R3G250-RE07-13

EC centrifugal fan - RadiCal

backward curved, single inlet

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Nominal data

Type	**R3G250-RE07-13**
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 (rpm)	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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	57.8	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		76.7	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	800
09 Pressure increase p_{fs}	Pa	380
10 Speed (rpm) n	min^{-1}	2535
11 Specific ratio*		1.00

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

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

LU-153273

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Technical features

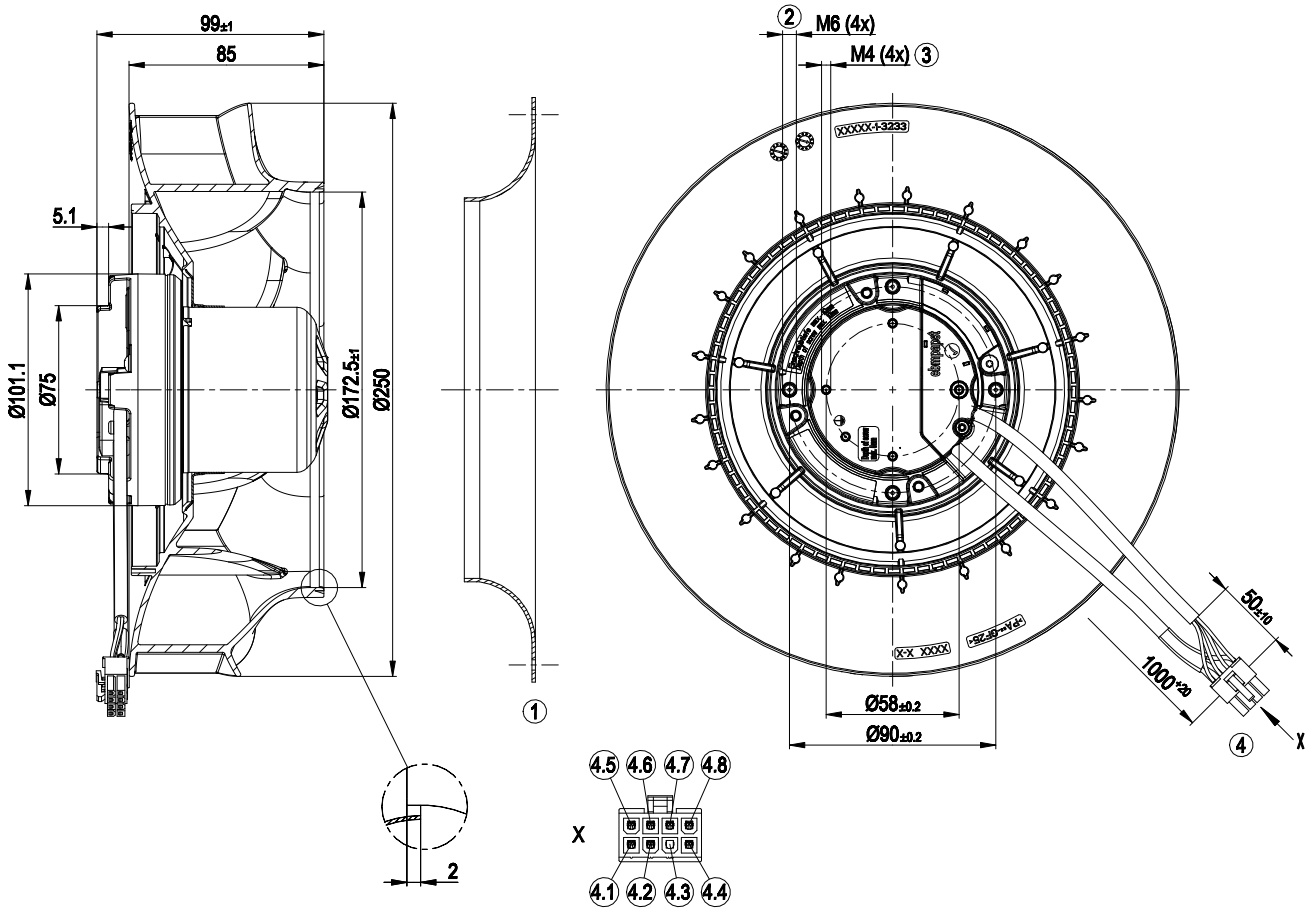
Mass	1.9 kg
Size	250 mm
Surface of rotor	Thick layer passivated
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ 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. 10 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
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	UL 2111; CSA C22.2 No.77

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Product drawing



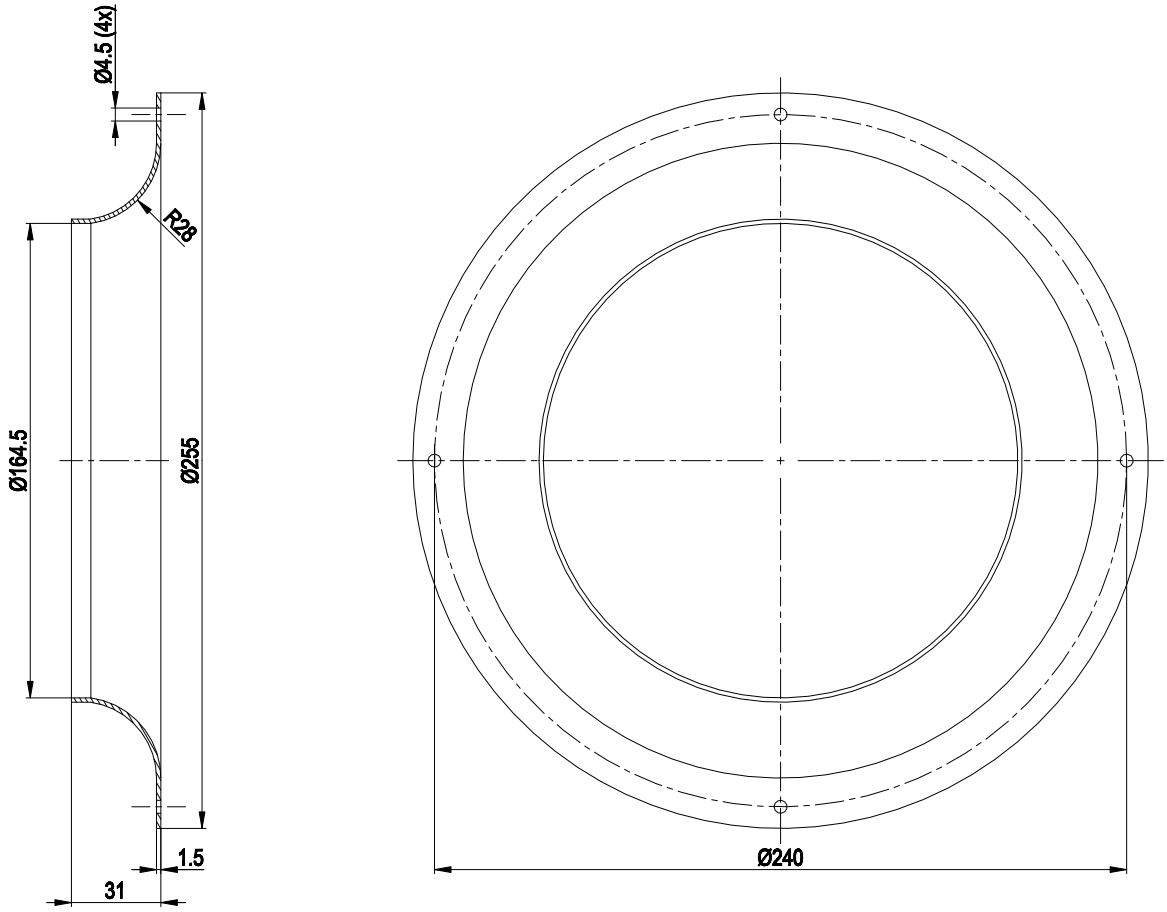
1	Accessory part: inlet nozzle 96359-2-4013, not included in scope of delivery
2	Thread reach max. 10 mm
3	Thread reach max. 5 mm
4	Connection line PVC 4x AWG22, connection line PVC 3x AWG20, connector housing 8-pole Molex 50-36-1713, 7x female connector Molex 39-00-0059
4.1	black
4.2	blue
4.3	not used
4.4	green/yellow
4.5	red
4.6	blue
4.7	yellow
4.8	white

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Accessory part



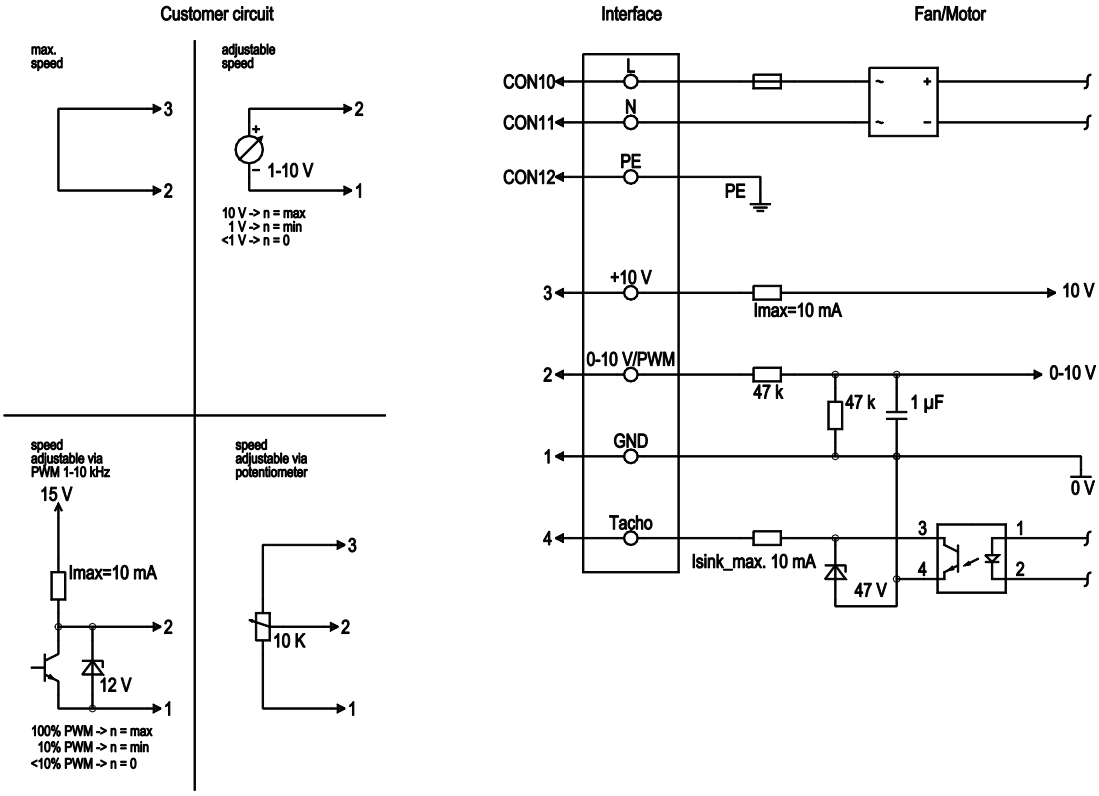
Accessory part: Inlet nozzle 96359-2-4013 not included in scope of delivery

