K3G400-RJ75-01

EC centrifugal module - RadiCal®

backward curved, single inlet

with support bracket

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G400-RJ75-01**	
Motor	**M3G112-EA**	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	2060
Power input	W	1320
Current draw	A	2.1
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	50

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

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	62.7	48.8	52.8
Efficiency grade N		71.9	58	62
Power input P_{ed}	kW	1.32		
Air flow q_v	m^3/h	4090		
Pressure increase p_{fs}	Pa	676		
Speed n	min^{-1}	2065		

Data definition with optimum efficiency. LU-152014
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	16.5 kg
Size	400 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Material of support bracket	Steel, coated in black
Material of inlet nozzle	Sheet steel, galvanised
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Refer to product drawing
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC

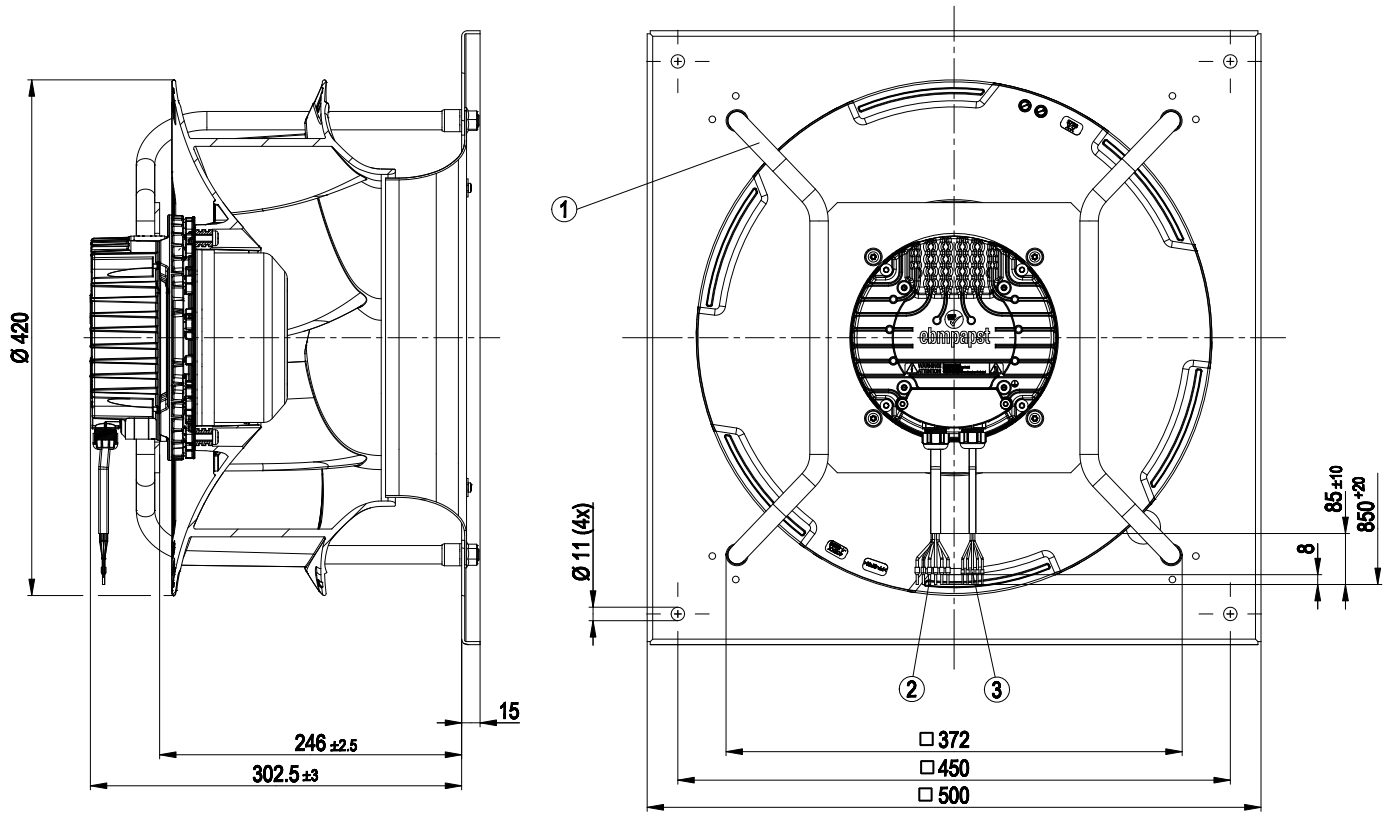
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Product drawing



1	Mounting position: shaft horizontal (install the support struts only vertically as shown in the view!) or rotor on bottom; rotor on top on request
2	Connection line PVC AWG18, 6x crimped core-end sleeves
3	Connection line PVC AWG22, 5x crimped core-end sleeves

