W1G300-EC24-04

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-EC24-04**	
Motor	**M1G074-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	18 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3000
Power consumption	W	225
Current draw	A	8.5
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

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	40.3	29.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		50.4	40
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.24
09 Air flow q_v	m³/h	1605
09 Pressure increase p_{fs}	Pa	200
10 Speed (rpm) n	min^{-1}	2910
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-188993

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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	PP plastic
Housing material	Die-cast aluminum
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 power derating; External sources of heat above 85°C can affect the service life
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; (sealed)
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
Electrical hookup	Plug; Integrated connector (pluggable directly on fan)
Motor protection	Locked-rotor protection
Approval	EAC

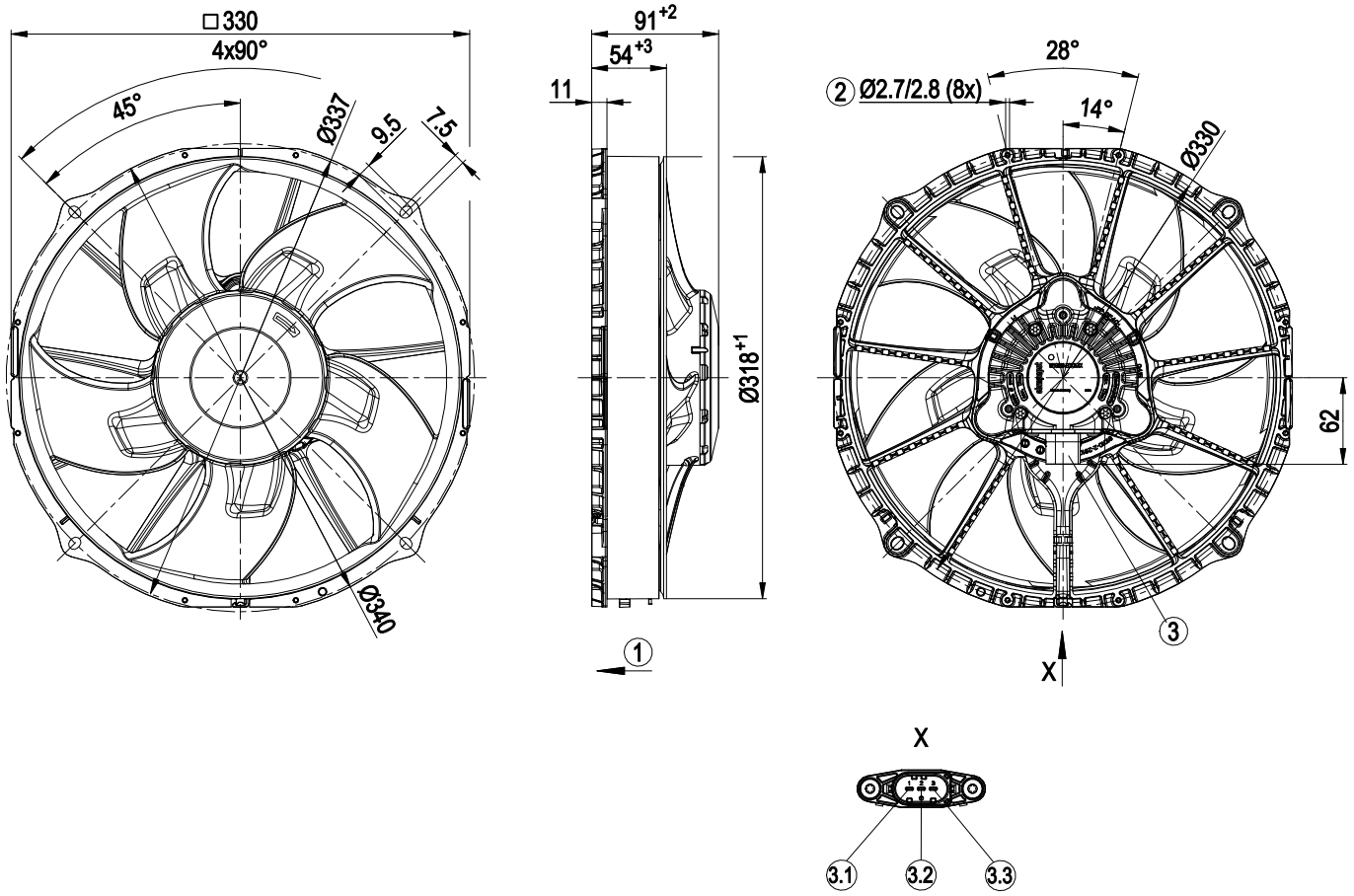
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Product drawing



1	Airflow direction "V"
2	on both sides for screws for fastening plastics, Ø 3.5 mm
3	Plug TE MCP 2.8, 3-pole, coded
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

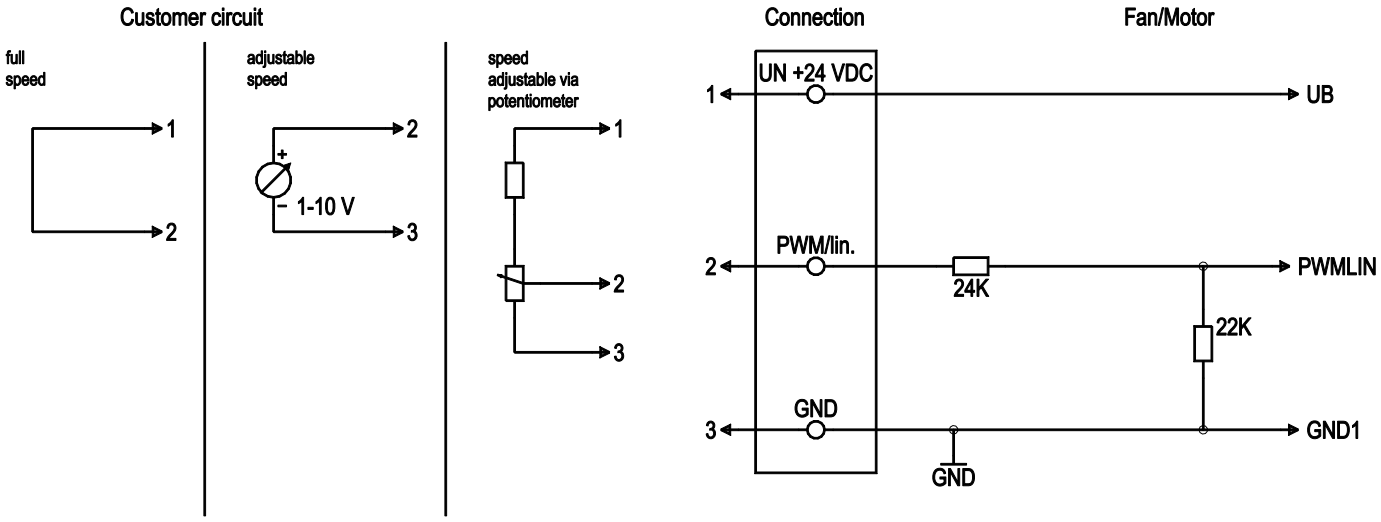
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Connection diagram



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

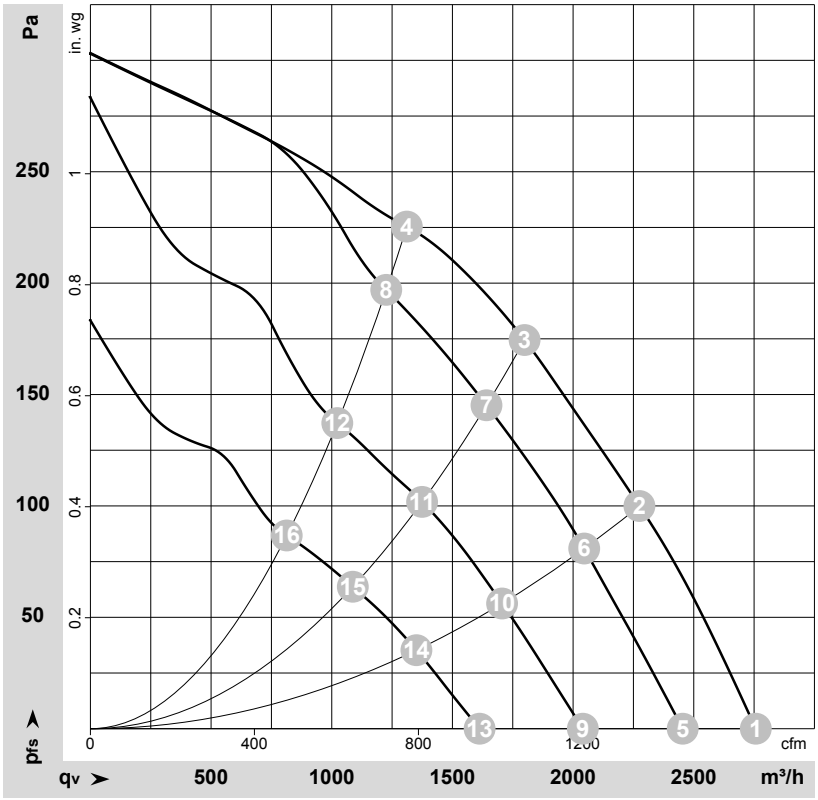
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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-188993-1

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	225	8.50	74	81	2755	0	1625	0.00
2	26	2955	251	9.64	78	82	2275	100	1340	0.40
3	26	2925	249	9.58	76	83	1800	175	1060	0.70
4	26	2850	247	9.48	76	84	1310	225	770	0.90
5	26	2680	165	6.32	72	78	2455	0	1445	0.00
6	26	2675	182	6.99	73	80	2045	81	1205	0.33
7	26	2675	188	7.22	74	81	1640	145	965	0.58
8	26	2675	200	7.69	74	82	1225	197	720	0.79
9	26	2265	99	3.79	67	74	2040	0	1200	0.00
10	26	2255	109	4.17	68	75	1705	56	1005	0.22
11	26	2260	112	4.29	69	77	1375	102	810	0.41
12	26	2255	118	4.53	70	78	1025	137	600	0.55
13	26	1815	53	2.03	62	68	1615	0	950	0.00
14	26	1815	58	2.24	63	70	1350	35	795	0.14
15	26	1815	60	2.31	64	71	1085	64	640	0.26
16	26	1815	63	2.42	64	72	815	87	480	0.35

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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