R3G310-AN43-71

EC centrifugal fan

backward-curved, single-intake



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Nominal data

Type	**R3G310-AN43-71**
Motor	**M3G084-FA**

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}	2435
Power consumption	W	470
Current draw	A	3.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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}	%	60.7	48
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.7	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.46
09 Air flow q_v	m³/h	1810
09 Pressure increase p_{fs}	Pa	507
10 Speed (rpm) n	min^{-1}	2455
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

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

LU-112311

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

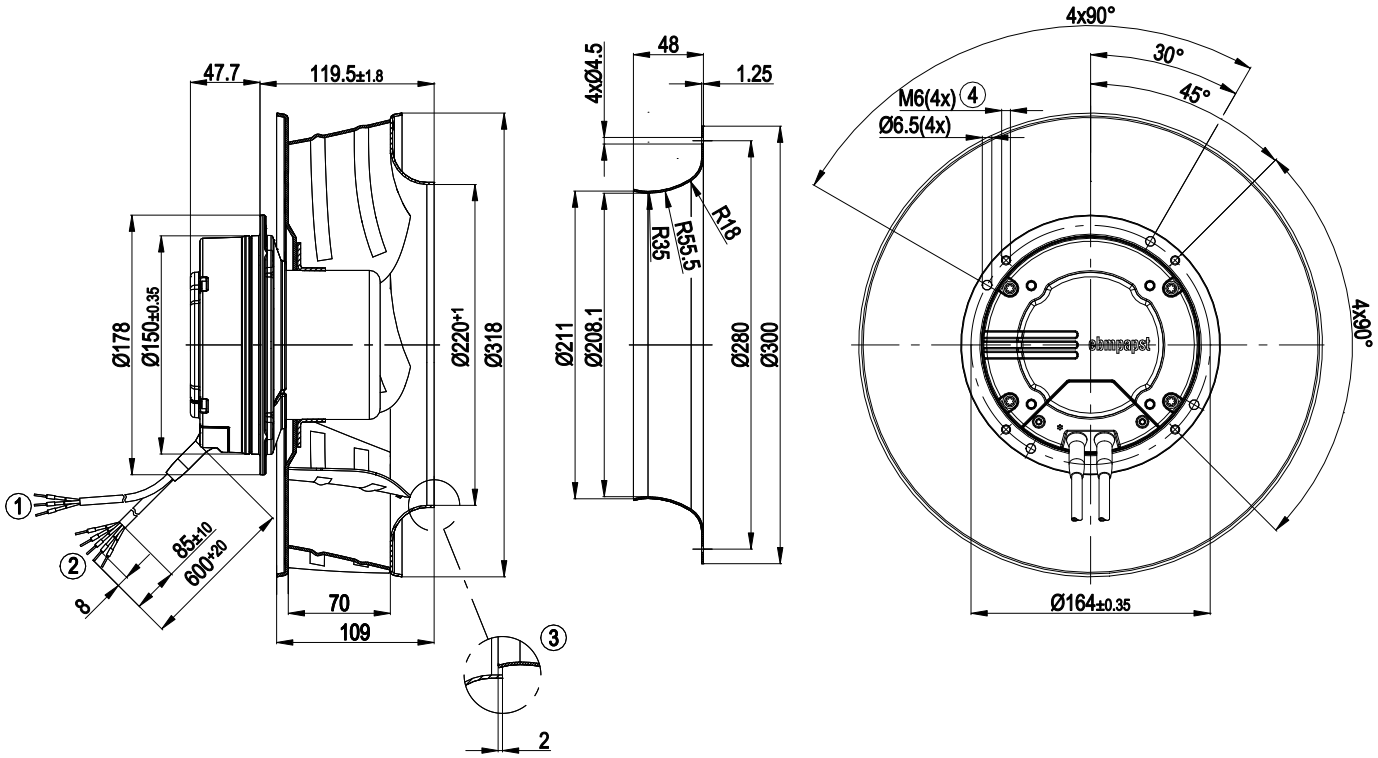
Weight	4.56 kg
Size	310 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) 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 supply - 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



