

R3G310-FD02-01 ebmpapst Datasheet

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## Nominal data

Type	R3G310-FD02-01	
Motor	M3G074-CF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min <sup>-1</sup>	1650
Power consumption	W	170
Current draw	A	1.35
Min. back pressure	Pa	200
Min. back pressure	in. wg	0.8
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 $\eta_{es}$	%	70	43.1	09 Power consumption $P_{ed}$	kW	0.15
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	1530
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	231
04 Efficiency grade N		88.9	62	10 Speed (rpm) n	min <sup>-1</sup>	1655
05 Variable speed drive		Yes		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 =  $1 + p_g / 100\,000\text{ Pa}$ 

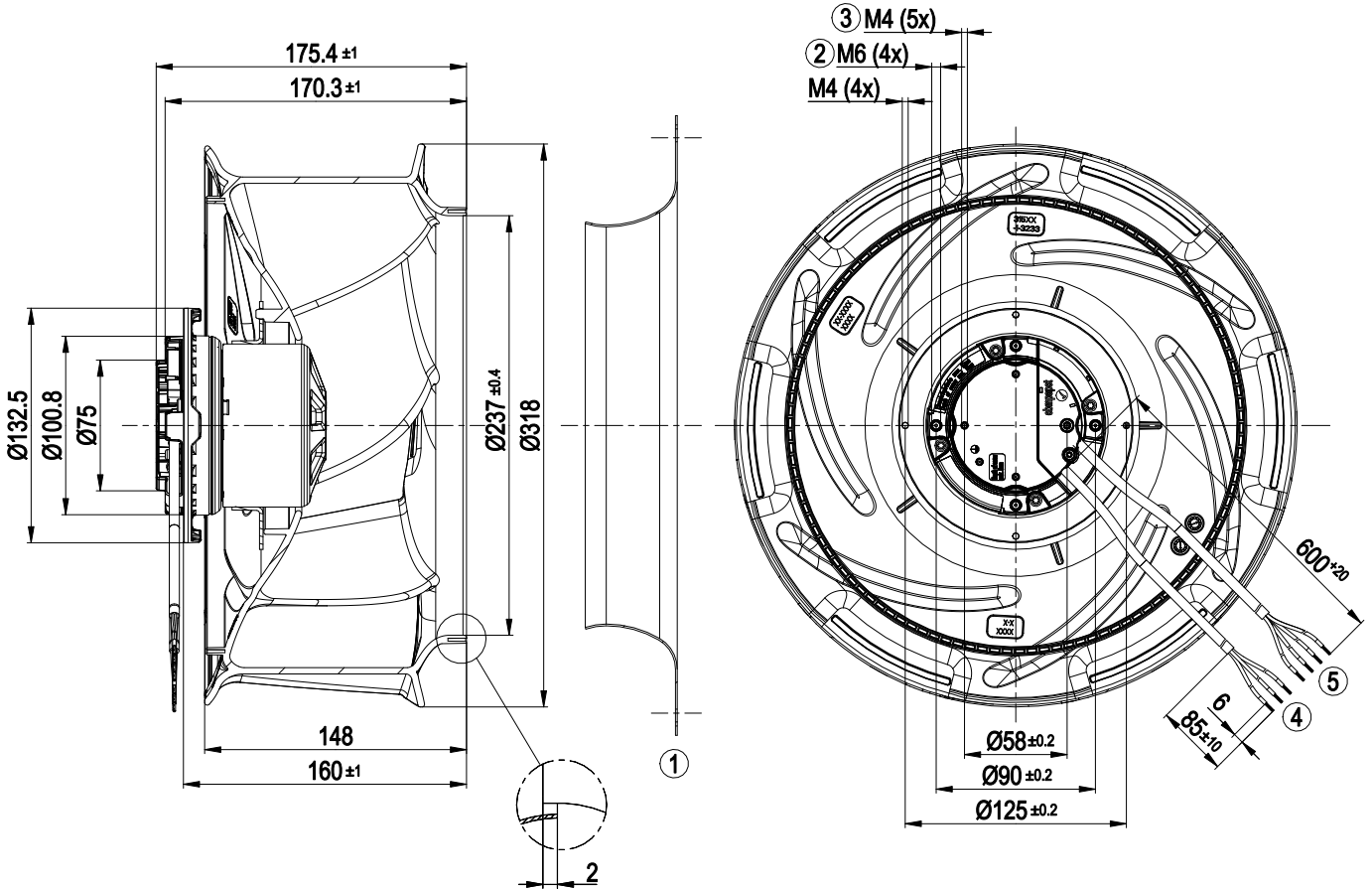
LU-197197



## Technical description

Size	310 mm
Motor size	74
Rotor surface	Galvanized
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
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, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Tach output</li> <li>- Power limiter</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Overvoltage detection</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage detection</li> </ul>
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Conformity with standards	EN 60335-1; CE

