R3G310-AJ40-71

EC centrifugal fan

backward-curved, single-intake



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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
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2430
Power consumption	W	485
Current draw	A	2.9
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	35

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	60.5	48.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.1	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.51
09 Air flow q_v	m^3/h	2005
09 Pressure increase p_{fs}	Pa	501
10 Speed (rpm) n	min^{-1}	2510
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-109696

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Technical description

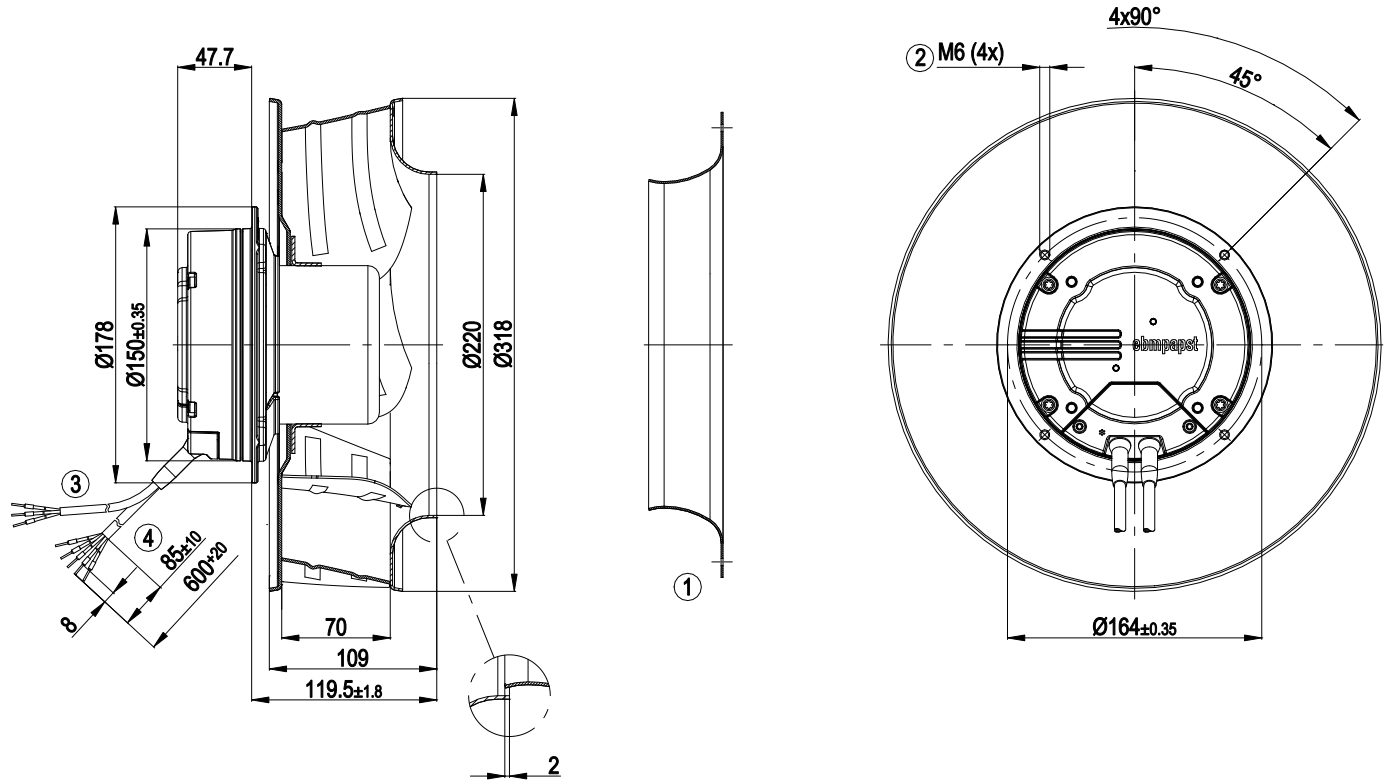
Weight	4.56 kg
Fan size	310 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	C22.2 No.77 + CAN/CSA-E60730-1; UL1004-3 +60730; EAC; CCC

