EC centrifugal fan

backward-curved, single-intake

R3G400-AD32-71 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G400-AD32-71**
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}	1400
Power consumption	W	360
Current draw	A	2.2
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}	%	60	46.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		75.2	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.36
09 Air flow q_v	m^3/h	2505
09 Pressure increase p_{fs}	Pa	283
10 Speed (rpm) n	min^{-1}	1455
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-114983

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Technical description

Weight	6 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
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 bottom; rotor on top 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 - 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 61800-5-1; CE
Approval	EAC; UL 2111; CSA C22.2 No. 77

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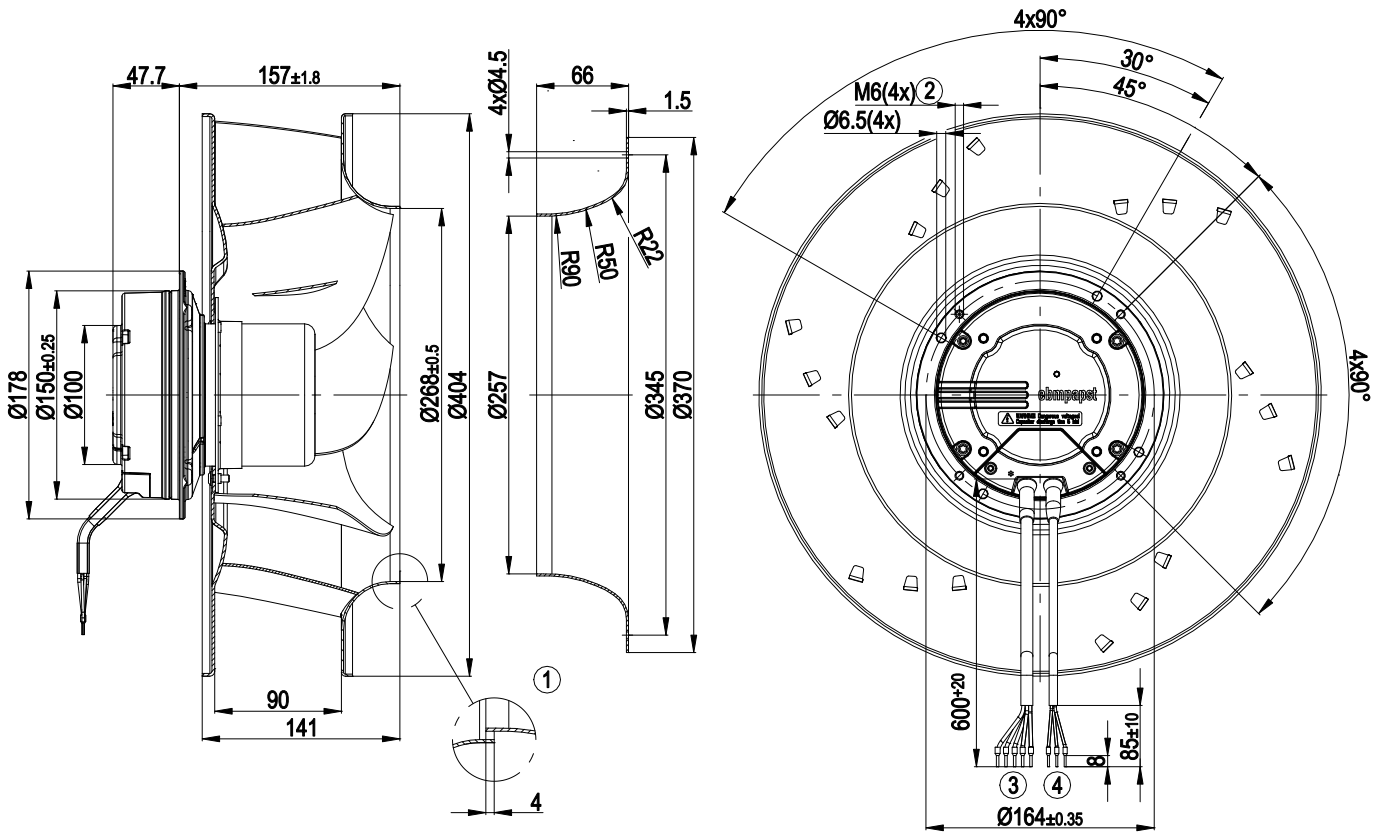
Product drawing



1	Accessory part: Inlet ring 54476-2-4013 not included in scope of delivery, other inlet rings on request
2	Clearance for screw 8 - 10 mm
3	Cable AWG18, 5 x crimped ferrules
4	Cable AWG 22, 3 x crimped ferrules

