K3G400-AC30-52

EC centrifugal module

backward curved, single inlet

with support plate

K3G400-AC30-52 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G400-AC30-52**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	1304
Power input	W	370
Current draw	A	1.8 (200V)
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	30

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*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	58.2	42.4	46.4
Efficiency grade N		73.8	58	62
Power input P_{ed}	kW	0.33		
Air flow q_v	m^3/h	2080		
Pressure increase p_{fs}	Pa	300		
Speed n	min^{-1}	1310		

Data definition with optimum efficiency. LU-70774
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	10 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	Aluminium sheet
Material of distancing profiles	Aluminium
Material of inlet nozzle	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity class	F0
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	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	-Operation and alarm display via LED -Integrated PID controller -Motor current limit -PFC, active -RS-485 ebmBUS with DCI function -Soft start -Control interface with SELV potential safely disconnected from the mains -Excess temperature protection for 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 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
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
Approval	UL 2111; CSA C22.2 Nr.77

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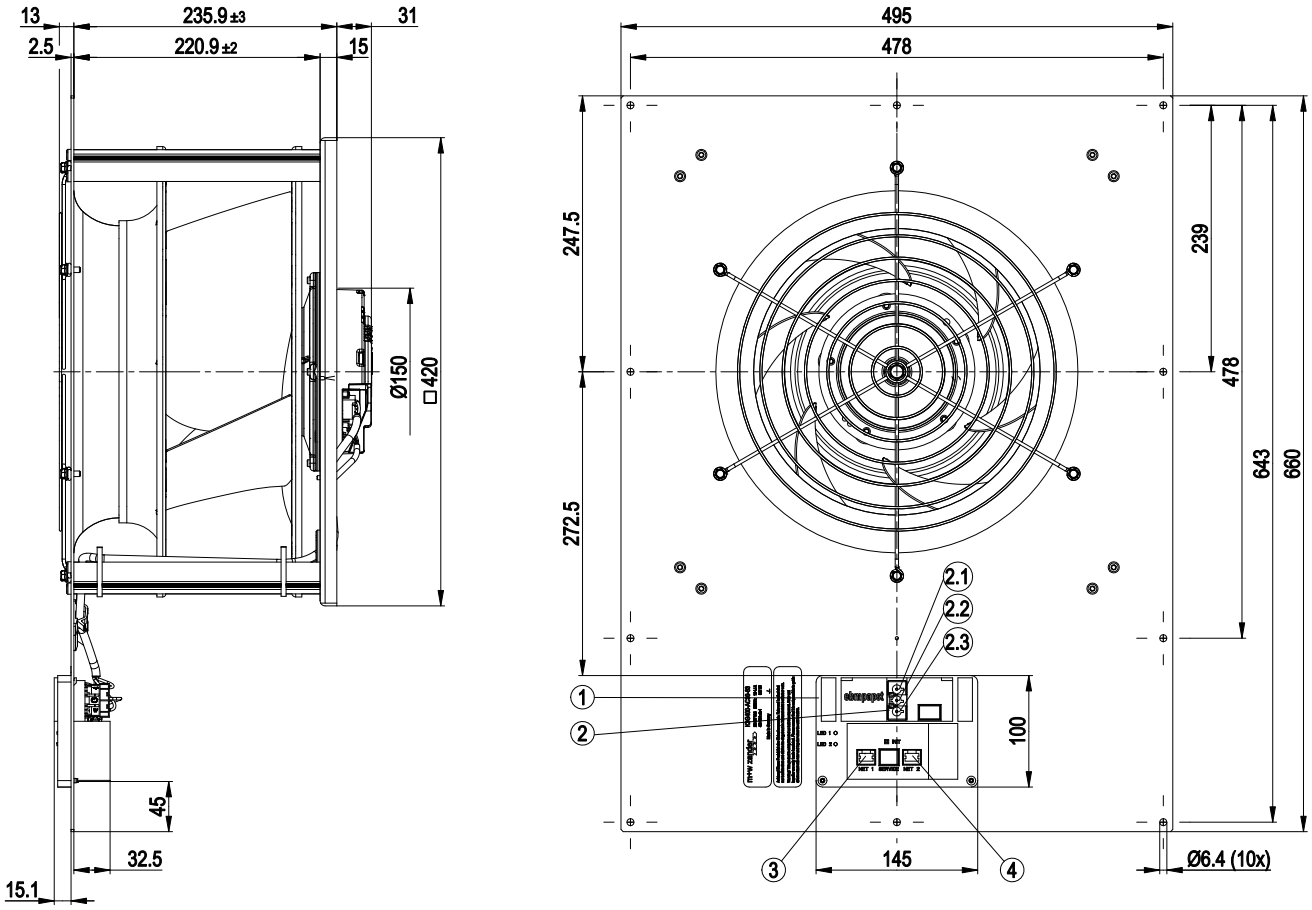
Product drawing



