EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G190-RG19-50 ebmpapst Datasheet
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Nominal data

Type	**R3G190-RG19-50**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	3255
Power consumption	W	85
Current draw	A	0.75
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

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Technical description

Weight	1.3 kg
Size	190 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1+
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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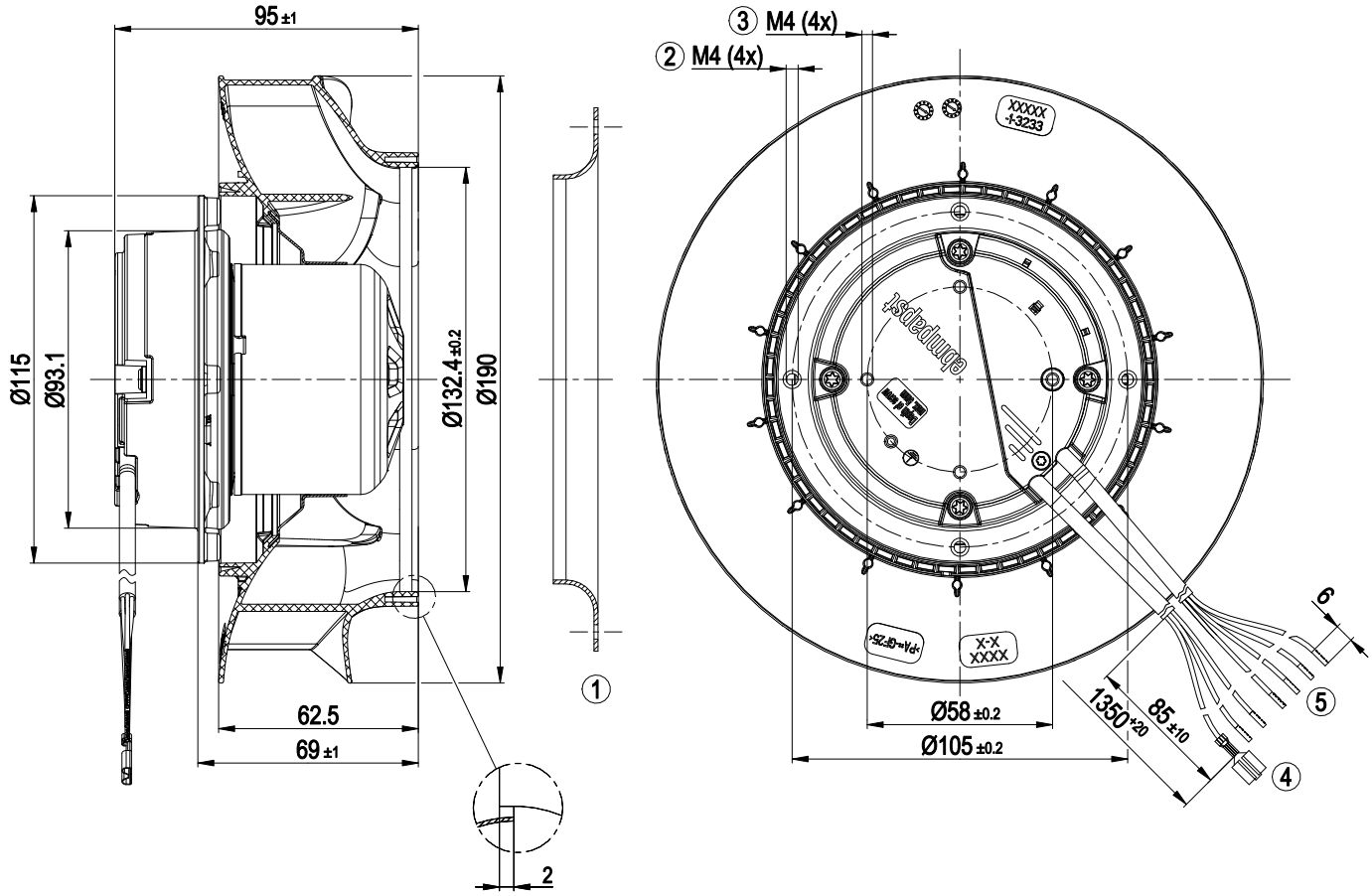
Product drawing



1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Max. clearance for screw 5 mm
4	Cable PVC 3G 0.5 mm², 2x wire-end splice, 1x crimped flat push-on receptacle 6.3 x 0.8
5	Cable PVC 4x 0.25 mm², 4x crimped splices

