R3G310-AN43-81

EC centrifugal fan

backward curved, single inlet

R3G310-AN43-81 ebmpapst Datasheet
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County court Stuttgart · HRB 590142

Nominal data

Type	**R3G310-AN43-81**
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}	2435
Power input	W	470
Current draw	A	3.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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}	%	60.6	48
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.6	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.46
09 Air flow q_v	m^3/h	1810
09 Pressure increase p_{fs}	Pa	507
10 Speed (rpm) n	min^{-1}	2455
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-112311

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Technical features

Mass	5.2 kg
Size	310 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	6
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	Any
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 - PFC, passive - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage detection
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; C22.2 Nr.77 + CAN/CSA-E60730-1; EAC; UL1004-3 +60730

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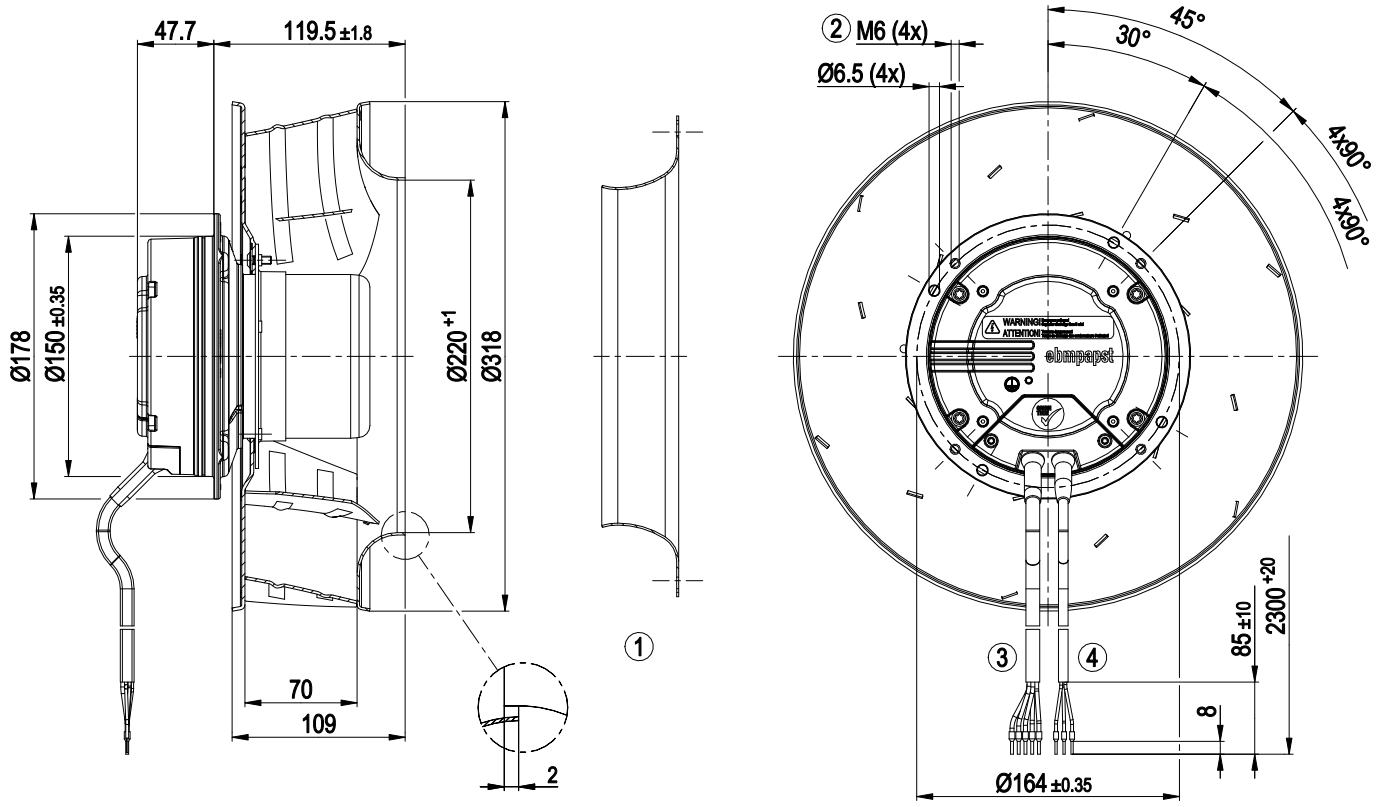
Product drawing



1	Accessory part: Inlet nozzle 31050-2-4013 not included in scope of delivery
2	Thread reach 8 - 10 mm
3	Connection line PVC AWG18, 5x crimped core-end sleeves
4	Connection line PVC AWG22, 3x crimped core-end sleeves

