

Product Change Notice

Date:	July 14, 2020
Overview:	Obsolescence of PNs K3G097-AF22-02 & K3G097-AK34-43
Reason for Change:	A component needed to manufacture both products has been discontinued
Affected Part No(s):	K3G097-AF22-02 & K3G097-AK34-43
Design Change Detail:	PNs K3G097-AF22-02 & K3G097-AK34-43 are being obsoleted due to the discontinuation of a component needed to manufacture them. The suggested replacement for both PNs is K3G097-AP46-01.
Effective Date:	Last time buy orders can be placed through September 25, 2020 for delivery by December 31, 2020 after which these products will no longer be available
Last Time Buy Deadline:	September 25, 2020
Pricing:	No change
ebm-papst employee:	Jeannine Zenobi
Attachments:	Datasheets for PNs K3G097-AF22-02, K3G097-AK34-43, and K3G097-AP46-01
Comments:	N/A

Form No: 1274	Quality Record - No	Page 1 of 1
Rev. – Orig, Released 08/28/14	Retention Period – 1 year	Dept. Owner – Sales/Marketing

EC centrifugal fan combination

forward-curved, dual-intake

with housing, Automotive


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Nominal data

Type	K3G097-AF22-02	
Motor	M3G084-BF	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	3500
Power consumption	W	325
Current draw	A	12.5
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}	%	47.5	34.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		57.4	44
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_e	kW	0.27
09 Air flow q_v	m ³ /h	700
09 Pressure increase p_{fs}	Pa	599
10 Speed (rpm) n	min ⁻¹	4770
11 Specific ratio*		1.01

