R3G220-RD19-13

EC centrifugal fan - RadiCal

backward curved, single inlet

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Nominal data

Type	**R3G220-RD19-13**	
Motor	**M3G055-CF**	
Phase		1~
Nominal voltage	VDC	380
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	3180
Power input	W	165
Current draw	A	0.5
Max. ambient temperature	°C	45

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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	56.7	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		75.6	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	760
09 Pressure increase p_{fs}	Pa	378
10 Speed (rpm) n	min^{-1}	3220
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-163818

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Technical features

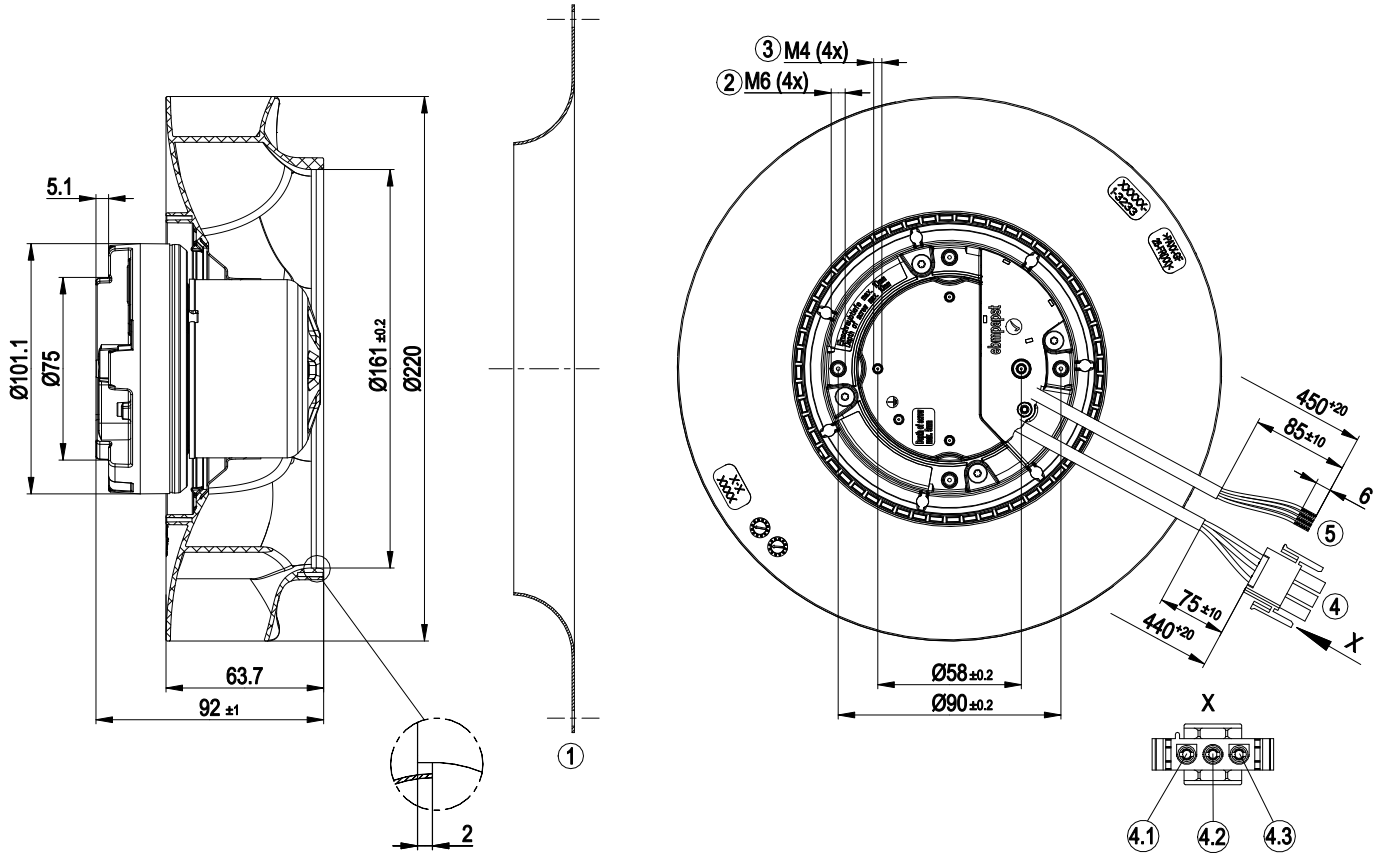
Mass	1.5 kg
Size	220 mm
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Output limit - Motor current limit - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 0.25 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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Product drawing



