EC centrifugal fan - RadiCal

backward-curved, single-intake

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R3G220-RG17-01**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2650
Power consumption	W	104
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

EC centrifugal fan - RadiCal

backward-curved, single-intake

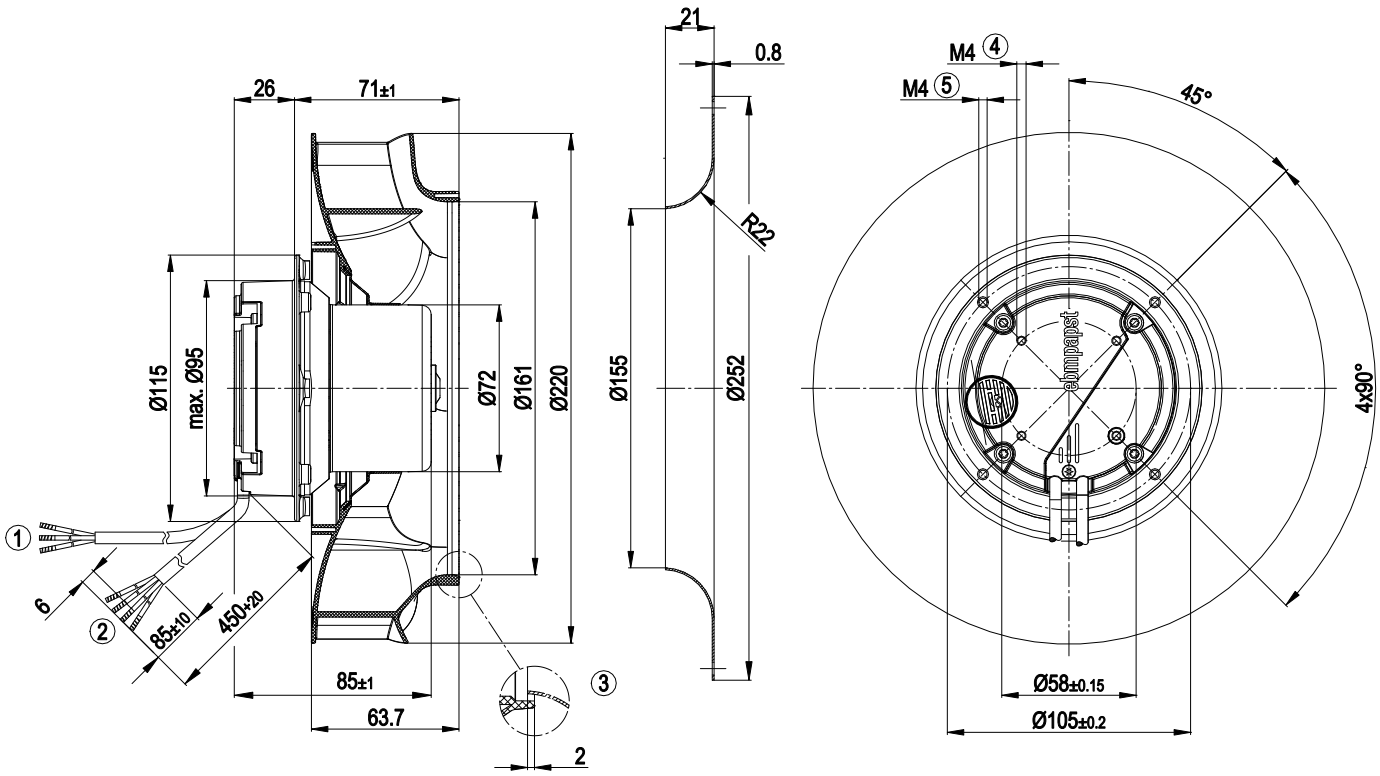
Technical description

Weight	1.4 kg
Fan size	220 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
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/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; CE

