R3G175-RC05-12

EC centrifugal fan - RadiCal

backward curved, single inlet

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Nominal data

Type	**R3G175-RC05-12**
Motor	**M3G055-BI**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	3740
Power input	W	85
Current draw	A	0.80
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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Technical features

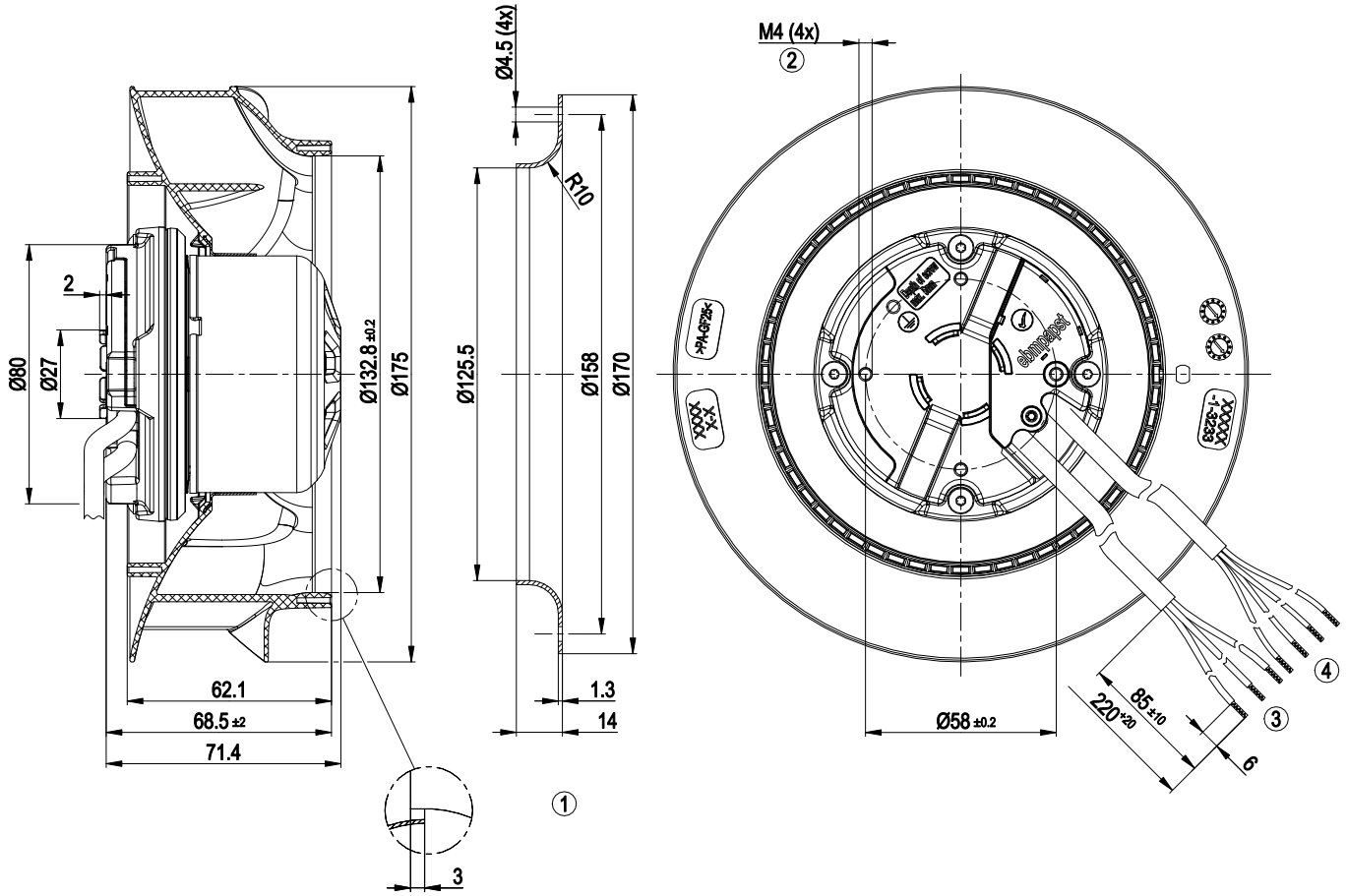
Mass	1 kg
Size	175 mm
Surface of rotor	Uncoated
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	CE

