R1G310-AD17-11

EC centrifugal fan

backward curved, single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R1G310-AD17-11**	
Motor	**M1G074-CF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 52
Frequency	Hz	-
Type of data definition		fa
Speed	min^{-1}	1800
Power input	W	120
Current draw	A	3.0
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	Yes
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		54.1	38.2	42.2
Efficiency grade N		73.9	58	62
Power input P_e	kW	0.13		
Air flow q_v	m^3/h	1115		
Pressure increase p_{fs}	Pa	200		
Speed n	min^{-1}	1520		

Data established at point of optimum efficiency

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Technical features

Mass	2.6 kg
Size	310 mm
Surface of rotor	Coated in black
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 42
Insulation class	"B"
Humidity class	F0
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	- Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 55022 (Class B)
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60950-1
Approval	UL 1004-1; CSA C22.2 Nr.77

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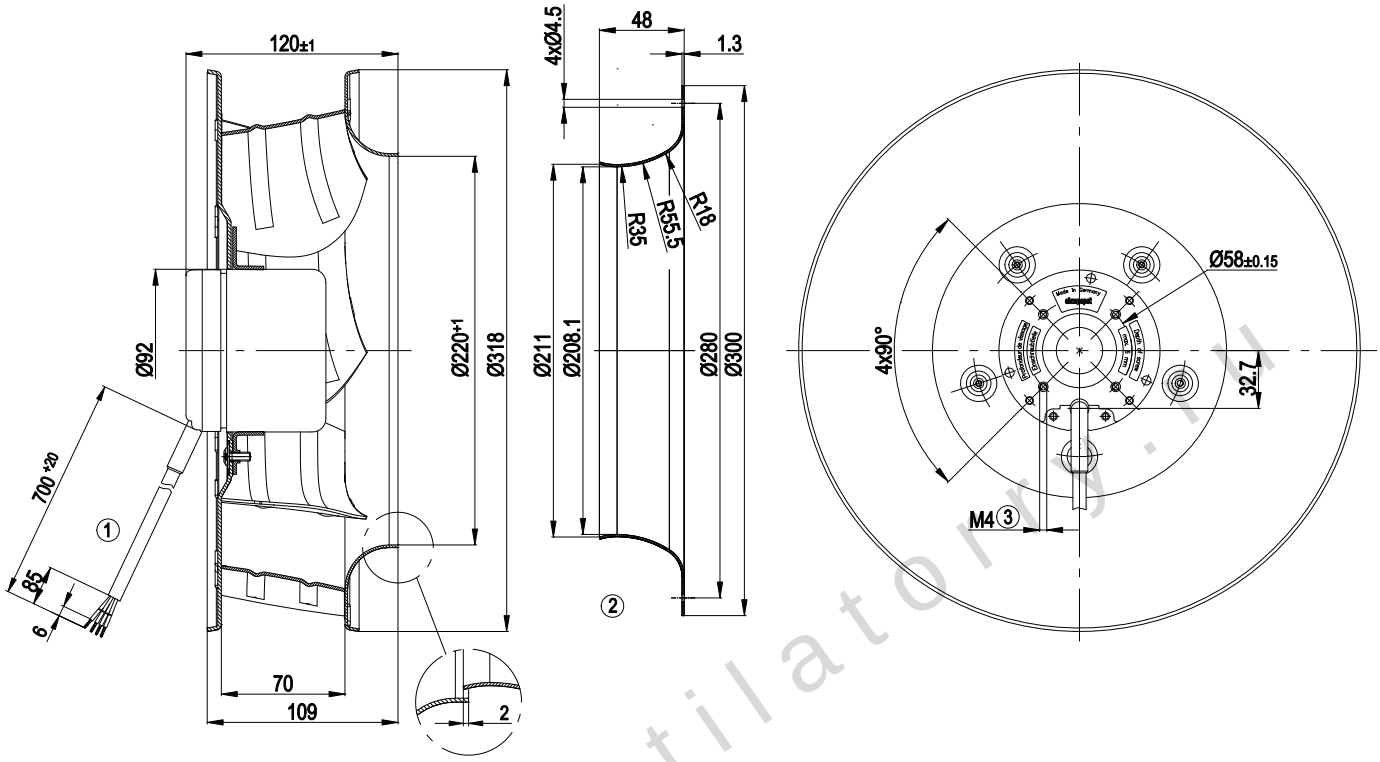
Product drawing



1	Connection line AWG20, 4 x brass lead tips crimped
2	Accessory parts: Inlet nozzle 31050-2-4013 not included in the standard scope of delivery, other inlet nozzles on request
3	Depth of screw max. 6 mm

