W1G300-EC24-05

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	**W1G300-EC24-05**	
Motor	**M1G074-CF**	
Nominal voltage	VDC	27
Nominal voltage range	VDC	18 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3100
Power consumption	W	250
Current draw	A	9.4
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70
-with power derating to	°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	2.6 kg
Size	300 mm
Motor size	74
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA6 plastic
Fan housing material	PP plastic
Number of blades	5
Motor suspension	Motor vibration-damped on both sides
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	Above +70°C with temperature derating; External sources of heat above +85°C can affect the service life; Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at negative ambient temperatures below -25°C (such as refrigeration applications), a fan design with special low-temperature bearings must be implemented.
Max. permitted ambient temp. for motor (transport/storage)	+90 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	-Start at 85 °C (2 min) permitted - Motor current limitation - Soft start - Control input 0-10 VDC - Temperature derating - Thermal overload protection for electronics - Reverse polarity protection
Speed levels	2
Electrical hookup	Plug
Motor protection	Locked-rotor protection
Approval	EAC
Comment	E1 approval in preparation

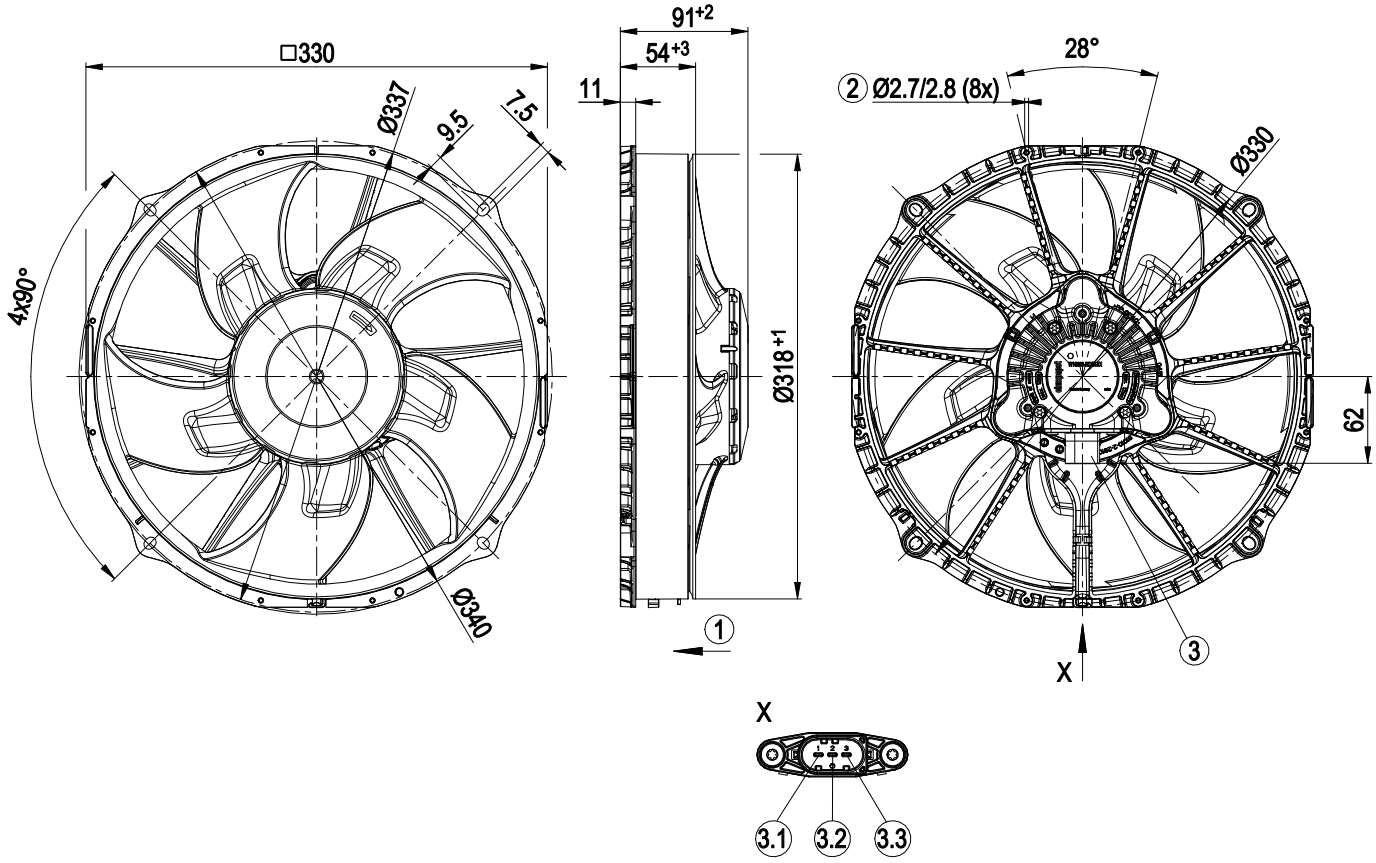
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Product drawing



1	Airflow direction "V"
2	on both sides for screws for fastening plastics, Ø 3.5 mm
3	3-pole plug, pluggable with cable from accessories
3.1	+ UN
3.2	0-10 V
3.3	GND
	Accessory part: Cable (420 mm) with mating connector, part no. 02020-4-1021 not included in scope of delivery 3-pole mating connector TE 1-1718627-1, 2x socket TE 1241396-1, 1x socket TE 1241388-1, 2x seal TE 963292-1, 1x seal TE 963294-1

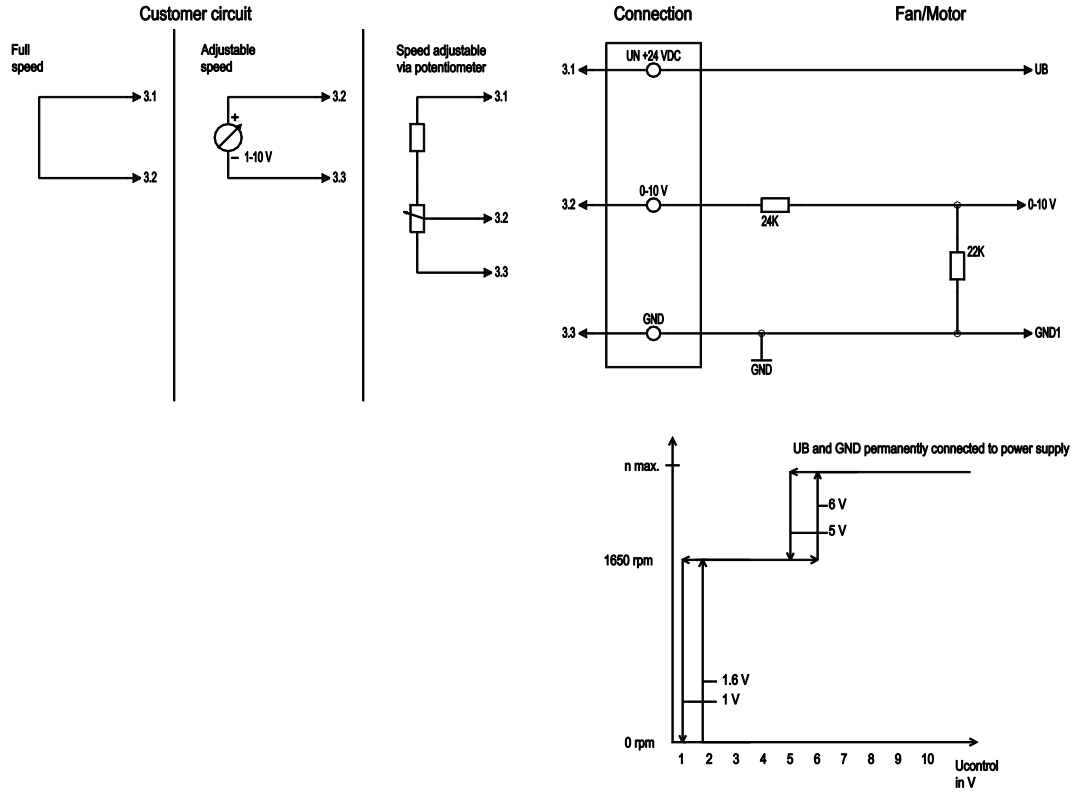
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Connection diagram



No.	Conn.	Designation	Function/assignment
1	3.1	UN +24 VDC	Power supply 24 VDC, maximum ripple ±3.5%
2	3.2	0-10 V	Control input, 2 speed levels 0-10 V
3	3.3	GND	Reference ground

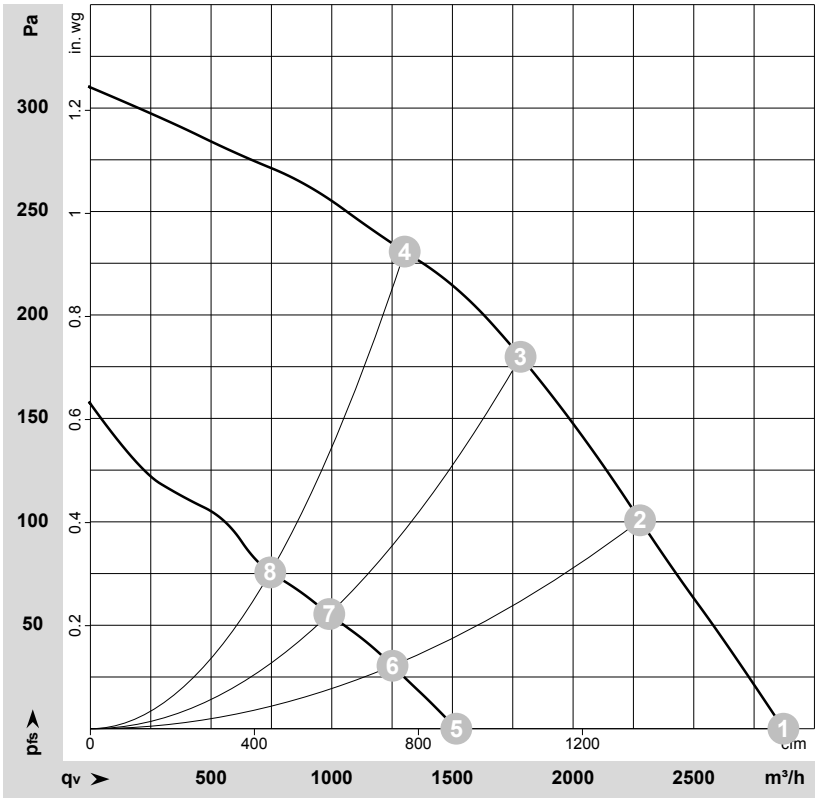
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-181263-1

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	27	3100	250	9.40	77	82	2870	0	1690	0.00
2	27	3005	250	9.27	76	83	2280	100	1340	0.40
3	27	2975	250	9.25	77	84	1780	180	1050	0.72
4	27	2885	247	9.12	76	84	1300	230	765	0.92
5	27	1650	37	1.38	61	67	1515	0	890	0.00
6	27	1650	42	1.54	61	68	1250	30	735	0.12
7	27	1650	43	1.58	62	69	990	55	585	0.22
8	27	1650	46	1.70	62	70	745	75	440	0.30

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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