W3G300-ER38-45

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-ER38-45**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	27.5
Nominal voltage range	VDC	15 .. 32
Type of data definition		fa/cu
Speed (rpm)	min^{-1}	3320
Power input	W	335
Current draw	A	12.2
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

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

Data in accordance with ecodesign regulation EU 327/2011 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	41.3	30.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		50.4	40
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.36
09 Air flow q_v	m^3/h	2010
09 Pressure increase p_{fs}	Pa	243
10 Speed (rpm) n	min^{-1}	3255
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-67589

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Technical features

Mass	2.5 kg
Size	300 mm
Motor size	74
Material of impeller	PBT plastic
Material of wall ring	PP plastic
Number of blades	5
Direction of air flow	A
Balance quality per DIN ISO 21940-11	G 10
Direction of rotation	Clockwise, seen on rotor
Type of protection	Motor IP24 KM
Insulation class	"B"
Humidity (F) / environmental protection class (H)	H2
Max. permissible ambient motor temp. (transp./ storage)	+70 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensation drainage holes	None, open rotor
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancies	25,000 h (typical)
Technical features	- Start at 85 °C (2 min permitted) -Load dump protection - Motor current limit - Soft start - Control input 0-5 VDC - Standstill upon cable break - Overvoltage detection - Over-temperature protected electronics - Line undervoltage detection
EMC directives	According to ECE R10 Rev. 3
Electrical connection	Connector with connection line; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Lateral
Approval	E1; EAC

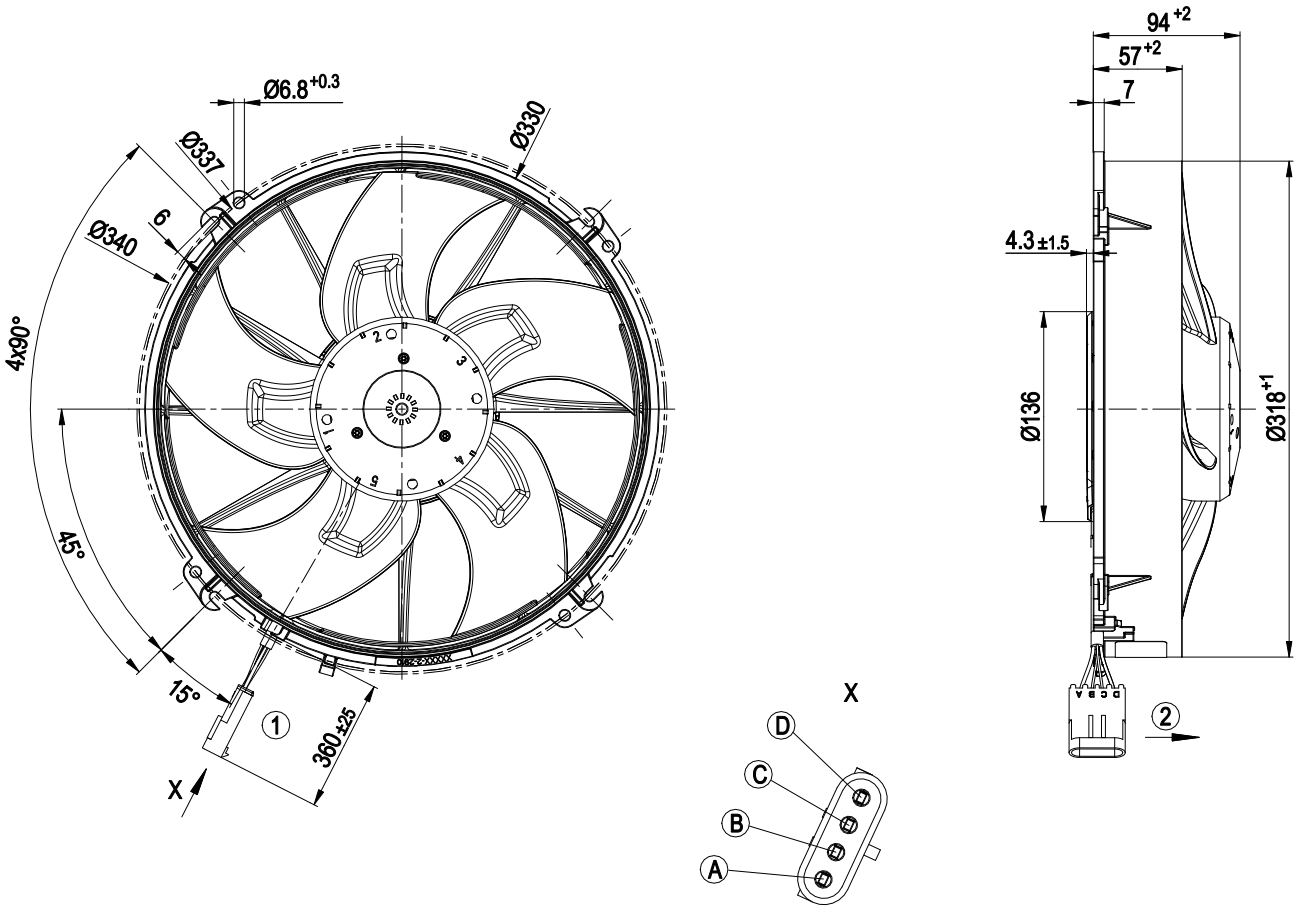
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Product drawing



1	Connection line with 4-pole connector Packard Electric 12010974, coded
2	Direction of air flow "A"
A	+ UB (red)
B	PWM/LIN (blue)
C	CGND (white)
D	GND (black)
	Customer circuit socket:
	Housing: Packard 12015797
	Plug contacts: Packard 120 89188 and Packard 121 24580
	Seal: Packard 153 24982 and Packard 153 24983

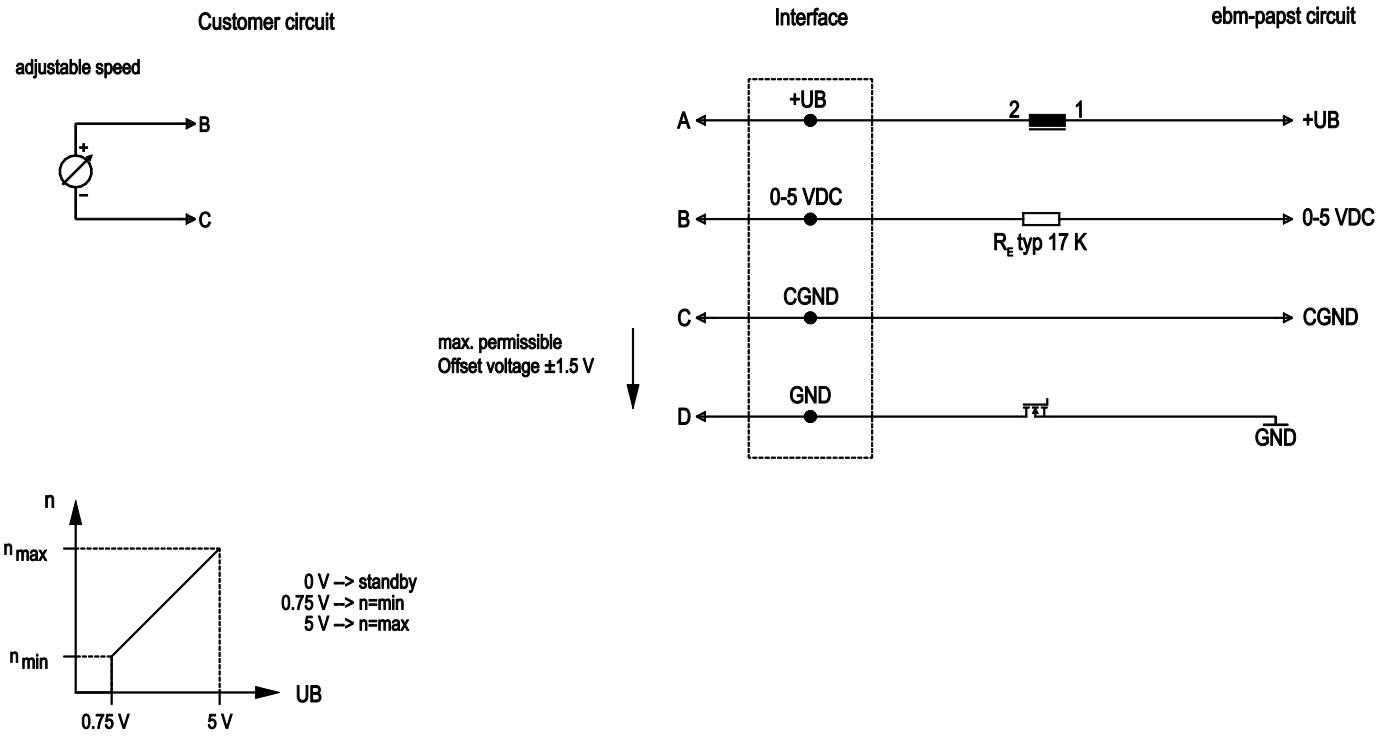
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Connection screen



