W3G300-ME46-02

EC axial fan

with brushless DC motor

Fan housing with guide vanes, Automotive

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Nominal data

Type	**W3G300-ME46-02**	
Motor	**M3G084-BF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3200
Power consumption	W	215
Current draw	A	8.2
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
Balancing grade according to DIN ISO 21940-11	G 16
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 (typical)
Technical features	- Locked-rotor detection - Error output (high-side switch) - Power limiter - Load dump (58 V) - 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
Approval	EAC

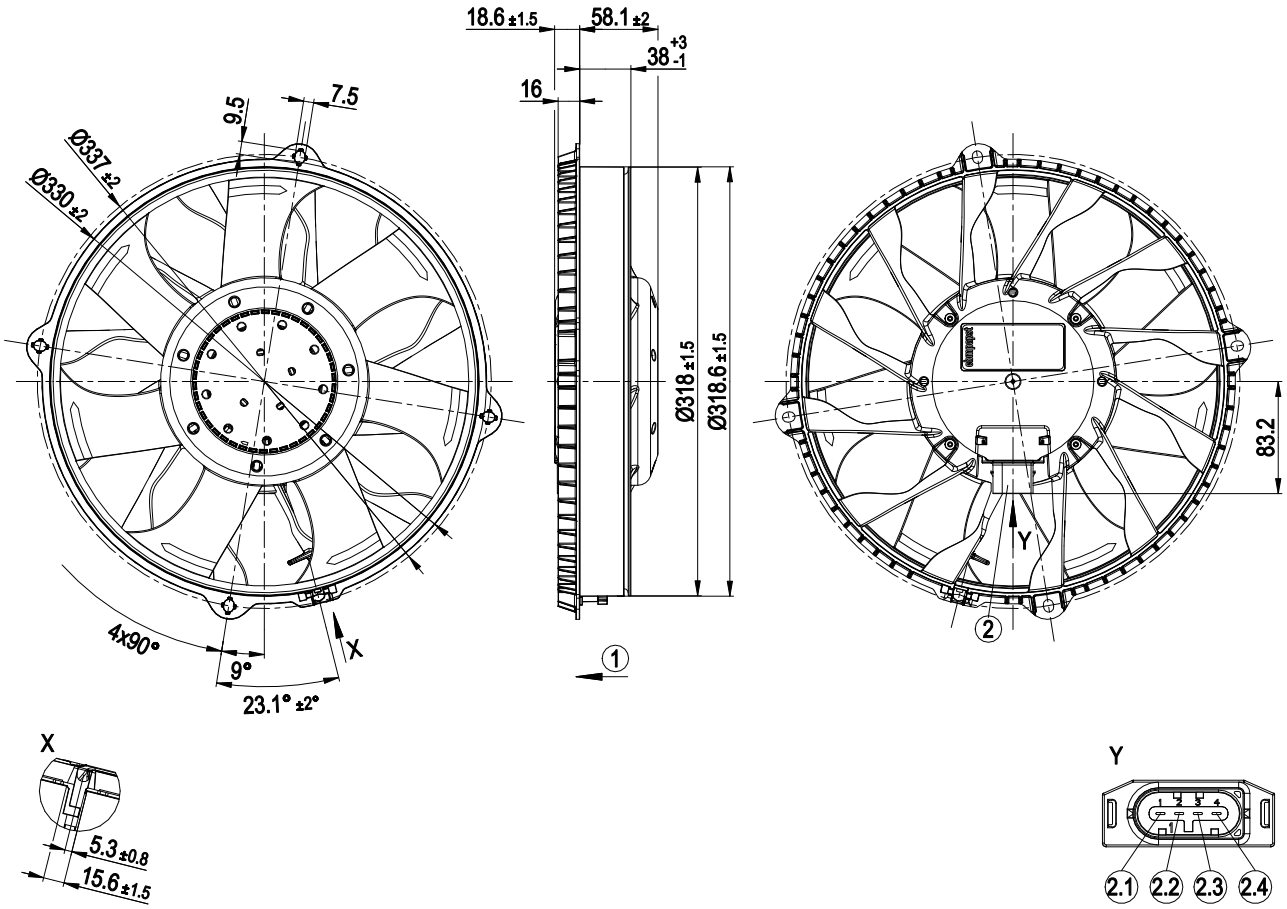
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Product drawing



