W3G300-BV25-33

EC axial fan

with brushless DC motor

Automotive



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W3G300-BV25-33**	
Motor	**M3G084-BF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Type of data definition		fa
Speed	min^{-1}	3940
Power input	W	380
Current draw	A	14.6
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85/110

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*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	44.8	27.5	31.5
Efficiency grade N		53.3	36	40
Power input P_e	kW	0.46		
Air flow q_v	m³/h	2205		
Pressure increase p_{fs}	Pa	306		
Speed n	min^{-1}	3720		

Data definition with optimum efficiency. LU-137152
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	2 kg
Size	300 mm
Material of impeller	PA plastic
Material of wall ring	PA plastic
Number of blades	7
Direction of air flow	"V"
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 class	F4-1
Note ambient temperature	Over +85° C with power derating
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

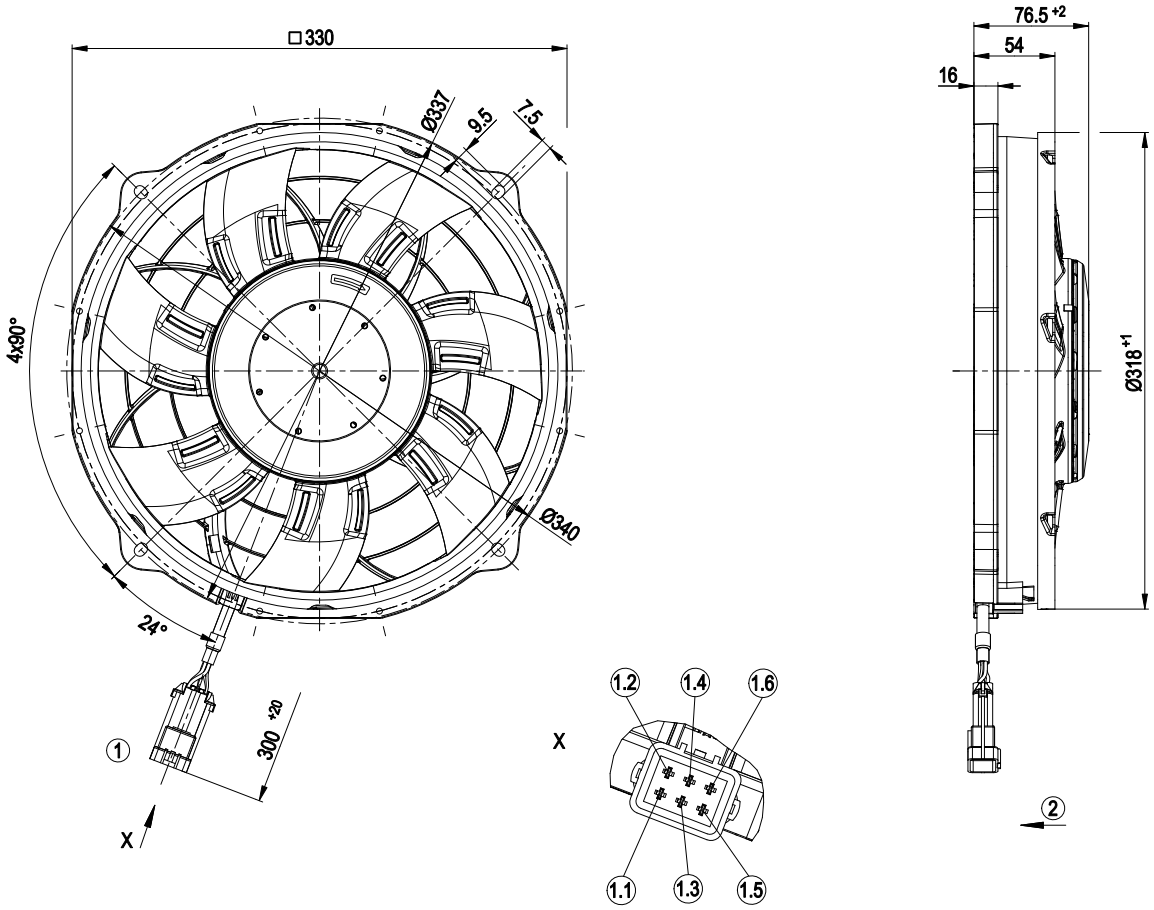
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Product drawing



1	Connection line with Delphi plug 12185126, 6-pole, coded
	Mating connector Delphi 15344052, locking cover 12185000 not included in scope of delivery
1.1	+ UB (black)
1.2	GND (brown)
1.3	PWM/LIN (yellow)
1.4	Reverse (blue)
1.5	INVLIN (orange)
1.6	Diagnostic output (white)
2	Direction of air flow "V"

