K3G250-AT42-A4

EC centrifugal module

backward curved, single inlet

with support bracket



ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G250-AT42-A4**	
Motor	**M3G084-DF**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	2970
Power input	W	480
Current draw	A	2.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}		59.6	44.2	48.2
Efficiency grade N		73.4	58	62
Power input P_{ed}	kW	0.48		
Air flow q_v	m^3/h	1755		
Pressure increase p_{fs}	Pa	532		
Speed n	min^{-1}	2975		

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

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Technical features

Mass	8.7 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 - Alarm relay - Motor current limit - PFC, active - 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
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 55022 (Class B, household environment)
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

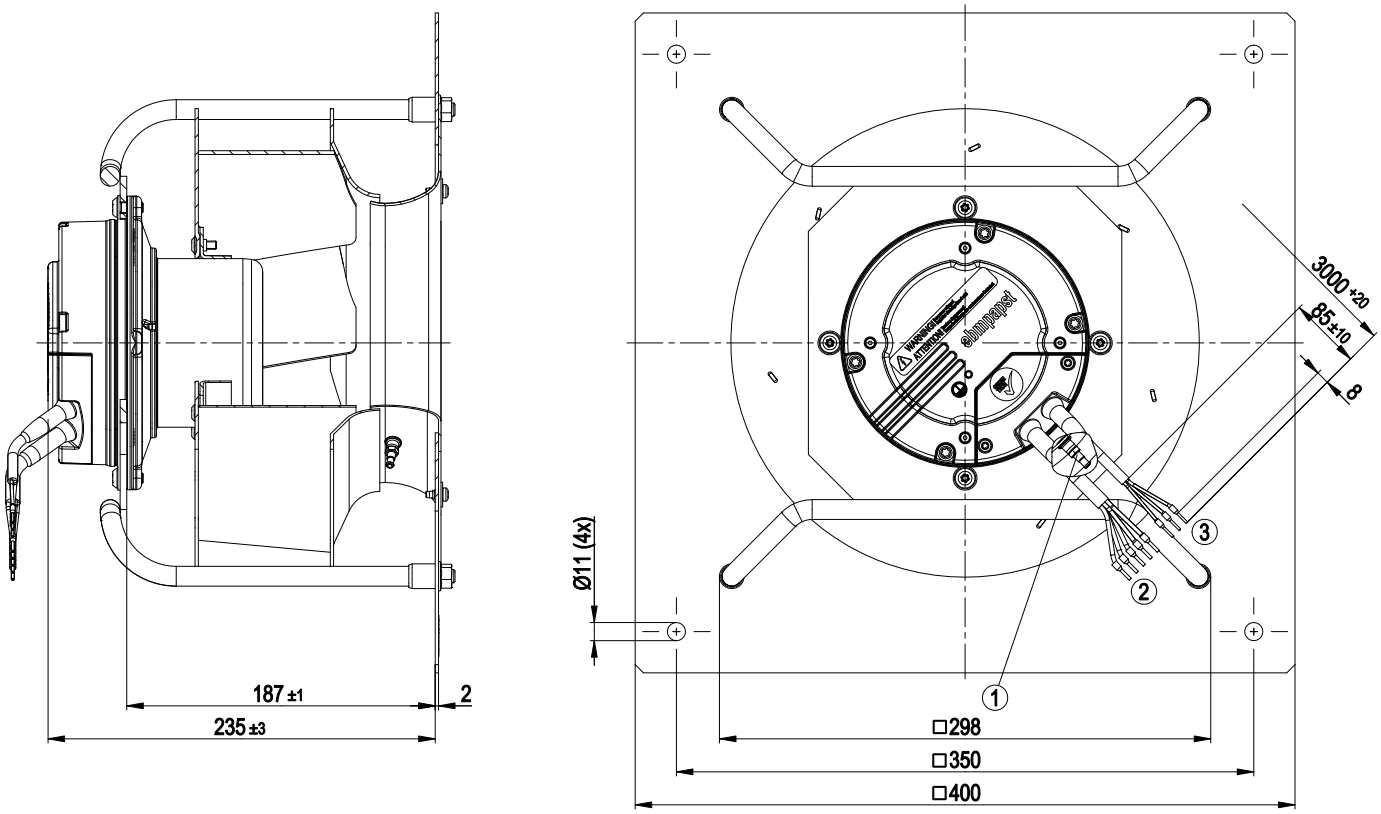
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Product drawing



1	Inlet nozzle with bleeder connection for pressure relief (k-factor 70)
2	Connection line PVC AWG18, 5x crimped core-end sleeves
3	Connection line PVC AWG22, 3x crimped core-end sleeves

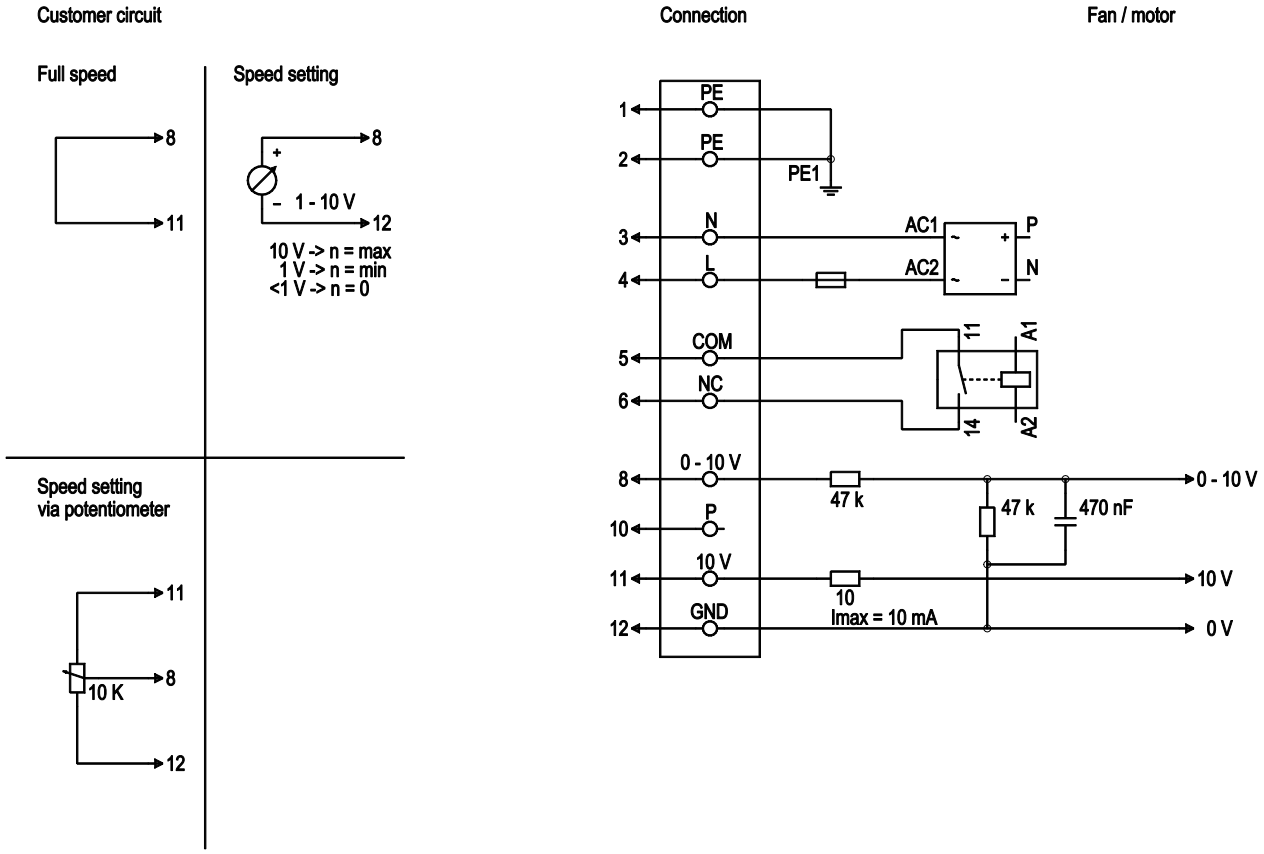
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Connection screen



