

R1G250-RC77-02

EC centrifugal fan - RadiCal

backward-curved, single-intake



R1G250-RC77-02 ebmpapst Datasheet

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Nominal data

Type	R1G250-RC77-02	
Motor	M1G074-CF	
Nominal voltage	VDC	12
Nominal voltage range	VDC	8 .. 16
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	2000
Power consumption	W	64
Current draw	A	5.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	70

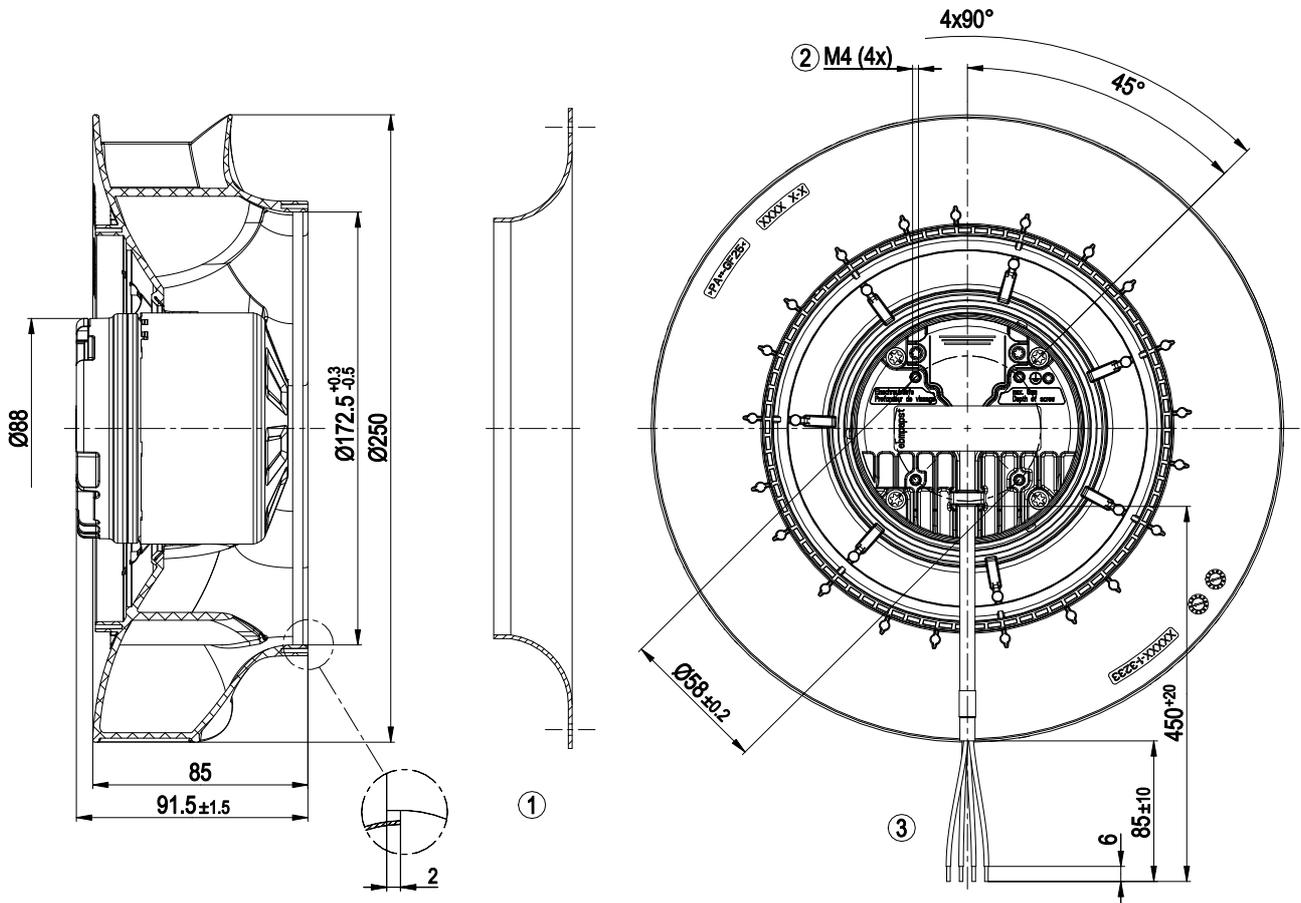
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