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Product drawing



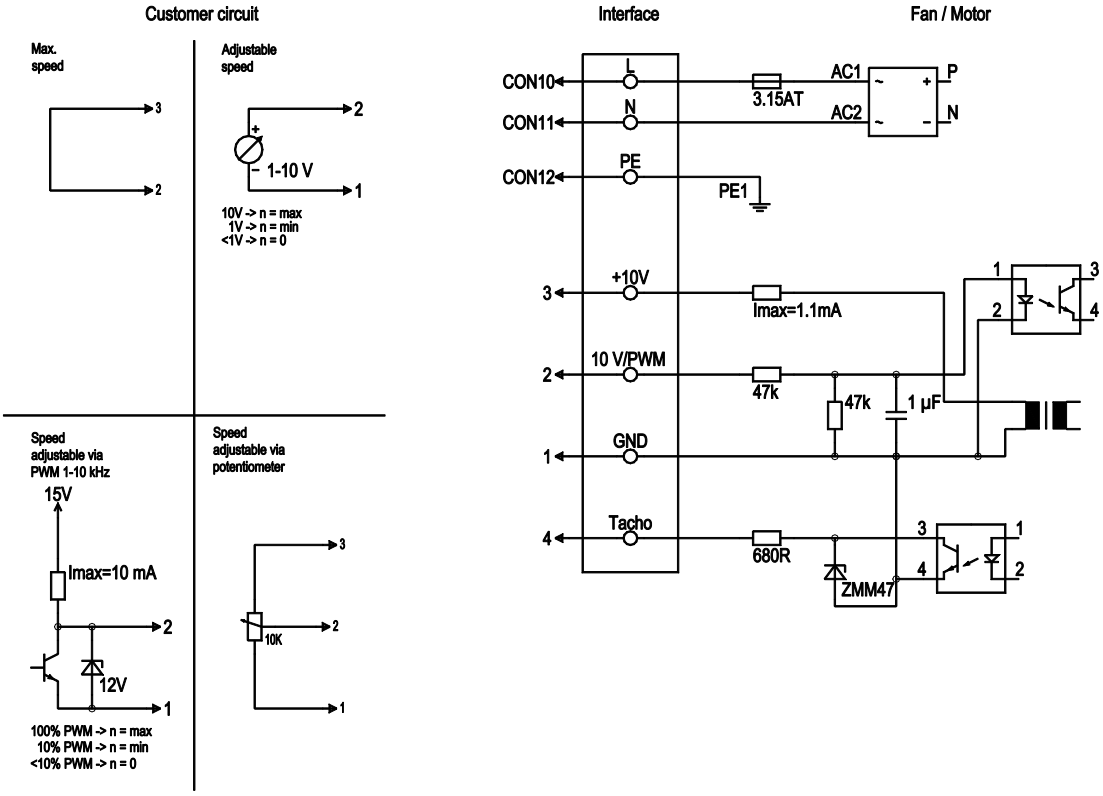
1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line PVC 3x AWG20, 3x lead tips crimped
4	Connection line PVC 4x AWG22, 4x lead tips crimped

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Connection screen



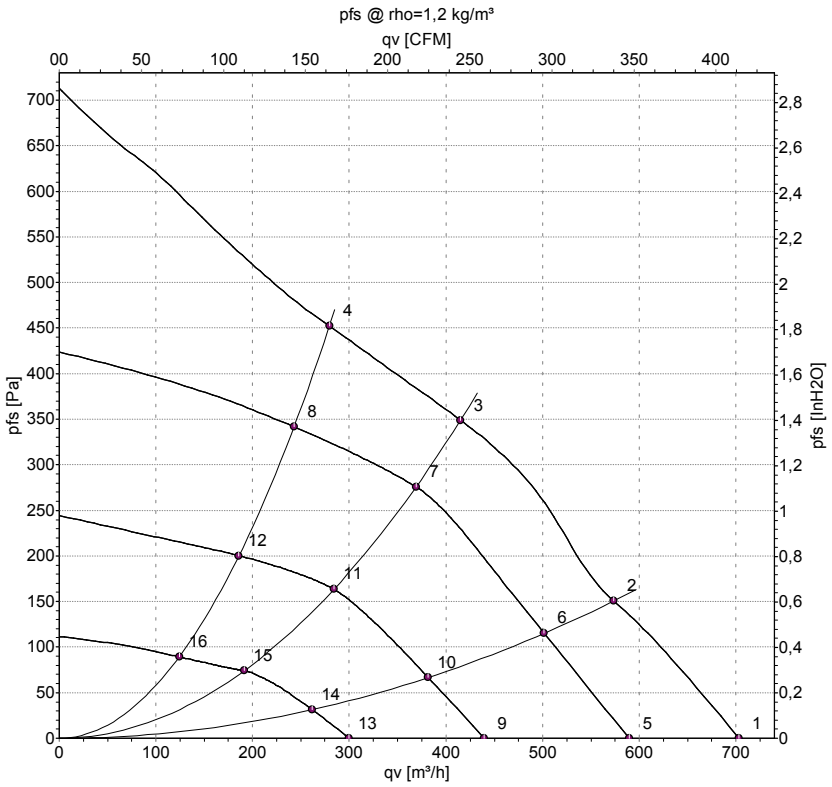
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0-10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10 V / max. 1,1 mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tacho	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated

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Charts: Air flow 50 Hz



Measurement: LU-155217-1
Measurement: LU-159483-1
Measurement: LU-159485-1
Measurement: LU-159487-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

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	4050	85	0.80	70	77	705	0	415	0.00
2	230	50	3820	85	0.80	65	72	575	150	340	0.60
3	230	50	3740	85	0.80	59	67	415	350	245	1.41
4	230	50	3800	85	0.80	61	69	280	450	165	1.81
5	230	50	3395	49	0.47	64	73	590	0	345	0.00
6	230	50	3330	54	0.50	61	68	500	115	295	0.46
7	230	50	3295	55	0.51	55	63	370	276	215	1.11
8	230	50	3345	52	0.50	56	65	245	342	145	1.37
9	230	50	2530	22	0.25	59	66	440	0	260	0.00
10	230	50	2505	24	0.24	53	61	380	67	225	0.27
11	230	50	2505	25	0.25	48	56	285	163	165	0.65
12	230	50	2525	24	0.25	50	58	185	201	110	0.81
13	230	50	1725	9.0	0.11	49	58	300	0	175	0.00
14	230	50	1710	9.0	0.12	43	52	260	32	155	0.13
15	230	50	1680	9.0	0.11	38	46	190	74	110	0.30
16	230	50	1680	9.0	0.11	40	48	125	89	75	0.36

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

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