

R3G220-RC11-04

# EC centrifugal fan - RadiCal®

backward curved, single inlet



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## Nominal data

Type	R3G220-RC11-04	
Motor	M3G055-BI	
Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min <sup>-1</sup>	2330
Power input	W	65
Current draw	A	0.95
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+60

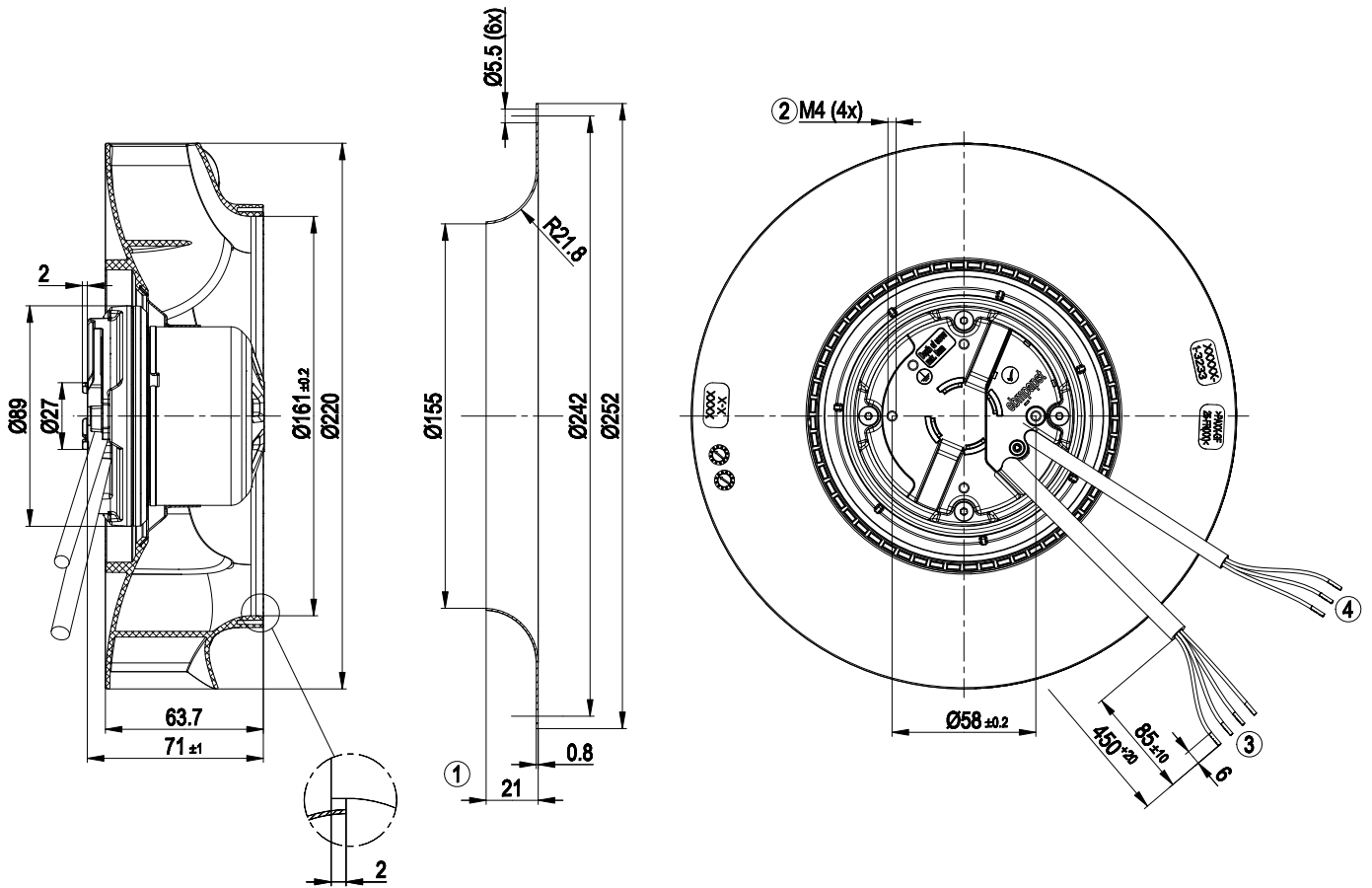
ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations



