R3G500-RQ04-73

Viessmann

VI 9637383

EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G500-RQ04-73 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G500-RQ04-73**	
Motor	**M3G084-GF**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	800
Power consumption	W	327
Current draw	A	2.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	57.4	46.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.1	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.32
09 Air flow q_v	m^3/h	3630
09 Pressure increase p_{fs}	Pa	166
10 Speed (rpm) n	min^{-1}	800
11 Specific ratio*		1.00

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 Pa

LU-123662

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Technical description

Weight	9.8 kg
Fan size	500 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1: 2002 + AL11: 2004 + A1: 2004 + A12: 2006 + A2: 2006 + A13: 2008
Approval	VDE

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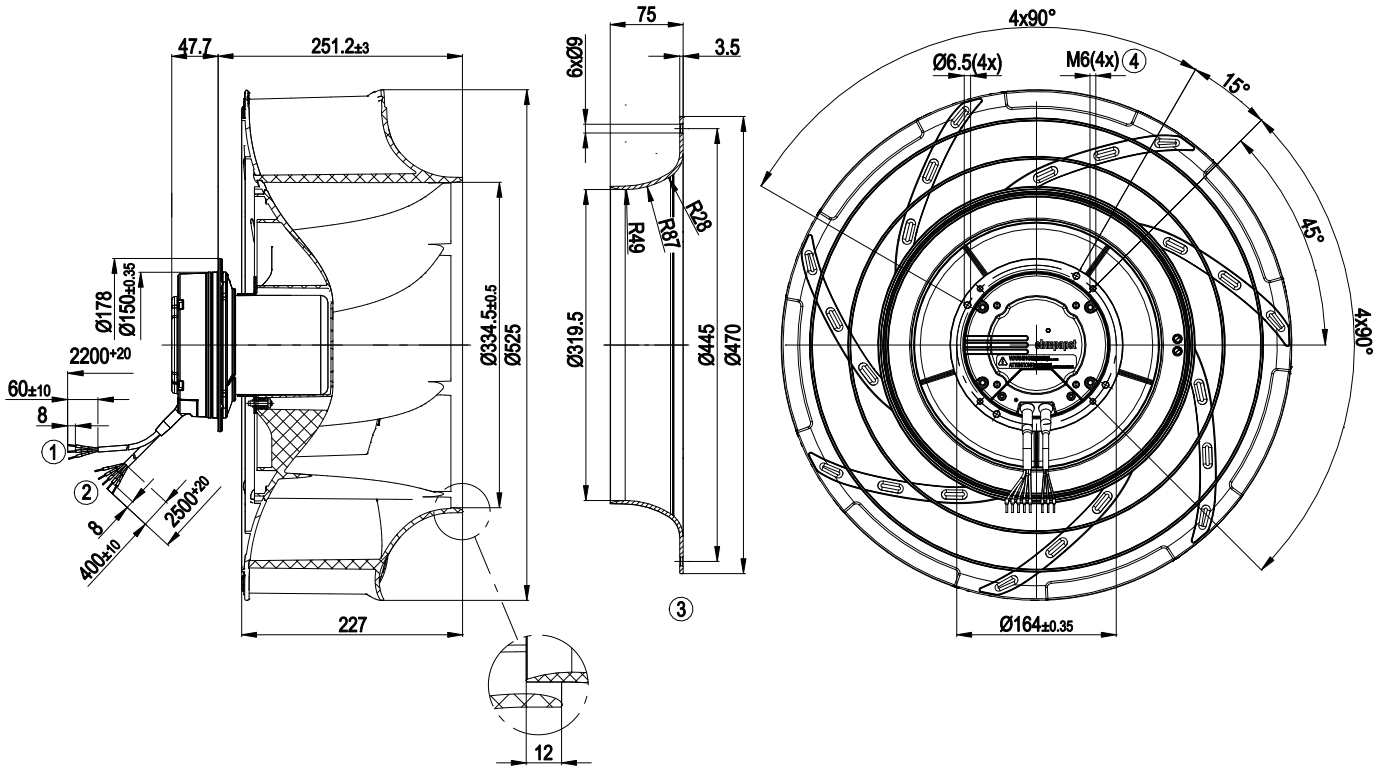
Product drawing



1	Cable PVC AWG22, 3 x crimped ferrules
2	Cable PVC AWG18, 5 x crimped ferrules
3	Accessory part: Inlet ring 50901-5-2943, not included in scope of delivery
4	Clearance for screw min. 8 mm, max. 10 mm

