

EC centrifugal fan - RadiCal

backward curved, single inlet

R3G250-RE21-16 ebmpapst Datasheet
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Nominal data

Type	R3G250-RE21-16	
Motor	M3G055-DF	
Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min ⁻¹	2500
Power input	W	163
Current draw	A	2.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

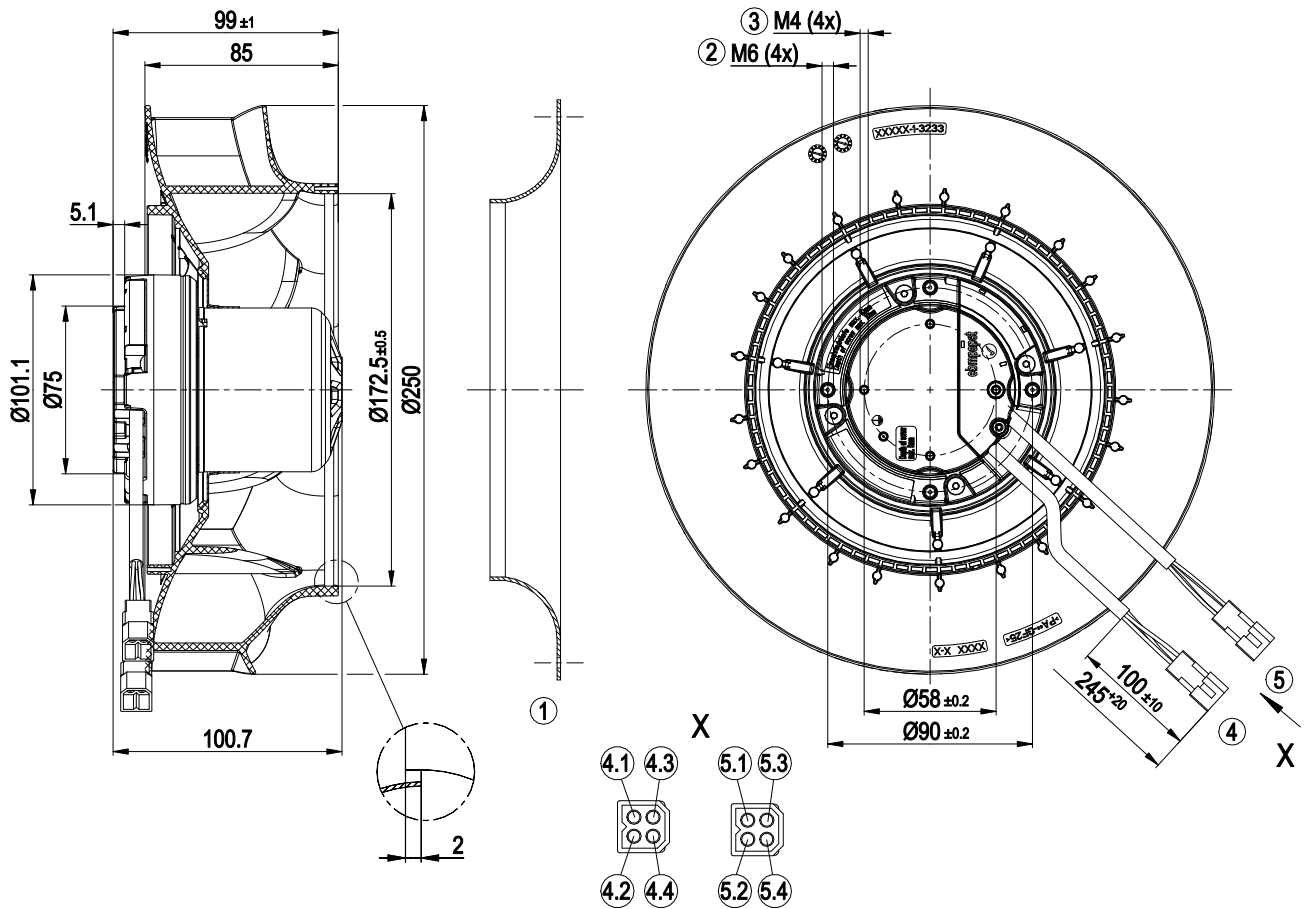
ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations



Technical features

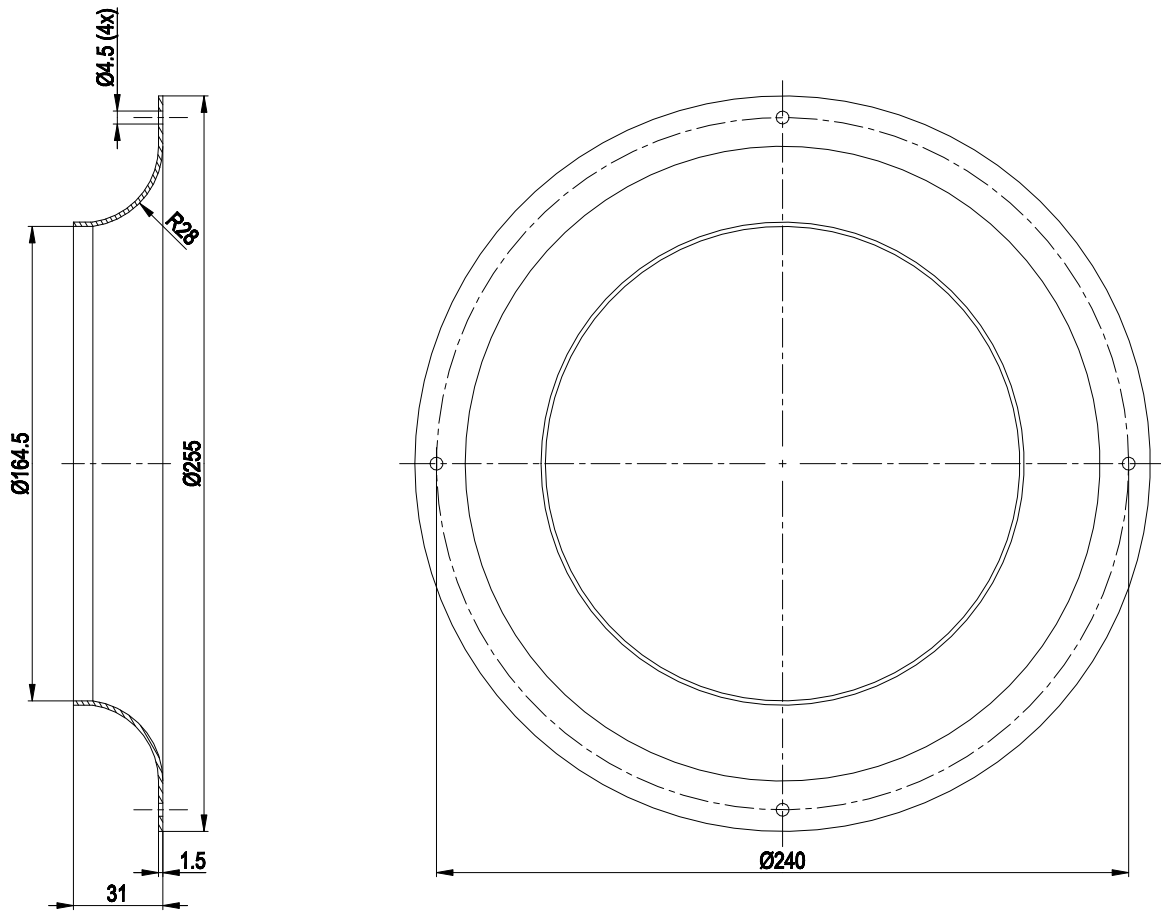
Mass	1.9 kg
Size	250 mm
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60034-1; EN 60204-1; CE
Approval	UL 2111; CSA C22.2 No.77

Product drawing



1	Accessory part: Inlet nozzle 96359-2-4013 not included in scope of delivery
2	Thread reach max. 10 mm
3	Thread reach max. 5 mm
4	Connection line PVC AWG20, connector housing 4-pole Molex 03-09-2049, 3x plug pin Molex 02-09-2116
4.1	PE (green/yellow)
4.2	N (blue)
4.3	L (black)
4.4	not used
5	Connection line PVC AWG20, connector housing 4-pole Molex 03-09-2049, 4x female connector Molex 02-09-1117
5.1	GND (blue)
5.2	PWM (yellow)
5.3	+10 V (red)
5.4	Tach (white)

