EC centrifugal fan - RadiCal

K3G190-RY53-05 ebmpapst Datasheet
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Nominal data

Type	**K3G190-RY53-05**
Motor	**M3G074-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}	3700
Power input	W	115
Current draw	A	0.95
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

Technical features

Mass	1.9 kg
Size	190 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"
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
Condensate discharge holes	None, open rotor
Cooling bore / aperture	Rotor-side
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
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

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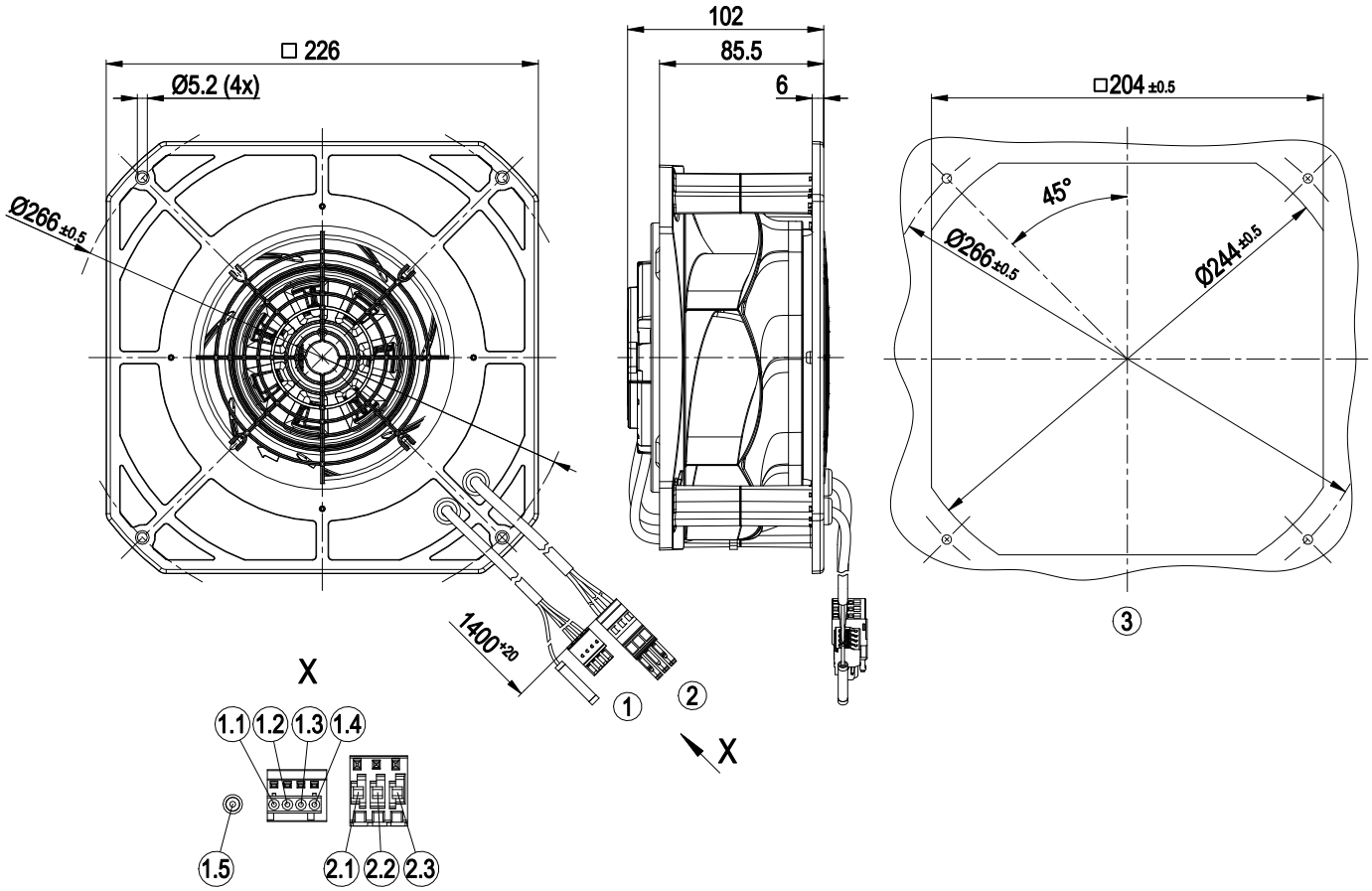
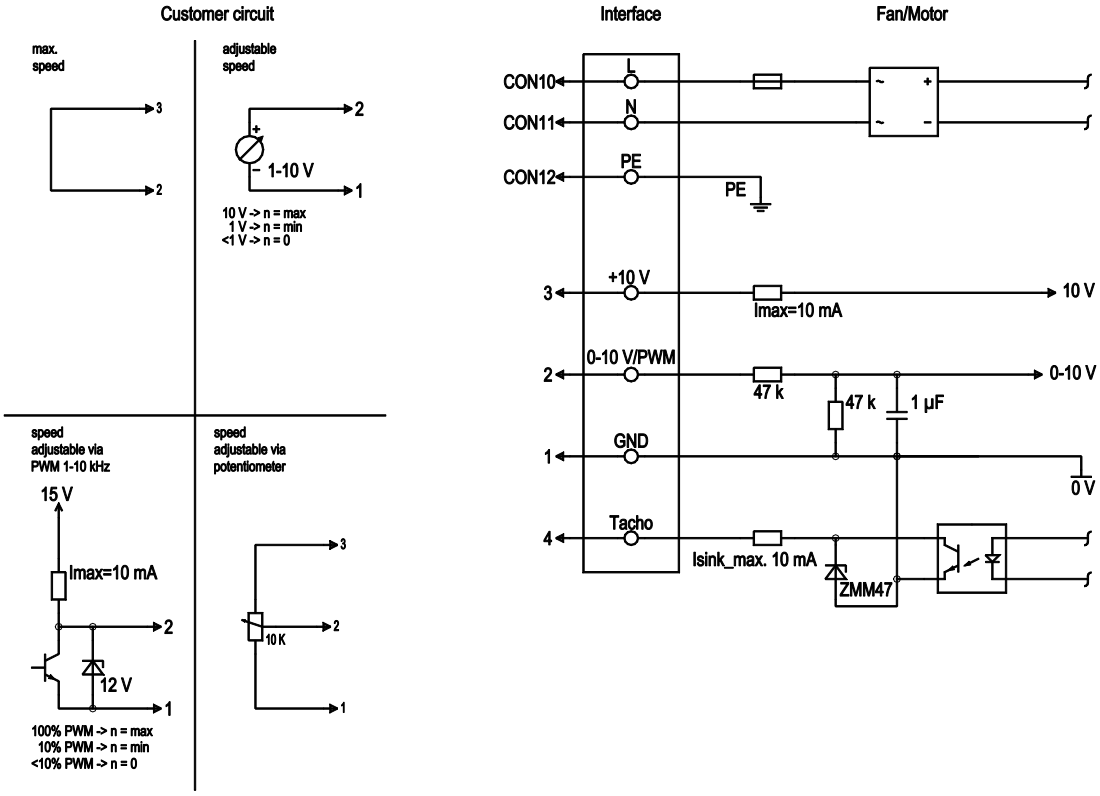
Product drawing