1	Terminal box
2	Connector housing 3-pole GST18/3 Wieland 92.032.9058.1
2.1	N
2.2	PE
2.3	L
3	RJ45 socket (RSA PIN 1+3 / RSB PIN 2+6)
4	RJ45 socket (RSA PIN 1+3 / RSB PIN 2+6)

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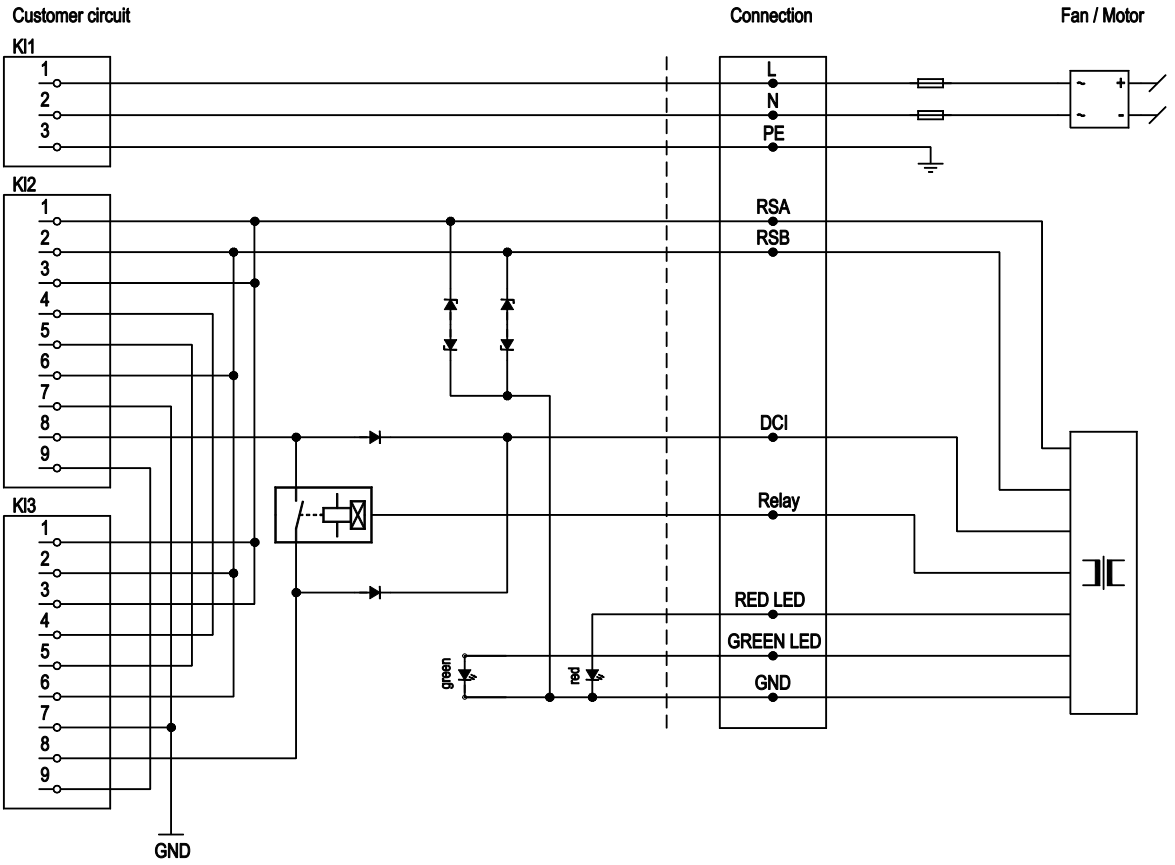
Connection screen