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

LU-175827



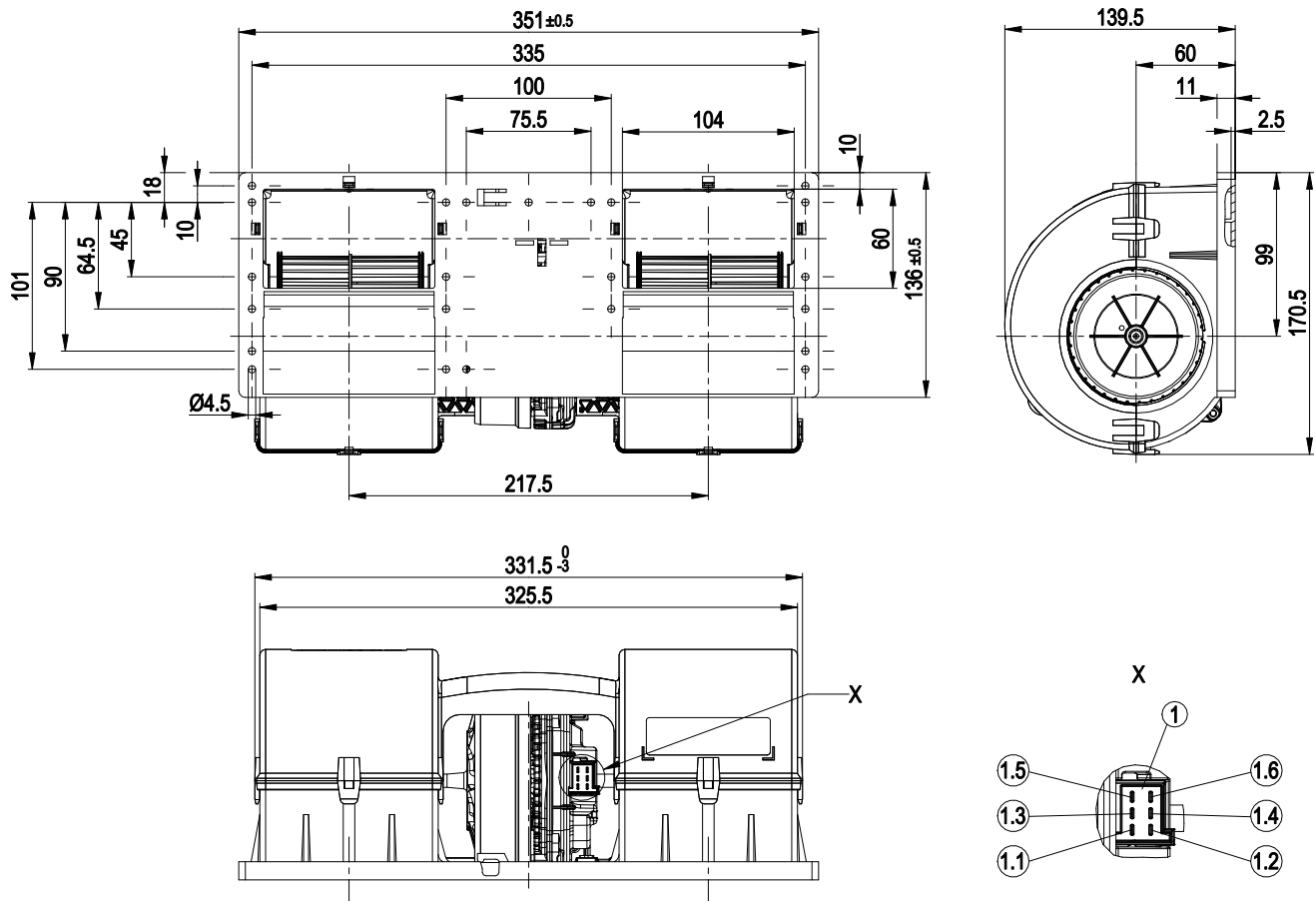
Technical description

Weight	2 kg
Size	97 mm
Motor size	84
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	H1
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 mounting	Ball bearing
Motor bearing	(sealed)
Life expectancy	40,000 h (typical)
Technical features	- Lowering input - Fault output (high-side switch max. 30 mA) - INVLIN (inverse linear control input) - 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
EMC regulations	According to ECE R10 Rev. 5
Electrical hookup	Plug; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Approval	EAC; E1
Sound level	81 dB(A), sound power level according to ISO 13347
Comment	Type approval number – 057907

EC centrifugal fan combination

forward-curved, dual-intake
with housing, Automotive

Product drawing



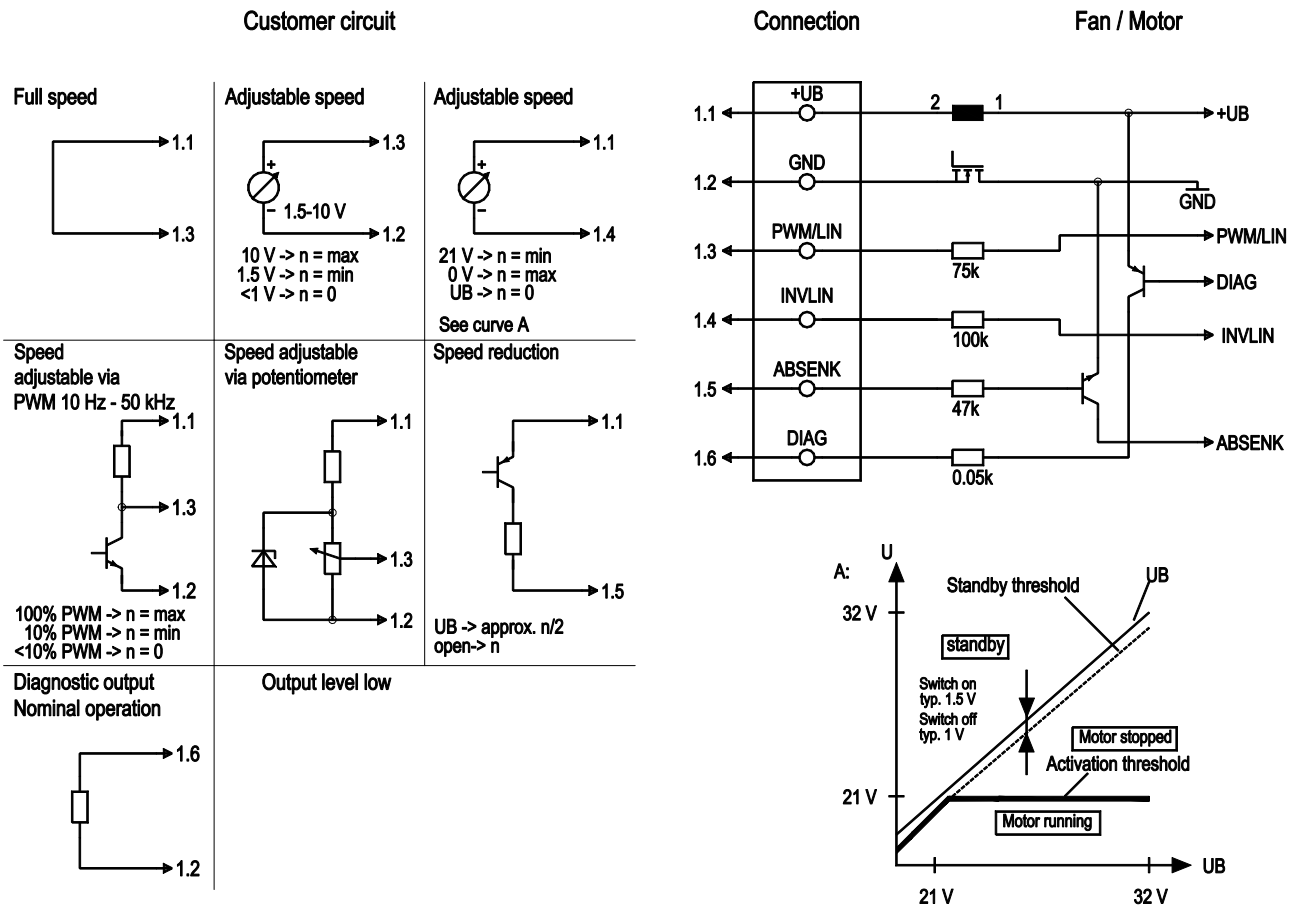
1	6-pole coded header tyco Junior Power Timer, cable (460 mm) with mating connector part no. 02001-4-1021 not included in scope of delivery.
1.1	+ UB
1.2	GND
1.3	PWM/LIN
1.4	INVLIN
1.5	ABSENK
1.6	Diagnostic output

