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
Method of obtaining data		ml
Speed (rpm)	min^{-1}	4720
Power consumption	W	166
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}	%	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 consumption 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 obtained at optimum efficiency level.

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

LU-160714

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	1.75 kg
Size	175 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	PA plastic
Housing material	PA plastic
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
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 61000-6-3 (household environment), except EN 61000-3-2
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. The built-in component has several local protection class assignments. The final protection class is determined by the intended installation.
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE; UKCA
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1; CCC

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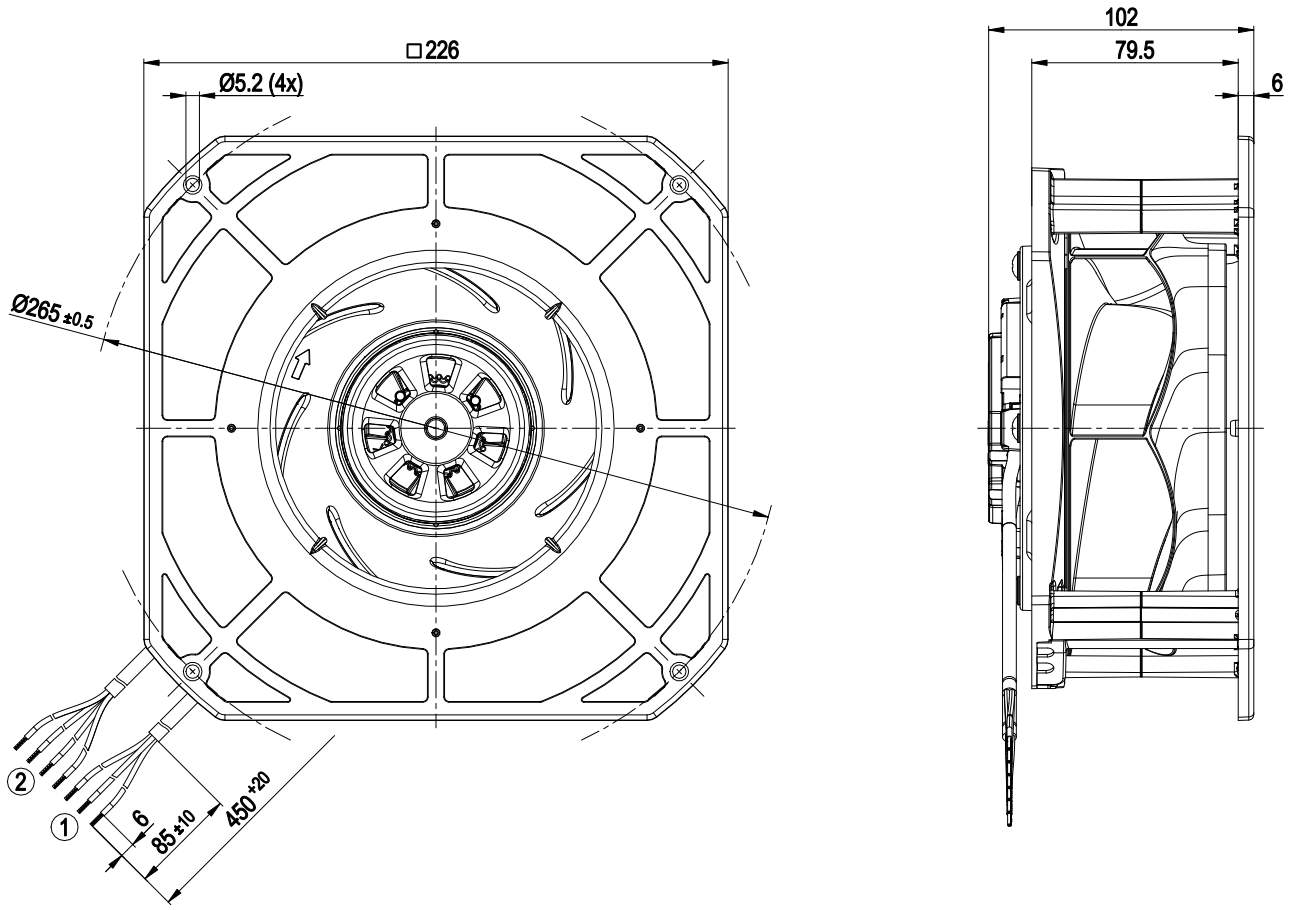
Product drawing



1	Cable PVC AWG20		3x splice	2	Cable PVC AWG22
	4x splice				

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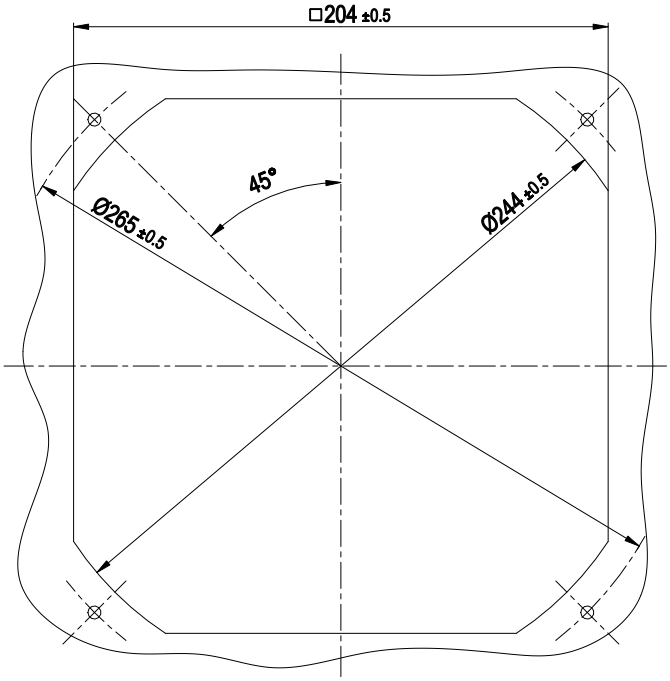
Mounting dimensions



