

8317084497  
VHS0146XSLFZ

# EC centrifugal fan

Forward-curved, single-intake

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### Nominal data

Type	8317084497	
Motor	E06005-30(M3G060-DA)	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min-1	2658
Power input	W	170
Current draw	A	1.2
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

		Actual	Request 2015
01 Overall efficiency $\eta_{es}$	%	45.4	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		56.6	44
05 Variable speed drive		Yes	

Data definition with optimum efficiency.

The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

09 Power input $P_{ed}$	kW	0.17
09 Air flow $q_v$	m <sup>3</sup> /h	368
09 Pressure increase $p_{fs}$	Pa	671
10 Speed (rpm) $n$	min <sup>-1</sup>	3372
11 Specific ratio*		1.01

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

ID17151



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## Technical description

Weight	2.70 kg
Size	146 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	Plastic
Housing material	Galvanized steel plate + Surface black painted
Number of blades	48
Balancing grade according to DIN ISO 1940-1	G 6.3
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"><li>- Output 10VDC, max. 10 mA</li><li>- Tach output</li><li>- Power limiter</li><li>- Motor current limitation</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>- Overvoltage protection</li><li>- Thermal overload protection for electronics / motor</li><li>- Line undervoltage detection</li></ul>
EMC immunity to interference	According to EN 61000-6-2(industrial environment)
EMC interference emission	According to EN 61000-6-3(household environment)
Touch current acc.IEC 60990	<=3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	GB12350, EN60034-1, EN60335-1, CCC, CE
Approval	

