R3G310-AJ40-71

EC centrifugal fan

backward curved, single inlet



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G310-AJ40-71**	
Motor	**M3G084-DF**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	2430
Power input	W	485
Current draw	A	2.9
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	35

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*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		60.5	44.4	48.4
Efficiency grade N		74.1	58	62
Power input P_{ed}	kW	0.51		
Air flow q_v	m^3/h	2005		
Pressure increase p_{fs}	Pa	501		
Speed n	min^{-1}	2510		

Data established at point of optimum efficiency

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Technical features

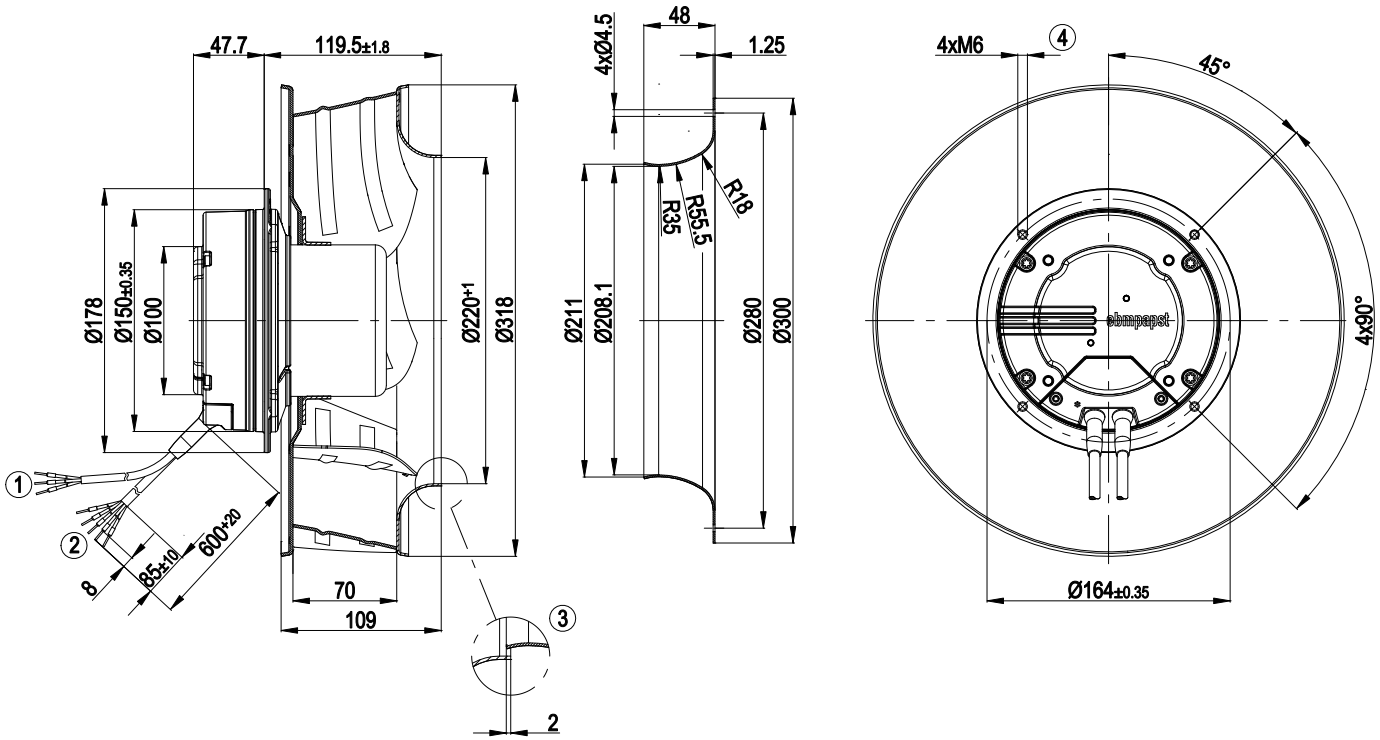
Mass	4.56 kg
Size	310 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient 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 - Alarm relay - 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 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 61800-5-1; CE
Approval	UL 2111; CCC; CSA C22.2 Nr.77

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Product drawing



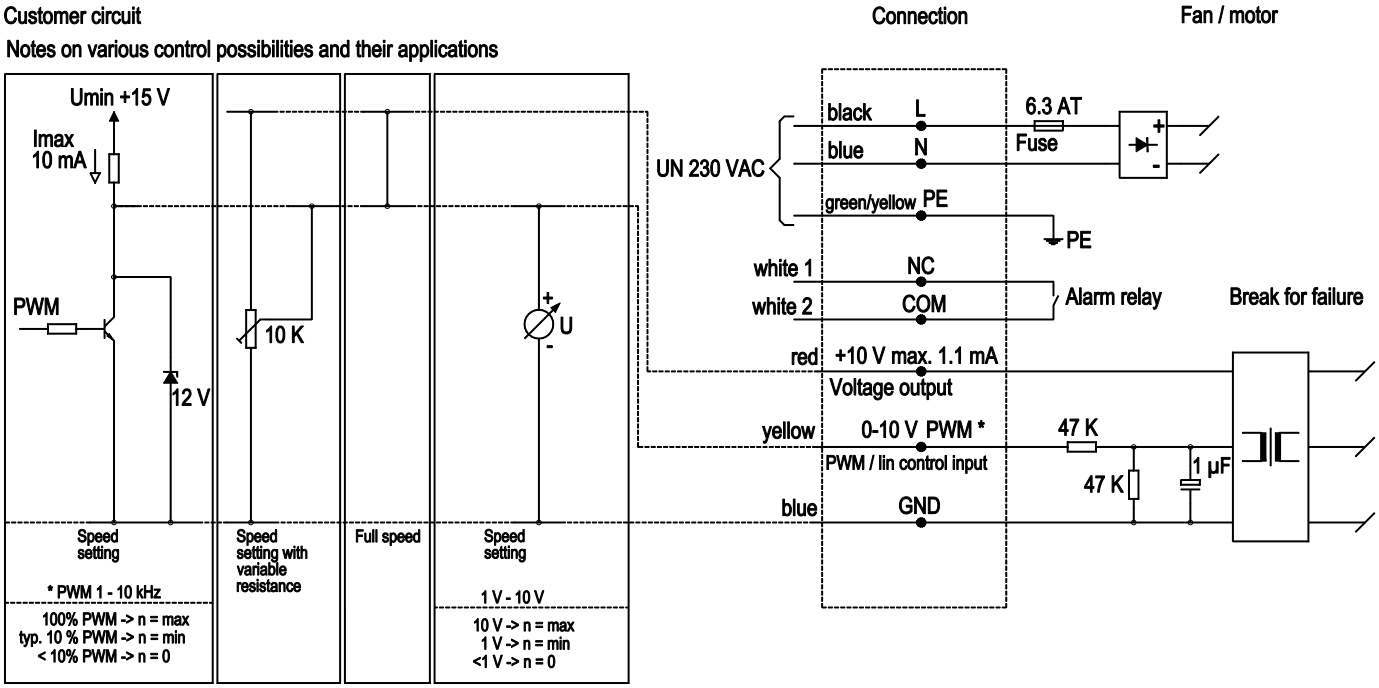
1	Connection line AWG22, 3 x crimped core-end sleeves
2	Connection line AWG18, 5 x crimped core-end sleeves
3	Accessory part: inlet nozzle 31050-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
4	Depth of screw 8 - 10 mm

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Connection screen

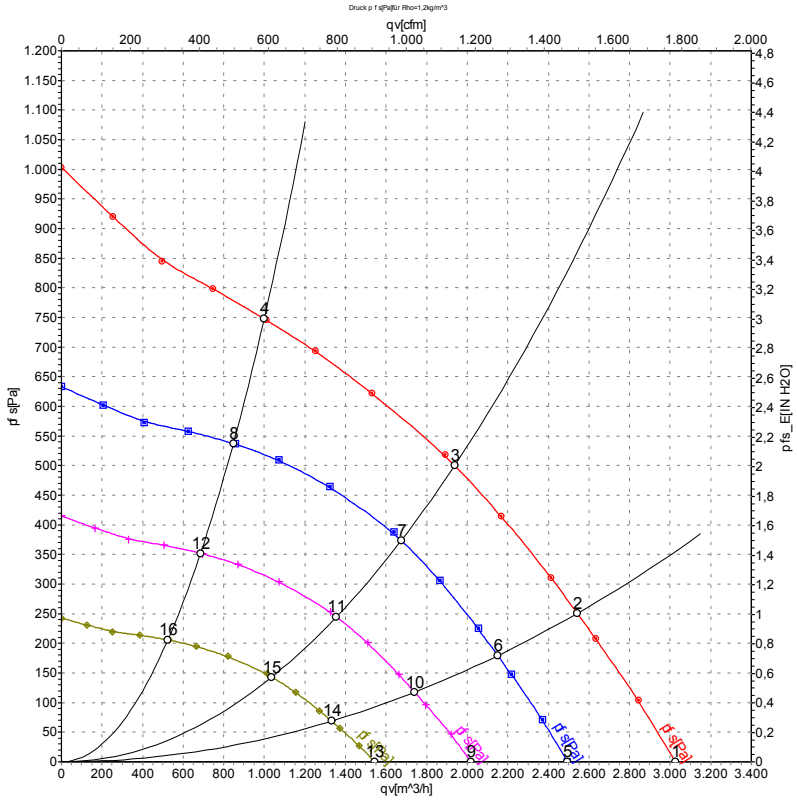


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Charts: Air flow 50 Hz



Measurement: LU-65567

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	2550	357	2.17	3030	0
2	230	50	2485	434	2.62	2545	250
3	230	50	2430	485	2.90	1940	500
4	230	50	2475	450	2.72	1000	750
5	230	50	2100	200	1.21	2495	0
6	230	50	2100	262	1.59	2150	179
7	230	50	2100	308	1.87	1675	375
8	230	50	2100	274	1.66	845	538
9	230	50	1700	106	0.64	2020	0
10	230	50	1700	139	0.84	1740	118
11	230	50	1700	164	0.99	1355	246
12	230	50	1700	146	0.88	685	352
13	230	50	1300	47	0.29	1545	0
14	230	50	1300	62	0.38	1330	69
15	230	50	1300	73	0.44	1035	144
16	230	50	1300	65	0.39	525	206

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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