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Connection screen



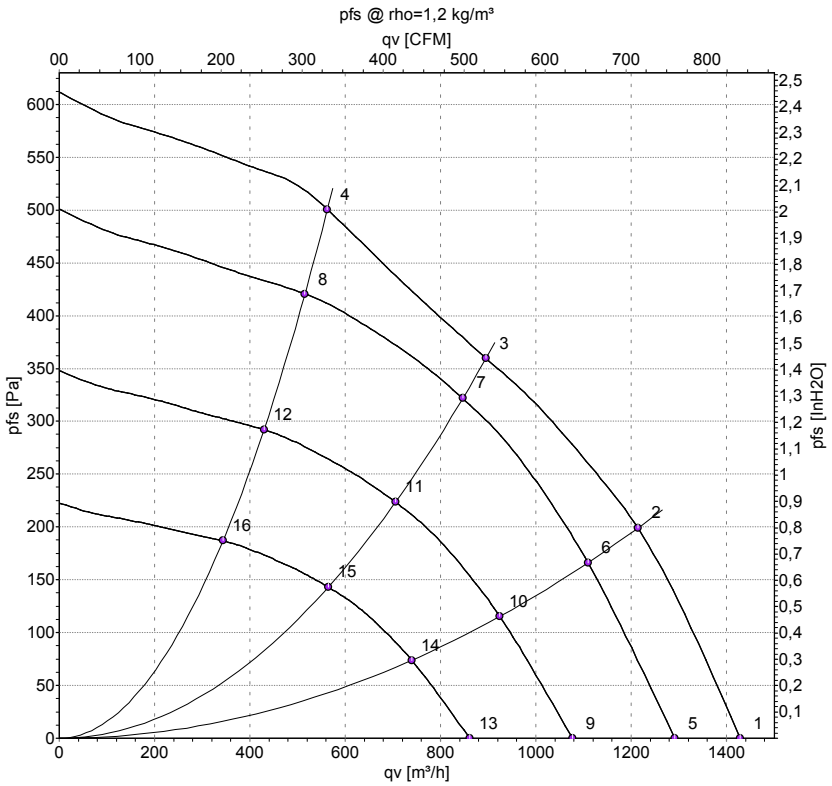
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Speed monitoring output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV

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Charts: Air flow 50 Hz



Measurement: LU-154717-1

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	2655	143	1.18	68	76	1430	0	840	0.00
2	230	50	2630	170	1.40	64	72	1215	200	715	0.80
3	230	50	2510	170	1.40	60	67	895	360	525	1.45
4	230	50	2620	168	1.39	65	73	560	500	330	2.01
5	230	50	2400	105	0.87	66	73	1290	0	760	0.00
6	230	50	2400	129	1.07	62	69	1110	168	655	0.67
7	230	50	2400	144	1.19	59	66	845	322	500	1.29
8	230	50	2400	129	1.07	63	70	515	421	305	1.69
9	230	50	2000	61	0.51	61	69	1075	0	635	0.00
10	230	50	2000	75	0.62	57	65	925	116	545	0.47
11	230	50	2000	83	0.69	54	62	705	224	415	0.90
12	230	50	2000	75	0.62	59	66	430	292	250	1.17
13	230	50	1600	31	0.26	55	63	860	0	505	0.00
14	230	50	1600	38	0.32	52	59	740	75	435	0.30
15	230	50	1600	43	0.35	48	56	565	143	330	0.57
16	230	50	1600	38	0.32	53	60	345	187	200	0.75

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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