Line	No.	Signal	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, voltage range see rating plate, 50 / 60 Hz
1	4	L	black	Supply voltage, phase, voltage range see rating plate, 50 / 60 Hz
1	5	COM	white 1	Floating status message contact, normally closed connection (2 A, max. 250 VAC, min. 10 mA)
1	6	NC	white 2	Floating status message contact, normally closed connection
2	8	0 -10 V	yellow	Control input, set value 0 - 10 VDC, impedance 100 kOhm, SELV
2	10	P	orange	Not assigned
2	11	10 VDC	red	Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for ext. devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV

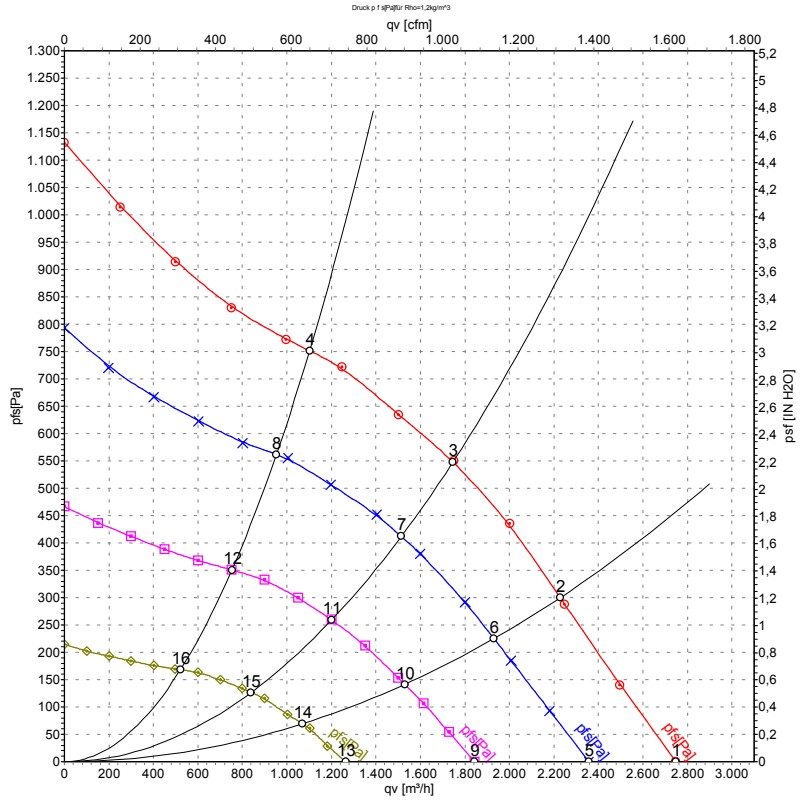
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Charts: Air flow 50 Hz



Measurement: LU-139097
Measurement: LU-139101
Measurement: LU-139105
Measurement: LU-139106

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	3180	416	1.82	2750	0
2	230	50	3050	462	2.02	2230	300
3	230	50	2970	480	2.10	1745	550
4	230	50	3040	463	2.03	1100	750
5	230	50	2730	263	1.18	2360	0
6	230	50	2630	295	1.31	1930	225
7	230	50	2580	314	1.39	1515	412
8	230	50	2615	303	1.34	955	562
9	230	50	2140	134	0.64	1840	0
10	230	50	2080	153	0.71	1530	141
11	230	50	2050	165	0.76	1200	260
12	230	50	2070	156	0.72	755	351
13	230	50	1470	52	0.34	1265	0
14	230	50	1440	60	0.36	1070	69
15	230	50	1430	64	0.37	840	126
16	230	50	1440	61	0.36	520	168

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

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