R3G310-AP52-14

EC centrifugal fan

backward curved, single inlet

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Nominal data

Type	**R3G310-AP52-14**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50
Type of data definition		fa
Speed (rpm)	min^{-1}	1770
Power input	W	170
Current draw	A	1.25
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	57.1	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		76	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	1355
09 Pressure increase p_{fs}	Pa	222
10 Speed (rpm) n	min^{-1}	1500
11 Specific ratio*		1.00

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-74253

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Technical features

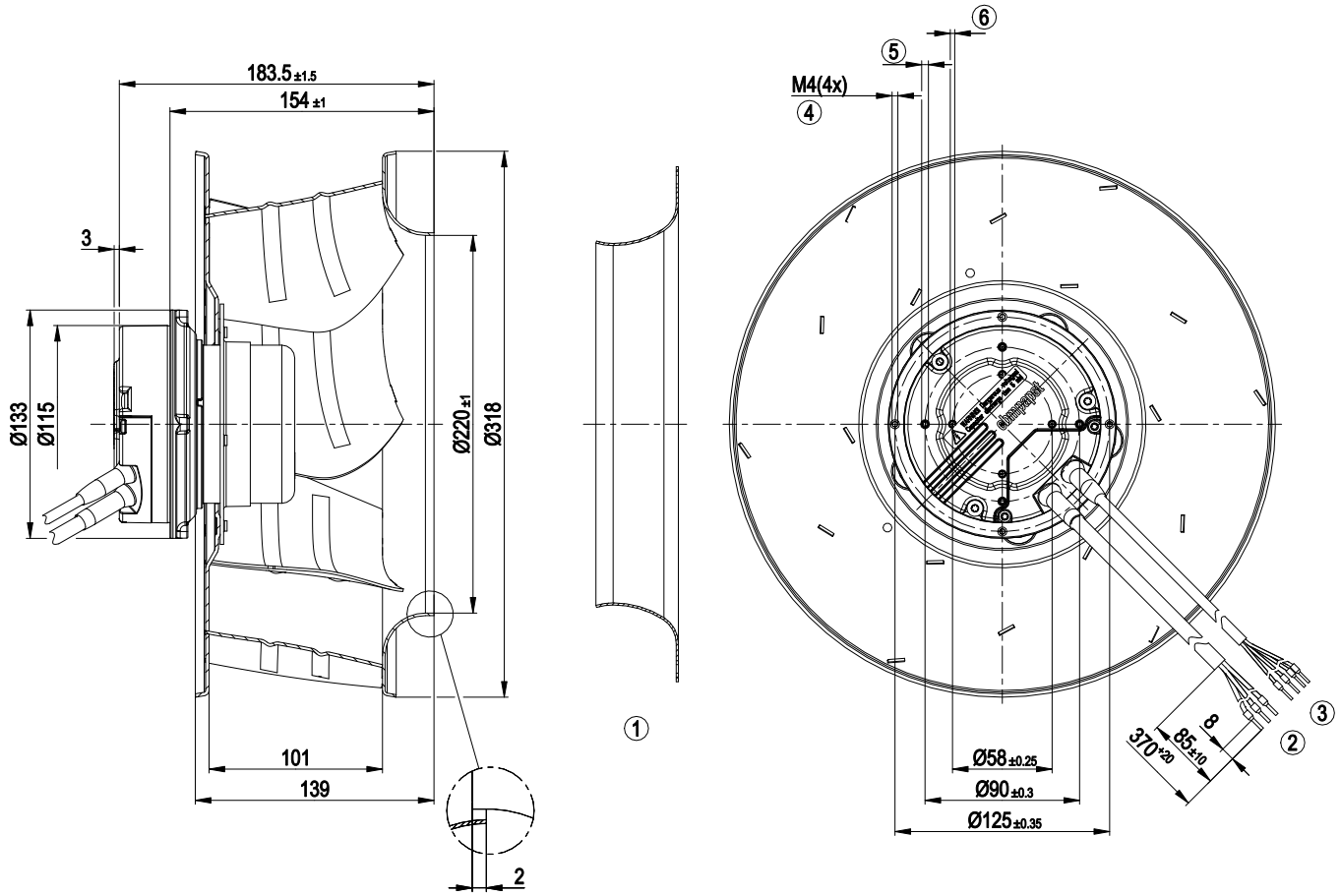
Mass	3.2 kg
Size	310 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity (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 - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial 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 60335-1; CE
Approval	CSA C22.2 No.77; UL 2111

