G3G180-BD12-92

EC centrifugal fan

forward curved, single inlet

with housing (flange)

G3G180-BD12-92 ebmpapst Datasheet
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Nominal data

Type	**G3G180-BD12-92**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	110
Nominal voltage range	VDC	77 .. 145
Type of data definition		ml
Speed	min-1	2220
Power input	W	430
Current draw	A	3.8
Min. back pressure	Pa	200
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+60

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}		48	26.6	33.6
Efficiency grade N		58.4	37	44
Power input P_e	kW	0.23		
Air flow q_v	m³/h	700		
Pressure increase p_{fs}	Pa	504		
Speed n	min-1	2300		

Data established at point of optimum efficiency

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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, coated in black
Material of impeller	Sheet steel, coated in black
Housing material	Sheet steel, coated in black
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F4-1
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 - 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 61000-6-4 (industrial environment)
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

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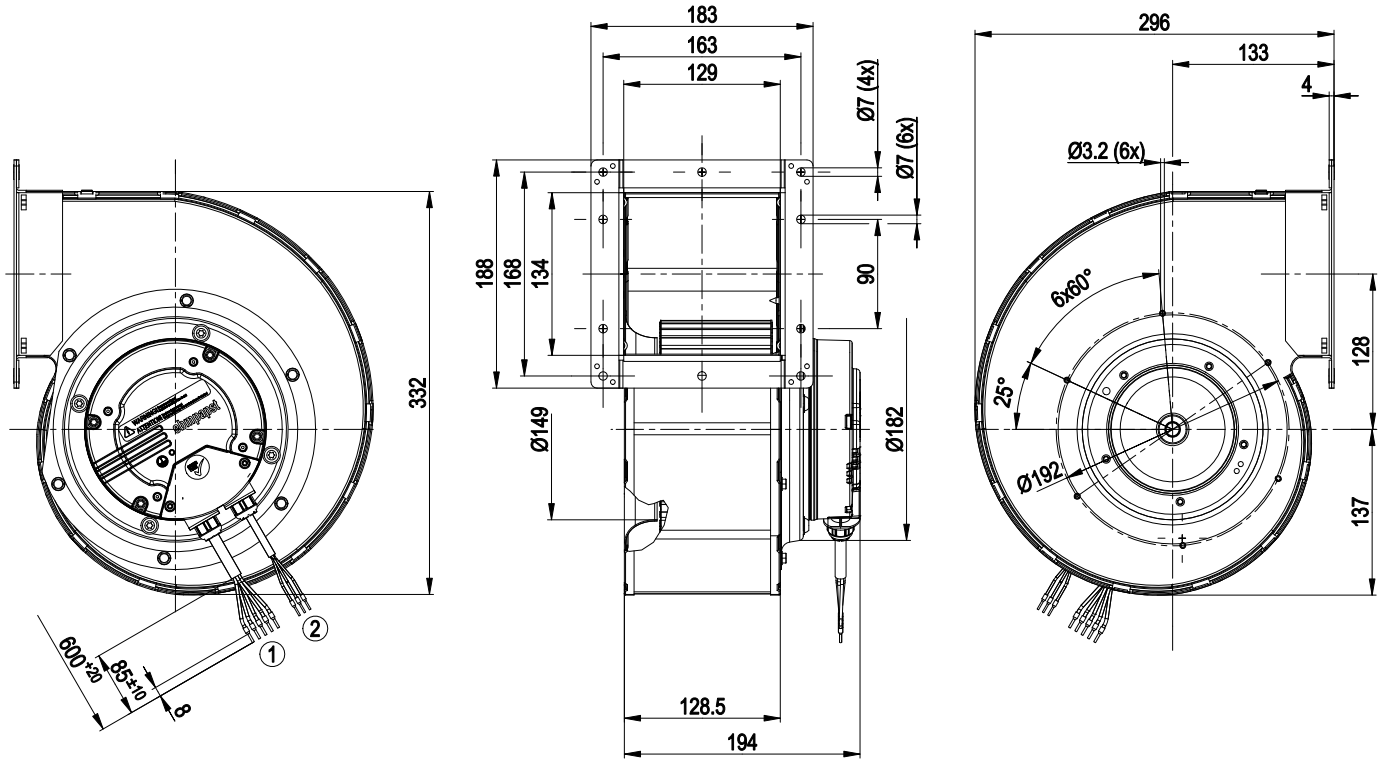
Product drawing



1	Connection line XLPE/XLPO 5G 1.0 mm², 5x crimped core-end sleeves
2	Connection line XLPE/XLPO 3 x 0.33 mm², 3x crimped core-end sleeves