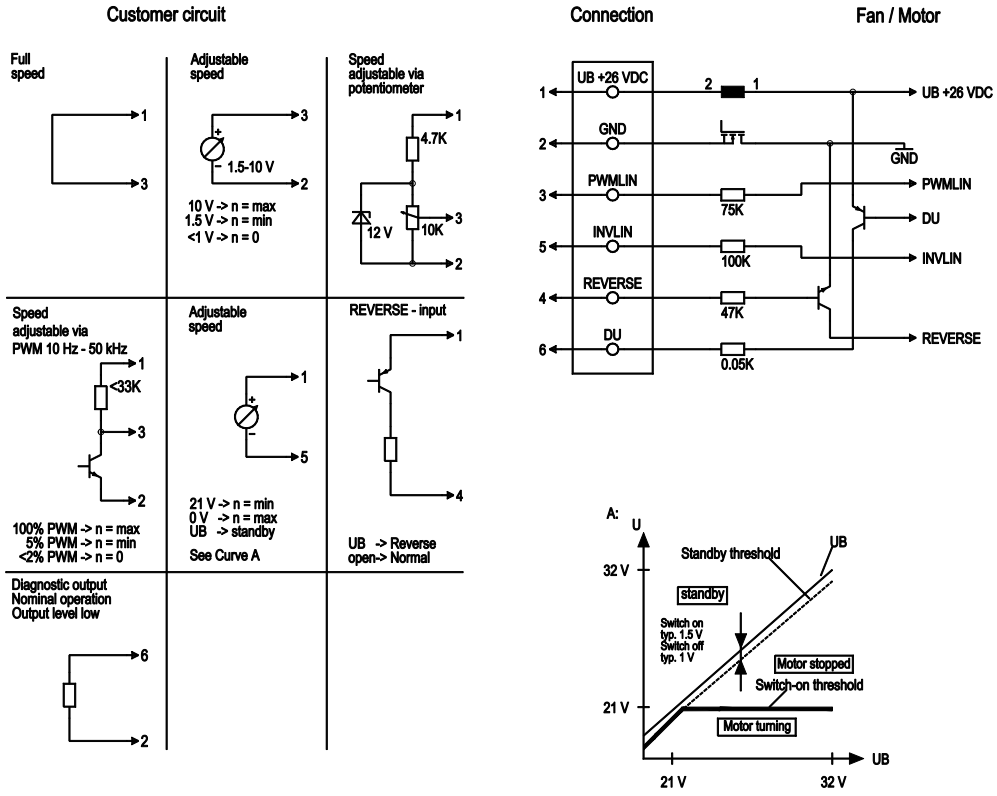
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Connection screen



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	REVERSE	Input for changing direction of rotation
	5	INVLIN	Control input, inverse linear
	6	DU	Diagnostic output

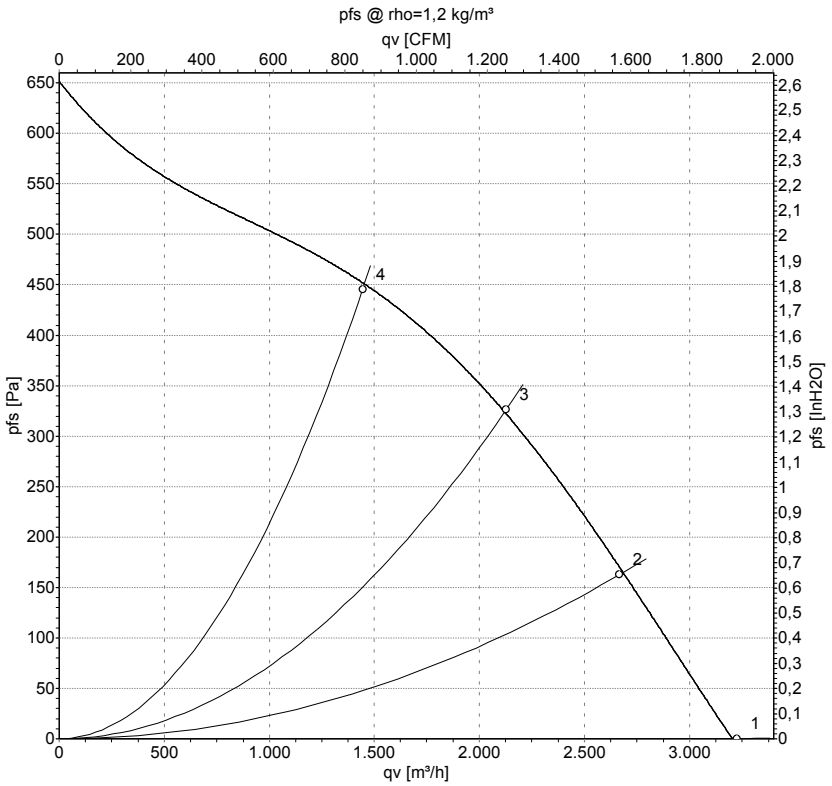
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Charts: Air flow



Measurement: LU-141116

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}	qv	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	26	3940	380	14.60	79	87	3225	0
2	26	3815	408	15.68	79	87	2665	160
3	26	3715	462	17.74	78	85	2130	325
4	26	3630	495	19.01	81	88	1445	445

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

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