R3G500-AN34-71

EC centrifugal fan

backward-curved, single-intake

R3G500-AN34-71 ebmpapst Datasheet
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Nominal data

Type	**R3G500-AN34-71**	
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^{-1}	750
Power consumption	W	265
Current draw	A	1.6
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 Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	53.2	45.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		69.8	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.26
09 Air flow q_v	m^3/h	3010
09 Pressure increase p_{fs}	Pa	149
10 Speed (rpm) n	min^{-1}	755
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-102374

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Technical description

Weight	8.9 kg
Size	500 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	9
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54; installation- and position-dependent
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Output 10 VDC, max. 1.1 mA - Thermal overload protection for electronics/motor - Alarm relay - Line undervoltage detection - Motor current limitation - Soft start
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 61800-5-1; CE
Approval	UL 1004-3 + 60730-1; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1

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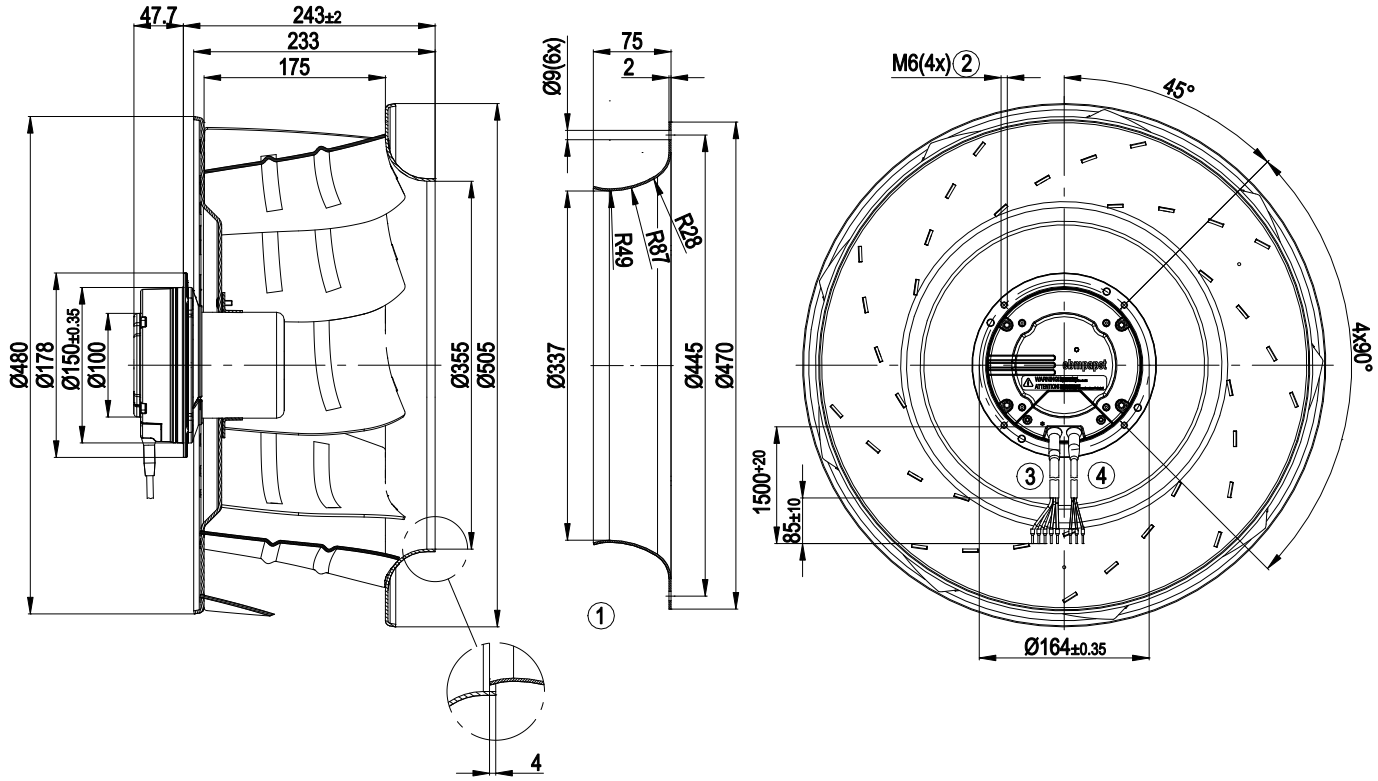
Product drawing



1	Accessory part: Inlet ring 63072-2-4013 with pressure tap not included in scope of delivery, other inlet rings on request
2	Clearance for screw 8 - 10 mm
3	Cable AWG 18, 5x crimped ferrules
4	Cable AWG 22, 3x crimped ferrules

