G3G180-BD43-74

EC centrifugal fan

forward curved, single inlet

with housing (flange)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**G3G180-BD43-74**	
Motor	**M3G084-FA**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	2450
Power input	W	510
Current draw	A	3.15
Min. back pressure	Pa	300
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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}	%	46.4	27.5	34.5
Efficiency grade N		55.9	37	44
Power input P_{ed}	kW	0.31		
Air flow q_v	m^3/h	760		
Pressure increase p_{fs}	Pa	628		
Speed n	min^{-1}	2605		

Data definition with optimum efficiency. LU-111416
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	180 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
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	- Output 10 VDC max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Excess temperature protection for electronics/motor - Line undervoltage 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)
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 60335-1; CE
Approval	UL 2111; CSA C22.2 Nr.77

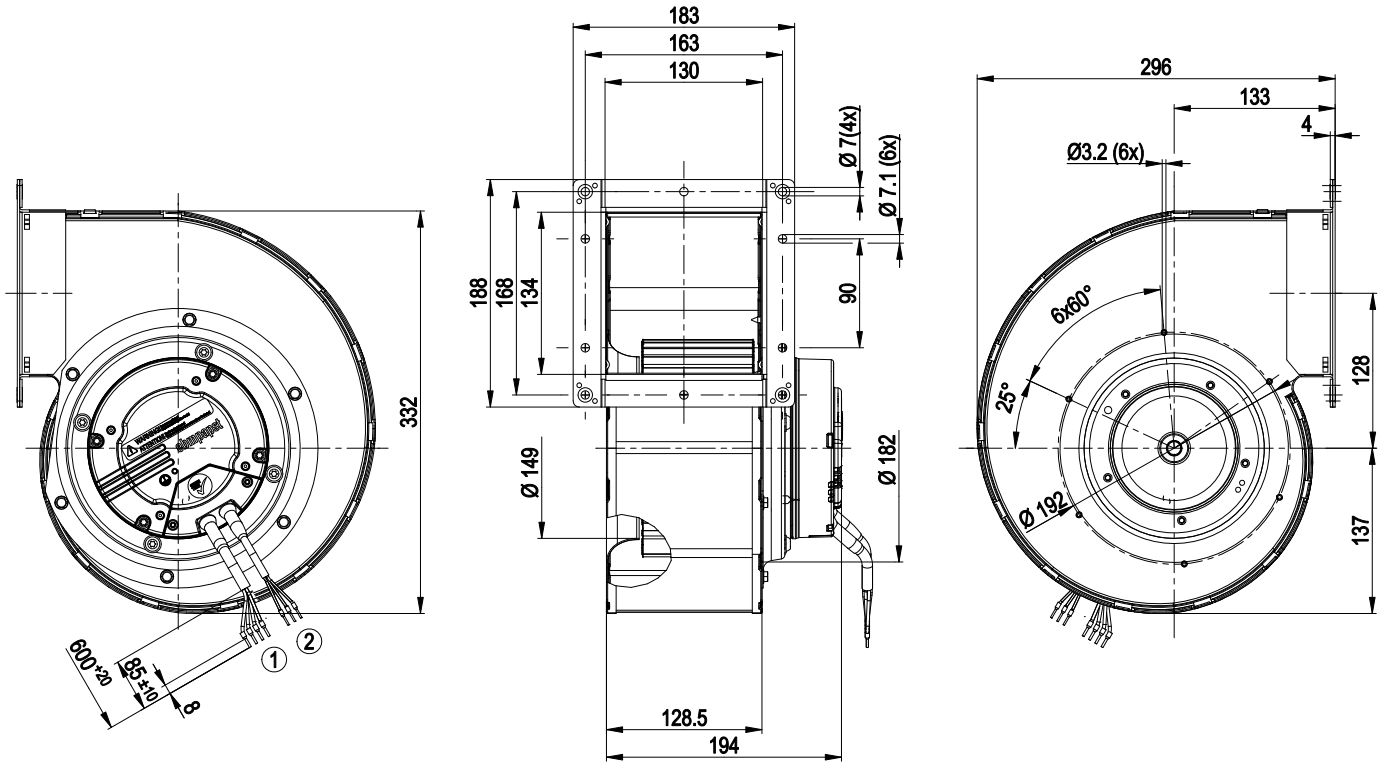
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Product drawing



