K3G097-AS81-06

EC dual centrifugal fan

forward curved, dual inlet

with housing, Automotive



ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G097-AS81-06**	
Motor	**M3G084-BF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Type of data definition		fa
Speed	min^{-1}	3580
Power input	W	320
Current draw	A	12.3
Min. back pressure	Pa	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

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

		Actual	Request 2015
Overall efficiency η_{es}	%	43.9	34.2
Efficiency grade N		53.7	44
Power input P_e	kW	0.28	
Air flow q_v	m³/h	690	
Pressure increase p_{fs}	Pa	572	
Speed n	min^{-1}	4735	

Data definition with optimum efficiency. LU-166997
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

ebmpapst

EC dual centrifugal fan

forward curved, dual inlet

with housing, Automotive

Technical features

Mass	2 kg
Size	97 mm
Material of impeller	PA plastic
Housing material	PP plastic
Number of blades	34
Balance quality according to DIN ISO 1940-1	G 2.5
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 24 KM; (motor); electronics IP 6K9K; customer plug not sealed
Insulation class	"B"
Humidity class	F4-1
Note ambient temperature	Over +70° C with power derating
Max. permissible ambient motor temp. (transp./ storage)	+85 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancies	40,000 h (typical)
Technical features	- Lowering input - Fault output (high-side switch max. 30 mA) - INVLIN (control input, inverse linear) - Output limit -Load dump (58 V) - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Overvoltage detection - Over-temperature protected electronics - Line undervoltage detection
Electrical leads	With plug; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Approval	EAC
Remark	E1 approval in preparation

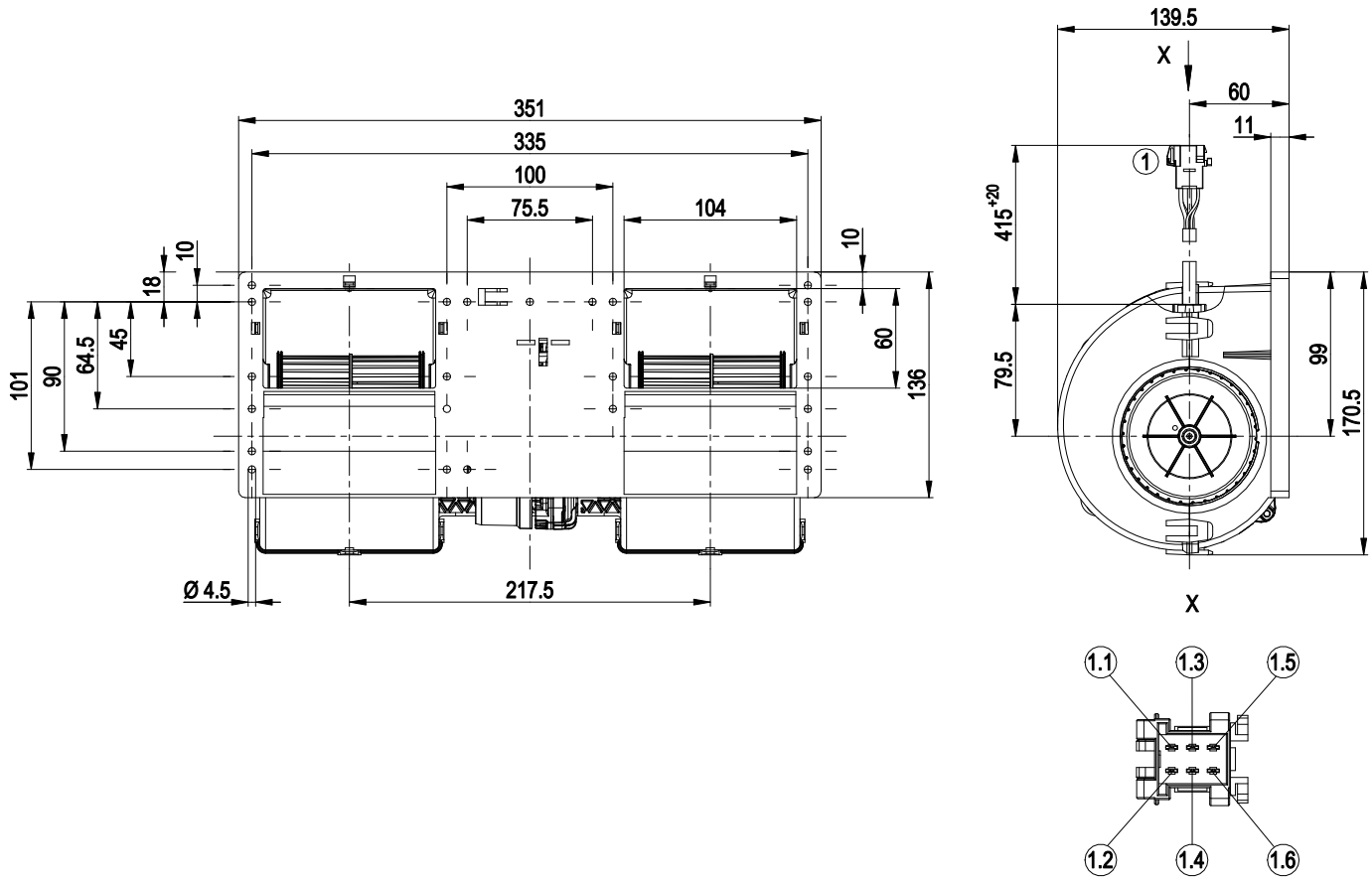
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC dual centrifugal fan

