

R3G310-AO52-16 ebmpapst Datasheet

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## Nominal data

Type	R3G310-AO52-16	
Motor	M3G074-CF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	1925
Power consumption	W	150
Current draw	A	1.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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 $\eta_{es}$	%	59.9	43.5	09 Power consumption $P_{ed}$	kW	0.17
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	1300
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	250
04 Efficiency grade N		78.4	62	10 Speed (rpm) n	min <sup>-1</sup>	1705
05 Variable speed drive		Yes		11 Specific ratio <sup>*</sup>		1.00

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

<sup>\*</sup> Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$ 

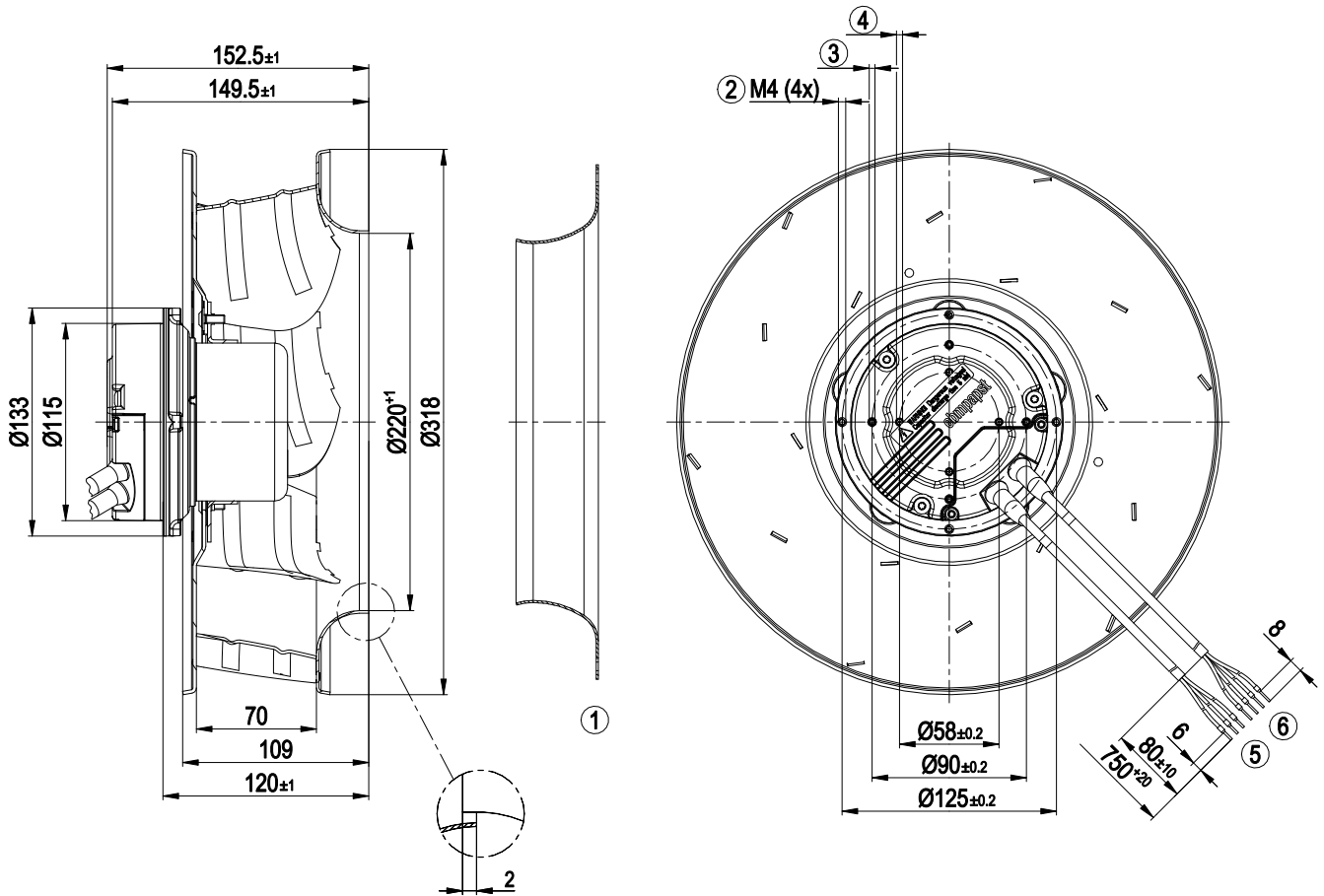
LU-69203



## Technical description

<b>Weight</b>	3 kg
<b>Size</b>	310 mm
<b>Motor size</b>	74
<b>Rotor surface</b>	Painted black
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	Sheet aluminum
<b>Number of blades</b>	6
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP44; installation- and position-dependent
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	H0 - dry environment
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None
<b>Mode</b>	S1
<b>Motor mounting</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 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>- Thermal overload protection for motor</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-4 (industrial environment)
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60335-1; CE

