R1G310-AD17-20

Qingdao Haier Special Electrics Co.

EC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R1G310-AD17-20**	
Motor	**M1G074-CF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 52
Frequency	Hz	-
Method of obtaining data		fa
Speed (rpm)	min^{-1}	1800
Power consumption	W	120
Current draw	A	3.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	54.1	42.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		73.9	62
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.13
09 Air flow q_v	m^3/h	1115
09 Pressure increase p_{fs}	Pa	200
10 Speed (rpm) n	min^{-1}	1520
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-53928

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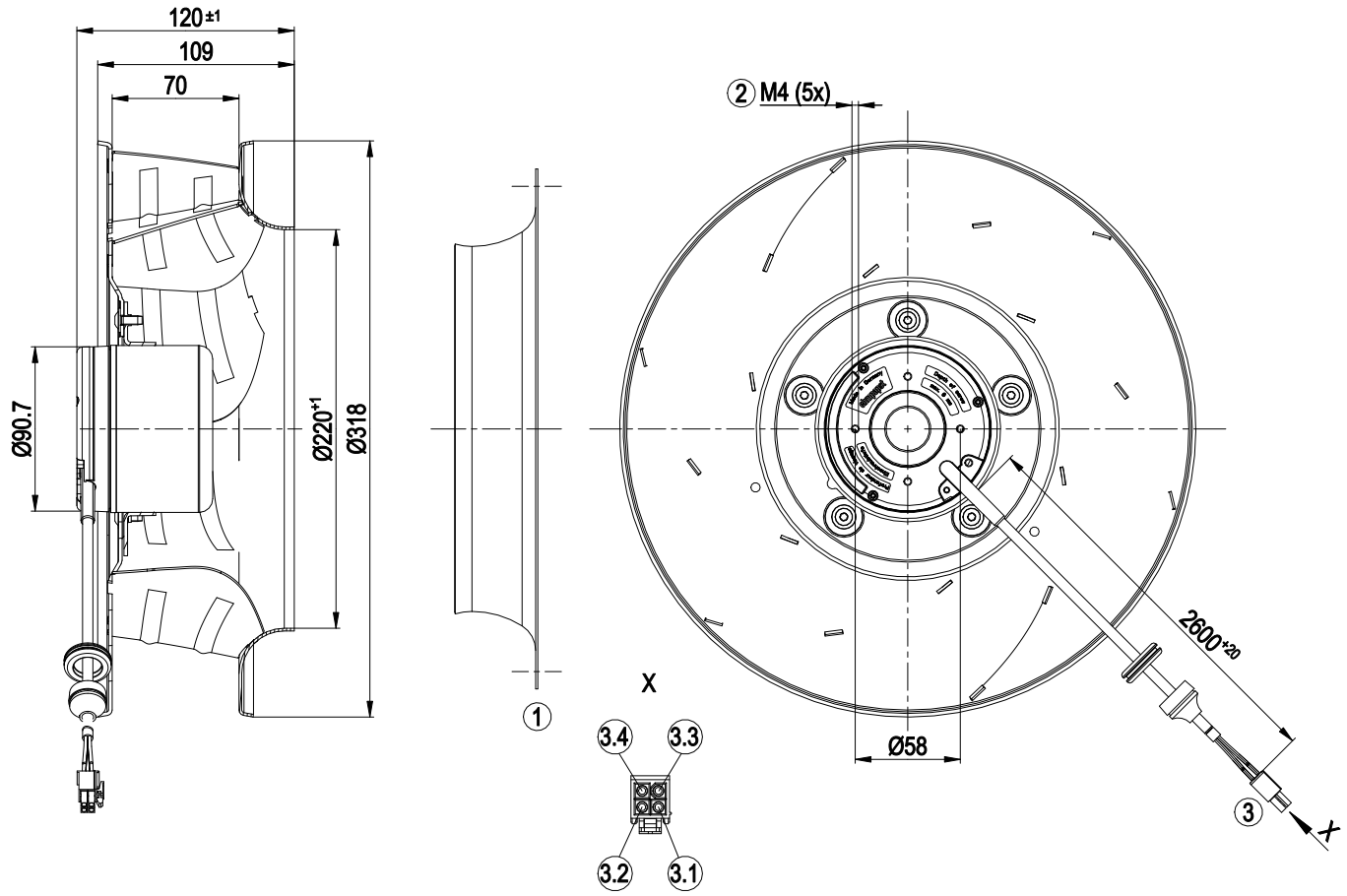
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Technical description

