G3G180-BD43-74

EC centrifugal fan

forward-curved, single-intake

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
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2450
Power consumption	W	510
Current draw	A	3.15
Min. back pressure	Pa	300
Min. back pressure	inH2O	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	46.4	34.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.9	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.31
09 Air flow q_v	m^3/h	760
09 Pressure increase p_{fs}	Pa	628
10 Speed (rpm) n	min^{-1}	2605
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-111416

ebmpapst

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Technical description

Weight	7.5 kg
Fan size	180 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC max. 1.1 mA - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC/PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 2111; CSA C22.2 No. 77

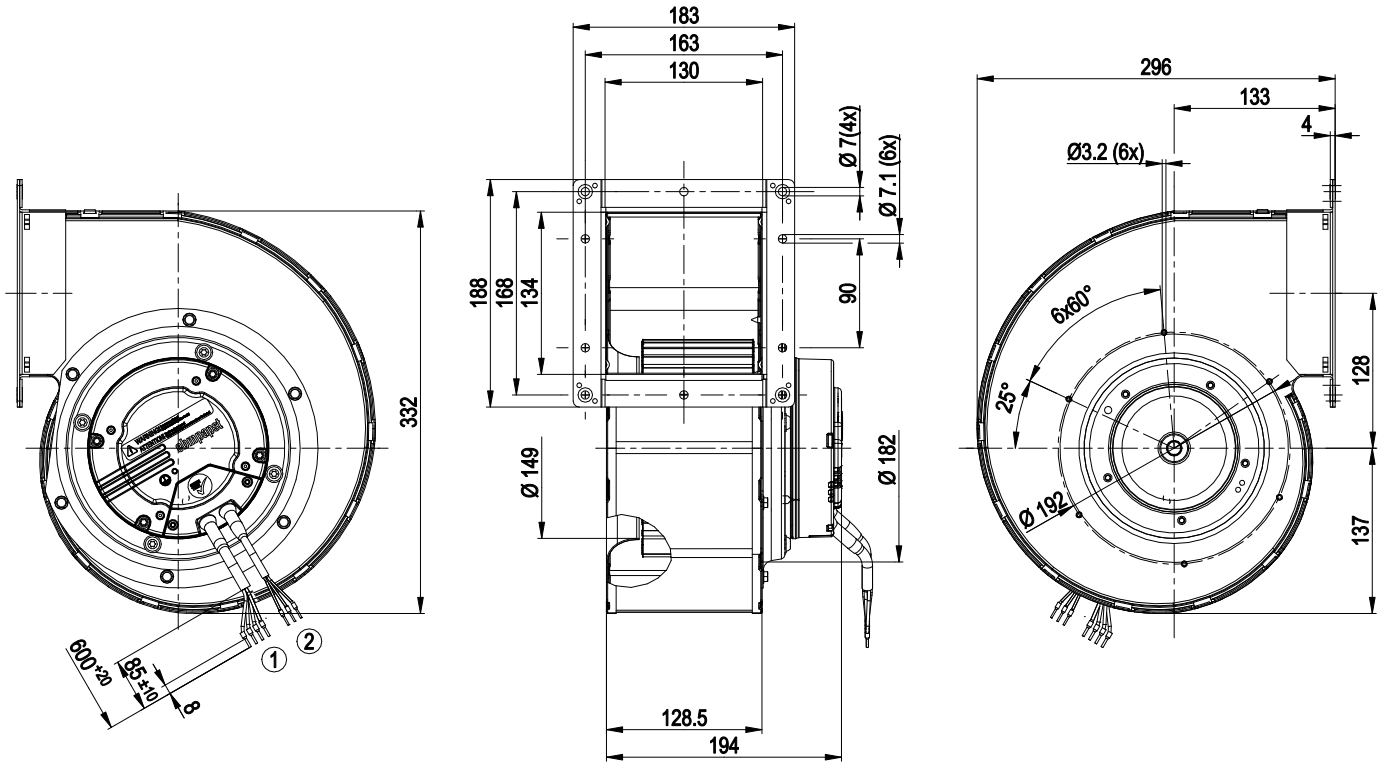
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Product drawing



