R3G190-RG23-13

EC centrifugal fan - RadiCal

backward-curved



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Nominal data

Type	**R3G190-RG23-13**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	3374
Power consumption	W	96
Current draw	A	0.8
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

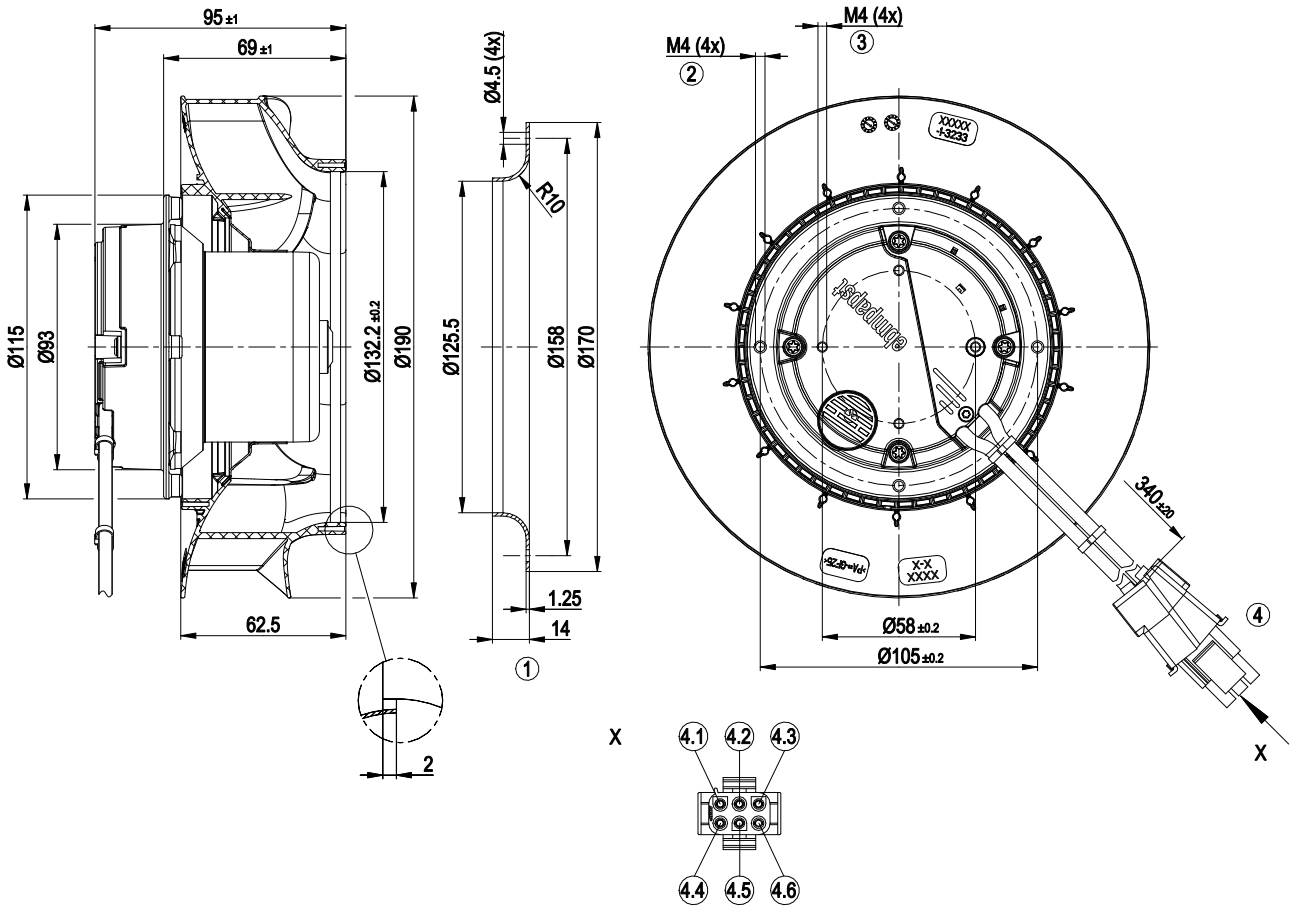
Weight	1.4 kg
Fan size	190 mm
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
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	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Power limiter - Motor current limitation - Soft start - Set value input Lin 0-10 VDC / PWM (1.4 V corresponds to V=min, 10 V corresponds to V=max) - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for motor
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	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1

