K3G560-AH02-09

EC centrifugal module

backward curved, single inlet

with support bracket

K3G560-AH02-09 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G560-AH02-09**	
Motor	**M3G150-IF**	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	1510
Power input	W	3100
Current draw	A	4.9
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}		59.7	52.6	56.6
Efficiency grade N		65.1	58	62
Power input P_{ed}	kW	3.03		
Air flow q_v	m^3/h	8745		
Pressure increase p_{fs}	Pa	709		
Speed n	min^{-1}	1505		

Data established at point of optimum efficiency

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Technical features

Mass	47.7 kg
Size	560 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, hot-galvanised
Material of support bracket	Steel, galvanised and coated in black
Material of inlet nozzle	Sheet steel, hot-galvanised
Number of blades	9
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	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. 1.1 mA - 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 - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE

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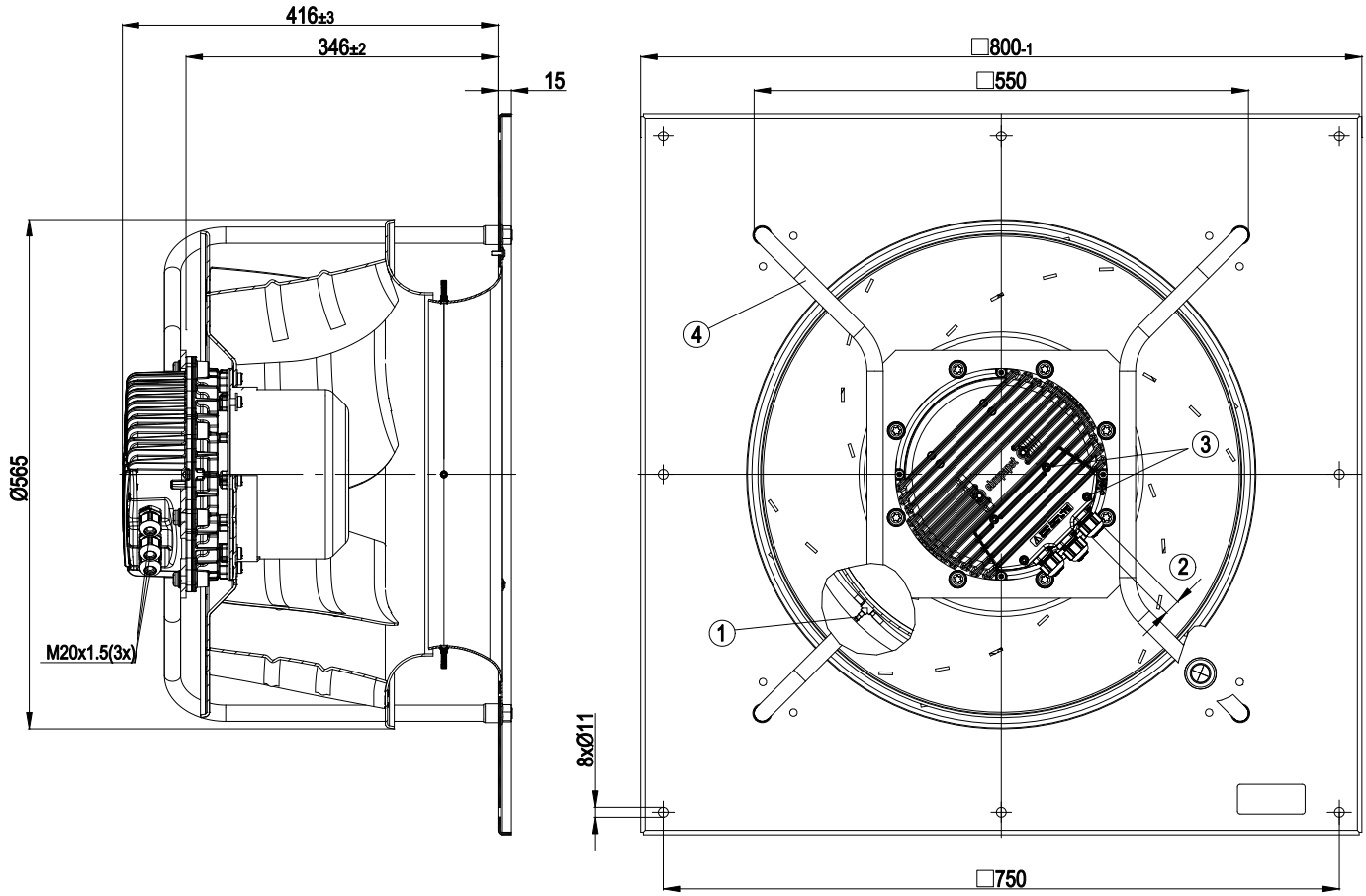
Product drawing



1	Inlet nozzle with bleeder connection for pressure relief (k-factor: 348)
2	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 4±0.6 Nm
3	Tightening torque 3.5±0.5 Nm
4	Observe the correct mounting position. Install the support struts only vertically as shown in the view.

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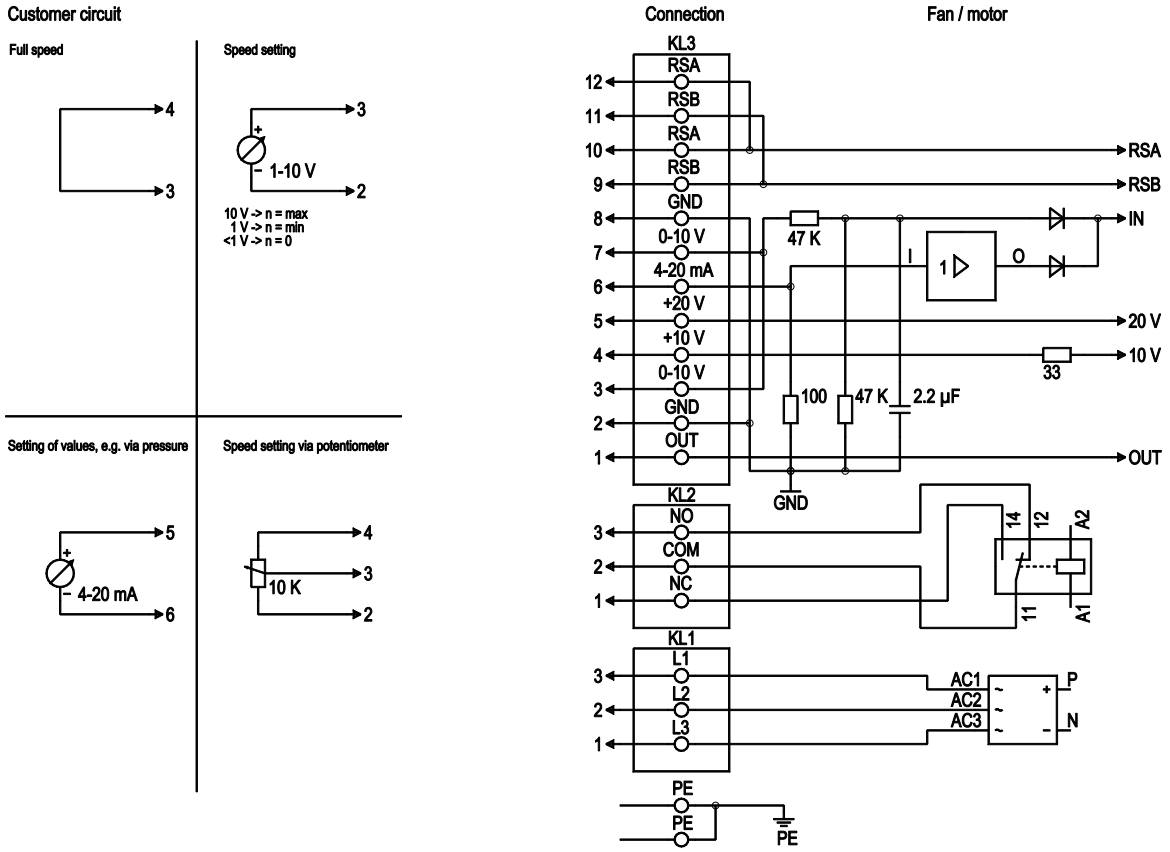
Connection screen