Accessory part

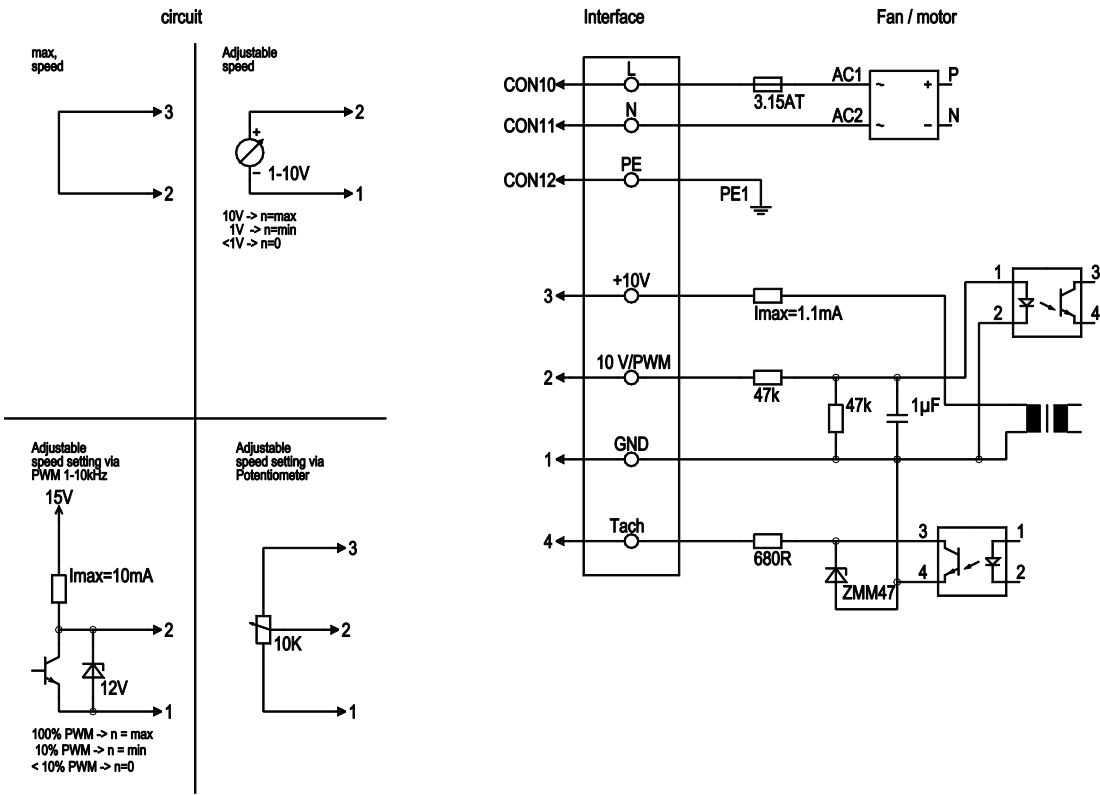


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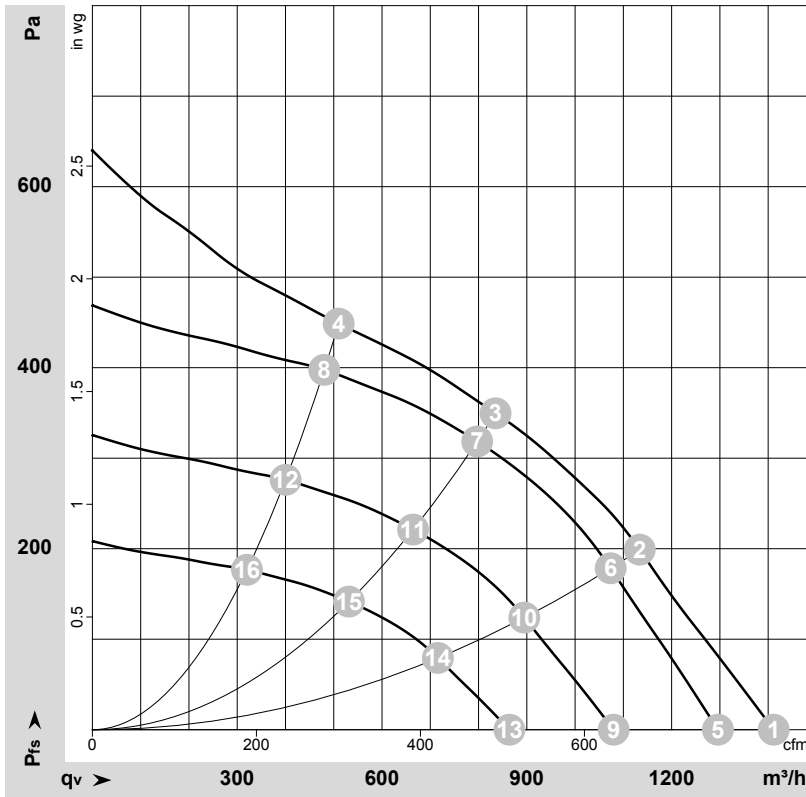
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 115 VAC, 50- 60 Hz, for voltage range refer to rating plate
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND - Connection for control interface
	2	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10V/ 1.1mA, electrically isolated, not short-circuit-proof.
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated



Charts: Air flow 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-142364-1

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	f	n	P _{ed}	I	q _v	p _{fs}	q _v	p _{fs}
	V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	inH ₂ O
1	115	50	2615	135	2.00	1410	0	830	0.00
2	115	50	2535	155	2.20	1135	200	665	0.80
3	115	50	2500	163	2.30	835	350	490	1.41
4	115	50	2545	148	2.00	510	450	300	1.81
5	115	50	2400	104	1.36	1295	0	765	0.00
6	115	50	2400	131	1.71	1075	179	630	0.72
7	115	50	2400	140	1.80	795	319	470	1.28
8	115	50	2400	124	1.62	480	398	285	1.60
9	115	50	2000	60	0.79	1080	0	635	0.00
10	115	50	2000	76	0.99	895	124	525	0.50
11	115	50	2000	81	1.04	665	221	390	0.89
12	115	50	2000	72	0.94	400	277	235	1.11
13	115	50	1600	31	0.40	865	0	510	0.00
14	115	50	1600	39	0.51	715	79	420	0.32
15	115	50	1600	41	0.53	530	142	315	0.57
16	115	50	1600	37	0.48	320	177	190	0.71

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase