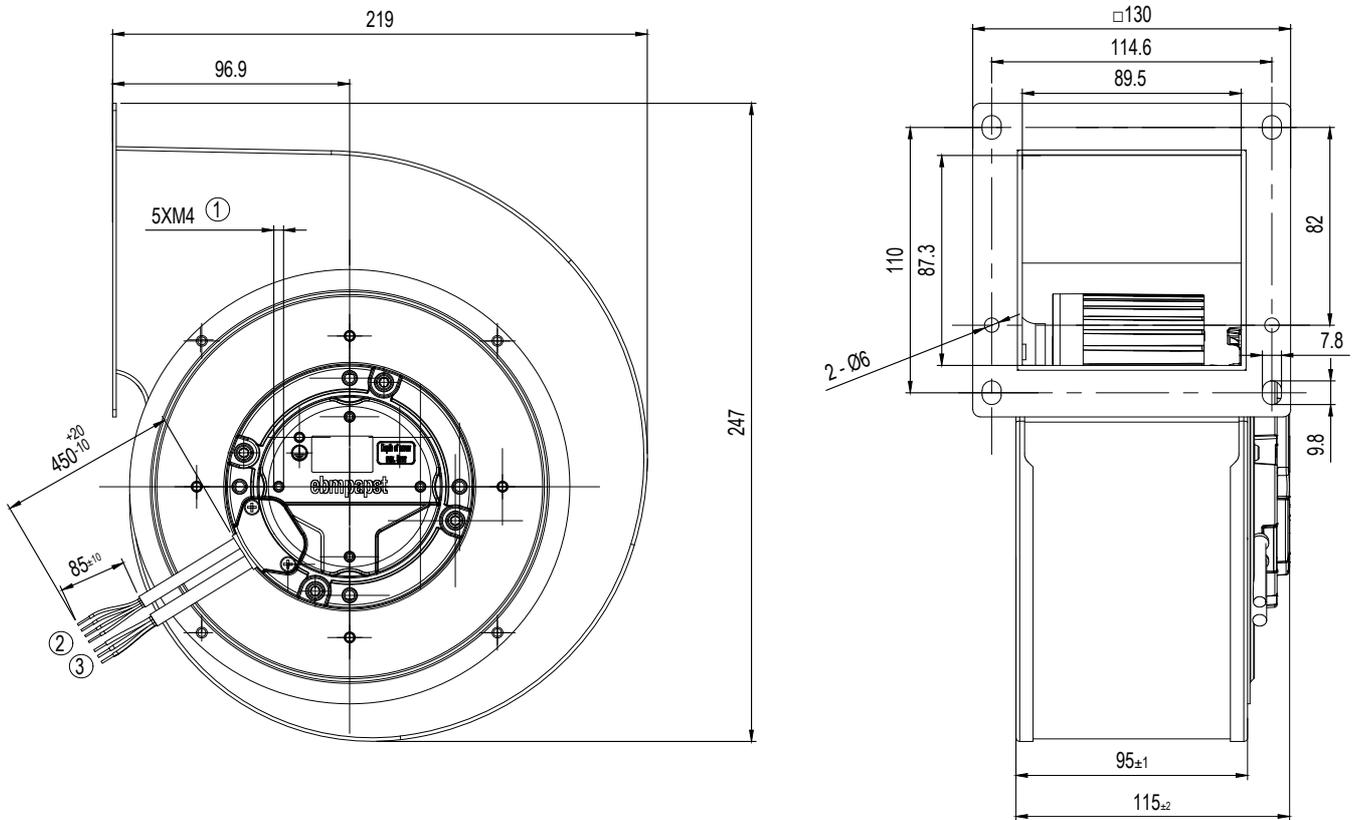


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## Product drawing

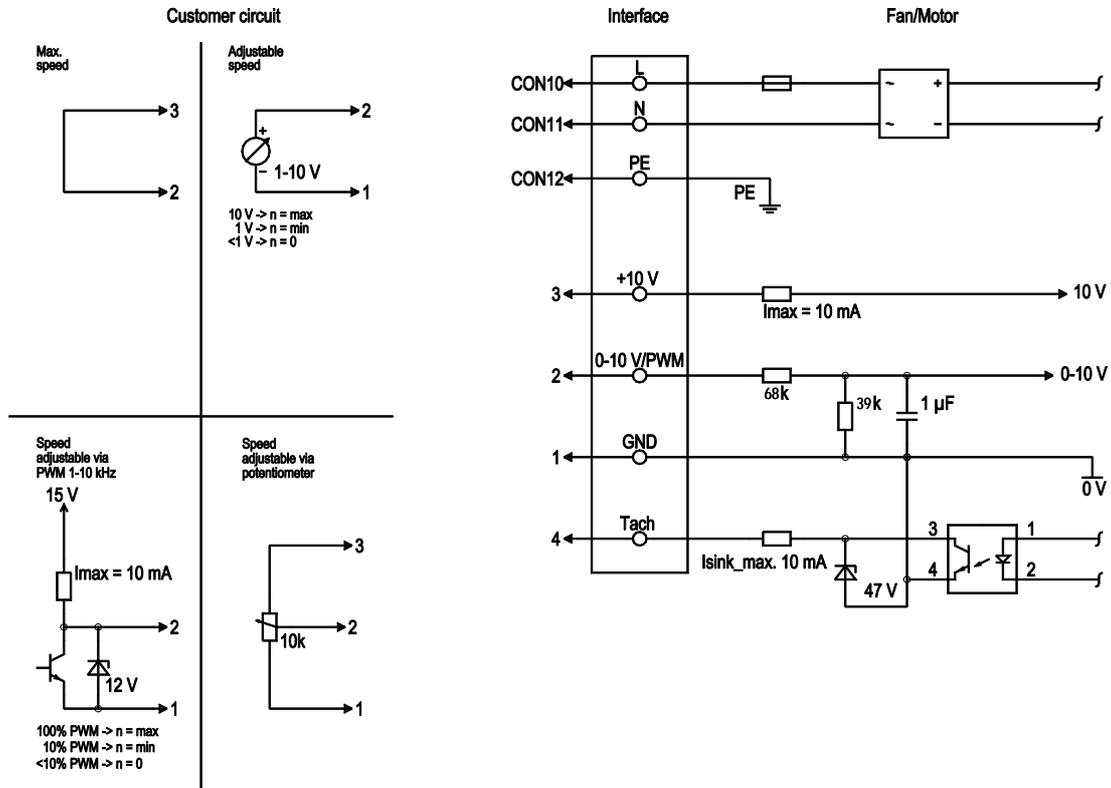


1	Max. clearance for screw 5 mm
2	Cable PVC 4x0.25 mm <sup>2</sup>
3	Cable PVC 3x0.5 mm <sup>2</sup>

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## Connection diagram

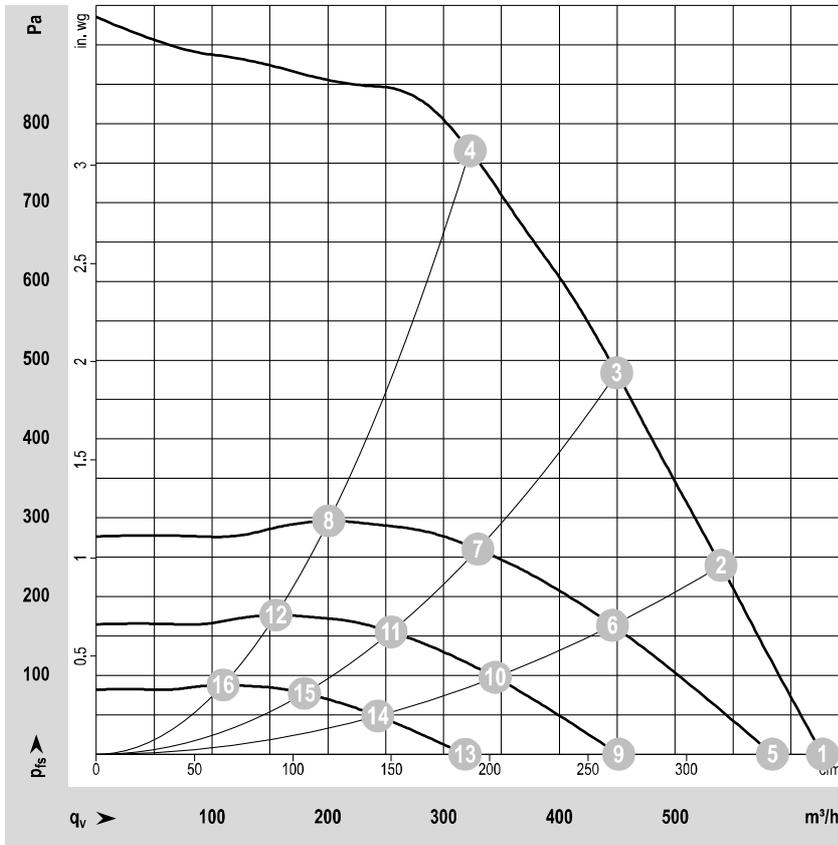


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Protective earth
	3	+10 V	red	Fixed voltage output 10 VDC ±3 %, I <sub>max</sub> = 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	2	0-10 V / PWM	yellow	0-10 V / PWM control input, R <sub>i</sub> =100 kΩ, SELV
	1	GND	blue	Reference ground for control interface, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, I <sub>sink max</sub> = 10 mA, SELV

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## Curves: Air performance



$\rho = 1.2 \text{ kg/m}^3 \pm 2 \%$

Measurement: ID 17151

Test housing: Sheet metal housing PN: 8317084582 (831708466+831708473)  
