8317084181
VBH0190RSLFZ

EC centrifugal fan

backward-curved, single-intake

8317084181 ebmpapst Datasheet
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Nominal data

Type	8317084181
Motor	**E0**6005-30(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	4123
Power input	W	170
Current draw	A	1.3
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 η_{es}	%	53.1	43.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71.7	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.17
09 Air flow q_v	m³/h	535
09 Pressure increase p_{fs}	Pa	533
10 Speed (rpm) n	min-1	4157
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

ID-15121

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Technical description

Weight	1.8 kg
Size	190 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	Plastic
Number of blades	7
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	- Output 10VDC, max. 10 mA
	- Tach output
	- Power limiter
	- Motor current limitation
	- Soft start
	- Control input 0-10 VDC / PWM
	- Control interface with SELV potential safely disconnected from the mains
	- Overvoltage protection
	- Thermal overload protection for electronics / motor
	- Line undervoltage detection
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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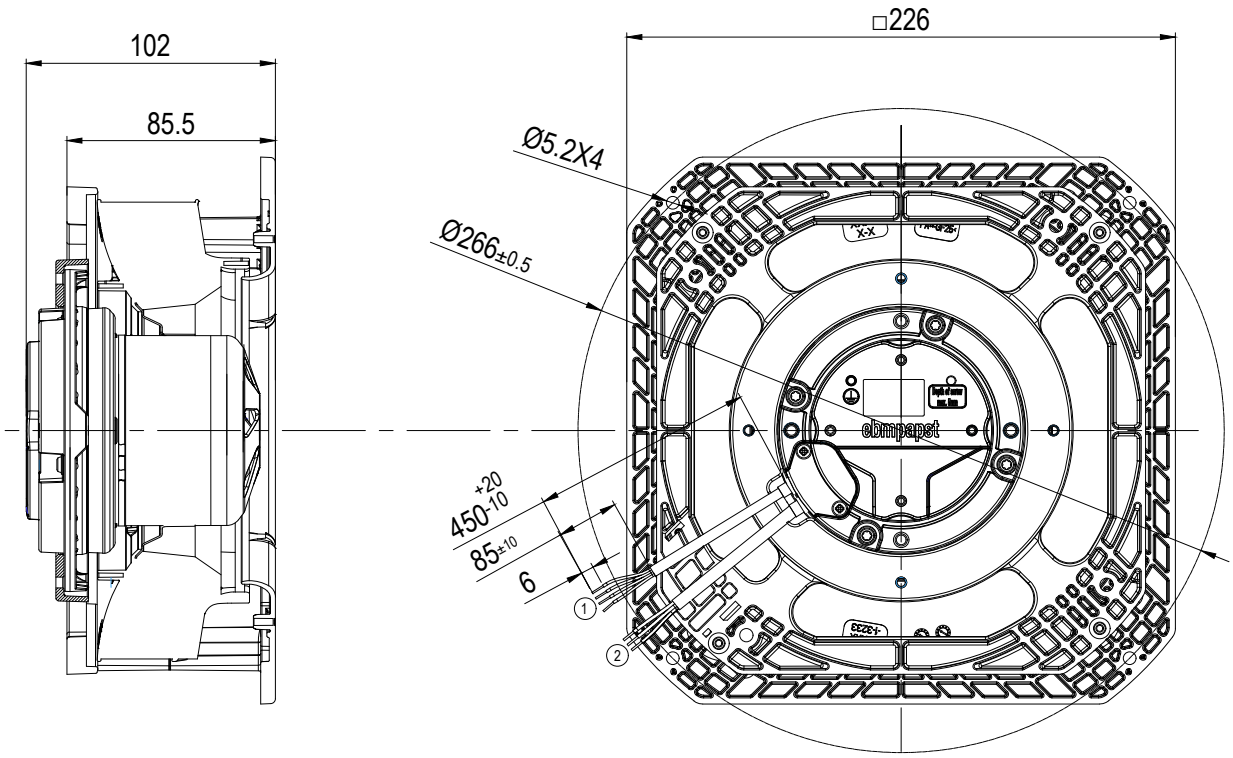
Product drawing



1	Cable PVC 4x0.25 mm²
2	Cable PVC 3x0.5 mm²

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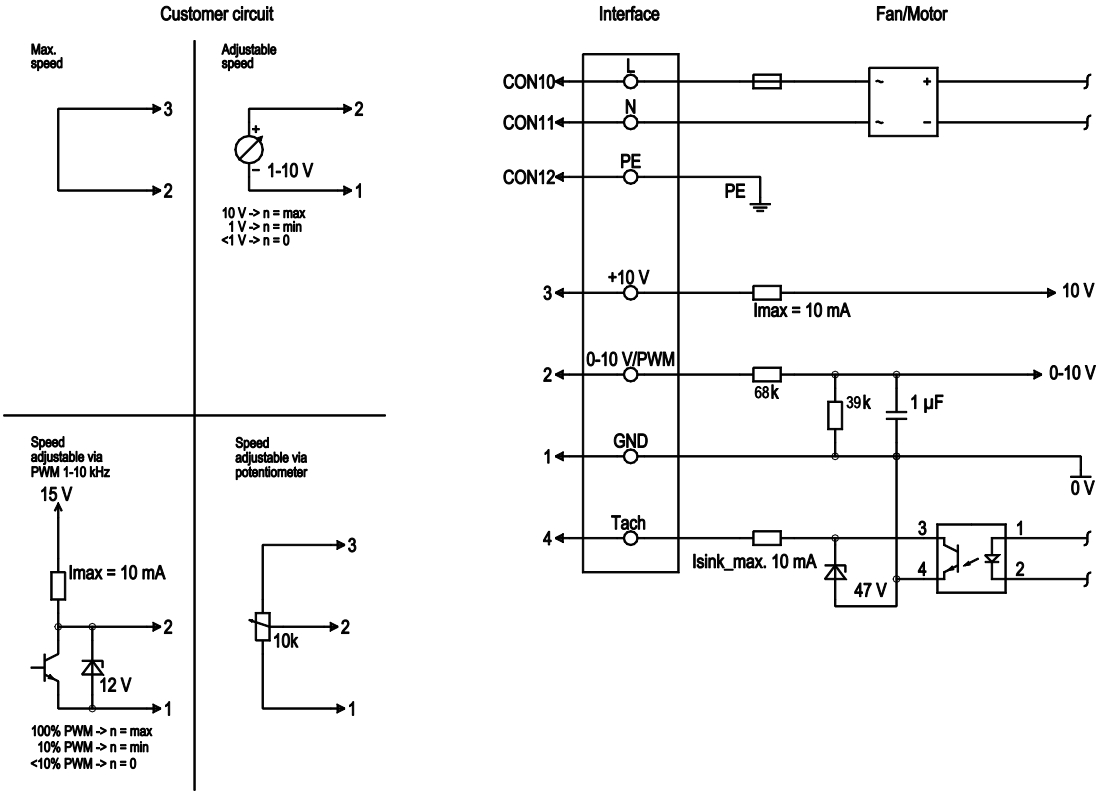
Connection diagram



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 %, Imax. 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, Ri=100 kΩ, SELV
	1	GND	blue	Reference ground for control interface, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV

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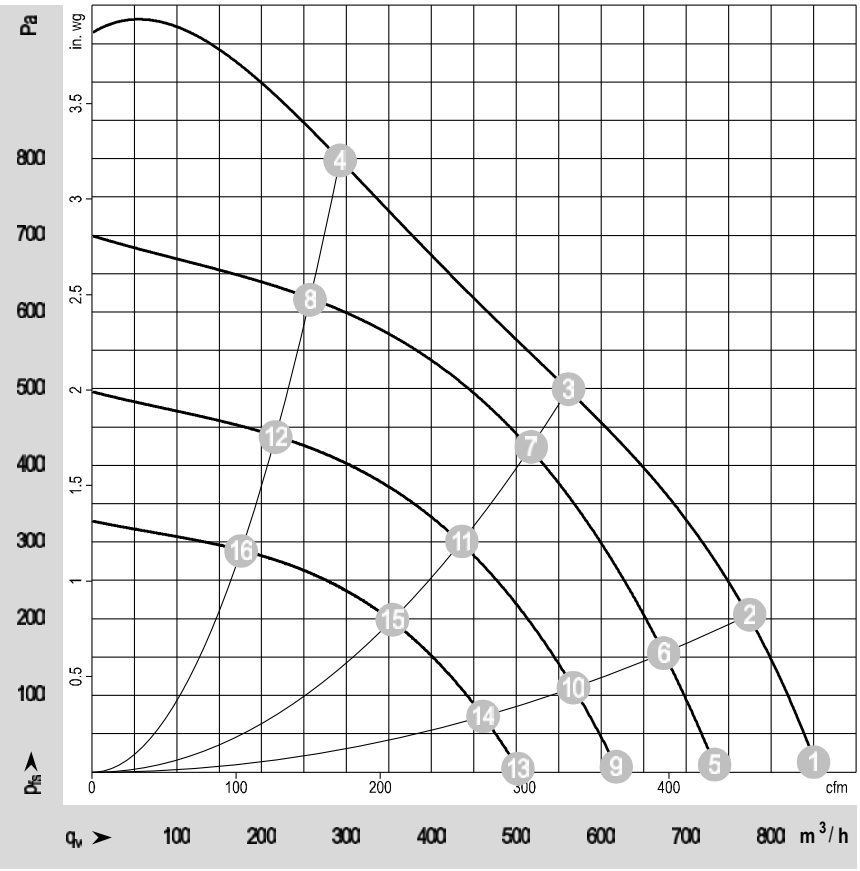
Curves: Air performance



ρ = 1.2 kg/m3 ± 2 %

Measurement: ID 15121

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.

Fan performance

Index	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_v	p_{fs}	q_v	P_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in.wg
01	230	50	4404	170.0	1.26	74	82	850	0	500	0
02	230	50	4372	170.0	1.26	71	79	775	205	456	0.82
03	230	50	4123	170.0	1.27	65	73	562	499	331	2.00
04	230	50	4323	170.0	1.27			292	799	172	3.21
05	230	50	3800	109.2	0.81	70	78	733	0	431	0
06	230	50	3800	111.7	0.83	67	75	674	155	396	0.62
07	230	50	3800	133.1	0.99	63	71	517	424	304	1.70
08	230	50	3800	115.5	0.86			257	617	151	2.48
09	230	50	3200	65.2	0.48	66	74	618	0	364	0
10	230	50	3200	66.7	0.50	63	71	567	110	334	0.44
11	230	50	3200	79.5	0.59	59	67	436	301	256	1.21
12	230	50	3200	69.0	0.52			216	438	127	1.76
13	230	50	2600	35.0	0.26	61	69	502	0	295	0
14	230	50	2600	35.8	0.27	57	66	461	73	271	0.29
15	230	50	2600	42.6	0.32	54	62	354	199	208	0.80
16	230	50	2600	37.0	0.28			176	289	104	1.16

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