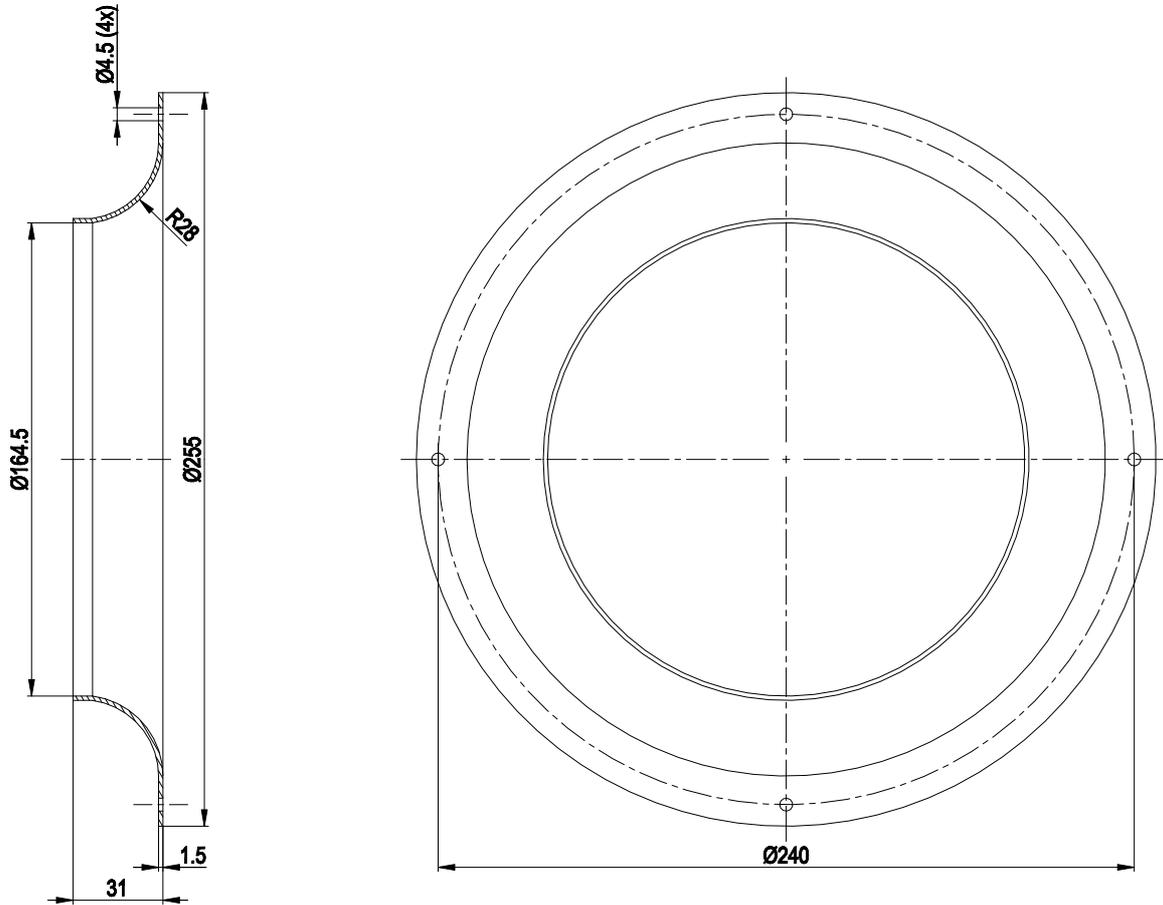
Weight	1.98 kg
Size	250 mm
Motor size	74
Rotor surface	Galvanized
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2+
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	<ul style="list-style-type: none"> - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection - Reverse polarity protection
With cable	Axial
Protection class assignment	<p>III; Requires supply with safety extra-low voltage SELV.</p> <p>This component for installation may have several local protection classes. This information relates to this component's basic design.</p> <p>The final protection class is based on the component's intended installation and connection. If there is a PE connection point on the housing, it must not be visible after installation.</p>
Approval	CSA C22.2 No. 113; UL 507; EAC

Product drawing



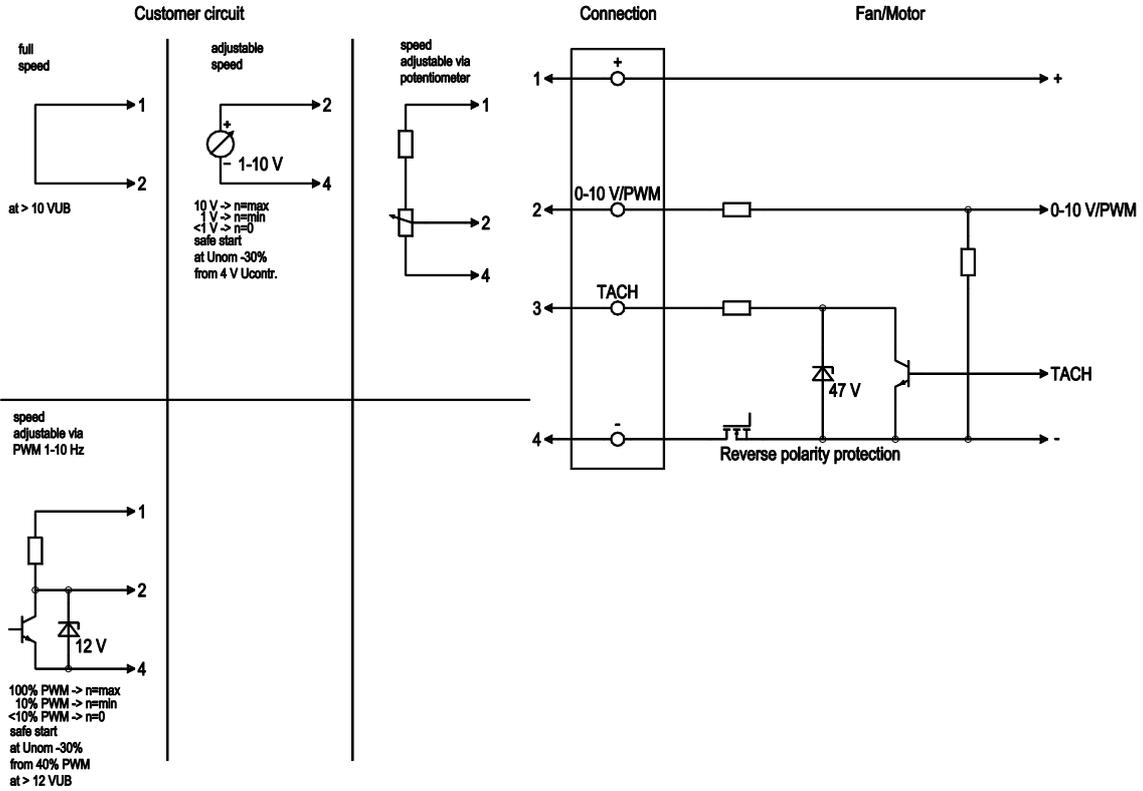
1	Accessory part: Inlet ring 96359-2-4013 not included in scope of delivery
2	Clearance for screw max. 6 mm
3	Cable PVC 4x AWG18, insulating hose
	4x splice

