R3G133-RA01-03

EC centrifugal fan - RadiCal

backward-curved, single-intake



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Nominal data

Type	**R3G133-RA01-03**
Motor	**M3G045-AI**

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}	3770
Power consumption	W	27
Current draw	A	0.27
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

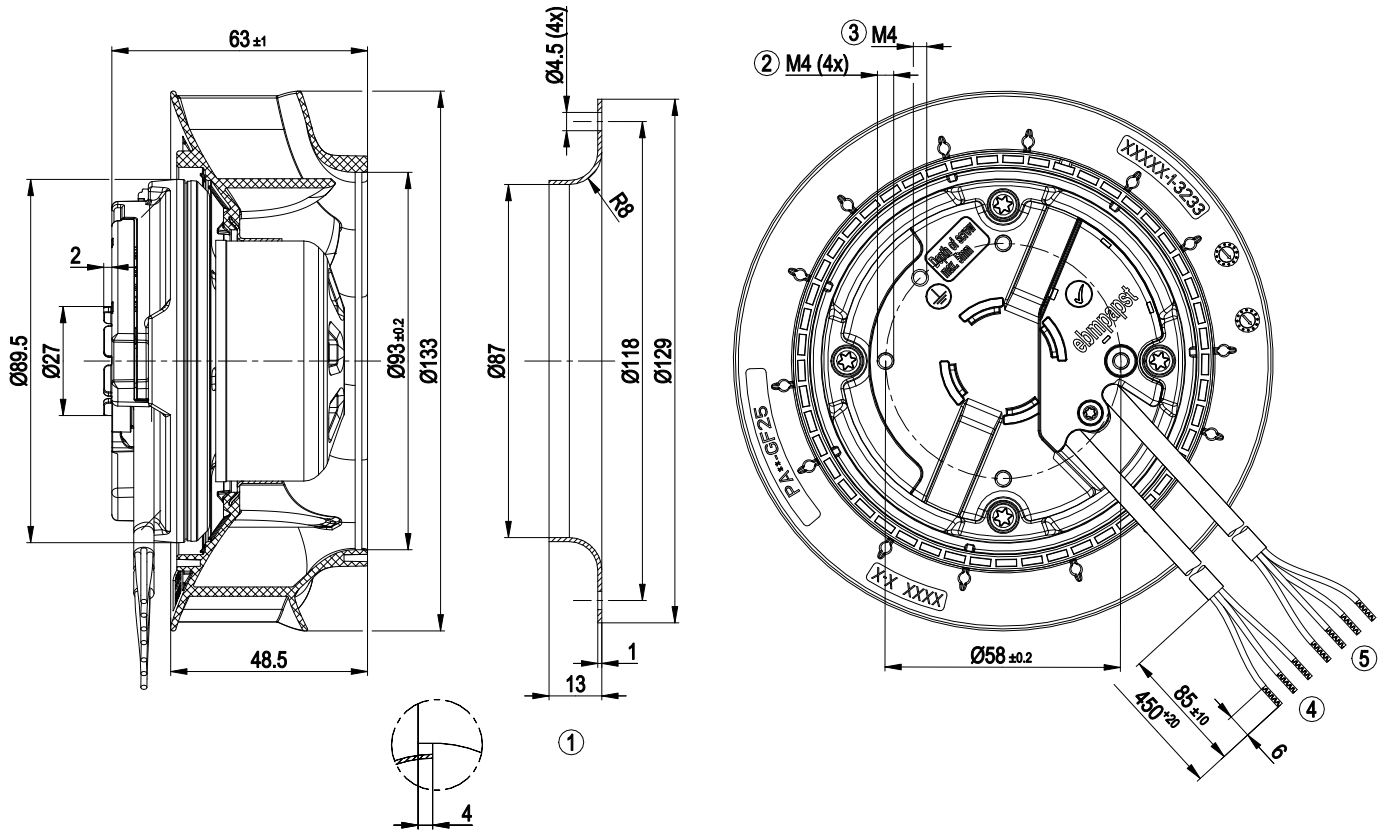
Weight	0.5 kg
Fan size	133 mm
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection 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. 1.1 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - 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	Locked-rotor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	C22.2 No.77 + CAN/CSA-E60730-1; VDE; UL 1004-7 + 60730; EAC; CCC

