EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G310-FP12-31 ebmpapst Datasheet FansCo

sales@fansco.com

www.fansco.com

Nominal data

Type	**R3G310-FP12-31**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min^{-1}	2000
Power consumption	W	215
Current draw	A	4.4
Min. ambient temperature	°C	-40
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}	%	71.2	45.4
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	0.26
09 Air flow q_v	m^3/h	1805
09 Pressure increase p_{fs}	Pa	329
10 Speed (rpm) n	min^{-1}	1965
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-193317

ebmpapst

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Technical description

Size	310 mm
Motor size	84
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 - Reverse polarity protection
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Conformity with standards	EN 62368-1; CE
Approval	CSA C22.2 No. 100; EAC; UL 1004-1

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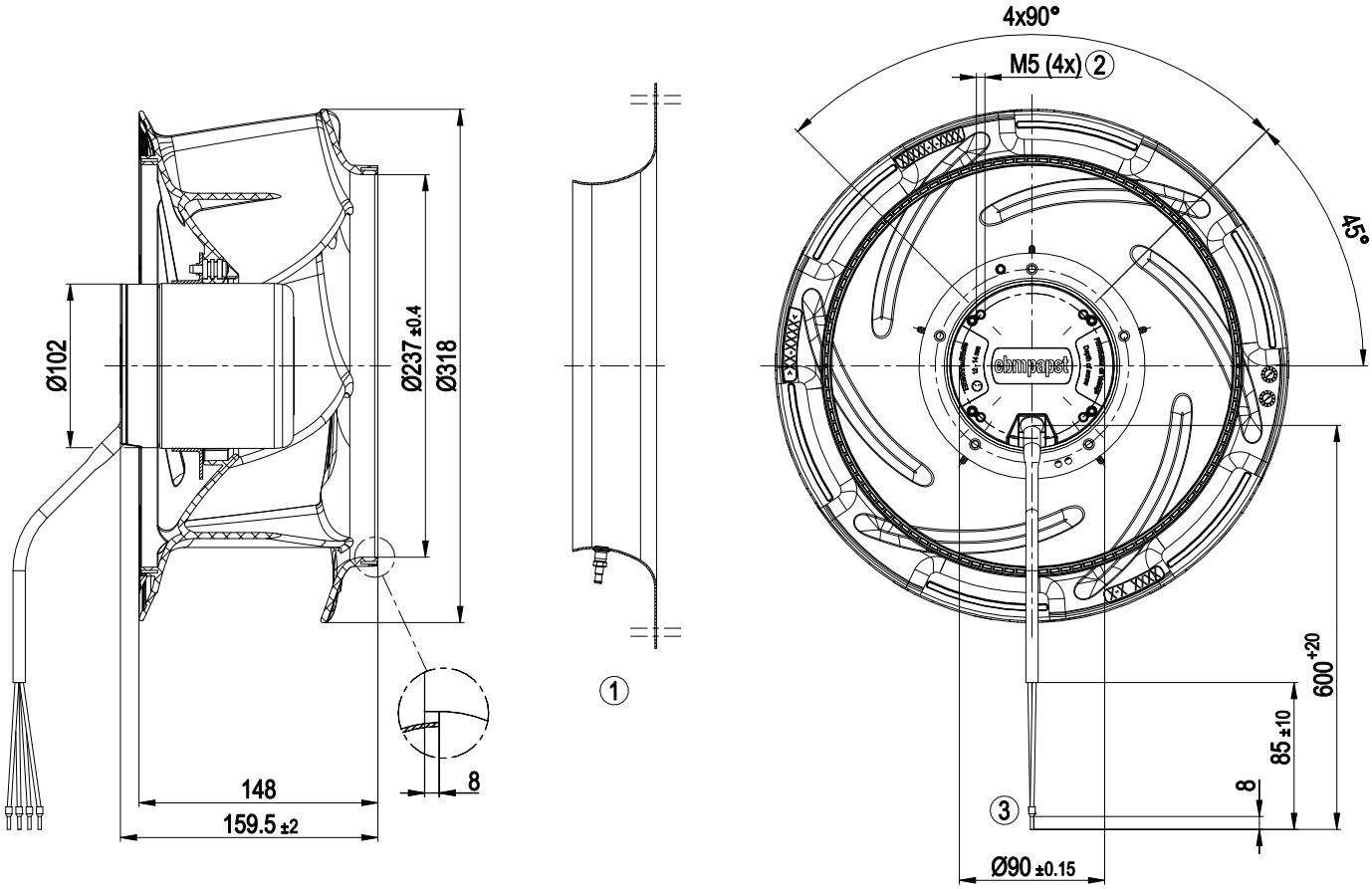
Product drawing