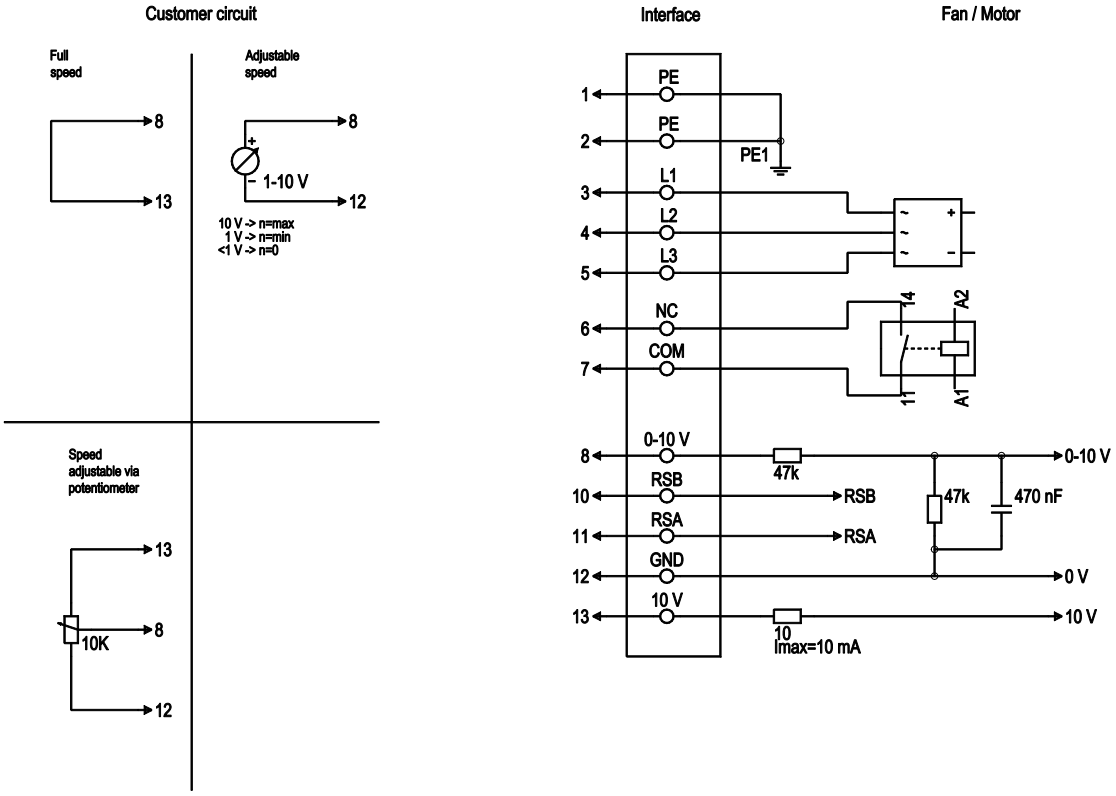
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3, 4, 5	L1, L2, L3	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analogue input 1 (set value); 0-10 V; Ri=100kΩ; parametrisable curve
2	10	RSB	brown	RS485 interface for Modbus, RSB
2	11	RSA	white	RS485 interface for Modbus, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. potentiometer)

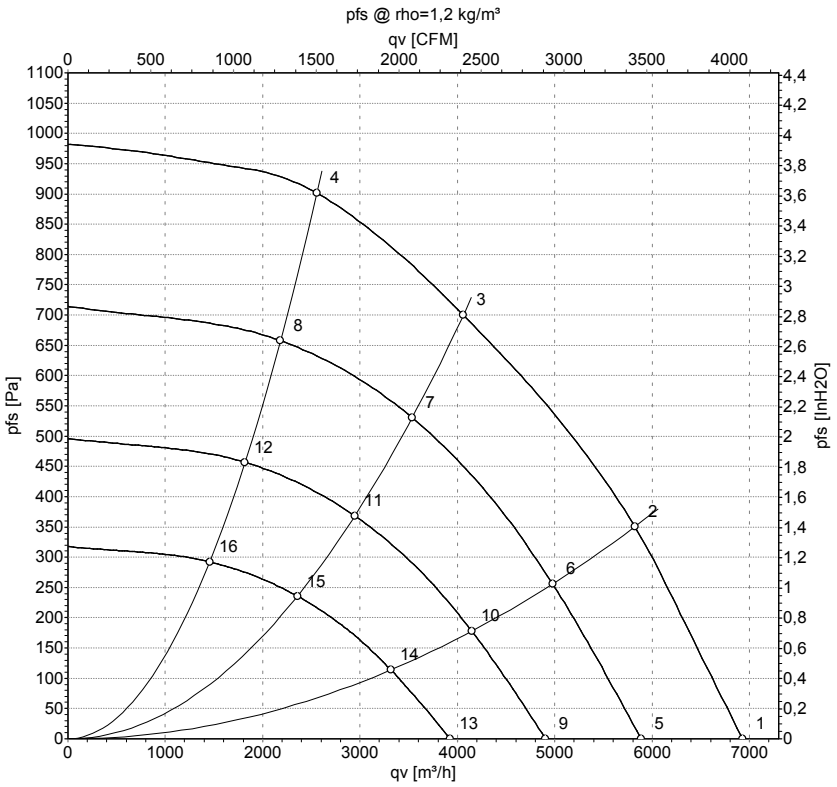
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Charts: Air flow 50 Hz



Measurement: LU-152014

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}	LwA_{out}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	400	50	2120	965	1.56	84	89	92	6930	0
2	400	50	2110	1239	1.99	76	82	88	5820	360
3	400	50	2060	1320	2.10	68	74	81	4060	700
4	400	50	2110	1267	2.03	73	79	84	2555	900
5	400	50	1800	592	0.96	80	85	88	5885	0
6	400	50	1800	768	1.23	72	78	84	4975	259
7	400	50	1800	877	1.41	64	71	78	3535	534
8	400	50	1800	788	1.26	69	75	80	2180	659
9	400	50	1500	342	0.55	75	80	83	4905	0
10	400	50	1500	444	0.71	67	73	79	4150	180
11	400	50	1500	507	0.81	60	66	73	2945	371
12	400	50	1500	456	0.73	64	71	75	1820	457
13	400	50	1200	175	0.28	70	75	77	3925	0
14	400	50	1200	228	0.37	62	68	74	3320	115
15	400	50	1200	260	0.42	54	61	68	2355	238
16	400	50	1200	234	0.37	58	65	69	1455	293

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

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