K3G310-AN12-93

EC centrifugal module

backward curved, single inlet

with support bracket

K3G310-AN12-93 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G310-AN12-93**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	110
Nominal voltage range	VDC	77 .. 145
Type of data definition		ml
Speed	min^{-1}	2300
Power input	W	410
Current draw	A	3.7
Min. ambient temperature	°C	-40
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

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	43.3	47.3
Efficiency grade N		74.4	58	62
Power input P_e	kW	0.4		
Air flow q_v	m^3/h	1600		
Pressure increase p_{fs}	Pa	494		
Speed n	min^{-1}	2310		

Data definition with optimum efficiency. LU-104537
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	7.5 kg
Size	310 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet aluminium, laser-welded
Material of mounting plate	Aluminium sheet
Material of support bracket	Steel, coated in black plastic (RAL 9005)
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F3-1
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 top; rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Output 10 VDC, max. 1.1 mA - Over-temperature protected electronics / motor - Alarm relay - Line undervoltage detection - Motor current limit - Soft start
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Product conforming to standard	EN 61800-5-1
Approval	EAC

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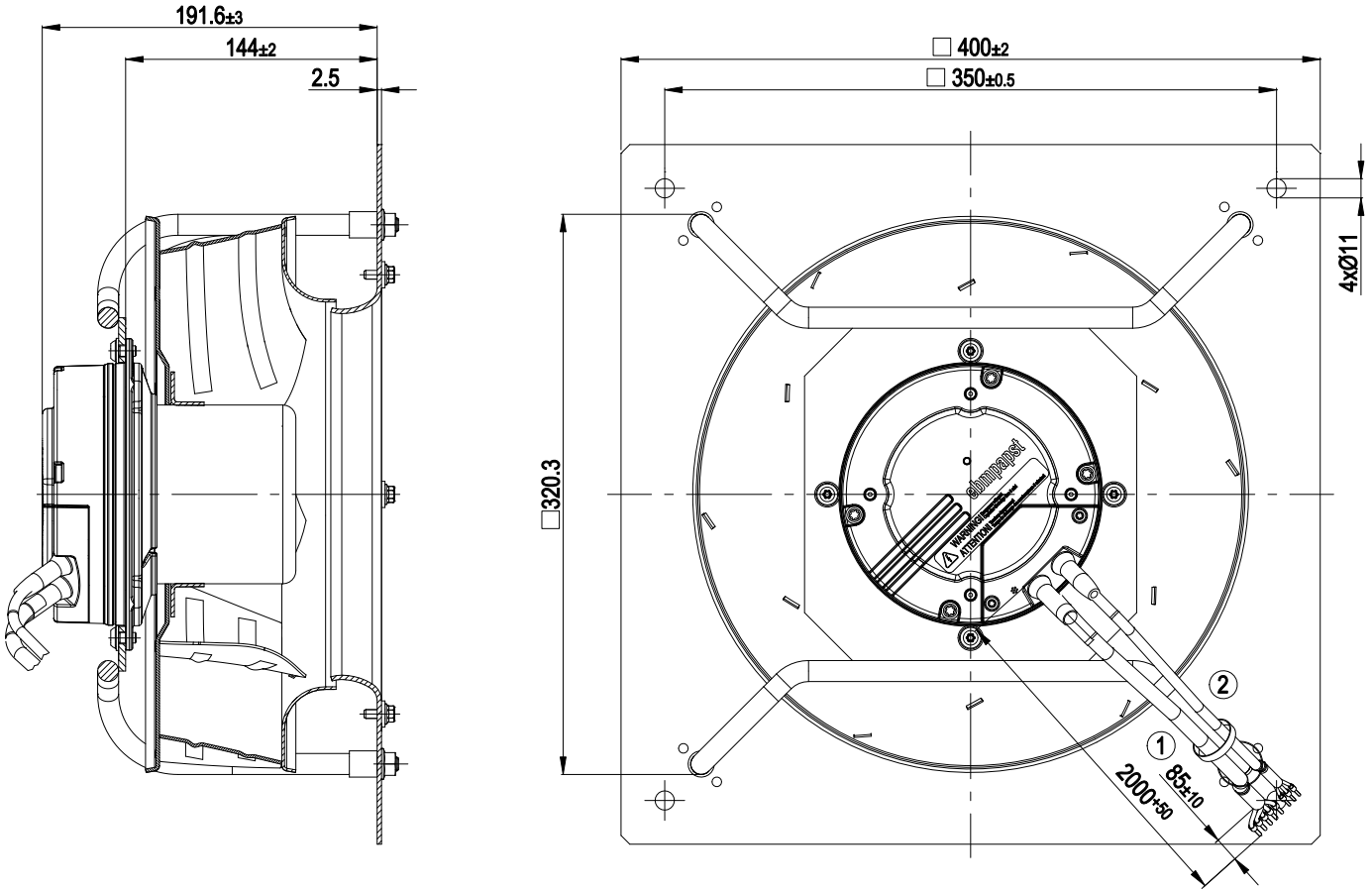
Product drawing



