K3G175-RD53-03

EC centrifugal module - RadiCal

backward curved

with housing

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Nominal data

Type	**K3G175-RD53-03**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	4720
Power input	W	166
Current draw	A	1.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011 (prEN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	56.9	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		75.8	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.15
09 Air flow q_v	m^3/h	560
09 Pressure increase p_{fs}	Pa	512
10 Speed (rpm) n	min^{-1}	4710
11 Specific ratio*		1.01

Data definition with optimum efficiency.

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

LU-160714

The indicated efficiency values for obtaining conformity with the Ecodesign Directive EU 327/2011 were achieved with defined air conduction components (e.g. inlet nozzles).
The dimensions are to be requested from ebm-papst. If other air guide geometries are used on the installation side, the ebm-papst evaluation loses its validity/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 features

Mass	1.8 kg
Size	175 mm
Motor size	55
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Housing material	PA plastic
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP54
Insulation class	"B"
Humidity (F) / environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensation drainage holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment), except EN 61000-3-2
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
Cable exit	Variable
Safety classification	I; If a protective earth is connected by the customer This component to be built-in can have several local protection class ratings. The specification refers to the basic design of this component. The final protection class is based on the intended installation and connection of the component.
Product conforming to standard	EN 60034-1; EN 60204-1; EN 60335-1; CE
Standard conformity	UKCA
Approval	CSA C22.2 no. 77 + CAN/CSA-E60730-1; CCC; UL 1004-7 + 60730-1

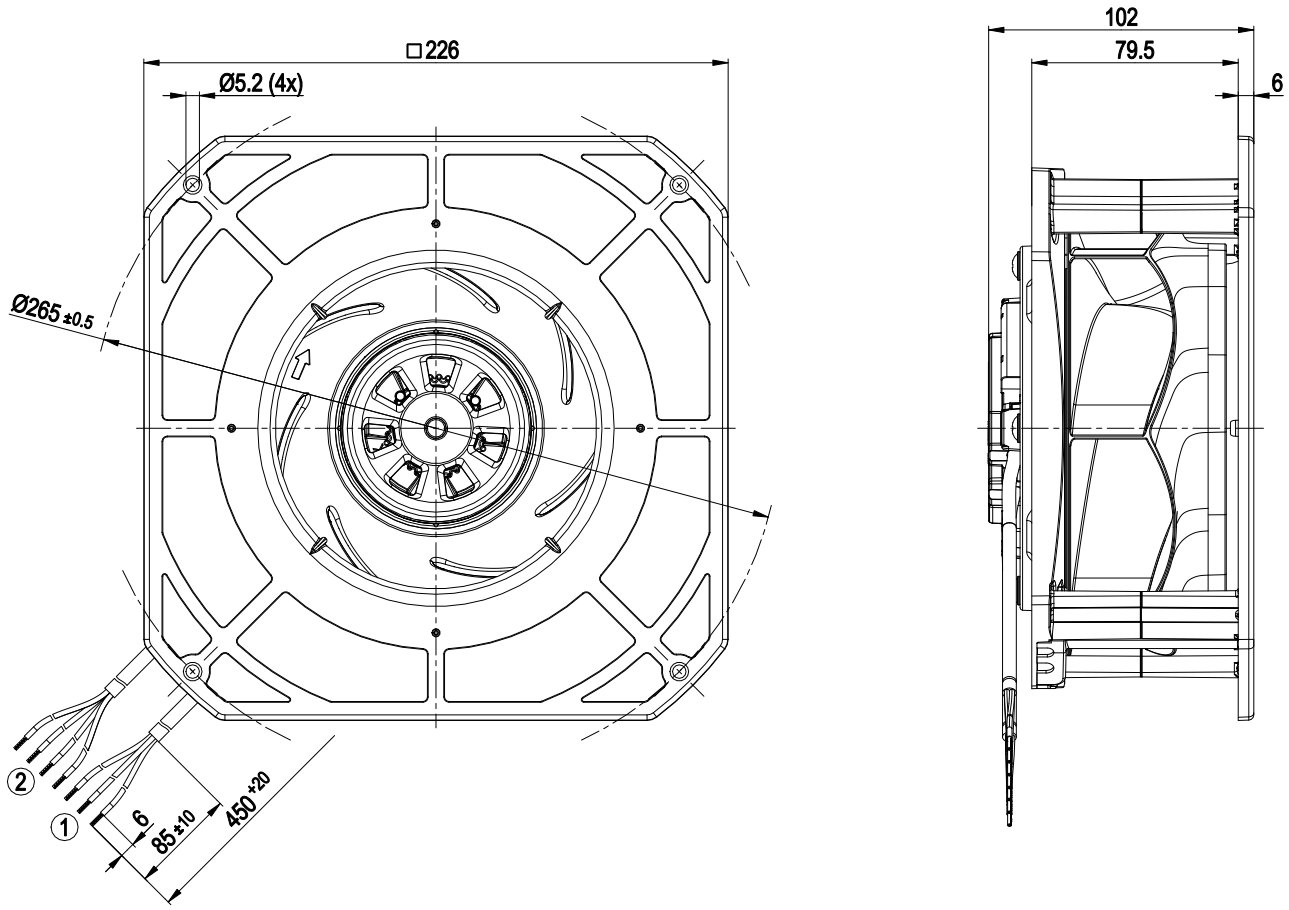
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Product drawing