No.	Conn.	Designation	Function / assignment
	A	+UB	Power supply
	B	0-5 VDC	Analogue voltage control input 0-5 V
	C	CGND	Control input reference earth, permissible offset ±1.5 V
	D	GND	Power supply GND, reference earth

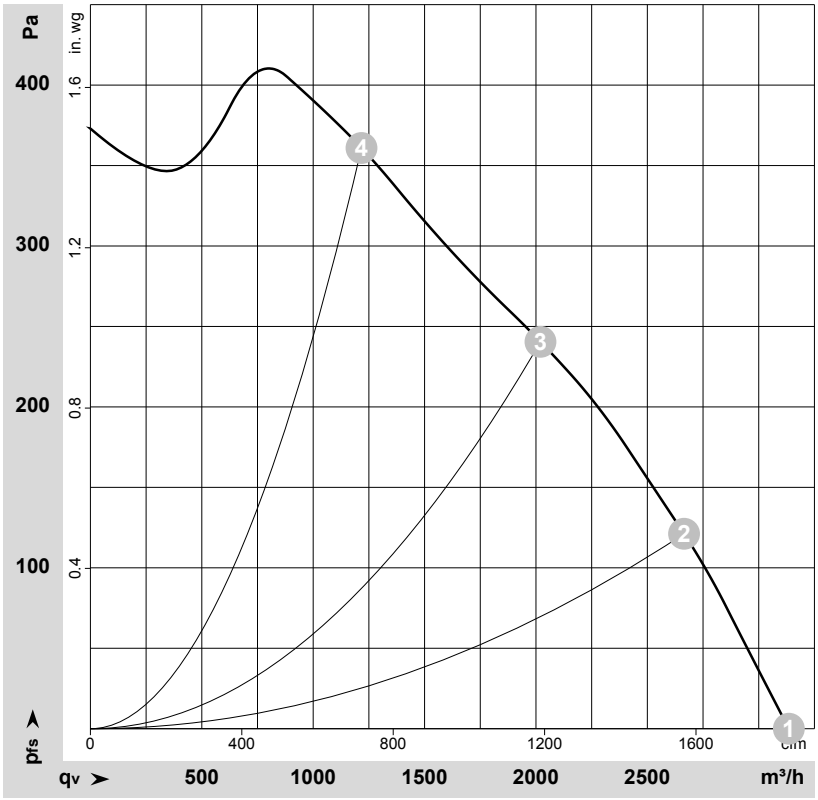
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Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-67589-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	27.5	3320	335	12.20	3135	0	1845	0.00
2	27.5	3290	356	12.91	2665	120	1570	0.48
3	27.5	3255	368	13.36	2020	240	1190	0.96
4	27.5	3150	421	15.27	1215	360	715	1.45

U = Supply voltage · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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