

backward curved, single inlet

with support bracket

K3G400-AX66-05 ebmpapst Datasheet

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Nominal data

Type	K3G400-AX66-05	
Motor	M3G112-EA	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min ⁻¹	1480
Power input	W	595
Current draw	A	1.12
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+35

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

		Actual	Request 2013	Request 2015
Installation category	A			
Efficiency category	Static			
Variable speed drive	Yes			
Specific ratio*	1.00			
Overall efficiency η_{es}		65.3	45	49
Efficiency grade N		78.3	58	62
Power input P_{ed}	kW	0.58		
Air flow q_v	m ³ /h	3615		
Pressure increase p_{fs}	Pa	348		
Speed n	min ⁻¹	1485		

Data established at point of optimum efficiency.



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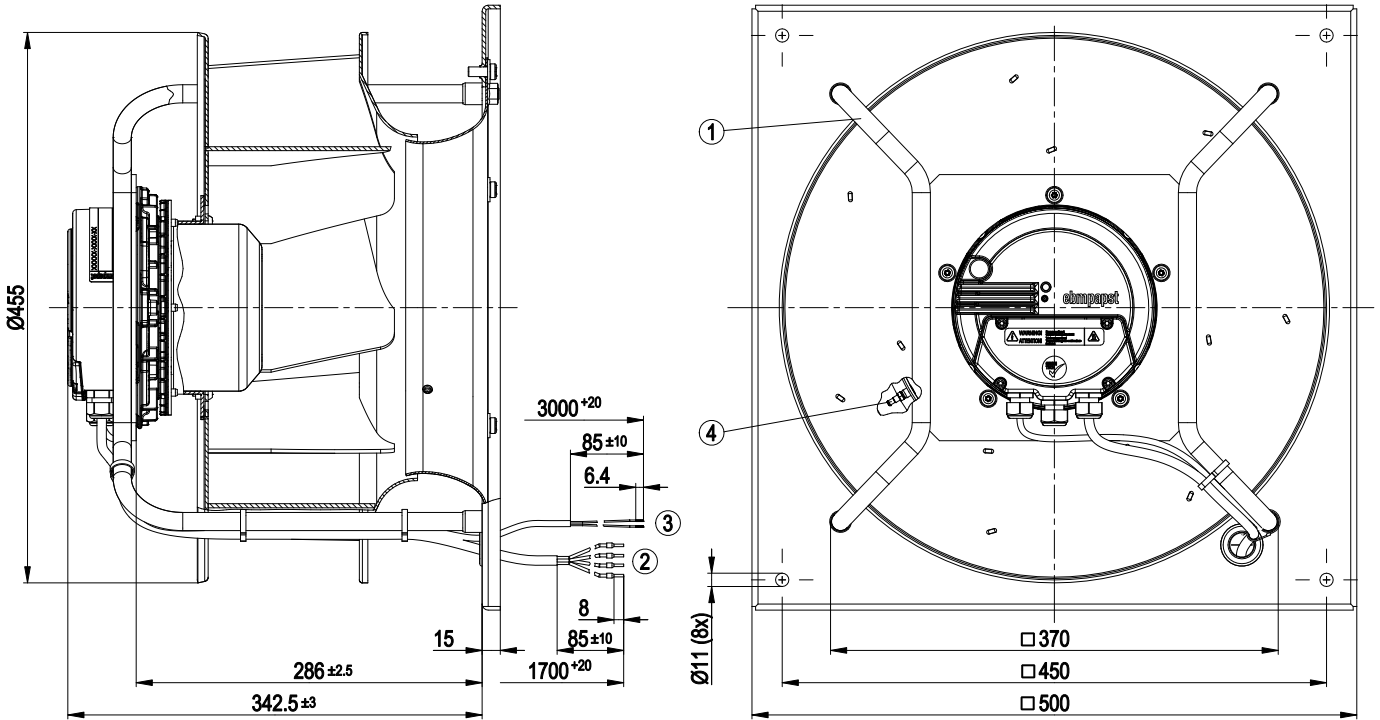
Technical features

Mass	18.8 kg
Size	400 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	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	On the stator side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - 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
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 61000-6-3 (household environment)
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE

EC centrifugal module - Plug fan

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Product drawing



1	Mounting position: shaft horizontal (install the support struts only vertically as shown in the view!) or rotor on top; rotor on bottom on request
2	Connection line silicone 4G 1.5 mm ² , 4 x crimped core-end sleeves
3	Connection line PVC AWG22, 2 x brass lead tips crimped
4	Inlet nozzle with bleeder connection for pressure relief (k-factor: 188)

