EC centrifugal fan - RadiCal

backward curved, single inlet

R3G190-RG19-34 ebmpapst Datasheet
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Nominal data

Type	**R3G190-RG19-34**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	3635
Power input	W	119
Current draw	A	0.9
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

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Technical features

Mass	1.4 kg
Size	190 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	IP54
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	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household 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 60335-1; CE

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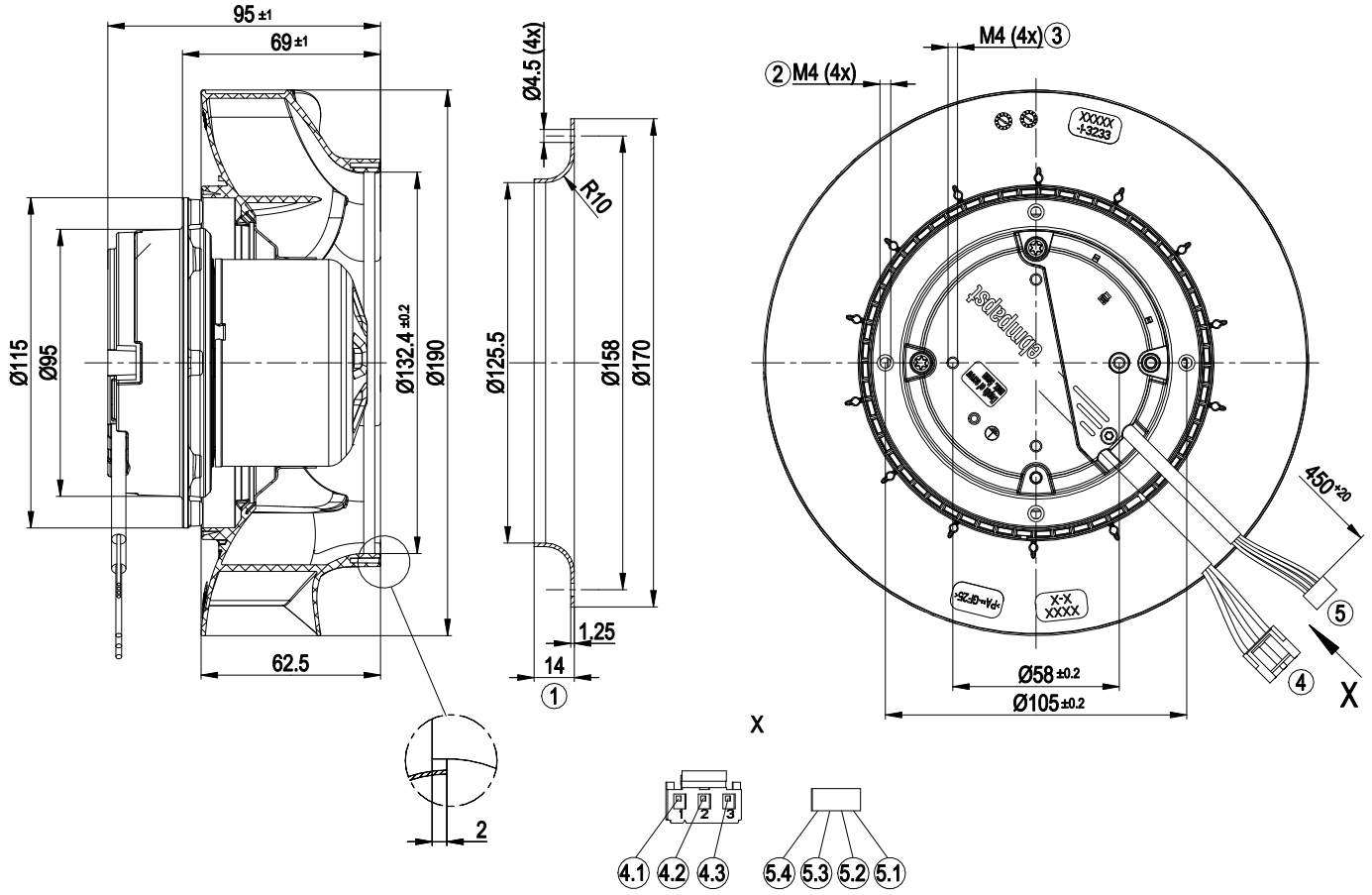
Product drawing



1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery
2	Thread reach max. 6 mm
3	Thread reach max. 6 mm
4	Connection line PVC 3G 0.5 mm², connector housing 3-pole JST NVR-03, 3x female connector JST SVH-21T crimped
4.1	brown
4.2	green/yellow
4.3	blue
5	Connection line PVC 4x 0.25 mm², connector housing 4-pole JST PHR-4, 4x female connector JST SPH-002T-P0.5S
5.1	+10 V (red)
5.2	GND (blue)
5.3	0-10 V PWM (yellow)
5.4	Tach (white)