Accessory part



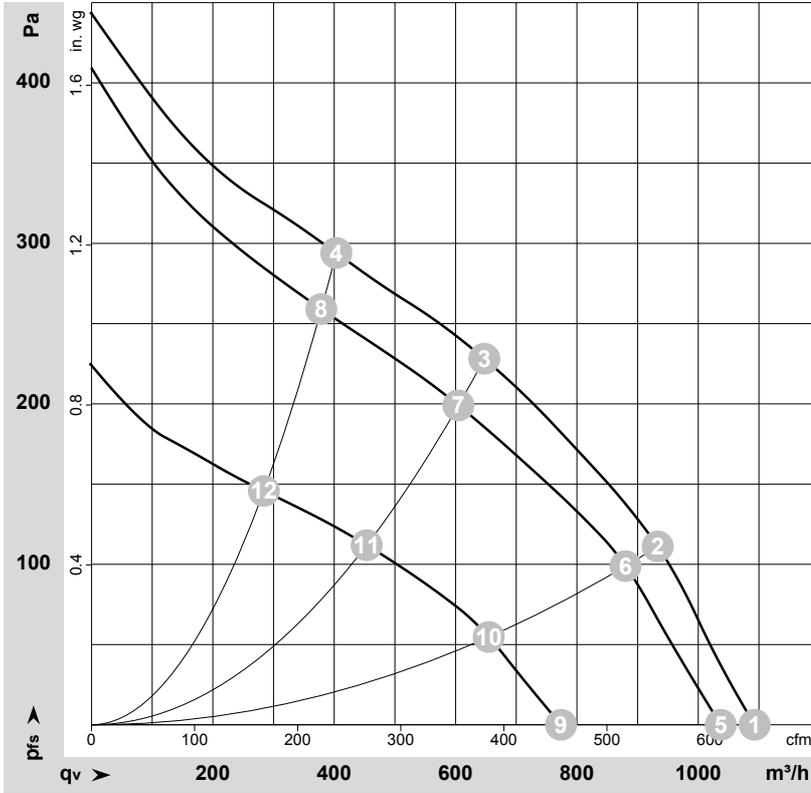
Accessory part: inlet ring 96359-2-4013 not included in scope of delivery

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	Un +12VDC		red	Power supply 12 VDC, see nameplate for voltage range, maximum ripple 3.5%
2	PWM/LIN		yellow	Control input Re > 40k (PWM 1-10 kHz / 0-10 V)
3	Tacho		white	Tach output, 3 pulses per revolution, Isink max = 10 mA
4	GND		blue	Reference ground

Curves: Air performance



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

Measurement: LU-184028-1
 Measurement: LU-183782-1
 Measurement: LU-184029-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	16	2110	75	4.67			1095	0	645	0.00
2	16	2065	80	4.96			935	111	550	0.45
3	16	2020	86	5.36			645	228	380	0.92
4	16	2070	82	5.08			405	294	240	1.18
5	12	2000	64	5.40	62	70	1035	0	610	0.00
6	12	1945	69	5.69	61	67	880	100	520	0.40
7	12	1895	71	5.95	58	63	605	200	355	0.80
8	12	1945	69	5.69	61	66	380	260	225	1.04
9	8	1500	30	3.67			775	0	455	0.00
10	8	1465	31	3.85			655	56	385	0.22
11	8	1430	32	4.03			455	112	265	0.45
12	8	1460	31	3.86			285	146	165	0.59

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