EC centrifugal fan combination

forward-curved, dual-intake

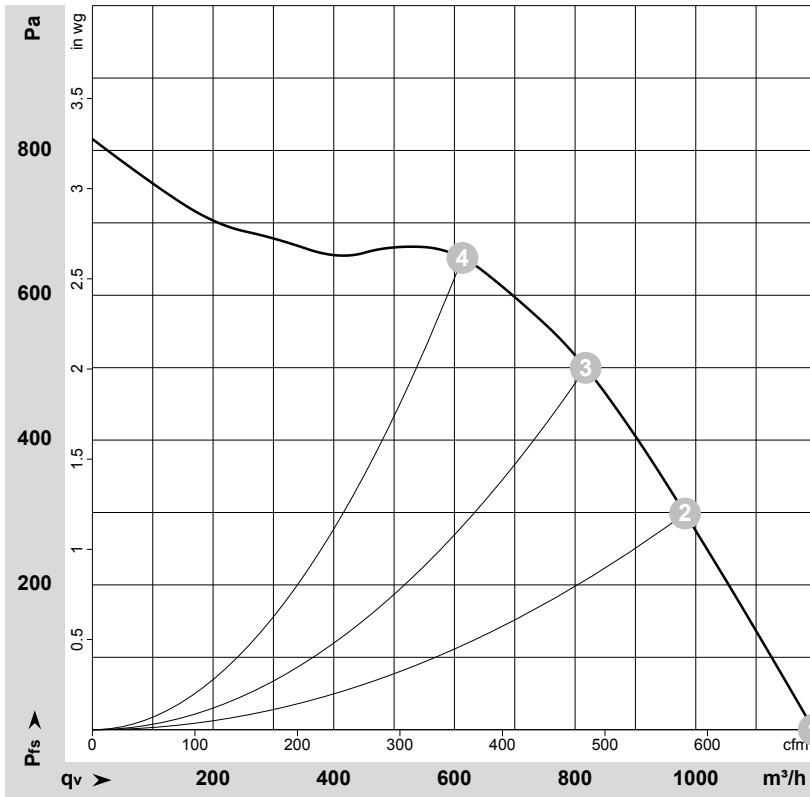
with housing, Automotive

Connection diagram



No.	Conn.	Designation	Function/assignment
	1.1	+UB	Power supply
	1.2	GND	Power supply GND, reference ground
	1.3	PWM/LIN	Analog voltage control input 0-10 V or PWM
	1.4	INVLIN	Control input, inverse linear
	1.5	ABSENK	Lowering input
	1.6	DIAG	Diagnostic output

Curves: Air performance



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

Measurement: LU-175827-1

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)	m³/h	Pa	cfm	in. wg
1	26	3500	325	12.50	71	81	1195	0	705	0.00
2	26	4045	301	11.55	70	80	980	300	580	1.20
3	26	4460	283	10.87	70	80	820	500	480	2.01
4	26	4965	270	10.37	70	80	615	650	360	2.61

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 · q_v = Air flow
p_{fs} = Pressure increase



K3G097-AK34-43

EC dual centrifugal fan

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Nominal data

Type	K3G097-AK34-43	
Motor	M3G074-CF	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	3600
Power consumption	W	325
Current draw	A	12.5
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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	44.9	33.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.3	44
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_e	kW	0.22
09 Air flow q_v	m ³ /h	510
09 Pressure increase p_{fs}	Pa	625
10 Speed (rpm) n	min ⁻¹	4845
11 Specific ratio*		1.01