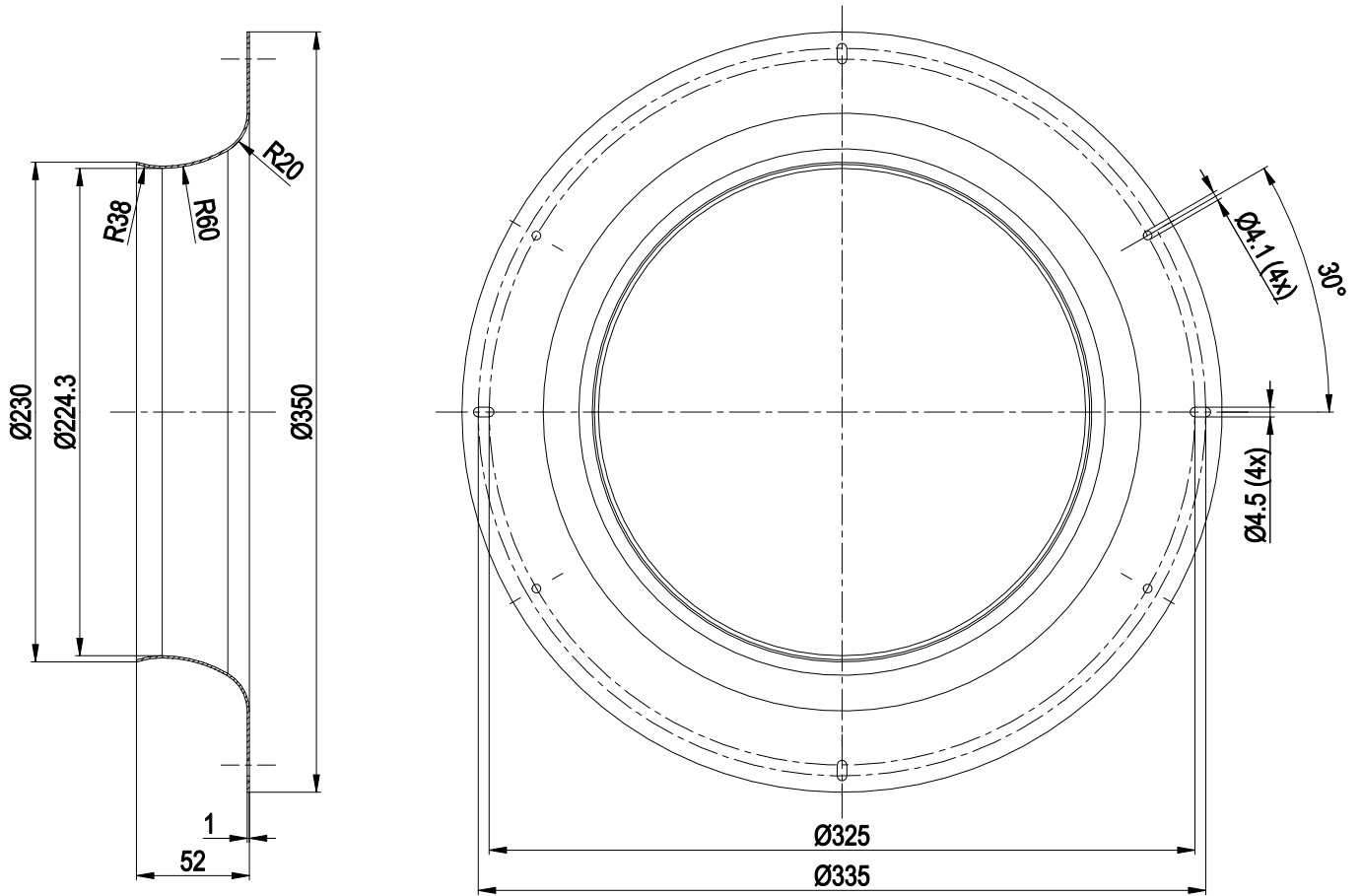
Product drawing



1	Accessory part: Inlet ring 31550-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Max. clearance for screw 5 mm
4	Cable PVC AWG20 3x splice
5	Cable PVC AWG22 4x splice