forward curved, dual inlet

with housing, Automotive

Product drawing



1	Connection line with plug Tyco Junior Power Timer 929505-2, 6-pole, coded
1.1	+ UB (black)
1.2	GND (brown)
1.3	PWM/LIN (yellow)
1.4	INVLIN (orange)
1.5	ABSENK (blue)
1.6	Diagnostic output (white)
	Mating connector Tyco 929504-2 (not included in scope of delivery)

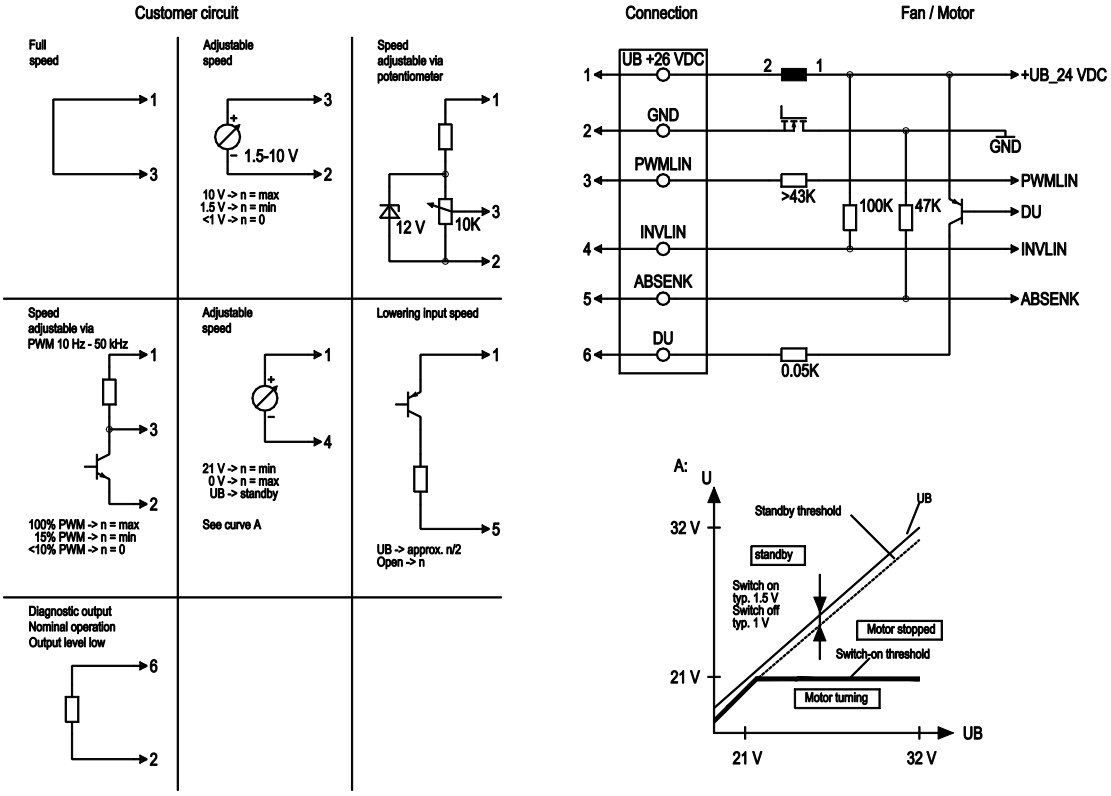
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC dual centrifugal fan