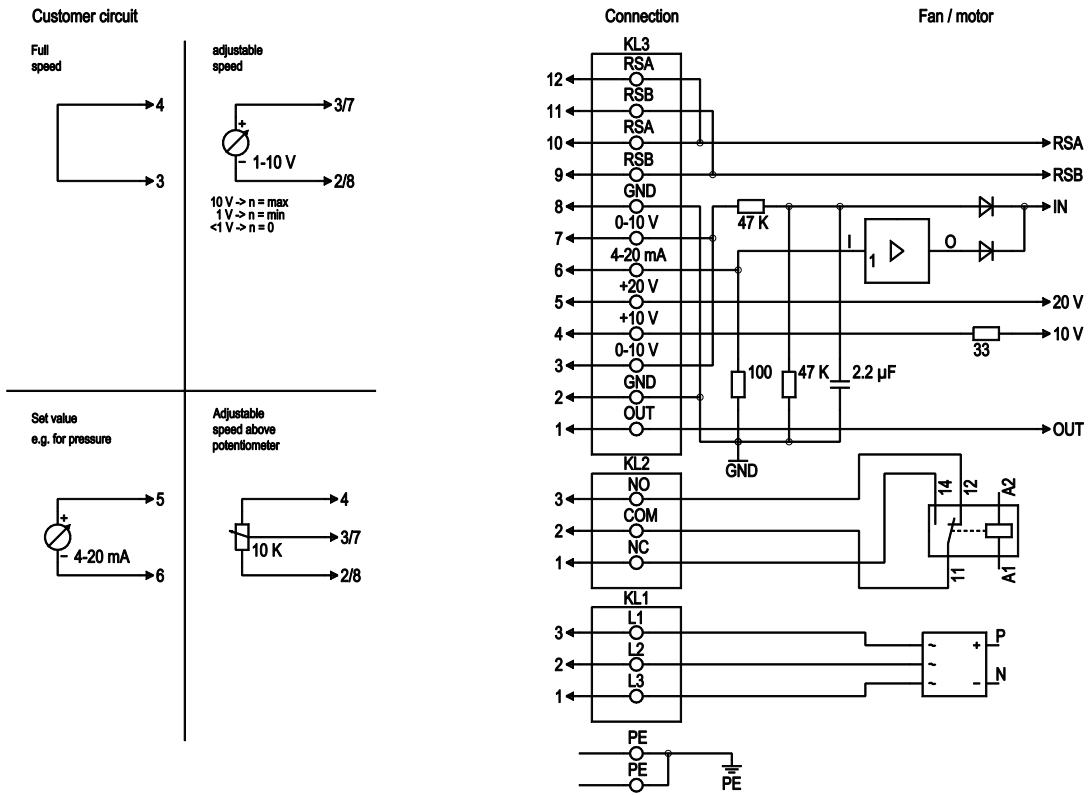


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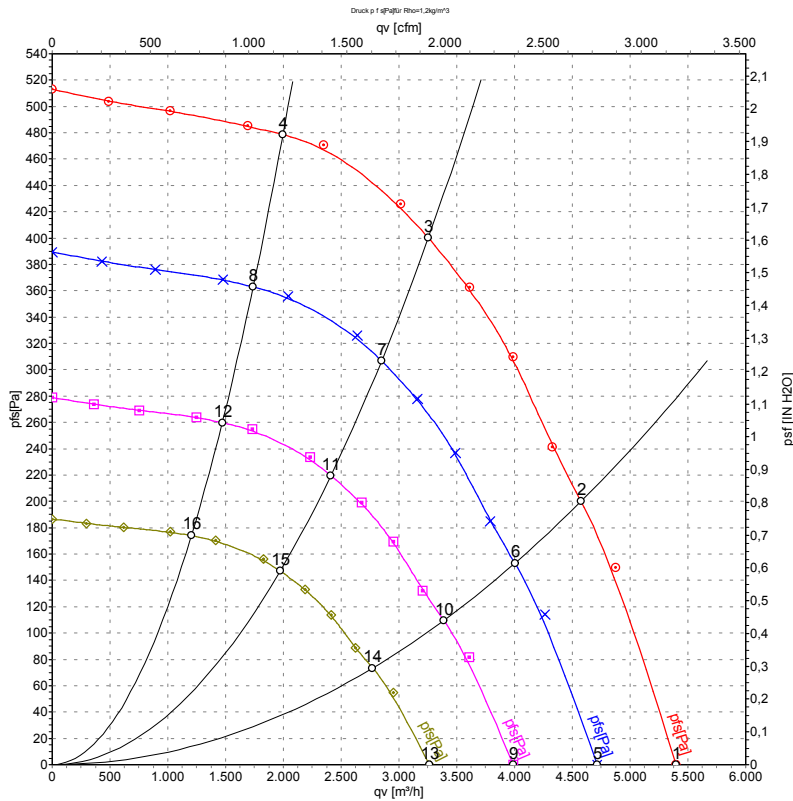
Connection screen



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



Charts: Air flow 50 Hz



Measurement: LU-134466

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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	400	50	1480	405	0.85	71	79	84	5400	0
2	400	50	1480	514	1.03	67	76	80	4575	200
3	400	50	1480	595	1.12	66	74	79	3255	400
4	400	50	1480	539	1.06	67	75	80	1995	480
5	400	50	1300	269	0.56	68	76	81	4710	0
6	400	50	1300	344	0.69	64	72	77	4005	153
7	400	50	1300	398	0.77	62	71	76	2850	307
8	400	50	1300	356	0.70	64	72	76	1740	363
9	400	50	1100	163	0.34	64	72	77	3985	0
10	400	50	1100	208	0.42	60	68	73	3385	110
11	400	50	1100	241	0.47	58	67	71	2410	220
12	400	50	1100	216	0.43	60	68	72	1470	260
13	400	50	900	89	0.19	59	67	72	3260	0
14	400	50	900	114	0.23	54	63	67	2770	73
15	400	50	900	132	0.26	53	62	66	1975	147
16	400	50	900	118	0.23	55	63	67	1205	174

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

