R3G250-AH52-01

EC centrifugal fan

backward curved, single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G250-AH52-01**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	2600
Power input	W	160
Current draw	A	1.2
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}		47.1	39.1	43.1
Efficiency grade N		66	58	62
Power input P_{ed}	kW	0.16		
Air flow q_v	m^3/h	690		
Pressure increase p_{fs}	Pa	350		
Speed n	min^{-1}	2595		

Data established at point of optimum efficiency

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Technical features

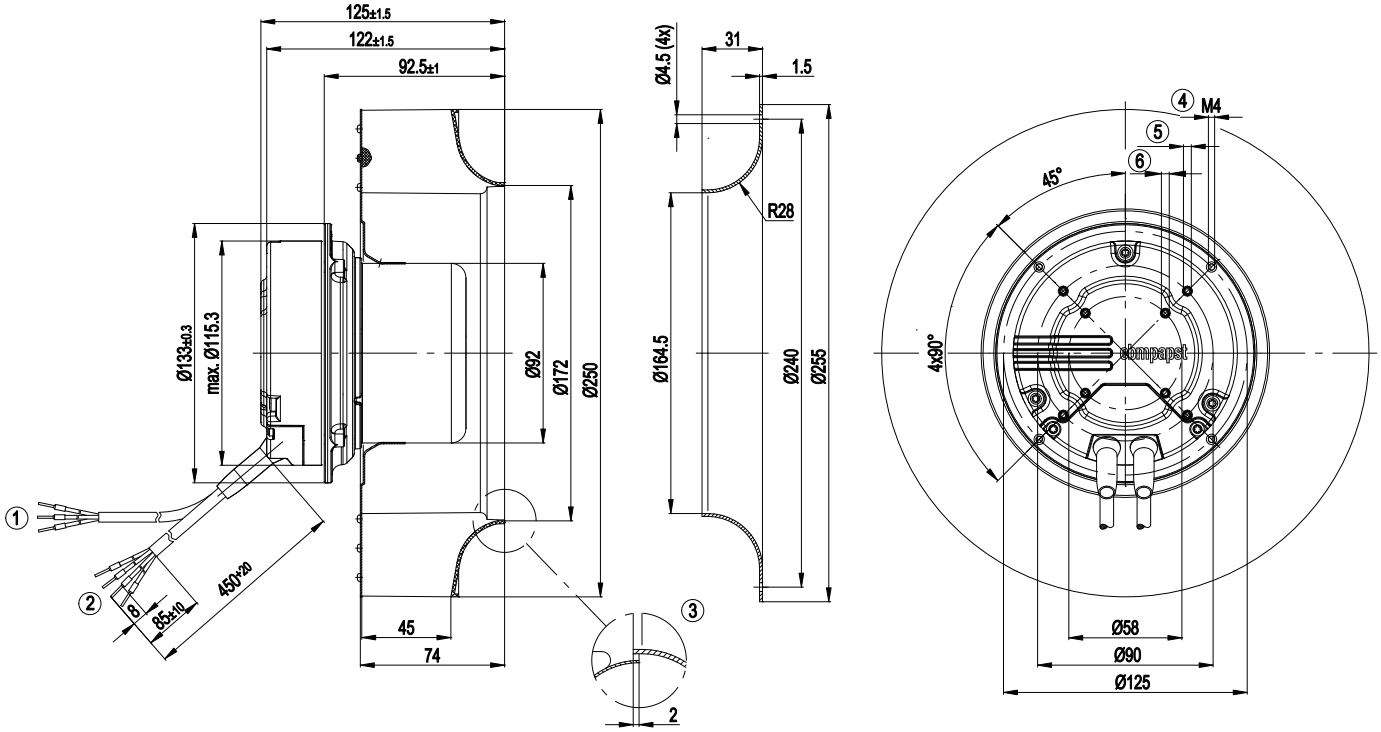
Mass	2.4 kg
Size	250 mm
Surface of rotor	Thick layer passivated
Material of electronics housing	Die-cast aluminium
Material of impeller	Plastic PA66, fibreglass-reinforced
Number of blades	11
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensate discharge holes	None
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
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	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; EN 60950-1; EN 61800-5-1; CE
Approval	UL 2111; CCC; CSA C22.2 Nr.77

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Product drawing



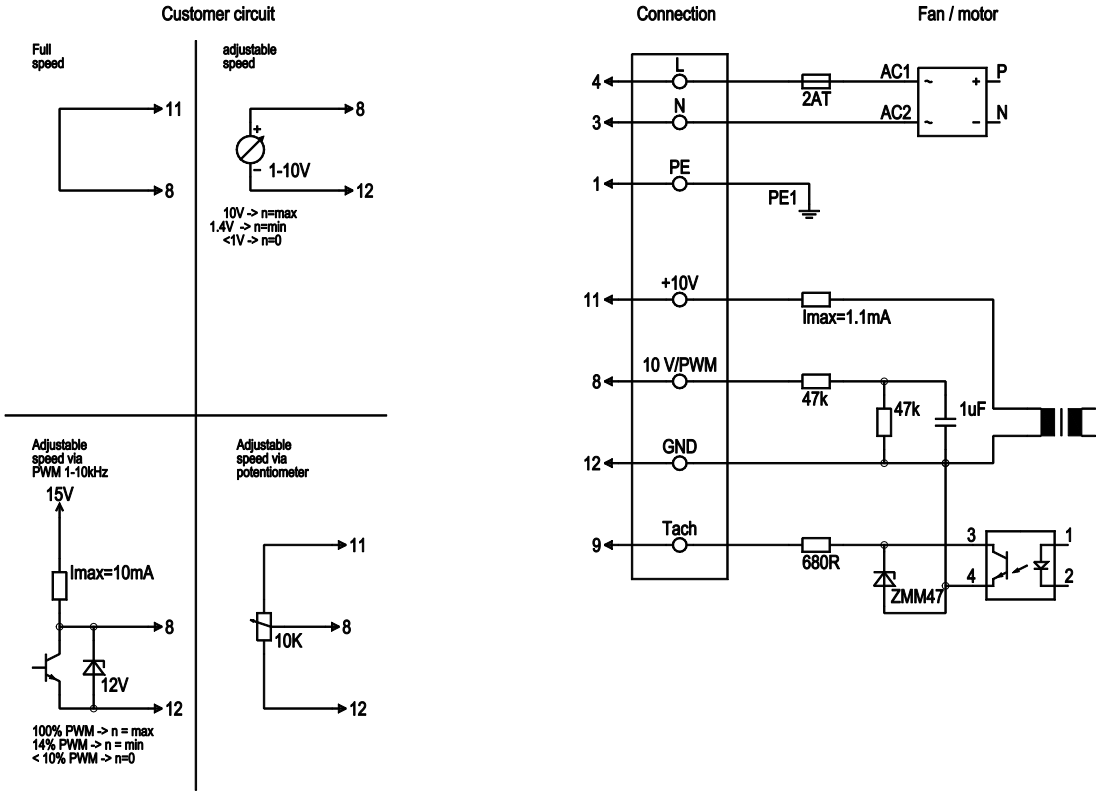
1	Connection line AWG18, 3 x crimped core-end sleeves
2	Connection line AWG22, 4 x crimped core-end sleeves
3	Accessory part: inlet nozzle 96359-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
4	Depth of screw 8 - 10 mm, tightening torque 2.5±0.2 Nm; gluing the screws is recommended
5	Pilot hole prepared for self-tapping screw M4, depth of screw max. 6 mm
6	Pilot hole prepared for self-tapping screw M4, depth of screw max. 8 mm

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Connection screen



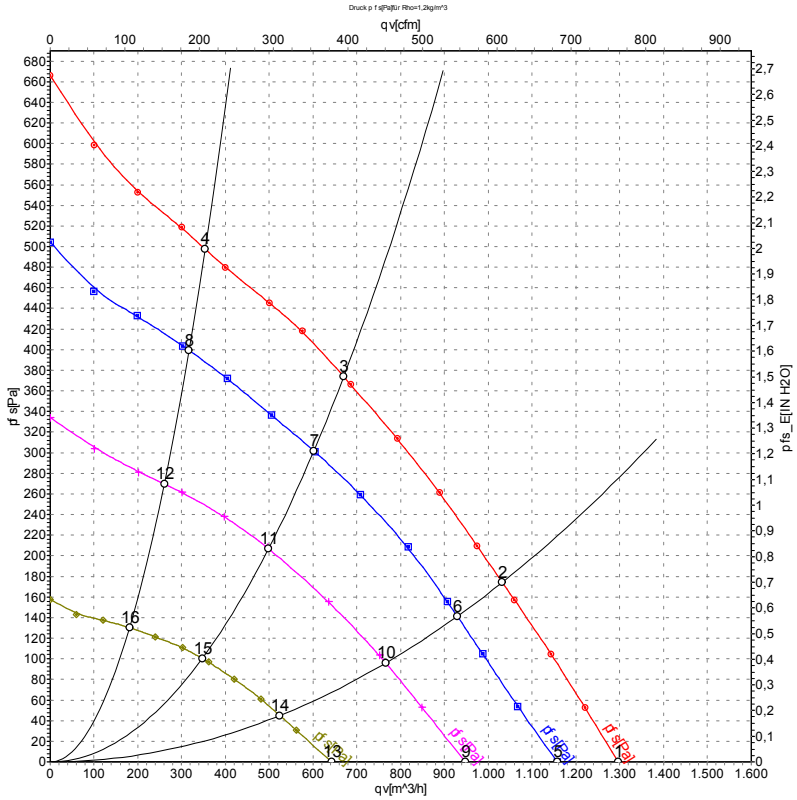
Line	No.	Signal	Colour	Function / assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V / max. 1.1 mA, electrically isolated
	12	GND	blue	GND - Connection for control interface

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Charts: Air flow 50 Hz



Measurement: LU-74719
Measurement: LU-67431
Measurement: LU-67432
Measurement: LU-67433

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	2770	123	0.90	1295	0
2	230	50	2660	148	1.08	1030	175
3	230	50	2600	160	1.20	670	375
4	230	50	2680	147	1.08	355	500
5	230	50	2455	88	0.66	1155	0
6	230	50	2380	106	0.81	930	141
7	230	50	2335	116	0.87	600	302
8	230	50	2400	105	0.79	315	399
9	230	50	2000	53	0.40	945	0
10	230	50	1960	62	0.47	765	96
11	230	50	1935	69	0.51	500	208
12	230	50	1965	61	0.46	260	270
13	230	50	1380	22	0.17	640	0
14	230	50	1365	25	0.20	525	45
15	230	50	1350	28	0.22	345	100
16	230	50	1360	25	0.19	180	130

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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