K3G500-AU10-14

EC centrifugal module - AHU

backward curved, single inlet

with support plate

K3G500-AU10-14 ebmpapst Datasheet
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Nominal data

Type	**K3G500-AU10-14**
Motor	**M3G150-FF**

Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	1900
Power input	W	2800
Current draw	A	8.5
Min. ambient temperature	°C	-25
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

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Technical features

Mass	40 kg
Size	500 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 and coated in black
Material of distancing profiles	Aluminium
Material of inlet nozzle	Sheet steel, hot-galvanised and coated in black
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F5
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 top; rotor on bottom on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- PFC, passive - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Alarm relay - Integrated PID controller - Input for sensor 0-10 V or 4-20 mA - Output for slave 0-10 V - RS485 ebmBUS - Motor current limit - Soft start - Line undervoltage / phase failure detection - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA
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
Approval	CSA C22.2 Nr.77; EAC; UL 2111

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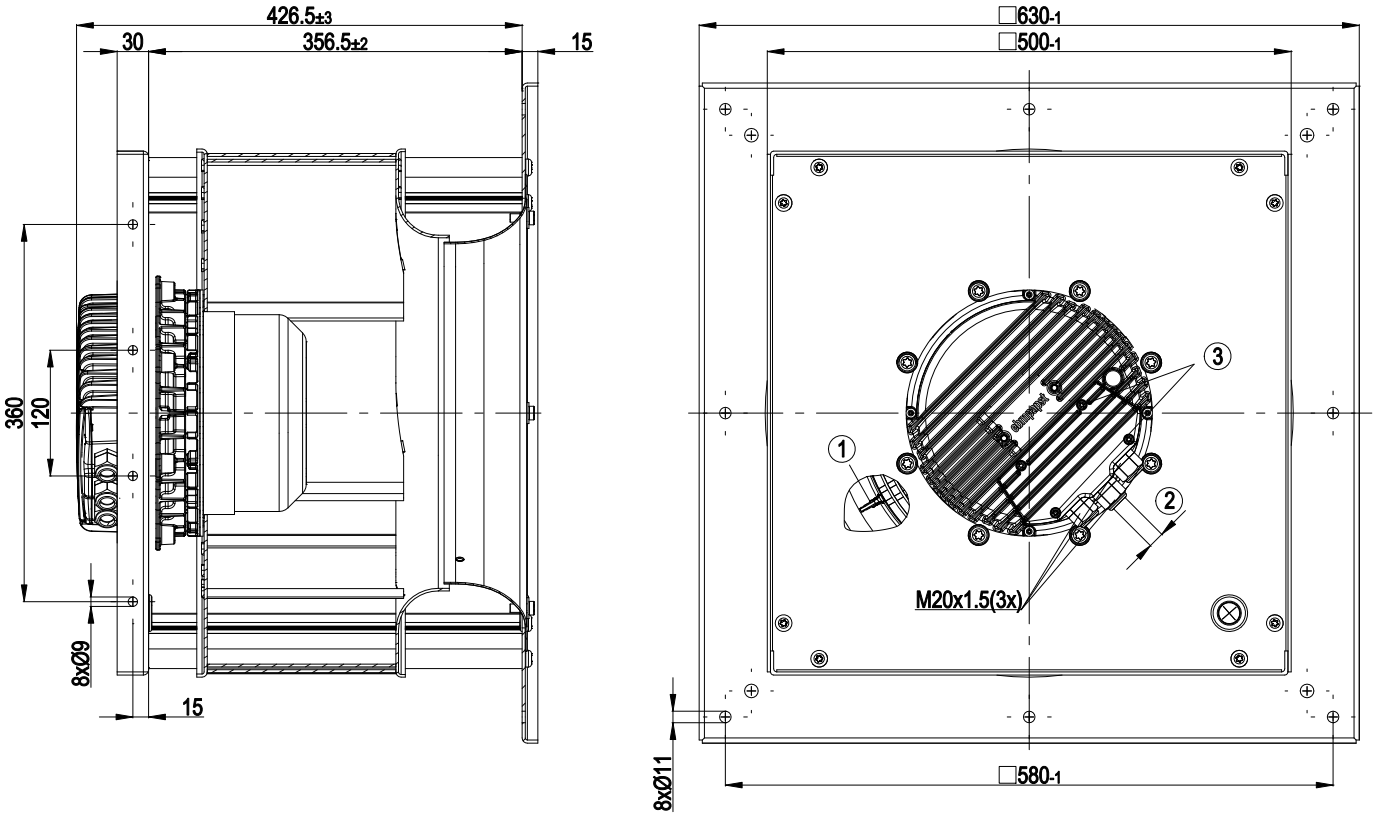
Product drawing



1	Inlet nozzle with bleeder connection for pressure relief (k-factor: 265)
2	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 4±0.6 Nm
3	Tightening torque 3.5±0.5 Nm