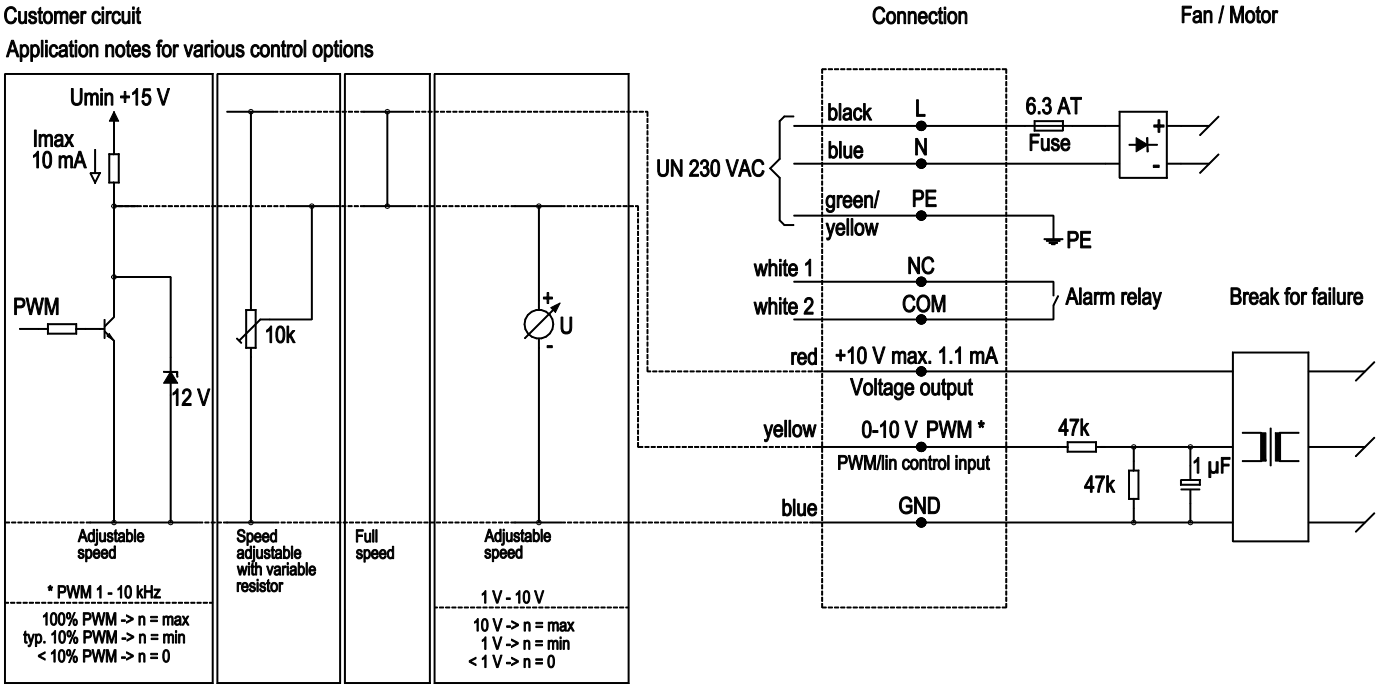
1	Cable PVC AWG22, 3x crimped ferrules
2	Cable PVC AWG18, 5x crimped ferrules
3	Accessory part: inlet ring 31050-2-4013 not included in scope of delivery
4	Clearance for screw 8-10 mm

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Connection diagram

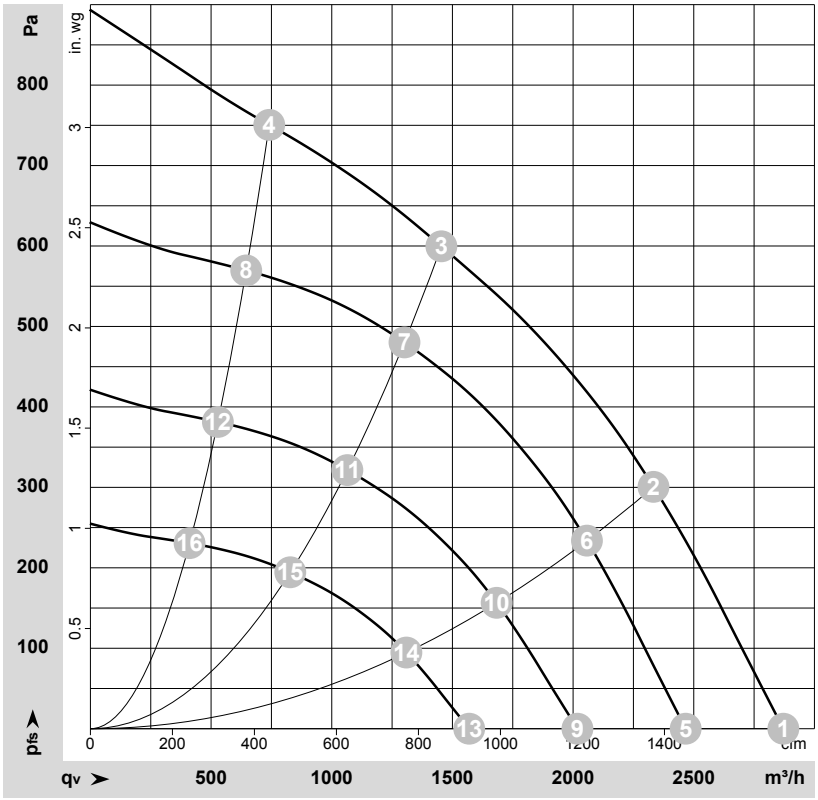


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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-112311-1

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	2560	356	2.31	2870	0	1690	0.00
2	1~	230	50	2495	438	2.83	2335	300	1375	1.20
3	1~	230	50	2435	470	3.00	1455	600	855	2.41
4	1~	230	50	2525	403	2.61	740	750	435	3.01
5	1~	230	50	2200	226	1.46	2465	0	1450	0.00
6	1~	230	50	2200	301	1.94	2055	236	1210	0.95
7	1~	230	50	2200	334	2.17	1300	481	765	1.93
8	1~	230	50	2200	267	1.73	645	570	380	2.29
9	1~	230	50	1800	124	0.80	2020	0	1190	0.00
10	1~	230	50	1800	165	1.06	1685	158	990	0.63
11	1~	230	50	1800	183	1.19	1065	322	625	1.29
12	1~	230	50	1800	146	0.95	530	381	310	1.53
13	1~	230	50	1400	58	0.38	1570	0	925	0.00
14	1~	230	50	1400	78	0.50	1310	95	770	0.38
15	1~	230	50	1400	86	0.56	830	195	485	0.78
16	1~	230	50	1400	69	0.44	410	231	240	0.93

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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