K3G400-AQ14-13

EC centrifugal module

backward curved, single inlet

with support bracket

K3G400-AQ14-13 ebmpapst Datasheet
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Nominal data

Type	**K3G400-AQ14-13**	
Motor	**M3G150-FF**	
Phase		3~
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min^{-1}	2380
Power input	W	2470
Current draw	A	7.6
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

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Technical features

Mass	32 kg
Size	400 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminum
Material of impeller	Aluminium sheet
Material of mounting plate	Sheet steel, hot-galvanised
Material of support bracket	Steel, coated in black
Number of blades	7
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	- 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 - Output 20 VDC - Output 10 VDC - RS485 ebmBUS - Motor current limit - Soft start - 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	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	UL; CSA C22.2 Nr.100

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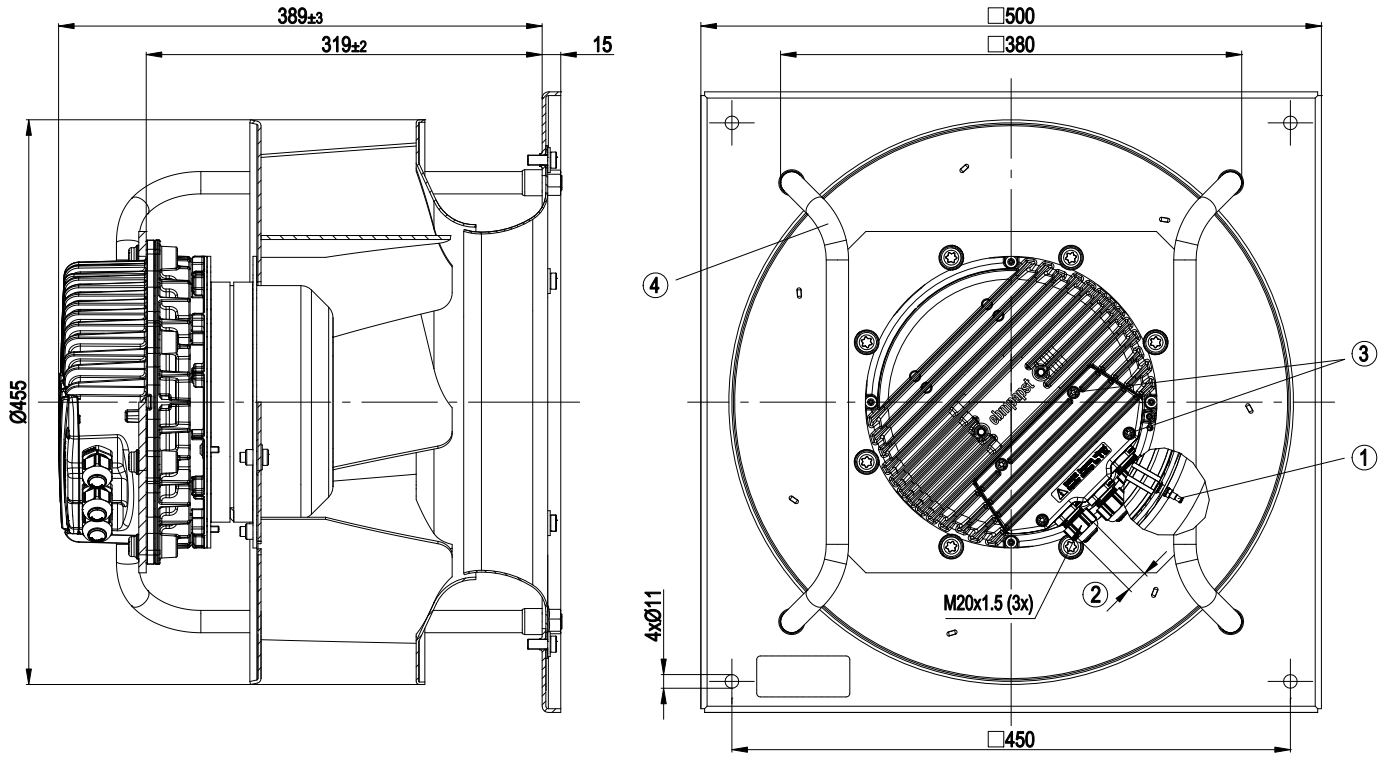
Product drawing



1	Inlet nozzle with bleeder connection for pressure relief (k-factor: 188)
2	Cable diameter: min. 4 mm; max. 10 mm; tightening torque: 4±0.6 Nm
3	Tightening torque 3.5±0.5 Nm
4	Mounting position: shaft horizontal (install the support struts only vertically as shown in the view!) or rotor on bottom; rotor on top on request

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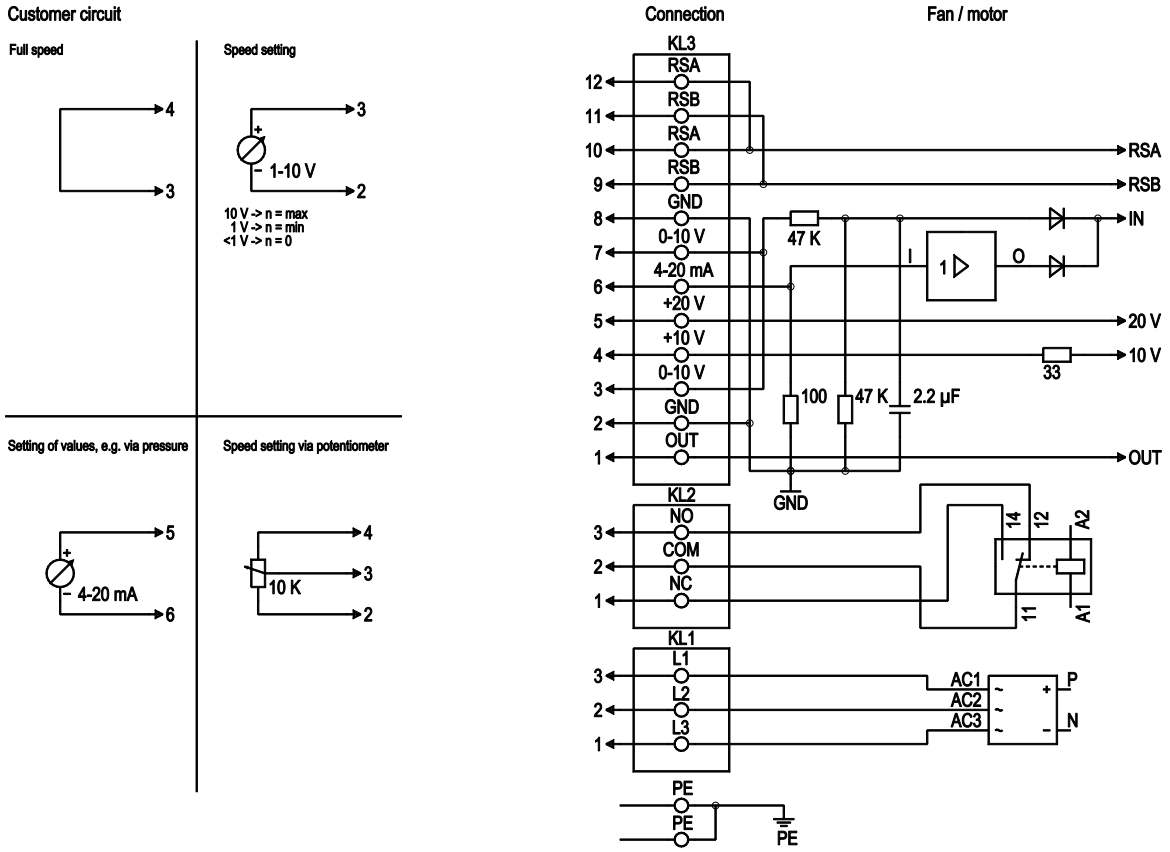
Connection screen



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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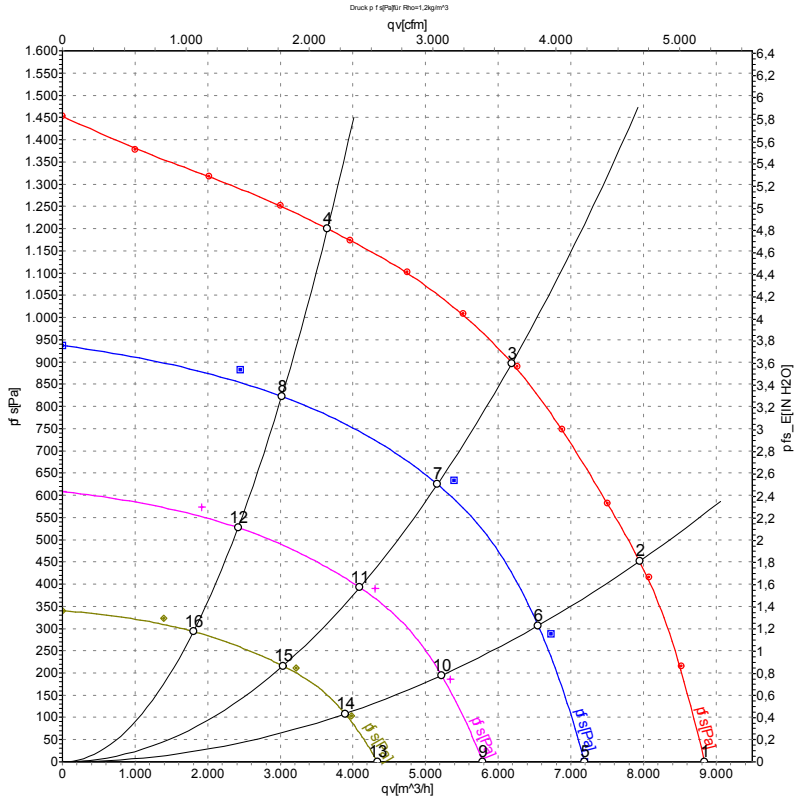
Charts: Air flow 50 Hz



Measurement: LU-110142
Measurement: LU-115192
Measurement: LU-115191
Measurement: LU-115190

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	2495	1906	5.86	85	92	99	8845	0
2	200	50	2420	2247	6.90	80	86	95	7950	450
3	200	50	2380	2470	7.60	75	82	91	6190	900
4	200	50	2415	2327	7.15	78	86	94	3650	1200
5	200	50	2000	975	3.03	80	87	93	7190	0
6	200	50	2000	1210	3.74	75	82	89	6550	332
7	200	50	2000	1375	4.24	72	78	86	5165	652
8	200	50	2000	1221	3.76	75	81	88	3020	834
9	200	50	1600	524	1.64	74	81	87	5790	0
10	200	50	1600	649	2.02	69	76	82	5220	210
11	200	50	1600	720	2.22	65	72	79	4095	407
12	200	50	1600	650	2.01	68	74	81	2420	535
13	200	50	1200	231	0.79	67	73	79	4340	0
14	200	50	1200	290	0.96	63	70	75	3890	116
15	200	50	1200	316	1.04	59	66	71	3035	222
16	200	50	1200	290	0.94	60	67	72	1805	298

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