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

LU-171155



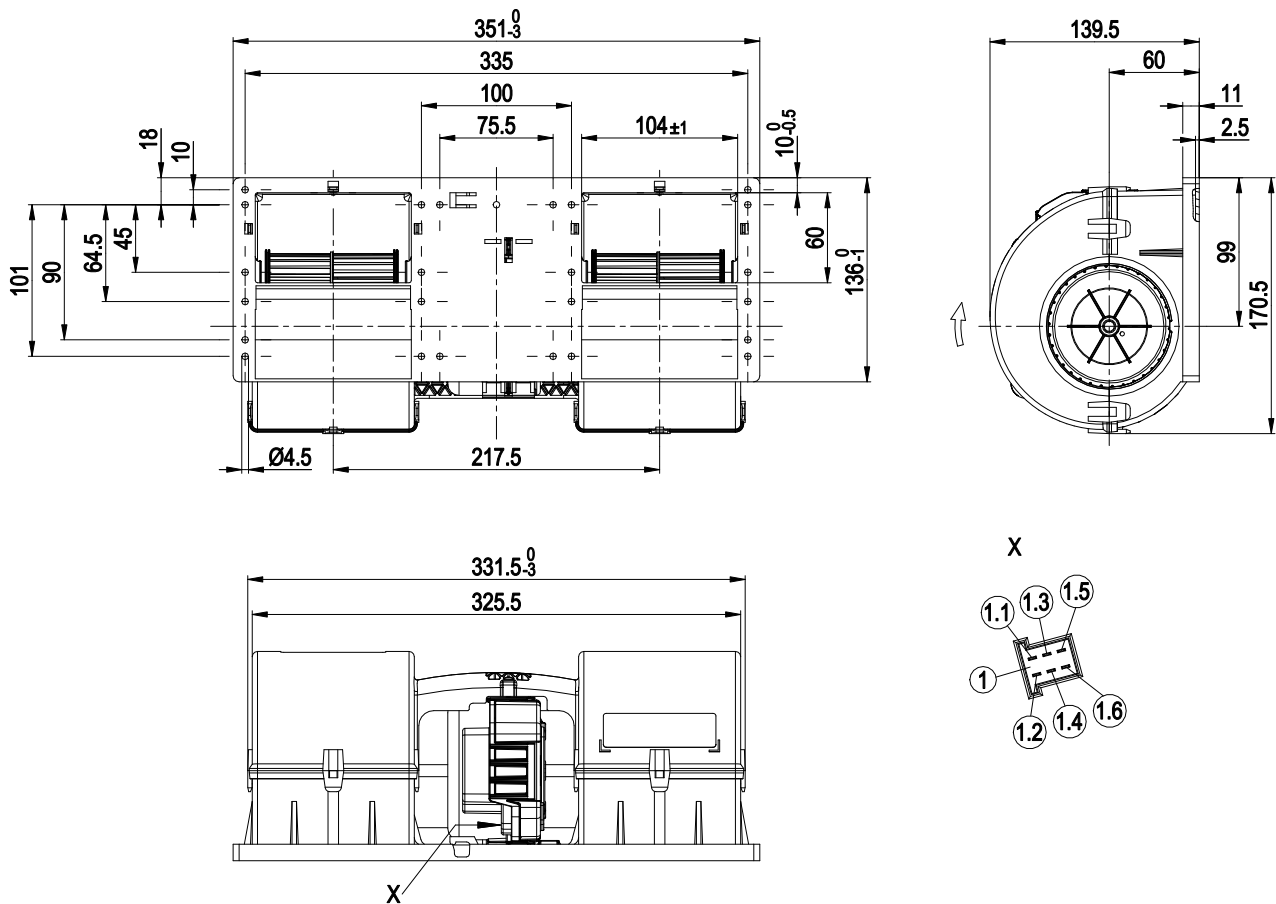
Technical description

Weight	2.3 kg
Size	97 mm
Motor size	74
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	Motor IP24 KM
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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	- Lowering input - Tach output - Fault output (high-side switch max. 30 mA) - INVLIN (inverse linear control input) - Power limit - 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	Plug; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Approval	R10; EAC
Sound level	76 dB(A), sound power level according to ISO 13347
Comment	Type approval number – 036432

