

# EC centrifugal fan

forward-curved, single-intake

with housing (flange)

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## Nominal data

Type	G3G225-CD29-72	
Motor	M3G084-FA	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min <sup>-1</sup>	1815
Power consumption	W	545
Current draw	A	3.5
Min. back pressure	Pa	300
Min. back pressure	in. wg	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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

## Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015		
01 Overall efficiency $\eta_{es}$	%	48.1	34.7	09 Power consumption $P_{ed}$	kW
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa
04 Efficiency grade N		57.4	44	10 Speed (rpm) n	min <sup>-1</sup>
05 Variable speed drive		Yes		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 =  $1 + p_{fs} / 100\,000\text{ Pa}$ 

LU-111997



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## Technical description

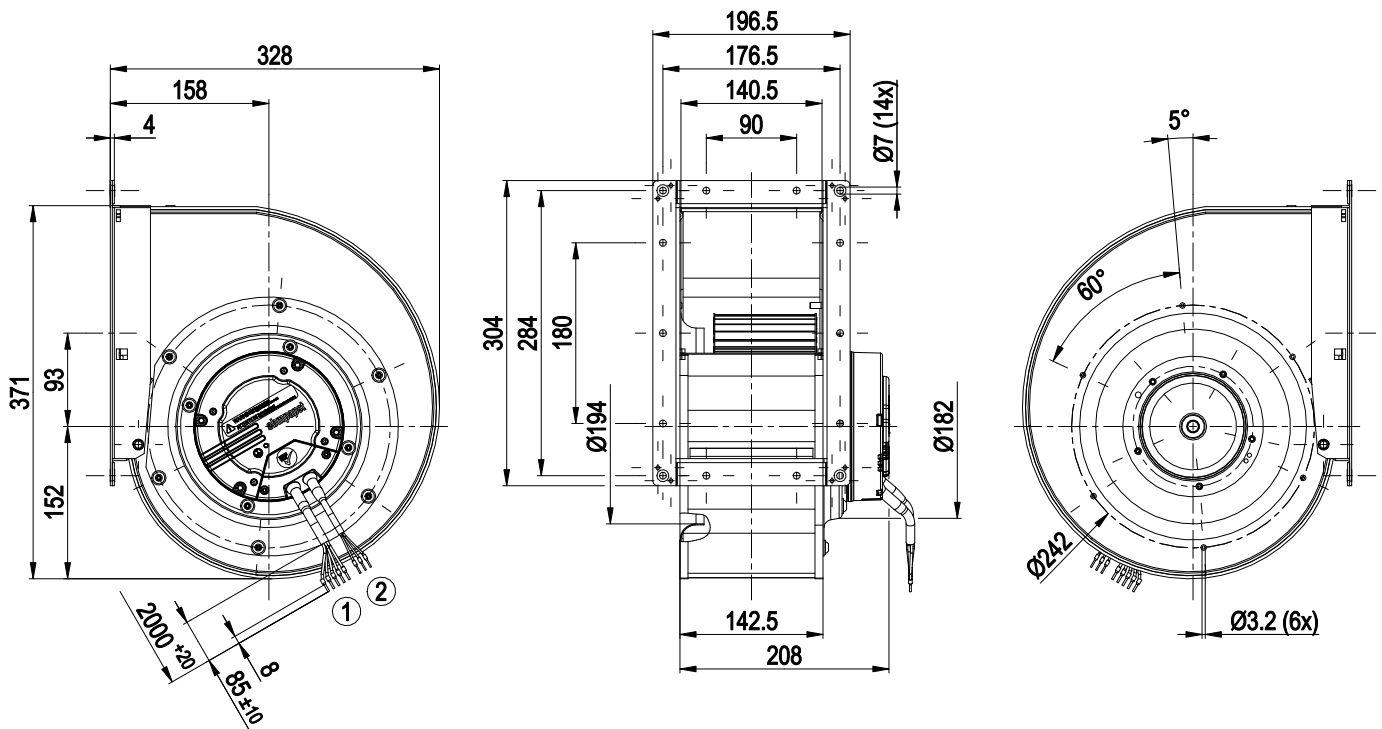
<b>Weight</b>	9.7 kg
<b>Fan size</b>	225 mm
<b>Rotor surface</b>	Painted black
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	Sheet steel, galvanized
<b>Housing material</b>	Sheet steel, galvanized
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP54
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	F3-1
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Alarm relay</li> <li>- Motor current limitation</li> <li>- PFC, passive</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage detection</li> </ul>
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 61800-5-1; CE
<b>Approval</b>	CSA C22.2 No. 77; UL 1004-3



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## Product drawing



- |   |                                                                                        |
|---|----------------------------------------------------------------------------------------|
| 1 | Cable halogen-free, BETAtans® 3 GW flex, 5G 1.0 mm <sup>2</sup> , 5x crimped ferrules  |
| 2 | Cable halogen-free, BETAtans® 3 GW flex, 3x 0.33 mm <sup>2</sup> , 3x crimped ferrules |