1	Connection line halogen- and silicone-free, 5 x 1.00 mm², 5 x crimped core-end sleeves
2	Connection line halogen- and silicone-free, 3 x 0.33 mm², 3 x crimped core-end sleeves

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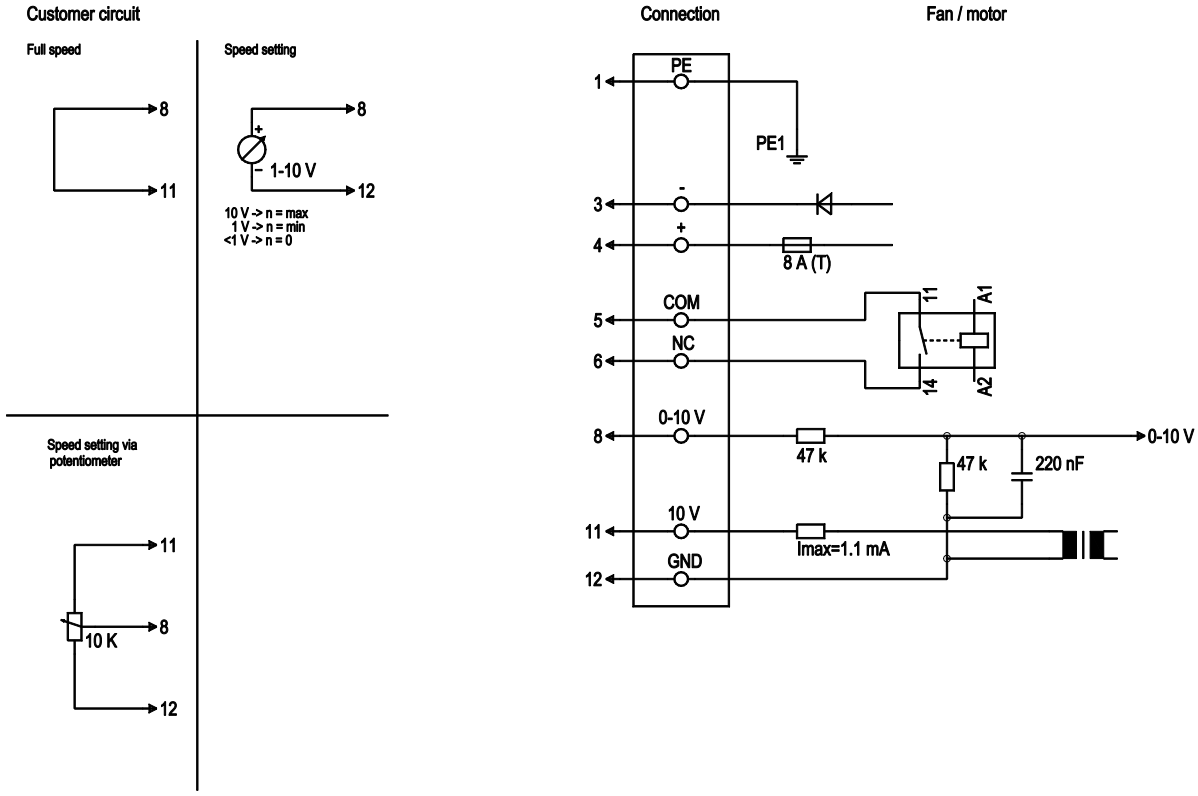
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	PE	green/yellow	Protective earth
1	3	-	blue	Supply voltage, GND (110 VDC)
1	4	+	red	Supply voltage, 110 VDC
1	5	COM	white 1	Alarm relay, COMMON (0.6 A-110 VDC, 1 A-80 VDC, 3 A-30 VDC)
1	6	NC	white 2	Alarm relay, normally closed, break for failure
2	8	0-10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kΩ, SELV
2	11	10 VDC	red	Voltage output 10 VDC (+/-3%), max. 1.1 mA, supply voltage for external devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV

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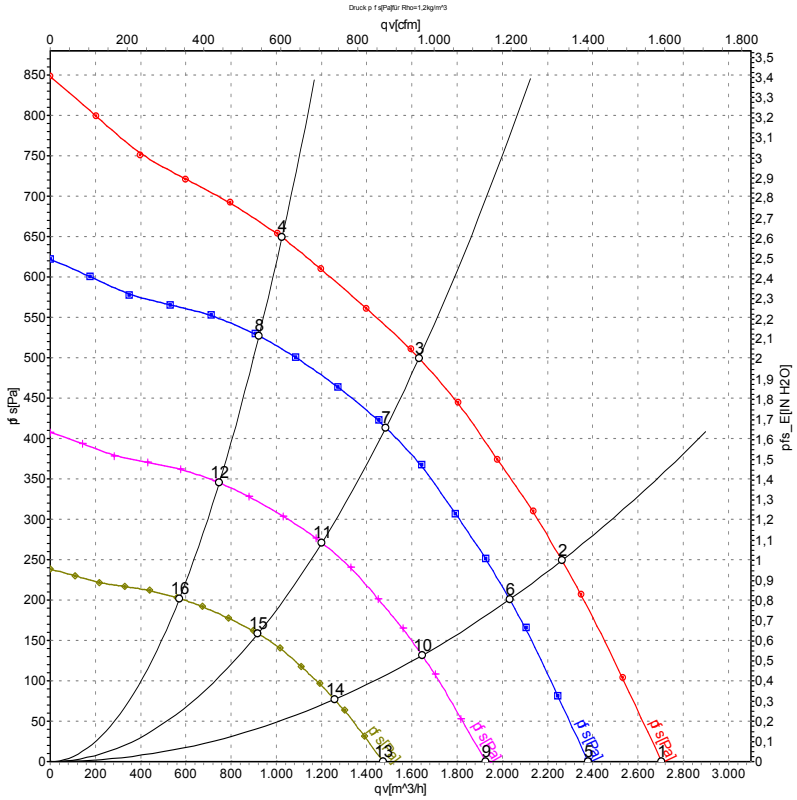
Charts: Air flow



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	n	P_{ed}	I	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa
1	110	2385	309	2.80	2705	0
2	110	2340	369	3.35	2265	250
3	110	2300	410	3.70	1630	500
4	110	2330	385	3.50	1025	650
5	110	2100	211	1.91	2380	0
6	110	2100	267	2.43	2030	201
7	110	2100	308	2.80	1485	414
8	110	2100	282	2.56	925	527
9	110	1700	112	1.01	1925	0
10	110	1700	142	1.29	1645	132
11	110	1700	163	1.48	1200	271
12	110	1700	150	1.36	750	346
13	110	1300	50	0.45	1475	0
14	110	1300	63	0.58	1260	77
15	110	1300	73	0.66	920	159
16	110	1300	67	0.61	570	202

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