1	Accessory part: Inlet ring 31555-2-4013 with pressure tap (k-factor: 128) 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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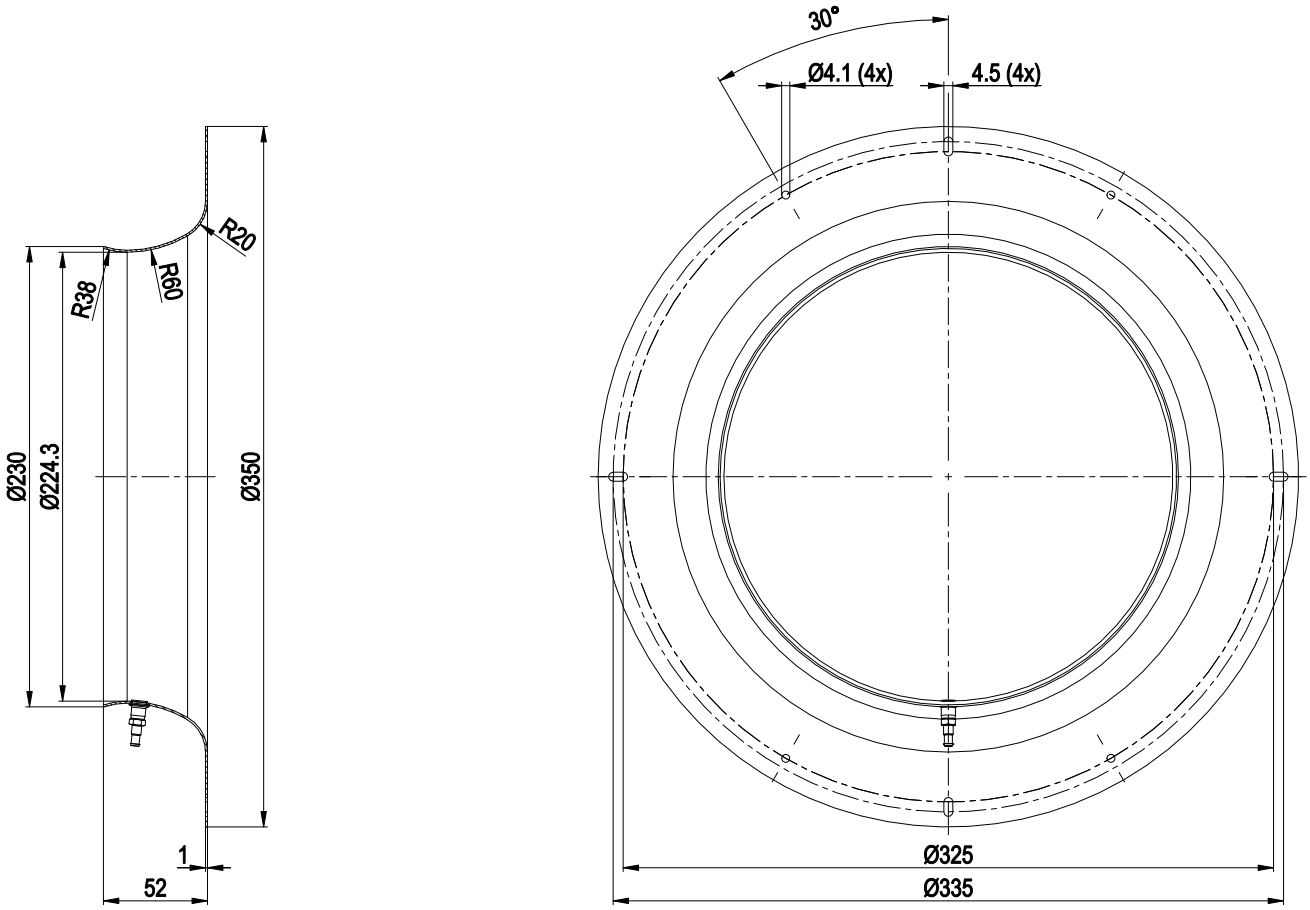
Accessory part



Inlet ring 31555-2-4013 with pressure tap (k-factor: 128)

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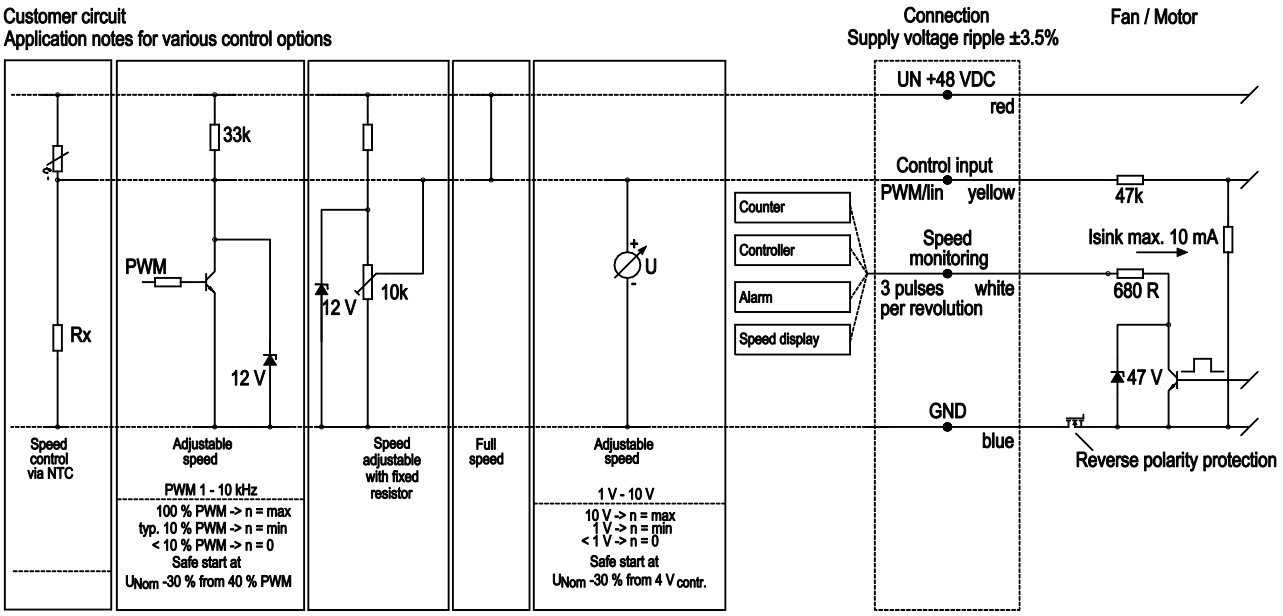
Connection diagram



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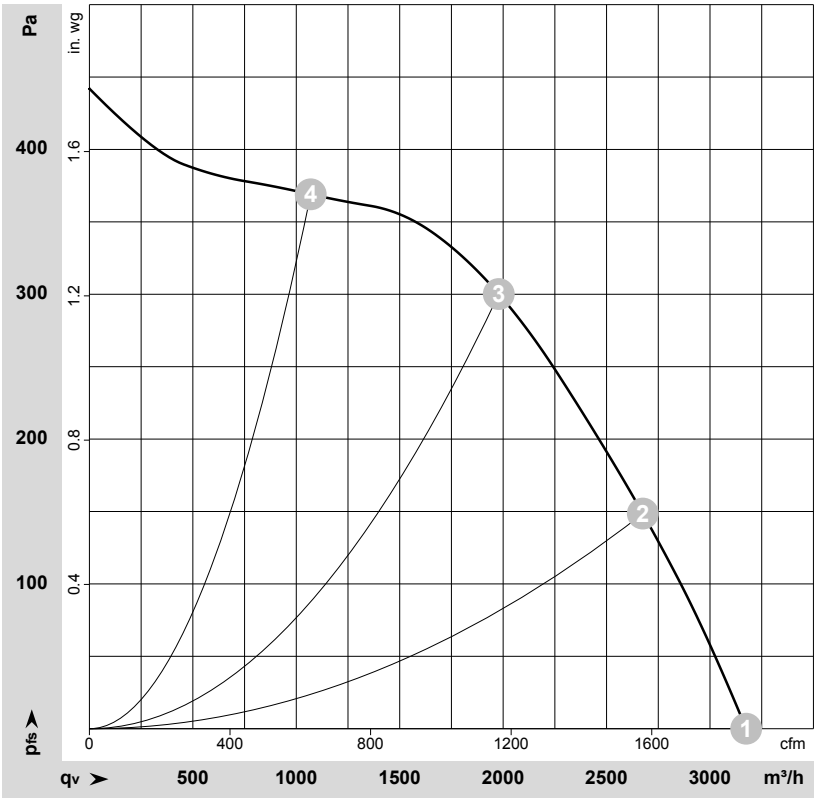
Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-193317-1

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	in. wg
1	48	2000	215	4.40	71	78	3175	0	1870	0.00
2	48	1975	255	5.32	68	75	2675	150	1575	0.60
3	48	1960	265	5.52	66	72	1980	300	1165	1.20
4	48	1995	231	4.80	68	75	1070	370	630	1.49

U = Voltage · 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