EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G310-FC98-02 ebmpapst Datasheet
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Nominal data

Type	**R3G310-FC98-02**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min^{-1}	1650
Power consumption	W	105
Current draw	A	2.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	68.2	42.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		87.8	62
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.13
09 Air flow q_v	m^3/h	1605
09 Pressure increase p_{fs}	Pa	181
10 Speed (rpm) n	min^{-1}	1570
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-195930

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Technical description

Weight	2.83 kg
Size	310 mm
Motor size	74
Rotor surface	Painted black
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
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 - Overvoltage detection
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Conformity with standards	EN 60950-1
Approval	EAC

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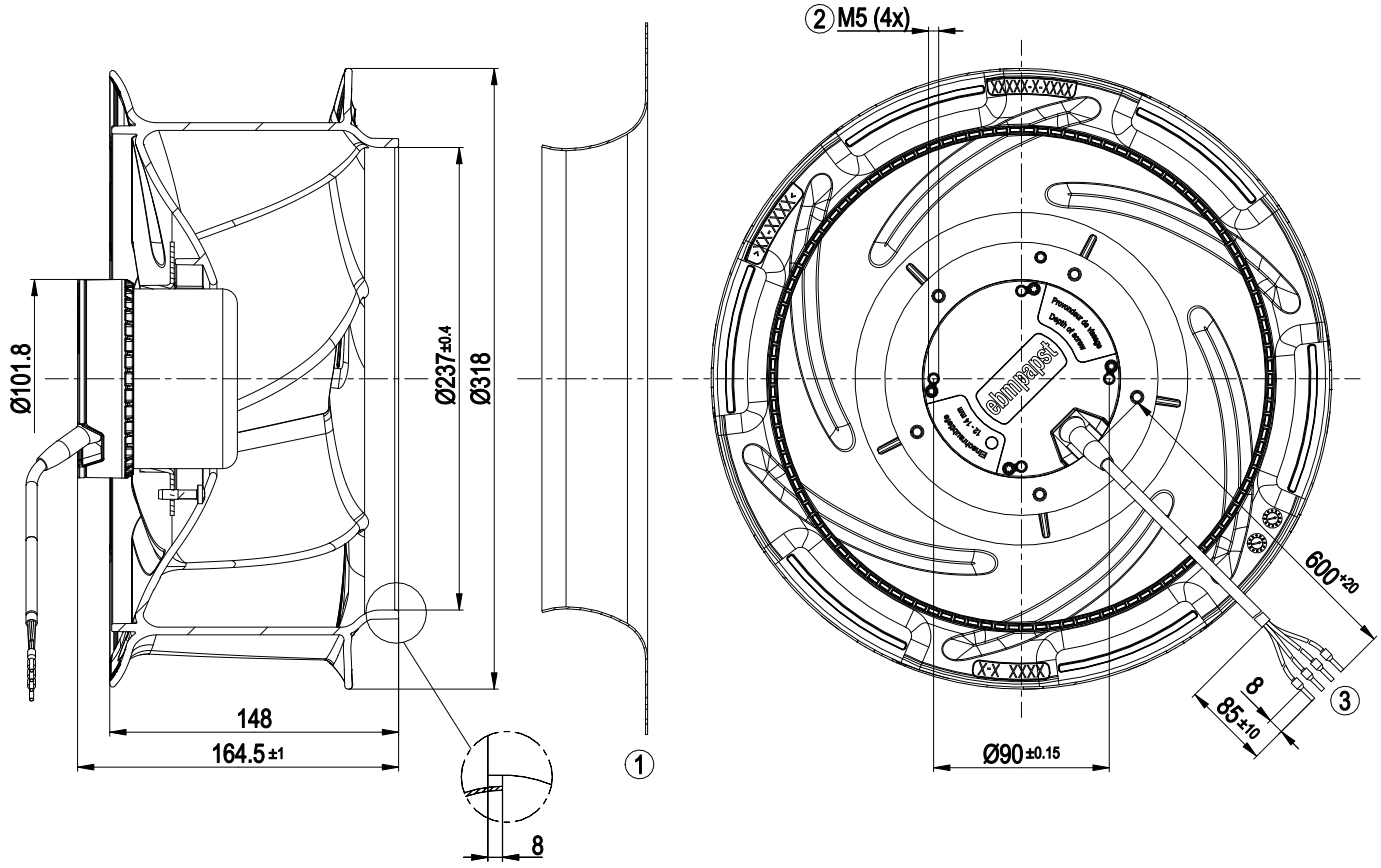
Product drawing



1	Accessory part: Inlet ring 31550-2-4013 not included in scope of delivery
2	Max. clearance for screw 14 mm
3	Cable PVC AWG16
	4x wire-end ferrule

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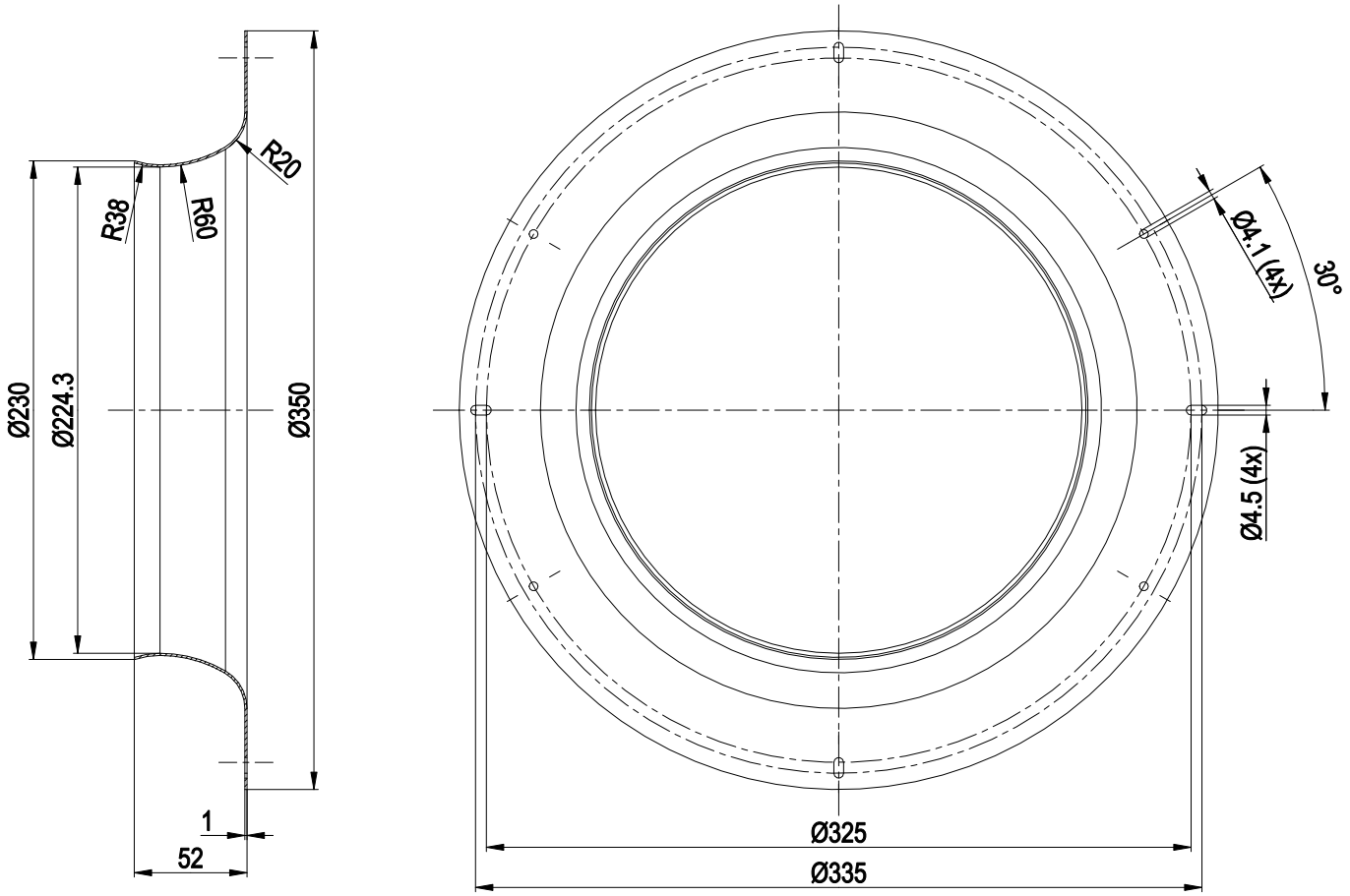
Accessory part



Inlet ring 31550-2-4013

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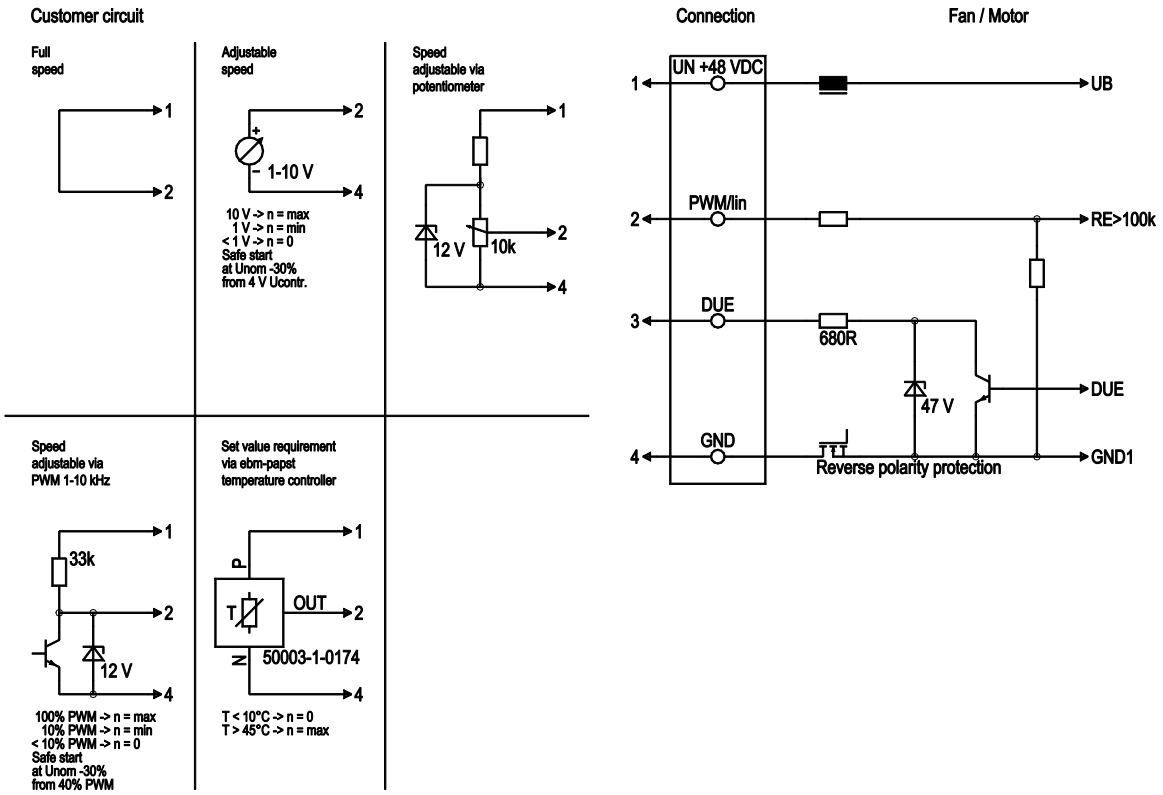
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	1	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%
	2	0-10 VDC	yellow	Control input Re > 100 K
	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference ground

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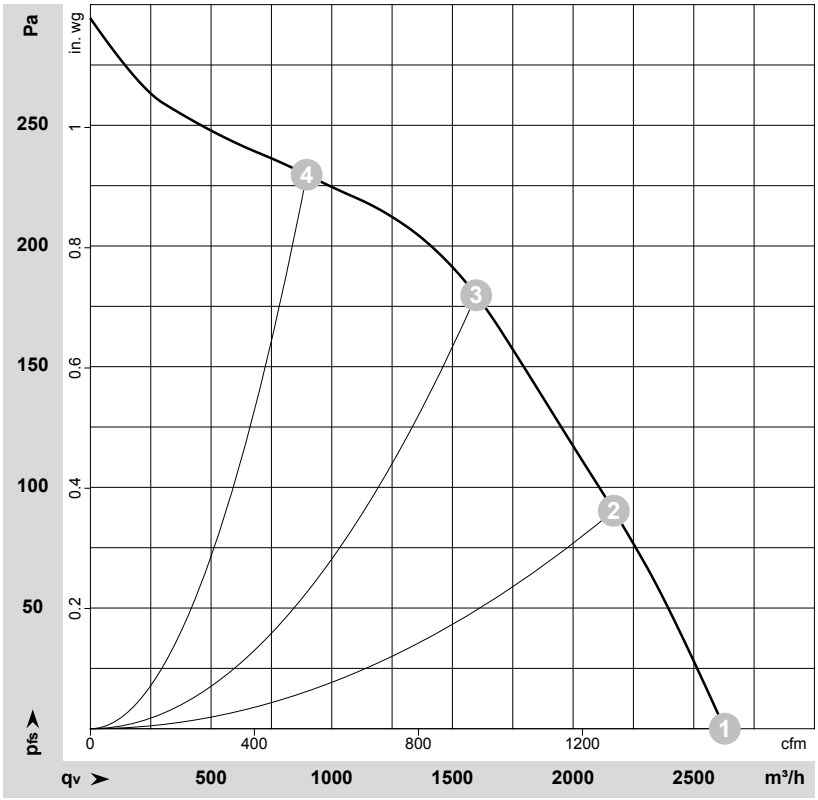
Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-195930-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	48	1650	105	2.20	2630	0	1545	0.00
2	48	1595	128	2.66	2170	90	1275	0.36
3	48	1570	135	2.81	1600	180	940	0.72
4	48	1600	126	2.61	895	230	525	0.92

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