K3G250-AY11-C2

EC centrifugal module - RadiPac

backward curved, single inlet

with support bracket

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G250-AY11-C2**	
Motor	**M3G084-GF**	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	3580
Power input	W	820
Current draw	A	1.35
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

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}		62.1	46.2	50.2
Efficiency grade N		73.9	58	62
Power input P_{ed}	kW	0.75		
Air flow q_v	m^3/h	1465		
Pressure increase p_{fs}	Pa	1051		
Speed n	min^{-1}	3610		

Data definition with optimum efficiency.

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Technical features

Mass	11.1 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Material of mounting plate	Sheet steel, galvanised
Material of support bracket	Steel, coated in black
Material of inlet nozzle	Sheet steel, galvanised
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - 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
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer at the connection point of the housing)
Product conforming to standard	EN 61800-5-1; CE
Approval	UL 1004-7 + 60730; GOST; C22.2 Nr.77 + CAN/CSA-E60730-1; CCC

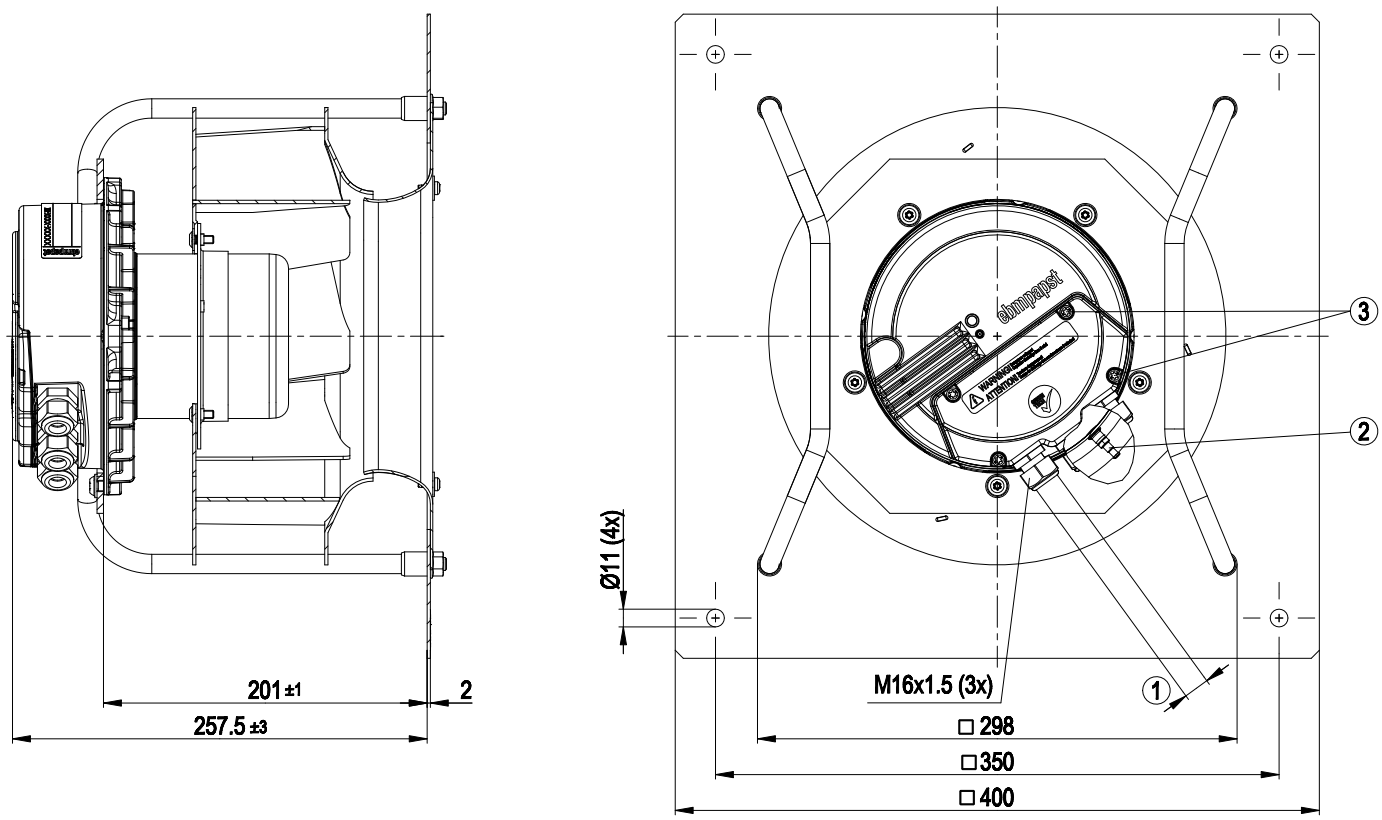
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Product drawing



1	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 2.5±0.4 Nm
2	Inlet nozzle with bleeder connection for pressure relief (k-factor: 70)
3	Tightening torque 3.5±0.5 Nm

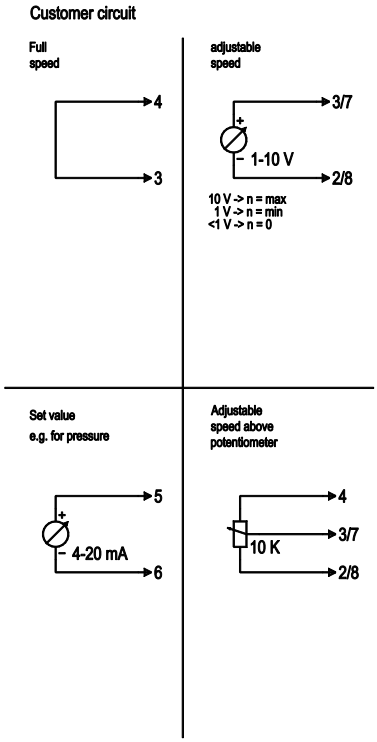
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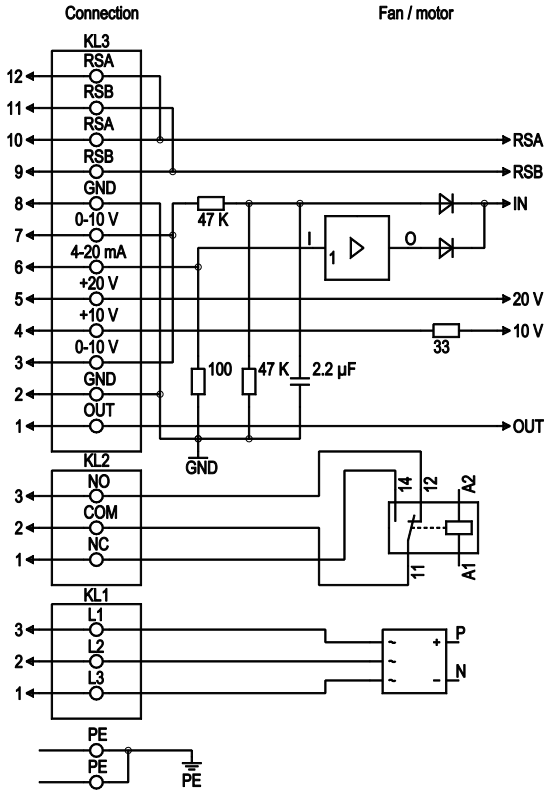
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Connection screen





No.	Pin	Signal	Function / assignment
PE		PE	Protective earth connection
KL1	1, 2, 3	L1, L2, L3	Supply voltage, voltage range (see type plate), 50/60 Hz
KL2	1	NC	Floating status contact, break with error
KL2	2	COM	Floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, close with error
KL3	1	OUT	Analogue output, 0-10 VDC, max. 3 mA, SELV, Output of the actual motor duty cycle (PWM): 1 V corresponds to 10% PWM, 10 V correspond to 100% PWM.
KL3	2, 8	GND	Signal ground for control interface, SELV
KL3	3, 7	0-10 V	Set value / actual sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/-3%), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA, supply voltage for external devices (e.g. sensors), SELV
KL3	6	4-20 mA	Set value / actual sensor value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for MODBUS, RSB
KL3	10, 12	RSA	RS485 interface for MODBUS, RSA

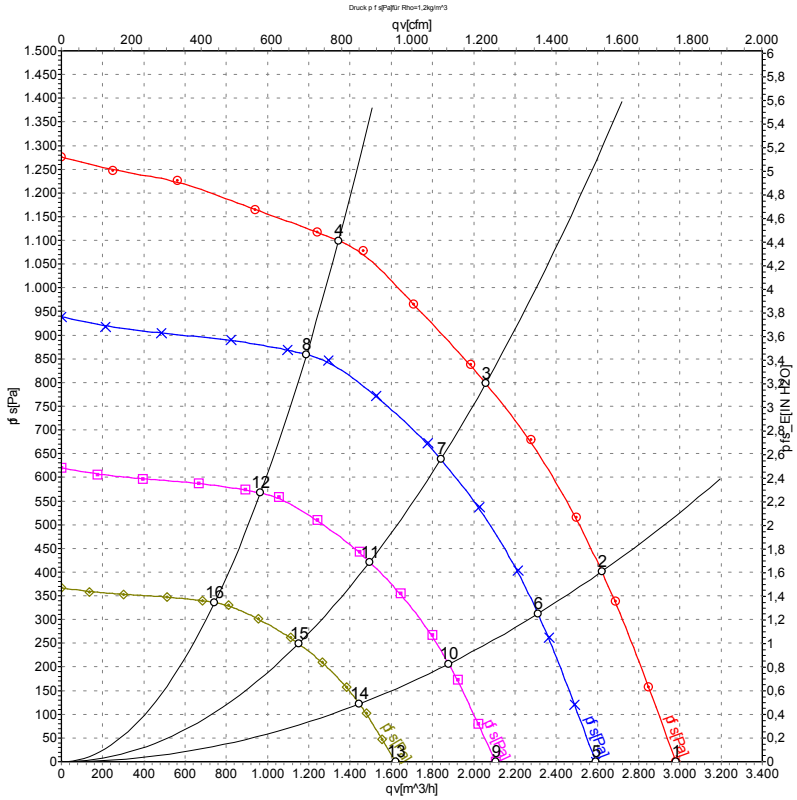
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Charts: Air flow 50 Hz



Measurement: LU-131307

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	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	m^3/h	Pa
1	400	50	3680	650	1.14	87	2980	0
2	400	50	3630	759	1.27	84	2620	400
3	400	50	3580	820	1.35	80	2060	800
4	400	50	3620	744	1.23	88	1345	1100
5	400	50	3200	428	0.75		2595	0
6	400	50	3200	520	0.87		2310	312
7	400	50	3200	581	0.94		1840	639
8	400	50	3200	514	0.85		1190	859
9	400	50	2600	230	0.40		2105	0
10	400	50	2600	279	0.47		1880	206
11	400	50	2600	312	0.51		1495	422
12	400	50	2600	276	0.46		965	567
13	400	50	2000	104	0.18		1620	0
14	400	50	2000	127	0.21		1445	122
15	400	50	2000	142	0.23		1150	250
16	400	50	2000	126	0.21		745	336

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

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