W3G300-PW24-01

EC axial fan

with brushless DC motor

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

Nominal data

Type	**W3G300-PW24-01**	
Motor	**M3G084-BF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Type of data definition		fa
State		prelim.
Speed (rpm)	min^{-1}	3000
Power input	W	200
Current draw	A	7.7
Max. back pressure	Pa	320
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85
- with power derating up to	°C	105

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	47.4	30.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		57	40
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.3
09 Air flow q_v	m^3/h	2000
09 Pressure increase p_{fs}	Pa	231
10 Speed (rpm) n	min^{-1}	3015
11 Specific ratio*		1.00

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

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

LU-177349

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Technical features

Mass	2.0 kg
Size	300 mm
Material of impeller	Plastic, PA UL94 HB (black)
Material of wall ring	Plastic, PA
Number of blades	9
Direction of air flow	"A"
Balance quality according to DIN ISO 1940-1	G 10
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 24 KM; (motor); electronics IP 6K9K
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H4
Max. permissible ambient motor temp. (transp./ storage)	+110 °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
Cable exit	Lateral
Approval	EAC
Noise level	86 dB(A), sound power level as per ISO 13347

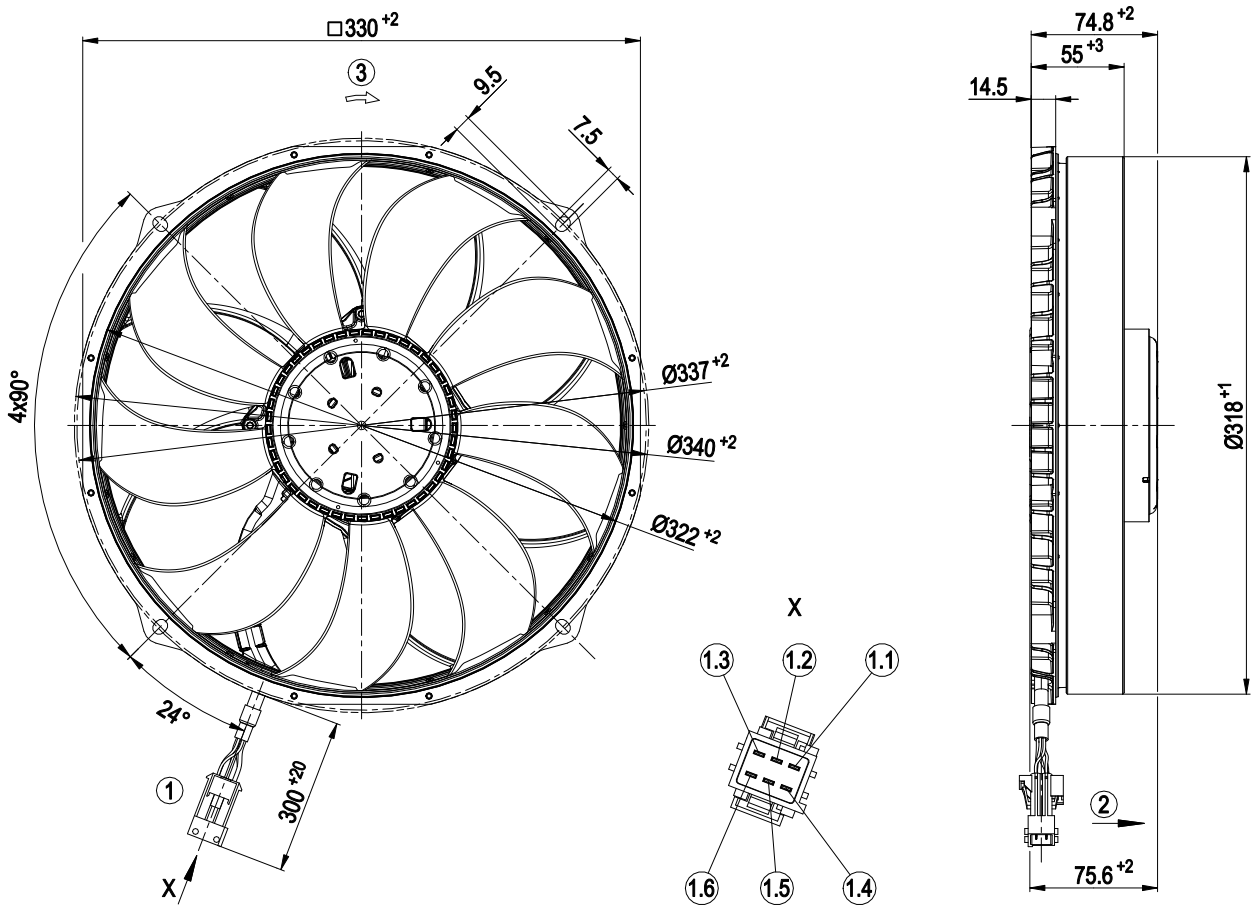
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Product drawing



1	Connection line with plug tyco Junior Power Timer 1-962349-1, 6-pole, coded
	Connection line (460 mm) with mating connector part no. 02002-4-1021 not included in scope of delivery
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)
2	Direction of air flow "A"
3	Direction of rotation clockwise, viewed towards rotor