Weight	2.7 kg
Size	310 mm
Motor size	74
Rotor surface	Painted black
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1; H1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM
Electrical hookup	Plug
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Conformity with standards	EN 60950-1
Approval	CSA C22.2 No. 77; CCC; UL 1004-1

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Product drawing



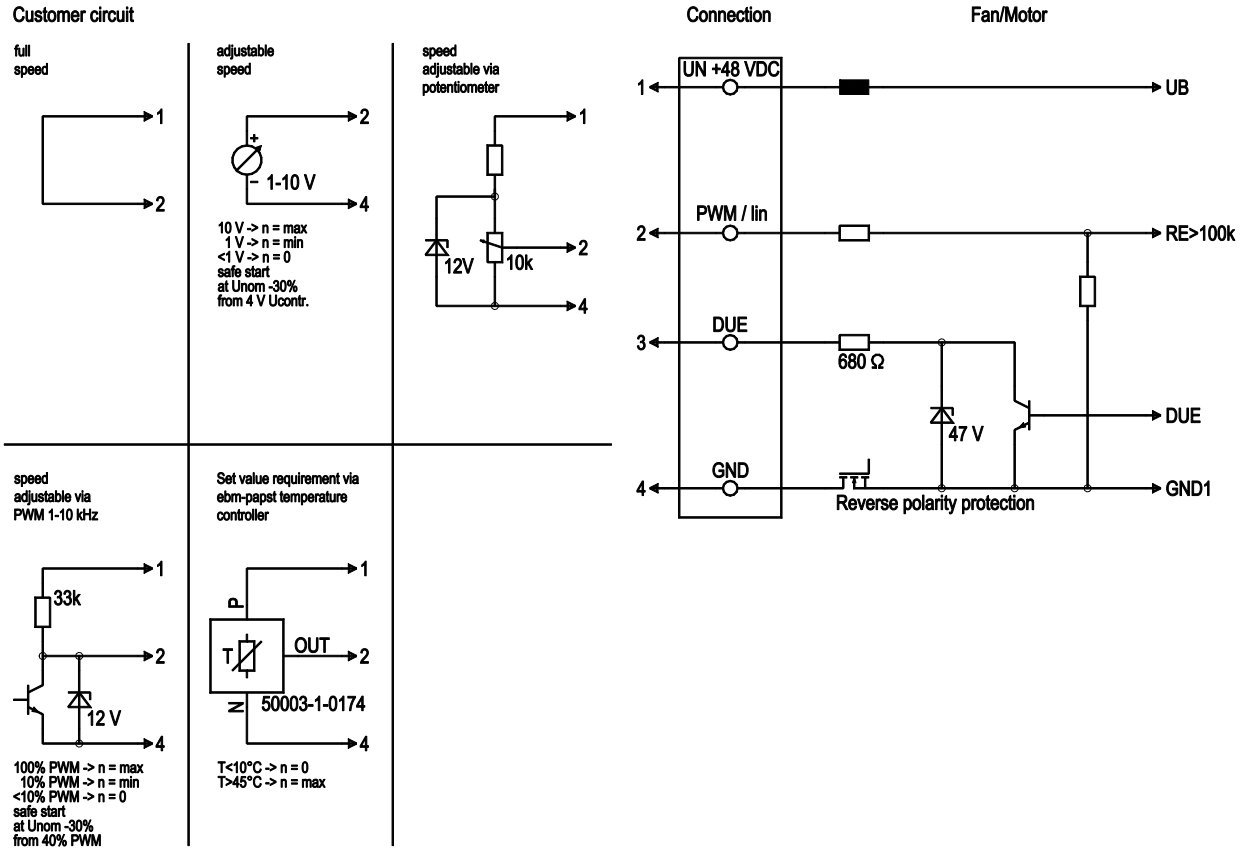
1	Accessory part: inlet ring 31050-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Cable PVC AWG20
	4-pole connector housing TE 172167-1, 4x socket TE 170362-1
3.1	GND (blue)
3.2	PWM/LIN (yellow)
3.3	DUE (white)
3.4	UN +48 VDC (red)

