W3G300-BV12-41

EC axial fan

with brushless DC motor

Automotive

W3G300-BV12-41 ebmpapst Datasheet

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Nominal data

Type	**W3G300-BV12-41**
Motor	**M3G084-BF**

Nominal voltage	VDC	13
Nominal voltage range	VDC	9 .. 16
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3200
Power consumption	W	220
Current draw	A	16.7
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85
-with power derating to	°C	105

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	2 kg
Size	300 mm
Motor size	84
Impeller material	PA plastic UL94 HB (black)
Fan housing material	PA plastic UL94 HB (black)
Number of blades	7
Airflow direction	V
Balancing grade according to DIN ISO 21940-11	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
Max. permitted ambient temp. for motor (transport/storage)	+105 °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)
Technical features	- Lowering input - Start-up at 85°C (2 min) permissible - Fault output (high-side switch max. 30 mA) - 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
EMC regulations	ECE R10 Rev. 3
Electrical hookup	Connector with cable
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Protection class assignment	III; Requires supply with safety extra-low voltage SELV. This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Approval	E1; EAC
Sound level	83 dB(A), sound power level according to ISO 13347
Comment	Type approval number – 036433

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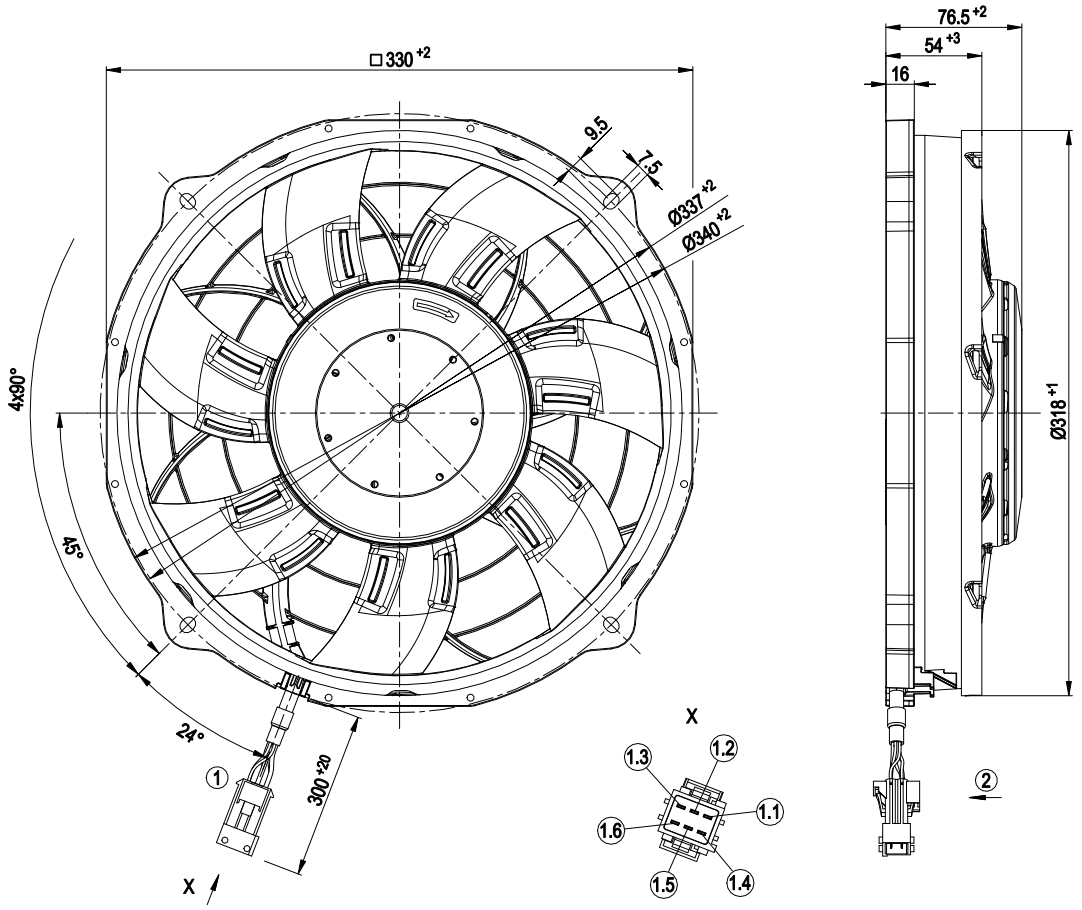
Product drawing



1	Cable FLRYW 2x 3 mm², 4x 0.75 mm²
	6-pole connector housing TE 1-962349-1, 2x flat plug TE 2-962916-1, 3x flat plug TE 1-962915-1 1x seal TE 963205-1, 2x seal TE 828905-1, 3x seal TE 828904-1, 1x dummy plug TE 828922-1
1.1	+ UB
1.2	GND
1.3	PWM/LIN
1.4	Not used / no function
1.5	ABSENK
1.6	Diagnostic output
	6-pole mating connector TE 1-963212-1, 3x receptacle TE 929939-1, 2x receptacle TE 929937-1, 1x dummy plug TE 828922-1
2	Airflow direction "V"

