K3G310-FD02-01

EC centrifugal module - RadiCal

backward-curved, single-intake

with support bracket

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Nominal data

Type	**K3G310-FD02-01**
Motor	**M3G074-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}	1650
Power consumption	W	170
Current draw	A	1.5
Min. back pressure	Pa	230
Min. back pressure	in. wg	0.92
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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	70	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		88.9	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.15
09 Air flow q_v	m^3/h	1530
09 Pressure increase p_{fs}	Pa	231
10 Speed (rpm) n	min^{-1}	1655
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-197197

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Technical description

Weight	7.25 kg
Size	310 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	PP plastic
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
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	Shaft horizontal or rotor on bottom; rotor on top on request
Cooling hole/opening	On rotor side
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 61000-6-4 (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	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE

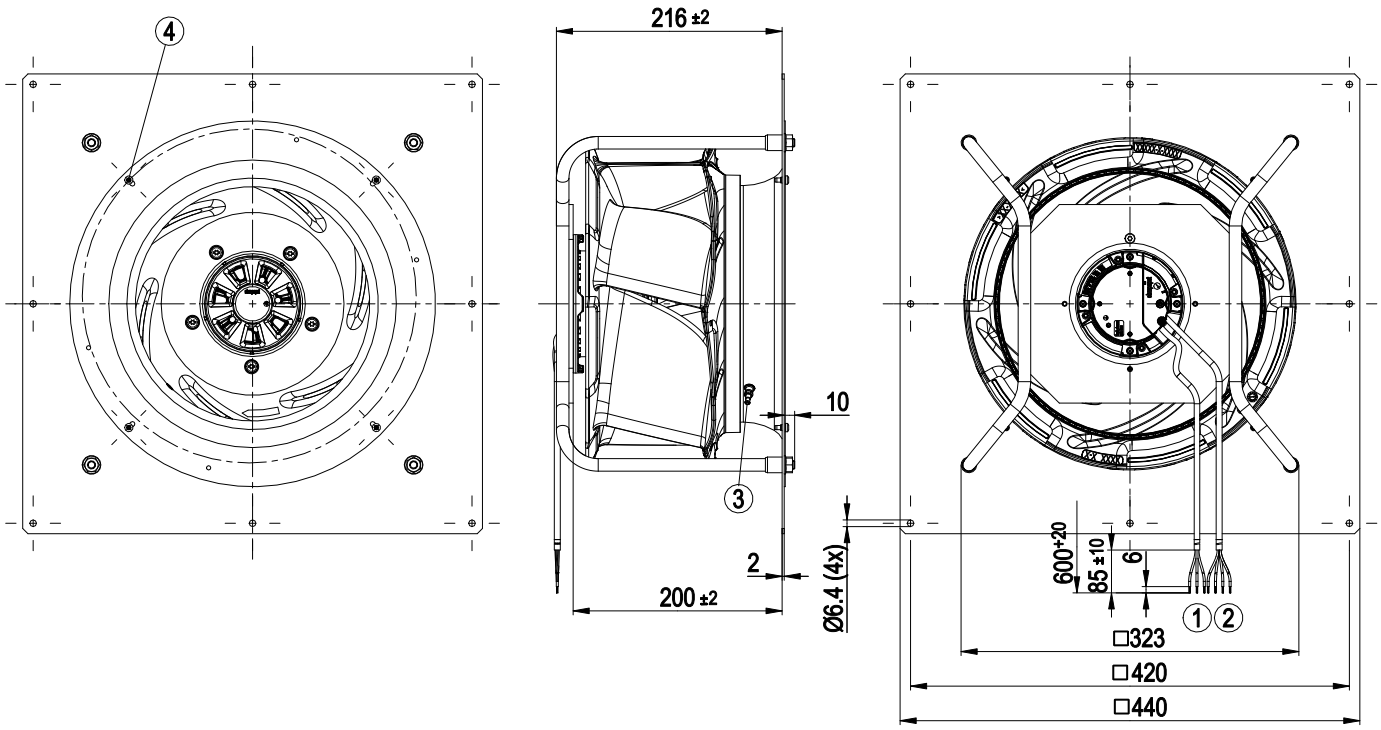
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Product drawing



1	Cable PVC AWG20
	3x splice
2	Cable PVC AWG22
	4x splice
3	Inlet ring with pressure tap (k-factor: 128)
4	Attachment for inlet ring and FlowGrid

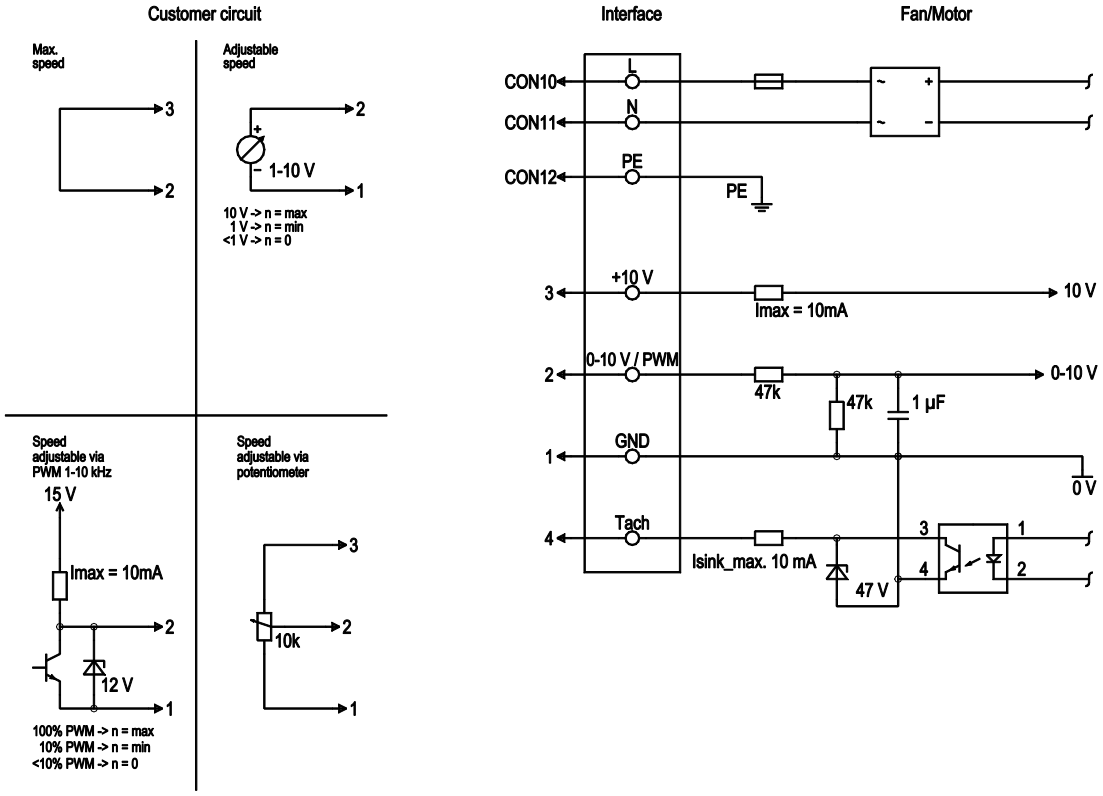
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Connection diagram



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

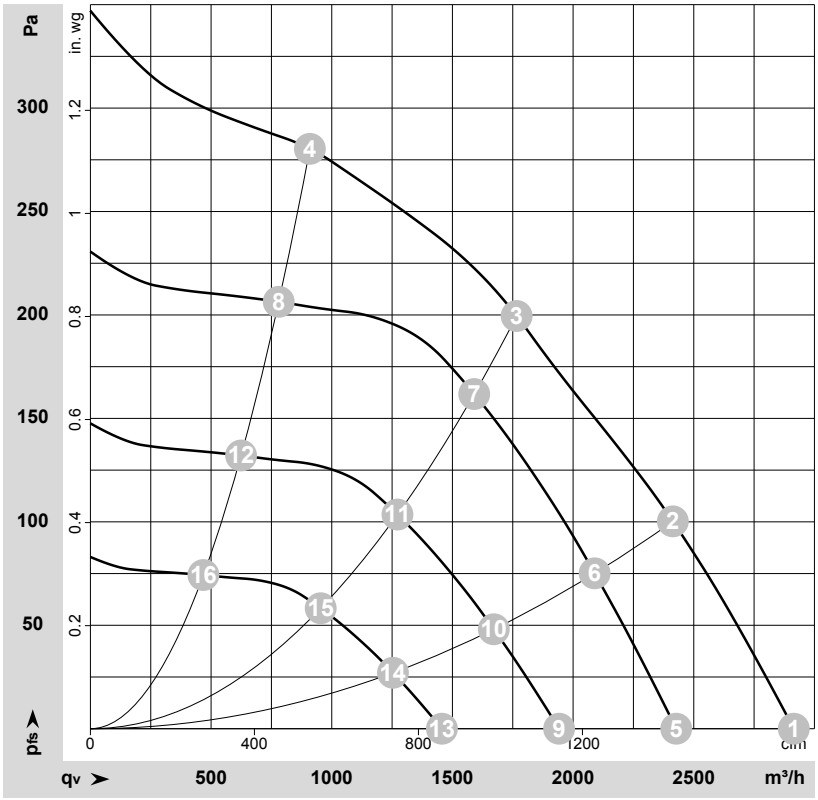
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-197197-1

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

	Wired	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	in. wg
1	1~	230	50	1800	140	1.16	2915	0	1715	0.00
2	1~	230	50	1735	170	1.50	2415	100	1420	0.40
3	1~	230	50	1650	170	1.50	1765	200	1040	0.80
4	1~	230	50	1750	170	1.50	910	280	535	1.12
5	1~	230	50	1500	81	0.67	2425	0	1430	0.00
6	1~	230	50	1500	106	0.87	2090	75	1230	0.30
7	1~	230	50	1500	119	0.97	1590	162	935	0.65
8	1~	230	50	1500	104	0.85	780	206	460	0.83
9	1~	230	50	1200	41	0.34	1940	0	1145	0.00
10	1~	230	50	1200	54	0.44	1670	48	985	0.19
11	1~	230	50	1200	61	0.50	1270	104	750	0.42
12	1~	230	50	1200	53	0.43	625	132	365	0.53
13	1~	230	50	900	17	0.14	1455	0	855	0.00
14	1~	230	50	900	23	0.19	1255	27	740	0.11
15	1~	230	50	900	26	0.21	955	58	560	0.23
16	1~	230	50	900	22	0.18	470	74	275	0.30

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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