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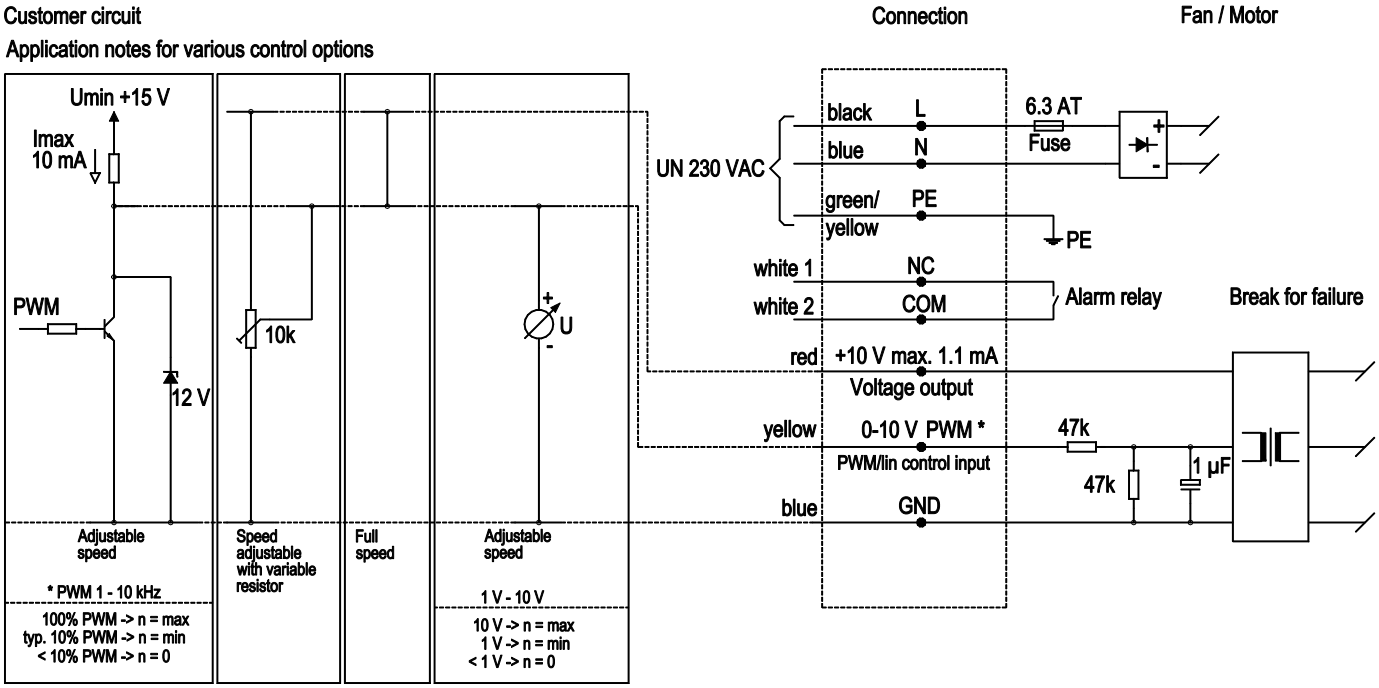
Connection diagram



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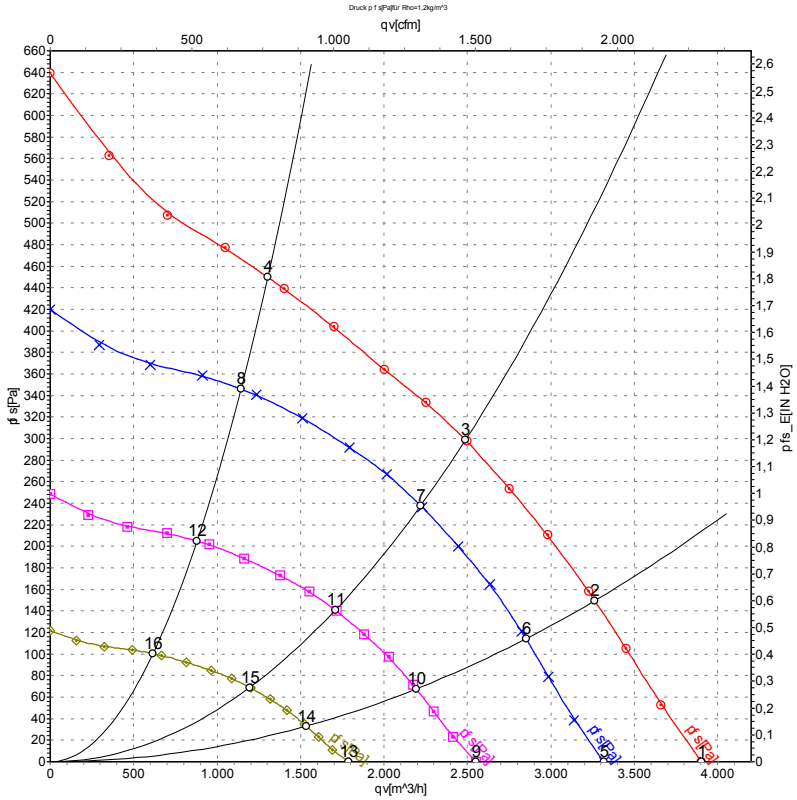
Curves: Air performance 50 Hz



Measurement: LU-114983-1

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	1530	290	1.79	73	79	83	3900	0	2295	0.00
2	230	50	1490	332	2.02	68	74	78	3260	150	1920	0.60
3	230	50	1450	360	2.20	60	67	72	2490	300	1465	1.20
4	230	50	1480	343	2.08	64	71	76	1305	450	770	1.81
5	230	50	1300	178	1.10	69	76	80	3315	0	1950	0.00
6	230	50	1300	221	1.35	65	71	75	2850	114	1680	0.46
7	230	50	1300	260	1.57	57	64	69	2220	238	1305	0.96
8	230	50	1300	232	1.41	61	69	73	1145	346	675	1.39
9	230	50	1000	81	0.50	64	70	74	2550	0	1500	0.00
10	230	50	1000	101	0.61	59	66	70	2195	68	1290	0.27
11	230	50	1000	118	0.71	52	59	64	1710	141	1005	0.57
12	230	50	1000	105	0.64	56	63	67	880	205	520	0.82
13	230	50	700	28	0.17	56	62	66	1785	0	1050	0.00
14	230	50	700	35	0.21	51	58	62	1535	33	905	0.13
15	230	50	700	41	0.25	44	51	56	1195	69	705	0.28
16	230	50	700	36	0.22	48	55	60	615	100	365	0.40

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