EC dual centrifugal fan

forward-curved, dual-intake
with housing, Automotive

Product drawing



1 6-pole header TE Junior Power Timer WE_9901118

1.1 + UB

1.2 GND

1.3 PWM/LIN

1.4 INVLIN

1.5 ABSENK

1.6 Diagnostic output

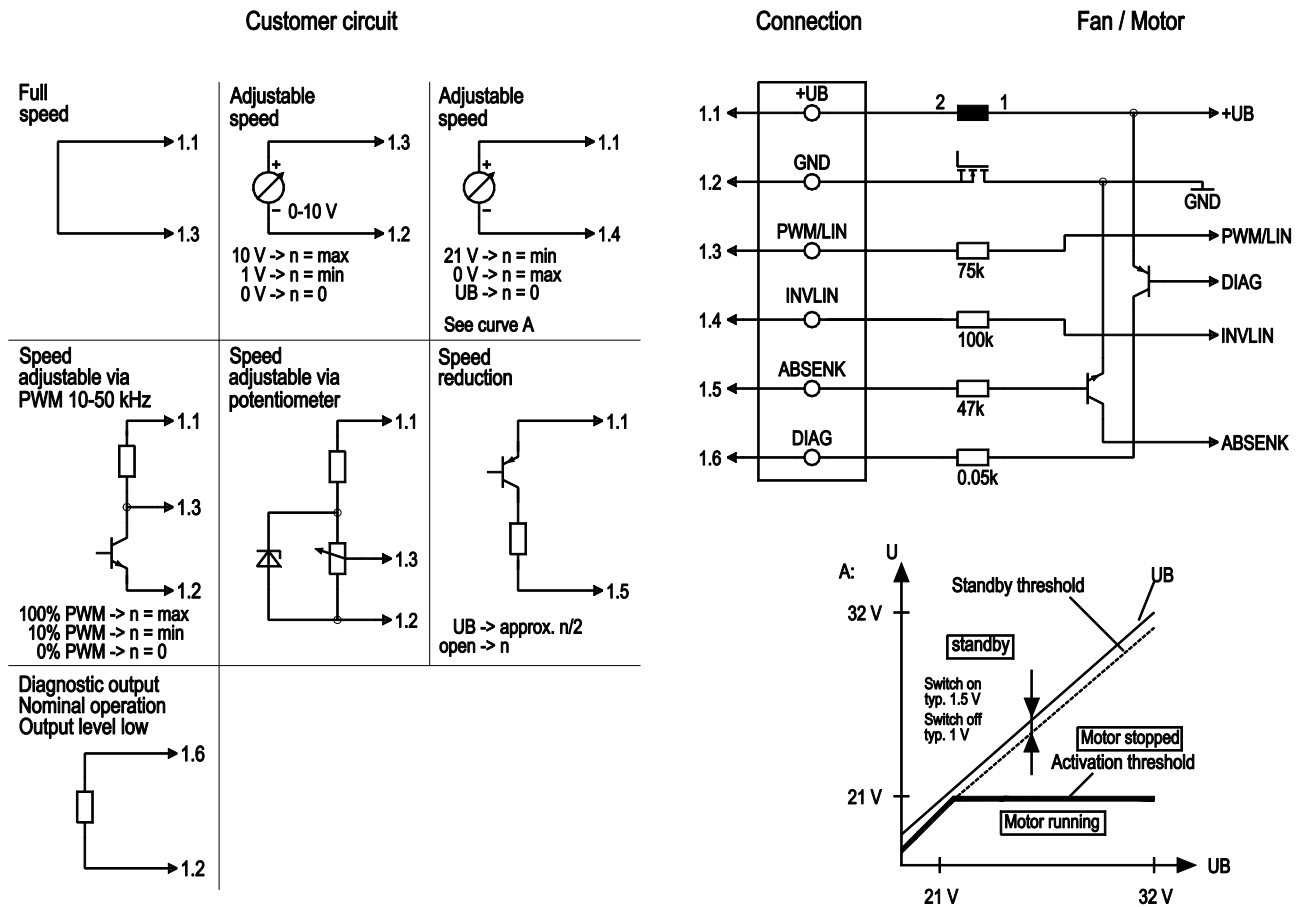
Accessory part: Cable (460 mm) with mating connector, part no. 02001-4-1021 not included in scope of delivery

6-pole mating connector TE 929504-2, 4x plug contact TE 927771-1, 2x plug contact TE 927768-1

EC dual centrifugal fan

forward-curved, dual-intake
with housing, Automotive

Connection diagram

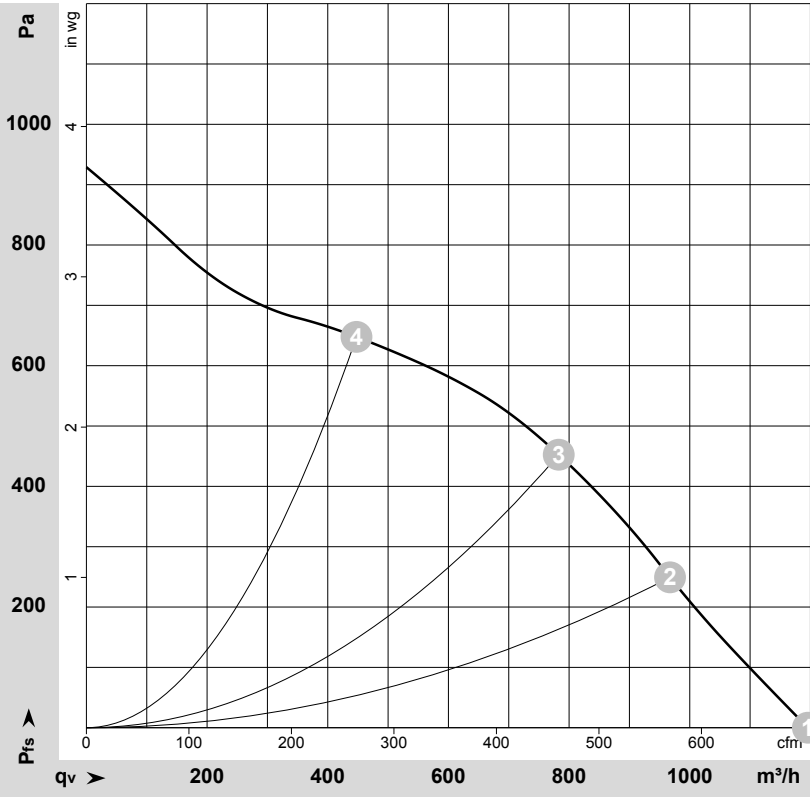


No.	Conn.	Designation	Function/assignment
1.1	+UB	Power supply	Power supply
1.2	GND	Power supply GND, reference ground	Power supply GND, reference ground
1.3	PWM/LIN	Analog voltage control input 0-10 V or PWM	Analog voltage control input 0-10 V or PWM
1.4	INVLIN	Control input, inverse linear	Control input, inverse linear
1.5	ABSENK	Lowering input	Lowering input
1.6	DIAG	Diagnostic output	Diagnostic output

EC dual centrifugal fan

forward-curved, dual-intake
with housing, Automotive

Curves: Air performance



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

Measurement: LU-171155-1

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	325	12.50	1195	0	705	0.00
2	26	3945	281	10.82	965	250	570	1.00
3	26	4350	266	10.21	785	450	460	1.81
4	26	4895	207	7.93	450	650	265	2.61

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



EC centrifugal fan combination

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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	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_e	kW	0.18
09 Air flow q_v	m³/h	500
09 Pressure increase p_{fs}	Pa	592
10 Speed (rpm) n	min ⁻¹	4600
11 Specific ratio*		1.01