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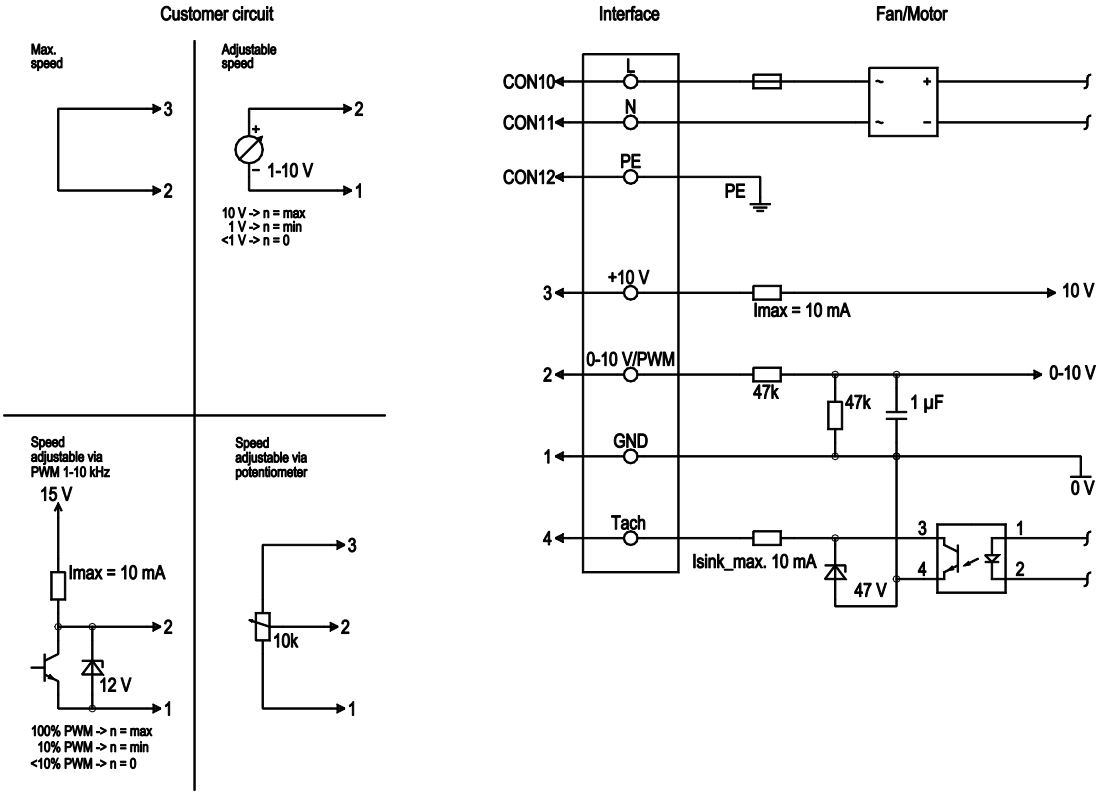
Connection diagram



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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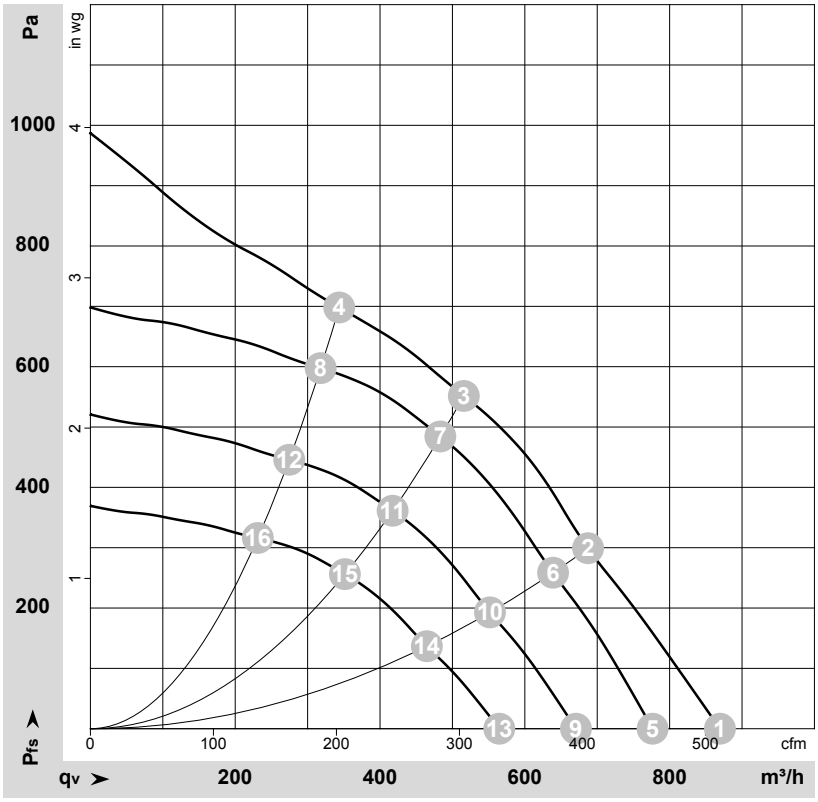
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-160714-1
Date: 2014-01-22
Nozzle: 09576-2-4013

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	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 = 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

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