1	Connection line PVC AWG18, 3x crimped core-end sleeves
2	Connection line PVC AWG22, 4x crimped core-end sleeves

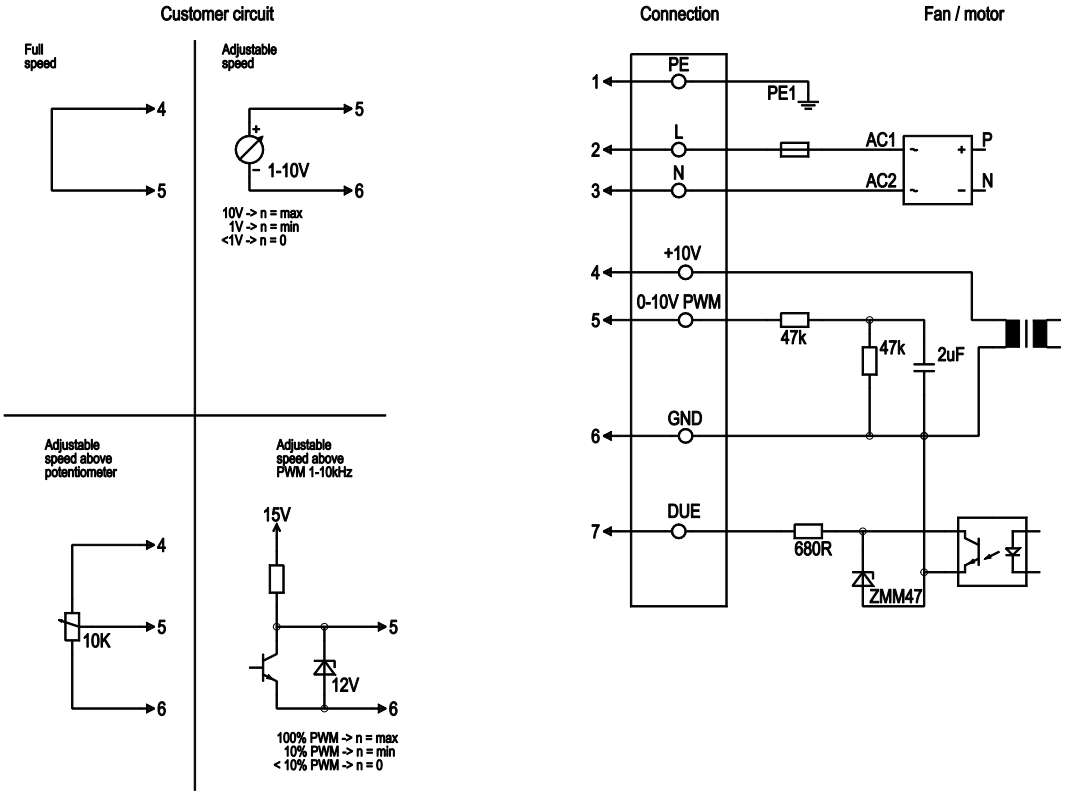
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	PE	green/yellow	Protective earth
1	2	L	black	Supply voltage, phase, 50/60 Hz
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
2	4	+10 V	red	Voltage output +10 V max. 1.1 mA electrically isolated
2	5	0-10 V PWM	yellow	Control input 0 -10 V or PWM, electrically isolated
2	6	GND	blue	Signal ground for control interface, electrically isolated
2	7	Tach	white	Speed monitoring output electrically isolated, Isink = 10 mA max., 1 pulse/revolution

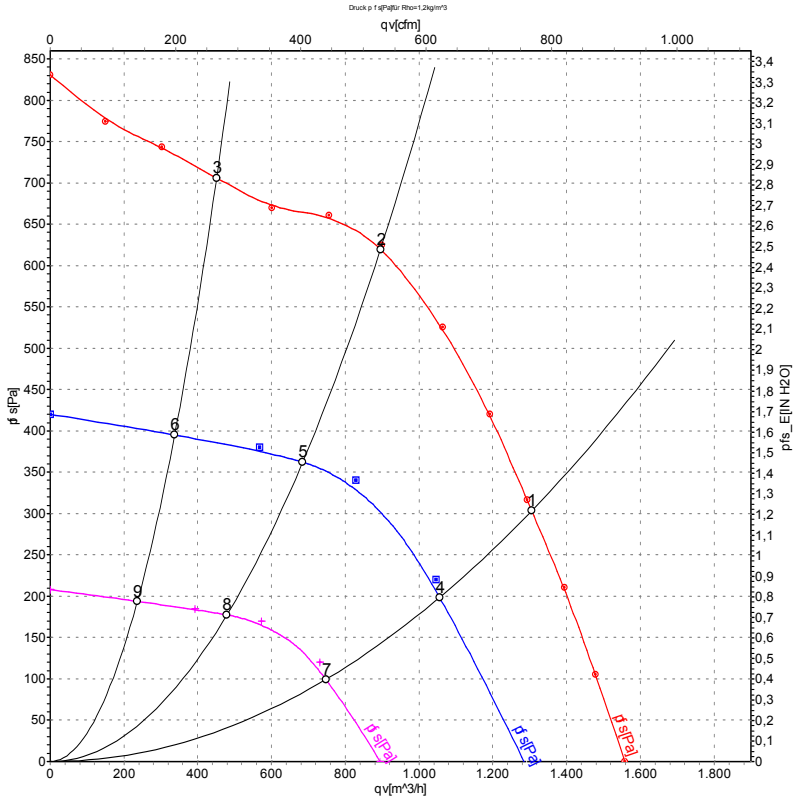
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Charts: Air flow 50 Hz



Measurement: LU-111416
Measurement: LU-112209
Measurement: LU-112210

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}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	2450	510	3.15	77	82	1305	300
2	230	50	2570	367	2.36	73	79	895	625
3	230	50	2675	239	1.57	73	79	450	700
4	230	50	2000	264	1.77	71	77	1055	212
5	230	50	2000	154	1.07	66	73	685	362
6	230	50	2000	102	0.73	65	72	335	396
7	230	50	1400	94	0.69	62	67	745	108
8	230	50	1400	57	0.43	57	63	480	177
9	230	50	1400	40	0.32	56	62	235	194

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 · qv = Air flow
p_{fs} = Pressure increase

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