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

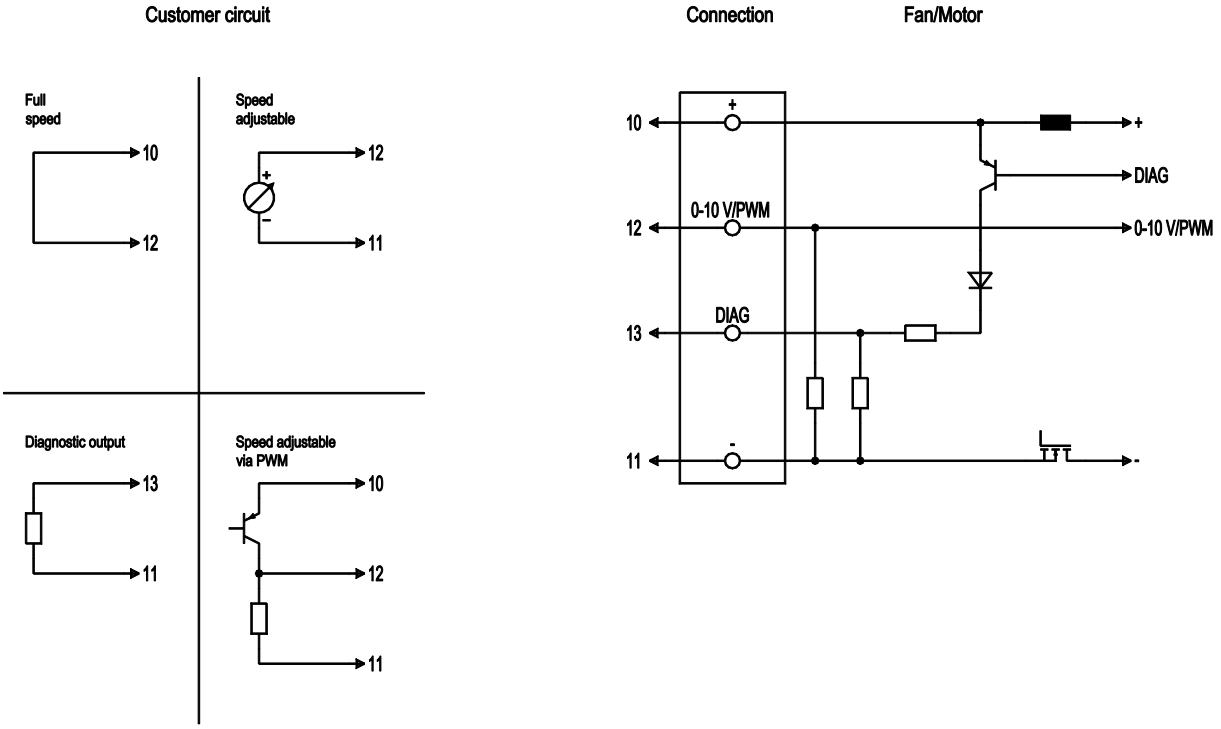
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Connection diagram



No.	Conn.	Designation	Function/assignment
10	2.3	+	Power supply +
11	2.4	-	Power supply -
12	2.2	0-10 V / PWM	Control input: Ri > 27 kΩ 0-10 V: (typ. 0.5 V -> Standby; 1.5 V -> n = min.; 9.5 V -> n = max.) or PWM: (12 V - Ub; 1 kHz - 10 kHz; typ. < 1% -> standby; 10% -> n = min.; 95% -> n = max.)
13	2.1	DIAG	Diagnostic output: Open Collector, Isorce max = 10 mA, Rsource = 2 kΩ; Rsink = 100 kΩ fan OK -> low; fan error -> high

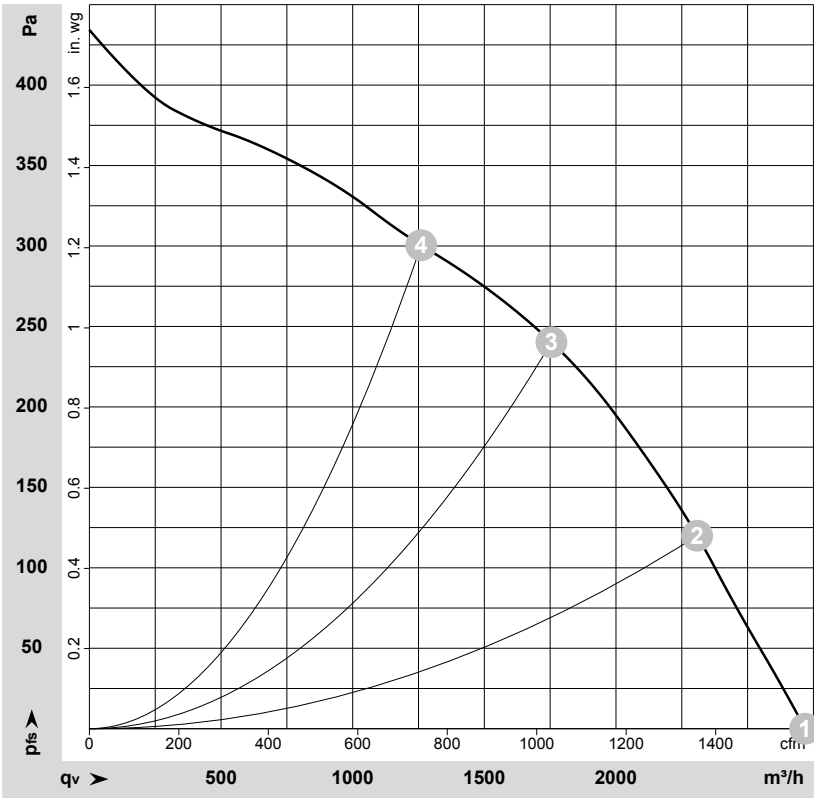
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-210599-1

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	3200	215	8.20	78	85	2720	0	1600	0.00
2	26	3145	233	8.95	77	83	2310	120	1360	0.48
3	26	3125	241	9.26	78	85	1755	240	1035	0.96
4	26	3125	242	9.31	80	87	1260	300	740	1.20

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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