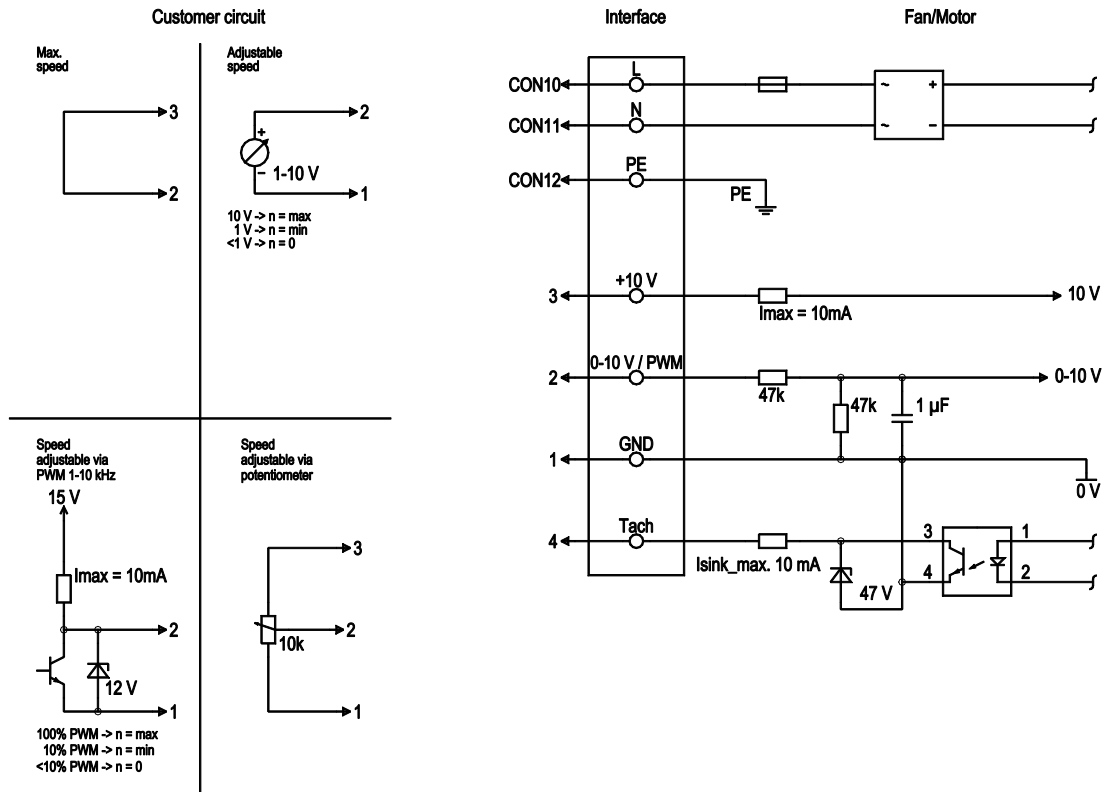
Accessory part



Inlet ring 31550-2-4013



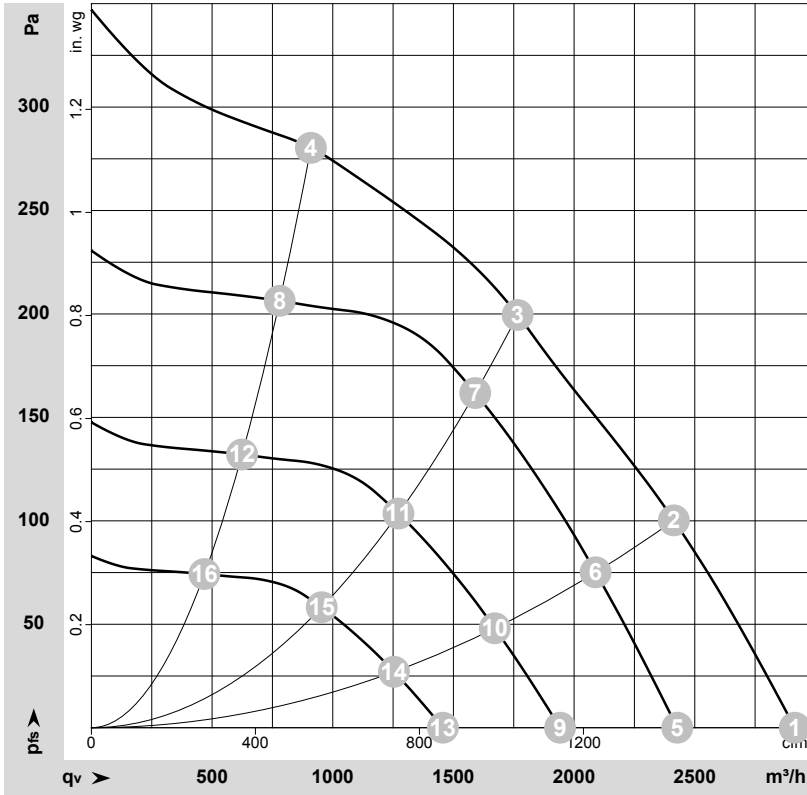
## Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, R <sub>i</sub> =100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, I <sub>sink_max</sub> = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, I <sub>max</sub> . 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV



## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-197197-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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

	Wired	U	f	n	P <sub>ed</sub>	I	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	in. wg
1	1~	230	50	1800	140	1.16	2915	0	1715	0.00
2	1~	230	50	1735	170	1.35	2415	100	1420	0.40
3	1~	230	50	1650	170	1.35	1765	200	1040	0.80
4	1~	230	50	1750	170	1.35	910	280	535	1.12
5	1~	230	50	1500	81	0.67	2425	0	1430	0.00
6	1~	230	50	1500	106	0.87	2090	75	1230	0.30
7	1~	230	50	1500	119	0.97	1590	162	935	0.65
8	1~	230	50	1500	104	0.85	780	206	460	0.83
9	1~	230	50	1200	41	0.34	1940	0	1145	0.00
10	1~	230	50	1200	54	0.44	1670	48	985	0.19
11	1~	230	50	1200	61	0.50	1270	104	750	0.42
12	1~	230	50	1200	53	0.43	625	132	365	0.53
13	1~	230	50	900	17	0.14	1455	0	855	0.00
14	1~	230	50	900	23	0.19	1255	27	740	0.11
15	1~	230	50	900	26	0.21	955	58	560	0.23
16	1~	230	50	900	22	0.18	470	74	275	0.30

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