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Connection diagram



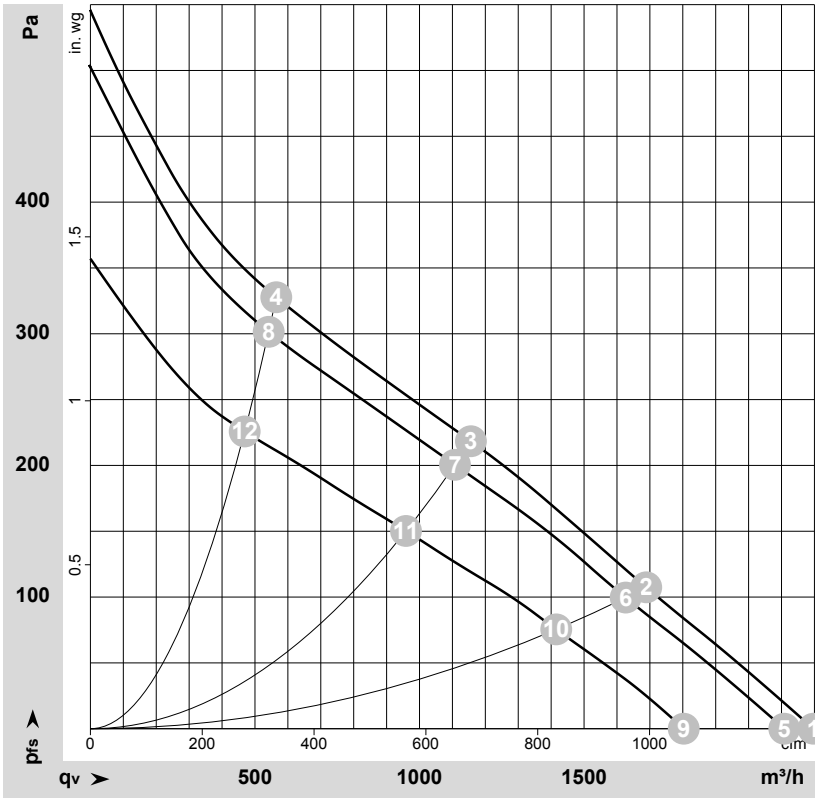
No.	Conn.	Designation	Color	Function/assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%
1	2	PWM / lin	yellow	PWM/lin. Control input, 0-10 V
1	3	DUE	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-53929-1
Measurement: LU-53928-1
Measurement: LU-52983-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	53	1860	135	3.07	2195	0	1295	0.00
2	53	1675	144	3.37	1690	107	995	0.43
3	53	1580	151	3.55	1155	218	680	0.88
4	53	1665	145	3.38	565	328	335	1.32
5	48	1800	120	3.00	2110	0	1240	0.00
6	48	1610	127	3.18	1625	100	960	0.40
7	48	1520	131	3.33	1110	200	650	0.80
8	48	1595	127	3.19	540	300	320	1.20
9	36	1570	74	2.34	1805	0	1060	0.00
10	36	1430	80	2.55	1415	75	835	0.30
11	36	1350	83	2.65	960	150	565	0.60
12	36	1405	81	2.56	470	225	275	0.90

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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