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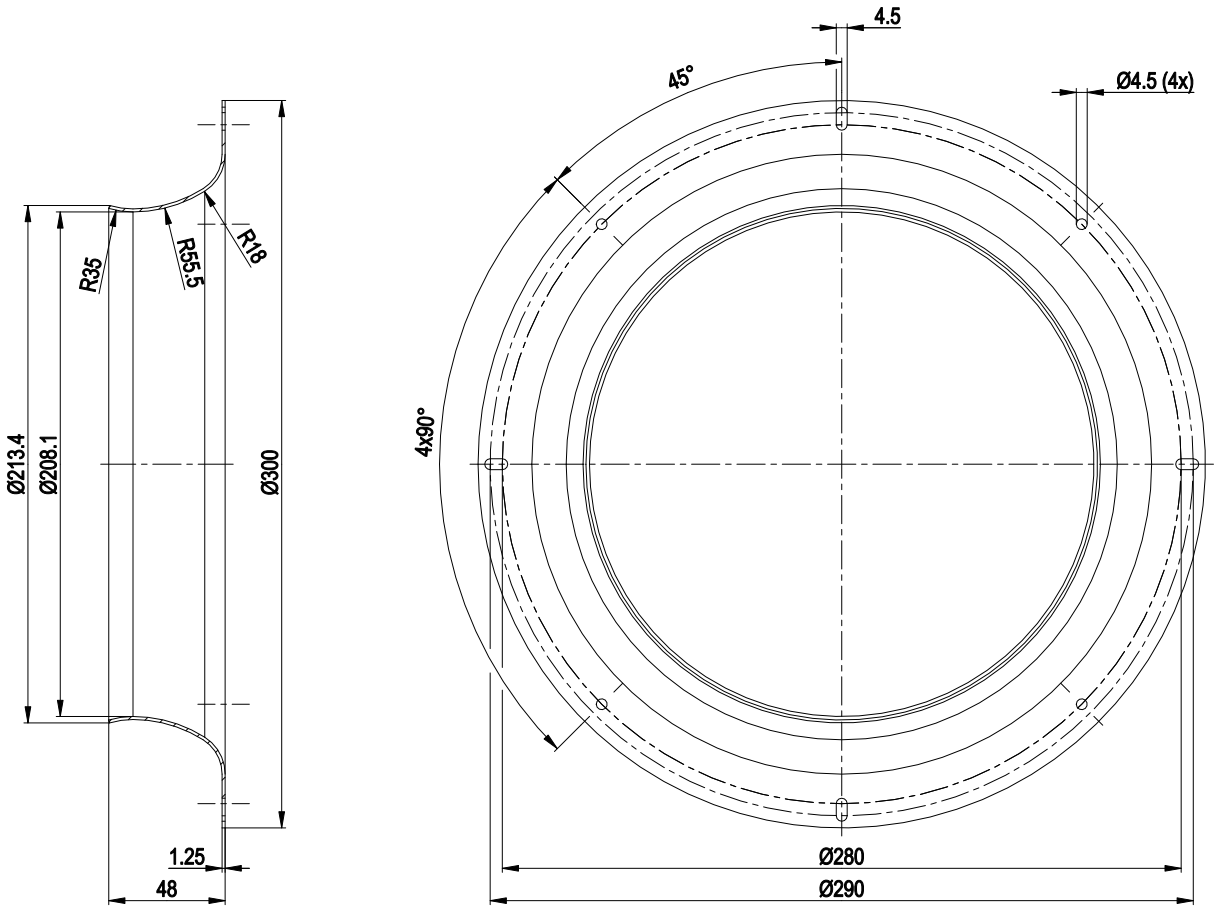
Accessory part