EC centrifugal fan - RadiCal

backward-curved, single-intake

Product drawing

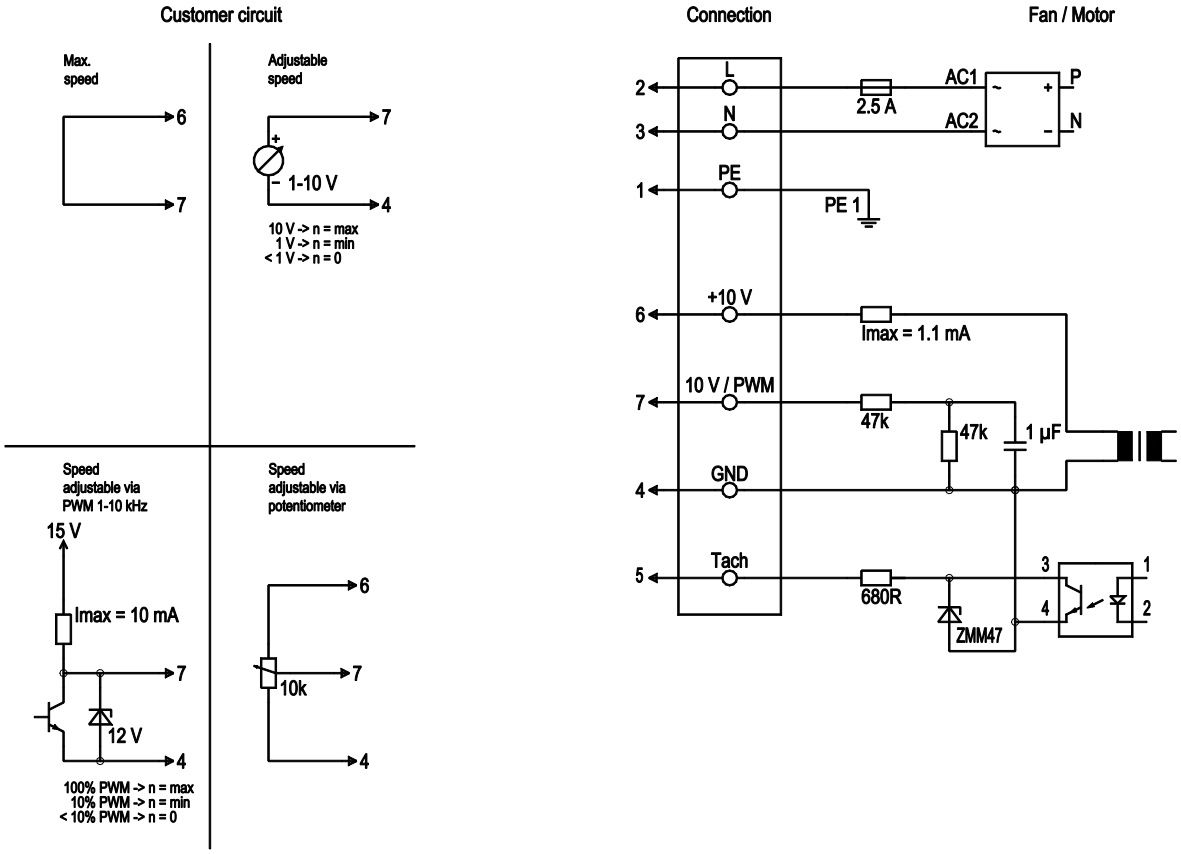


1	Cable PVC 3G 0.5 mm², 3x crimped splices
2	Cable PVC 4x 0.25 mm², 4x crimped splices
3	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
4	Max. clearance for screw 6 mm
5	Max. clearance for screw 6 mm

EC centrifugal fan - RadiCal

backward-curved, single-intake

Connection diagram

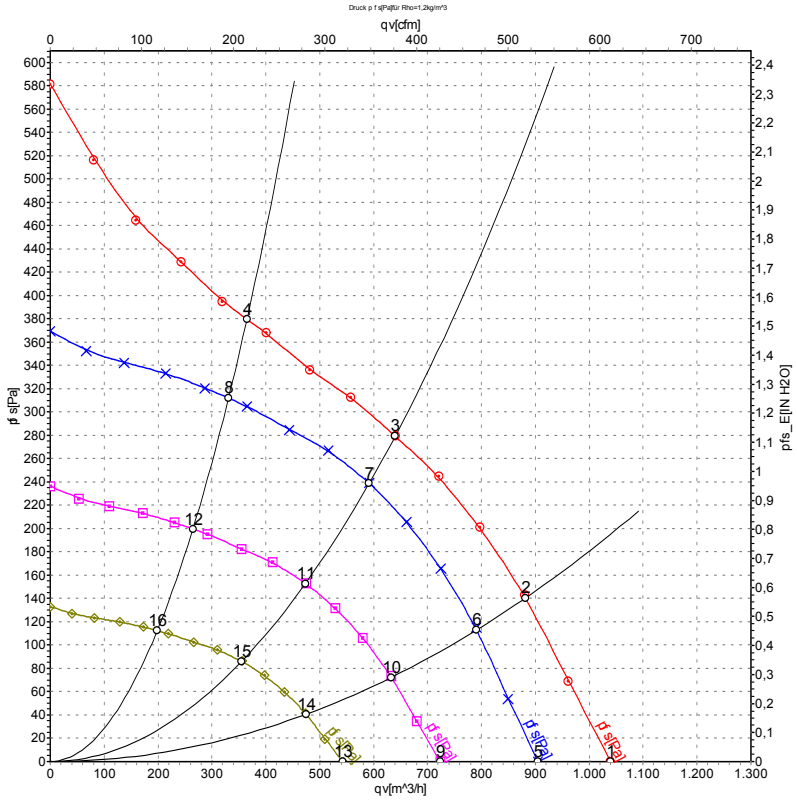


No.	Conn.	Designation	Color	Function/assignment
	2	L	brown	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	7	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	5	Tach	white	Tach output: open collector, 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

EC centrifugal fan - RadiCal

backward-curved, single-intake

Curves: Air performance 50 Hz



Measurement: LU-132486-1

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}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	2875	93	0.73	63	71	1040	0	610	0.00
2	230	50	2785	99	0.77	59	67	880	140	520	0.56
3	230	50	2650	104	0.80	57	65	640	280	375	1.12
4	230	50	2760	100	0.80	60	69	365	380	215	1.53
5	230	50	2500	61	0.48	60	68	905	0	535	0.00
6	230	50	2500	71	0.56	57	65	790	115	465	0.46
7	230	50	2500	83	0.65	55	64	590	240	350	0.96
8	230	50	2500	75	0.59	58	66	330	312	195	1.25
9	230	50	2000	31	0.25	55	63	725	0	425	0.00
10	230	50	2000	37	0.29	52	60	630	73	370	0.29
11	230	50	2000	43	0.33	51	59	475	153	280	0.61
12	230	50	2000	38	0.30	53	61	265	200	155	0.80
13	230	50	1500	13	0.10	49	57	545	0	320	0.00
14	230	50	1500	15	0.12	46	54	475	41	280	0.16
15	230	50	1500	18	0.14	44	53	355	86	210	0.35
16	230	50	1500	16	0.13	46	55	200	112	115	0.45

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
qv = Air flow · p_{fs} = Pressure increase