

R3G280-AF35-71

EC centrifugal fan

backward curved, single inlet

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General partner: Elektrobau Mulfingen GmbH · Headquarters Mulfingen

County court Stuttgart · HRB 590142



Nominal data

Type	R3G280-AF35-71	
Motor	M3G084-DF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min ⁻¹	2600
Power input	W	455
Current draw	A	2.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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

Installation category	A
Efficiency category	Static
Variable speed drive integrated	Integrated
Specific ratio*	1,00

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

	Actual	Request 2013	Request 2015
Overall efficiency η_{es}	48,2	43,9	47,9
Efficiency grade N	62,3	58	62
Power input P_{ed}	kW	0,45	
Air flow q_v	m ³ /h	1510	
Pressure increase p_{fs}	Pa	472	
Speed n	min ⁻¹	2610	

Data established at point of optimum efficiency



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Technical features

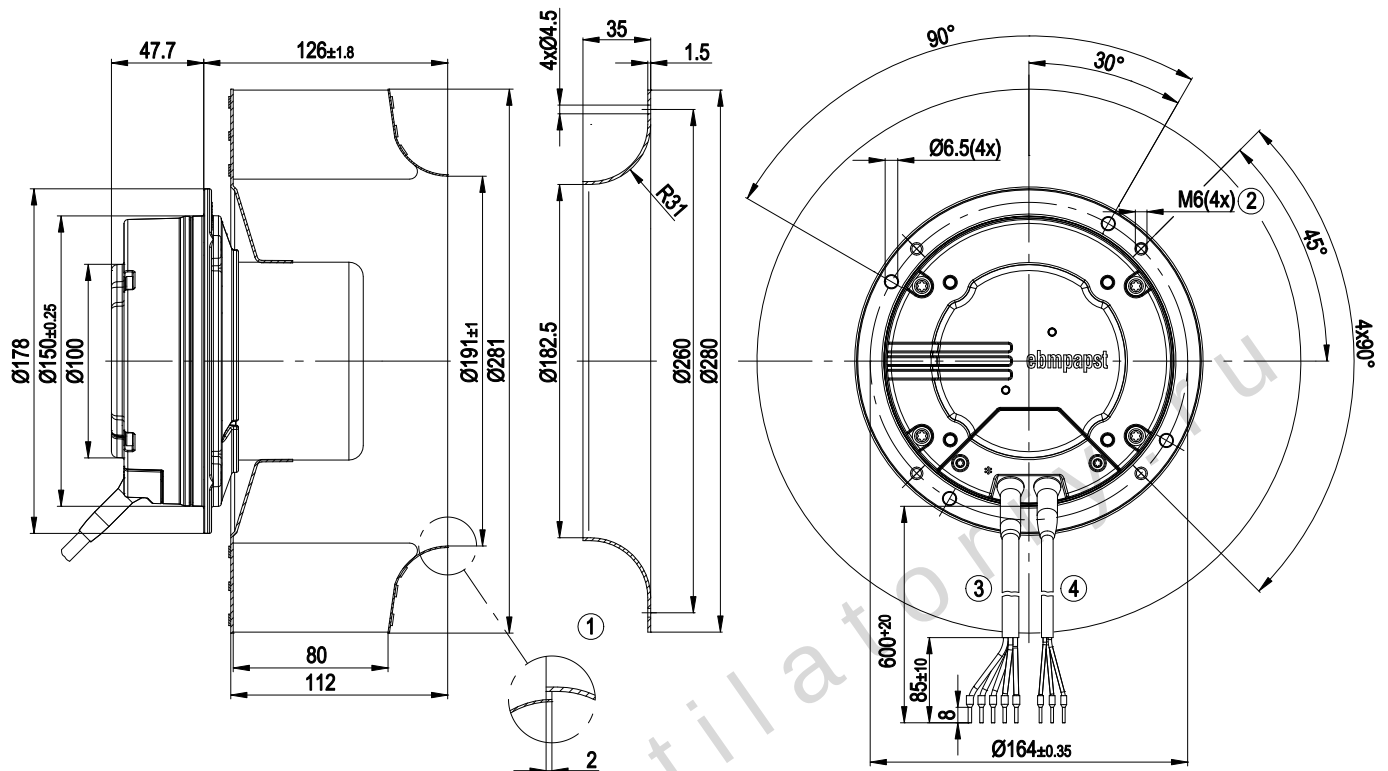
Mass	4.86 kg
Size	280 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, hot-galvanised
Number of blades	11
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
EMC harmonics	Acc. to EN 61000-3-2/3
Leakage current	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CSA C22.2 Nr.77; CCC; UL 2111; VDE

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Product drawing



1	Accessory part: inlet nozzle 96360-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
2	Depth of screw 8-10 mm
3	Connection line AWG18, 5 x crimped core-end sleeves
4	Connection line AWG22, 3 x crimped core-end sleeves

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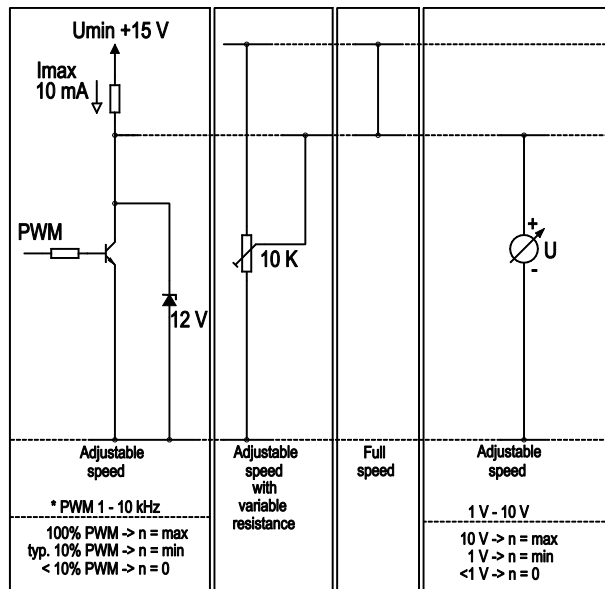
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Connection screen

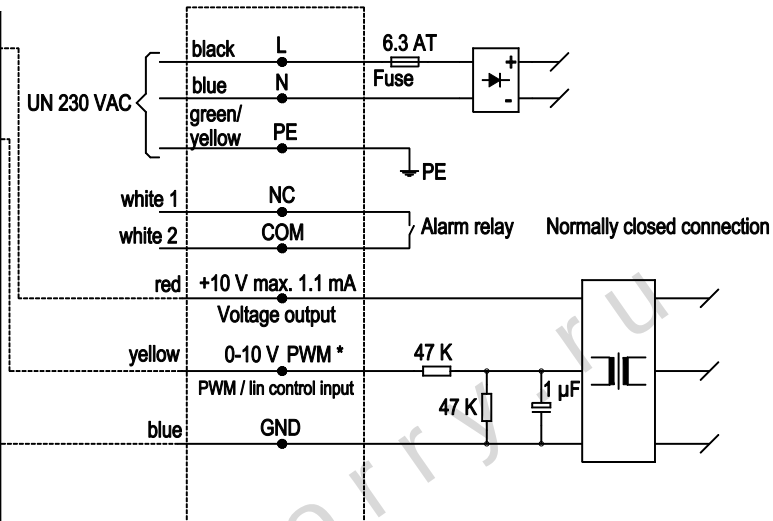
Customer circuit

Notes on various control possibilities and their applications



Connection

Fan / motor

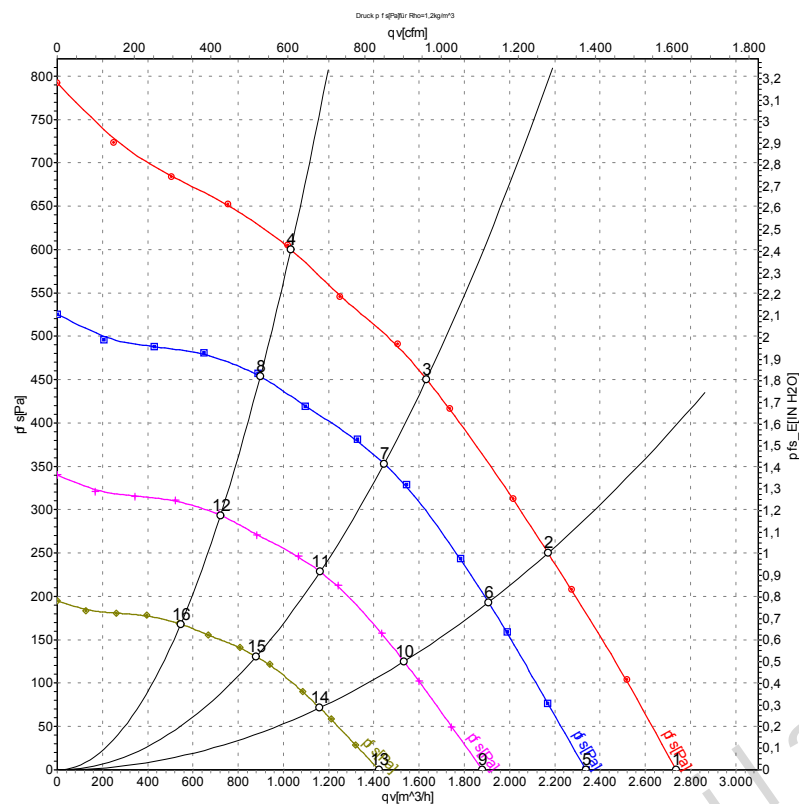


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Charts: Air flow 50 Hz



Measurement: LU-65464

Air performance measured as per ISO 5801
Installation category A. For detailed
information on the measuring set-up, please
contact ebm-papst. Suction-side noise
levels: L_{wA} measured as per ISO 13347 /
L_{pA} measured with 1m distance to fan axis.
The values given are valid under the
measuring conditions mentioned above and
may vary according to the actual installation
situation. With any deviation from the
standard set-up, the specific values have to
be checked and reviewed with the unit
installed.

Measured values

	U	f	n	P _{ed}	I	qv	P _{fs}
	V	Hz	min ⁻¹	W	A	m³/h	Pa
1	230	50	2690	332	2.06	2735	0
2	230	50	2620	416	2.55	2170	250
3	230	50	2600	455	2.80	1635	450
4	230	50	2645	406	2.48	1030	600
5	230	50	2300	208	1.28	2340	0
6	230	50	2300	282	1.73	1905	193
7	230	50	2300	314	1.91	1445	353
8	230	50	2300	267	1.63	895	455
9	230	50	1850	108	0.67	1880	0
10	230	50	1850	147	0.90	1535	125
11	230	50	1850	163	0.99	1165	228
12	230	50	1850	139	0.85	720	295
13	230	50	1400	47	0.29	1425	0
14	230	50	1400	64	0.39	1160	72
15	230	50	1400	71	0.43	880	131
16	230	50	1400	60	0.37	545	169