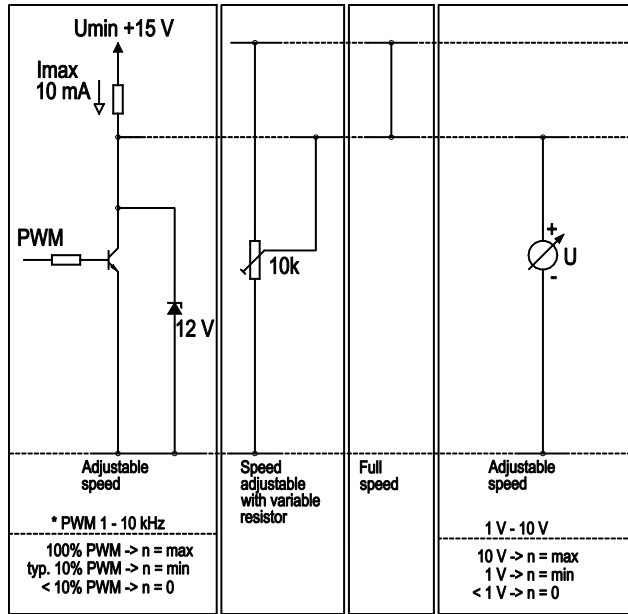
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## Connection diagram

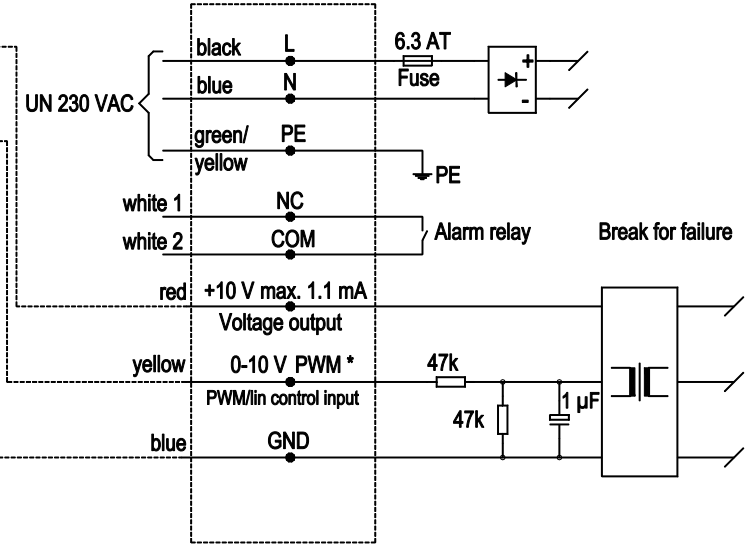
Customer circuit

Application notes for various control options



Connection

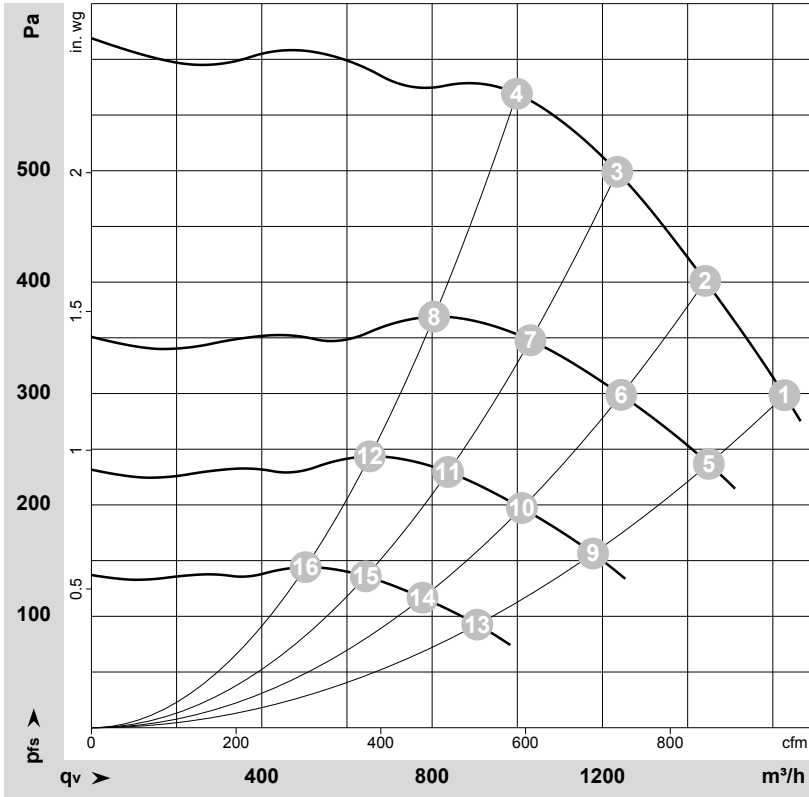
Fan / Motor



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## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-111997-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	230	50	1815	545	3.50	75	80	1625	300	960	1.20
2	230	50	1855	489	3.24	73	79	1440	400	850	1.61
3	230	50	1915	443	2.91	73	79	1235	500	725	2.01
4	230	50	1985	378	2.47	73	79	1000	570	590	2.29
5	230	50	1600	383	2.54	72	77	1450	239	855	0.96
6	230	50	1600	315	2.08	70	75	1245	300	730	1.20
7	230	50	1600	258	1.69	69	74	1030	351	605	1.41
8	230	50	1600	198	1.29	68	74	805	369	475	1.48
9	230	50	1300	205	1.36	66	72	1180	158	695	0.63
10	230	50	1300	169	1.12	64	70	1010	198	595	0.79
11	230	50	1300	138	0.91	63	69	840	231	495	0.93
12	230	50	1300	106	0.69	62	68	655	244	385	0.98
13	230	50	1000	93	0.62	60	65	905	93	535	0.37
14	230	50	1000	77	0.51	58	63	775	117	455	0.47
15	230	50	1000	63	0.41	57	62	645	137	380	0.55
16	230	50	1000	48	0.32	56	62	505	144	295	0.58

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase

