R3G310-RP12-31

EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G310-RP12-31 ebmpapst Datasheet
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Nominal data

Type	**R3G310-RP12-31**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2020
Power consumption	W	250
Current draw	A	5.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	63.7	46
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		79.7	62
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.3
09 Air flow q_v	m^3/h	1605
09 Pressure increase p_{fs}	Pa	388
10 Speed (rpm) n	min^{-1}	1970
11 Specific ratio*		1.00

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-136903

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Technical description

Weight	4.4 kg
Fan size	310 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
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	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for motor
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Conformity with standards	EN 60950-1; CE
Approval	UL 1004-1; CSA C22.2 No. 100; EAC

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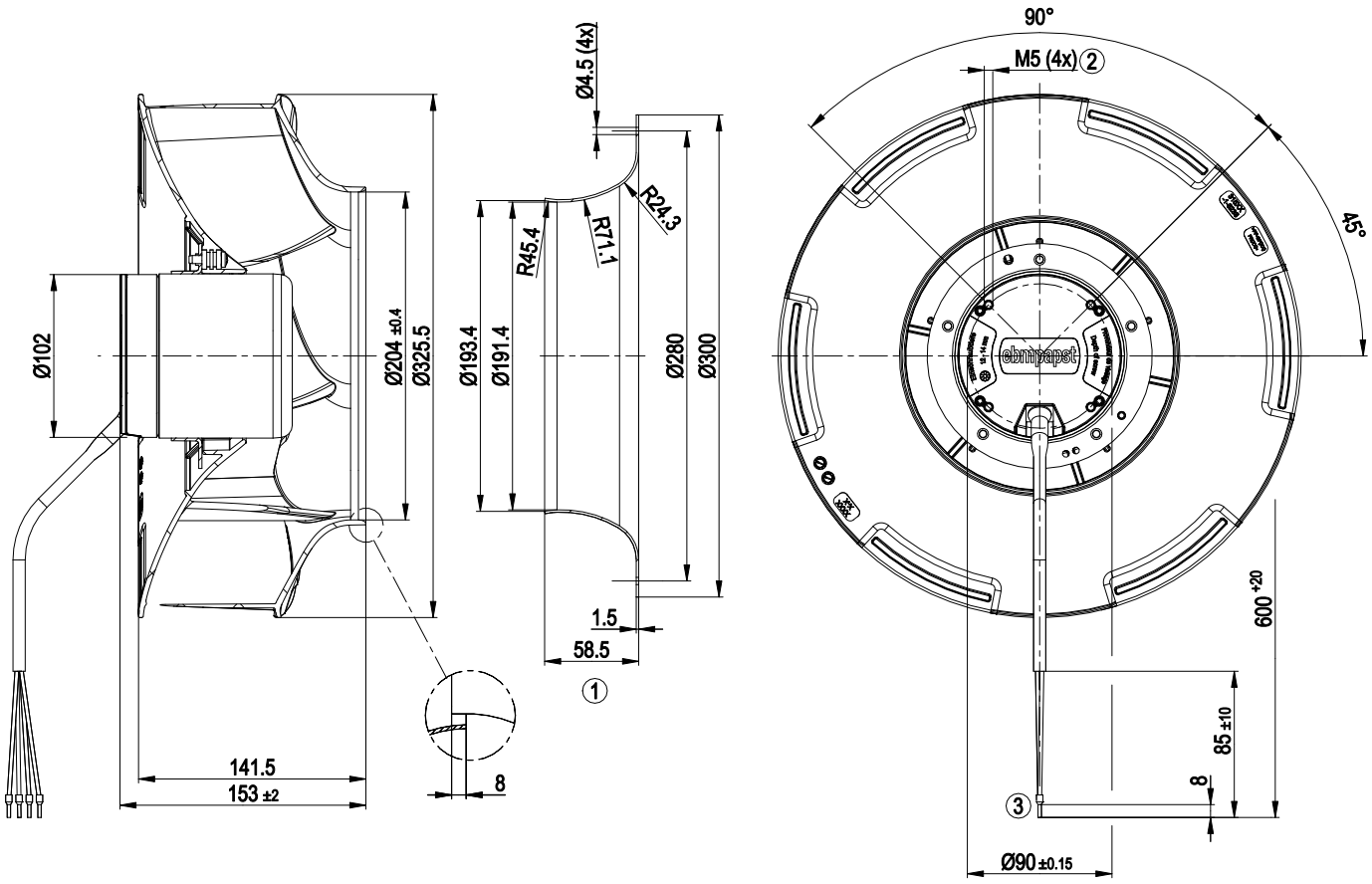
Product drawing



1	Accessory part: Inlet ring 31000-2-4013 not included in scope of delivery, other inlet rings on request
2	Max. clearance for screw 14 mm
3	Cable, PVC AWG16, 4x crimped ferrules

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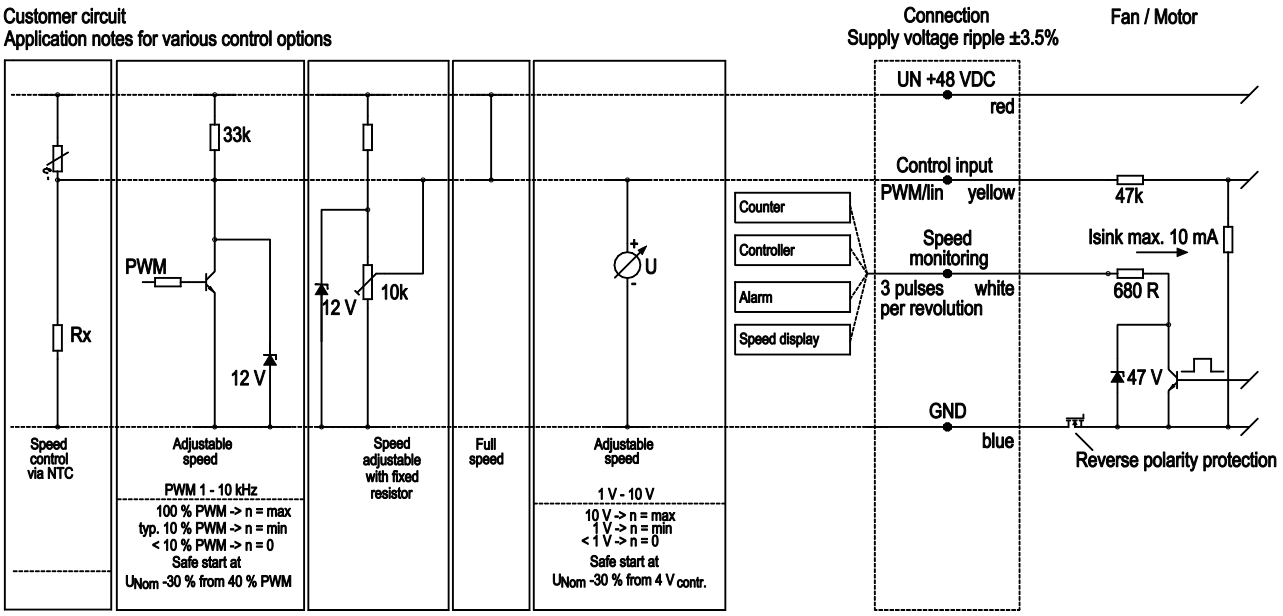
Connection diagram



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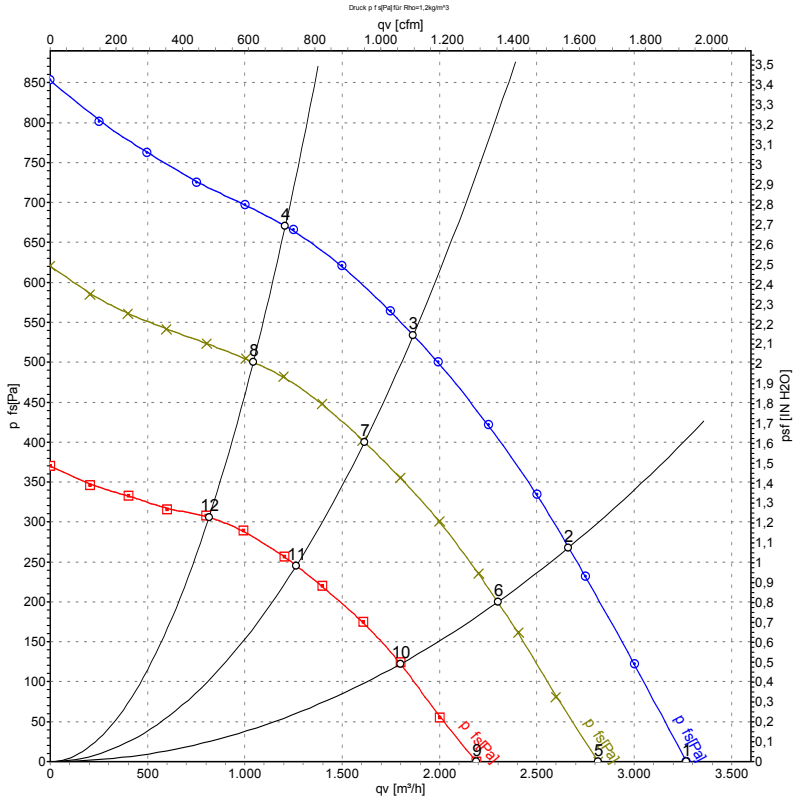
Curves: Air performance



Measurement: LU-137050-1
Measurement: LU-138231-1
Measurement: LU-137051-1

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	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	57	2335	382	6.75	73	81	3270	0	1925	0.00
2	57	2290	437	7.72	68	76	2665	268	1565	1.08
3	57	2275	459	8.12	64	71	1865	534	1100	2.14
4	57	2310	421	7.43	65	73	1210	671	710	2.69
5	48	2020	250	5.30	70	78	2815	0	1655	0.00
6	48	1980	284	5.95	65	73	2300	200	1355	0.80
7	48	1970	300	6.30	61	68	1615	400	950	1.61
8	48	2000	274	5.73	62	70	1045	500	615	2.01
9	36	1575	121	3.39	63	71	2190	0	1290	0.00
10	36	1555	140	3.90	60	67	1800	124	1060	0.50
11	36	1550	147	4.10	57	64	1265	245	745	0.98
12	36	1565	134	3.73	57	65	815	307	480	1.23

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side · q_V = Air flow
p_{fs} = Pressure increase