

EC centrifugal fan

backward-curved, single-intake

R3G250-BG02-11 ebmpapst Datasheet
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Nominal data

Type	R3G250-BG02-11	
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 ⁻¹	2550
Power consumption	W	160
Current draw	A	1.3
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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	52.8	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71.7	62
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_{ed}	kW	0.15
09 Air flow q_v	m³/h	900
09 Pressure increase p_{fs}	Pa	296
10 Speed (rpm) n	min ⁻¹	2575
11 Specific ratio*		1.00

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

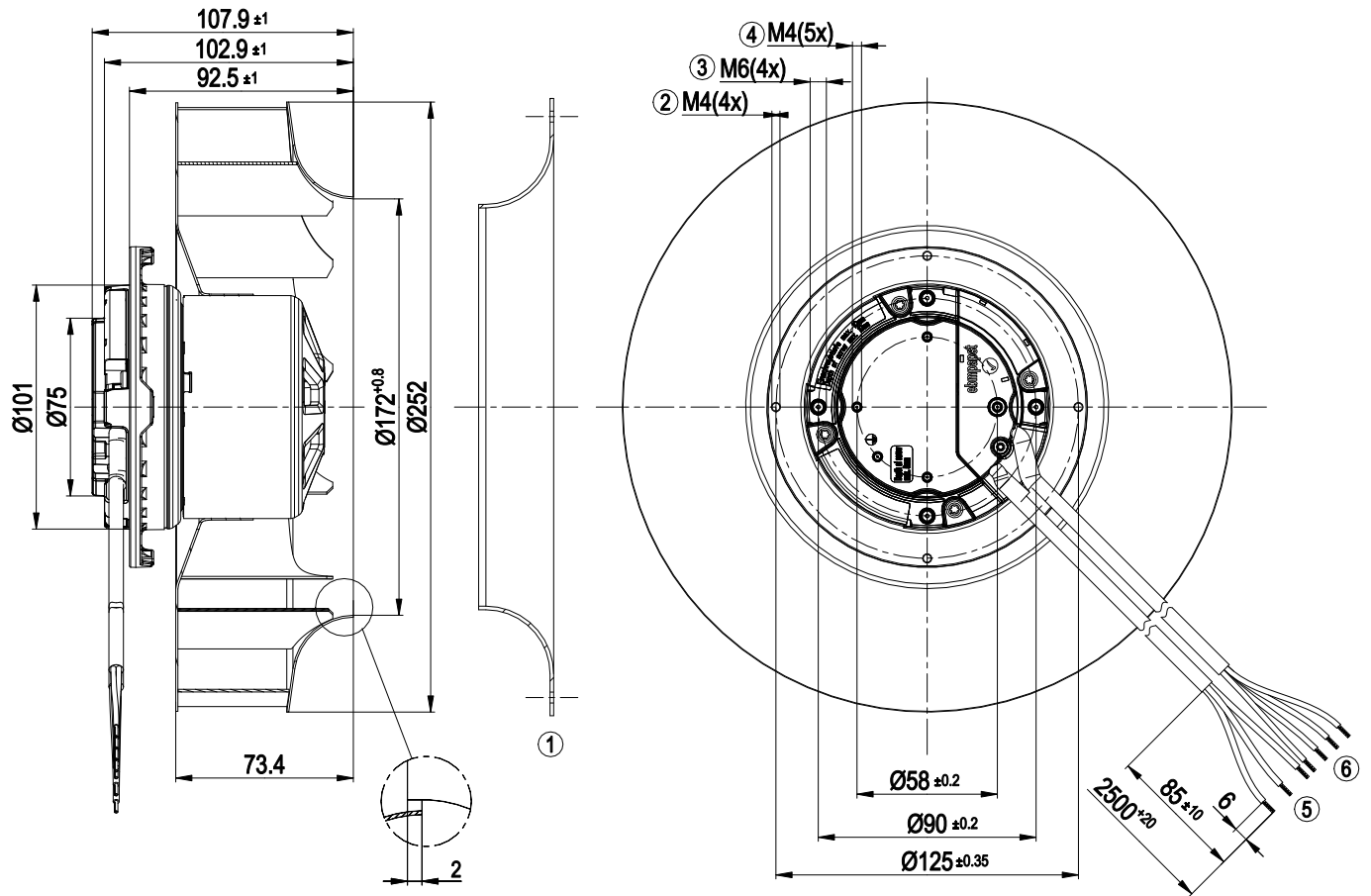
LU-195561



Technical description

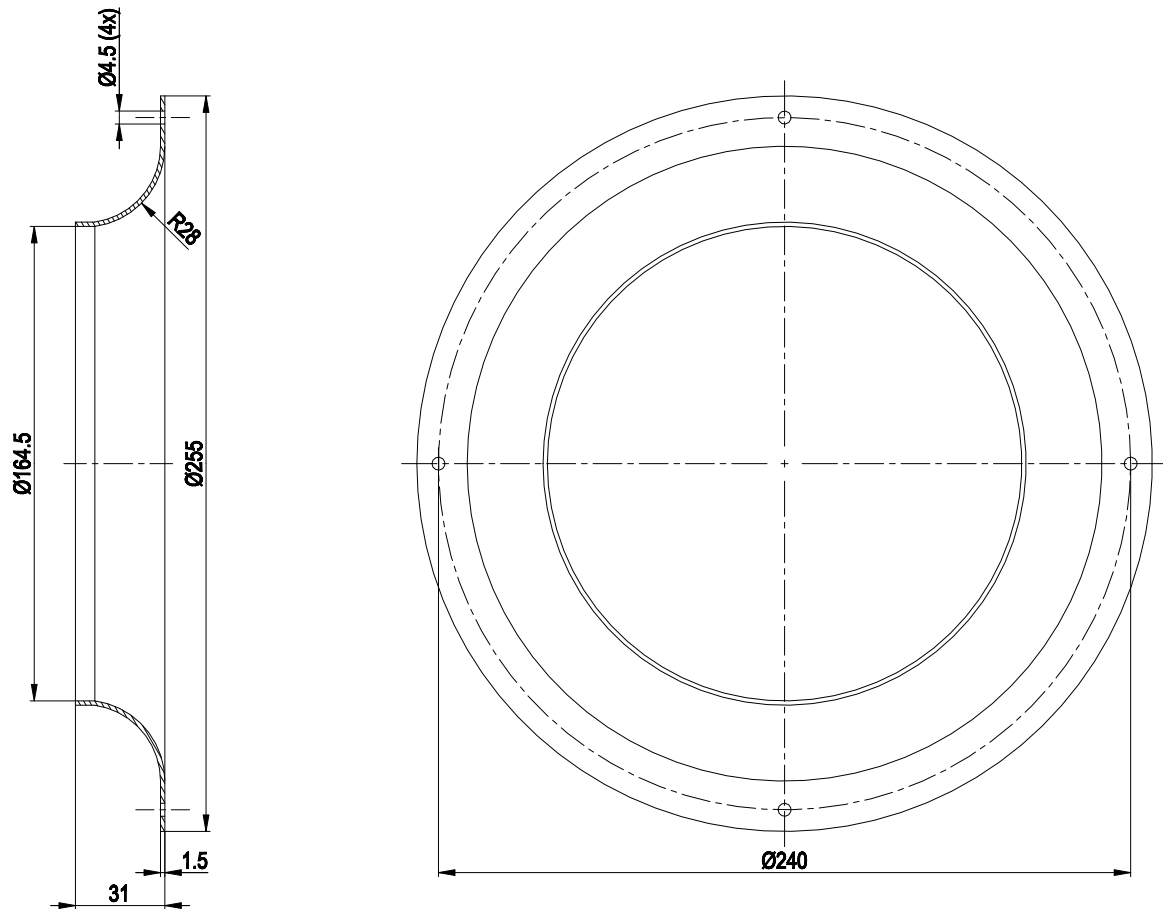
Weight	1.9 kg
Size	250 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	Sheet steel, galvanized
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1+
Max. permitted 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	Hybrid bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

Product drawing



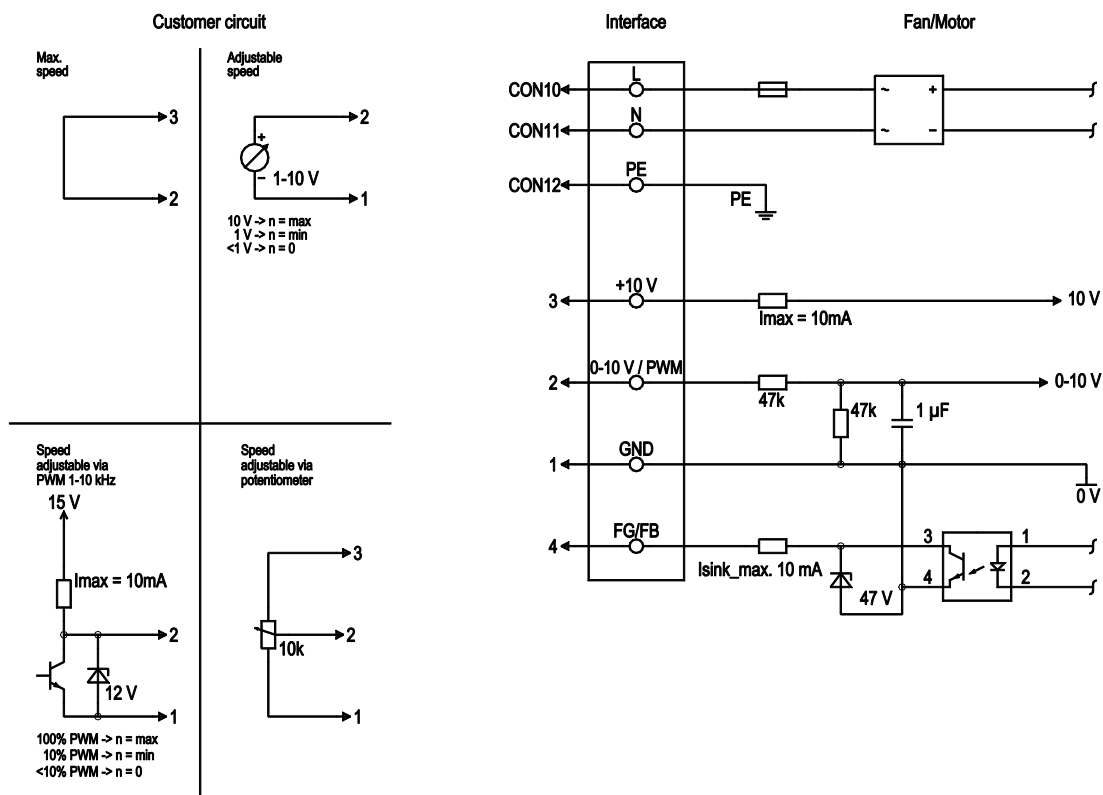
1	Accessory part: Inlet ring 96359-2-4013, not included in scope of delivery
2	Clearance for screw 8-10 mm
3	Max. clearance for screw 10 mm
4	Max. clearance for screw 5 mm
5	Cable PVC AWG20 3x splice
6	Cable PVC AWG22 4x splice