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

LU-201080



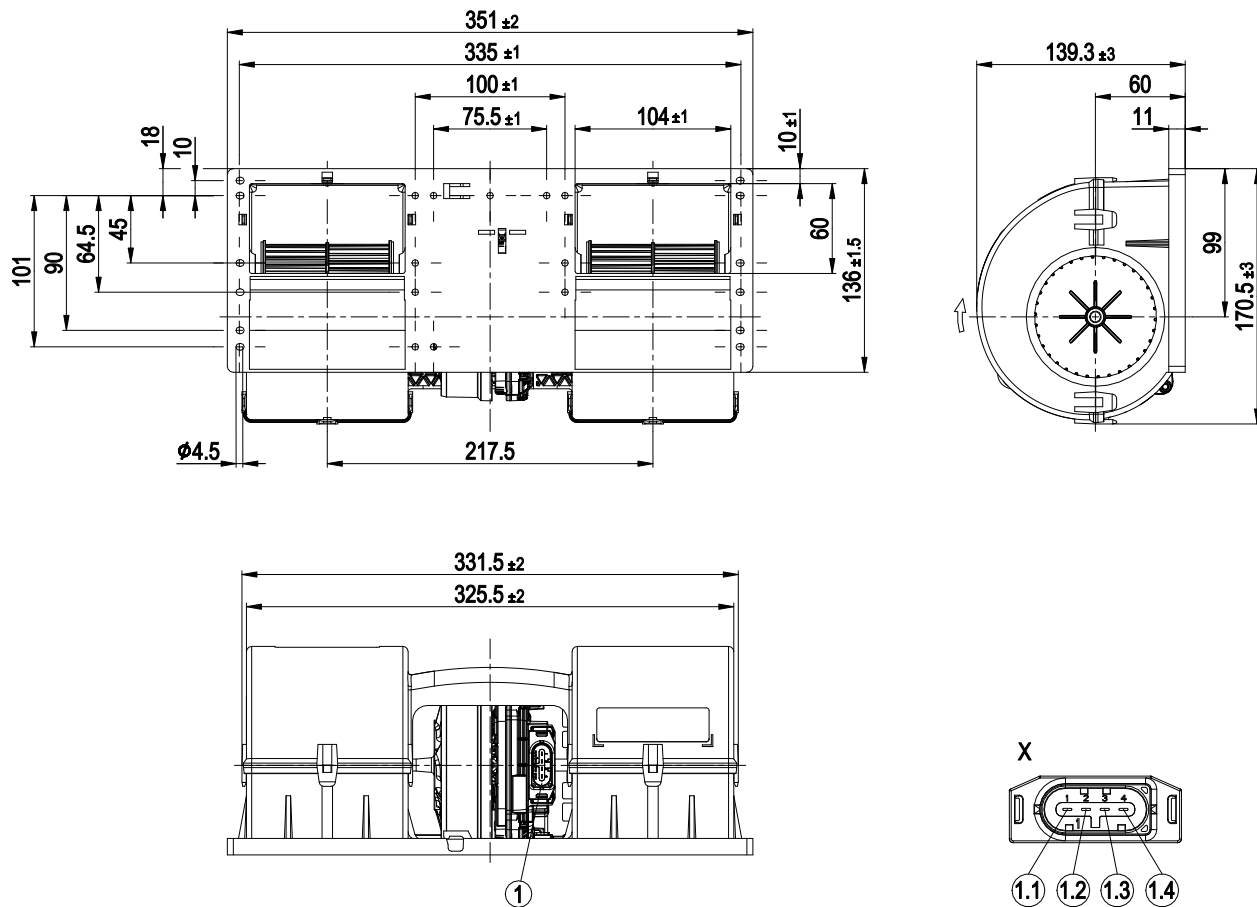
Technical description

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

EC centrifugal fan combination

forward-curved, dual-intake
with housing, Automotive

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

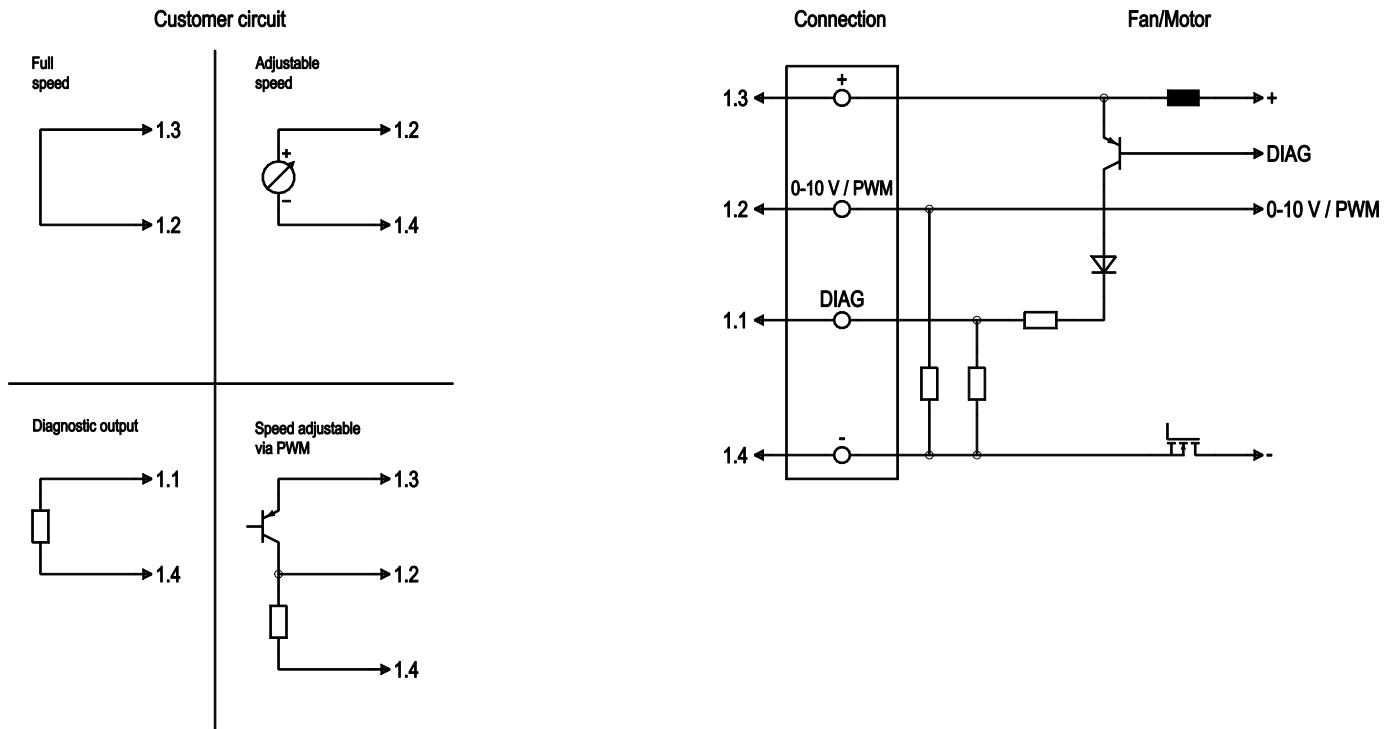
Accessory part: Cable (460 mm) with mating connector, part no. 02040-4-1021 not included in scope of delivery
4-pole mating connector TE 1-1718628-1, 2x plug contact TE 1-968857-1, 2x plug contact TE 1-968855-1,
2x seal TE 828905-1, 2x seal TE 828904-1

