EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G250-RO33-81 ebmpapst Datasheet
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Nominal data

Type	**R3G250-RO33-81**
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}	3330
Power consumption	W	375
Current draw	A	4.6
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 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PA plastic
Number of blades	7
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	Any
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
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	CSA C22.2 No. 77; EAC; UL 1004-3

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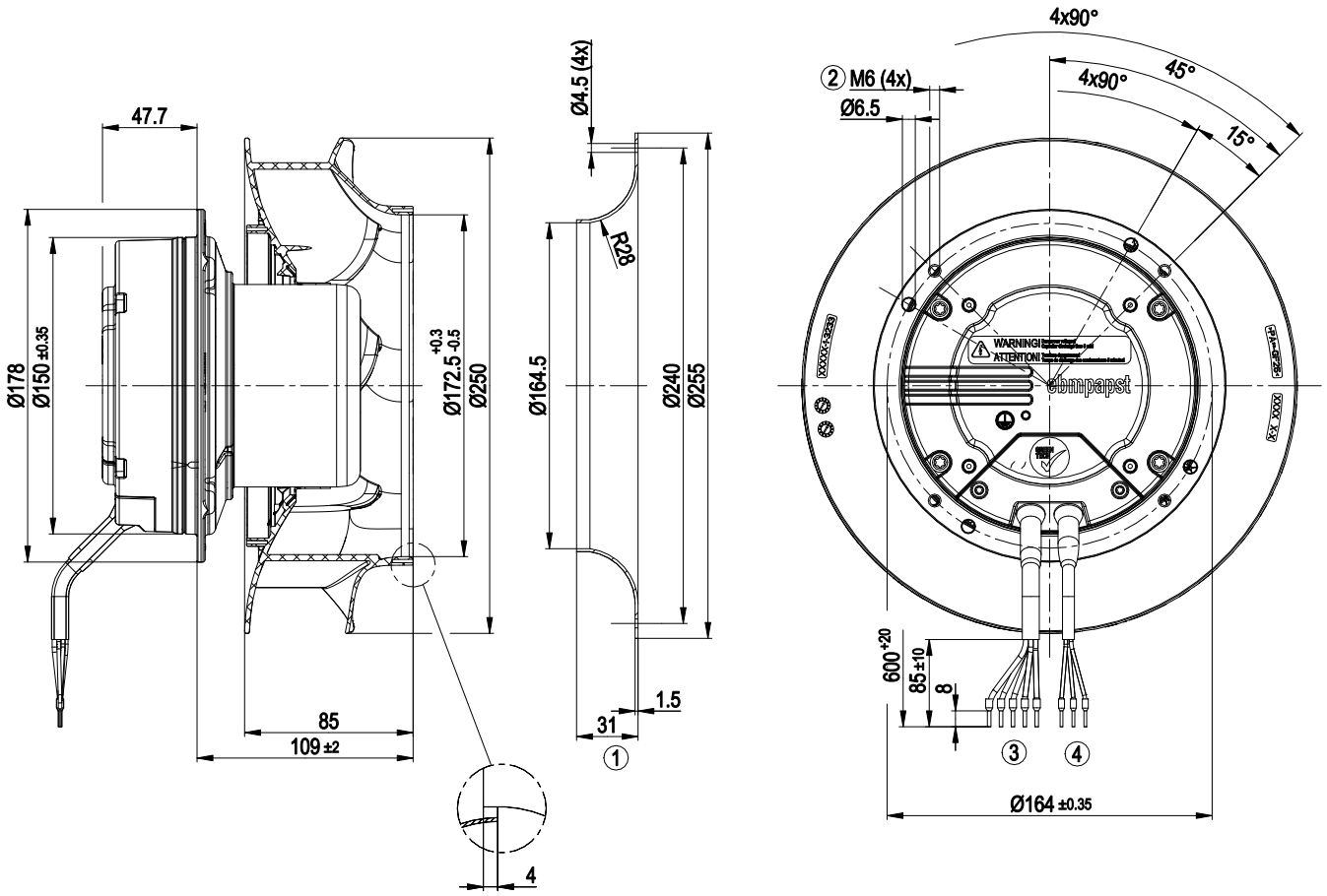
Product drawing



1	Accessory part: inlet ring 96359-2-4013 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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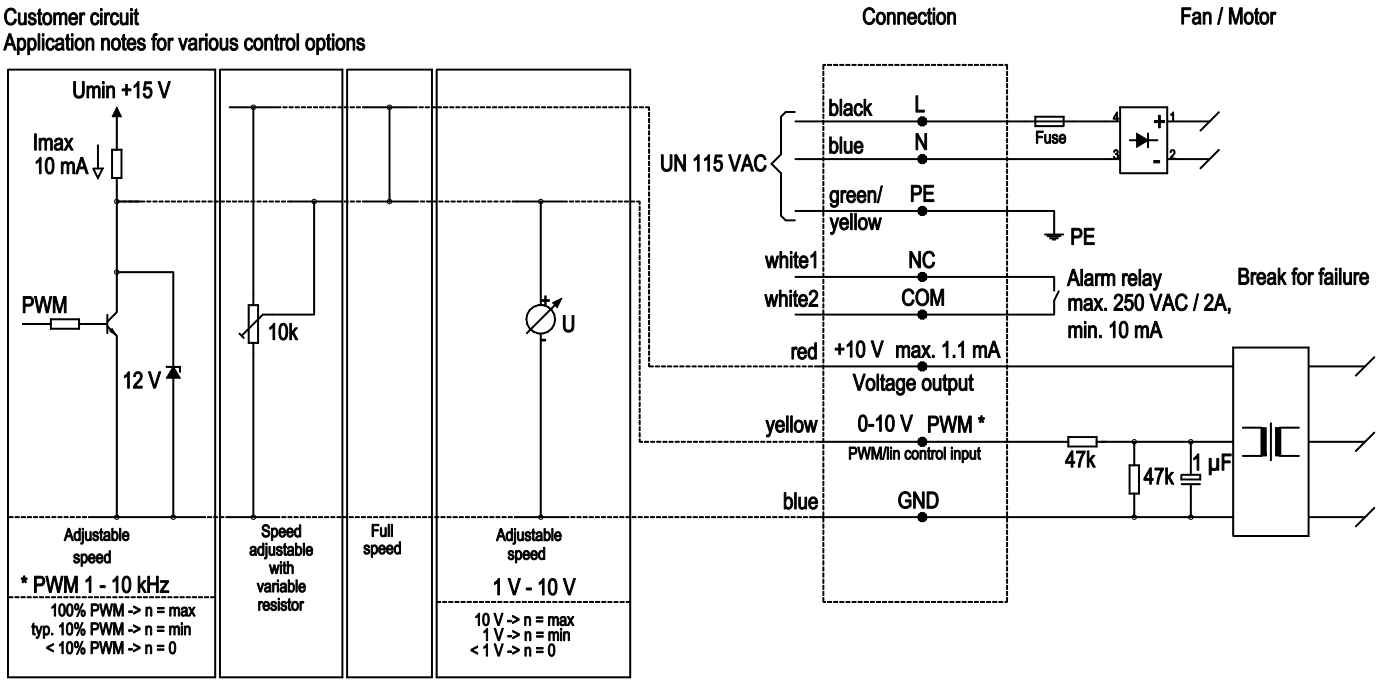
Connection diagram



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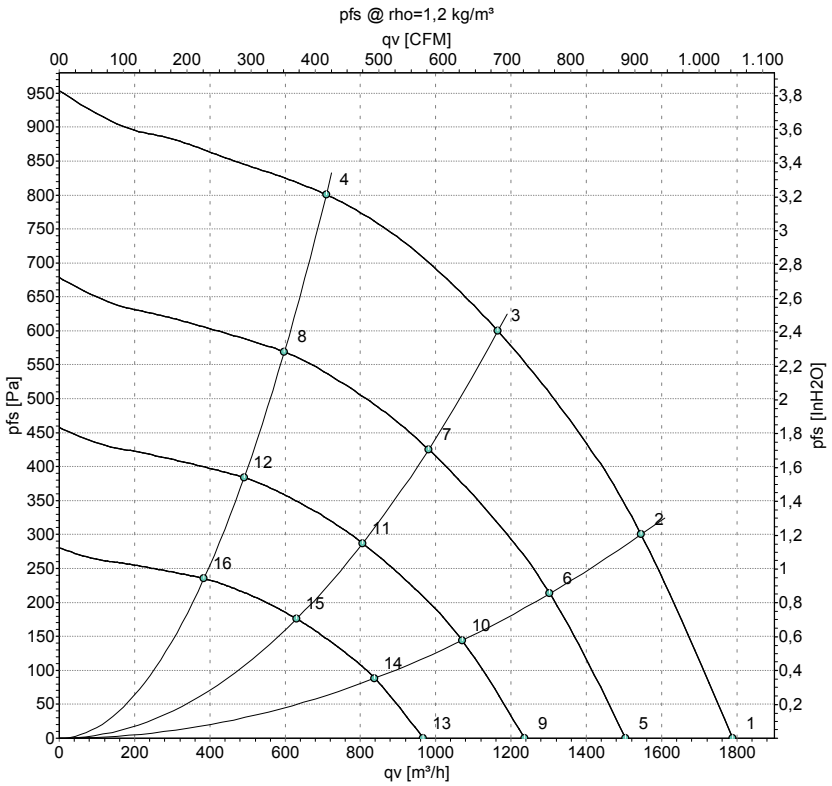
Curves: Air performance 50 Hz



Measurement: LU-159219-1

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	3330	289	3.62	1790	0	1055	0.00
2	115	50	3330	337	4.16	1545	300	910	1.20
3	115	50	3330	375	4.60	1165	600	685	2.41
4	115	50	3330	334	4.13	710	800	415	3.21
5	115	50	2800	172	2.15	1505	0	885	0.00
6	115	50	2800	202	2.49	1305	214	765	0.86
7	115	50	2800	217	2.66	980	426	575	1.71
8	115	50	2800	200	2.48	600	569	350	2.28
9	115	50	2300	95	1.19	1235	0	725	0.00
10	115	50	2300	112	1.38	1070	144	630	0.58
11	115	50	2300	120	1.48	805	287	475	1.15
12	115	50	2300	111	1.37	490	384	290	1.54
13	115	50	1800	46	0.57	965	0	570	0.00
14	115	50	1800	54	0.66	840	88	495	0.35
15	115	50	1800	58	0.71	630	176	370	0.71
16	115	50	1800	53	0.66	385	235	225	0.94

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