EC centrifugal fan

backward-curved, single-intake

R3G250-AZ02-01 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R3G250-AZ02-01**
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^{-1}	2600
Power consumption	W	160
Current draw	A	1.3
Max. ambient temperature	°C	50

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}	%	51.3	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		70.2	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.15
09 Air flow q_v	m^3/h	805
09 Pressure increase p_{fs}	Pa	322
10 Speed (rpm) n	min^{-1}	2620
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-195724

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Technical description

Weight	1.9 kg
Size	250 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	PA plastic
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	Ball 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
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
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

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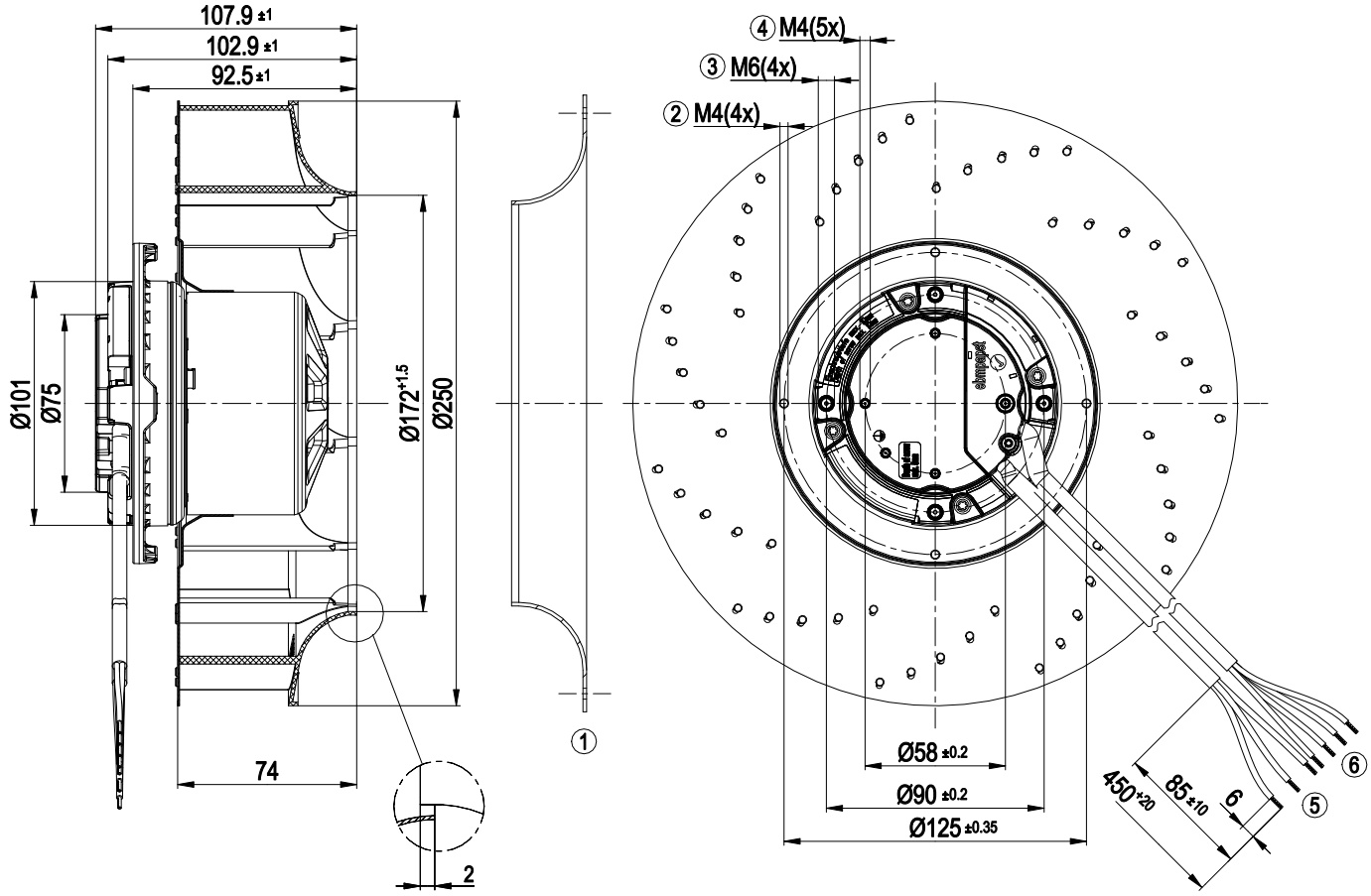
Product drawing



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

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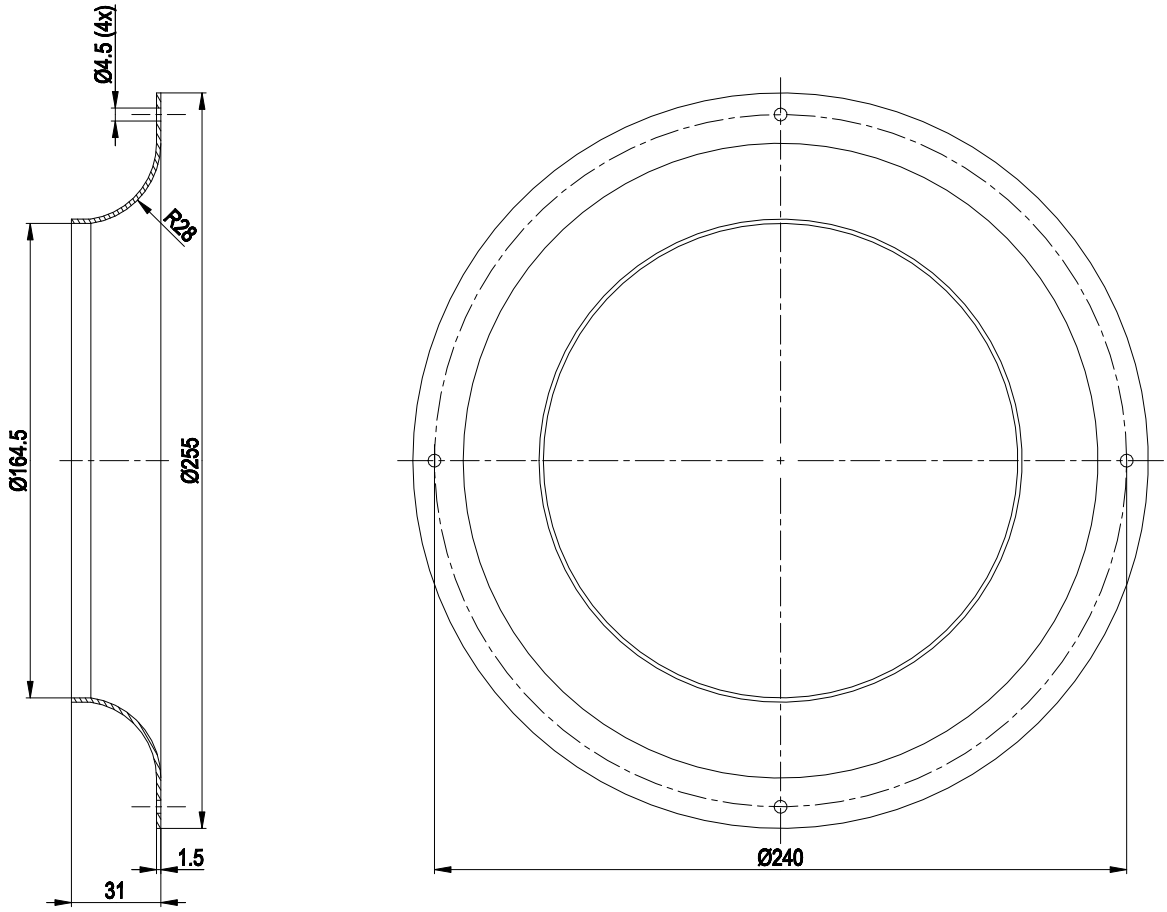
Accessory part



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

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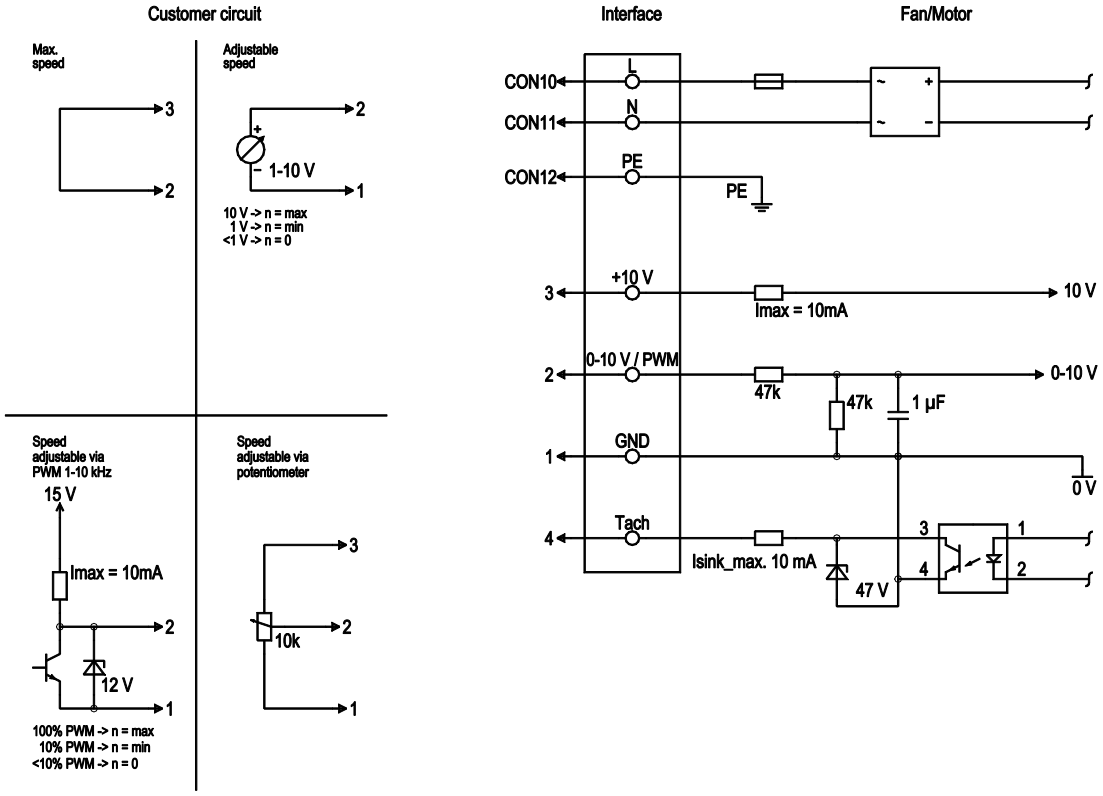
Connection diagram