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Product drawing



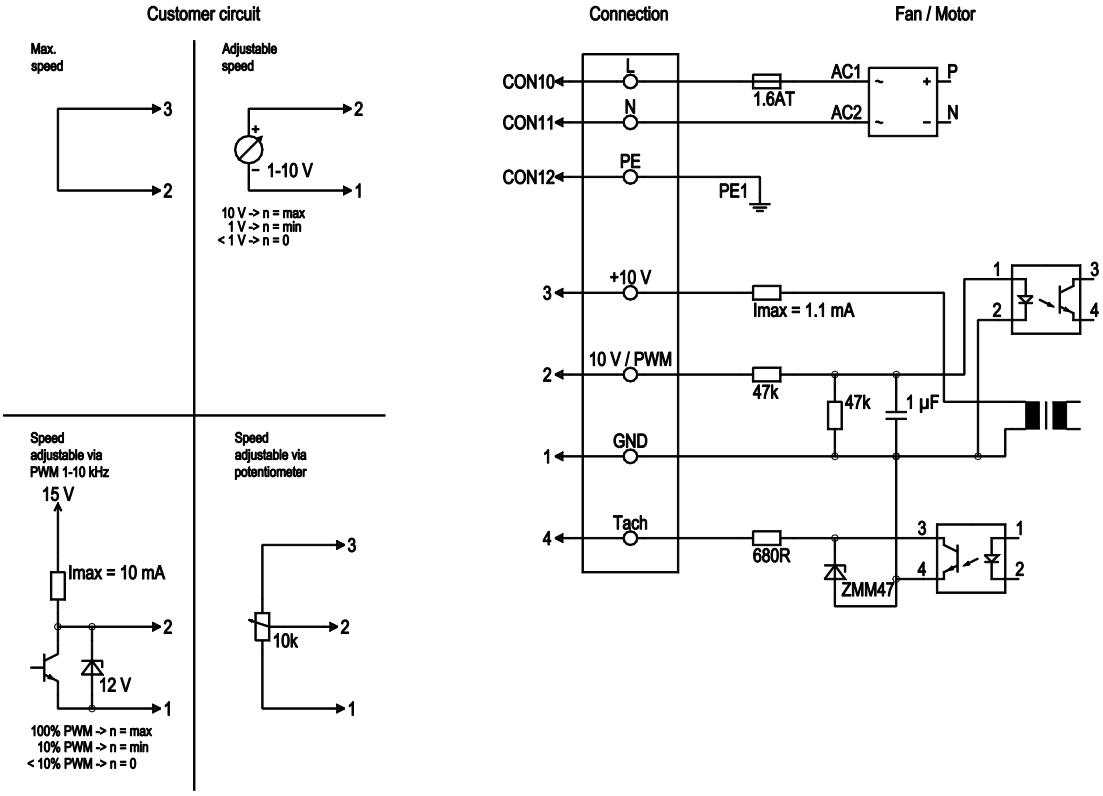
1	Accessory part: inlet ring 09566-2-4013, not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Max. clearance for screw 5 mm
4	Cable PVC AWG20, 3x crimped splices
5	Cable PVC AWG22, 4x crimped splices

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Connection diagram



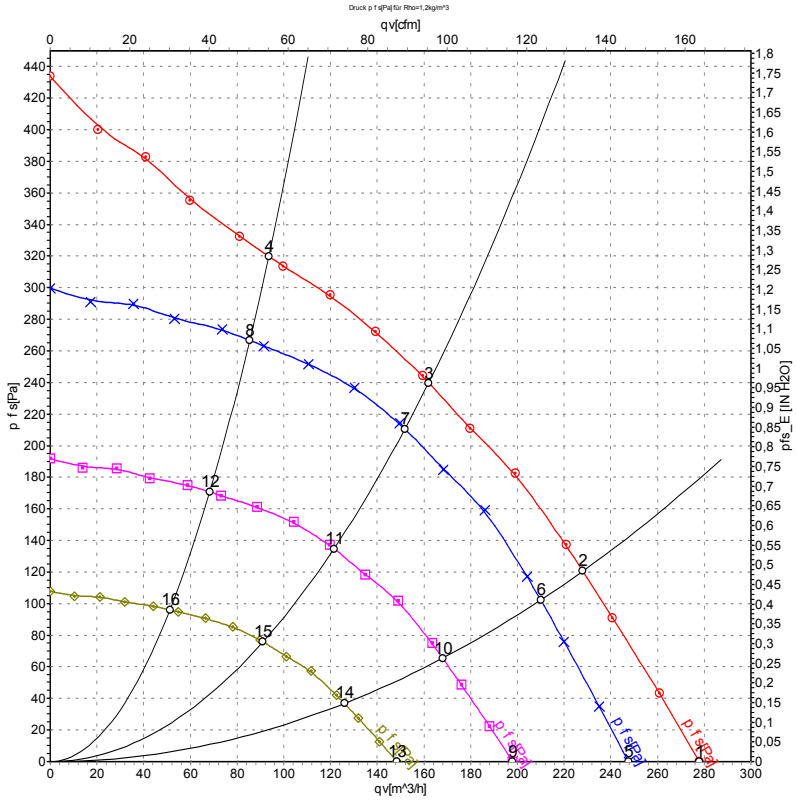
No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof.
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

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Curves: Air performance 50 Hz



Measurement: LU-131806-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	3930	24	0.23	58	66	280	0	165	0.00
2	230	50	3800	26	0.26	54	63	230	120	135	0.48
3	230	50	3770	27	0.27	52	61	160	240	95	0.96
4	230	50	3835	26	0.25	56	65	95	320	55	1.28
5	230	50	3500	17	0.16	55	64	250	0	145	0.00
6	230	50	3500	20	0.20	53	61	210	102	125	0.41
7	230	50	3500	22	0.22	51	59	150	211	90	0.85
8	230	50	3500	19	0.19	54	63	85	267	50	1.07
9	230	50	2800	8.5	0.08	50	59	200	0	115	0.00
10	230	50	2800	10	0.10	48	57	170	66	100	0.26
11	230	50	2800	11	0.11	46	55	120	135	70	0.54
12	230	50	2800	9.9	0.10	49	59	70	171	40	0.69
13	230	50	2100	3.6	0.04	44	53	150	0	85	0.00
14	230	50	2100	4.4	0.04	42	50	125	37	75	0.15
15	230	50	2100	4.8	0.05	39	48	90	76	55	0.31
16	230	50	2100	4.2	0.04	43	52	50	96	30	0.39

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

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