R3G310-AW46-32

EC centrifugal fan

backward curved, single inlet

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
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G310-AW46-32**	
Motor	**M3G084-DF**	
Nominal voltage	VDC	24
Nominal voltage range	VDC	19 .. 30
Type of data definition		fa
Speed	min^{-1}	2550
Power input	W	290
Current draw	A	12
Min. ambient temperature	°C	- 25
Max. ambient temperature	°C	+ 70

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		54.1	42.7	46.7
Efficiency grade N		69.4	58	62
Power input P_e	kW	0.35		
Air flow q_v	m³/h	1050		
Pressure increase p_{fs}	Pa	595		
Speed n	min^{-1}	2505		

Data established at point of optimum efficiency

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Technical features

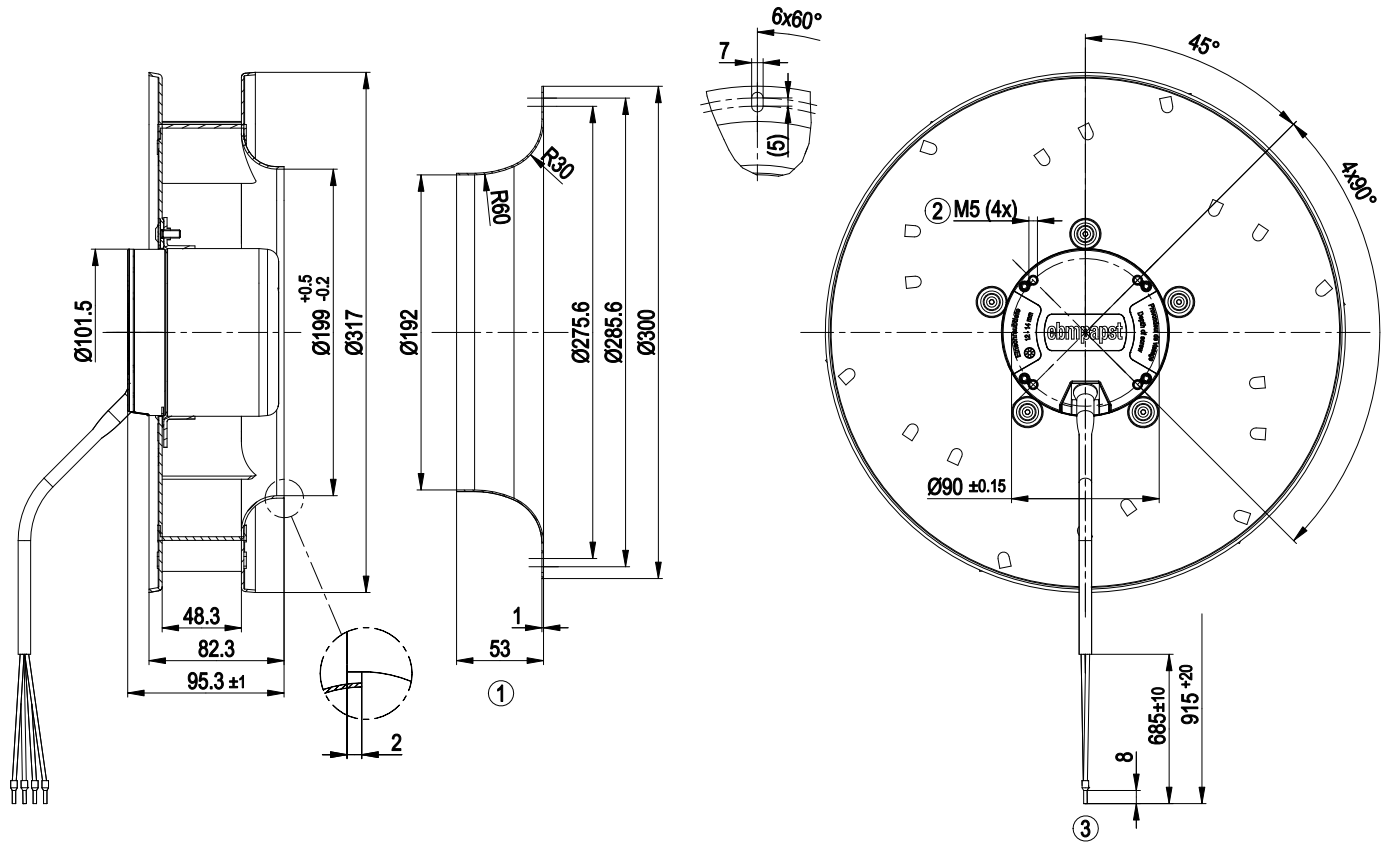
Mass	3.7 kg
Size	310 mm
Surface of rotor	Coated in black
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 42
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected motor
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Product conforming to standard	EN 60950-1
Approval	UL 1004-1; CSA C22.2 Nr.100

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Product drawing



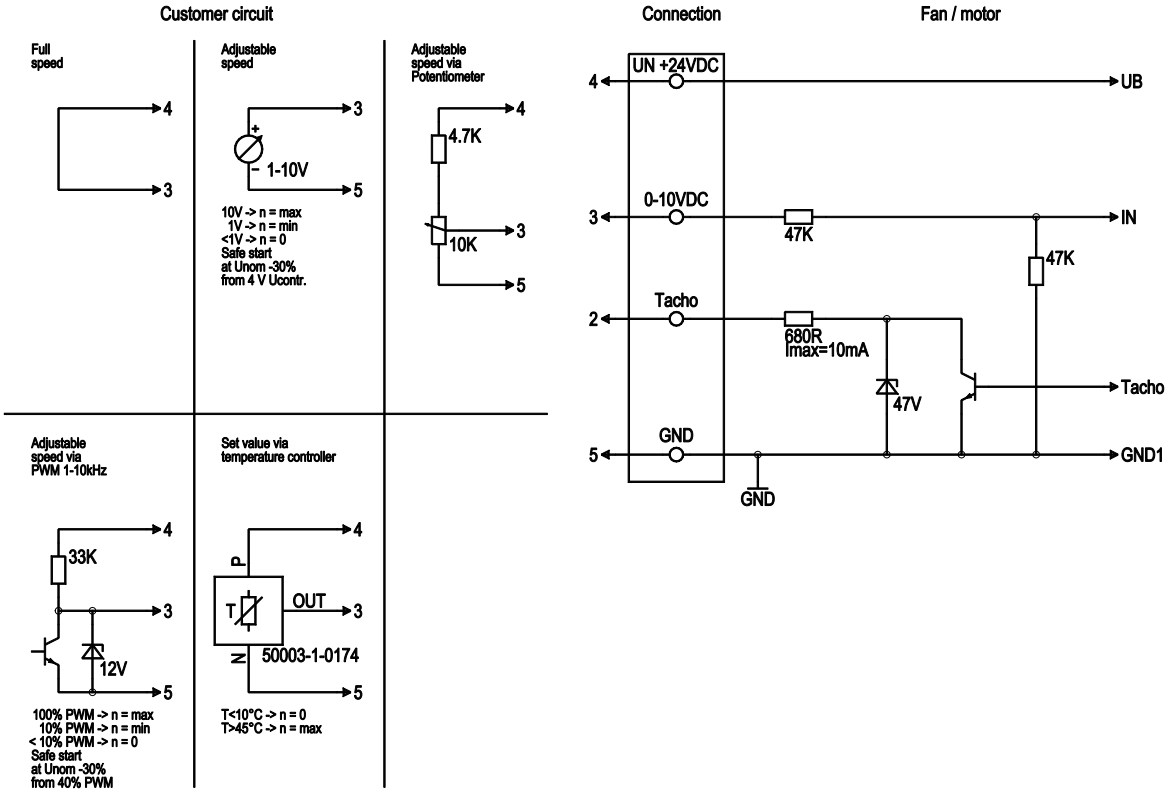
1	Accessory part: Inlet nozzle 97512-2-4013, not included in the standard scope of delivery
2	Depth of screw 12-14 mm
3	Connection line PVC AWG16, 4x crimped core-end sleeves

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Connection screen



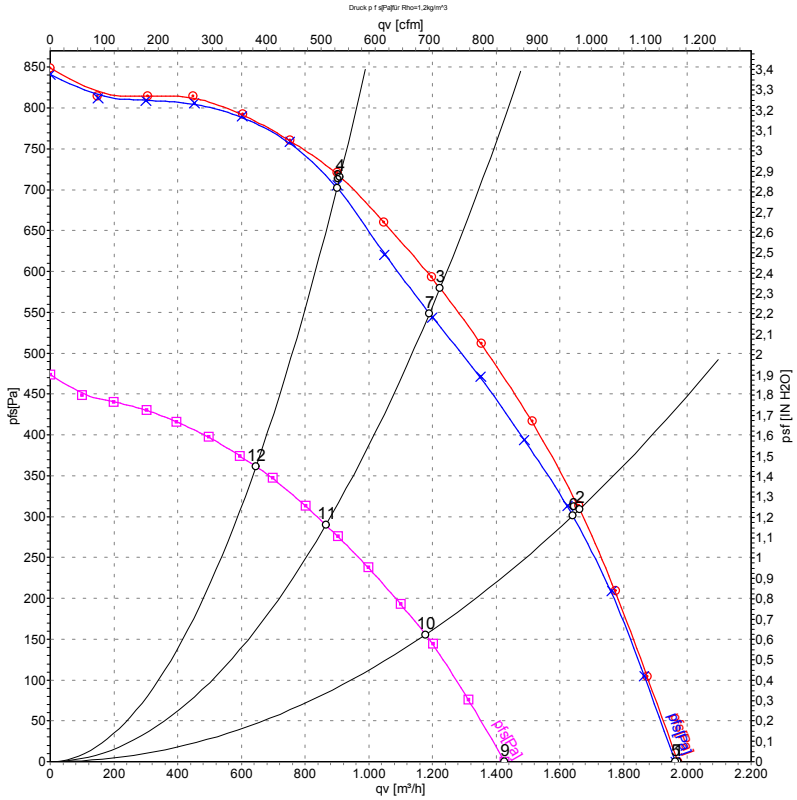
Line	No.	Signal	Colour	Function / assignment
	2	Tach	white	Tacho output, 3 pulses per revolution, Isink max = 10 mA
	3	0-10 VDC/PWM	yellow	Control input Re > 100 K
	4	Un +24 VDC	red	Power supply 24 VDC, residual ripple 3.5 %
	5	GND	blue	Reference ground

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Charts: Air flow



Measurement: LU-118916
Measurement: LU-118915
Measurement: LU-118924

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	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa
1	28	2550	290	10.41	1970	0
2	28	2550	368	13.21	1660	312
3	28	2550	390	14.05	1225	580
4	28	2550	371	13.31	910	718
5	24	2550	290	12.00	1960	0
6	24	2535	356	14.94	1640	300
7	24	2500	361	15.08	1190	550
8	24	2545	364	15.26	900	700
9	16	1860	114	7.15	1425	0
10	16	1830	136	8.56	1180	156
11	16	1820	140	8.82	865	290
12	16	1830	136	8.51	645	361

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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