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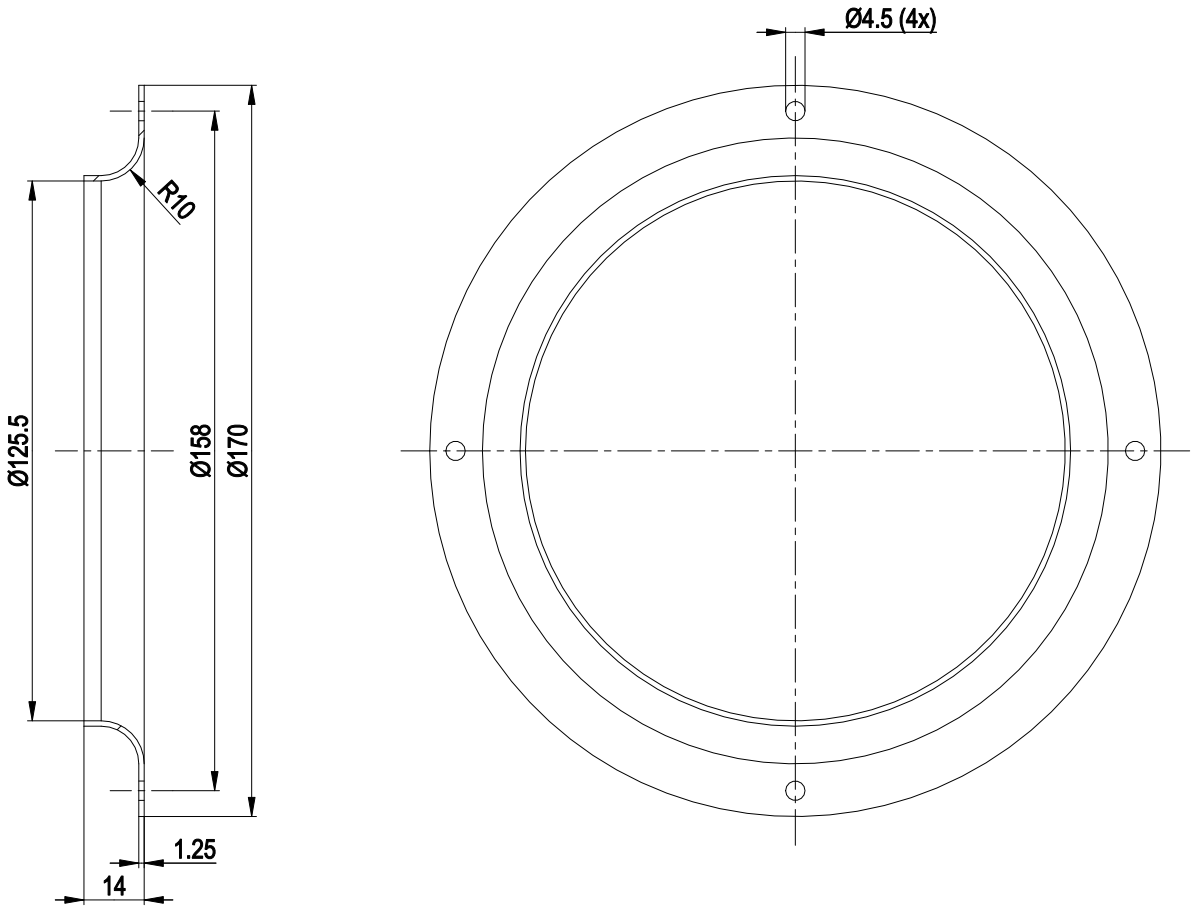
Accessory part



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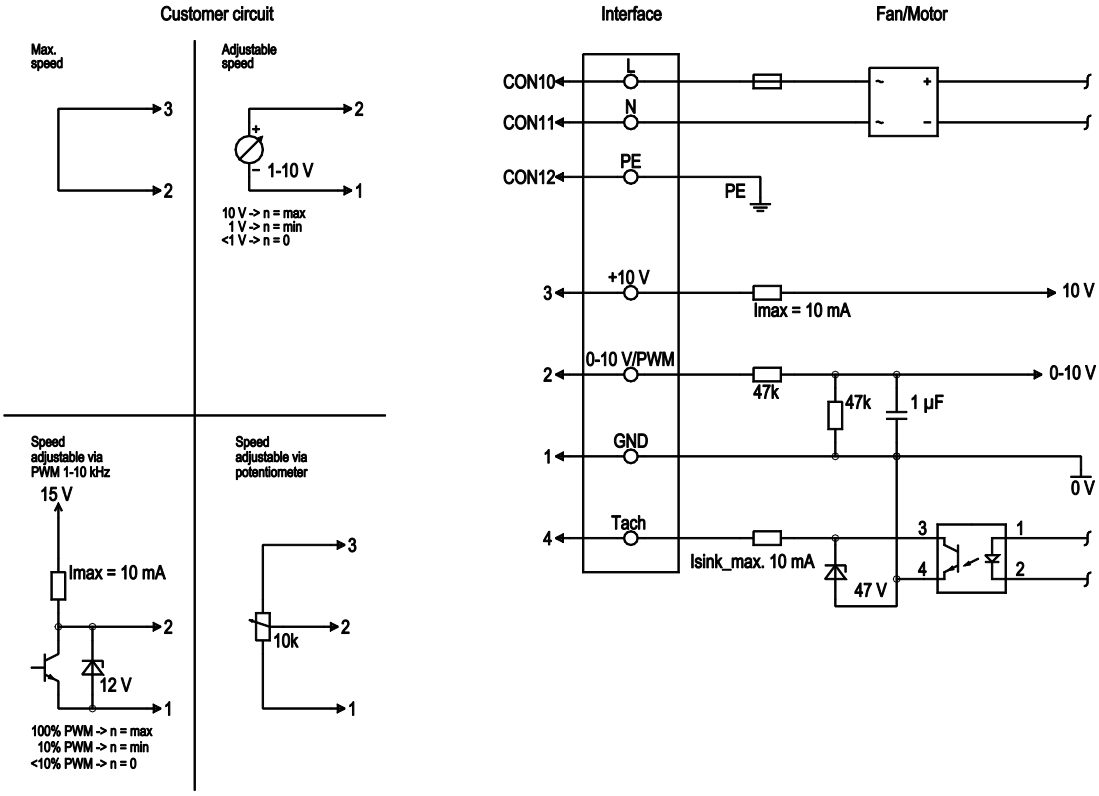
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	brown	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach 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. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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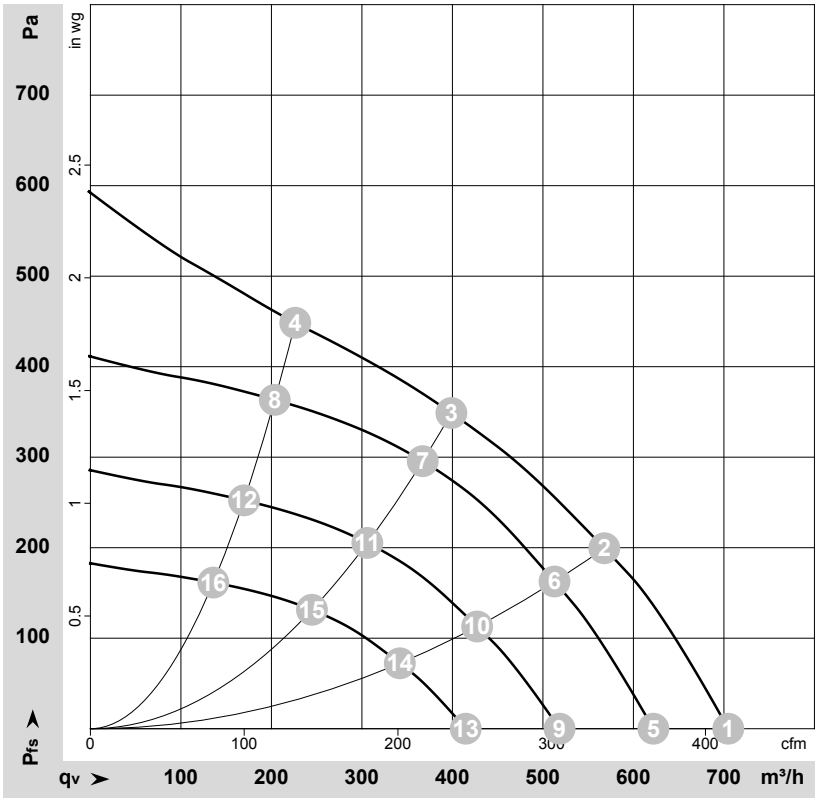
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-171588-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. 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	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	230	50	3400	72	0.64	705	0	415	0.00
2	230	50	3320	80	0.70	570	200	335	0.80
3	230	50	3255	85	0.75	400	350	235	1.41
4	230	50	3330	78	0.68	225	450	135	1.81
5	230	50	3000	50	0.44	620	0	365	0.00
6	230	50	3000	59	0.51	515	163	300	0.65
7	230	50	3000	66	0.58	365	296	215	1.19
8	230	50	3000	57	0.50	205	363	120	1.46
9	230	50	2500	29	0.25	520	0	305	0.00
10	230	50	2500	34	0.30	425	113	250	0.45
11	230	50	2500	38	0.33	305	205	180	0.82
12	230	50	2500	33	0.29	170	252	100	1.01
13	230	50	2000	15	0.13	415	0	245	0.00
14	230	50	2000	17	0.15	340	72	200	0.29
15	230	50	2000	20	0.17	245	131	145	0.53
16	230	50	2000	17	0.15	135	162	80	0.65

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