R3G280-AT04-71

EC centrifugal fan - RadiPac

backward curved, single inlet

R3G280-AT04-71 ebmpapst Datasheet
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Nominal data

Type	**R3G280-AT04-71**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2400
Power input	W	415
Current draw	A	2.7
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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	64.5	47.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		79	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.42
09 Air flow q_v	m^3/h	1770
09 Pressure increase p_{fs}	Pa	500
10 Speed (rpm) n	min^{-1}	2340
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-131078

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Technical features

Mass	5.43 kg
Size	280 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminum sheet
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F3-1
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	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Output 10 VDC, max. 1.1 mA - Over-temperature protected electronics / motor - Alarm relay - Line undervoltage detection - Motor current limit - Soft start
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 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	CCC; EAC

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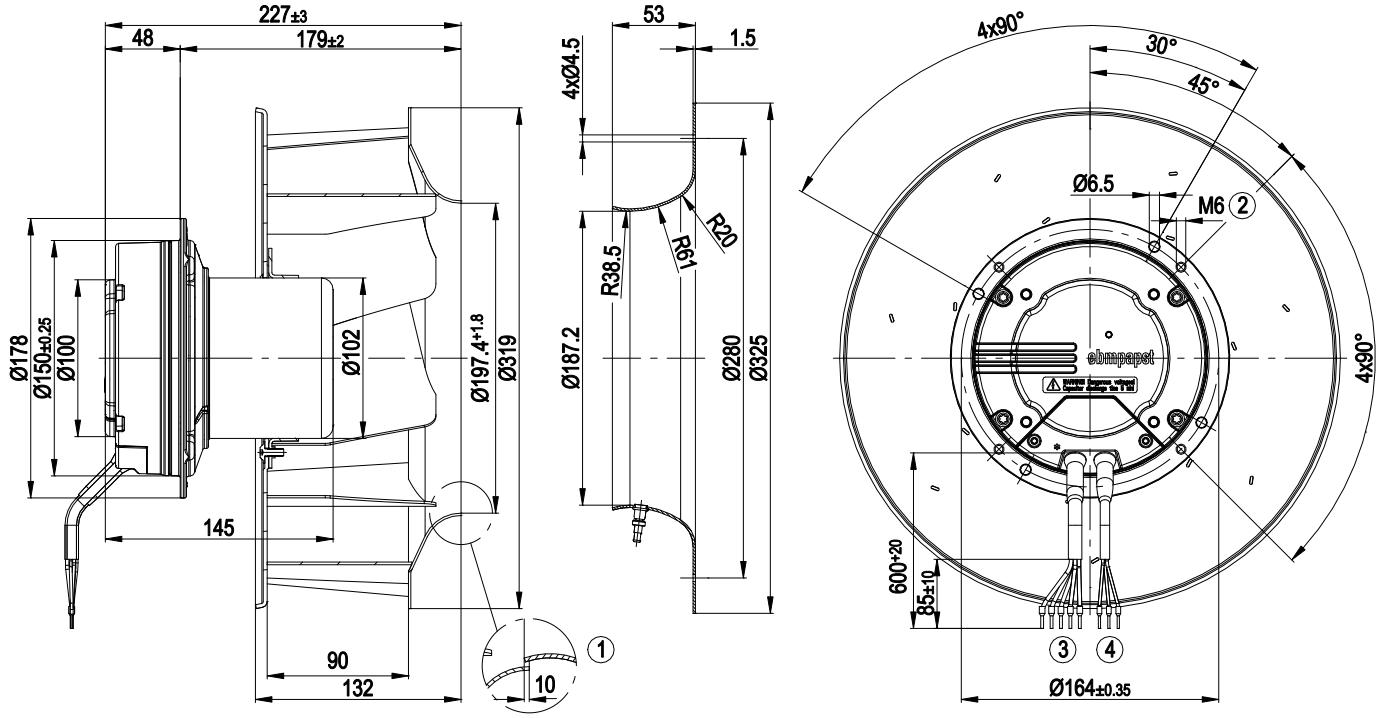
Product drawing



