R3G310-AJ23-81

EC centrifugal fan

backward-curved, single-intake

R3G310-AJ23-81 ebmpapst Datasheet
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Nominal data

Type	**R3G310-AJ23-81**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2170
Power consumption	W	360
Current draw	A	4.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

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Technical description

Weight	4.7 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 supply - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial 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
Approval	CCC; EAC; UL 2111; CSA C22.2 No. 77

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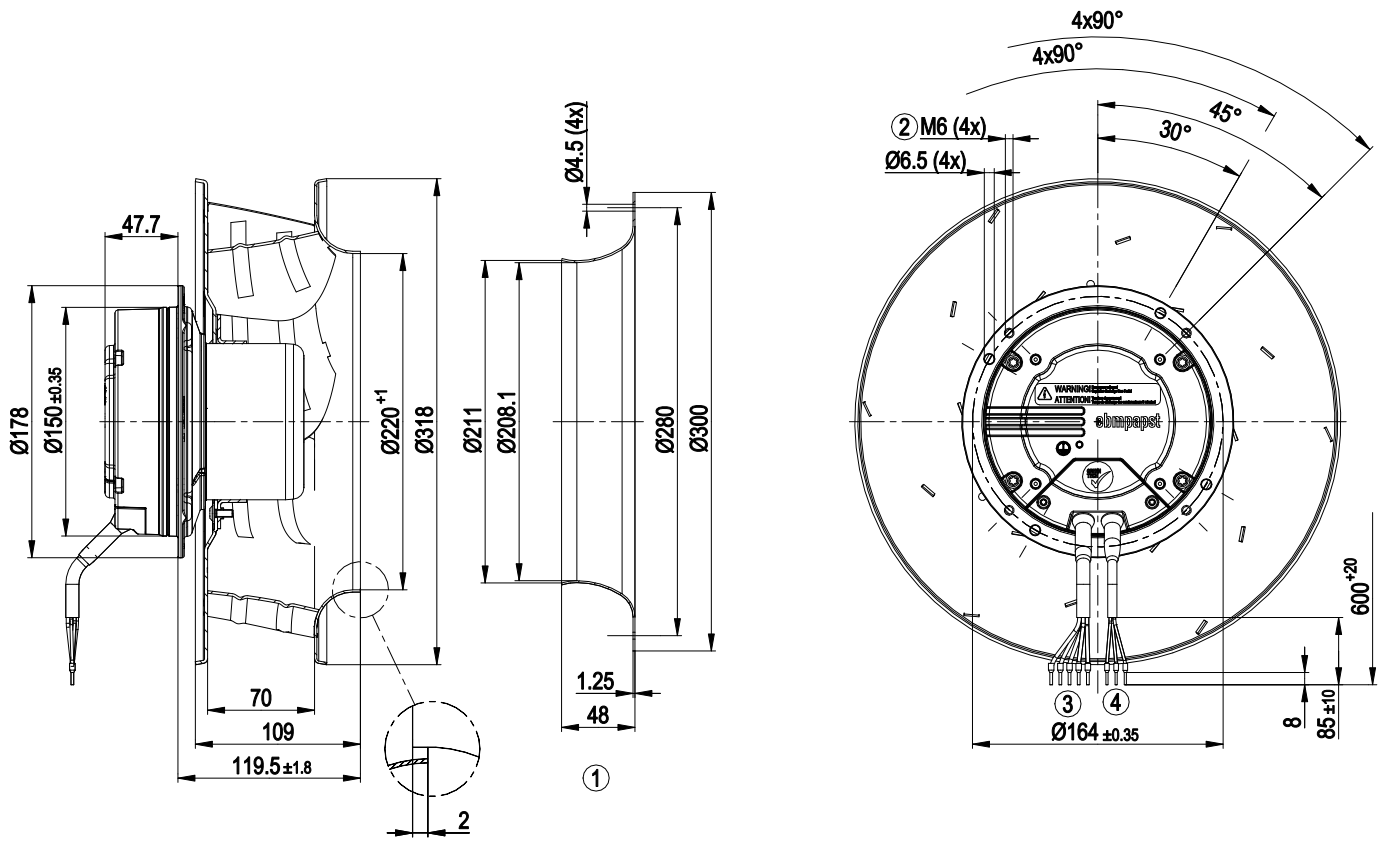
Product drawing



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

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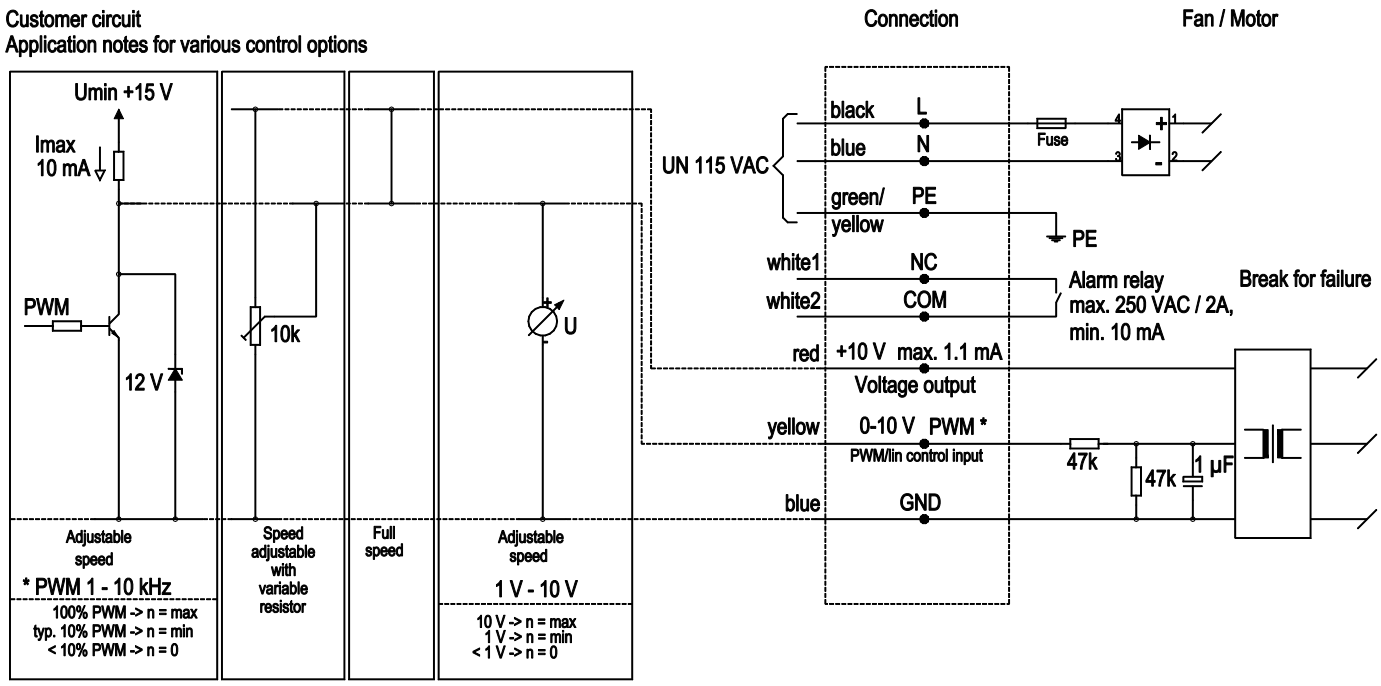
Connection diagram



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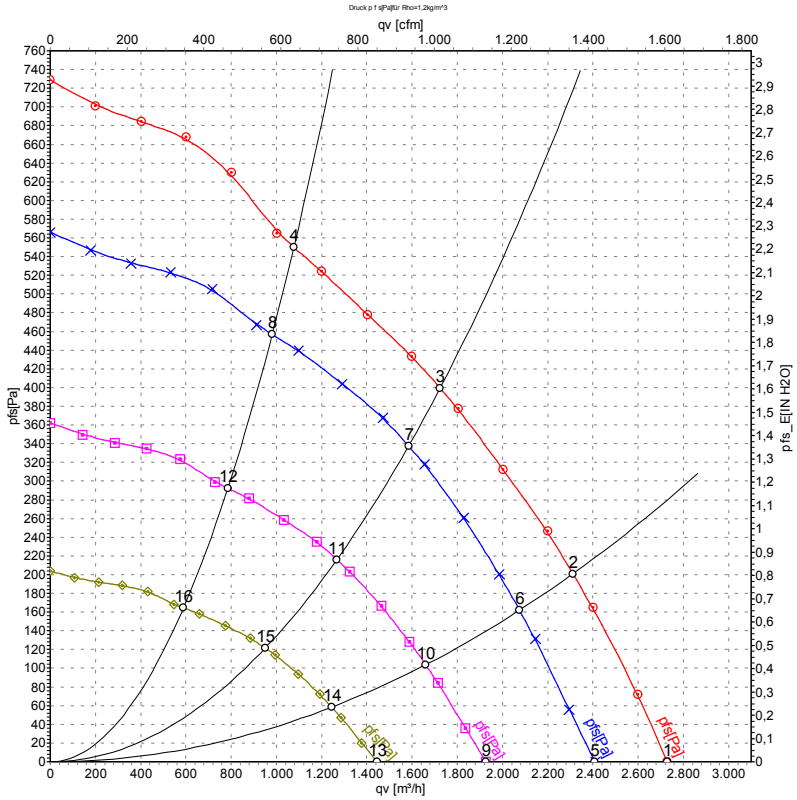
Curves: Air performance 50 Hz



Measurement: LU-137416-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	115	50	2265	273	3.22	2730	0	1605	0.00
2	115	50	2230	331	3.84	2310	200	1360	0.80
3	115	50	2170	360	4.10	1725	400	1015	1.61
4	115	50	2195	350	4.05	1075	550	635	2.21
5	115	50	2000	187	2.21	2410	0	1420	0.00
6	115	50	2000	239	2.78	2075	162	1220	0.65
7	115	50	2000	280	3.24	1585	338	935	1.36
8	115	50	2000	265	3.07	980	457	580	1.83
9	115	50	1600	96	1.13	1925	0	1135	0.00
10	115	50	1600	122	1.42	1660	104	975	0.42
11	115	50	1600	143	1.66	1270	216	745	0.87
12	115	50	1600	136	1.57	785	292	460	1.17
13	115	50	1200	40	0.48	1445	0	850	0.00
14	115	50	1200	52	0.60	1245	58	735	0.23
15	115	50	1200	60	0.70	950	122	560	0.49
16	115	50	1200	57	0.66	590	164	345	0.66

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