W3G300-QX25-23

EC axial fan

with brushless DC motor

Automotive

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**W3G300-QX25-23**
Motor	**M3G084-BF**

Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3800
Power consumption	W	400
Current draw	A	15.0
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	2.32 kg
Size	300 mm
Motor size	84
Blade material	PA plastic
Fan housing material	PA plastic
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
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
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing; (sealed)
Life expectancy	40,000 h (depending on load profile and ambient conditions)
Technical features	- Error output (high-side switch) - Power limiter - Load dump (58 V) - Motor current limitation - Reverse operation (reversal of rotation) - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Overvoltage detection - Thermal overload protection for electronics - Line undervoltage detection
EMC regulations	According to ECE R10 Rev.6
Electrical hookup	Connector with cable; Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Protection class assignment	Built-in component, 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	E1; EAC
Comment	Type approval number – 069119

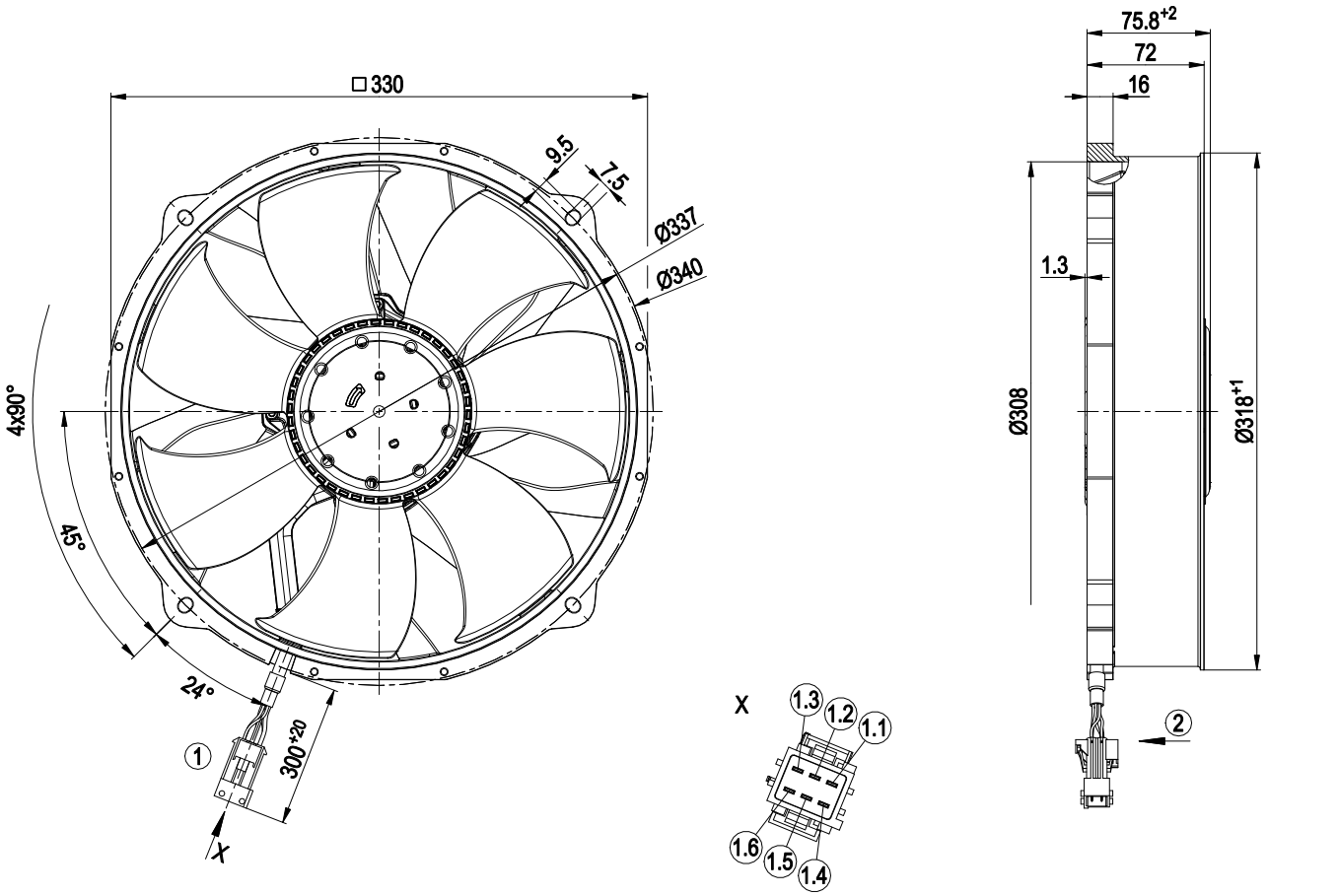
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Product drawing



1	Cable FLRYW 2x 3 mm², 3x 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
1.5	Reverse
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"

