

EC centrifugal fan

backward curved, single inlet

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Nominal data

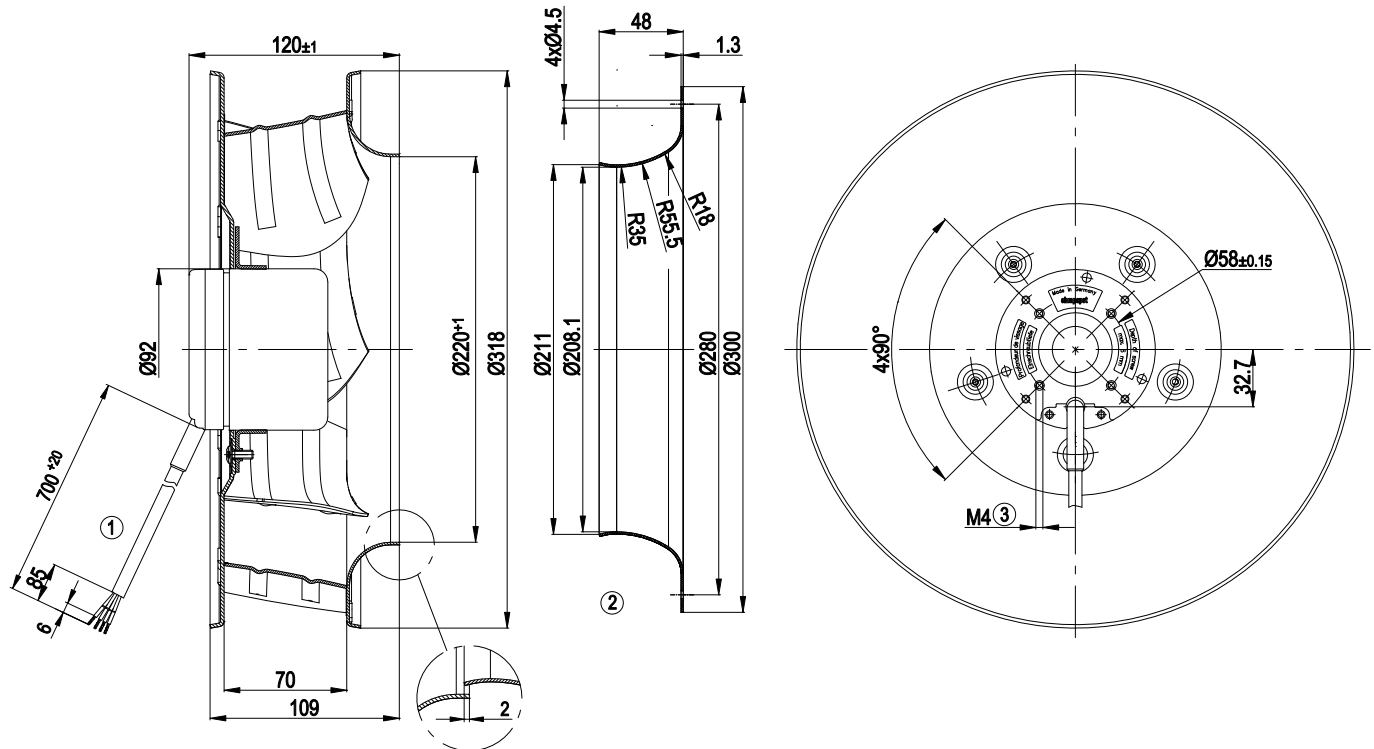
Type	R1G310-AD17-11	
Motor	M1G074-CF	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 52
Frequency	Hz	-
Type of data definition		rfa
Speed	min ⁻¹	1800
Power input	W	120
Current draw	A	3.0
Min. ambient temperature	°C	- 25
Max. ambient temperature	°C	+40

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Technical features

Size	310 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Any
EMC interference emission	Acc. to EN 55022 (Class B)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Humidity class	F0
Insulation class	"B"
Cable exit	Variable
Condensate discharge holes	None
Motor bearing	Ball bearing
Mass	2.6 kg
Material of impeller	Aluminium sheet
Motor protection	Reverse polarity and locked-rotor protection
Product conforming to standard	EN 60950-1
Surface of rotor	Coated in black
Number of blades	6
Type of protection	IP 42
Protection class	I
Technical features	<ul style="list-style-type: none"> - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Approval	CCC; CSA C22.2 Nr.77; UL 1004-1

Product drawing

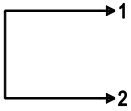


1	Connection line AWG20, 4 x brass lead tips crimped
2	Accessory parts: Inlet nozzle 31050-2-4013 not included in the standard scope of delivery, other inlet nozzles on request
3	Depth of screw max. 6 mm

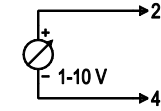
Connection screen

Customer circuit

Full speed

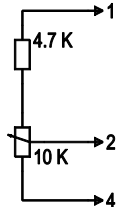


Speed setting

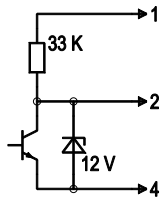


10 V → n = max
 1 V → n = min
 <1 V → n = 0
 Safe start
 at Unom -30 %
 from 4 V Ucontr.

Speed setting via potentiometer

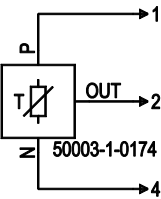


Speed setting via PWM 1-10 kHz



100 % PWM → n = max
 10 % PWM → n = min
 <10 % PWM → n = 0
 Safe start
 at Unom -30 %
 from 40% PWM

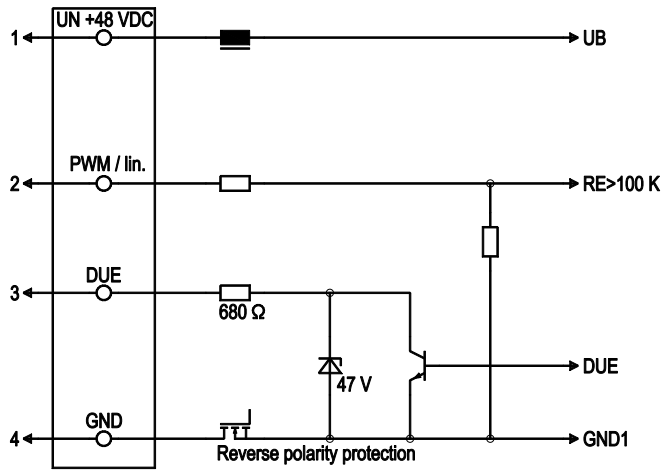
Set value via temperature controller



T < 10 °C → n = 0
 T > 45 °C → n = max

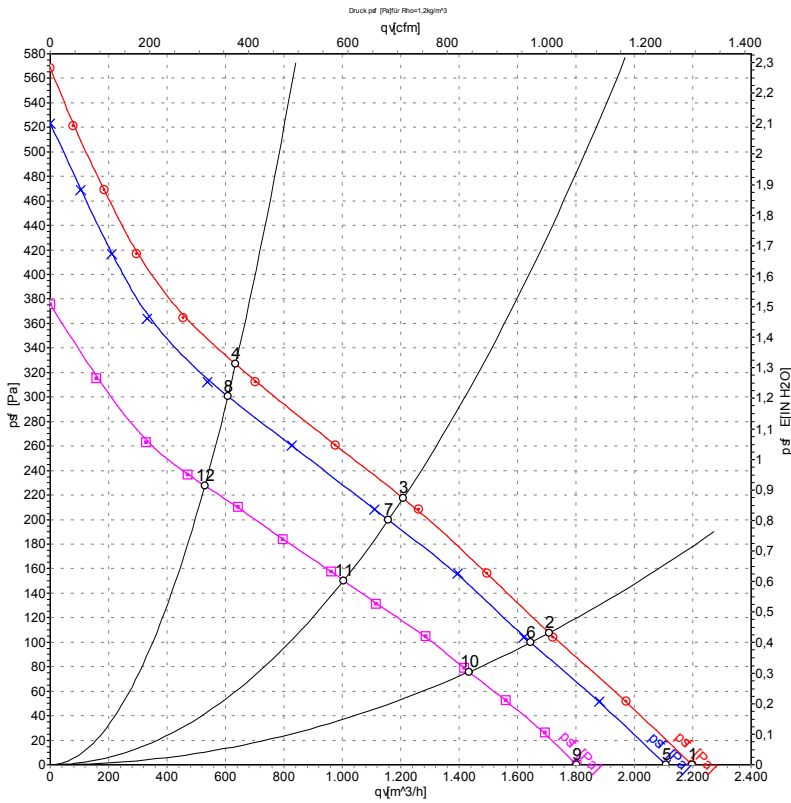
Connection

Fan / motor



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	DUE	white	Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA
1	4	GND	blue	Reference mass

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: 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	n	P ₁	I	qV	p _{sf}
	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