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.

## Fan performance

Index	U	f	n	P <sub>ed</sub>	I	L <sub>pAin</sub>	L <sub>wAin</sub>	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min-1	W	A	dB(A)	dB(A)	m³/h	Pa	cfm	in.wg
1	230	50	2363	170.0	1.22	74	80	627	0	369.3	0
2	230	50	2658	170.0	1.22	73	79	539	241	317.5	1.0
3	230	50	3000	170.0	1.23	70	76	450	485	265.1	1.9
4	230	50	3537	170.0	1.23	-	-	323	770	190.3	3.1
5	230	50	2200	137.2	0.98	72	78	584	0	344.0	0
6	230	50	2200	96.2	0.69	68	75	446	166	262.7	0.7
7	230	50	2200	67.0	0.48	63	69	330	261	194.4	1.0
8	230	50	2200	40.9	0.30	-	-	201	298	118.4	1.2
9	230	50	1700	63.3	0.45	66	72	451	0	265.7	0
10	230	50	1700	44.4	0.32	62	69	345	99	203.2	0.4
11	230	50	1700	30.9	0.22	56	63	255	156	150.2	0.6
12	230	50	1700	18.9	0.14	-	-	155	178	91.3	0.7
13	230	50	1200	22.3	0.16	57	64	319	0	187.9	0
14	230	50	1200	15.6	0.11	54	60	243	49	143.1	0.2
15	230	50	1200	10.9	0.08	48	54	180	78	106.0	0.3
16	230	50	1200	6.6	0.05	-	-	110	89	64.8	0.4

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