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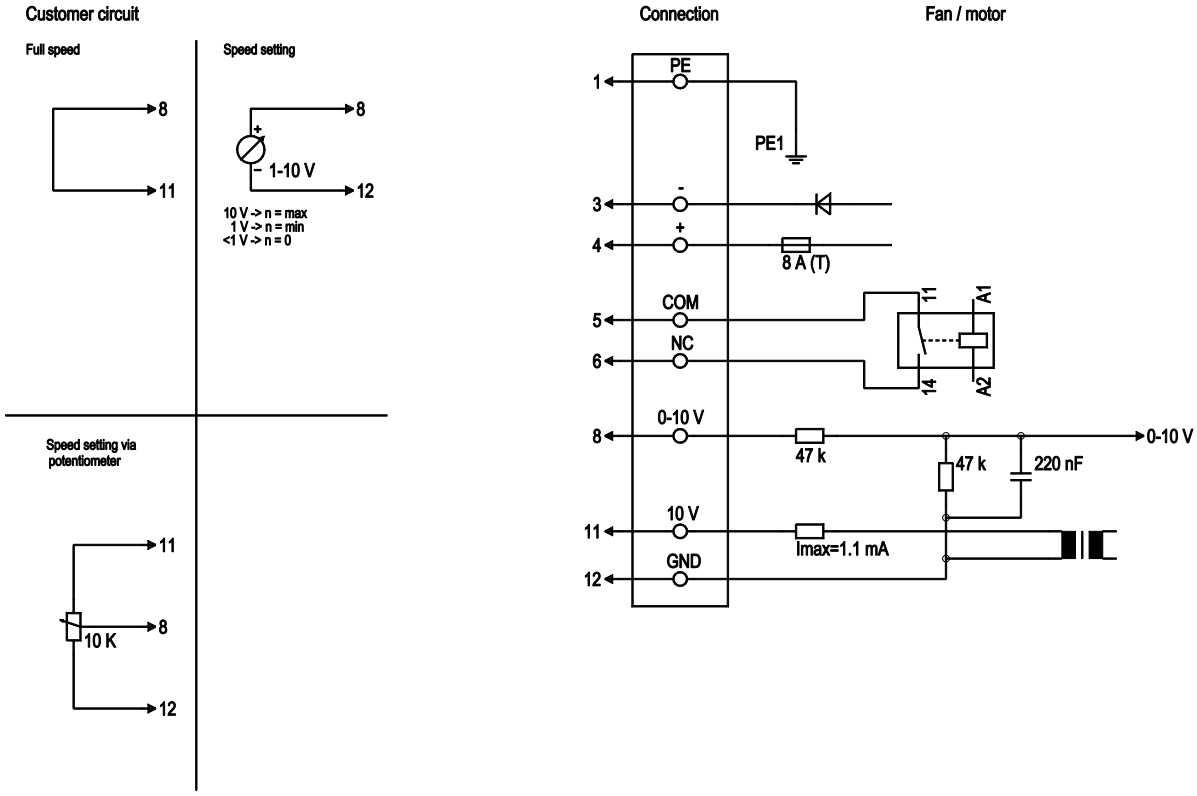
Connection screen



Line	No.	Signal	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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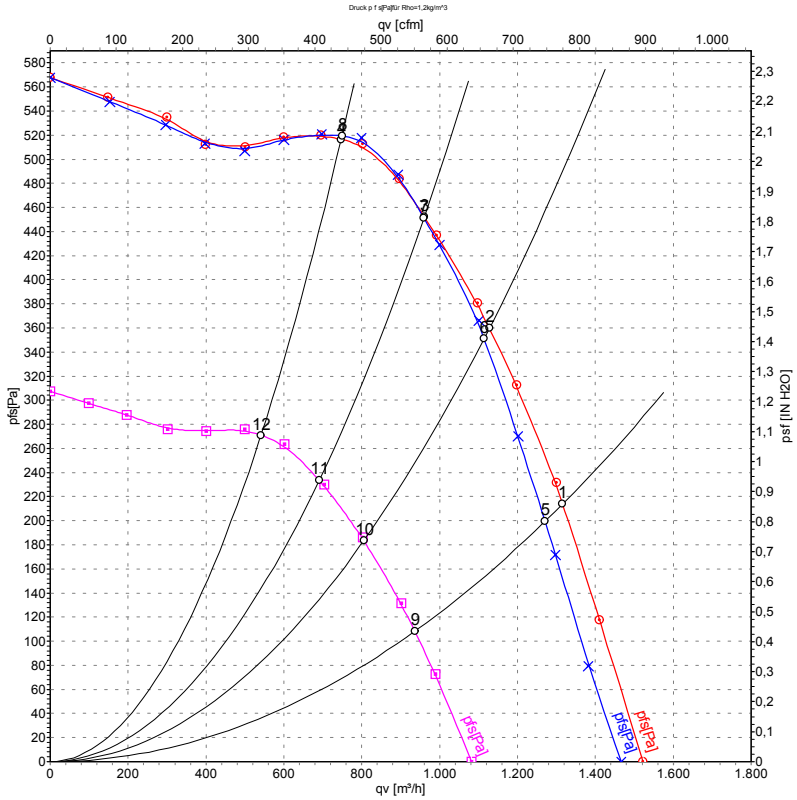
Charts: Air flow



Measurement: LU-138962
Measurement: LU-138963
Measurement: LU-138966

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	145	2275	474	3.28	1315	215
2	145	2275	391	2.70	1130	360
3	145	2275	332	2.29	960	450
4	145	2275	262	1.81	745	520
5	110	2220	430	3.80	1270	200
6	110	2275	376	3.40	1115	350
7	110	2275	323	2.92	960	450
8	110	2275	247	2.23	750	520
9	77	1635	175	2.27	935	108
10	77	1660	152	1.97	805	184
11	77	1670	131	1.70	690	234
12	77	1690	107	1.39	540	271

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