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Product drawing



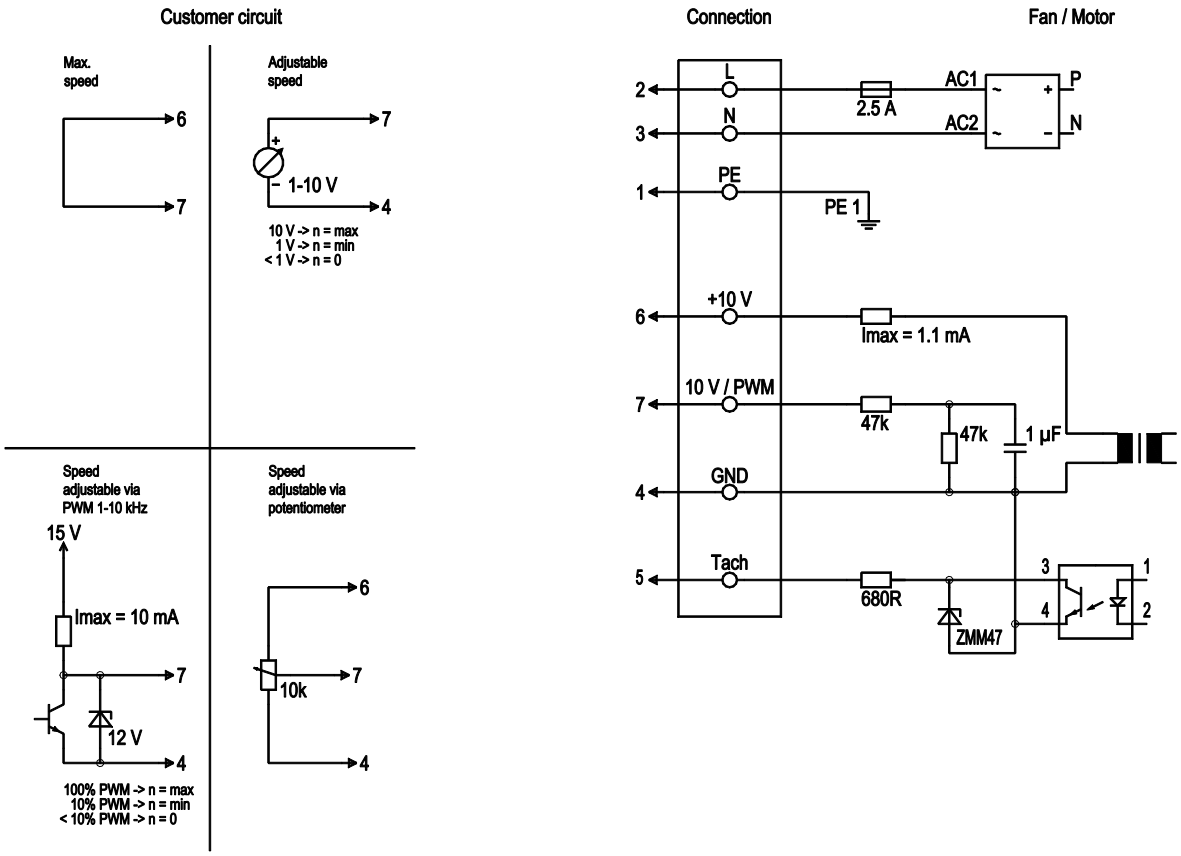
1	Accessory part: Inlet ring: 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Max. clearance for screw 5 mm
4	Cable PVC 3G 0.5 mm², cable PVC 3x 0.25 mm², connector housing 6-pole AMP 1586846-1, 2x strain relief AMP 1-640721-0, 1x plug pin AMP 350654-1 (gn/ye), 5x plug pin AMP 926885-1
4.1	0-10 V PWM (yellow)
4.2	GND (blue)
4.3	Tach (white)
4.4	L (brown)
4.5	N (blue)
4.6	PE (green/yellow)

