R3G310-AJ40-71

EC centrifugal fan

backward-curved, single-intake



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Amtsgericht (court of registration) Stuttgart · HRA 590344

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Amtsgericht (court of registration) Stuttgart · HRB 590142

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 (EN 17166)

		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.

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

LU-109696

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

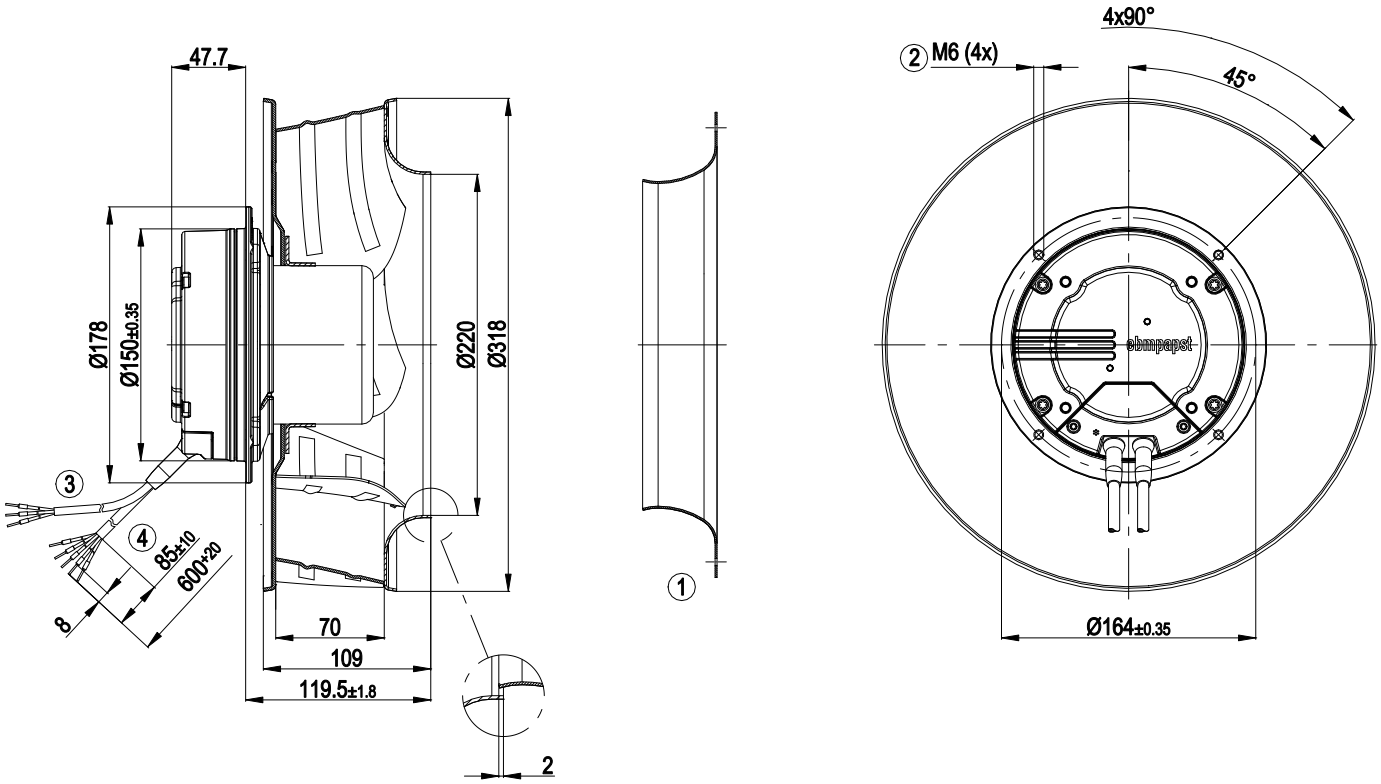
Weight	4.6 kg
Size	310 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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; UKCA
Approval	CCC; EAC; UL 1004-3 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1

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Product drawing



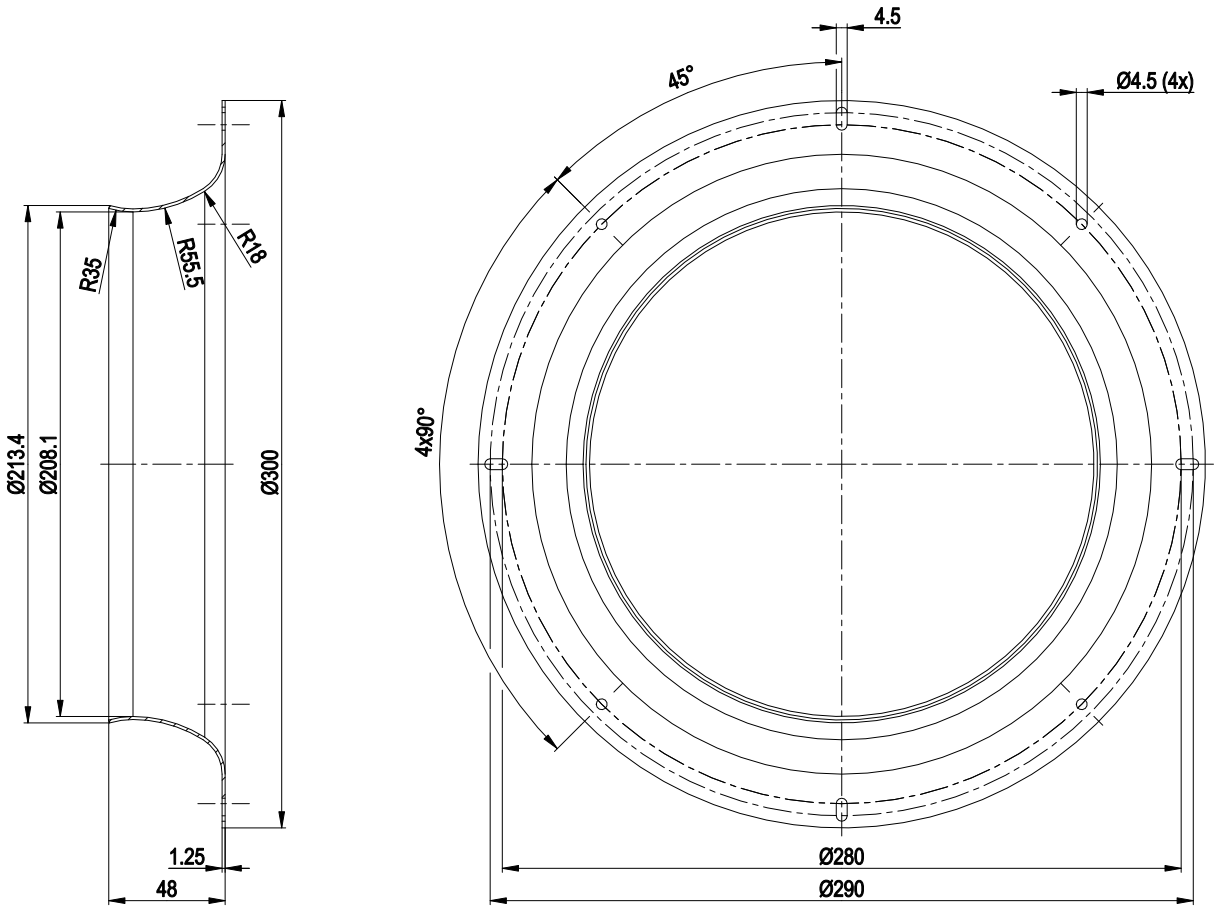
1	Accessory part: inlet ring 31050-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Cable PVC AWG22, 3x crimped ferrules
4	Cable PVC AWG18, 5x crimped ferrules

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Accessory part



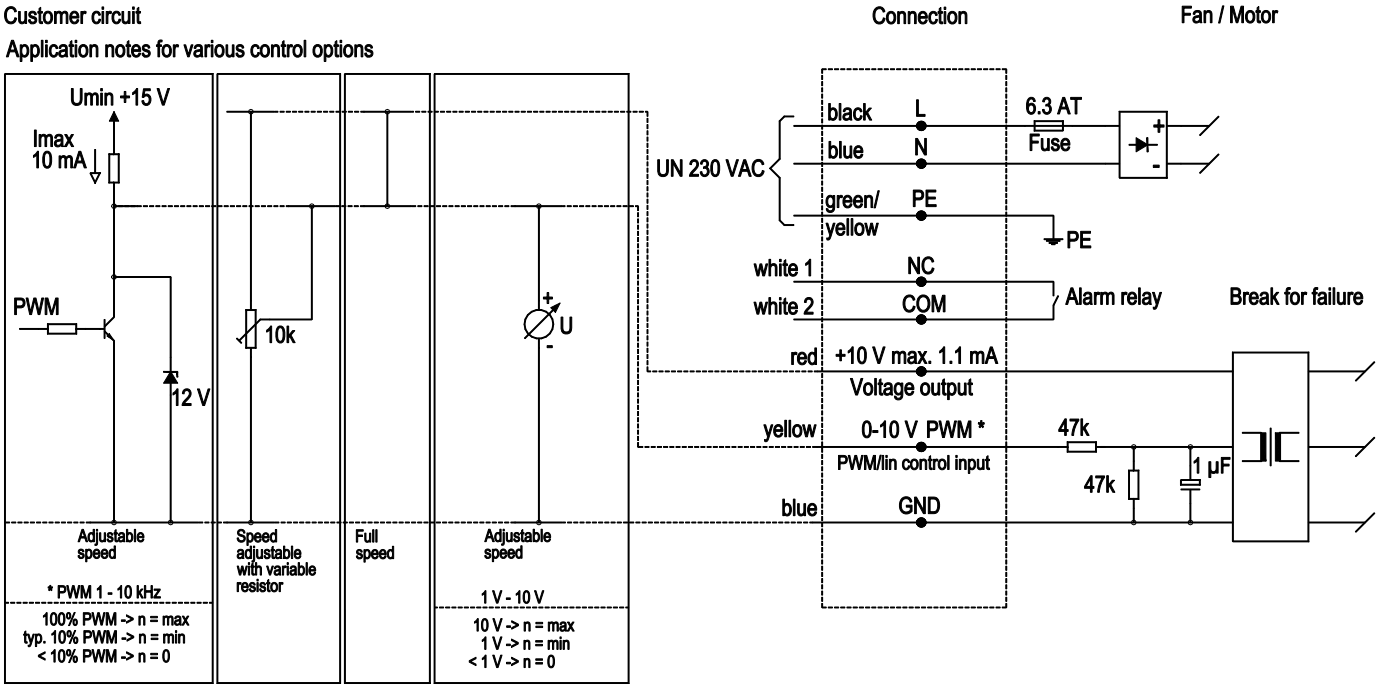
inlet ring 31050-2-4013 not included in scope of delivery