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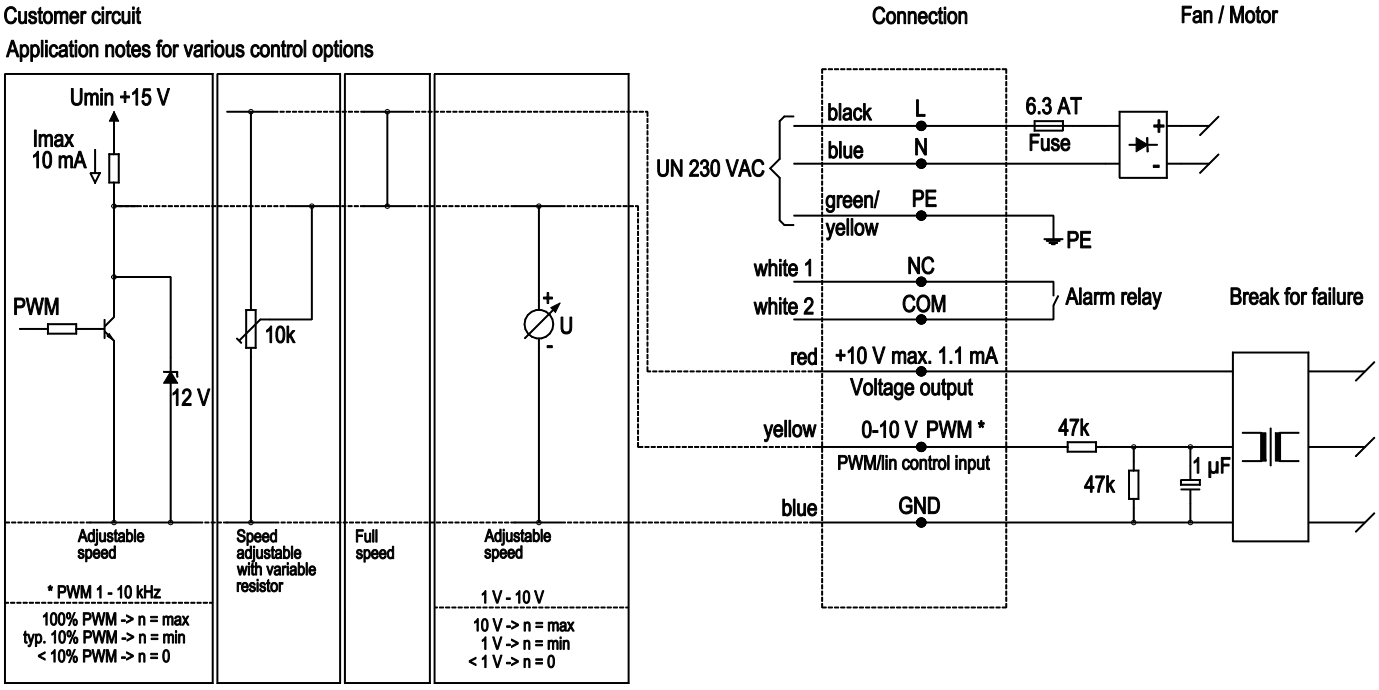
Connection diagram



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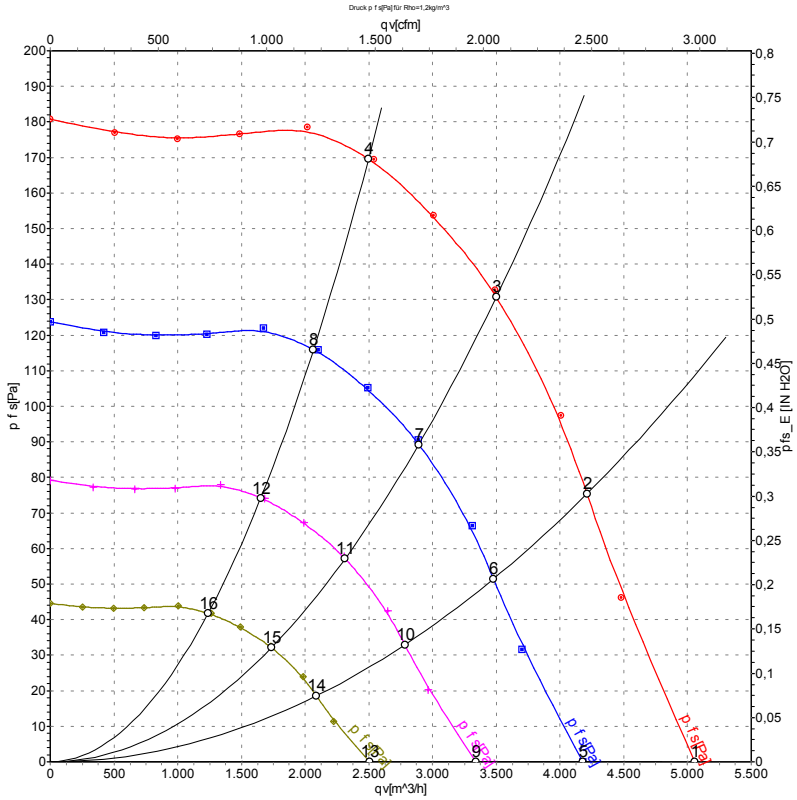
Curves: Air performance 50 Hz



Measurement: LU-102374-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	750	174	1.11	62	72	74	5055	0	2975	0.00
2	230	50	750	228	1.42	56	64	69	4210	75	2480	0.30
3	230	50	750	265	1.60	52	60	66	3500	130	2060	0.52
4	230	50	750	251	1.55	52	60	66	2495	170	1470	0.68
5	230	50	625	98	0.63	58	67	70	4180	0	2460	0.00
6	230	50	625	129	0.80	52	60	65	3480	52	2045	0.21
7	230	50	625	150	0.92	48	56	62	2890	90	1700	0.36
8	230	50	625	142	0.88	48	56	62	2065	116	1215	0.47
9	230	50	500	50	0.32	53	63	65	3340	0	1965	0.00
10	230	50	500	66	0.41	47	55	60	2785	33	1640	0.13
11	230	50	500	77	0.47	44	51	57	2315	58	1360	0.23
12	230	50	500	73	0.45	43	51	57	1650	74	970	0.30
13	230	50	375	21	0.14	46	56	59	2505	0	1475	0.00
14	230	50	375	28	0.17	41	49	54	2085	18	1230	0.07
15	230	50	375	32	0.20	37	45	51	1735	32	1020	0.13
16	230	50	375	31	0.19	37	44	51	1240	42	730	0.17

U = Voltage · 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 · q_V = Air flow · p_{fs} = Pressure increase