1	Accessory part: inlet nozzle 28075-2-4013 with a pressure tap 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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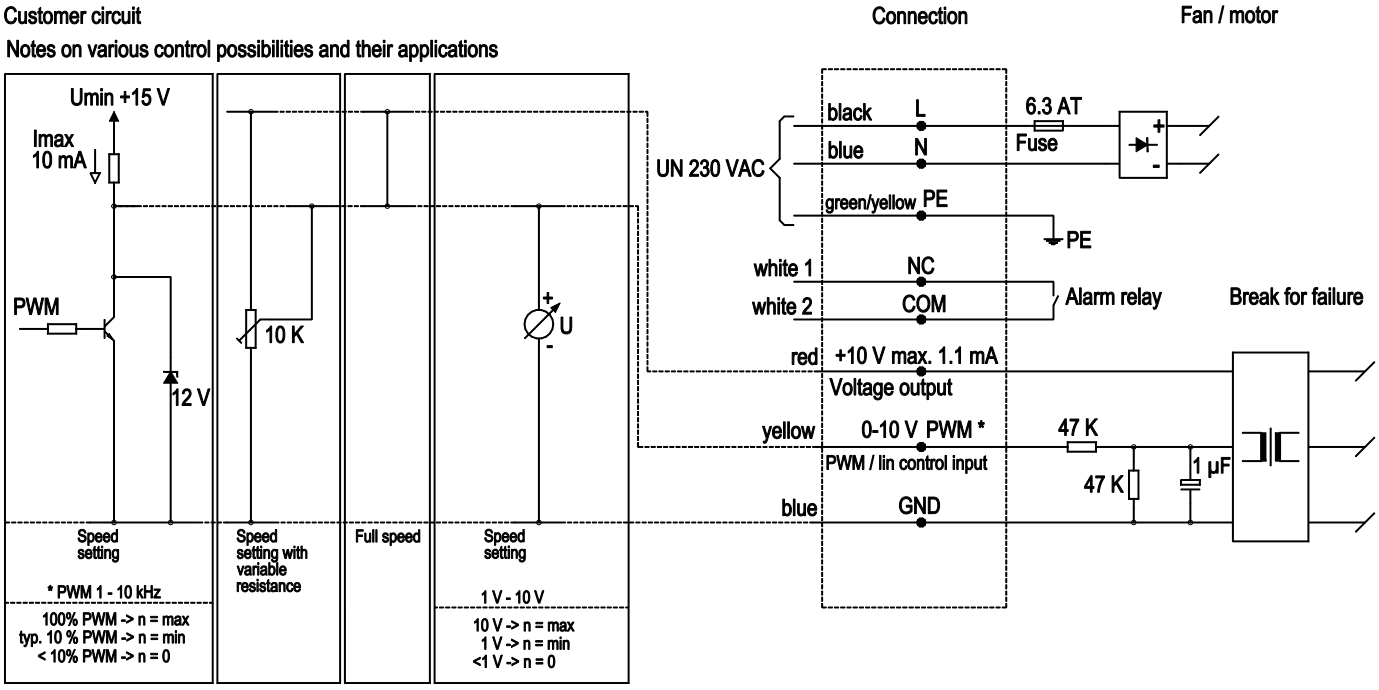
Connection screen



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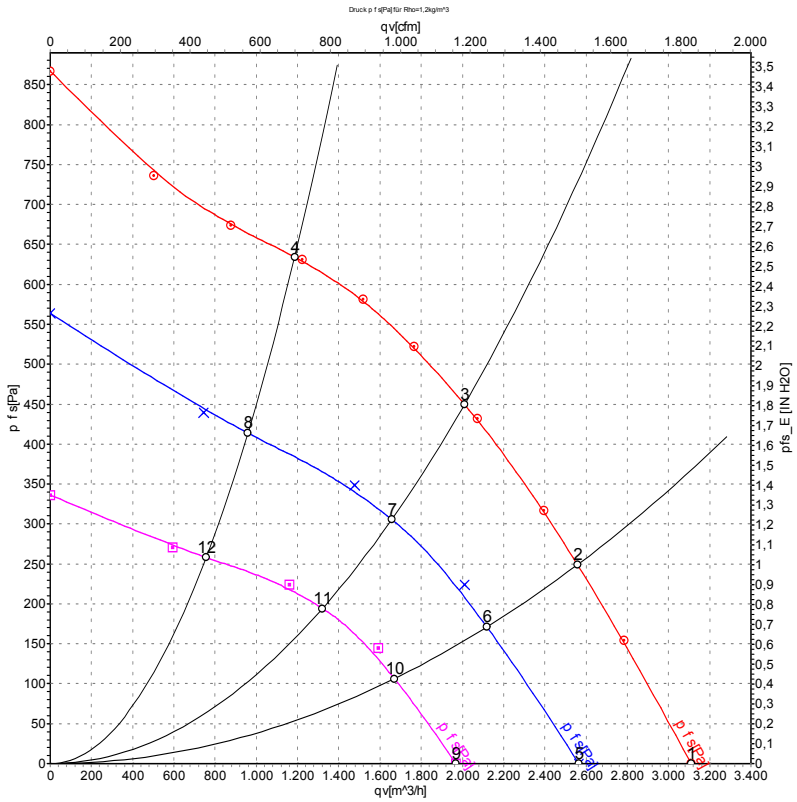
Charts: Air flow 50 Hz



Measurement: LU-131078-1
Measurement: LU-131156-1
Measurement: LU-131157-1

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: LwA measured as per ISO 13347 / LpA 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	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	inH2O
1	230	50	2530	335	2.19	72	80	86	3110	0	1830	0.00
2	230	50	2415	392	2.57	67	75	81	2560	250	1505	1.00
3	230	50	2400	415	2.70	63	71	78	2010	450	1185	1.81
4	230	50	2405	405	2.66	66	75	81	1185	635	700	2.55
5	230	50	2040	171	1.17	66	74	80	2565	0	1510	0.00
6	230	50	1990	216	1.45	61	69	76	2120	180	1245	0.72
7	230	50	1965	237	1.58	59	67	74	1655	306	975	1.23
8	230	50	2010	215	1.45	63	70	76	960	413	565	1.66
9	230	50	1570	85	0.63	60	67	74	1965	0	1160	0.00
10	230	50	1575	111	0.79	56	63	70	1670	114	985	0.46
11	230	50	1560	122	0.86	54	62	69	1320	195	780	0.78
12	230	50	1580	106	0.76	57	64	70	755	258	445	1.04

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase