W1G300-EC12-20

EC axial fan

with brushless DC motor

Automotive

W1G300-EC12-20 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**W1G300-EC12-20**	
Motor	**M1G074-CF**	
Nominal voltage	VDC	13
Nominal voltage range	VDC	9 .. 16
Type of data definition		fa
State		prelim.
Speed (rpm)	min^{-1}	2500
Power input	W	145
Current draw	A	11.0
Max. back pressure	Pa	160
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	85

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	41.7	28.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.4	40
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.14
09 Air flow q_v	m^3/h	1400
09 Pressure increase p_{fs}	Pa	135
10 Speed (rpm) n	min^{-1}	2415
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-168487

EC axial fan

with brushless DC motor

Automotive

Technical features

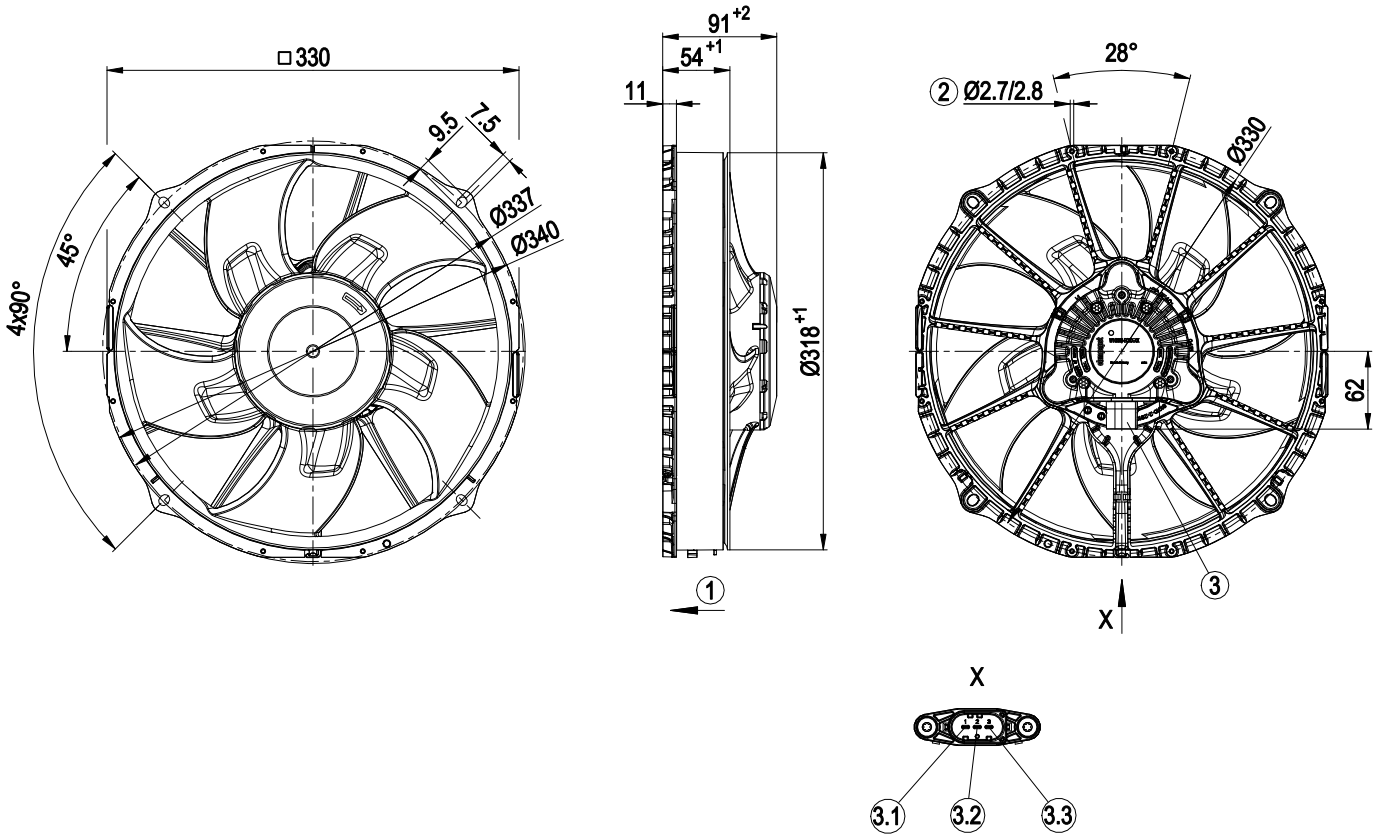
Mass	2.6 kg
Size	300 mm
Motor size	74
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	PA6 plastic
Housing material	Die-cast aluminium
Material of wall ring	PP plastic
Number of blades	5
Motor suspension	Motor mounted vibration-free on both sides
Direction of air flow	V
Direction of rotation	Clockwise, seen on rotor
Type of protection	Motor IP24 KM, electronics IP6K9K (mating connector fitted)
Insulation class	"B"
Humidity (F) / environmental protection class (H)	H4
Note ambient temperature	Above +70 °C with power derating; External sources of heat above 85 °C can affect the service life; External sources of heat above 85 °C can affect the service life
Max. permissible ambient motor temp. (transp./ storage)	+85 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensation drainage holes	None, open rotor
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Motor current limit - Soft start - Control input 0-10 VDC - Temperature derating - Over-temperature protected electronics
Speed steps	2
Electrical connection	Plug
Motor protection	Locked-rotor protection
Approval	EAC
Remark	E1 approval in preparation

EC axial fan

with brushless DC motor

Automotive

Product drawing



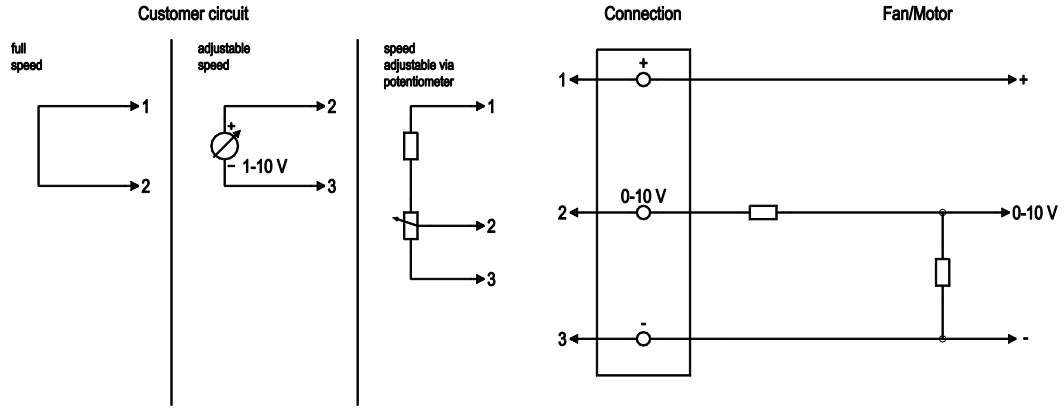
1	Direction of air flow "V"
2	On both sides for plastic screws dia. 3.5 mm
3	3-pole plug, pluggable with connection line from accessories
3.1	+ UB
3.2	0-10 V
3.3	GND
	Accessory part: Connection line (420 mm) with mating connector, part no. 02020-4-1021 not included in scope of delivery 3-pole mating connector TE 1-1718627-1, 2x female connector TE 1241396-1, 1x female connector TE 1241388-1, 2x seal TE 963292-1, 1x seal TE 963294-1

EC axial fan

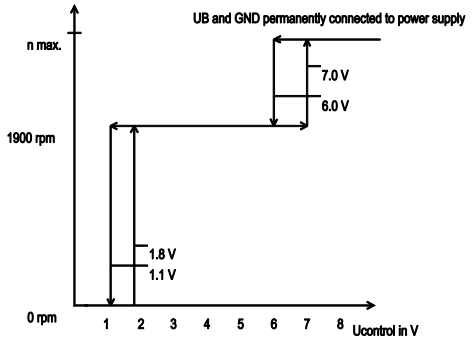
with brushless DC motor

Automotive

Connection screen



n max. = 0-10 V with +UB or 10 V
1900 rpm = 0-10 V with 4.0 V
0 rpm = 0-10 V with GND or 0 V



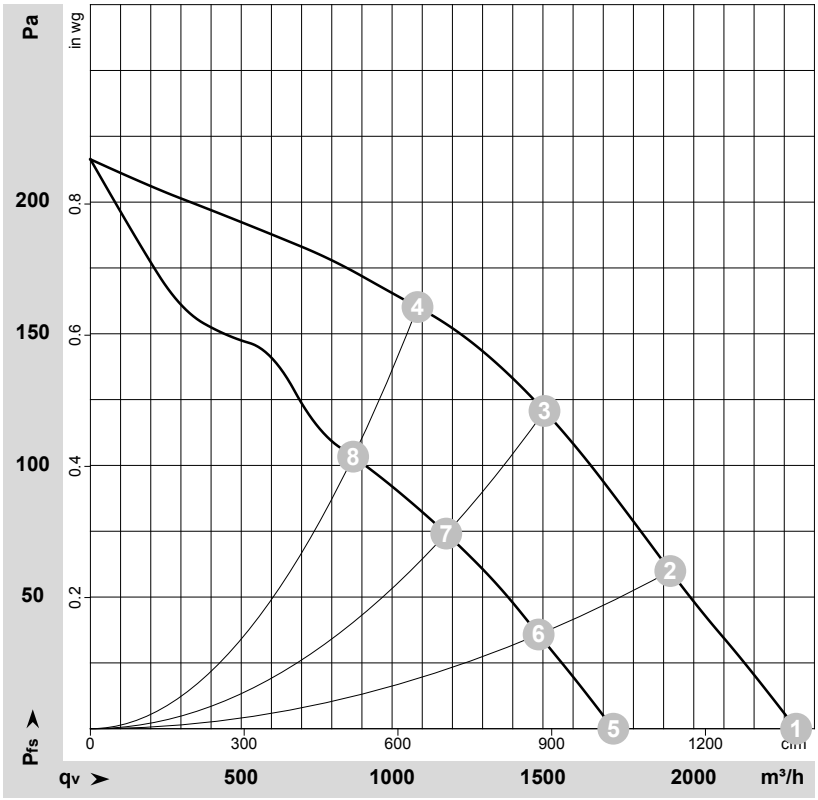
No.	Conn.	Designation	Function / assignment
1	1	UN +13 VDC	Power supply 13 VDC, maximum ripple 3.5 %
2	2	0-10 VDC	Control input, 2 speed levels
3	3	GND	Reference earth

EC axial fan

with brushless DC motor

Automotive

Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168487-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

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	13	2500	145	11.00	69	76	2340	0	1375	0.00
2	13	2455	145	11.00	70	78	1920	60	1130	0.24
3	13	2415	145	11.00	71	79	1505	120	885	0.48
4	13	2365	142	10.90	72	80	1085	160	640	0.64
5	13	1900	62	4.71	63	71	1735	0	1020	0.00
6	13	1900	68	5.22	64	72	1485	36	875	0.14
7	13	1900	71	5.46	65	73	1180	74	695	0.30
8	13	1900	74	5.69	66	75	870	103	515	0.41

U = Supply voltage · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow · p_{fs} = Pressure increase