## Technical features

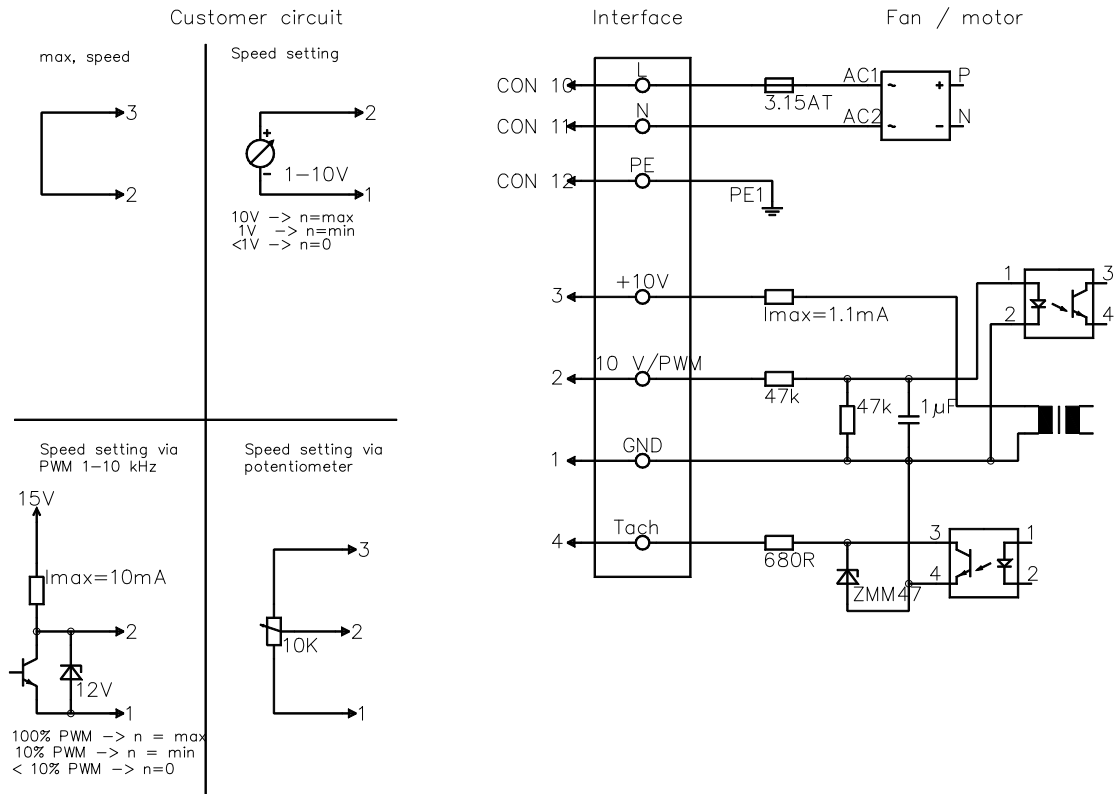
<b>Mass</b>	1.2 kg
<b>Size</b>	220 mm
<b>Surface of rotor</b>	Thick layer passivated
<b>Material of electronics housing</b>	Die-cast aluminium
<b>Material of impeller</b>	PA plastic
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 54
<b>Insulation class</b>	"B"
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None, open rotor
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage detection</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	Acc. to EN 61000-6-4 (industrial environment)
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Locked-rotor protection
<b>Cable exit</b>	Variable
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1
<b>Approval</b>	CSA C22.2 Nr.77; UL 2111

Product drawing



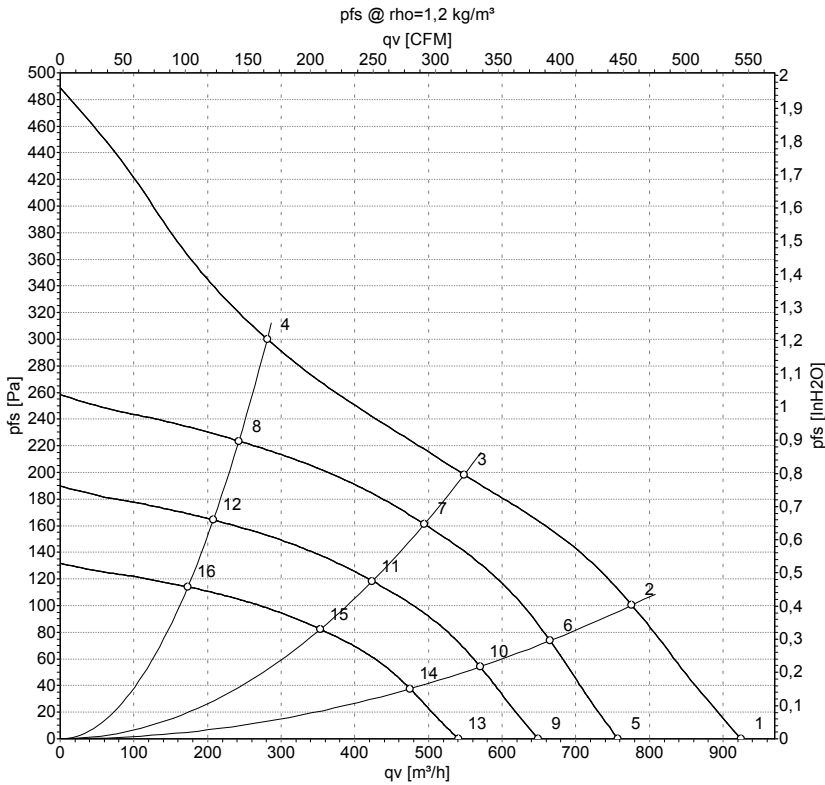
1	Accessory part: Inlet nozzle 09609-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 6 mm
3	Connection line PVC 3G 0.5 mm <sup>2</sup> , 3x brass lead tips crimped
4	Connection line PVC 4x 0.25 mm <sup>2</sup> ; 4 x brass lead tips crimped

## Connection screen



Line	No.	Signal	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
	3	10V/ max 1.1mA	red	Voltage output 10V/ 1.1mA, electrically isolated, not short-circuit-proof.
	2	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	1	GND	Blue	GND - Connection for control interface
	4	Tacho	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

## Charts: Air flow 50 Hz



Measurement: LU-147073

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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	qv	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa
1	115	50	2565	65	0.95	62	69	925	0
2	115	50	2450	65	0.95	58	66	775	100
3	115	50	2330	65	0.95	55	62	550	200
4	115	50	2430	65	0.95	59	67	280	300
5	115	50	2100	36	0.52	57	64	755	0
6	115	50	2100	41	0.60	54	62	665	74
7	115	50	2100	48	0.69	52	60	495	161
8	115	50	2100	42	0.61	54	62	245	224
9	115	50	1800	23	0.33	53	60	650	0
10	115	50	1800	26	0.38	50	58	570	54
11	115	50	1800	30	0.44	48	56	425	119
12	115	50	1800	26	0.39	50	58	210	164
13	115	50	1500	13	0.19	48	56	540	0
14	115	50	1500	15	0.22	46	53	475	38
15	115	50	1500	17	0.25	43	51	355	82
16	115	50	1500	15	0.22	46	53	175	114

U = Supply voltage · f = Frequency · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · qv = Air flow  
p<sub>s</sub> = Pressure increase