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Connection diagram

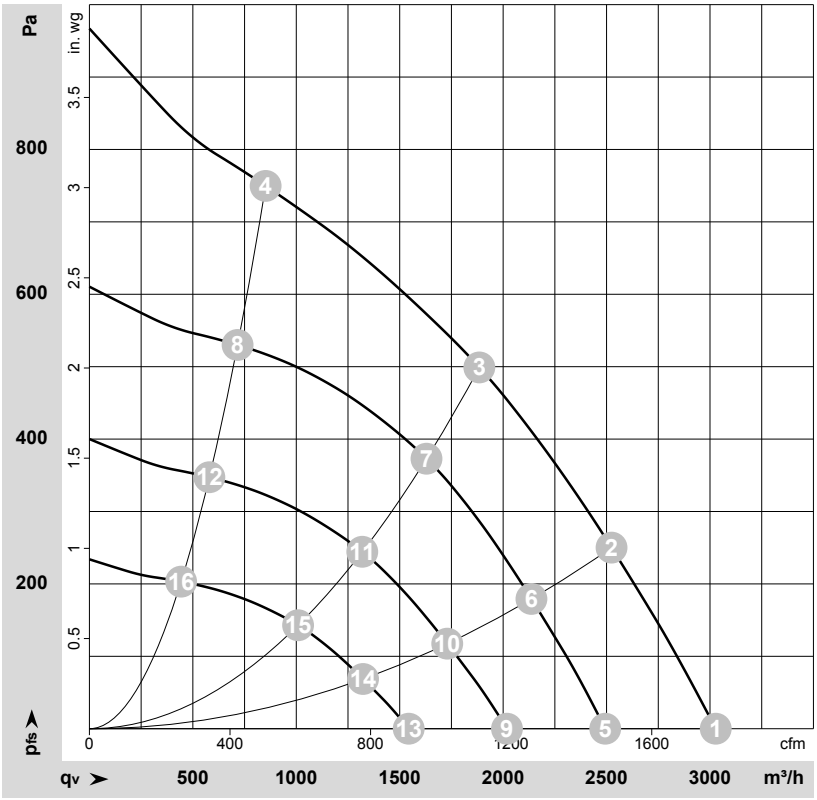


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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

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

	Wired	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	1~	230	50	2550	357	2.17	3030	0	1780	0.00
2	1~	230	50	2480	436	2.64	2525	250	1485	1.00
3	1~	230	50	2430	485	2.90	1885	500	1110	2.01
4	1~	230	50	2495	433	2.61	850	750	500	3.01
5	1~	230	50	2100	200	1.21	2495	0	1465	0.00
6	1~	230	50	2100	264	1.60	2135	179	1260	0.72
7	1~	230	50	2100	310	1.88	1630	376	960	1.51
8	1~	230	50	2100	258	1.55	715	530	420	2.13
9	1~	230	50	1700	106	0.64	2020	0	1190	0.00
10	1~	230	50	1700	140	0.85	1730	117	1020	0.47
11	1~	230	50	1700	165	1.00	1320	246	775	0.99
12	1~	230	50	1700	137	0.82	580	347	340	1.39
13	1~	230	50	1300	47	0.29	1545	0	910	0.00
14	1~	230	50	1300	63	0.38	1325	69	780	0.28
15	1~	230	50	1300	74	0.45	1010	144	595	0.58
16	1~	230	50	1300	61	0.37	445	203	260	0.81

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

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