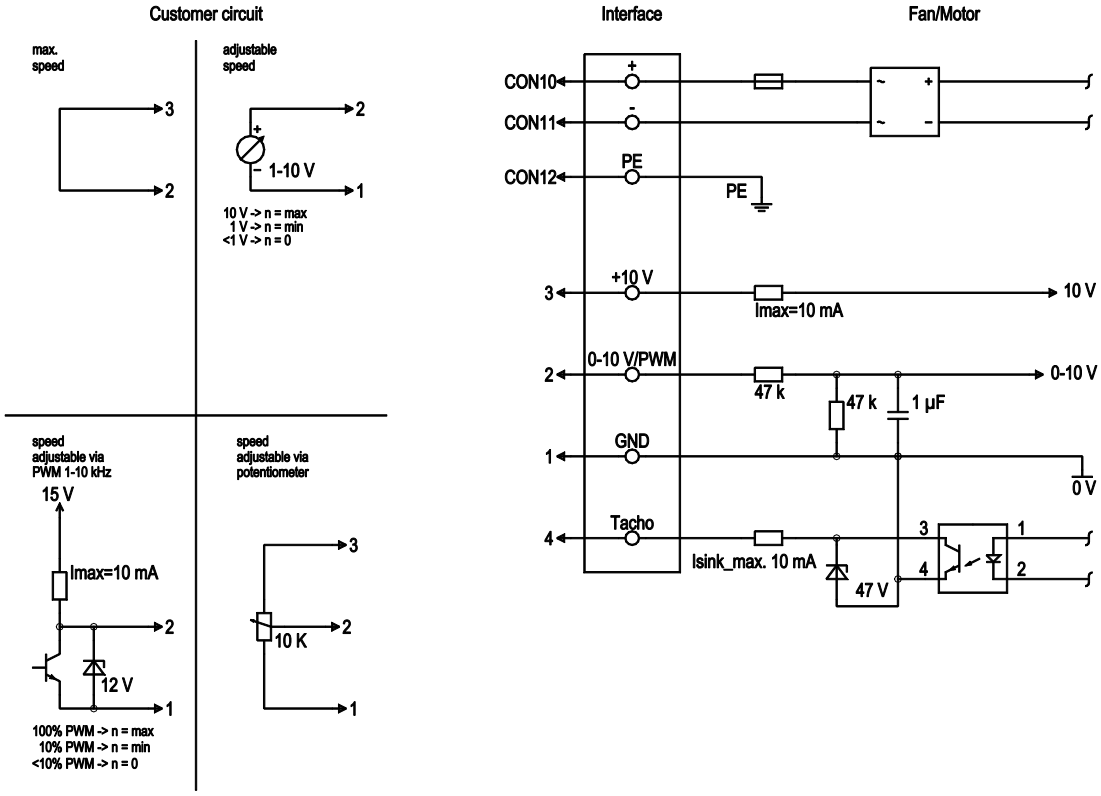
1	Accessory part: Inlet nozzle 09609-2-4013 not included in scope of delivery
2	Thread reach max. 10 mm
3	Thread reach max. 5 mm
4	Connection line PVC AWG20, connector housing 3-pole tyco 1241809-2, 3x plug pin tyco 350218-1
4.1	N (blue)
4.2	L (black)
4.3	PE (green/yellow)
5	Connection line PVC 4x AWG22, 4x lead tips crimped

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Connection screen



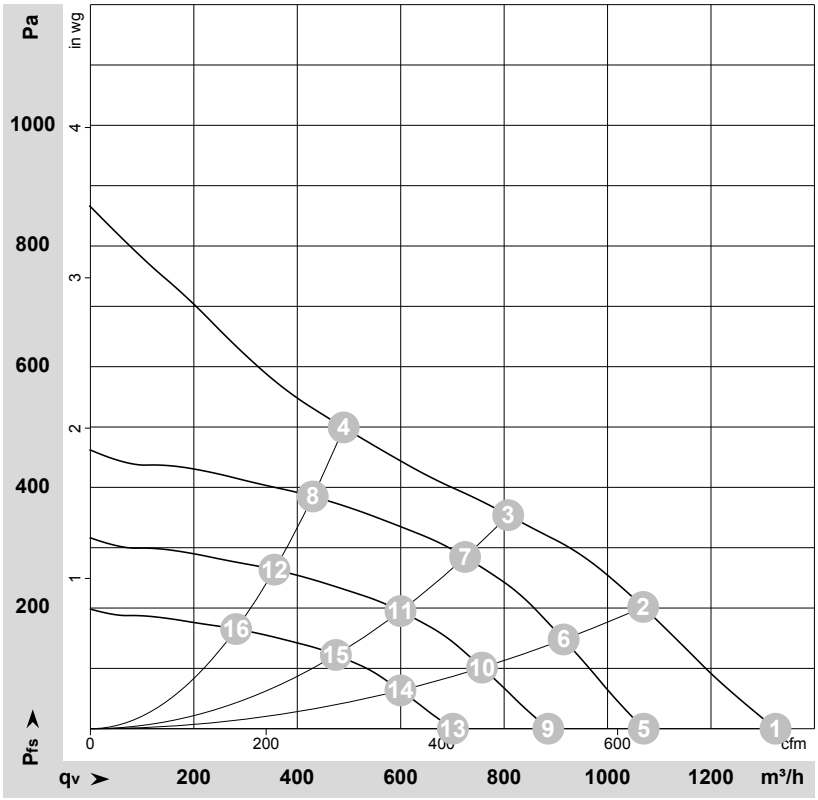
No.	Conn.	Designation	Colour	Function / assignment
	CON10	+	brown	Mains connection, power supply +, voltage range, see type plate
	CON11	-	blue	Mains connection, power supply -, voltage range, see type plate
	CON12	PE	green/yellow	Earth connection
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer), SELV
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	1	GND	blue	Signal ground for control interface, SELV
	4	Tach	white	Speed monitoring output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV

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Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-163818-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	380	3590	165	0.50	1325	0	780	0.00
2	380	3390	165	0.50	1070	200	630	0.80
3	380	3180	165	0.50	810	350	475	1.41
4	380	3300	165	0.50	490	500	290	2.01
5	380	2900	84	0.22	1070	0	630	0.00
6	380	2900	101	0.27	915	148	540	0.59
7	380	2900	116	0.31	725	285	425	1.14
8	380	2900	109	0.29	430	385	255	1.55
9	380	2400	48	0.13	885	0	520	0.00
10	380	2400	57	0.15	755	101	445	0.41
11	380	2400	66	0.17	600	195	355	0.78
12	380	2400	62	0.16	355	264	210	1.06
13	380	1900	24	0.06	700	0	415	0.00
14	380	1900	28	0.07	600	64	355	0.26
15	380	1900	33	0.09	475	122	280	0.49
16	380	1900	31	0.08	280	165	165	0.66

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

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