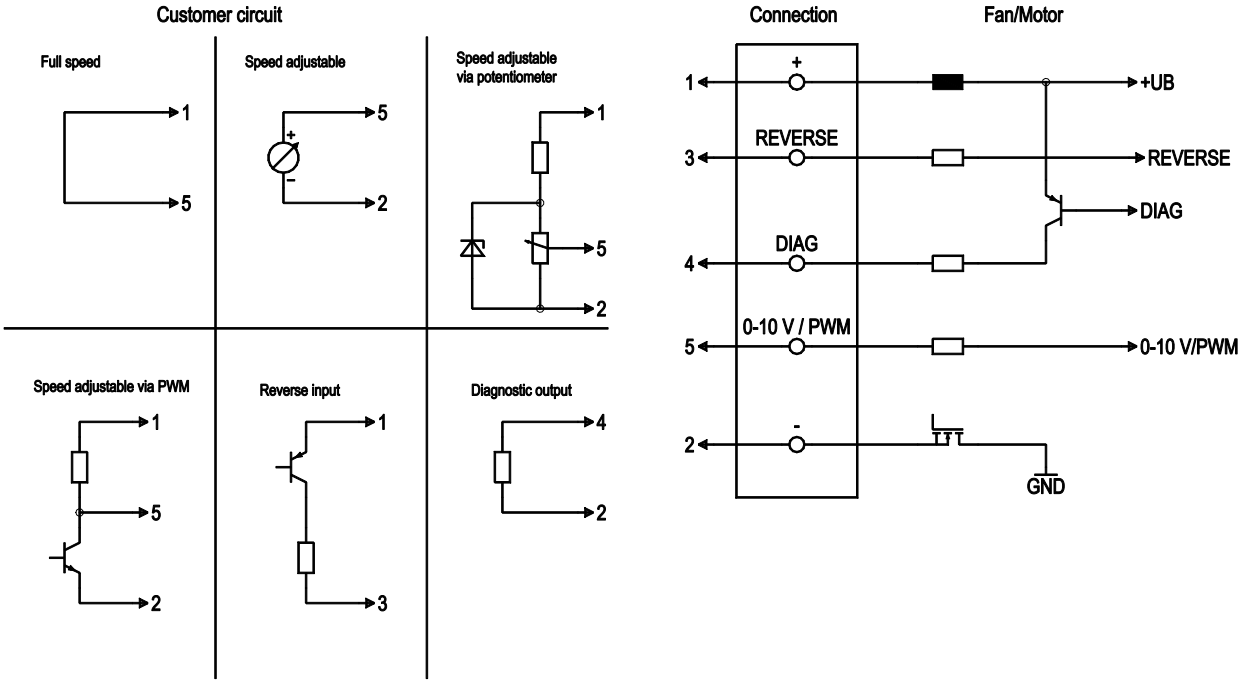
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1.1	1	+	black	Power supply, see nameplate for voltage range
1.2	2	-	brown	Power supply, see nameplate for voltage range
1.6	3	DIAG	white	Diagnostic output: Ri = 0.05 kΩ output level in nominal operation -> Low
1.5	4	Reverse	blue	Reversal of rotation input: Ri = 47 kΩ connected to power supply + -> direction of rotation is reversed, or open -> reversal of rotation inactive
1.3	5	0-10 V / PWM	yellow	Control input: Ri > 42 kΩ 0-10 V (typ. <1 V -> n = 0; 1.5 V -> n = min.; 10 V -> n = max.), potentiometer (limit voltage at potentiometer with 12 V Z-diode) or PWM (>12 V; 0.1-50 kHz; typ. <2% -> n = 0; 5% -> n = min. ; 100% -> n = max.)

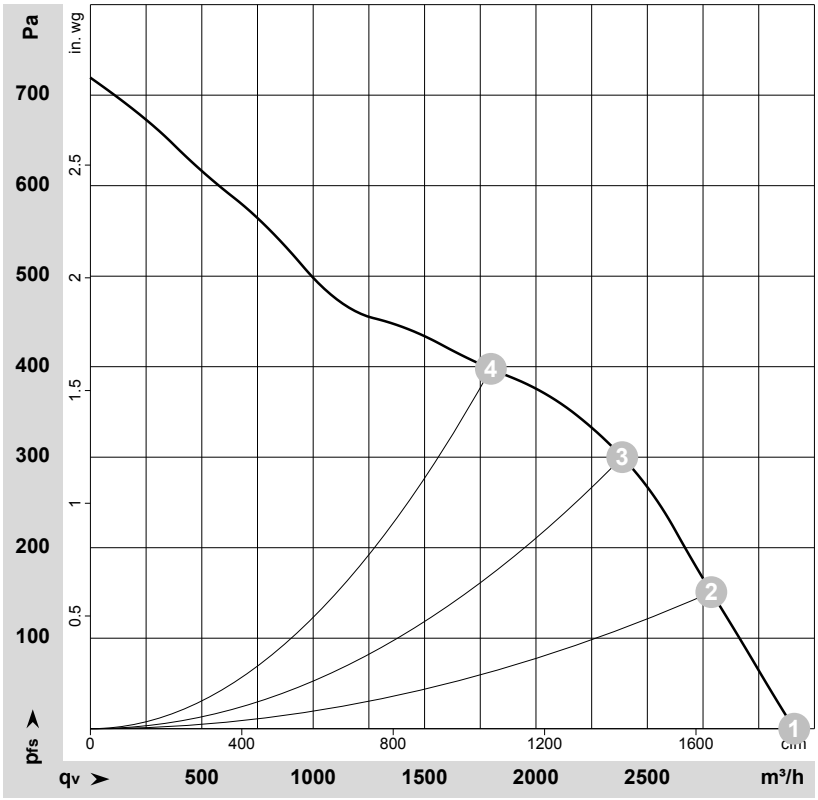
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-187429-1

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	3800	400	15.00	80	88	3160	0	1860	0.00
2	26	3725	426	16.37	79	87	2785	150	1640	0.60
3	26	3700	465	17.89	79	87	2385	300	1405	1.20
4	26	3700	462	17.74	82	89	1800	400	1060	1.61

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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