EC centrifugal fan combination

forward-curved, dual-intake

with housing, Automotive

Connection diagram



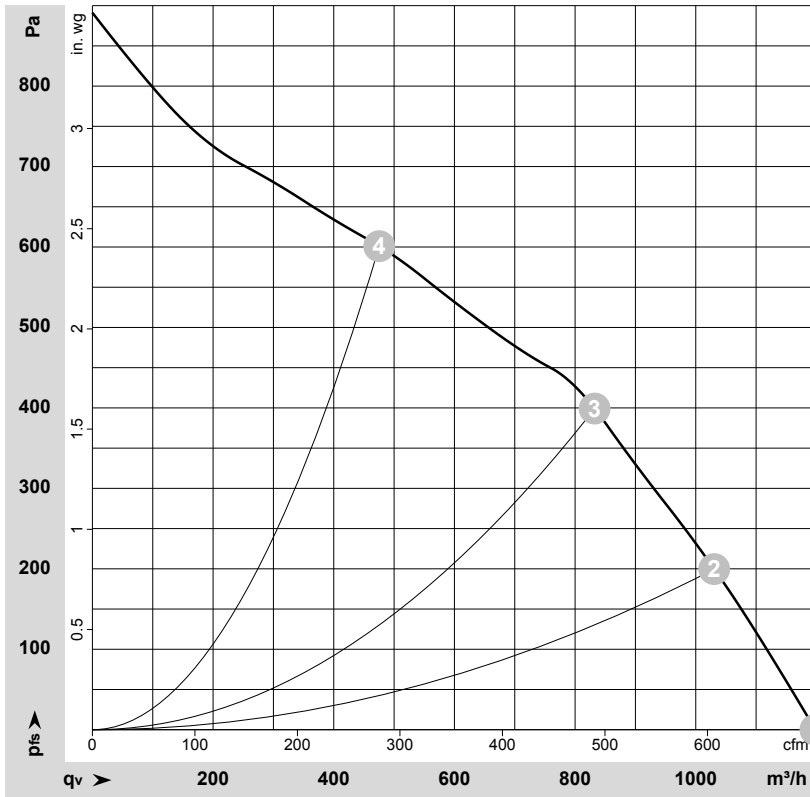
No.	Conn.	Designation	Function/assignment
	1.3	+	Power supply +
	1.4	-	Power supply -
	1.2	0-10 V / PWM	Control input: $R_i > 27 \text{ k}\Omega$ 0-10 V: (typ. 0.5 V -> Standby; 1.5 V -> n = min.; 9.5 V -> n = max.) or PWM: (12 V - U_b ; 1 kHz - 10 kHz; typ. < 1% -> standby; 10% -> n = min.; 95% -> n = max.)
	1.1	DIAG	Diagnostic output: Open Collector, $I_{\text{source max}} = 10 \text{ mA}$, $R_{\text{source}} = 2 \text{ k}\Omega$; $R_{\text{sink}} = 100 \text{ k}\Omega$ fan OK -> low; fan error -> high

EC centrifugal fan combination

forward-curved, dual-intake

with housing, Automotive

Curves: Air performance



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

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

