

R1G310-AD33-30

EC centrifugal fan

backward curved, single inlet

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Nominal data

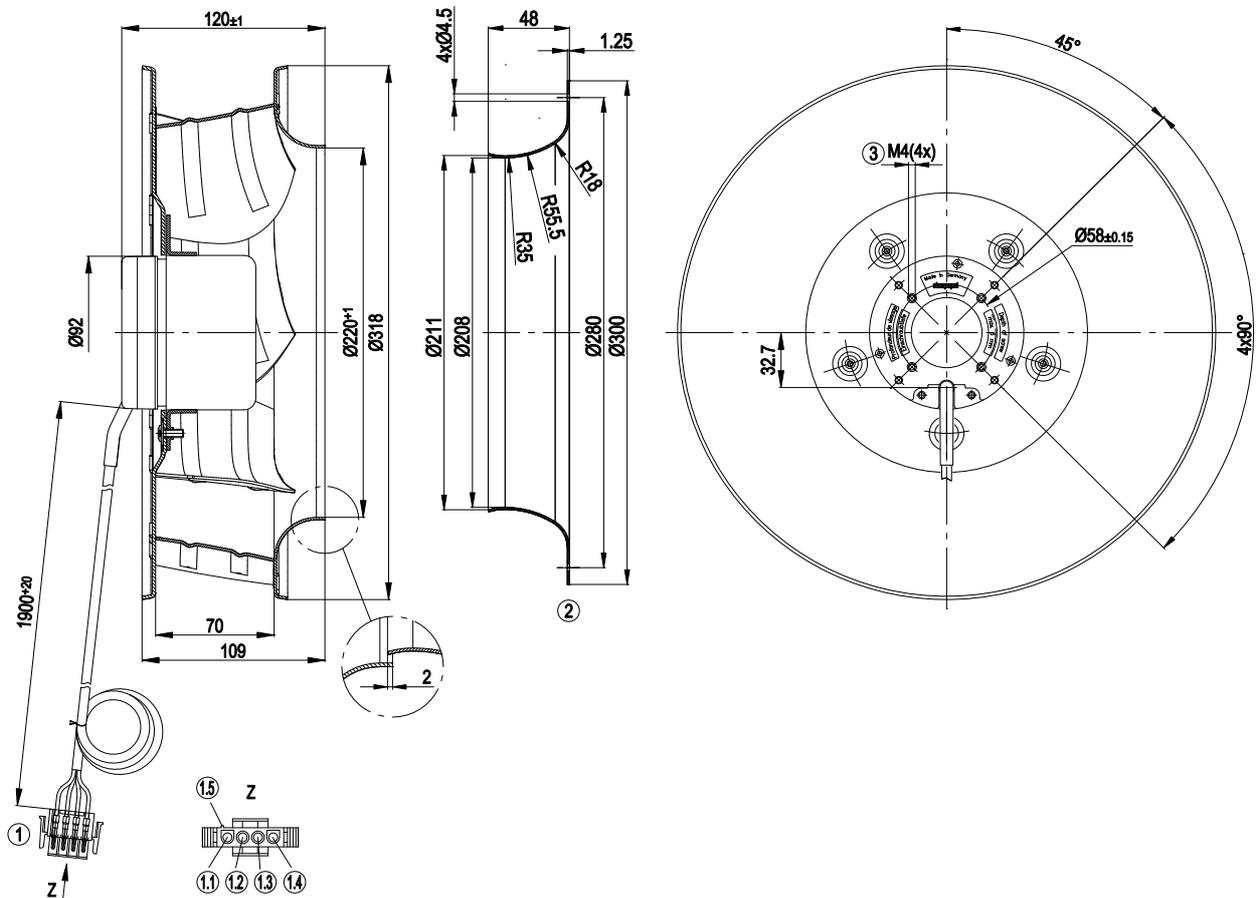
Type	R1G310-AD33-30	
Motor	M1G074-CF	
Nominal voltage	[VDC]	48
Nominal voltage range	[VDC]	36 .. 57
Type of data definition		rfa
Speed	[min ⁻¹]	1600
Power input	[W]	90
Current draw	[A]	2.2
Min. ambient temperature	[°C]	- 25
Max. ambient temperature	[°C]	+45

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
Electrical leads	With plug
EMC interference emission	Acc. to EN 55022 (Class B)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Humidity class	F4-1
Insulation class	"B"
Cable exit	Variable
Condensate discharge holes	None
Motor bearing	Ball bearing
Mass	2.61 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 44
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

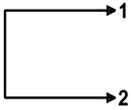


1	Connection line AWG20 with connector housing 4-pole (AMP No. 350779-1), 4x plug pin (AMP No. 926886-1)
1.1	+ (red)
1.2	Control input (yellow)
1.3	Speed monitoring (white)
1.4	(blue)
1.5	Polarising rib
2	Accessory part: Inlet nozzle 31050-2-4013 not included in the standard scope of delivery, other inlet nozzles on request
3	Depth of screw max. 6 mm

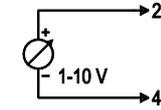
Connection screen

Customer circuit

Full speed

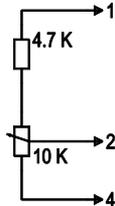


Speed setting

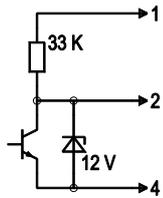


10 V → n = max
 1 V → n = min
 <1 V → n = 0
 Safe start
 at Unom -30 %
 from 4 V Ucontr.

Speed setting via potentiometer

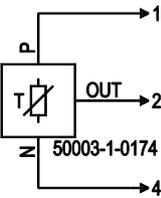


Speed setting via PWM 1-10 kHz



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

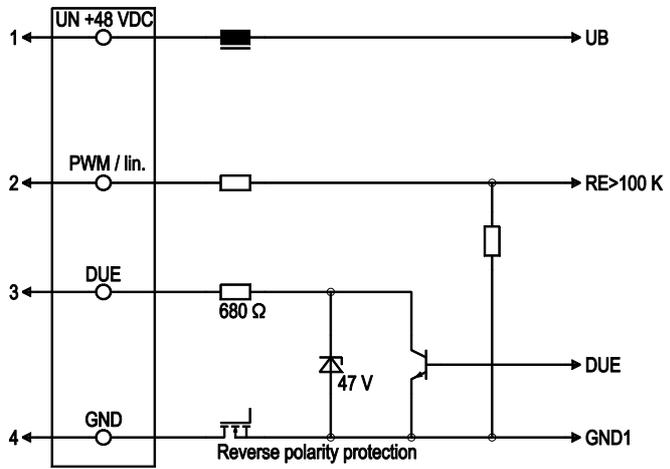
Set value via temperature controller



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

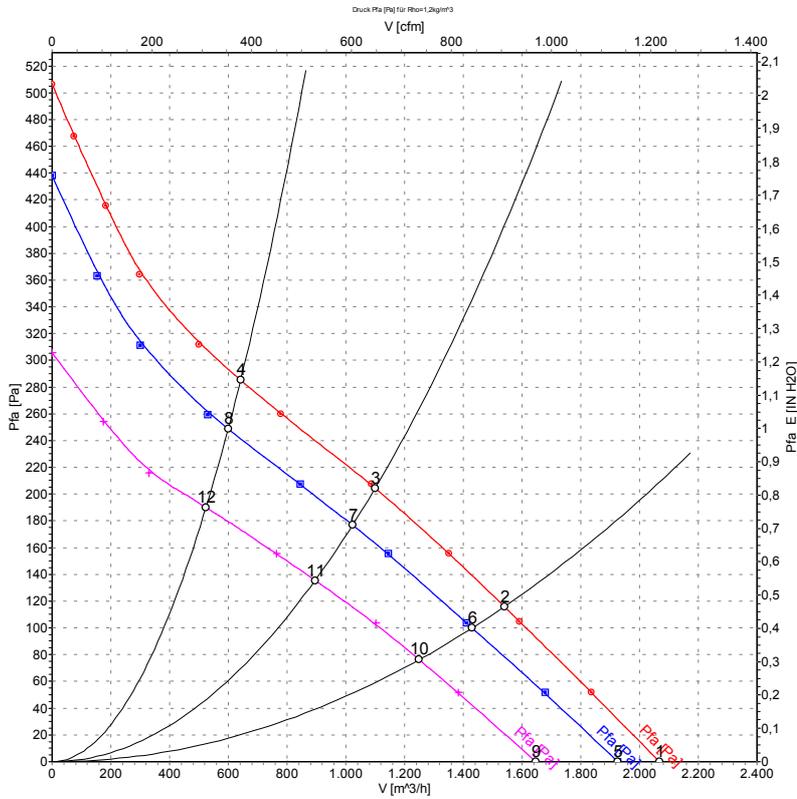
Connection

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-55399
Measurement: LU-55398
Measurement: LU-55400

Measured values

	U	n	P ₁	I	LpA _{ss}	Ŷ	P _{fa}
	[V]	[min ⁻¹]	[W]	[A]	[dB(A)]	[m³/h]	[Pa]
1	57	1725	113	2.40	66	2065	0
2	57	1550	122	2.66	60	1540	116
3	57	1490	125	2.77	59	1100	205
4	57	1545	122	2.67	63	640	285
5	48	1600	90	2.20	64	1925	0
6	48	1445	96	2.38	58	1430	100
7	48	1390	99	2.47	58	1025	175
8	48	1440	97	2.39	61	600	250
9	36	1375	57	1.79	60	1650	0
10	36	1265	65	2.02	55	1250	76
11	36	1225	67	2.09	54	895	136
12	36	1255	65	2.05	58	525	190