R3G310-AN48-78

EC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R3G310-AN48-78**
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}	2400
Power consumption	W	470
Current draw	A	3.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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}	%	60.1	48
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	0.46
09 Air flow q_v	m^3/h	1825
09 Pressure increase p_{fs}	Pa	500
10 Speed (rpm) n	min^{-1}	2420
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-111047

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Technical description

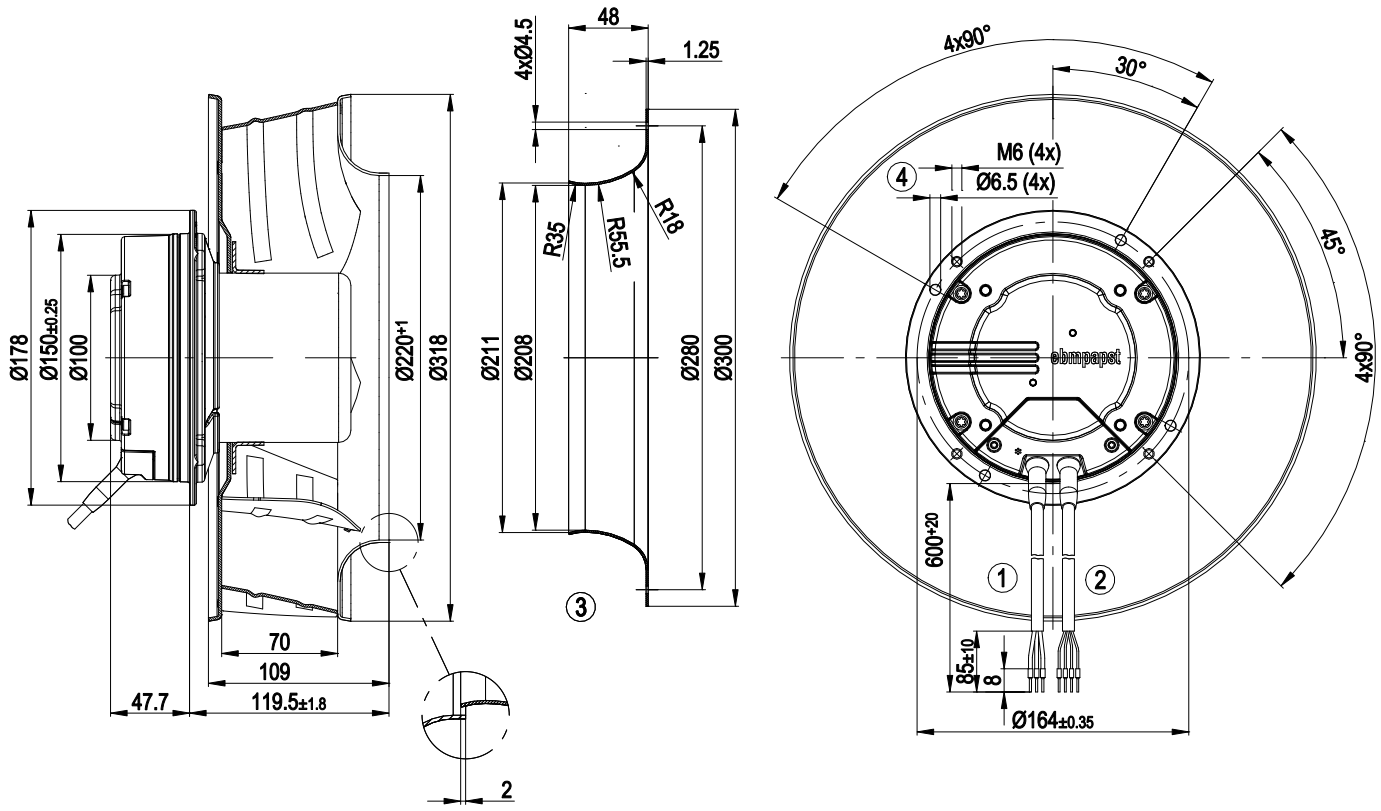
Weight	5.1 kg
Size	310 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection 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 - Tach output - 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	CSA C22.2 No. 77; CCC; UL 1004-3

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Product drawing



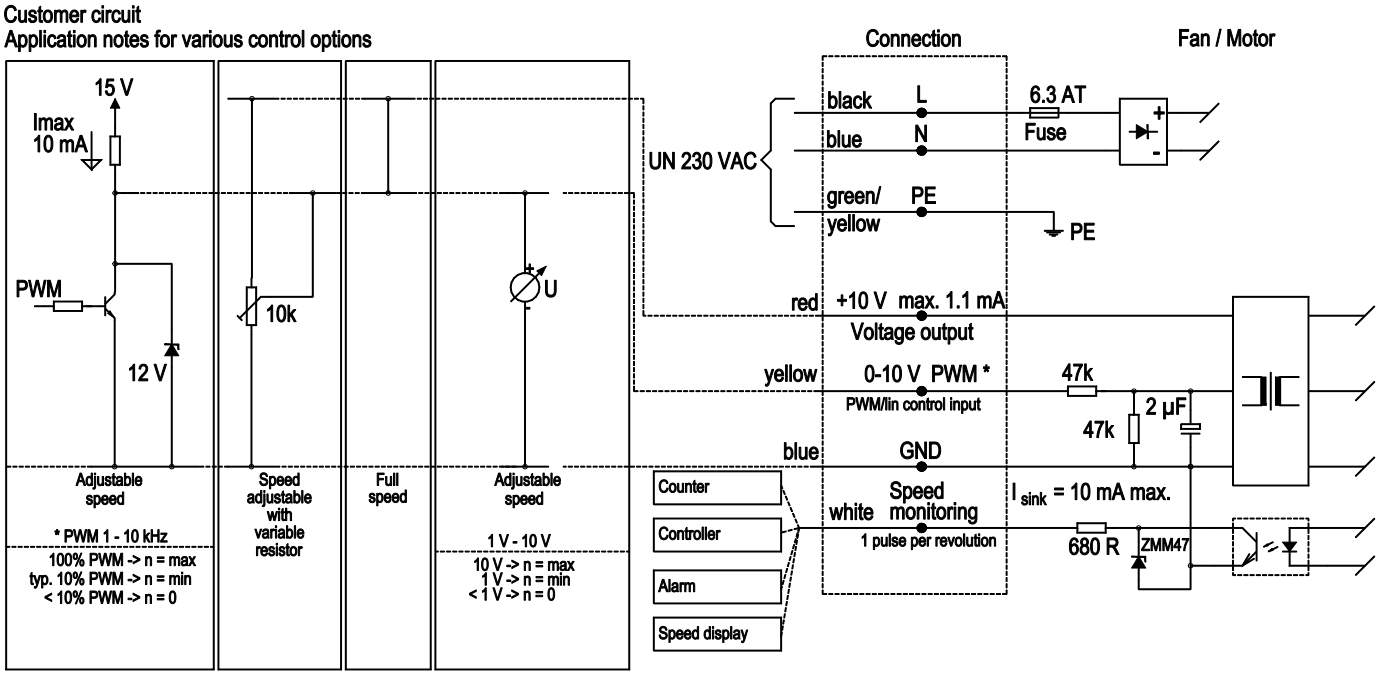
1	Cable PVC AWG18, 3x crimped ferrules
2	Cable PVC AWG22, 4x crimped ferrules
3	Accessory part: inlet ring 31050-2-4013 not included in scope of delivery, other inlet rings on request
4	Clearance for screw 8-10 mm

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Connection diagram

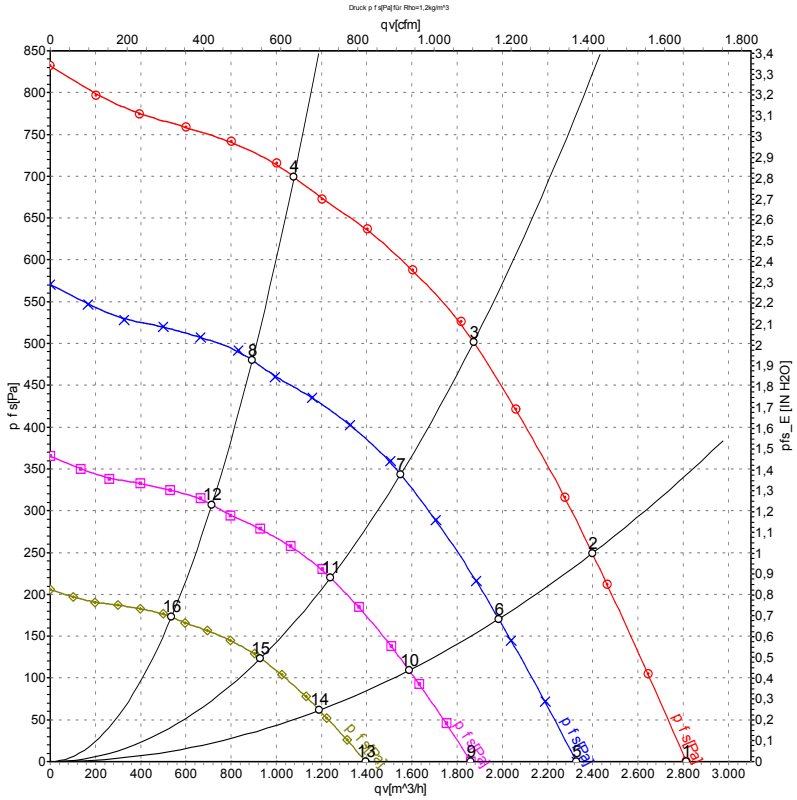


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Curves: Air performance 50 Hz



Measurement: LU-111047-1

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	2400	338	2.18	2815	0	1655	0.00
2	230	50	2400	413	2.65	2400	250	1410	1.00
3	230	50	2400	470	3.00	1875	500	1100	2.01
4	230	50	2400	428	2.75	1080	700	635	2.81
5	230	50	2000	191	1.23	2325	0	1370	0.00
6	230	50	2000	234	1.50	1985	170	1170	0.68
7	230	50	2000	263	1.68	1550	344	910	1.38
8	230	50	2000	244	1.56	895	480	525	1.93
9	230	50	1600	98	0.63	1860	0	1095	0.00
10	230	50	1600	120	0.77	1585	109	935	0.44
11	230	50	1600	134	0.86	1240	220	730	0.88
12	230	50	1600	125	0.80	715	307	420	1.23
13	230	50	1200	41	0.27	1395	0	820	0.00
14	230	50	1200	51	0.33	1190	61	700	0.24
15	230	50	1200	57	0.36	930	124	545	0.50
16	230	50	1200	53	0.34	535	173	315	0.69

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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