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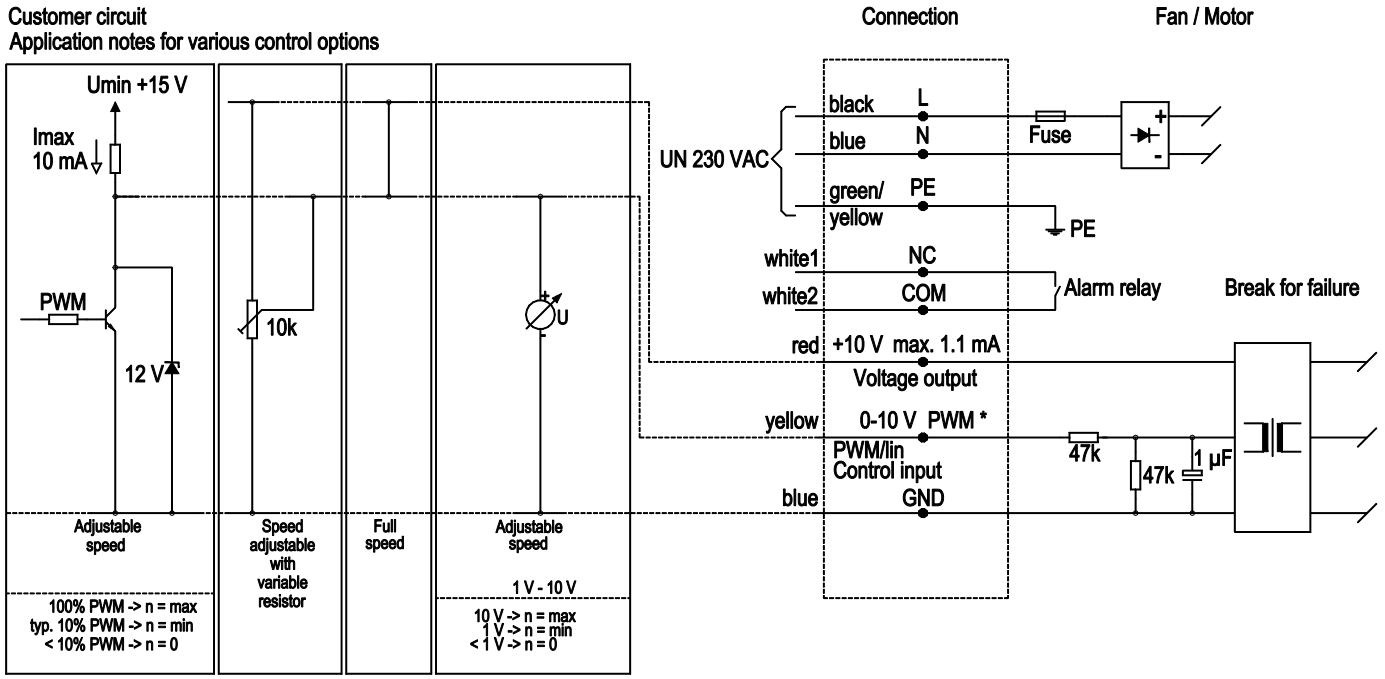
Connection diagram



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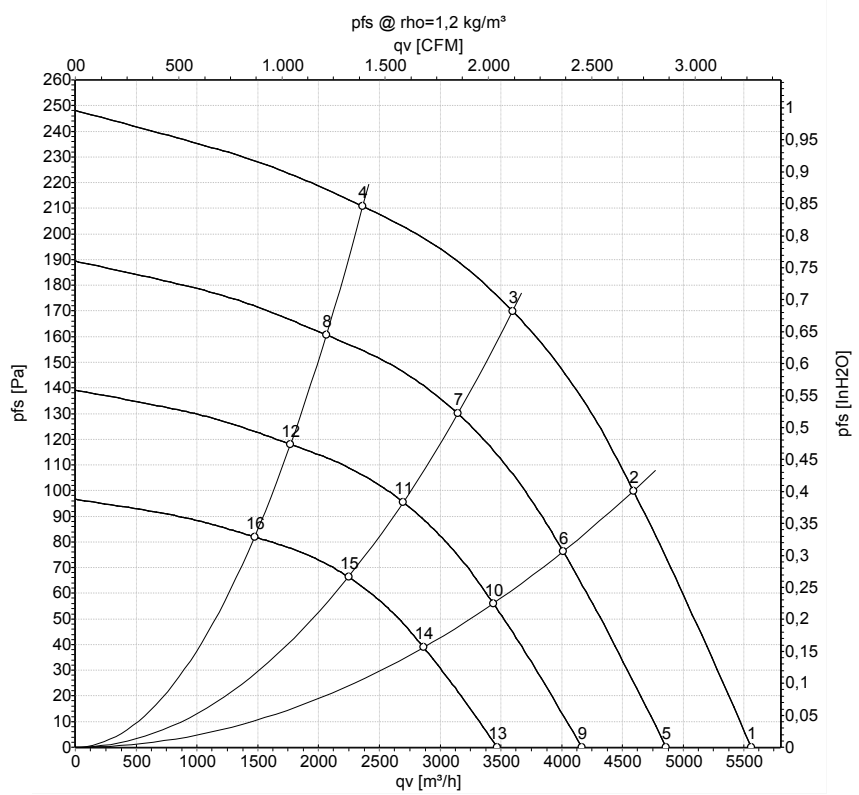
Curves: Air performance 50 Hz



Measurement: LU-123662-1

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.

Measured values

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	800	210	1.39	60	67	73	5560	0	3270	0.00
2	230	50	800	296	1.92	55	63	69	4590	100	2700	0.40
3	230	50	800	327	2.10	52	59	64	3595	170	2115	0.68
4	230	50	800	287	1.86	51	57	63	2365	210	1390	0.84
5	230	50	700	141	0.93	57	64	69	4860	0	2860	0.00
6	230	50	700	197	1.28	52	59	65	4010	77	2360	0.31
7	230	50	700	219	1.41	49	56	61	3145	131	1850	0.53
8	230	50	700	191	1.24	47	54	60	2065	161	1215	0.65
9	230	50	600	88	0.58	53	60	65	4165	0	2450	0.00
10	230	50	600	124	0.81	48	55	61	3440	56	2025	0.22
11	230	50	600	138	0.89	45	52	57	2695	96	1585	0.39
12	230	50	600	120	0.78	43	50	56	1770	118	1040	0.47
13	230	50	500	51	0.34	48	55	61	3470	0	2040	0.00
14	230	50	500	72	0.47	44	51	57	2865	39	1685	0.16
15	230	50	500	80	0.51	40	47	53	2245	67	1325	0.27
16	230	50	500	70	0.45	39	45	51	1475	82	870	0.33

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