1	Connection line PVC AWG22, 4-pole connector housing WAGO 2734-104
1.1	not used
1.2	GND (blue)
1.3	Tacho (white)
1.4	0-10 V PWM (yellow)
1.5	+10 V (red), butt connector
2	Connection line PVC AWG20, 3-pole connector housing WAGO 769-103/K000-0001
2.1	PE (green/yellow)
2.2	N (blue)
2.3	L (black)
3	Mounting dimensions

Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range, 50/60 Hz
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range, 50/60 Hz
	CON12	PE	green/yellow	Earth connection
	1	GND	blue	Signal ground for control interface, SELV
	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
	4	Tacho	white	Speed monitoring output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV

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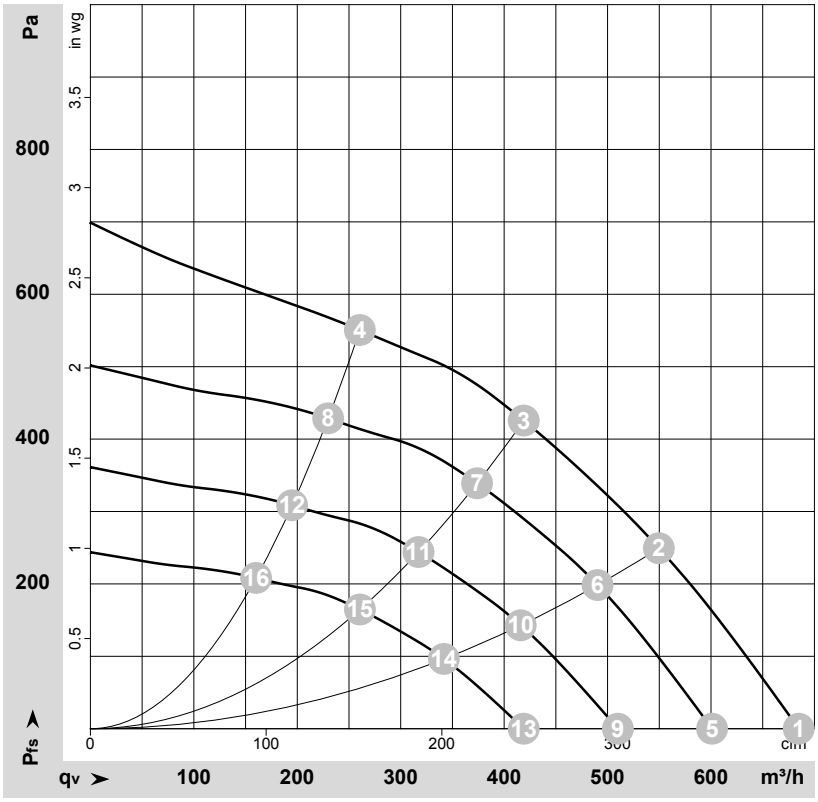
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-181877-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	3760	98	0.83	685	0	405	0.00
2	230	50	3695	111	0.93	550	250	325	1.00
3	230	50	3700	115	0.95	420	425	245	1.71
4	230	50	3740	103	0.87	260	550	155	2.21
5	230	50	3300	66	0.56	600	0	355	0.00
6	230	50	3300	79	0.66	490	200	290	0.80
7	230	50	3300	81	0.68	375	340	220	1.36
8	230	50	3300	71	0.60	230	429	135	1.72
9	230	50	2800	41	0.34	510	0	300	0.00
10	230	50	2800	48	0.41	415	144	245	0.58
11	230	50	2800	50	0.42	315	245	185	0.98
12	230	50	2800	43	0.37	195	309	115	1.24
13	230	50	2300	22	0.19	420	0	245	0.00
14	230	50	2300	27	0.22	340	97	200	0.39
15	230	50	2300	28	0.23	260	165	155	0.66
16	230	50	2300	24	0.20	160	208	95	0.84

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase