K3G220-RD53-11

EC centrifugal module - RadiCal

backward curved, single inlet

with housing

K3G220-RD53-11 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**K3G220-RD53-11**
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}	3230
Power input	W	168
Current draw	A	1.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	56.6	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		75.5	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	805
09 Pressure increase p_{fs}	Pa	366
10 Speed (rpm) n	min^{-1}	3210
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-153697

EC centrifugal module - RadiCal

backward curved, single inlet

with housing

Technical features

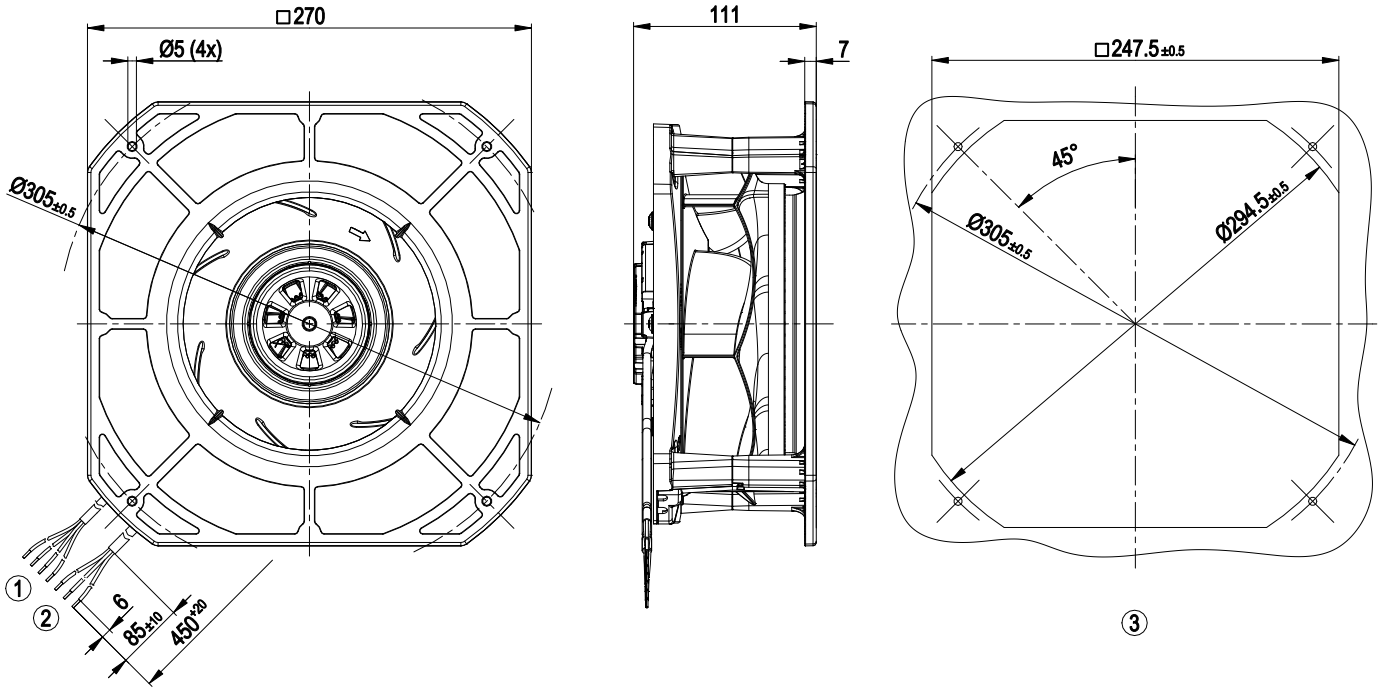
Mass	2.1 kg
Size	220 mm
Surface of rotor	Thick layer passivated
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Housing material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Fault output (open collector) - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected motor
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 2111; CSA C22.2 No.77

EC centrifugal module - RadiCal

backward curved, single inlet

with housing

Product drawing



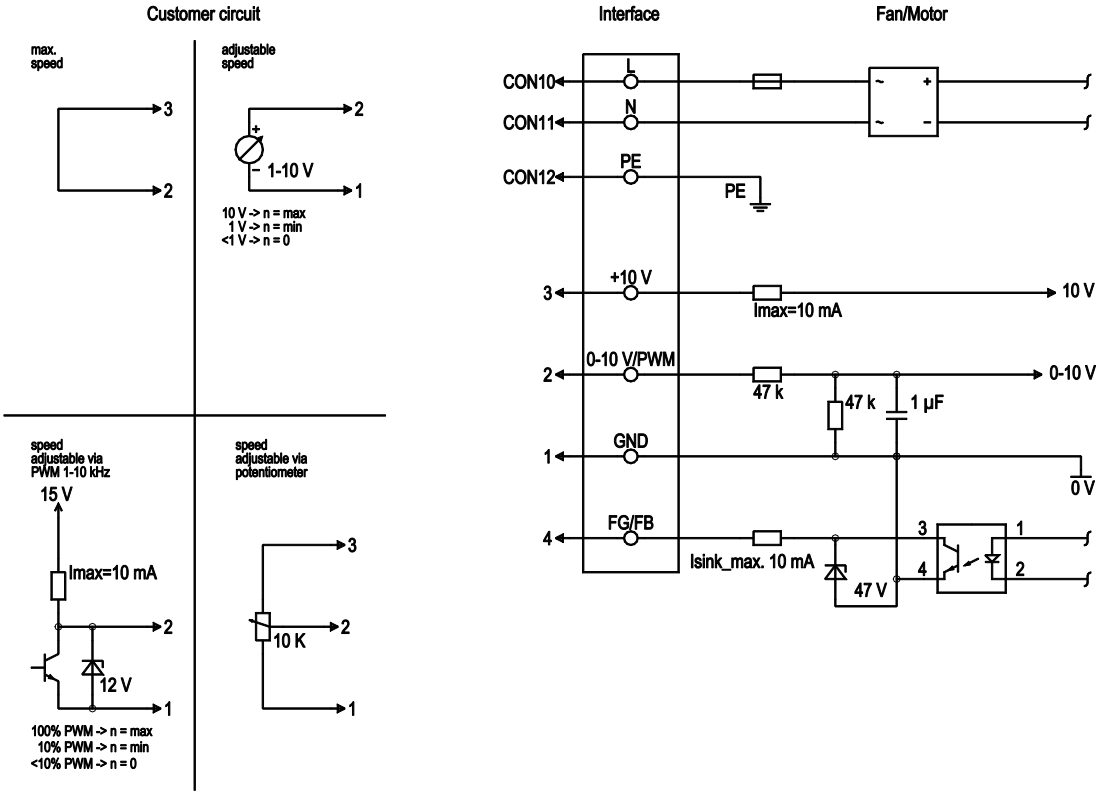
1	Connection line PVC AWG22, 4x lead tips crimped
2	Connection line PVC AWG20, 3x lead tips crimped
3	Mounting dimensions

EC centrifugal module - RadiCal

backward curved, single inlet

with housing

Connection screen



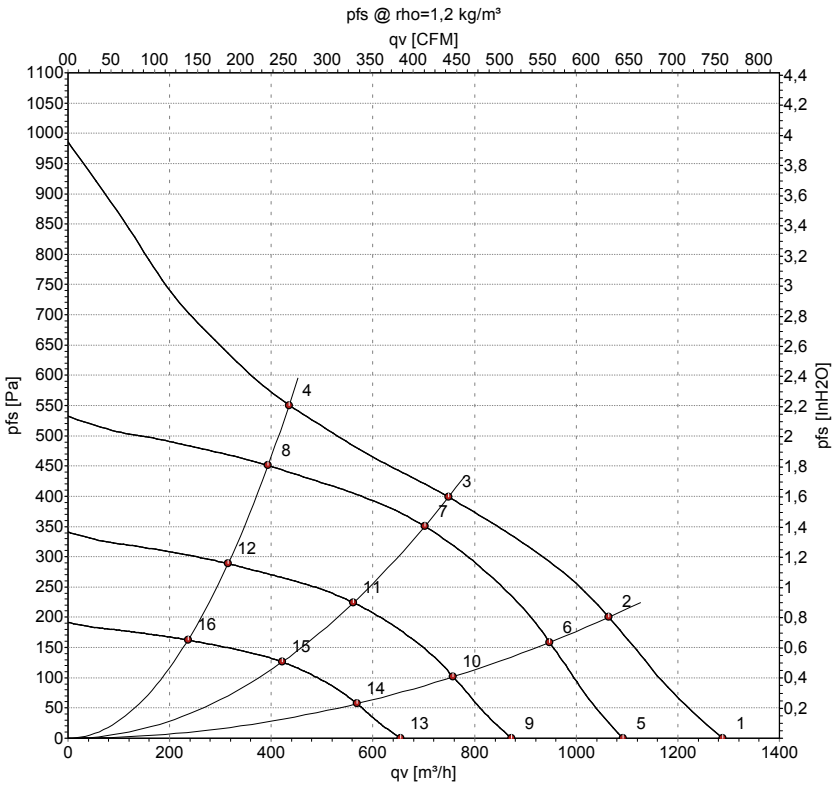
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	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
	4	Tach	white	Fan good / fan bad: Open collector, fan good = low, electrically isolated

EC centrifugal module - RadiCal

backward curved, single inlet

with housing

Charts: Air flow 50 Hz



Measurement: LU-153697-1

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	inH2O
1	230	50	3540	168	1.40	70	78	1290	0	760	0.00
2	230	50	3370	168	1.40	65	73	1065	200	625	0.80
3	230	50	3230	168	1.40	62	70	750	400	440	1.61
4	230	50	3310	168	1.40	66	74	435	550	255	2.21
5	230	50	3000	99	0.82	66	73	1090	0	645	0.00
6	230	50	3000	115	0.96	62	70	950	159	560	0.64
7	230	50	3000	135	1.12	61	68	700	350	415	1.41
8	230	50	3000	121	1.01	63	70	395	451	230	1.81
9	230	50	2400	51	0.42	60	68	875	0	515	0.00
10	230	50	2400	59	0.49	57	64	760	102	445	0.41
11	230	50	2400	69	0.57	55	63	560	224	330	0.90
12	230	50	2400	62	0.51	57	65	315	289	185	1.16
13	230	50	1800	21	0.18	53	61	655	0	385	0.00
14	230	50	1800	25	0.21	50	57	570	57	335	0.23
15	230	50	1800	29	0.24	48	55	420	126	250	0.51
16	230	50	1800	26	0.22	50	58	235	162	140	0.65

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