R3G225-RE07-20

ABB OY DRIVES

EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G225-RE07-20 ebmpapst Datasheet
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Nominal data

Type	**R3G225-RE07-20**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2860
Power consumption	W	170
Current draw	A	1.4
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 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	61.7	43.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		80.4	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	705
09 Pressure increase p_{fs}	Pa	458
10 Speed (rpm) n	min^{-1}	2865
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-127001

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

Weight	1.76 kg
Size	225 mm
Motor size	55
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
Mode	S1
Motor bearing	Ball bearing; (sealed)
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 assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 60335-1; EN 60335-1; CE; UKCA
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1; CCC

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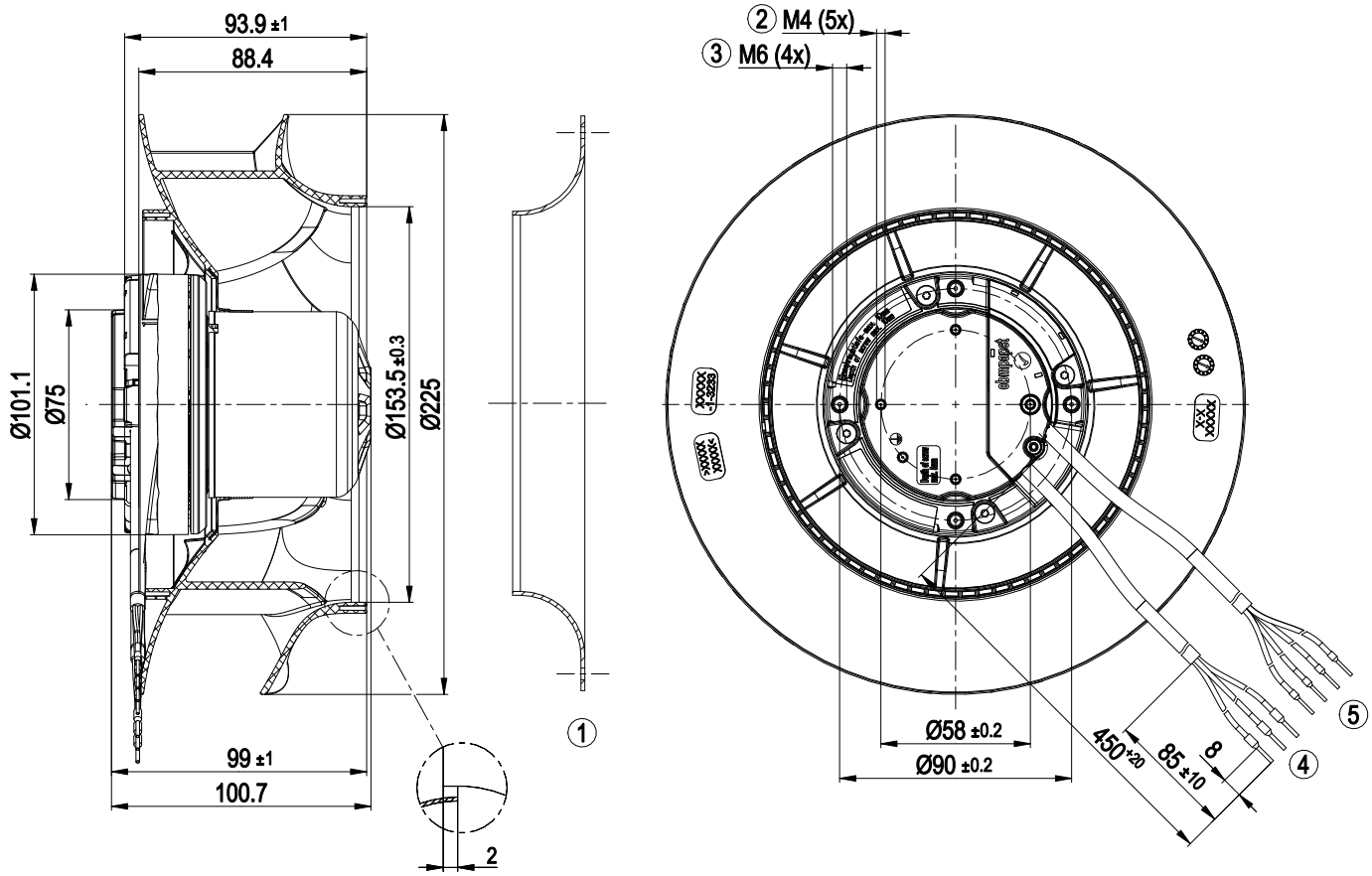
Product drawing



1	Accessory part: inlet ring 96358-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Max. clearance for screw 10 mm
4	Cable PVC AWG20
	3x wire-end ferrule
5	Cable PVC AWG22
	4x wire-end ferrule

