EC centrifugal fan - RadiCal

backward-curved

R3G175-RG19-11 ebmpapst Datasheet
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Nominal data

Type	**R3G175-RG19-11**
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}	4200
Power consumption	W	115
Current draw	A	1.0
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
Fan size	175 mm
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
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
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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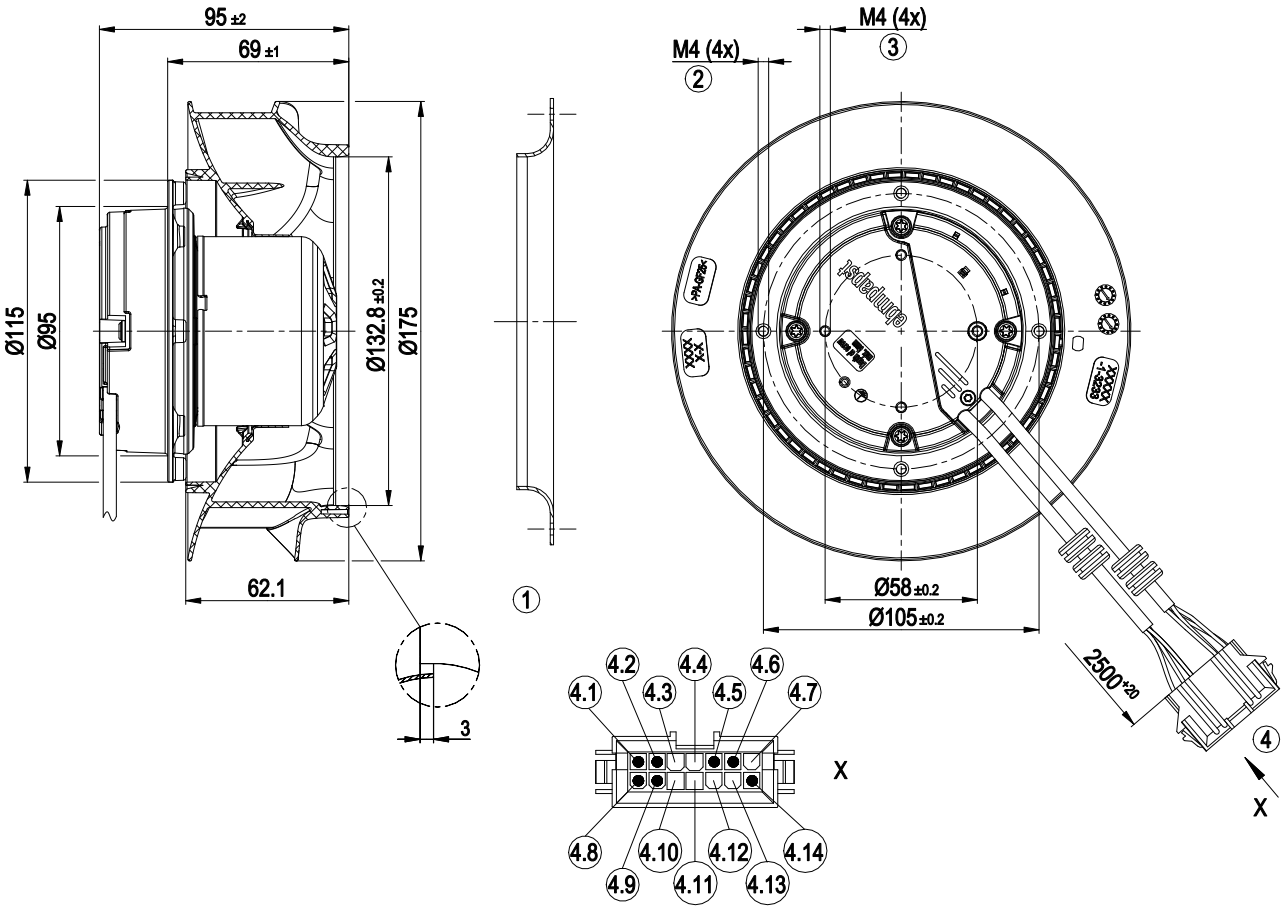
Product drawing



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, cable PVC 4x 0.25 mm², 1x 14-pole connector housing Molex 15-06-0146, 7x plug pin Molex 39-00-0041
4.1	+10 V (red)
4.2	Tach (white)
4.5	PE (green/yellow)
4.6	L (brown)
4.8	GND (blue)
4.9	0-10 V PWM (yellow)
4.14	N (blue)

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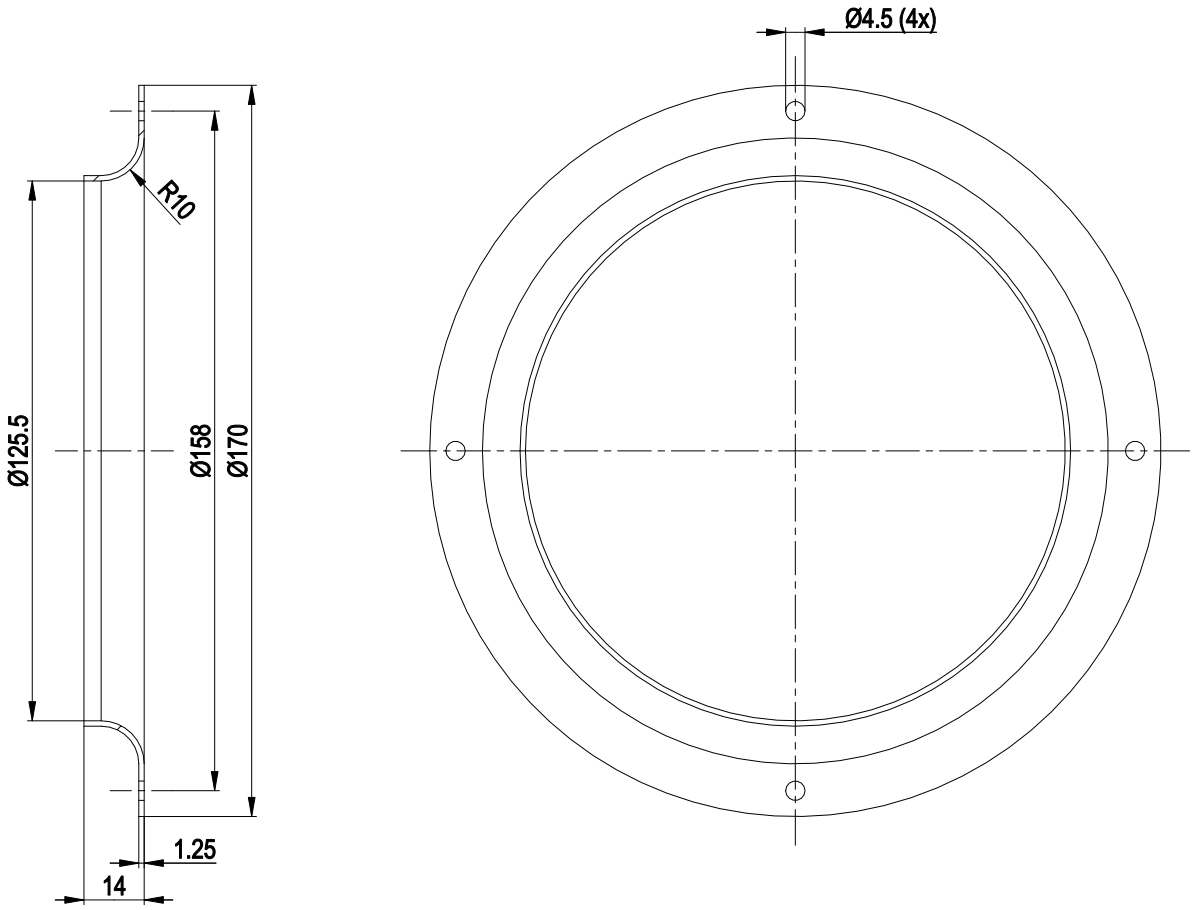
Accessory part



1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery

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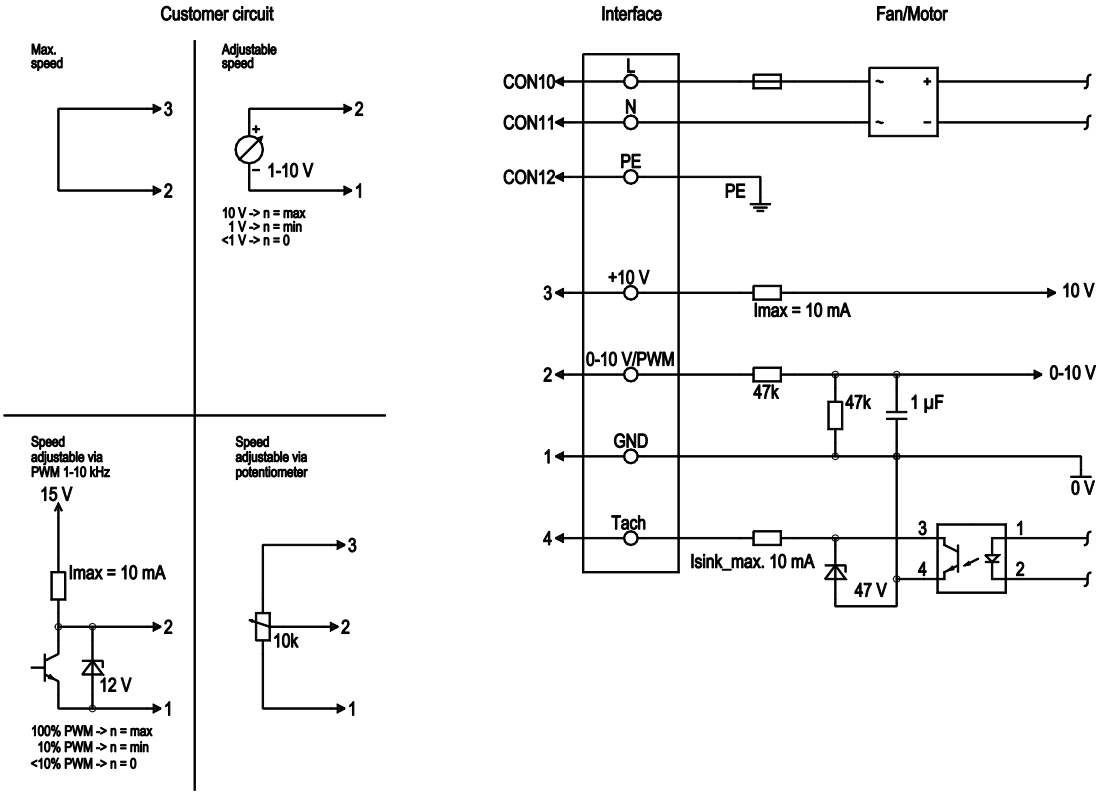
Connection diagram



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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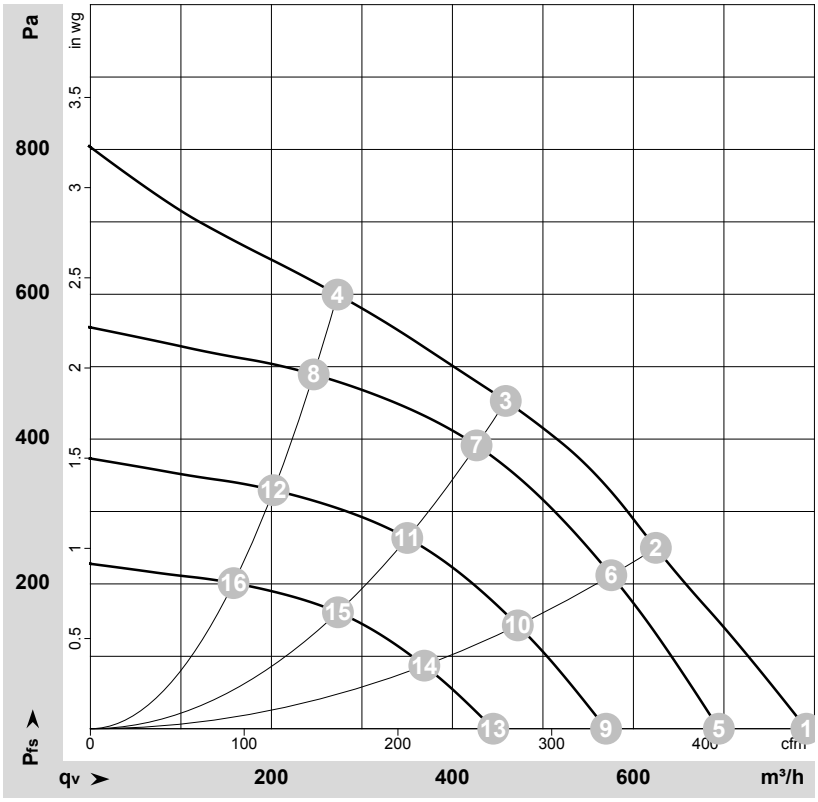
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-172908-1

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	4445	106	0.89	790	0	465	0.00
2	230	50	4230	115	0.99	625	250	370	1.00
3	230	50	4200	115	1.00	460	450	270	1.81
4	230	50	4315	114	0.96	275	600	160	2.41
5	230	50	3900	72	0.60	695	0	410	0.00
6	230	50	3900	93	0.77	575	213	340	0.86
7	230	50	3900	95	0.79	425	392	250	1.57
8	230	50	3900	84	0.71	245	489	145	1.96
9	230	50	3200	40	0.33	570	0	335	0.00
10	230	50	3200	51	0.43	470	143	280	0.57
11	230	50	3200	53	0.44	350	264	205	1.06
12	230	50	3200	46	0.39	200	329	120	1.32
13	230	50	2500	19	0.16	445	0	260	0.00
14	230	50	2500	24	0.20	370	87	215	0.35
15	230	50	2500	25	0.21	275	161	160	0.65
16	230	50	2500	22	0.19	160	201	95	0.81

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