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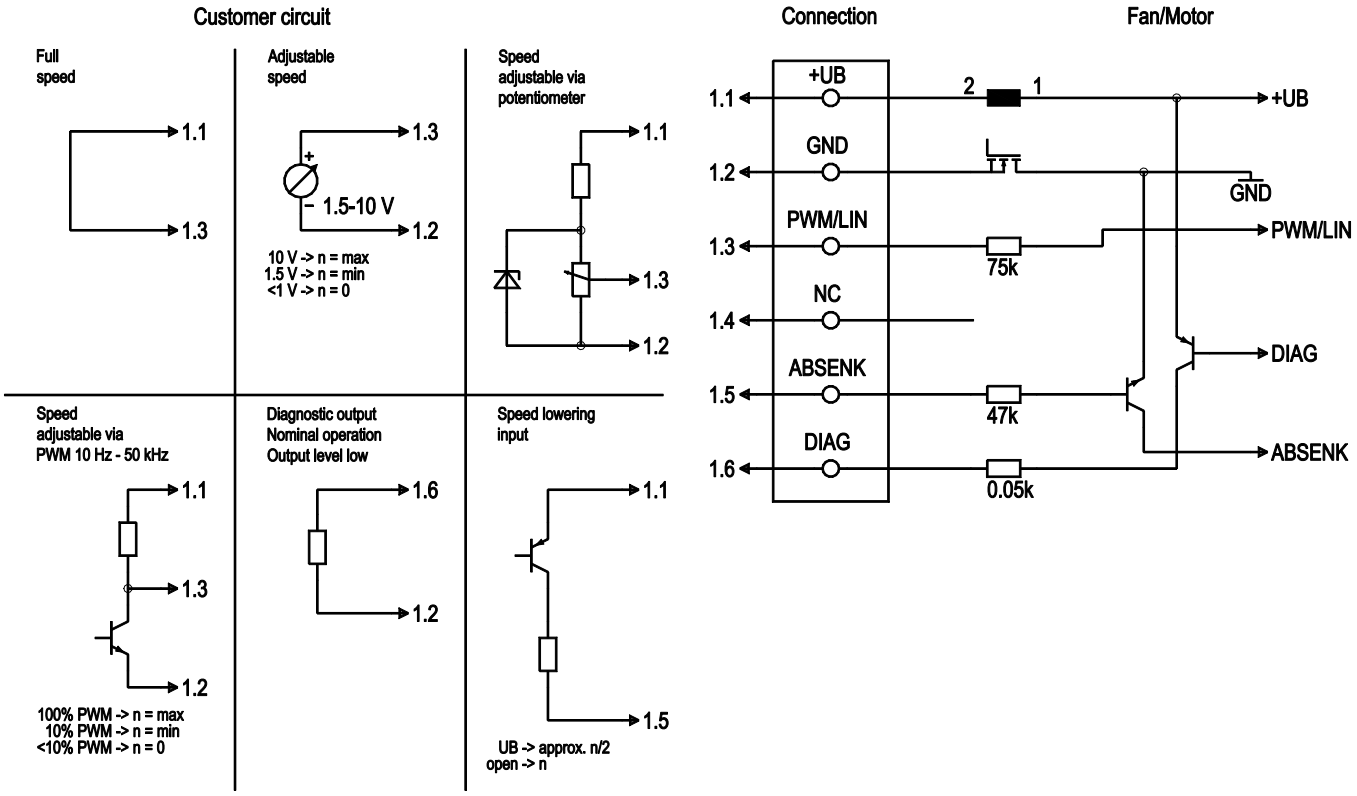
Connection diagram



No.	Conn.	Designation	Function/assignment
	1.1	+UB	Power supply
	1.2	GND	Power supply GND, reference ground
	1.3	PWM/LIN	Analog voltage control input 0-10 V or PWM
	1.4	NC	Not used / no function
	1.5	ABSENK	Lowering input
	1.6	DIAG	Diagnostic output

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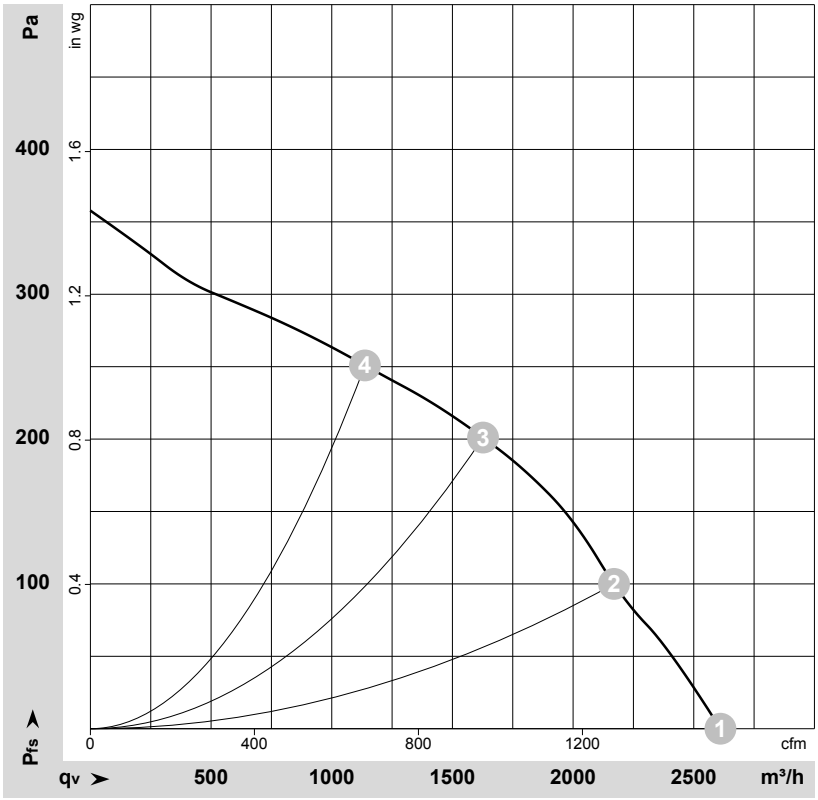
Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-141600-1

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	13	3200	220	16.70	75	83	2610	0	1535	0.00
2	13	3135	237	18.18	75	83	2170	100	1275	0.40
3	13	2955	248	18.98	72	80	1625	200	960	0.80
4	13	2845	248	19.01	73	81	1140	250	670	1.00

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