W3G300-BS24-01

EC axial fan

with brushless DC motor

Automotive



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Nominal data

Type	**W3G300-BS24-01**	
Motor	**M3G084-BF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3160
Power consumption	W	205
Current draw	A	7.9
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	95/110
Starting current	A	10

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}	%	46.1	29.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		56.3	40
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.24
09 Air flow q_v	m³/h	1805
09 Pressure increase p_{fs}	Pa	197
10 Speed (rpm) n	min^{-1}	3040
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-141130

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Technical description

Weight	2 kg
Size	300 mm
Motor size	84
Impeller material	PA plastic
Fan housing material	PA plastic
Number of blades	7
Airflow direction	V
Balancing grade according to DIN ISO 1940-1	G 10
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 +95°C with power derating
Max. permitted ambient temp. for motor (transport/storage)	+110 °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 - Fault output (high-side switch max. 30 mA) - INVLIN (inverse linear control input) - Power limiter - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC/PWM - Temperature derating - Overvoltage detection - Thermal overload protection for electronics - Undervoltage detection - Reverse polarity protection
EMC regulations	ECE R10 Rev. 3
Electrical hookup	Connector with cable; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Approval	E1; EAC
Comment	Type approval number – 036433

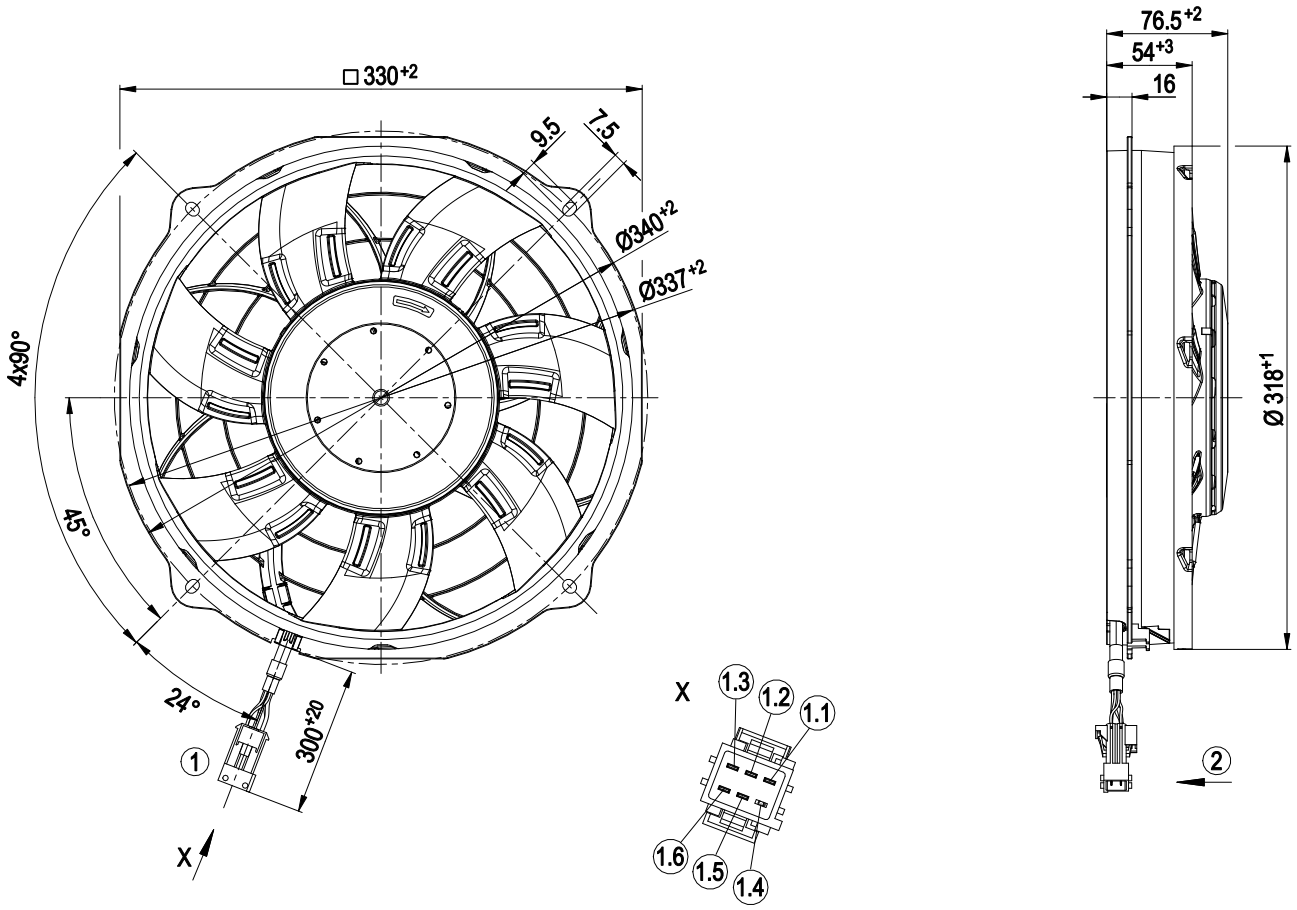
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Product drawing



1	Cable FLRYW 2x 1.5 mm², 4x 0.75 mm²
	6-pole connector housing TE 1-962349-1, 2x flat plug TE 2-962916-1, 4x flat plug TE 1-962915-1 1x seal TE 963205-1, 2x seal TE 828905-1, 4x seal TE 828904-1
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. 02002-4-1021 not included in scope of delivery 6-pole mating connector TE 1-963212-1, 4x receptacle TE 929939-1, 2x receptacle TE 929937-1
2	Airflow direction "V"

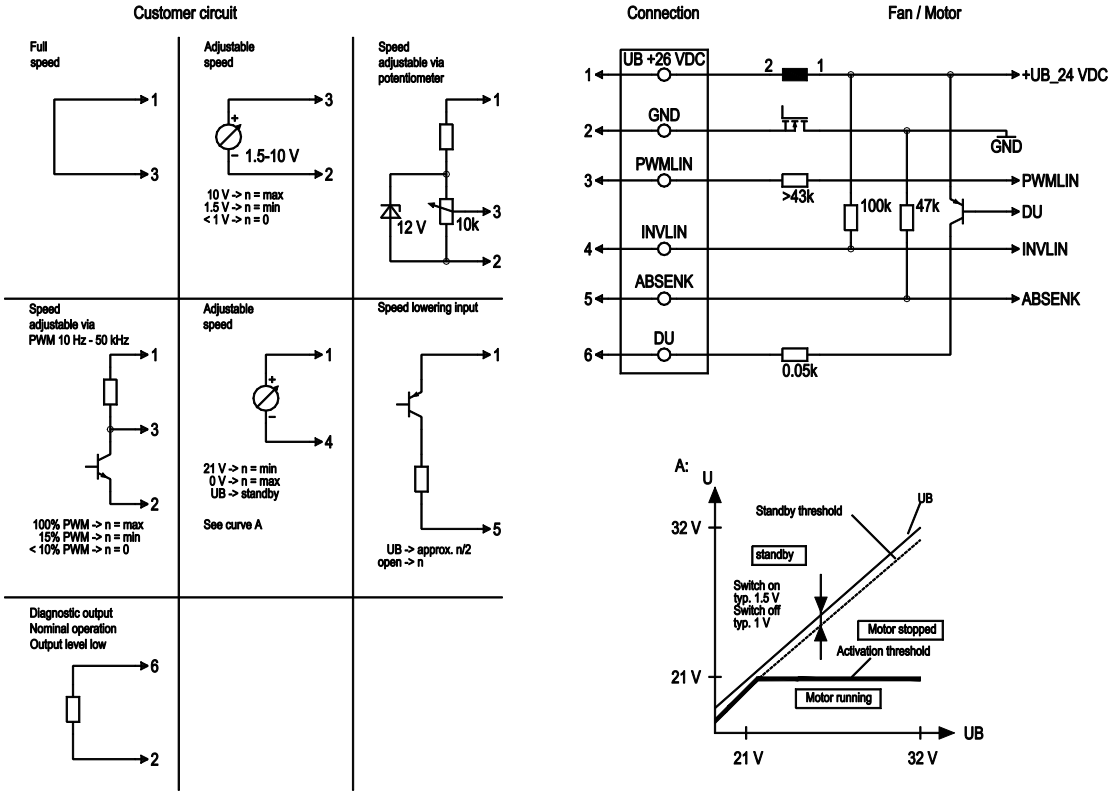
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Connection diagram



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

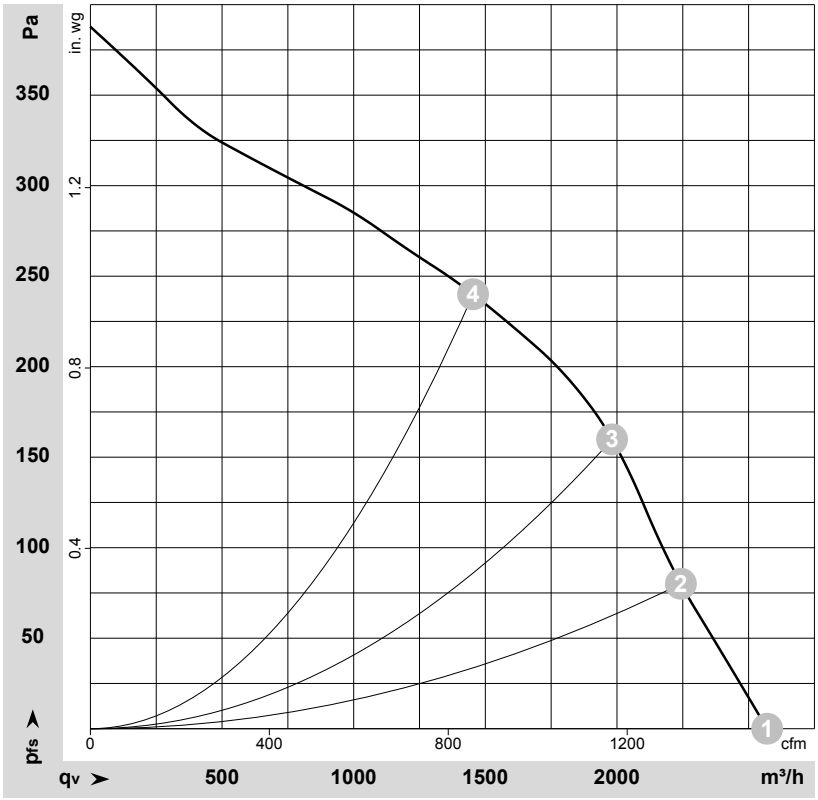
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Curves: Air performance



ρ = 1.181 kg/m³ ± 2 %

Measurement: LU-141130-1

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	3160	205	7.90	74	82	2570	0	1515	0.00
2	26	3155	217	8.35	73	81	2245	80	1320	0.32
3	26	3085	240	9.24	73	81	1980	160	1165	0.64
4	26	2960	244	9.36	73	80	1455	240	855	0.96

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

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