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Product drawing



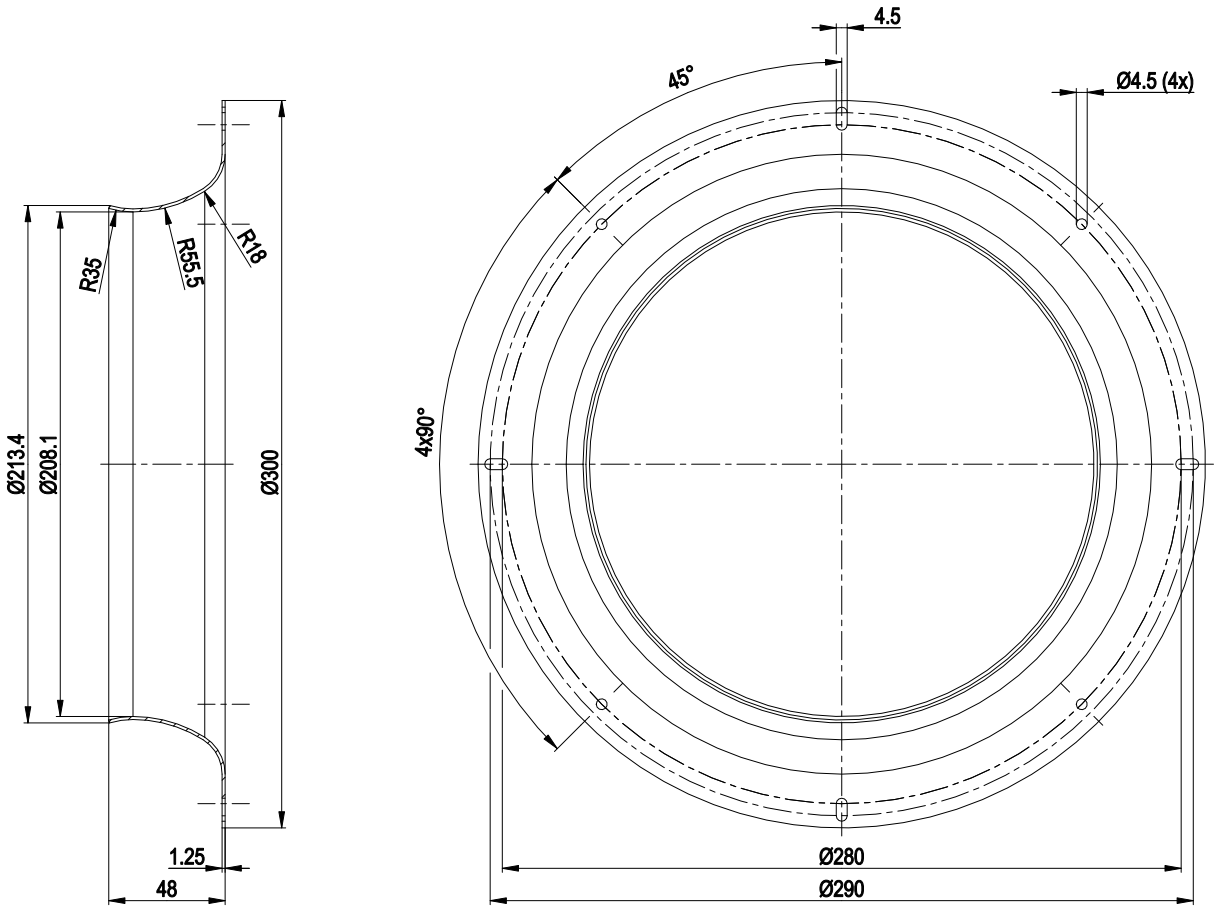
1	Accessory part: Inlet nozzle 31050-2-4013 not included in scope of delivery, other inlet nozzles on request
2	Connection line AWG18, 3x crimped core-end sleeves
3	Connection line AWG22, 4x crimped core-end sleeves
4	Thread reach 8-10 mm; tightening torque 2.5±0.2 Nm; gluing the screws is recommended
5	Pilot hole prepared for M4 self-tapping screw, thread reach max. 6 mm
6	Pilot hole prepared for M4 self-tapping screw, thread reach max. 8 mm

