R3G250-RE07-07

EC centrifugal fan - RadiCal®

backward curved

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G250-RE07-07**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	2510
Power input	W	170
Current draw	A	1.4
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

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	57.8	39.1	43.1
Efficiency grade N		76.7	58	62
Power input P_{ed}	kW	0.16		
Air flow q_v	m^3/h	800		
Pressure increase p_{fs}	Pa	380		
Speed n	min^{-1}	2535		

Data definition with optimum efficiency. LU-153273
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

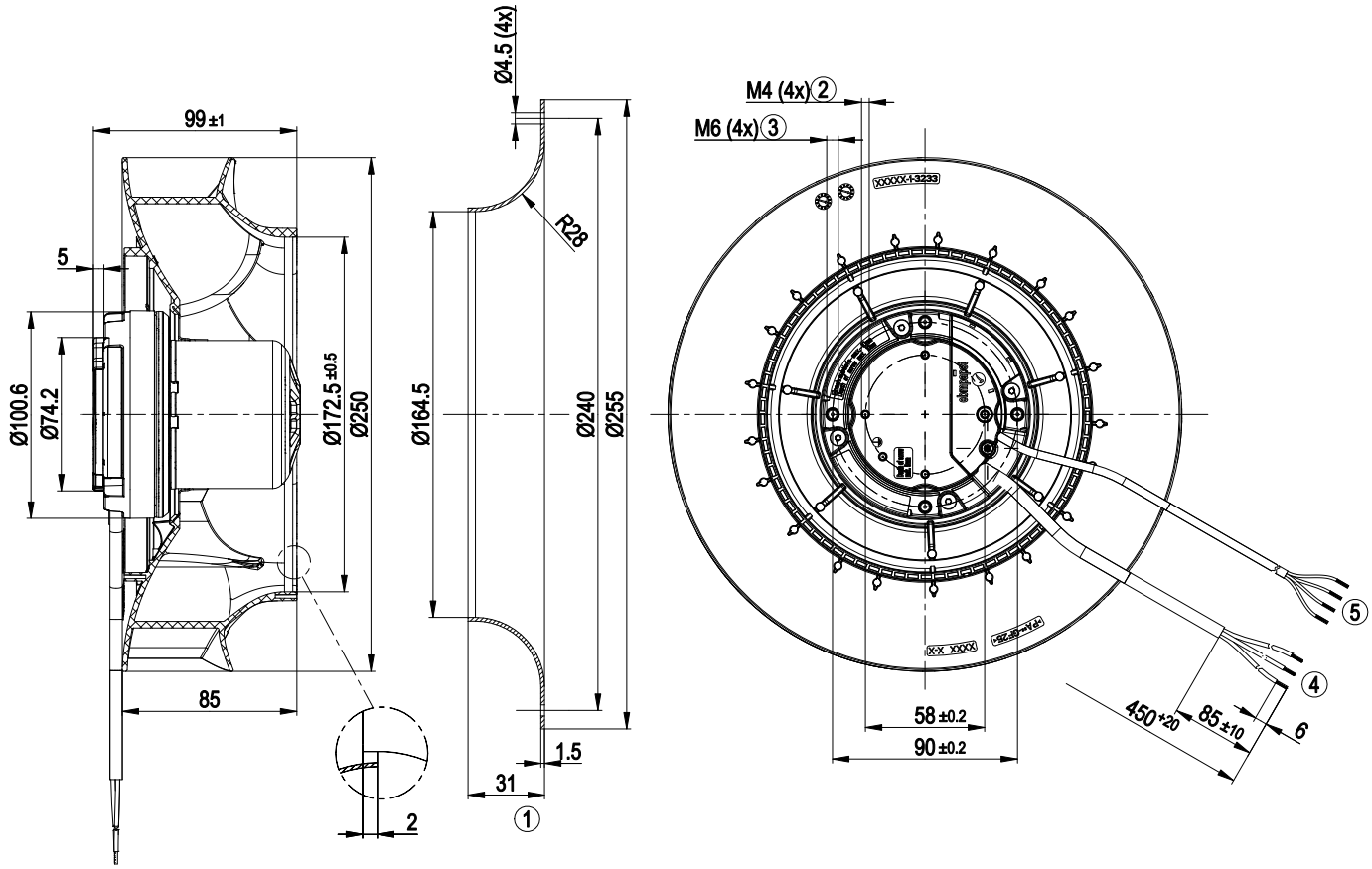
Mass	1.9 kg
Size	250 mm
Surface of rotor	Thick layer passivated
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ 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 - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial 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	EN 60335-1; CE
Approval	CCC; CSA C22.2 Nr.77; UL 2111

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Product drawing



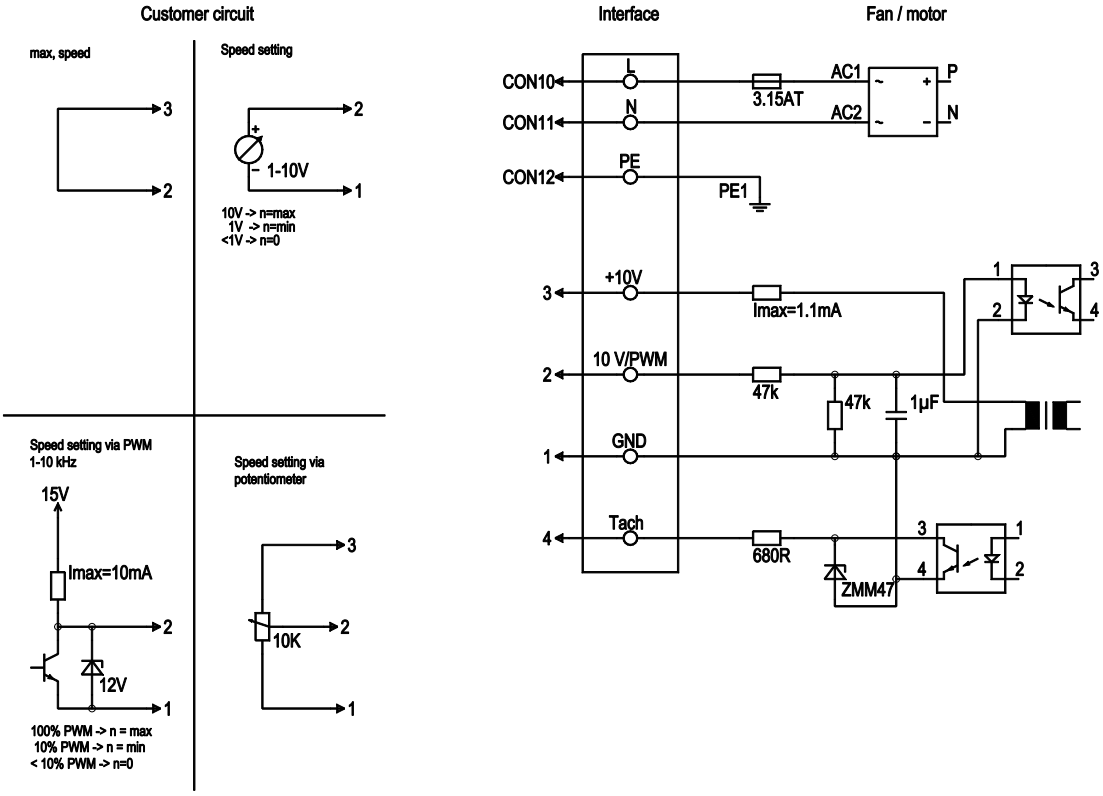
1	Accessory part: inlet nozzle 96359-2-4013, not included in scope of delivery
2	Depth of screw max. 5 mm
3	Depth of screw max. 10 mm
4	Connection line PVC 3X AWG20, 3x lead tips crimped
5	Connection line PVC AWG22, 4x lead tips crimped

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Connection screen



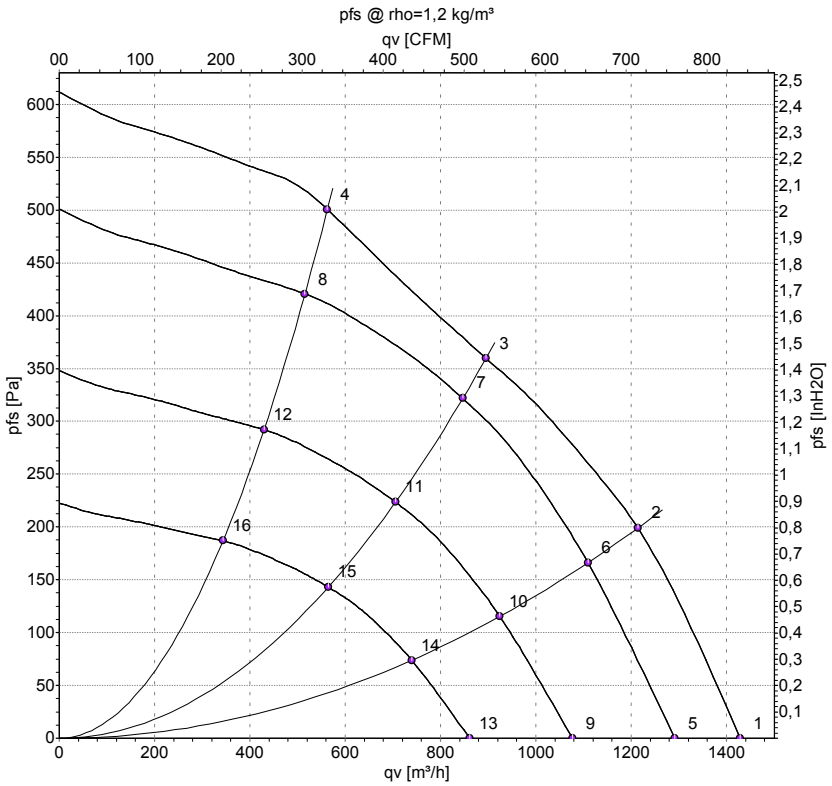
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, for voltage range refer to rating plate
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND - Connection for control interface
	2	0- 10V PWM	yellow	Control input 0 - 10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

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Charts: Air flow 50 Hz



Measurement: LU-154717

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}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	2655	143	1.18	68	76	1430	0
2	230	50	2630	170	1.40	64	72	1215	200
3	230	50	2510	170	1.40	60	67	895	360
4	230	50	2620	168	1.39	65	73	560	500
5	230	50	2400	105	0.87	66	73	1290	0
6	230	50	2400	129	1.07	62	69	1110	168
7	230	50	2400	144	1.19	59	66	845	322
8	230	50	2400	129	1.07	63	70	515	421
9	230	50	2000	61	0.51	61	69	1075	0
10	230	50	2000	75	0.62	57	65	925	116
11	230	50	2000	83	0.69	54	62	705	224
12	230	50	2000	75	0.62	59	66	430	292
13	230	50	1600	31	0.26	55	63	860	0
14	230	50	1600	38	0.32	52	59	740	75
15	230	50	1600	43	0.35	48	56	565	143
16	230	50	1600	38	0.32	53	60	345	187

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

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