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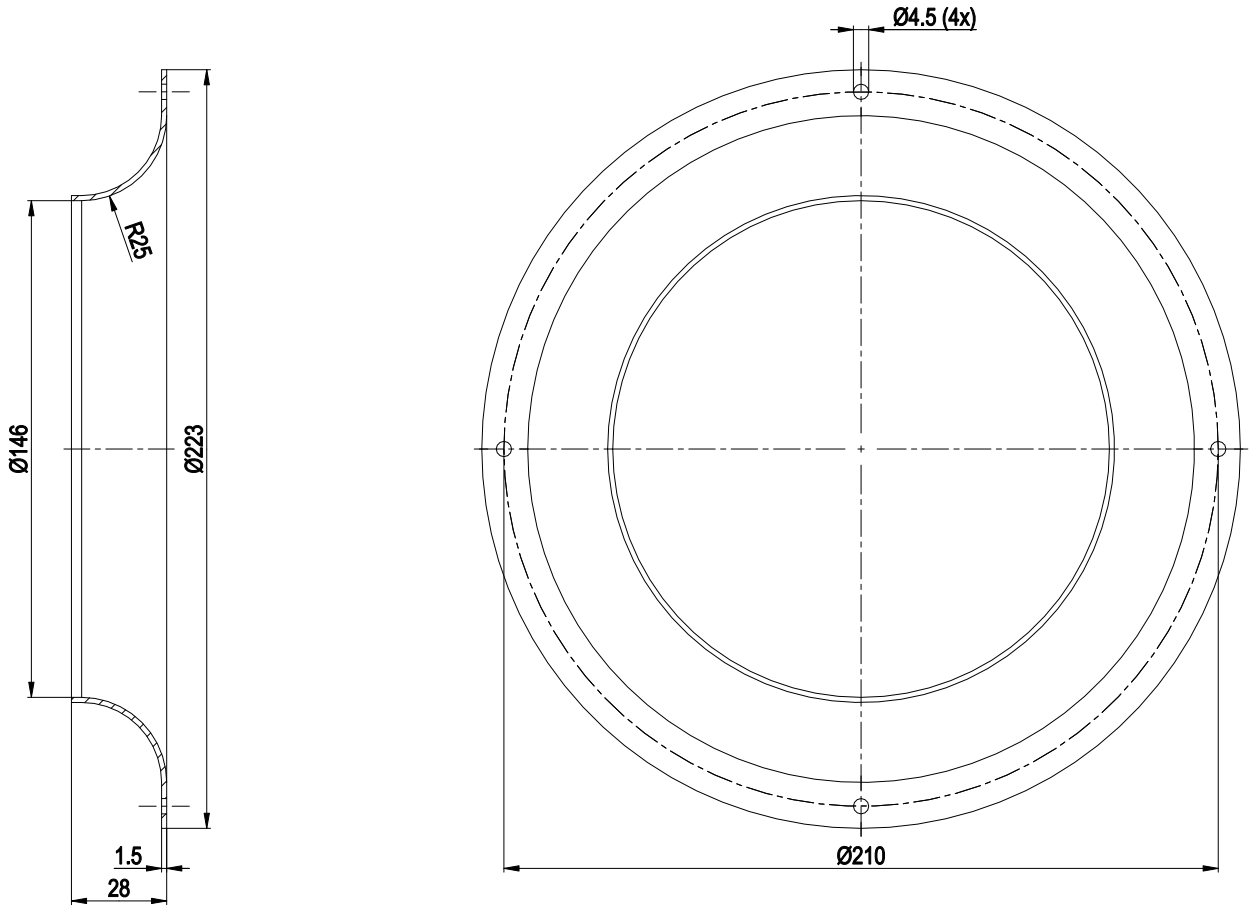
Accessory part



Inlet ring 96358-2-4013

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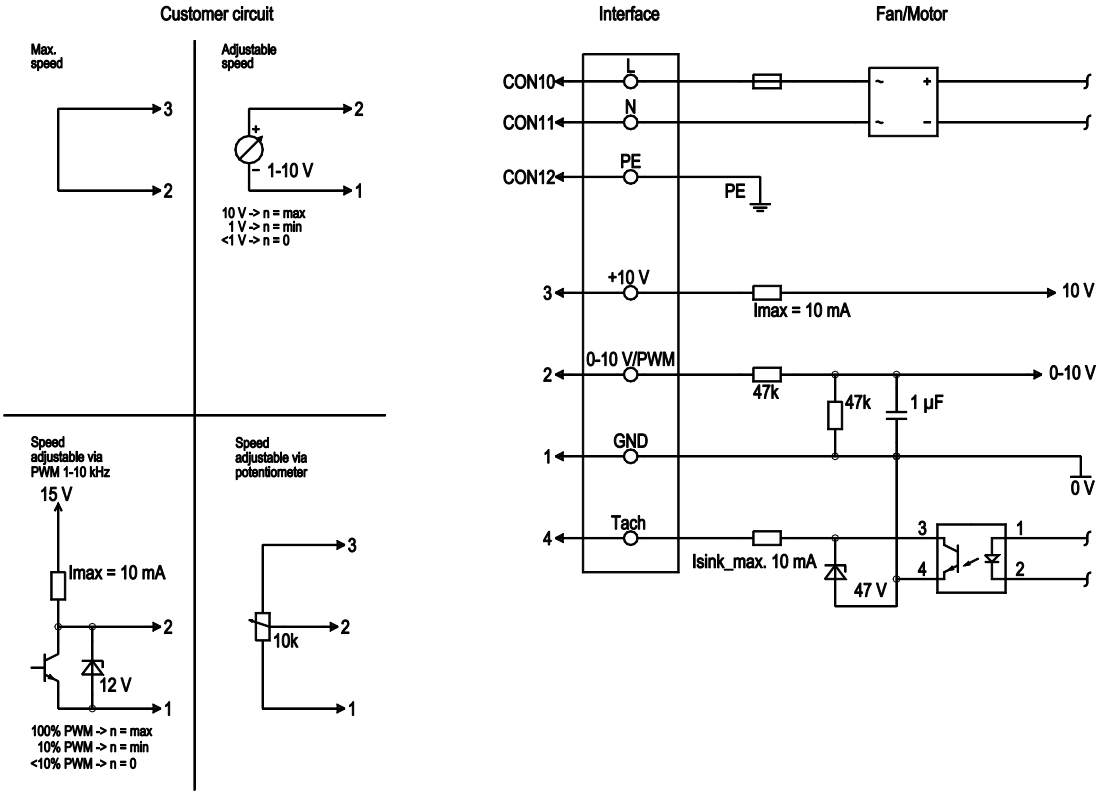
Connection diagram



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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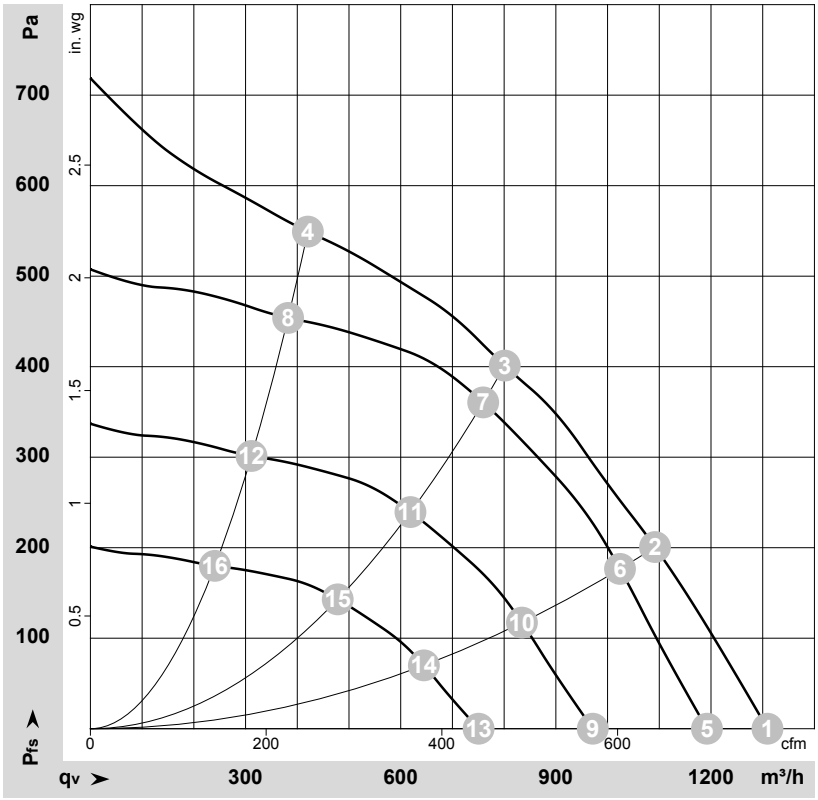
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-127001-1

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	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	2965	147	1.17	70	78	1310	0	770	0.00
2	230	50	2880	170	1.40	66	74	1090	200	645	0.80
3	230	50	2860	170	1.40	60	68	800	400	470	1.61
4	230	50	2970	149	1.22	66	74	420	550	250	2.21
5	230	50	2700	111	0.89	68	76	1190	0	700	0.00
6	230	50	2700	138	1.10	64	72	1025	178	605	0.71
7	230	50	2700	145	1.15	58	67	760	362	445	1.45
8	230	50	2700	112	0.92	64	72	380	454	225	1.82
9	230	50	2200	60	0.48	63	70	970	0	570	0.00
10	230	50	2200	75	0.59	59	67	835	118	490	0.47
11	230	50	2200	79	0.62	53	61	620	240	365	0.96
12	230	50	2200	61	0.50	59	67	310	301	185	1.21
13	230	50	1700	28	0.22	56	64	750	0	440	0.00
14	230	50	1700	34	0.27	53	60	645	71	380	0.29
15	230	50	1700	36	0.29	47	55	480	143	280	0.57
16	230	50	1700	28	0.23	52	60	240	180	140	0.72

U = Voltage · f = Frequency · 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