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Accessory part



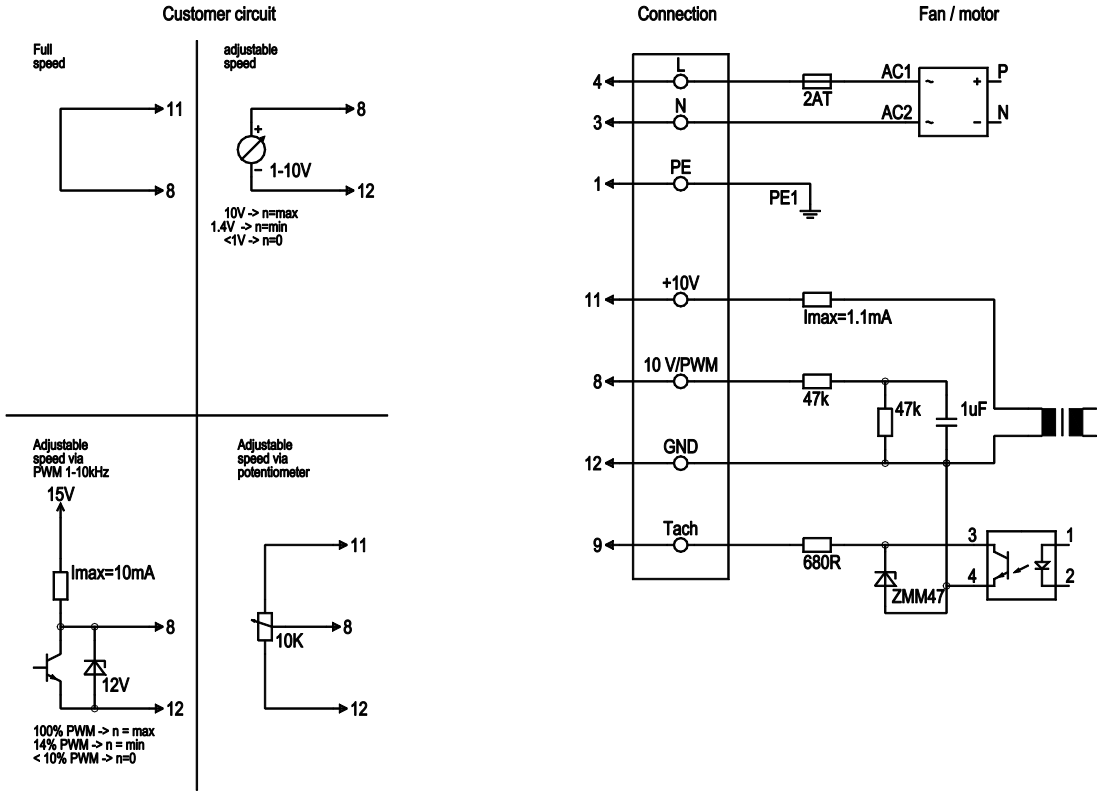
Inlet nozzle 31050-2-4013 not included in scope of delivery

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Connection screen



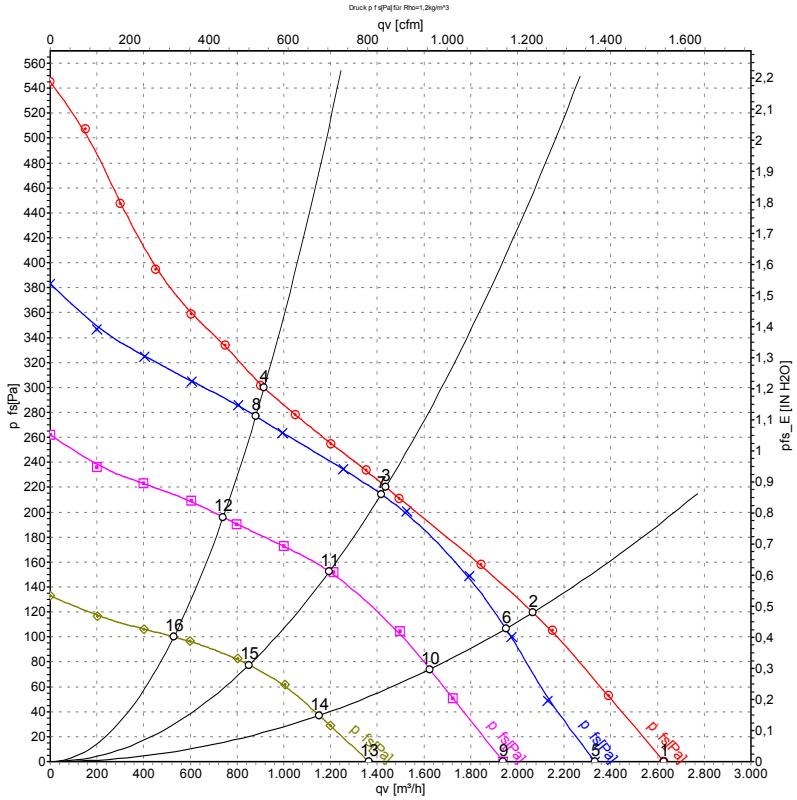
No.	Conn.	Designation	Colour	Function / assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V / max. 1.1 mA, electrically isolated
	12	GND	blue	GND - Connection for control interface

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Charts: Air flow 50 Hz



Measurement: LU-74253-1
Measurement: LU-67537-1
Measurement: LU-67538-1
Measurement: LU-67539-1

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	1770	170	1.25	2630	0	1545	0.00
2	230	50	1590	170	1.25	2065	120	1215	0.48
3	230	50	1500	170	1.25	1435	220	845	0.88
4	230	50	1560	170	1.25	915	300	540	1.20
5	230	50	1565	125	0.92	2330	0	1375	0.00
6	230	50	1520	145	1.07	1950	107	1150	0.43
7	230	50	1495	164	1.21	1415	214	835	0.86
8	230	50	1520	160	1.19	880	277	520	1.11
9	230	50	1295	73	0.53	1940	0	1140	0.00
10	230	50	1270	87	0.64	1625	74	955	0.30
11	230	50	1250	100	0.74	1195	154	705	0.62
12	230	50	1265	92	0.69	740	196	435	0.79
13	230	50	925	29	0.23	1365	0	805	0.00
14	230	50	910	36	0.28	1150	37	675	0.15
15	230	50	900	41	0.31	850	78	500	0.31
16	230	50	905	37	0.29	530	100	310	0.40

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

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