

W3G300-ME46-01

EC axial fan

with brushless DC motor

Fan housing with guide vanes, Automotive

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Nominal data

Type	W3G300-ME46-01	
Motor	M3G084-BF	

Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	3000
Power consumption	W	175
Current draw	A	6.7
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85

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



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Technical description

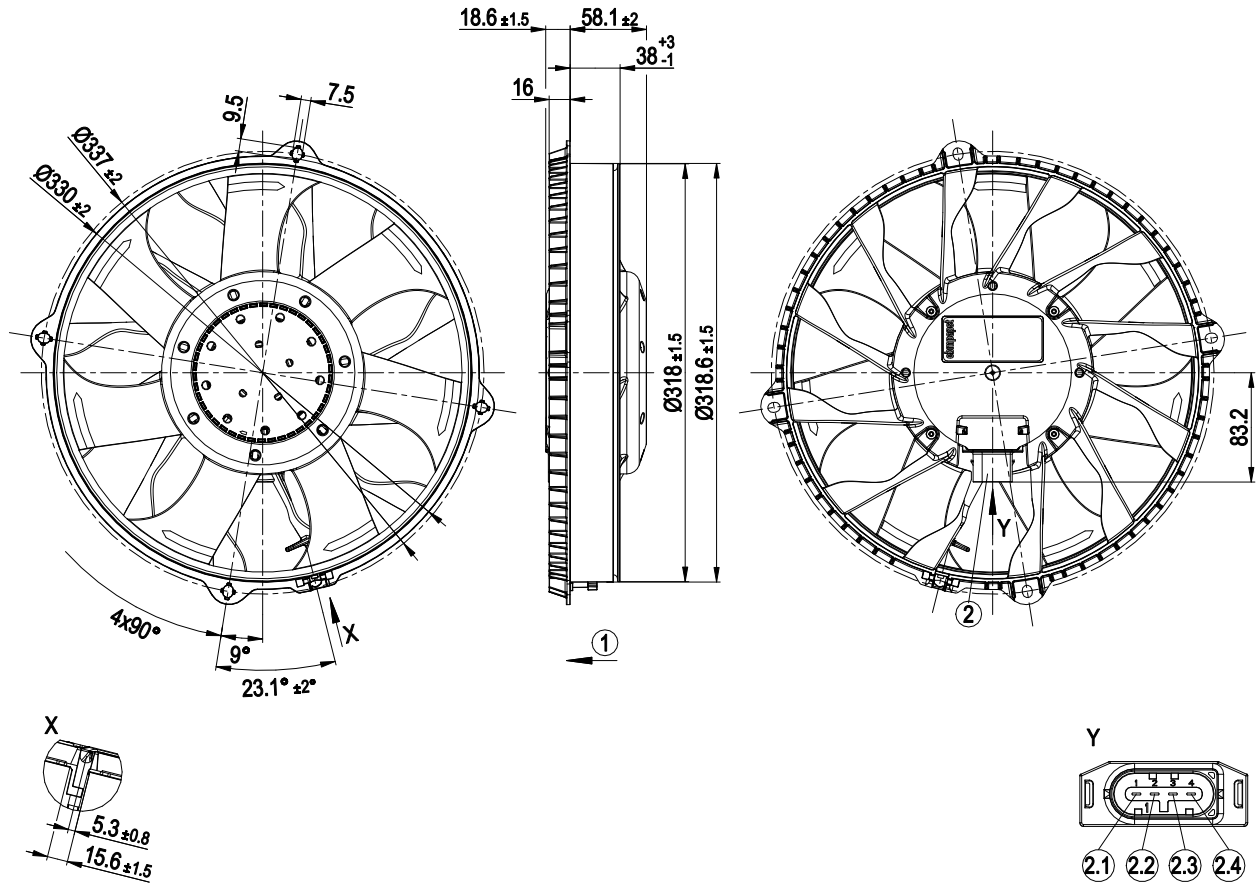
Weight	2 kg
Size	300 mm
Motor size	84
Blade material	PA plastic
Fan housing material	PP plastic
Number of blades	7
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H4
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+85 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancy	40,000 h (depending on load profile and ambient conditions)
Technical features	- Locked-rotor detection - Error output (high-side switch) - Power limiter - Load dump protection - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Thermal overload protection for electronics - Reverse polarity protection
Electrical hookup	Plug; Standby current less than 500 µA
Protection class assignment	0; Built-in component with basic insulation, protection class is based on the intended installation. 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	EAC; E1
Comment	Type approval number – 069401

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Product drawing



1	Airflow direction "V"
2	4-pole plug, pluggable with cable from accessories
2.1	Diagnostic output
2.2	PWM/LIN
2.3	+ UB
2.4	GND
Accessory part: Cable (460 mm) with mating connector, part no. 02040-4-1021 not included in scope of delivery 4-pole mating connector TE 1-1718628-1, 2x plug contact TE 1-968857-1, 2x plug contact TE 1-968855-1, 2x seal TE 828905-1, 2x seal TE 828904-1	