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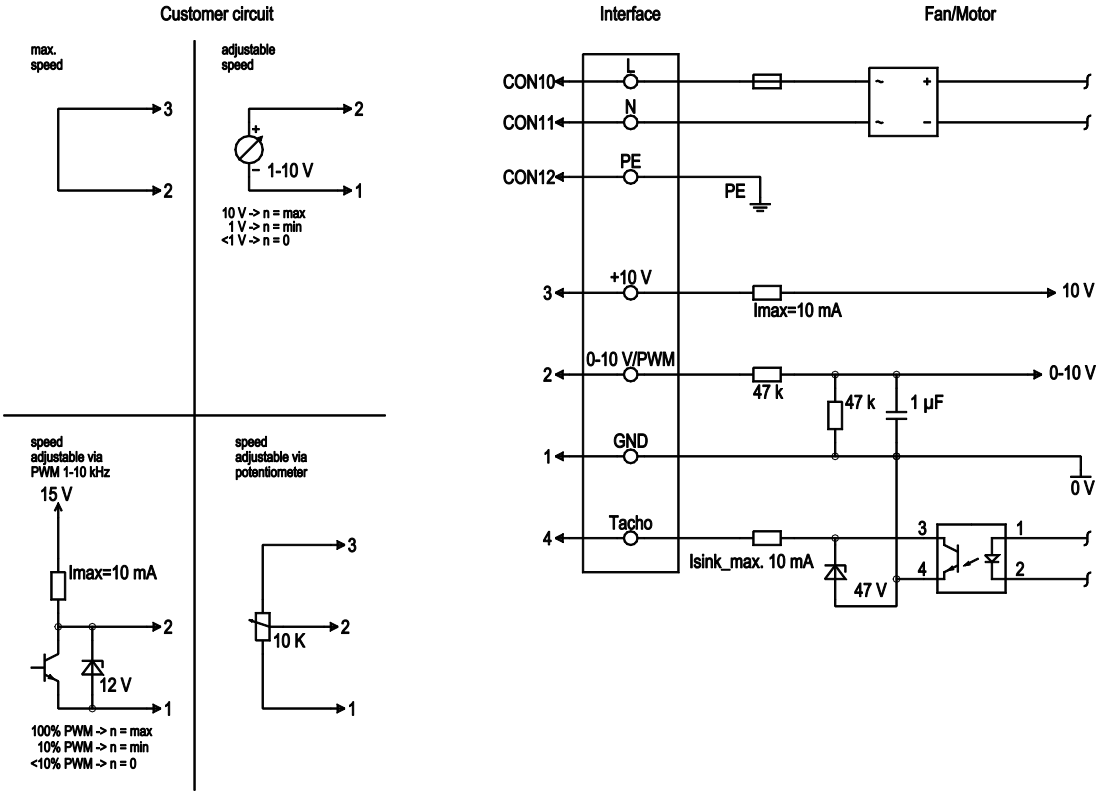
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	brown	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Speed monitoring output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	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
	1	GND	blue	Signal ground for control interface, SELV

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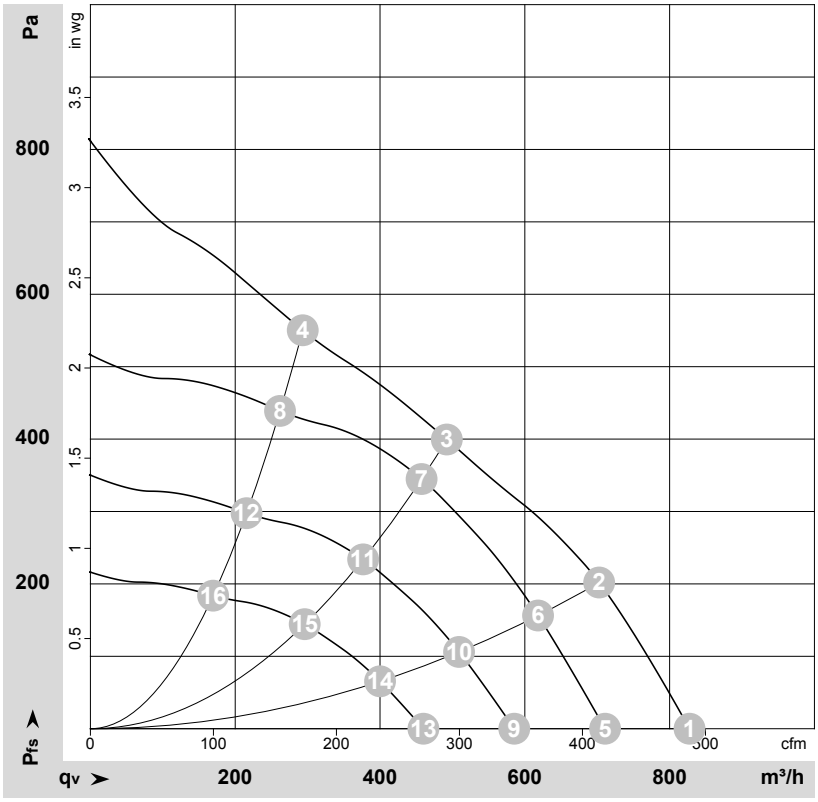
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168963-1

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	inH2O
1	230	50	3960	110	0.90	825	0	485	0.00
2	230	50	3870	119	0.90	705	200	415	0.80
3	230	50	3635	119	0.90	490	400	290	1.61
4	230	50	3805	119	0.90	295	550	170	2.21
5	230	50	3400	69	0.59	710	0	420	0.00
6	230	50	3400	78	0.65	620	157	365	0.63
7	230	50	3400	96	0.79	455	347	270	1.39
8	230	50	3400	85	0.71	260	439	155	1.76
9	230	50	2800	39	0.33	585	0	345	0.00
10	230	50	2800	43	0.36	510	107	300	0.43
11	230	50	2800	54	0.44	375	235	220	0.94
12	230	50	2800	47	0.40	215	297	125	1.19
13	230	50	2200	19	0.16	460	0	270	0.00
14	230	50	2200	21	0.18	400	66	235	0.26
15	230	50	2200	26	0.21	295	145	175	0.58
16	230	50	2200	23	0.19	170	184	100	0.74

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