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
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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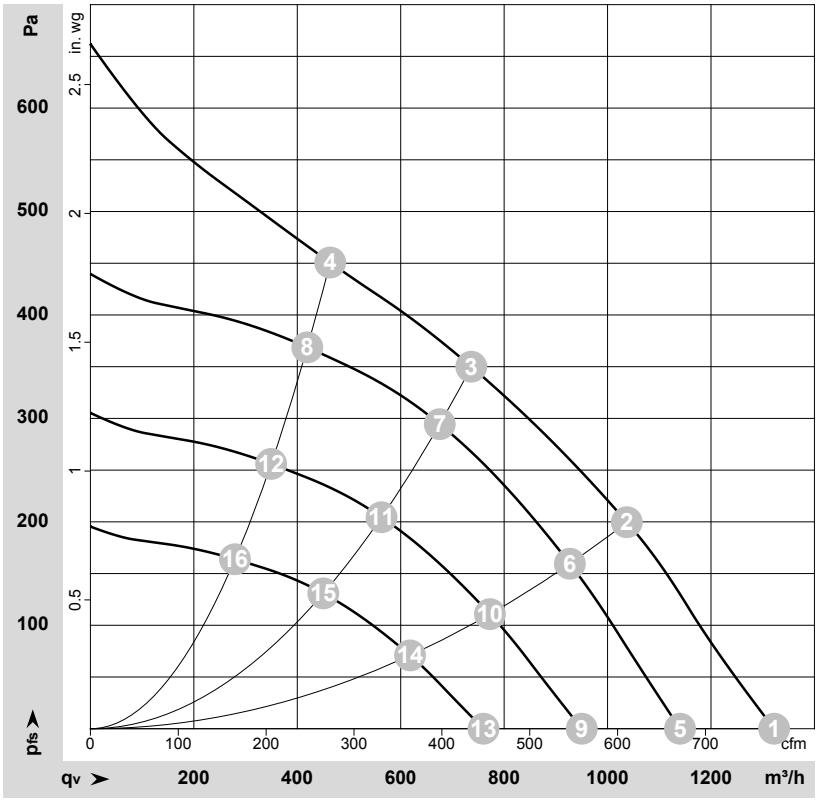
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-195724-1

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	2785	129	1.07	1320	0	780	0.00
2	1~	230	50	2685	148	1.21	1035	200	610	0.80
3	1~	230	50	2600	160	1.30	735	350	435	1.41
4	1~	230	50	2655	153	1.25	465	450	275	1.81
5	1~	230	50	2400	82	0.68	1140	0	670	0.00
6	1~	230	50	2400	106	0.87	925	160	545	0.64
7	1~	230	50	2400	123	1.00	675	295	400	1.18
8	1~	230	50	2400	113	0.93	420	369	245	1.48
9	1~	230	50	2000	48	0.40	950	0	560	0.00
10	1~	230	50	2000	61	0.50	775	111	455	0.45
11	1~	230	50	2000	71	0.58	565	205	330	0.82
12	1~	230	50	2000	66	0.54	350	256	205	1.03
13	1~	230	50	1600	24	0.20	760	0	445	0.00
14	1~	230	50	1600	31	0.26	620	71	365	0.29
15	1~	230	50	1600	36	0.30	450	131	265	0.53
16	1~	230	50	1600	34	0.28	280	164	165	0.66

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