

8317082273
VBS0250RSLFS

Sample

EC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	8317082273	
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	2488
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 2020
01 Overall efficiency η_{es}	%	54.4	45.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73	64
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 ³ /h	879
09 Pressure increase p_{fs}	Pa	334.5
10 Speed (rpm) n	min ⁻¹	2501
11 Specific ratio [*]		1.00

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

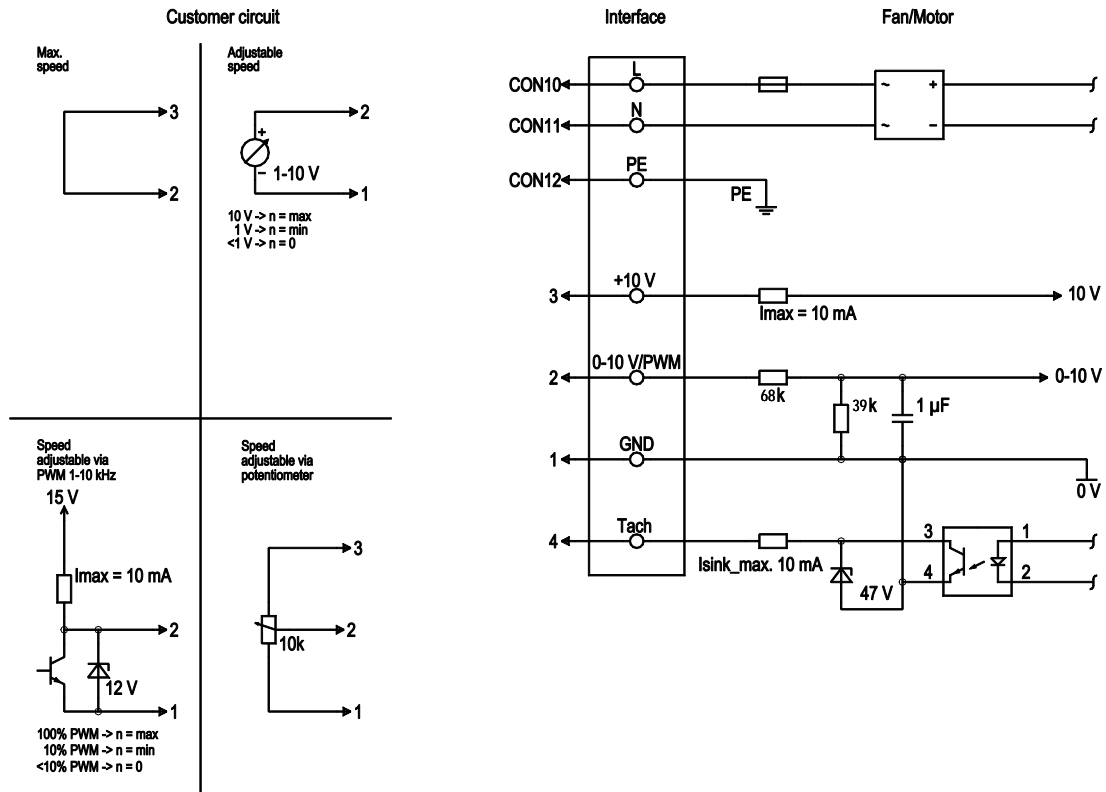
ID15479



Technical description

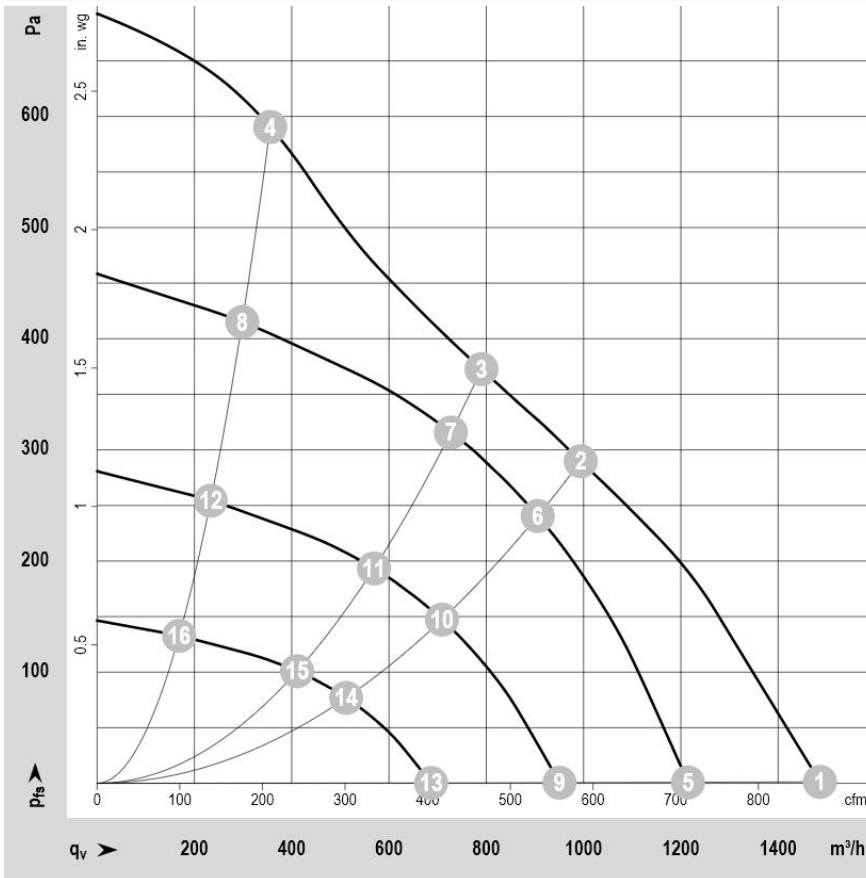
Weight	1.85 kg
Size	250 mm
Motor size	60
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	Plastic
Number of blades	7
Balancing grade according to DIN ISO 1940-1	G 6.3
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation 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 mounting	Ball bearing
Technical features	<ul style="list-style-type: none"> - 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	Reverse polarity and 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	-

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	Ground connection
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, I _{max} . 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 _i =100 kΩ, SELV