forward curved, dual inlet

with housing, Automotive

Connection screen



No.	Conn.	Designation	Function / assignment
	1	UB +26 VDC	Power supply 26 VDC
	2	GND	Power supply GND, reference ground
	3	PWMLIN	Analogue voltage control input 0 -10 V or PWM
	4	INVLIN	Control input, inverse linear
	5	ABSENK	Lowering input
	6	DU	Diagnostic output

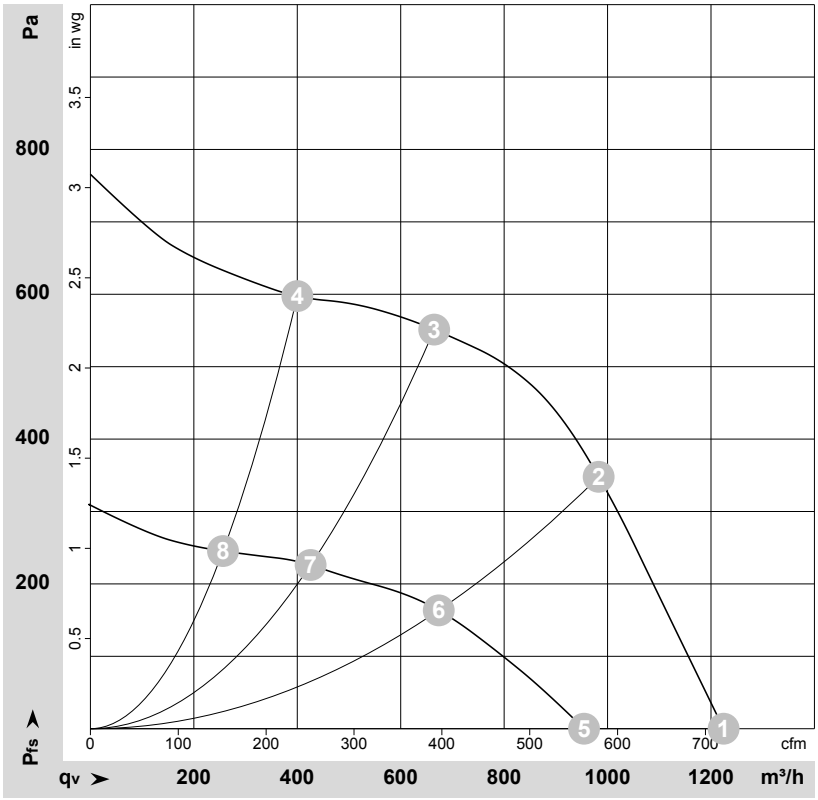
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC dual centrifugal fan

forward curved, dual inlet

with housing, Automotive

Charts: Air flow



ρ = 1,15 kg/m³ ± 2%

Measurement: LU-168702
Measurement: LU-168794

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	n	P_{ed}	I	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa
1	26-32	3580	320	12.3*	1225	0
2	26-32	4230	318	12.2*	985	350
3	26-32	4605	251	9.7*	665	550
4	26-32	4705	172	6.6*	400	600
5	16	2825	158	9.89	955	0
6	16	2920	106	6.61	675	164
7	16	2985	74	4.61	425	227
8	16	3025	54	3.46	255	245

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · * = Current measured at rated voltage · qv = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com