1	Connection line PVC AWG20
	3x lead tip
2	Connection line PVC AWG22
	4x lead tip

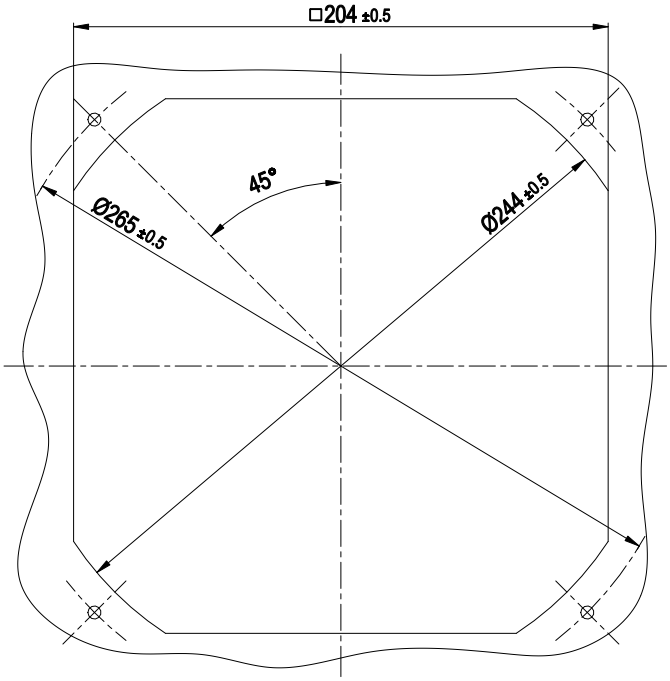
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Mounting dimensions



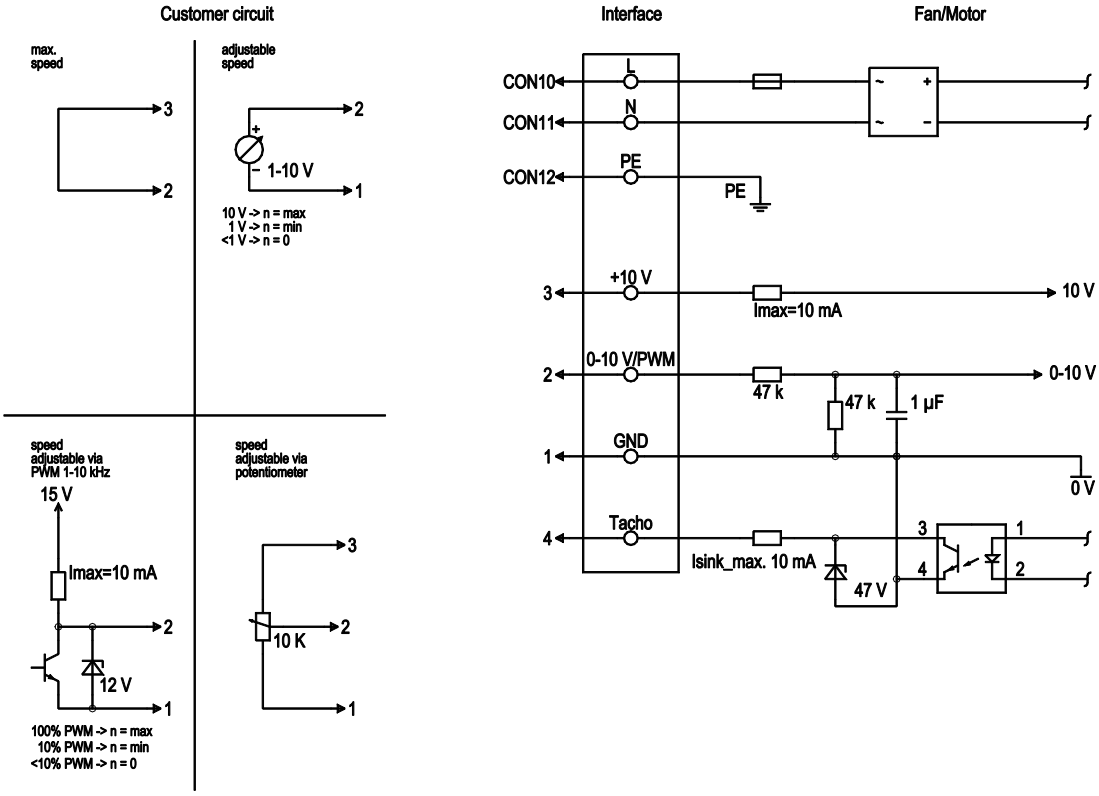
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Speed monitoring 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. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV

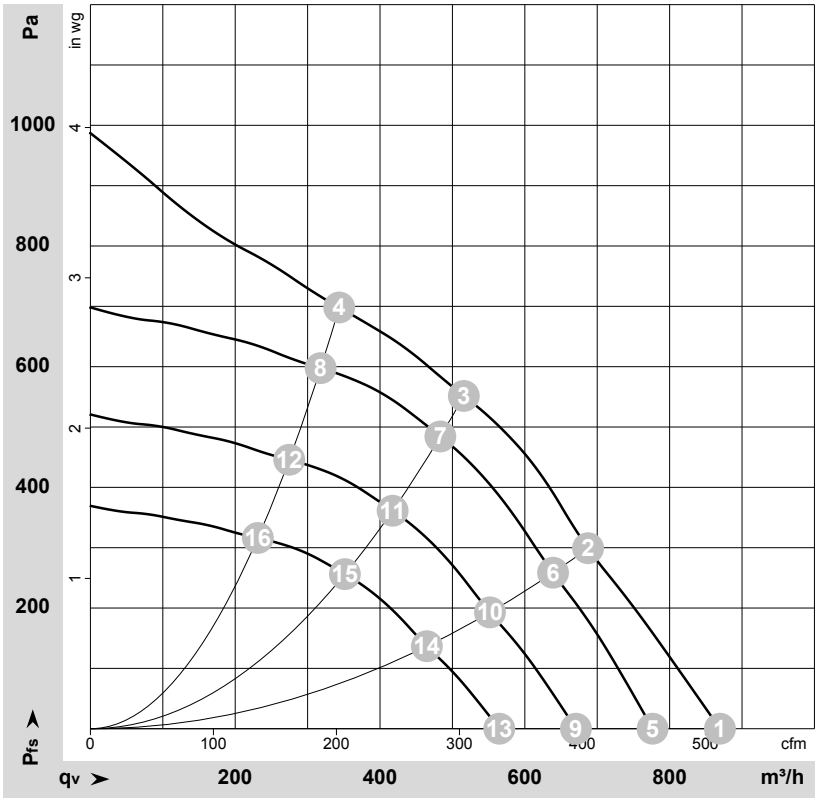
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-160714-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

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	4925	139	1.14	73	81	870	0	510	0.00
2	230	50	4730	158	1.28	68	76	685	300	405	1.20
3	230	50	4720	166	1.40	66	75	515	550	305	2.21
4	230	50	4755	155	1.25	70	78	345	700	200	2.81
5	230	50	4400	99	0.81	70	78	775	0	455	0.00
6	230	50	4400	127	1.03	66	74	640	257	375	1.03
7	230	50	4400	132	1.07	65	73	485	484	285	1.94
8	230	50	4400	123	0.99	68	76	320	598	185	2.40
9	230	50	3800	64	0.52	67	74	670	0	395	0.00
10	230	50	3800	82	0.66	63	70	550	192	325	0.77
11	230	50	3800	85	0.69	61	69	415	361	245	1.45
12	230	50	3800	79	0.64	65	72	275	446	160	1.79
13	230	50	3200	38	0.31	62	70	565	0	335	0.00
14	230	50	3200	49	0.40	58	66	465	136	275	0.55
15	230	50	3200	51	0.41	57	65	350	256	205	1.03
16	230	50	3200	47	0.38	60	68	230	316	135	1.27

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow p_{fs} = Pressure increase

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