	1	GND	blue	Reference ground for control interface, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, I _{sink max} = 10 mA, SELV

Curves: Air performance



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

Measurement: ID 15479

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 v	f Hz	n min-1	Ped W	I A	LpAout dB(A)	LwAout dB(A)	qv m3/h	pfs Pa	qv cfm	Pfs in.wg
01	230	50	2801	170	1.3	70	81	1481	1	872	0
02	230	50	2513	170	1.3	62	73	989	287	582	1.15
03	230	50	2488	170	1.3	60	71	788	369	463	1.5
04	230	50	2727	170	1.3	-	-	353	584	208	2.35
05	230	50	2300	94.3	0.68	65	76	1215	1	714.3	0
06	230	50	2300	130.6	0.95	60	71	905	241	531.6	0.97
07	230	50	2300	134.3	0.97	58	69	727	316	427.8	1.27
08	230	50	2300	101.2	0.73	-	-	298	416	175	1.67
09	230	50	1800	45.2	0.33	59	70	951	0	600	0
10	230	50	1800	62.6	0.45	54	65	708	148	418	0.6
11	230	50	1800	64.4	0.47	52	63	569	193	335.3	0.78
12	230	50	1800	48.5	0.35	-	-	233	255	137	1.02
13	230	50	1300	17.0	0.12	51	62	687	0	403.6	0
14	230	50	1300	23.6	0.17	46	56	511	77	299.2	0.31
15	230	50	1300	24.2	0.18	44	55	411	101	241.2	0.41
16	230	50	1300	18.3	0.13	-	-	168	133	98.4	0.53

U = Power supply · n = Speed (rpm) · Ped = 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