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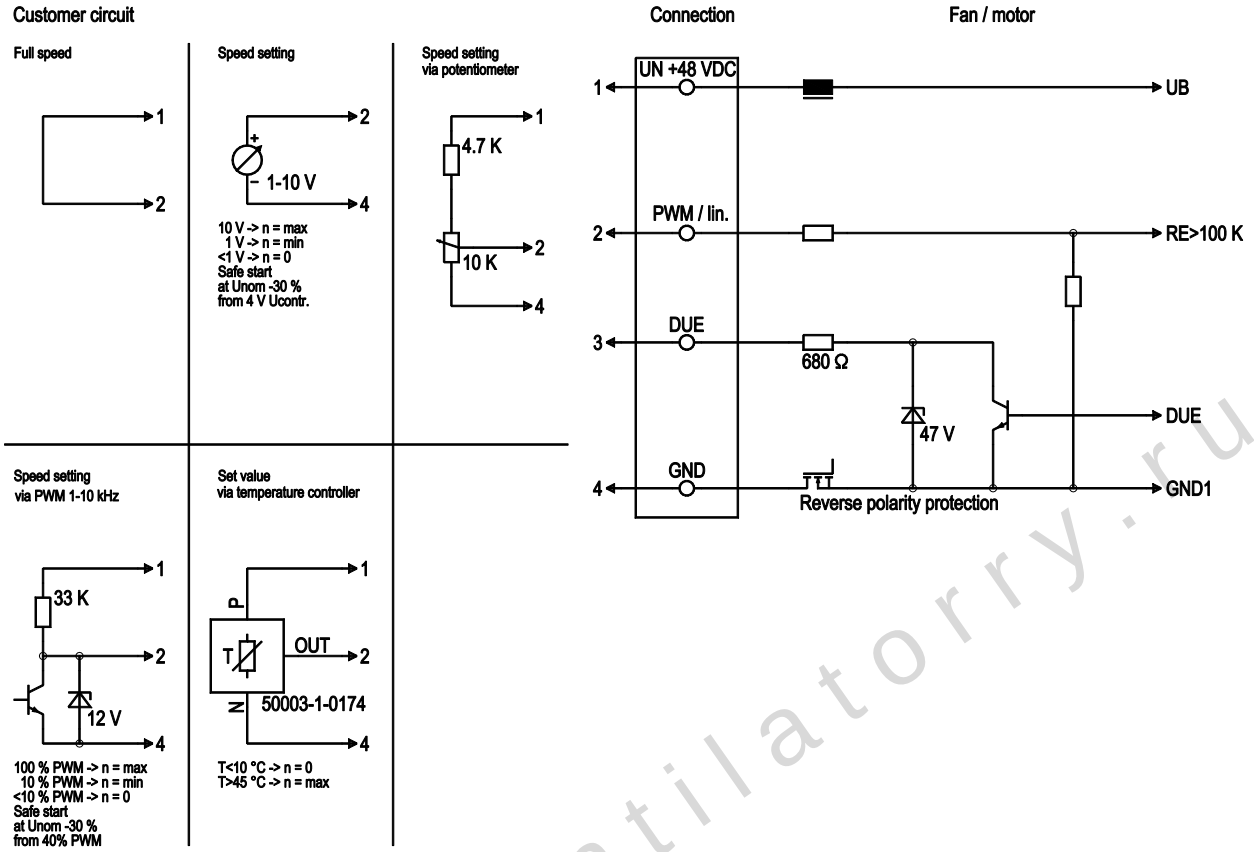
Connection screen



Line	No.	Signal	Colour	Function / assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, residual ripple 3.5 %
1	2	PWM / lin	yellow	PWM / lin. control input, 0-10 V
1	3	Tach	white	Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA
1	4	GND	blue	Reference mass

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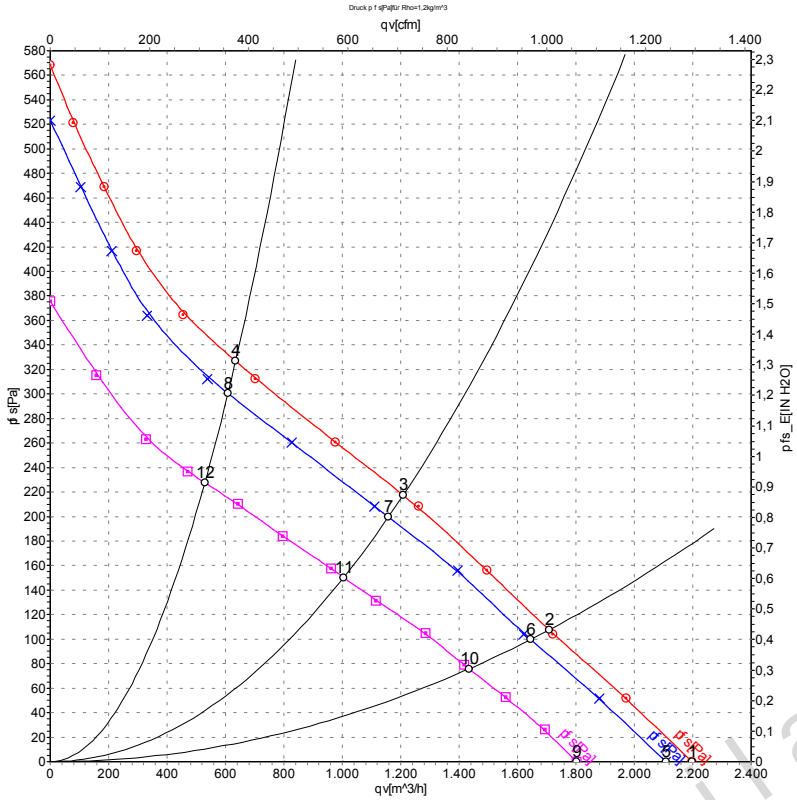
Charts: Air flow



Measurement: LU-53929
Measurement: LU-53928
Measurement: LU-52983

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	n	P_{ed}	I	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa
1	53	1860	135	3.07	2195	0
2	53	1680	144	3.36	1710	107
3	53	1580	150	3.55	1210	218
4	53	1640	147	3.42	635	327
5	48	1800	120	3.00	2110	0
6	48	1615	126	3.17	1645	100
7	48	1525	131	3.32	1160	200
8	48	1580	128	3.22	610	300
9	36	1570	74	2.34	1805	0
10	36	1435	80	2.54	1435	76
11	36	1355	83	2.65	1005	150
12	36	1395	81	2.59	530	228

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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