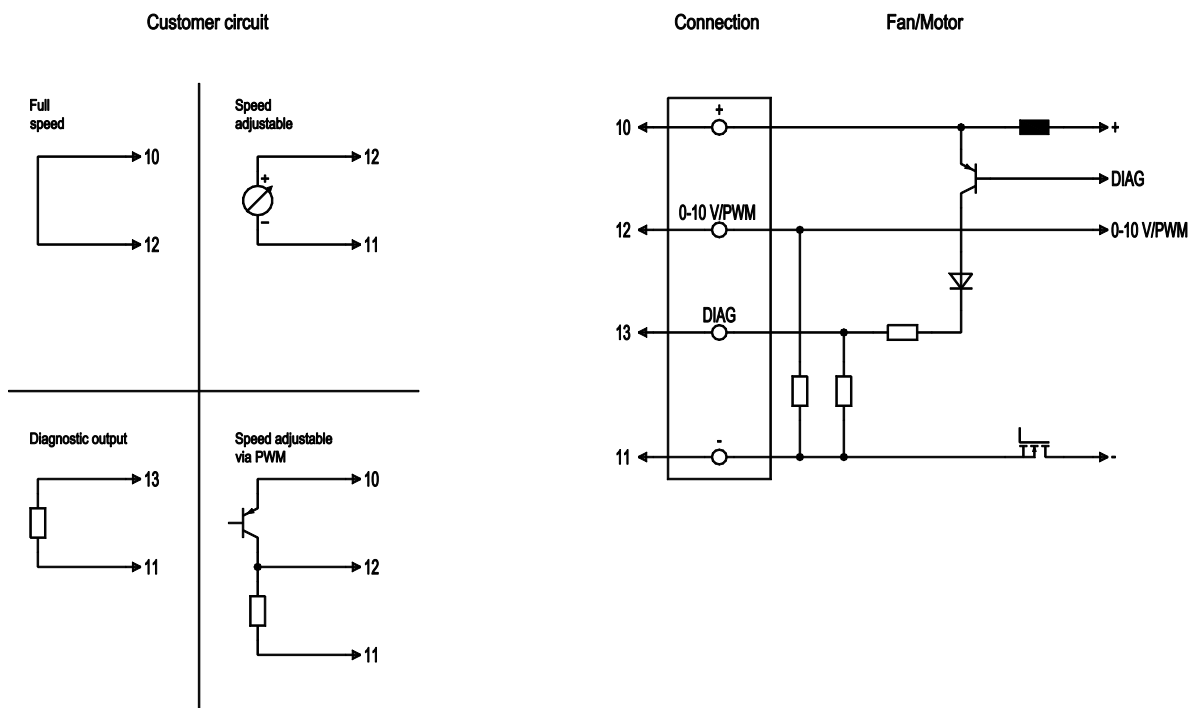


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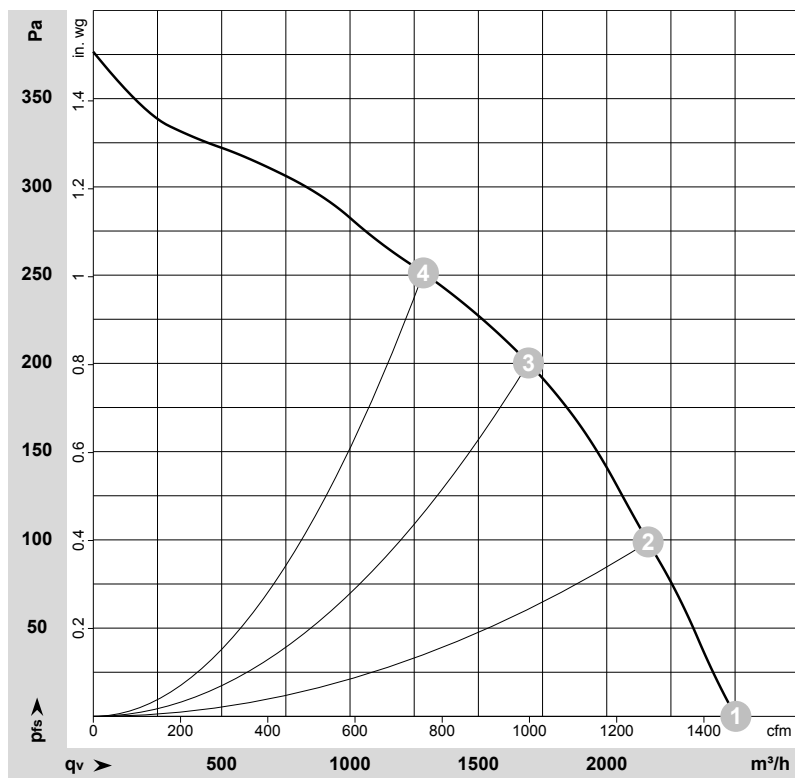
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Connection diagram



No.	Conn.	Designation	Function/assignment
10	2.3	+	Power supply +
11	2.4	-	Power supply -
12	2.2	0-10 V / PWM	Control input: $R_i > 27 \text{ k}\Omega$ 0-10 V: (typ. 0.5 V -> Standby; 1.5 V -> n = min.; 9.5 V -> n = max.) or PWM: (12 V - U_b ; 1 kHz - 10 kHz; typ. < 1% -> standby; 10% -> n = min.; 95% -> n = max.)
13	2.1	DIAG	Diagnostic output: Open Collector, $I_{\text{source max}} = 10 \text{ mA}$, $R_{\text{source}} = 2 \text{ k}\Omega$; $R_{\text{sink}} = 100 \text{ k}\Omega$ fan OK -> low; fan error -> high

Curves: Air performance



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-210594-1

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	3000	175	6.70	76	83	2505	0	1475	0.00
2	26	2925	186	7.14	75	82	2160	100	1270	0.40
3	26	2915	196	7.54	76	83	1695	200	1000	0.80
4	26	2920	196	7.54	78	85	1285	250	755	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