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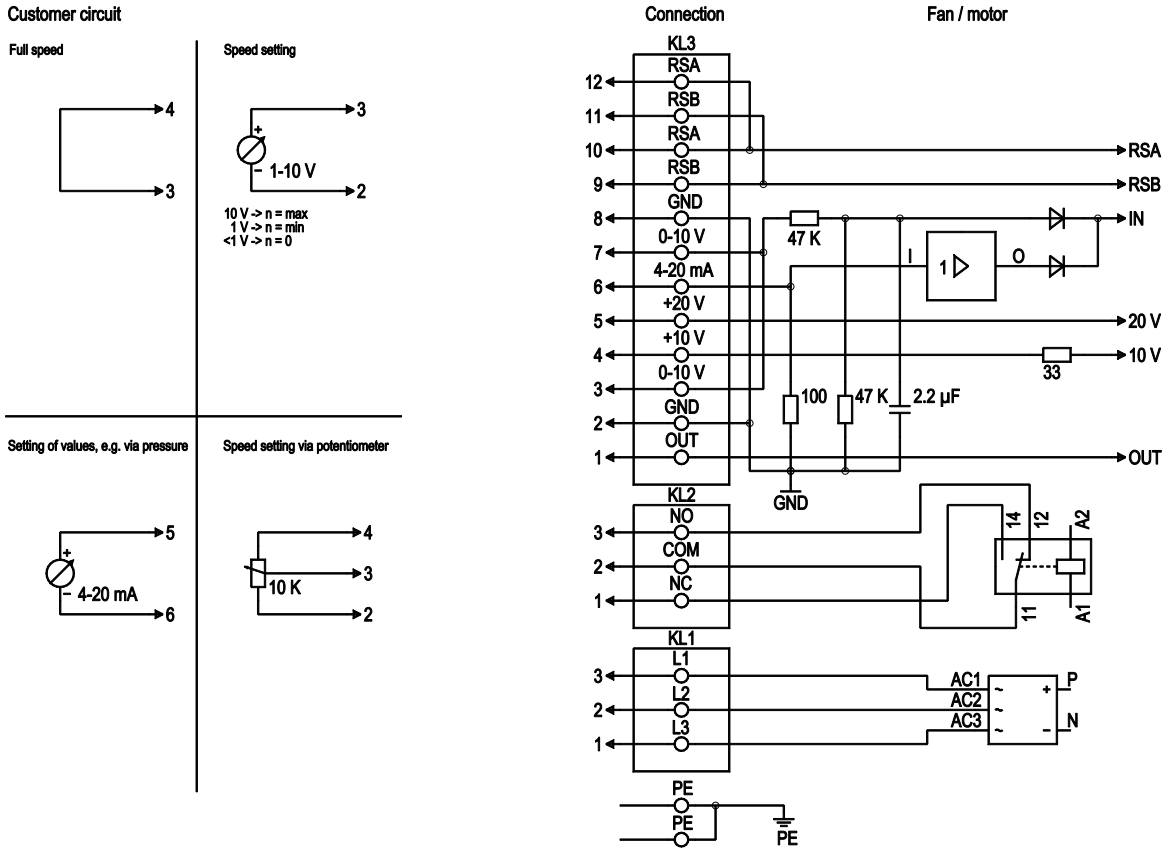
Connection screen



No.	Conn.	Designation	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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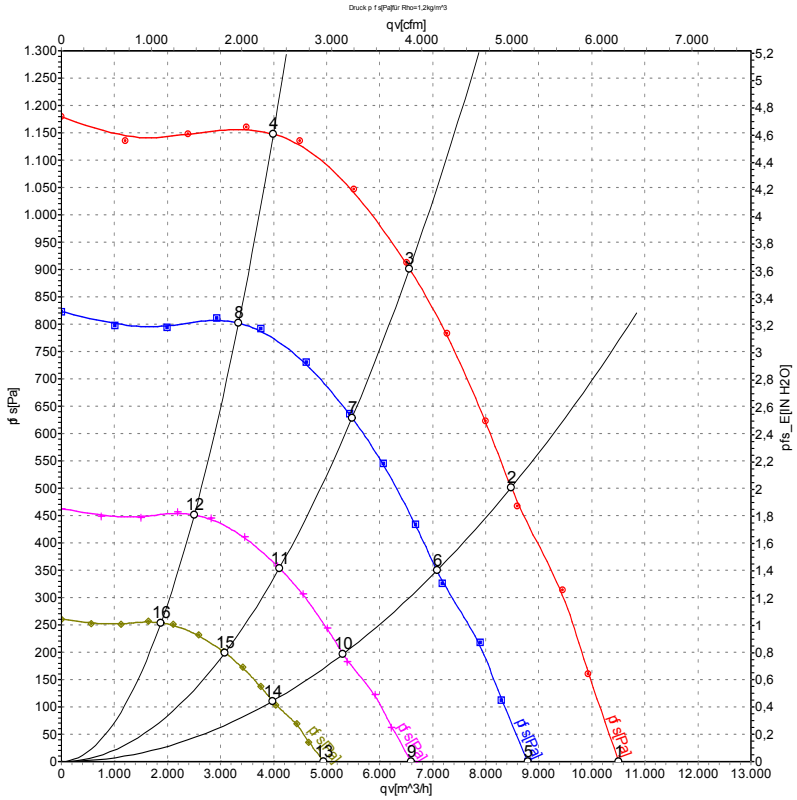
Charts: Air flow 50 Hz



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	200	50	1900	1674	5.13	86	95	103	10510	0
2	200	50	1900	2439	7.49	81	90	99	8480	500
3	200	50	1900	2800	8.50	77	84	90	6560	900
4	200	50	1900	2632	8.12	79	87	91	3995	1150
5	200	50	1600	980	3.00	82	91	99	8790	0
6	200	50	1600	1420	4.36	77	86	95	7080	348
7	200	50	1600	1663	5.15	73	81	86	5480	630
8	200	50	1600	1537	4.74	75	83	87	3340	802
9	200	50	1200	413	1.27	76	85	93	6595	0
10	200	50	1200	599	1.84	71	80	88	5310	196
11	200	50	1200	702	2.17	67	74	80	4110	355
12	200	50	1200	649	2.00	69	77	81	2505	451
13	200	50	900	174	0.53	70	78	87	4945	0
14	200	50	900	253	0.78	64	74	82	3985	110
15	200	50	900	296	0.92	60	68	73	3080	200
16	200	50	900	274	0.84	63	70	75	1880	254

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