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Product drawing



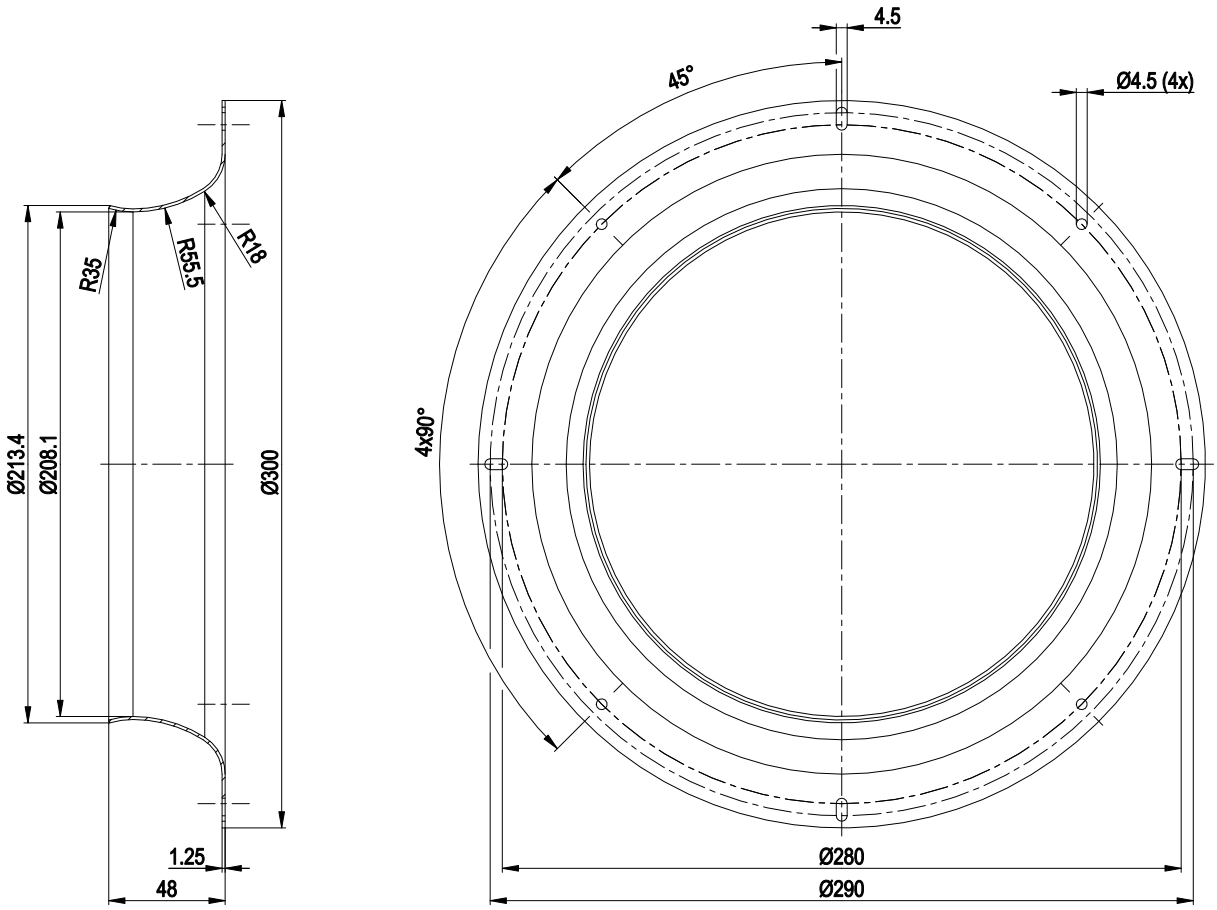
1	Accessory part: inlet ring 31050-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Cable PVC AWG22, 3x crimped ferrules
4	Cable PVC AWG18, 5x crimped ferrules

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Accessory part



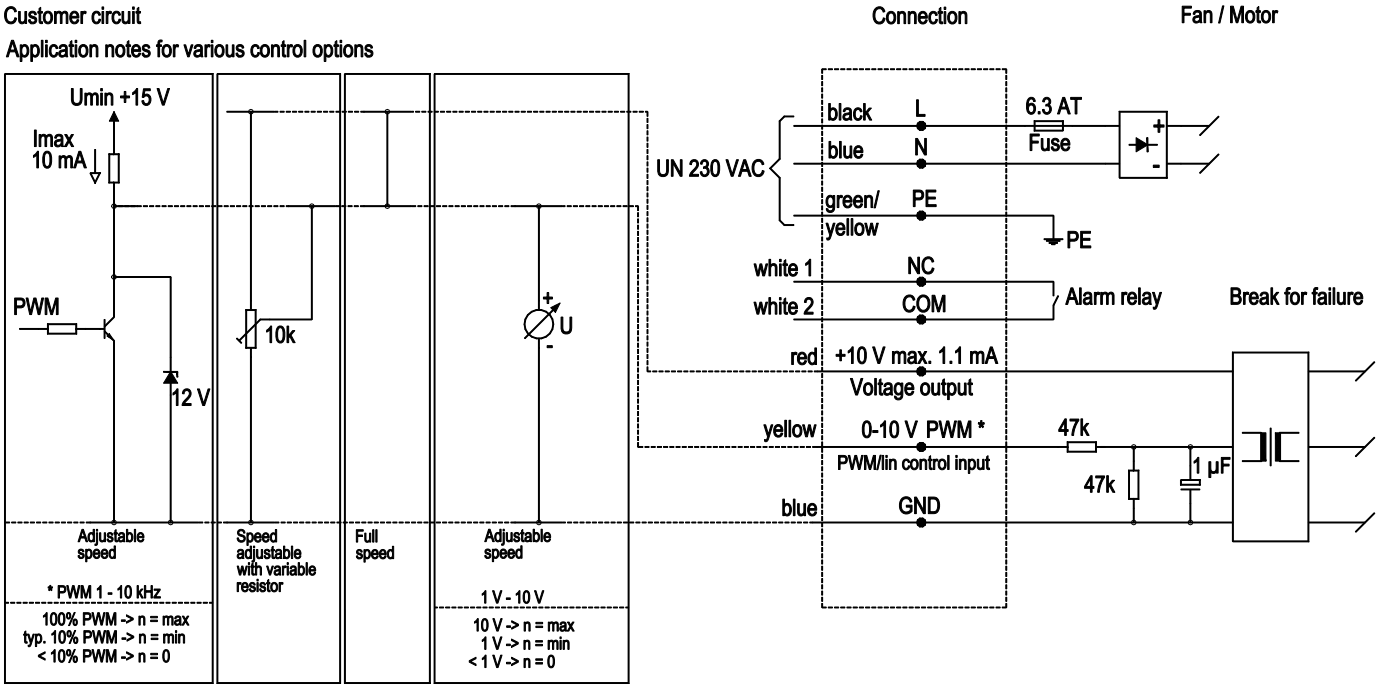
inlet ring 31050-2-4013 not included in scope of delivery

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Connection diagram

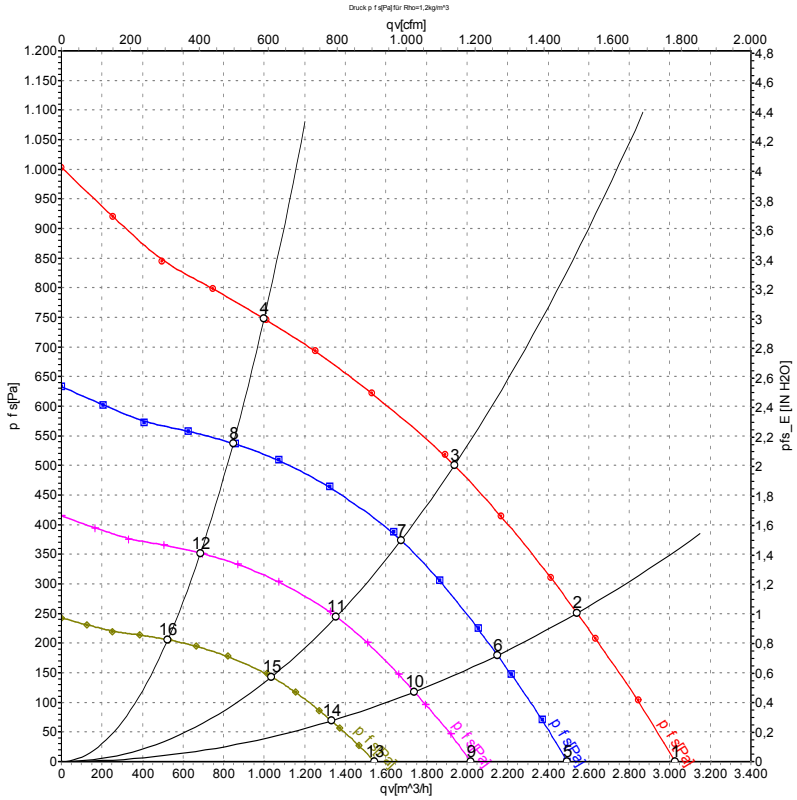


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Curves: Air performance 50 Hz



Measurement: LU-65567-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	230	50	2550	357	2.17	3030	0	1780	0.00
2	230	50	2485	434	2.62	2545	250	1495	1.00
3	230	50	2430	485	2.90	1940	500	1140	2.01
4	230	50	2475	450	2.72	1000	750	590	3.01
5	230	50	2100	200	1.21	2495	0	1465	0.00
6	230	50	2100	262	1.59	2150	179	1265	0.72
7	230	50	2100	308	1.87	1675	375	985	1.51
8	230	50	2100	274	1.66	845	538	500	2.16
9	230	50	1700	106	0.64	2020	0	1190	0.00
10	230	50	1700	139	0.84	1740	118	1025	0.47
11	230	50	1700	164	0.99	1355	246	800	0.99
12	230	50	1700	146	0.88	685	352	405	1.41
13	230	50	1300	47	0.29	1545	0	910	0.00
14	230	50	1300	62	0.38	1330	69	785	0.28
15	230	50	1300	73	0.44	1035	144	610	0.58
16	230	50	1300	65	0.39	525	206	310	0.83

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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