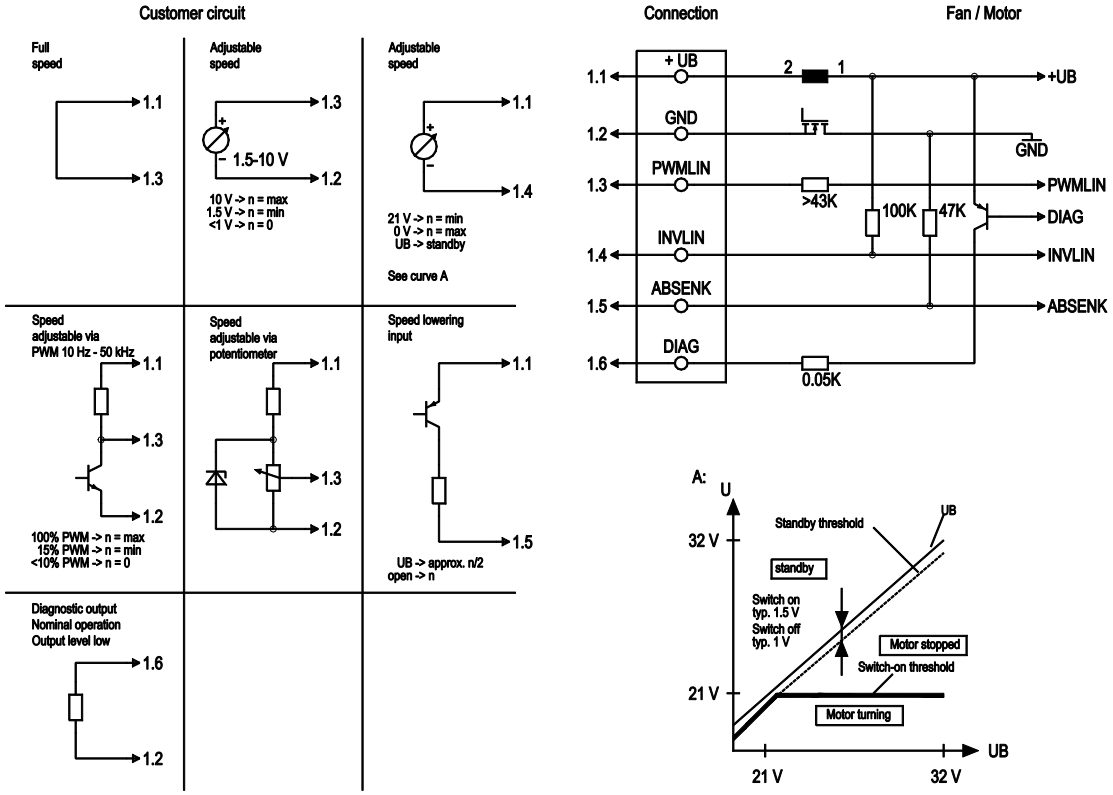
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Connection screen



No.	Conn.	Designation	Function / assignment
	1.1	+UB	Power supply
	1.2	GND	Power supply GND, reference earth
	1.3	PWMLIN	Analogue 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

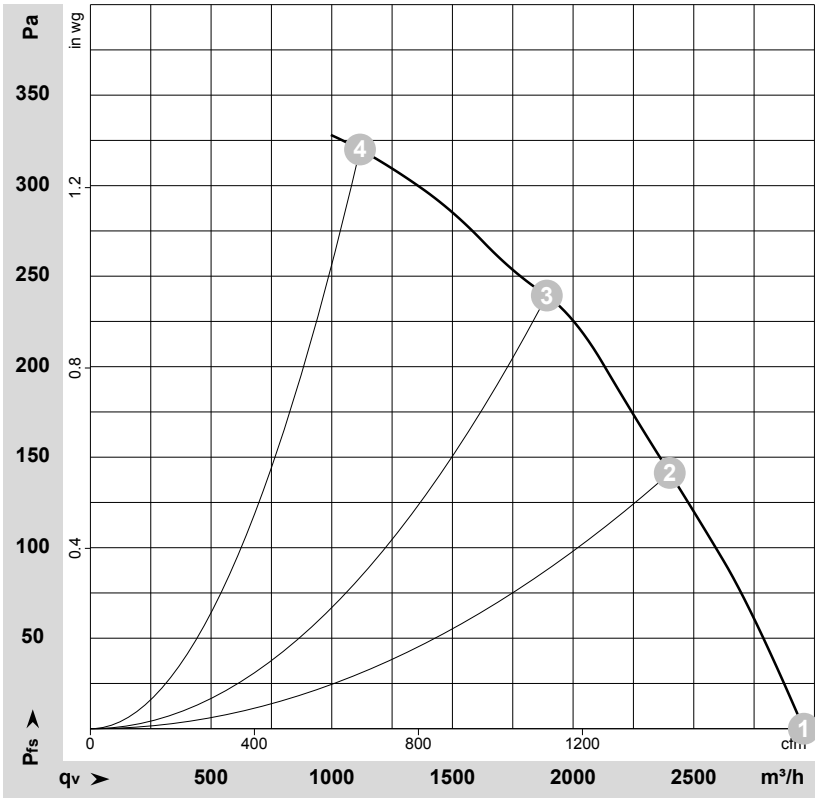
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Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-173433-1

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	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	inH2O
1	26	3000	200	7.70	79	86	2955	0	1740	0.00
2	26	2980	263	10.10	78	85	2400	140	1415	0.56
3	26	3010	310	11.93	75	83	1890	240	1115	0.96
4	26	2950	333	12.80	76	84	1115	320	655	1.28

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

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