K3G280-AT04-56

EC centrifugal module - Plug fan

backward curved, single inlet

with support bracket



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G280-AT04-56**
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}	2400
Power input	W	415
Current draw	A	2.7
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

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}	%	64.5	43.5	47.5
Efficiency grade N		79	58	62
Power input P_{ed}	kW	0.42		
Air flow q_v	m^3/h	1770		
Pressure increase p_{fs}	Pa	500		
Speed n	min^{-1}	2340		

Data definition with optimum efficiency. LU-131078
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	280 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	Aluminium sheet, white plastic-coated
Material of mounting plate	Sheet steel, galvanised and coated in white
Material of support bracket	Steel, galvanised and 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	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 bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limit - 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 detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
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; CE
Approval	EAC; UL 2111; CSA C22.2 Nr.77

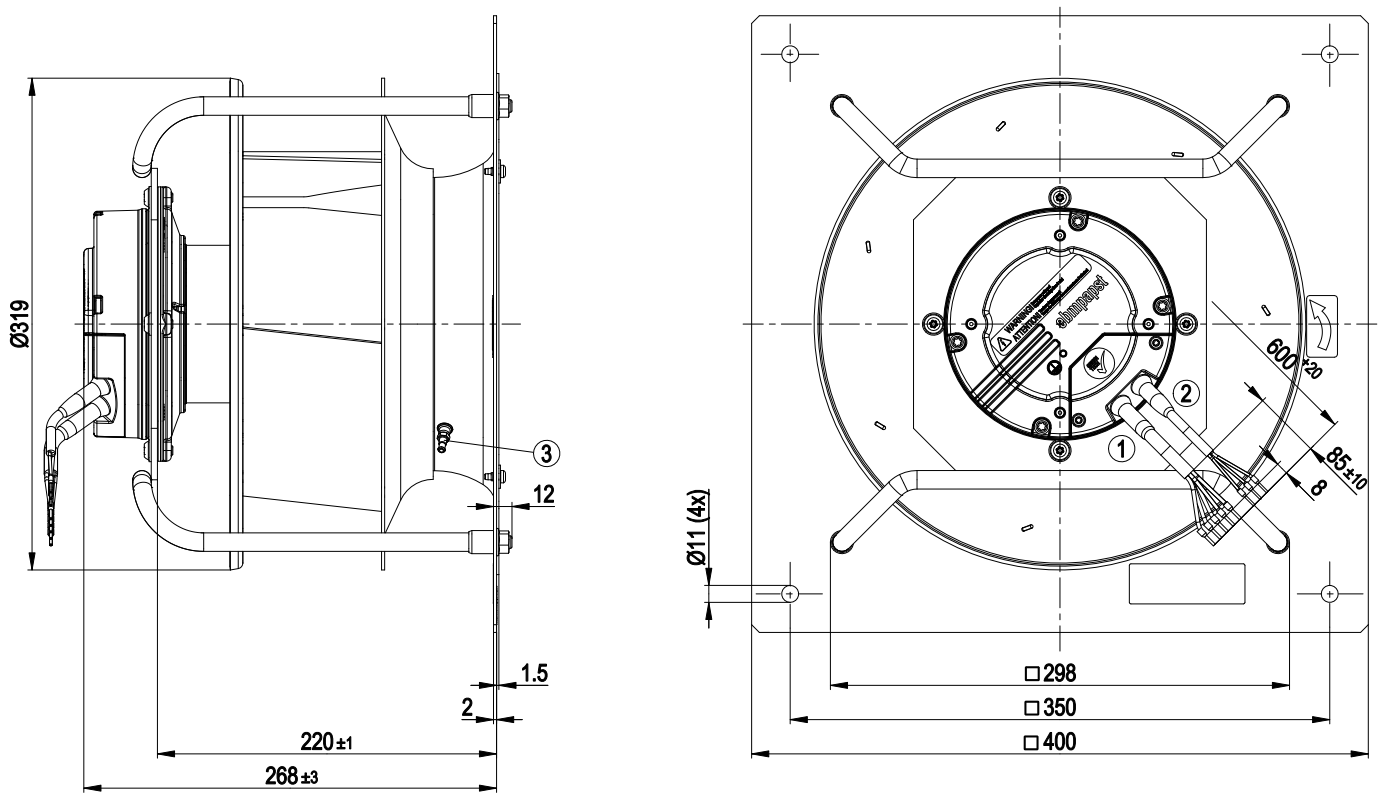
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Product drawing



1	Connection line PVC AWG18, 5x crimped core-end sleeves
2	Connection line PVC AWG22, 3x crimped core-end sleeves
3	Inlet nozzle with pressure tap (k-factor: 93)

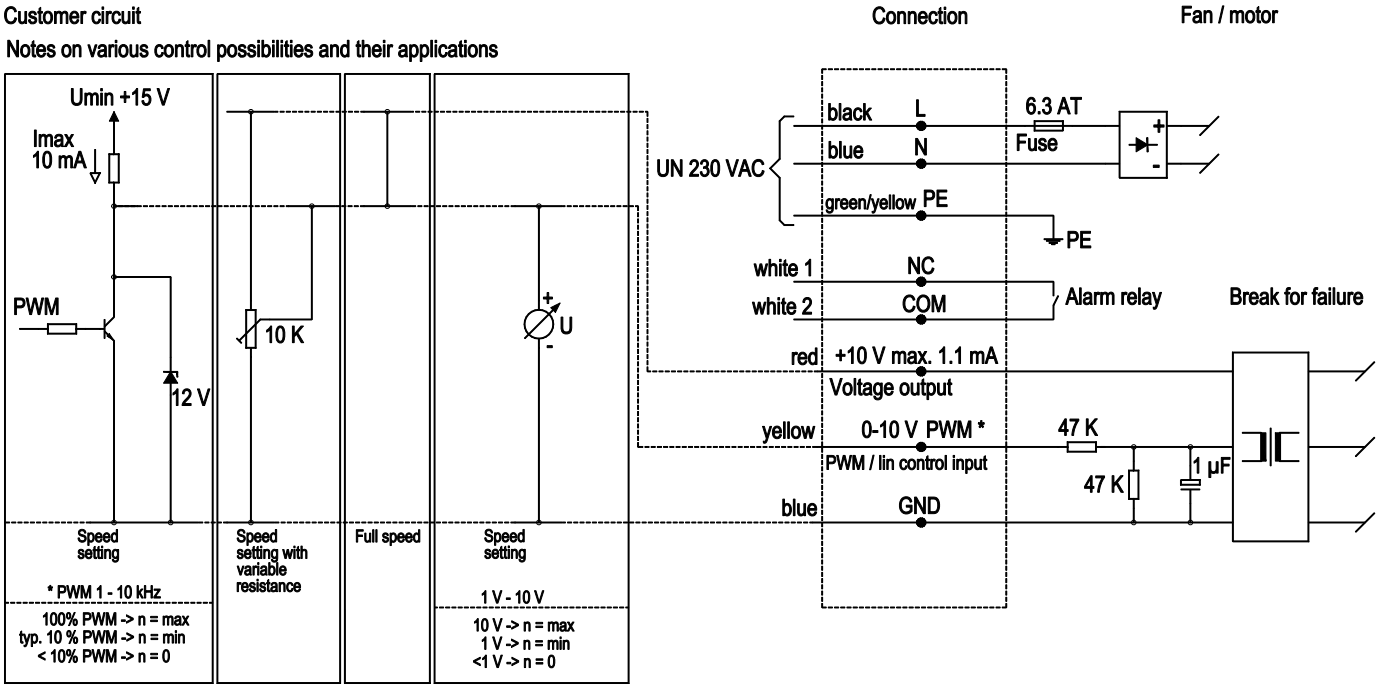
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Connection screen



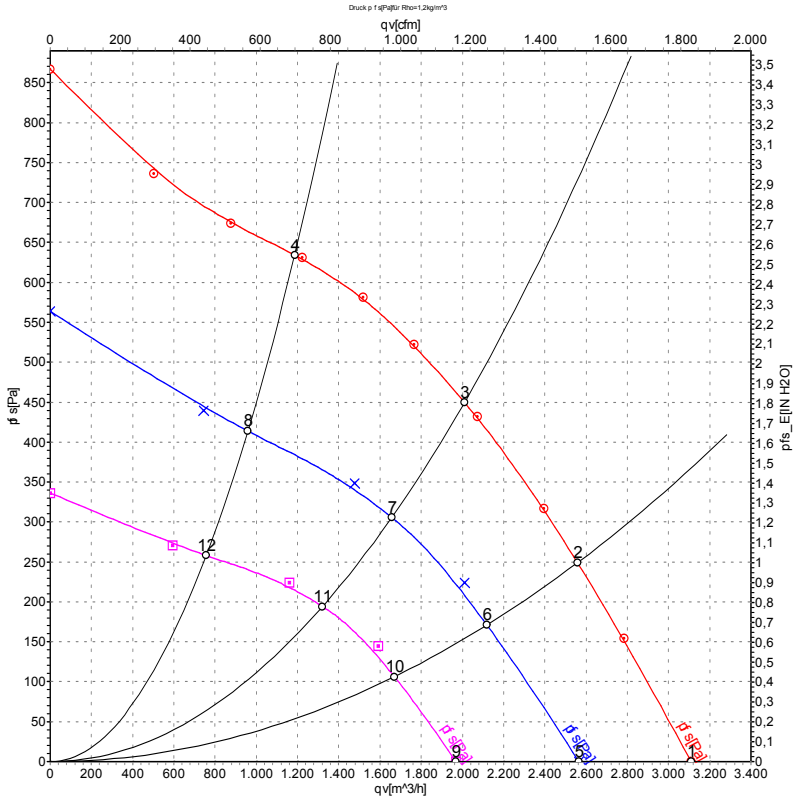
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Charts: Air flow 50 Hz



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	230	50	2530	335	2.19	72	80	86	3110	0
2	230	50	2415	392	2.57	67	75	81	2560	250
3	230	50	2400	415	2.70	63	71	78	2010	450
4	230	50	2405	405	2.66	66	75	81	1185	635
5	230	50	2040	171	1.17	66	74	80	2565	0
6	230	50	1990	216	1.45	61	69	76	2120	180
7	230	50	1965	237	1.58	59	67	74	1655	306
8	230	50	2010	215	1.45	63	70	76	960	413
9	230	50	1570	85	0.63	60	67	74	1965	0
10	230	50	1575	111	0.79	56	63	70	1670	114
11	230	50	1560	122	0.86	54	62	69	1320	195
12	230	50	1580	106	0.76	57	64	70	755	258

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

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