Accessory part



Accessory part: inlet ring 96359-2-4013 not included in scope of delivery

Connection diagram

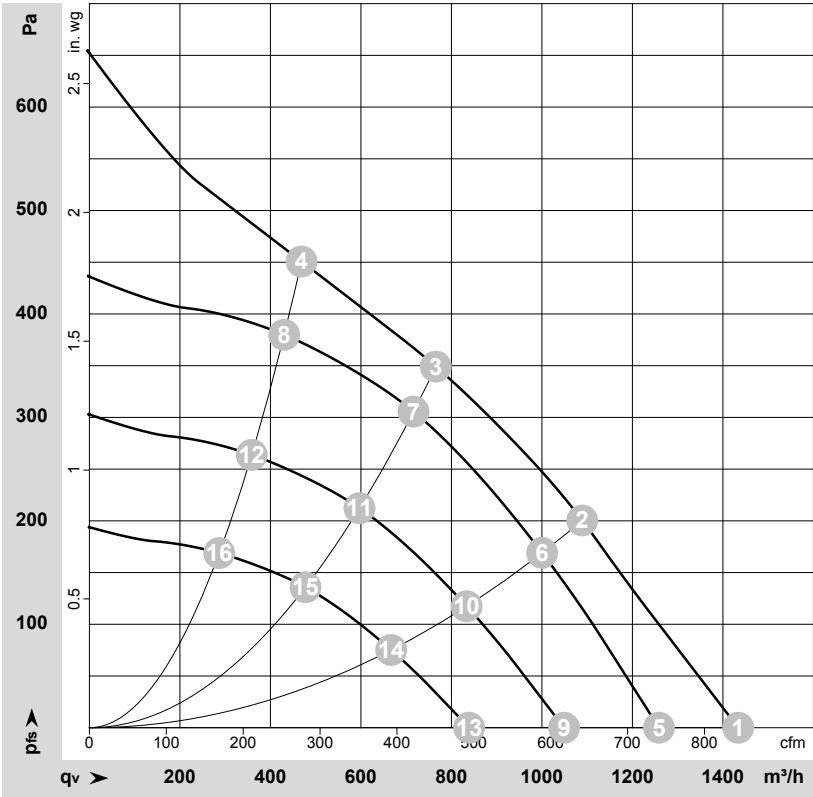


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, I _{max.} 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV
	4	FG/FB	white	Fan good / fan bad: open collector, fan good = high, electrically isolated, I _{sink max} = 10 mA

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Curves: Air performance 50 Hz



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

Measurement: LU-195561-1

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

	Wired	U	f	n	P _{ed}	I	q _v	p _{fs}	q _v	p _{fs}
		V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	1~	230	50	2735	132	1.09	1435	0	845	0.00
2	1~	230	50	2615	152	1.25	1090	200	640	0.80
3	1~	230	50	2550	160	1.30	765	350	450	1.41
4	1~	230	50	2610	152	1.25	470	450	275	1.81
5	1~	230	50	2400	89	0.74	1260	0	740	0.00
6	1~	230	50	2400	118	0.97	1000	169	590	0.68
7	1~	230	50	2400	132	1.08	715	307	420	1.23
8	1~	230	50	2400	118	0.97	430	381	255	1.53
9	1~	230	50	2000	52	0.43	1050	0	615	0.00
10	1~	230	50	2000	68	0.56	835	118	490	0.47
11	1~	230	50	2000	76	0.62	595	213	350	0.86
12	1~	230	50	2000	68	0.56	360	265	210	1.06
13	1~	230	50	1600	26	0.22	840	0	495	0.00
14	1~	230	50	1600	35	0.29	665	75	395	0.30
15	1~	230	50	1600	39	0.32	475	137	280	0.55
16	1~	230	50	1600	35	0.29	285	169	170	0.68

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