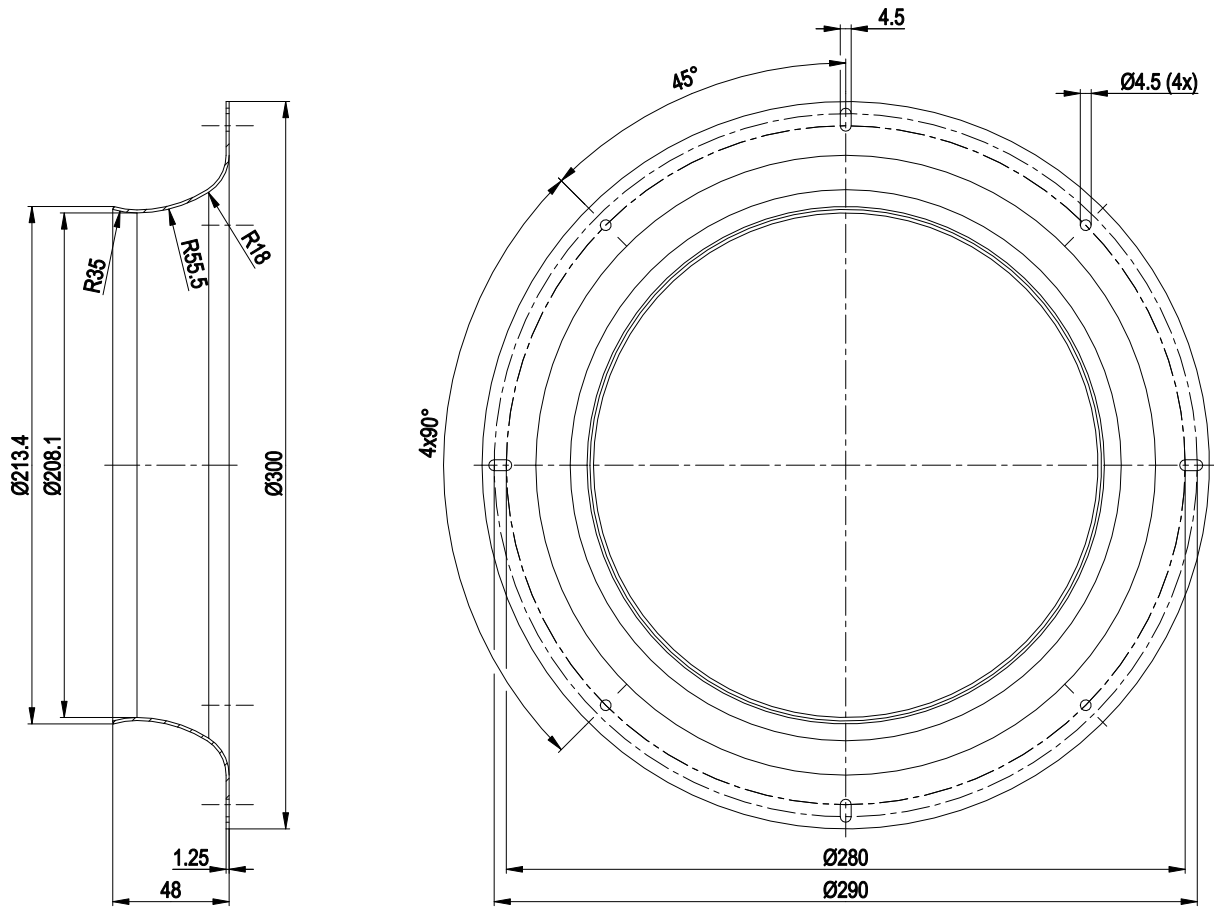
Product drawing



1	Accessory part: inlet ring 31050-2-4013 not included in scope of delivery
2	Clearance for screw 8-10 mm
3	Tapping hole prepared for self-tapping M4 screw, max. clearance for screw 6 mm
4	Tapping hole prepared for self-tapping M4 screw, max. clearance for screw 8 mm
5	Cable PVC AWG18 3x wire-end ferrule
6	Cable PVC AWG22 4x wire-end ferrule

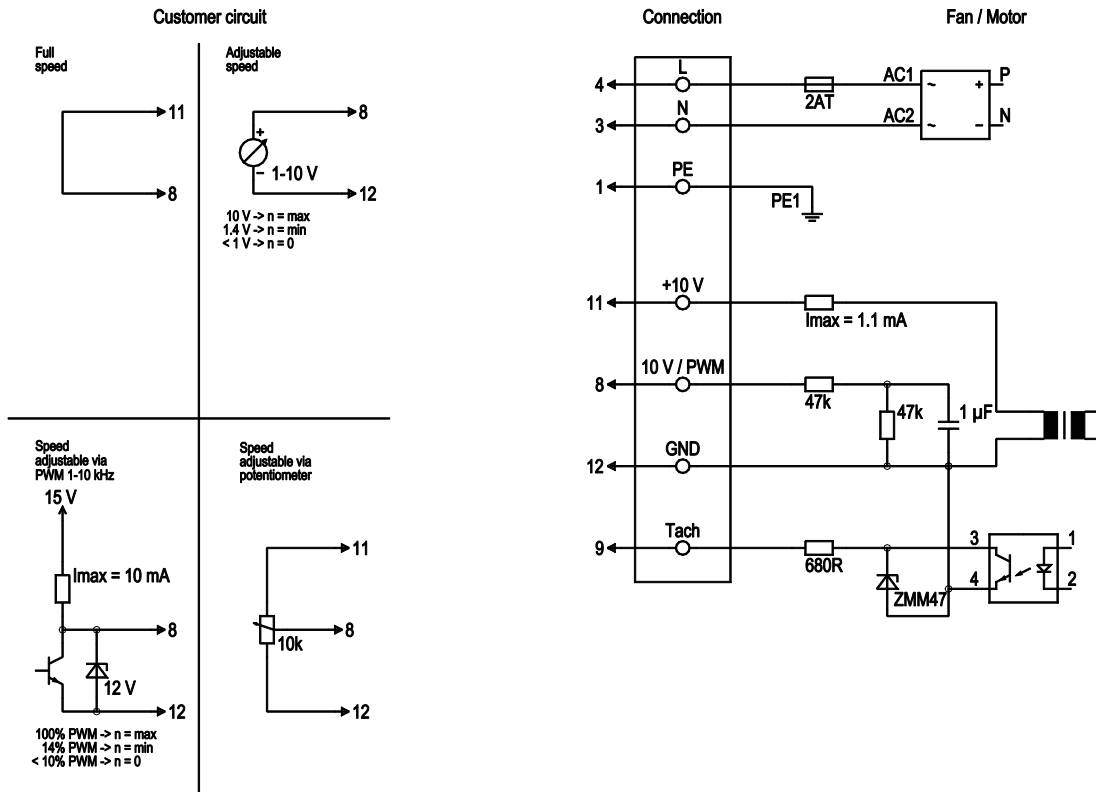


## Accessory part



inlet ring 31050-2-4013 not included in scope of delivery

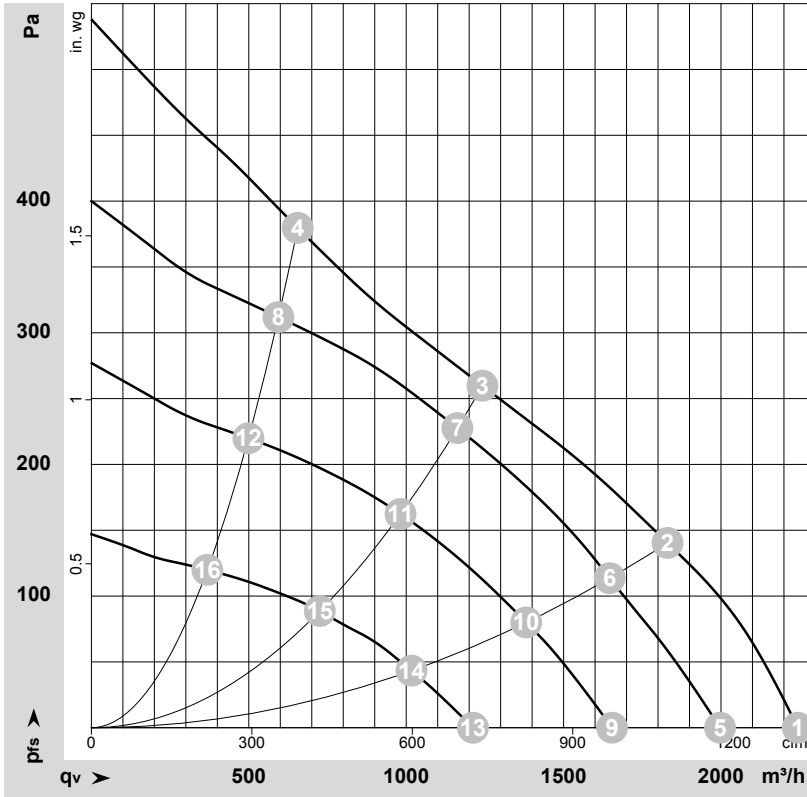
## Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V/max. 1.1 mA, electrically isolated
	12	GND	blue	GND connection for control interface



## Curves: Air performance 50 Hz



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

Measurement: LU-69203-1  
 Measurement: LU-67778-1  
 Measurement: LU-67779-1  
 Measurement: LU-67780-1

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	1925	150	1.10	2245	0	1320	0.00
2	1~	230	50	1810	174	1.29	1830	140	1075	0.56
3	1~	230	50	1705	173	1.28	1240	260	730	1.04
4	1~	230	50	1805	173	1.27	655	380	385	1.53
5	1~	230	50	1670	100	0.75	1995	0	1175	0.00
6	1~	230	50	1610	131	0.96	1645	114	970	0.46
7	1~	230	50	1585	139	1.00	1165	228	685	0.92
8	1~	230	50	1615	133	0.98	595	312	350	1.25
9	1~	230	50	1395	60	0.47	1655	0	975	0.00
10	1~	230	50	1350	78	0.59	1380	80	815	0.32
11	1~	230	50	1340	85	0.64	980	162	580	0.65
12	1~	230	50	1355	81	0.60	500	220	295	0.88
13	1~	230	50	1025	28	0.23	1210	0	715	0.00
14	1~	230	50	1005	36	0.28	1015	43	600	0.17
15	1~	230	50	990	40	0.31	725	89	425	0.36
16	1~	230	50	1005	37	0.29	370	120	215	0.48

Wired = Wiring · U = Power supply · 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