LED1 / LED2

Status	Priority	Address S/N	Speed	Green LED	Red LED
Malfunction	1	S/N any	any	off	Flashing 1 Hz
Flashing	2	S/N = 1/1	any	Flashing 10 Hz	on
Flashing	2	S/N <> 1	any	Flashing 10 Hz	off
After set value change	3	S/N = 1/1	any	Flashing 3x at 2.5 Hz	on
After set value change	3	S/N <> 1	any	Flashing 3x at 2.5 Hz	off
Fan speed 0	4	S/N = 1/1	n = 0	Flashing 1 Hz	on
Fan speed 0	4	S/N <> 1	n = 0	Flashing 1 Hz	off
Fan speed >0	4	S/N = 1/1	n > 0	off	on
Fan speed >0	4	S/N <> 1	n > 0	on	off

No.	Conn.	Designation	Function / assignment
KL1	1	L	Power supply, phase, 50/60 Hz
KL1	2	N	Power supply, neutral conductor, 50/60 Hz
KL1	3	PE	Protective earth
KL2/KL3	1	RSA	RS485 interface for ebmBUS, RSA
KL2/KL3	2	RSB	RS485 interface for ebmBUS, RSB
KL2/KL3	3	RSA	RS485 interface for ebmBUS, RSA
KL2/KL3	4	-	Bridge KL2-KL3
KL2/KL3	5	-	Bridge KL2-KL3
KL2/KL3	6	RSB	RS485 interface for ebmBUS, RSB
KL2/KL3	7	GND	Reference ground
KL2/KL3	8	DCI	Daisy chain signal
KL2/KL3	9	Schirm	Shield for RJ45-CAT5 wire (not used)

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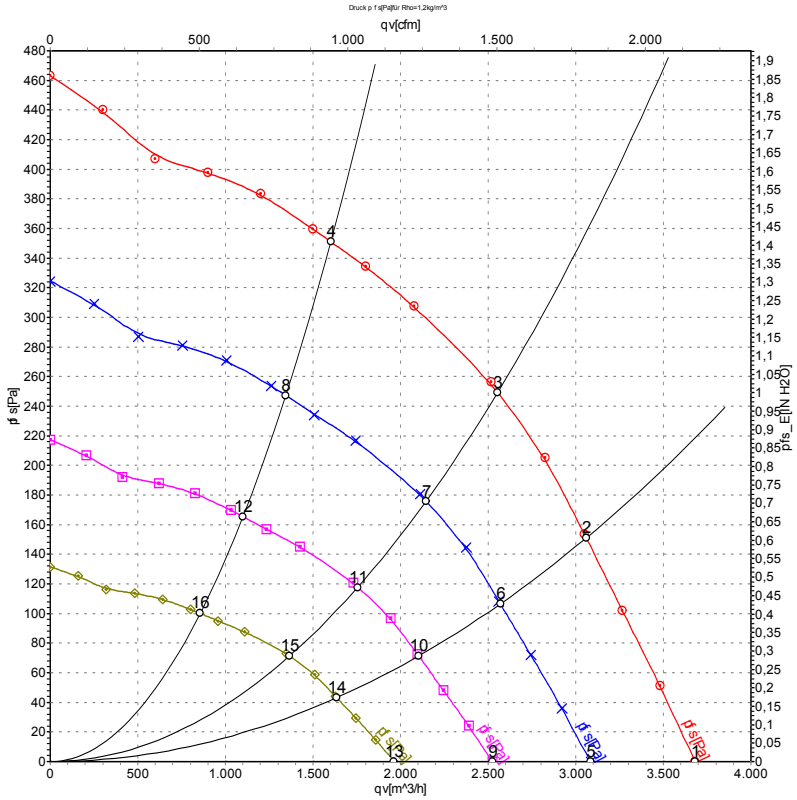
Charts: Air flow 50 Hz



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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	200	50	1305	284	1.44	3680	0
2	200	50	1305	330	1.67	3060	150
3	200	50	1305	350	1.80	2555	250
4	200	50	1305	314	1.59	1600	350
5	200	50	1100	167	0.85	3085	0
6	200	50	1100	196	0.99	2570	107
7	200	50	1100	207	1.05	2145	177
8	200	50	1100	186	0.94	1345	247
9	200	50	900	91	0.46	2525	0
10	200	50	900	107	0.54	2105	71
11	200	50	900	114	0.57	1755	118
12	200	50	900	102	0.51	1100	166
13	200	50	700	43	0.22	1965	0
14	200	50	700	50	0.26	1635	43
15	200	50	700	53	0.27	1365	72
16	200	50	700	48	0.24	855	100

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