No.	Pin	Signal	Function / assignment
PE		PE	Protective earth connection
KL1	1, 2, 3	L1, L2, L3	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, normally closed connection
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open connection
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of the current level control coefficient: 1 V equates to 10 % level control coefficient. 10 V equate to 100 % level control coefficient.
KL3	2, 8	GND	Reference mass for control interface, SELV
KL3	3, 7	0-10 V	Use control / actual 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, supply voltage for ext. devices (e.g. potentiometers), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25 %/-10 %), max. 50 mA, supply voltage for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / actual value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for ebmBus, RSB, SELV
KL3	10, 12	RSA	RS485 interface for ebmBus, RSA, SELV

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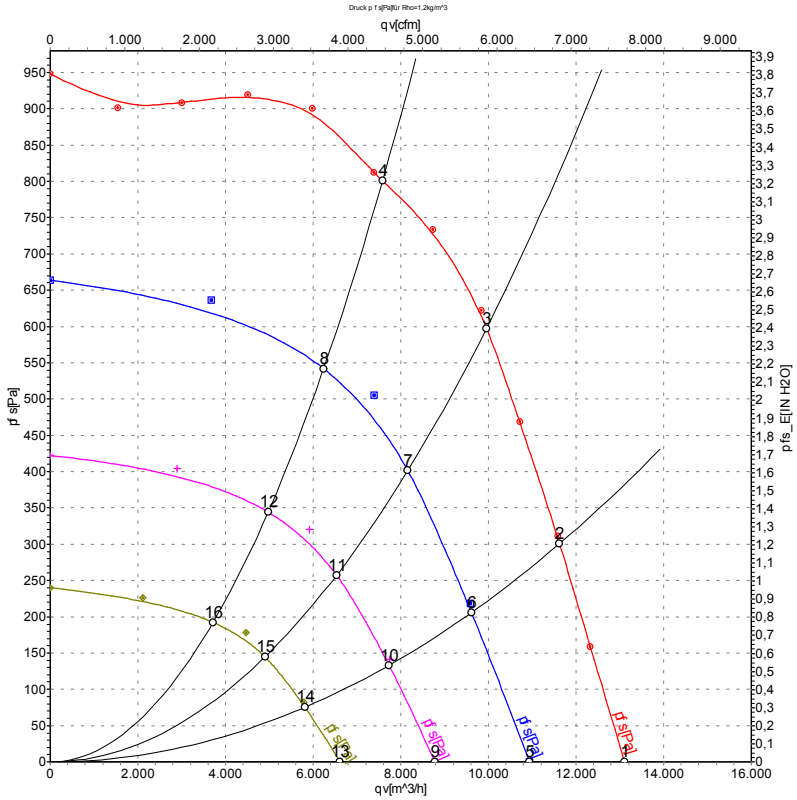
Charts: Air flow 50 Hz



Measurement: LU-109157
Measurement: LU-111949
Measurement: LU-111950
Measurement: LU-111948

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

	Conn.	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	Y	400	50	1510	1965	2.99	80	86	94	13110	0
2	Y	400	50	1510	2553	3.88	78	84	92	11620	300
3	Y	400	50	1510	3100	4.90	76	83	90	9955	600
4	Y	400	50	1510	2981	4.53	75	82	89	7585	800
5	Y	400	50	1250	1082	1.65	74	81	88	10930	0
6	Y	400	50	1250	1392	2.12	72	79	86	9615	216
7	Y	400	50	1250	1579	2.40	71	78	84	8160	405
8	Y	400	50	1250	1557	2.37	71	78	84	6240	546
9	Y	400	50	1000	583	0.95	67	74	81	8775	0
10	Y	400	50	1000	734	1.16	66	73	79	7735	142
11	Y	400	50	1000	826	1.30	65	72	78	6535	260
12	Y	400	50	1000	811	1.27	65	72	78	4970	346
13	Y	400	50	750	272	0.54	60	67	73	6615	0
14	Y	400	50	750	330	0.63	60	67	73	5810	80
15	Y	400	50	750	368	0.69	59	66	72	4900	146
16	Y	400	50	750	357	0.67	58	66	72	3715	193

Conn. = Connection · 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