1	Cable PVC AWG18, 3x crimped ferrules
2	Cable PVC AWG22, 4x crimped ferrules

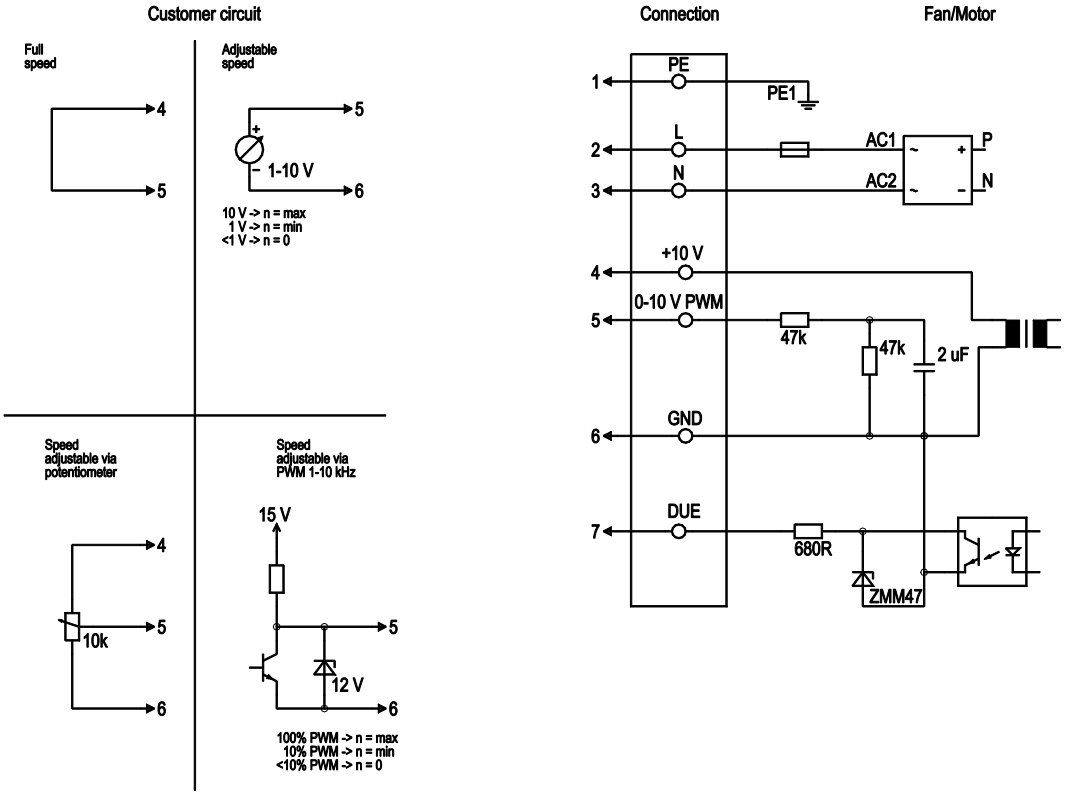
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	PE	green/yellow	Protective earth
1	2	L	black	Power supply, phase, 50/60 Hz
1	3	N	blue	Power supply, 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	Reference ground for control interface, electrically isolated
2	7	Tach	white	Tach output electrically isolated, Isink = 10 mA max., 1 pulse/revolution

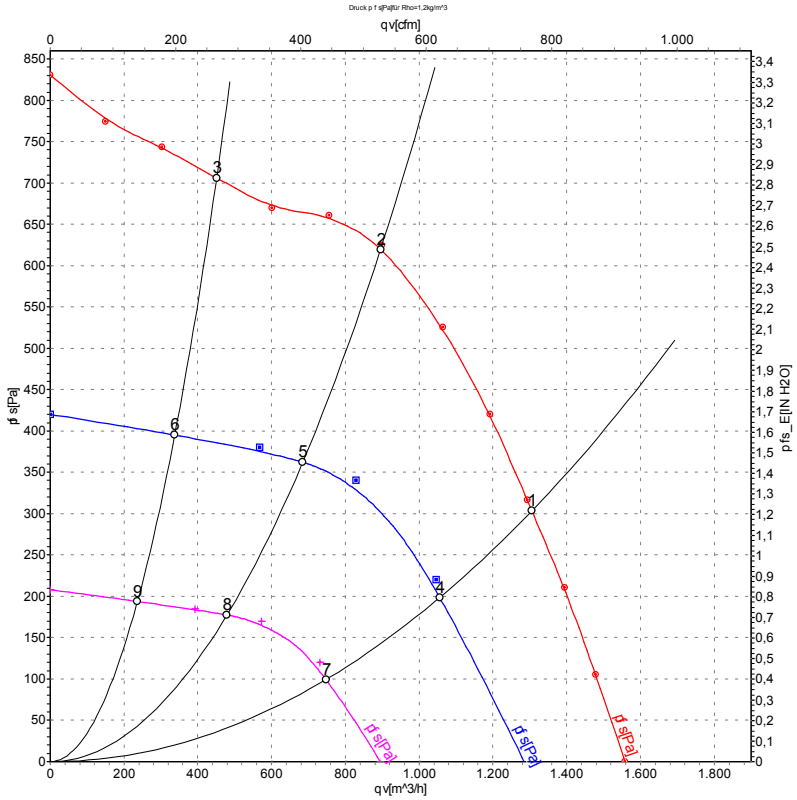
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Curves: Air performance 50 Hz



Measurement: LU-111416-1
Measurement: LU-112209-1
Measurement: LU-112210-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	2450	510	3.15	77	82	1305	300	770	1.20
2	230	50	2570	367	2.36	73	79	895	625	525	2.51
3	230	50	2675	239	1.57	73	79	450	700	265	2.81
4	230	50	2000	264	1.77	71	77	1055	212	620	0.85
5	230	50	2000	154	1.07	66	73	685	362	405	1.45
6	230	50	2000	102	0.73	65	72	335	396	200	1.59
7	230	50	1400	94	0.69	62	67	745	108	440	0.43
8	230	50	1400	57	0.43	57	63	480	177	280	0.71
9	230	50	1400	40	0.32	56	62	235	194	140	0.78

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase

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