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Connection diagram



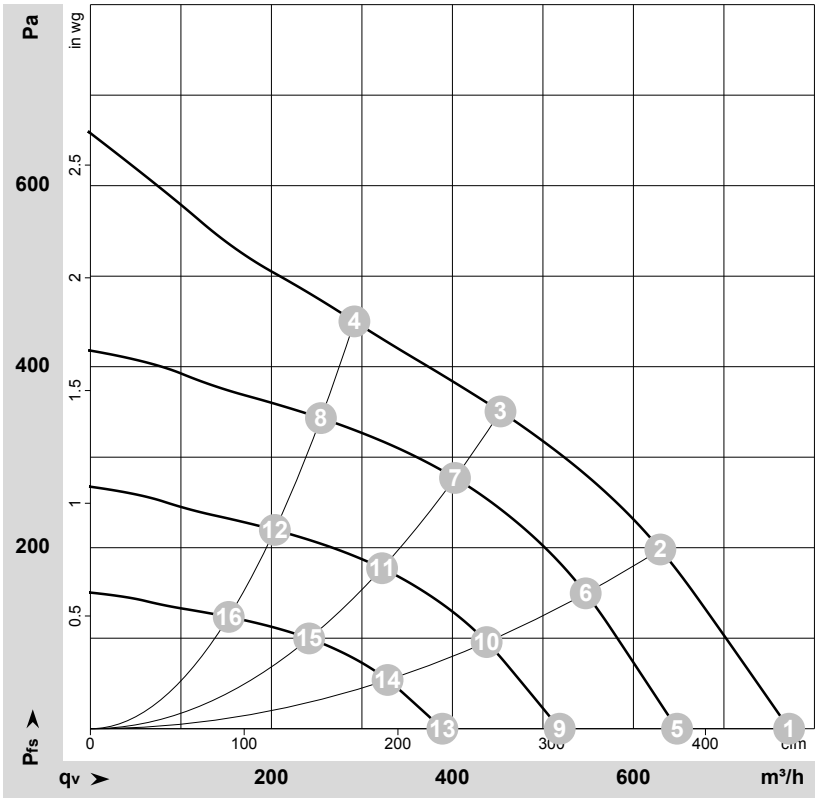
No.	Conn.	Designation	Color	Function/assignment
	2	L	brown	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	7	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	5	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	6	10V / max. 1.1 mA	red	Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof
	4	GND	blue	GND connection for control interface

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-127616-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	3575	81	0.64	770	0	455	0.00
2	230	50	3450	90	0.71	630	200	370	0.80
3	230	50	3375	96	0.80	455	350	265	1.41
4	230	50	3435	91	0.72	290	450	170	1.81
5	230	50	3000	48	0.38	650	0	380	0.00
6	230	50	3000	59	0.47	545	152	320	0.61
7	230	50	3000	67	0.53	405	277	235	1.11
8	230	50	3000	61	0.48	255	343	150	1.38
9	230	50	2400	25	0.19	520	0	305	0.00
10	230	50	2400	30	0.24	440	97	260	0.39
11	230	50	2400	34	0.27	320	177	190	0.71
12	230	50	2400	31	0.25	205	220	120	0.88
13	230	50	1800	10.0	0.08	390	0	230	0.00
14	230	50	1800	13	0.10	330	55	195	0.22
15	230	50	1800	14	0.11	240	100	140	0.40
16	230	50	1800	13	0.10	155	124	90	0.50

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

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