Inlet nozzle 31050-2-4013 not included in scope of delivery

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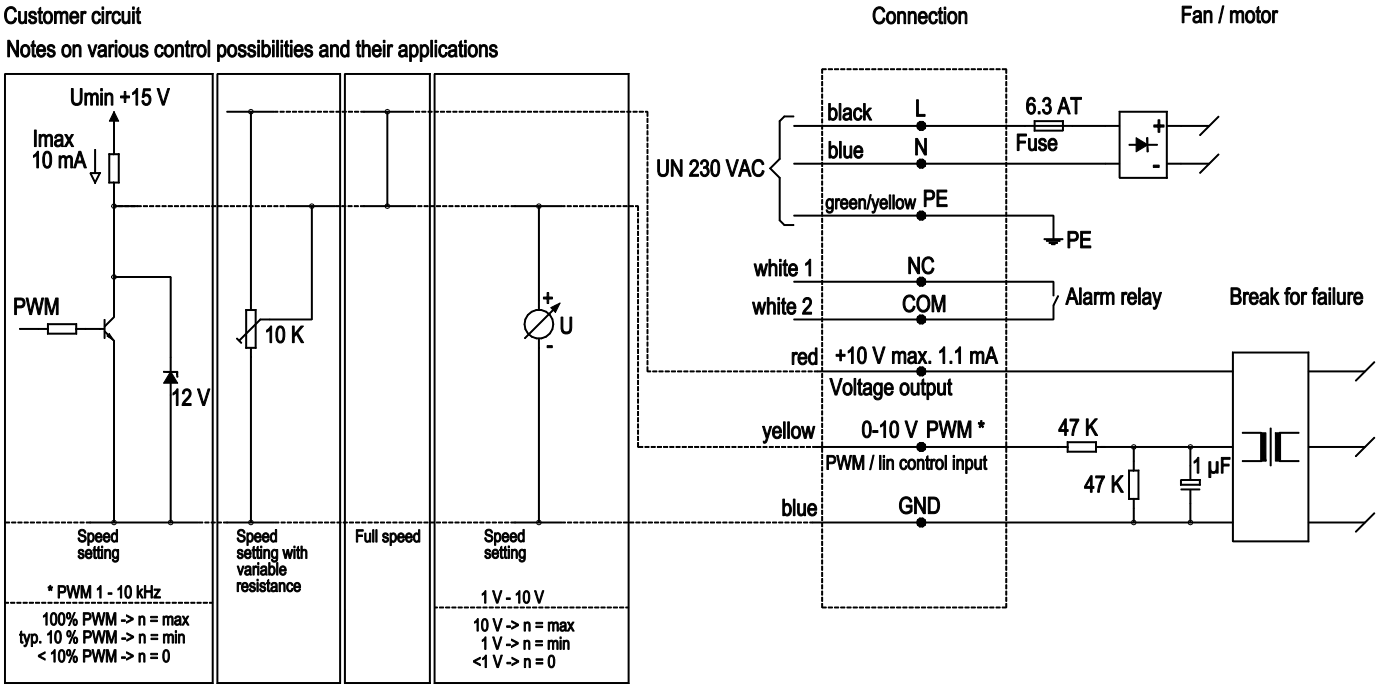
Connection screen



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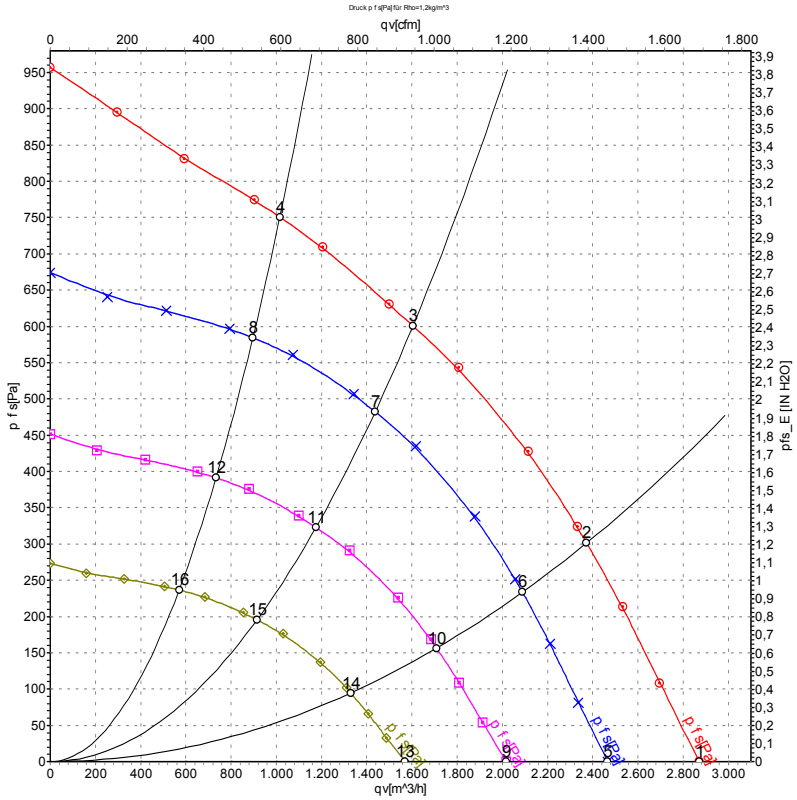
Charts: Air flow 50 Hz



Measurement: LU-112311-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	2560	356	2.31	2870	0	1690	0.00
2	230	50	2500	432	2.79	2375	300	1395	1.20
3	230	50	2435	470	3.00	1605	600	945	2.41
4	230	50	2495	437	2.84	1015	750	600	3.01
5	230	50	2200	226	1.46	2465	0	1450	0.00
6	230	50	2200	295	1.91	2090	234	1230	0.94
7	230	50	2200	336	2.18	1440	482	845	1.94
8	230	50	2200	301	1.95	895	584	525	2.34
9	230	50	1800	124	0.80	2020	0	1190	0.00
10	230	50	1800	162	1.04	1710	157	1005	0.63
11	230	50	1800	184	1.19	1175	323	690	1.30
12	230	50	1800	165	1.07	735	391	430	1.57
13	230	50	1400	58	0.38	1570	0	925	0.00
14	230	50	1400	76	0.49	1330	95	780	0.38
15	230	50	1400	87	0.56	915	195	540	0.78
16	230	50	1400	77	0.50	570	237	335	0.95

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase