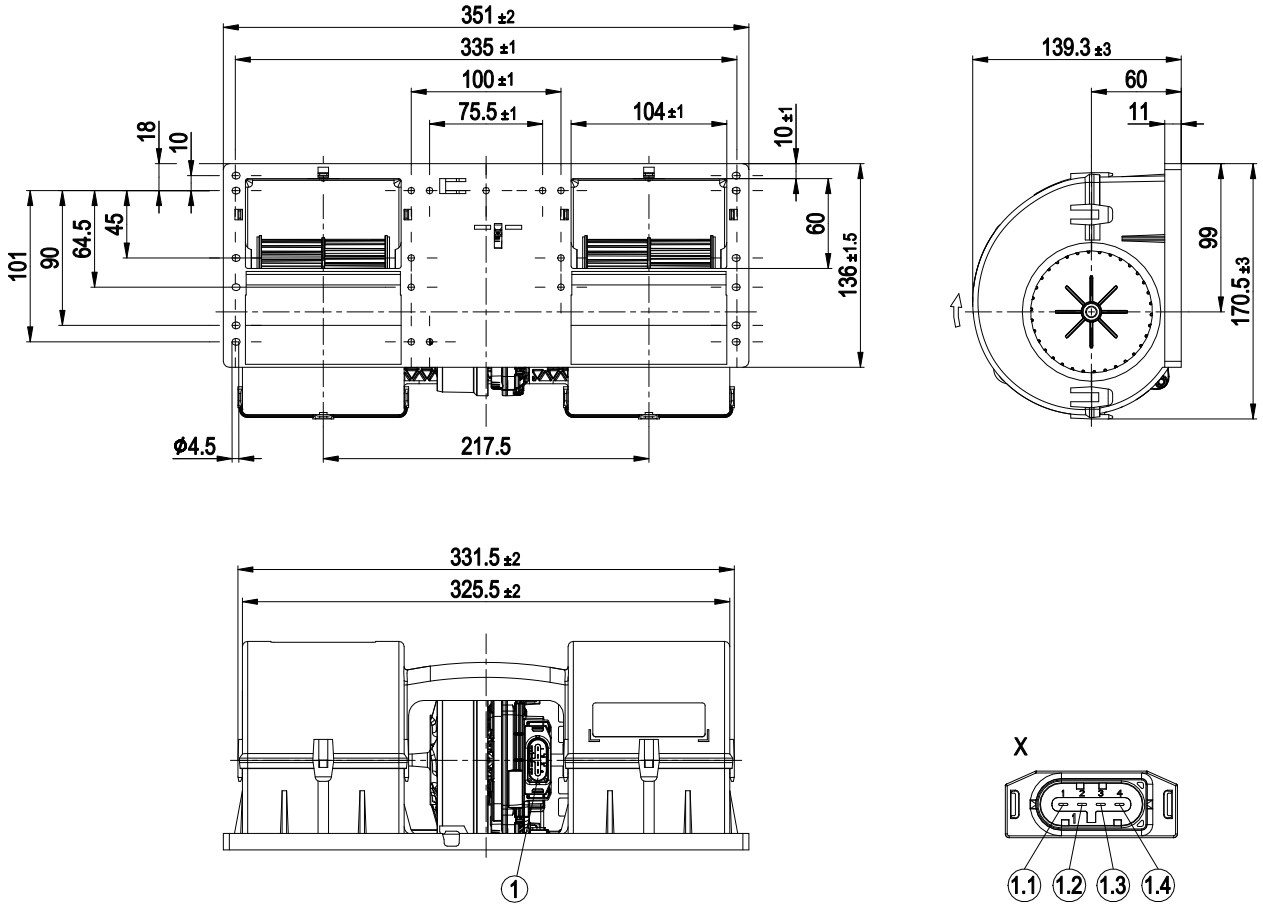
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Product drawing



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

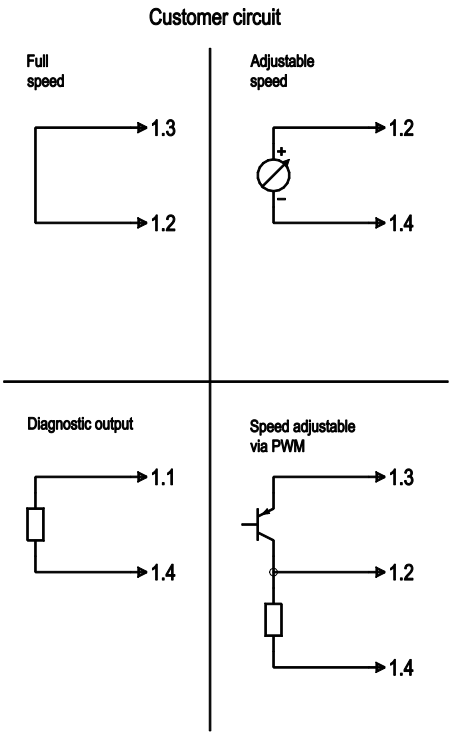
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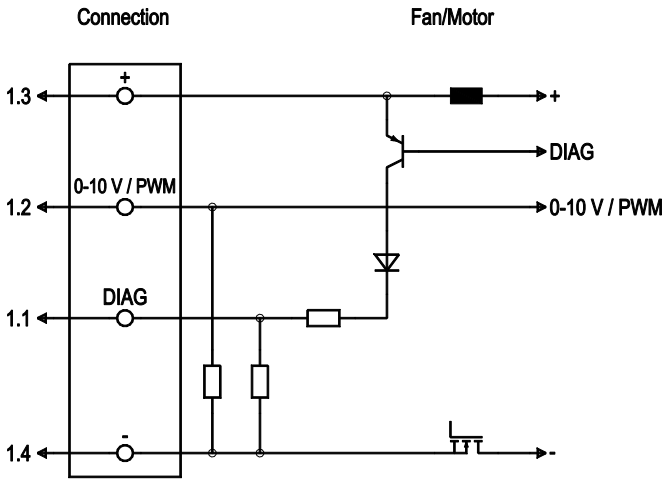
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Connection diagram





No.	Conn.	Designation	Function/assignment
	1.3	+	Power supply +
	1.4	-	Power supply -
	1.2	0-10 V / PWM	Control input: Ri > 27 kΩ 0-10 V: (typ. 0.5 V -> Standby; 1.5 V -> n = min.; 9.5 V -> n = max.) or PWM: (12 V - Ub; 1 kHz - 10 kHz; typ. < 1% -> standby; 10% -> n = min.; 95% -> n = max.)
	1.1	DIAG	Diagnostic output: Open Collector, Isource max = 10 mA, Rsource = 2 kΩ; Rsink = 100 kΩ fan OK -> low; fan error -> high

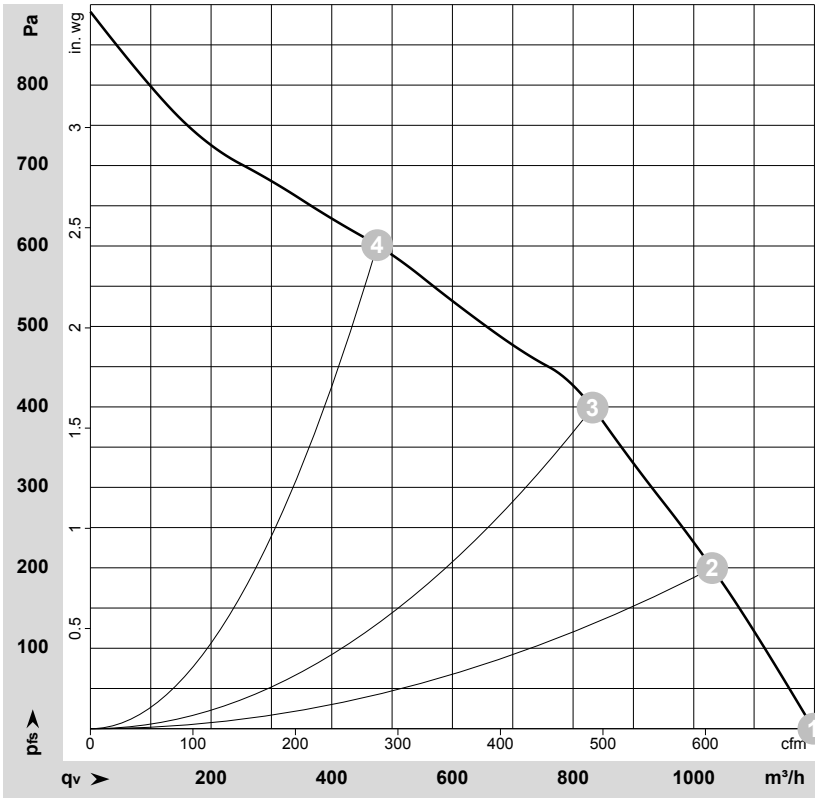
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-201080-1

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	3500	320	12.20	70	81	1200	0	705	0.00
2	26	3780	284	10.90	68	78	1030	200	605	0.80
3	26	4100	246	9.43	66	77	830	400	490	1.61
4	26	4630	183	7.03	67	77	475	600	280	2.41

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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