R3G310-RP10-33

EC centrifugal fan - RadiCal

backward curved, single inlet

R3G310-RP10-33 ebmpapst Datasheet
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Nominal data

Type	**R3G310-RP10-33**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Type of data definition		fa
Speed (rpm)	min^{-1}	2550
Power input	W	490
Current draw	A	10.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	63	48.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		76.1	62
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.57
09 Air flow q_v	m³/h	2105
09 Pressure increase p_{fs}	Pa	558
10 Speed (rpm) n	min^{-1}	2460
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-173212

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Technical features

Mass	4.5 kg
Size	310 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected motor
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Product conforming to standard	EN 60950-1; CE
Approval	UL 1004-1; EAC; CSA C22.2 No.100

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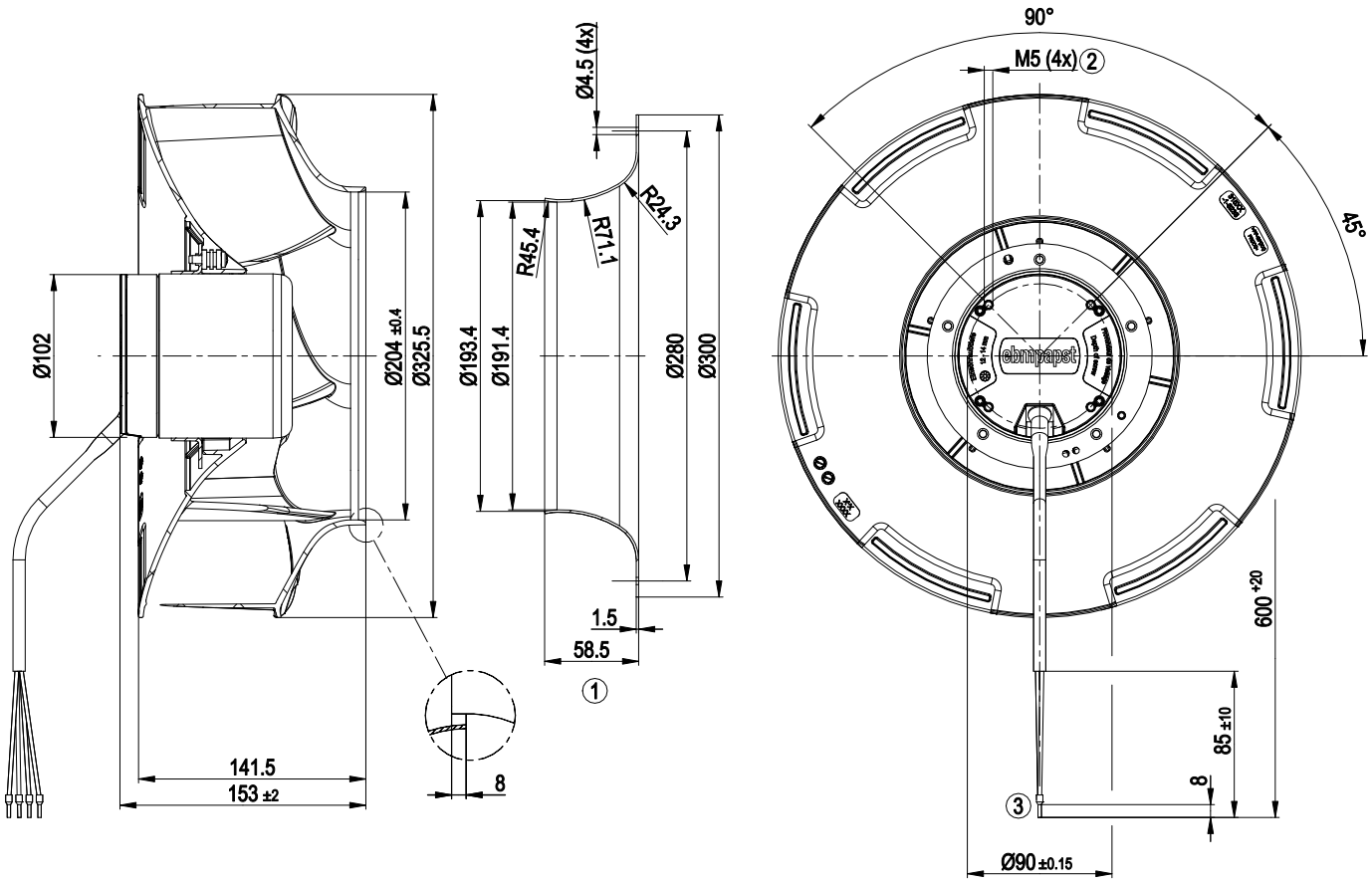
Product drawing



1	Accessory part: Inlet nozzle 31000-2-4013 not included in scope of delivery
2	Thread reach max. 14 mm
3	Connection line PVC AWG16, 4x crimped core-end sleeves

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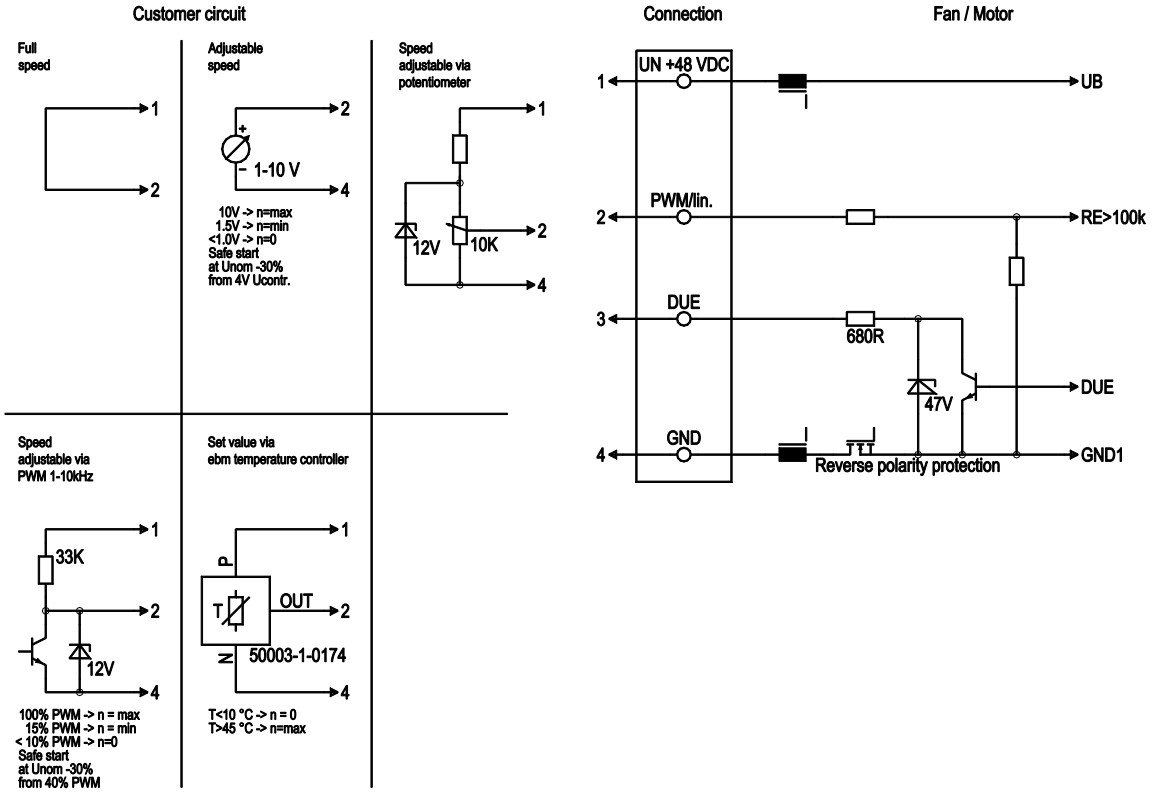
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	Un +48VDC	red	Power supply 48 VDC, for voltage range refer to rating plate, residual ripple 3.5%
1	2	0-10VDC	yellow	Control input Re > 100 k
1	3	DUE	white	Tacho output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

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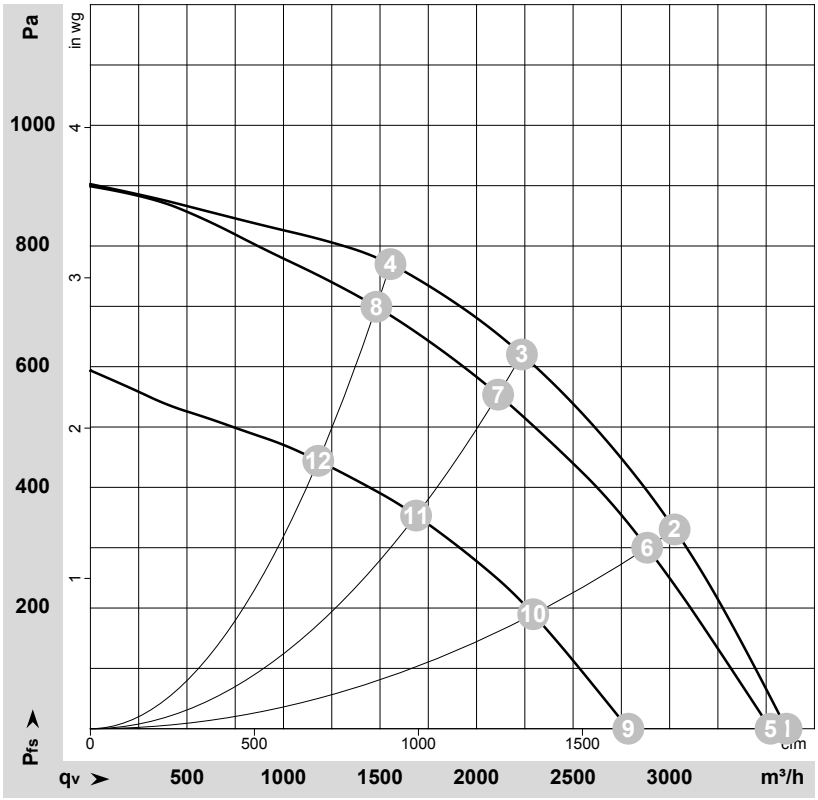
Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-173226-1
Measurement: LU-173212-1
Measurement: LU-173225-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	57	2600	578	9.19	3605	0	2120	0.00
2	57	2600	619	10.98	3025	333	1780	1.34
3	57	2600	684	12.17	2235	620	1315	2.49
4	57	2600	635	11.28	1555	771	915	3.10
5	48	2550	490	10.30	3525	0	2075	0.00
6	48	2495	545	11.48	2885	300	1695	1.20
7	48	2460	573	12.15	2110	555	1245	2.23
8	48	2485	556	11.72	1480	700	870	2.81
9	36	2020	248	6.95	2785	0	1640	0.00
10	36	1990	278	7.79	2295	190	1350	0.76
11	36	1970	294	8.24	1685	353	995	1.42
12	36	1985	278	7.79	1180	444	695	1.78

U = Supply voltage · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase