R1G175-AB41-34

EC centrifugal fan

backward-curved, single-intake



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Nominal data

Type	**R1G175-AB41-34**	
Motor	**M1G055-BD**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3100
Power consumption	W	34
Current draw	A	1.0
Min. ambient temperature	°C	-
Max. ambient temperature	°C	60

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

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Technical description

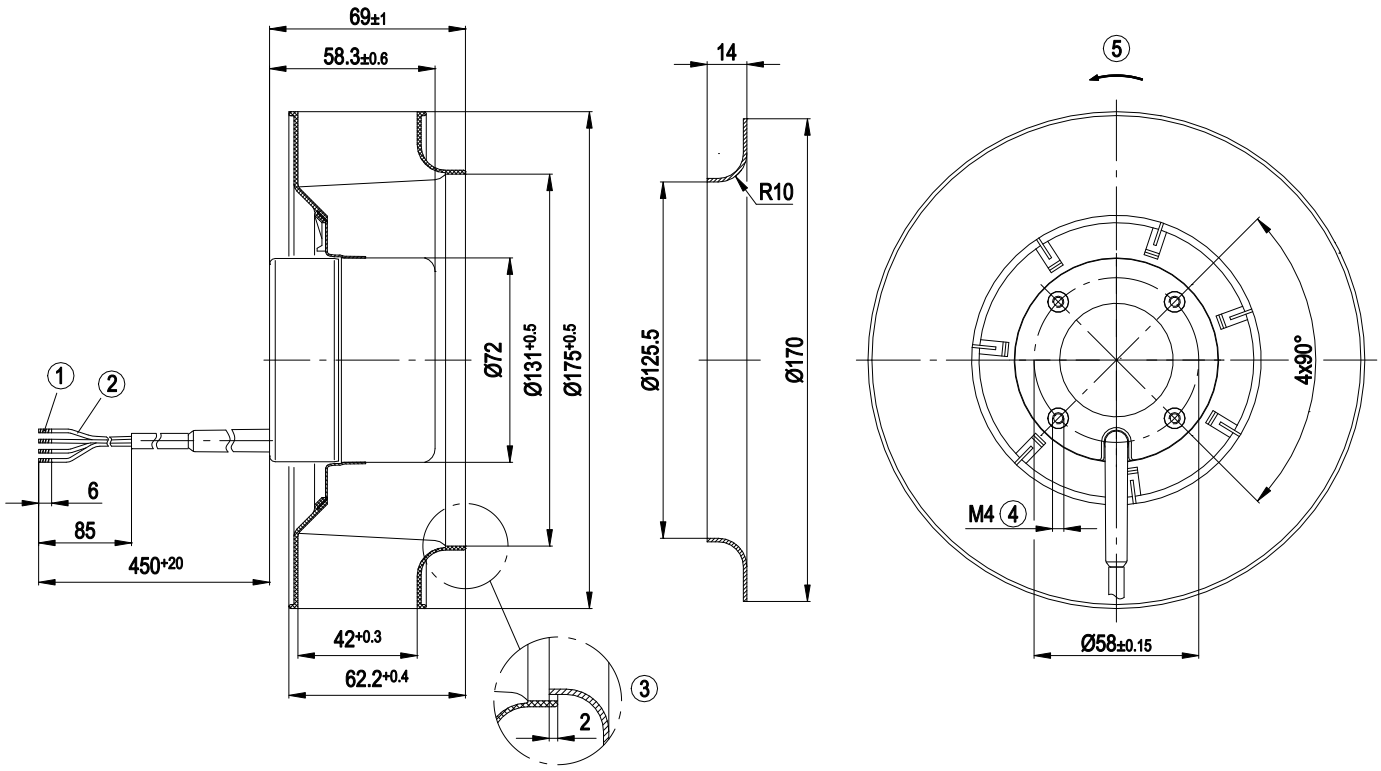
Weight	0.8 kg
Fan size	175 mm
Rotor surface	Thick-film passivated (electroplated with nickel)
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F4-2
Max. 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
Mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Tach output - Soft start
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-3
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Conformity with standards	EN 60950-1

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Product drawing



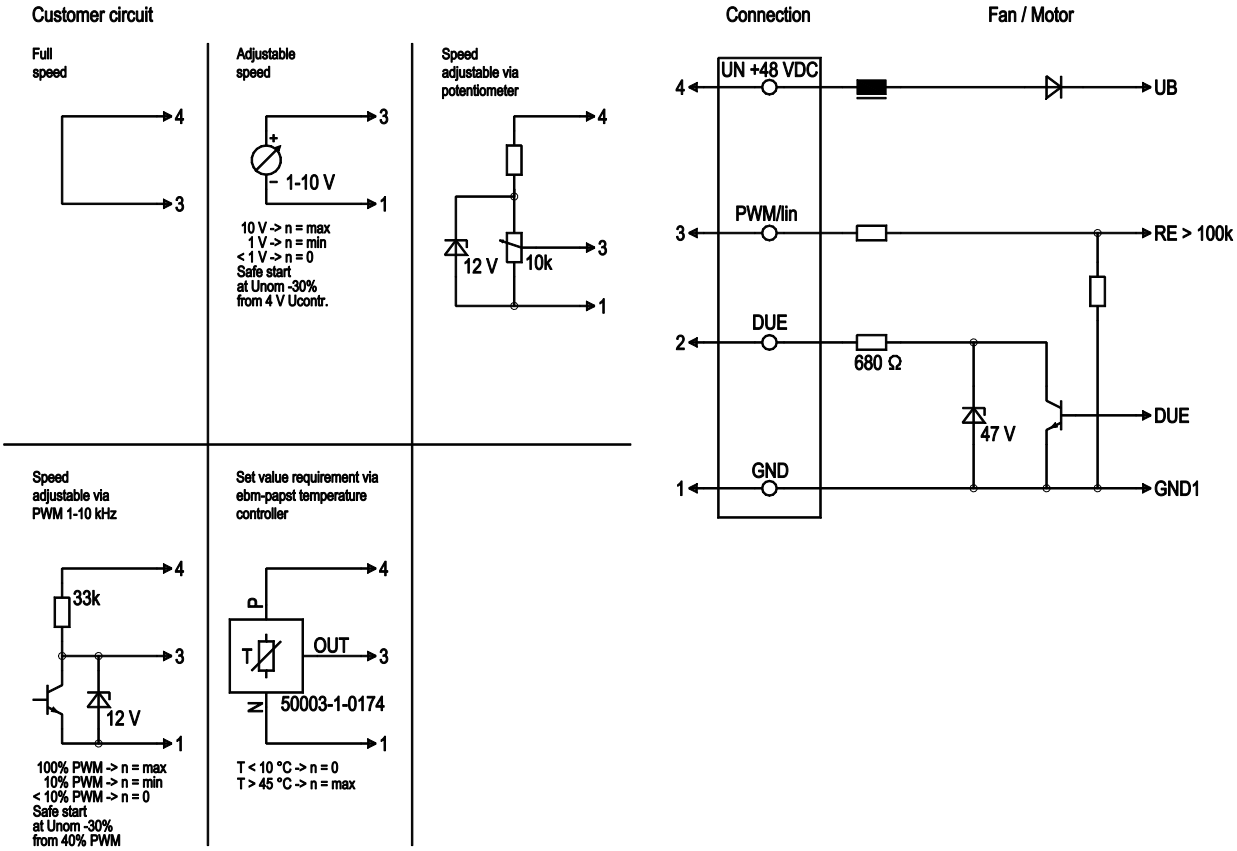
1	Wire-end splices
2	Cable 4 x AWG20: red = +, yellow = 0-10 VDC, white = speed monitoring, blue = GND
3	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
4	Max. clearance for screw 6 mm
5	Direction of rotation clockwise, viewed toward rotor

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Connection diagram



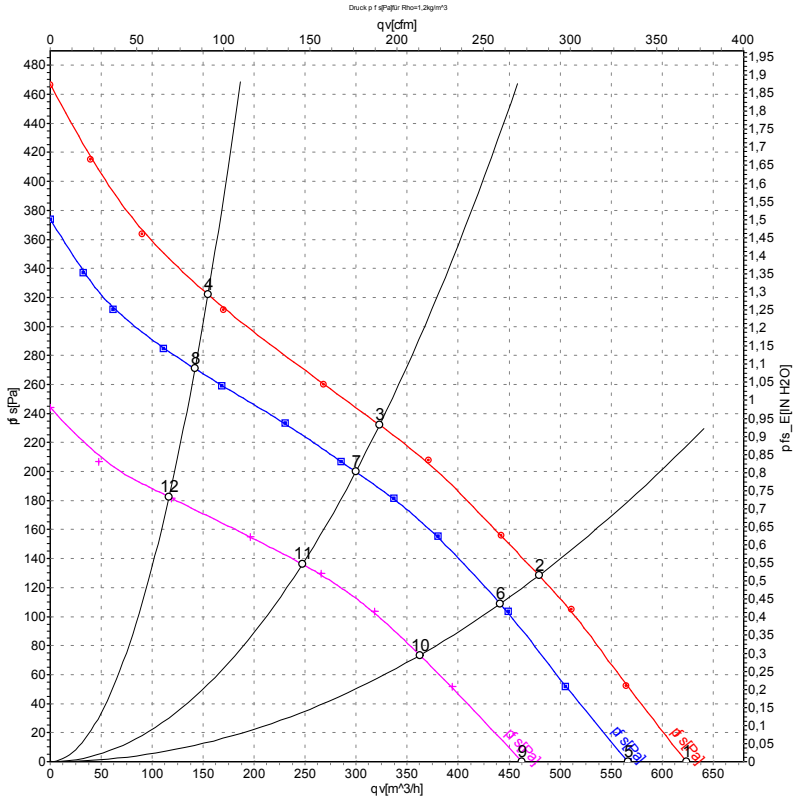
No.	Conn.	Designation	Color	Function/assignment
1	1	GND	blue	Reference ground
1	2	DUE	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
1	3	PWM/LIN	yellow	Control input Re > 100k
1	4	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%

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Curves: Air performance



Measurement: LU-45688-1
Measurement: LU-45687-1
Measurement: LU-45689-1

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	qv	p_{fs}	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	56	3410	46	0.92	625	0	365	0.00
2	56	3210	48	0.98	480	128	280	0.51
3	56	3105	50	1.01	325	232	190	0.93
4	56	3260	48	0.96	155	321	90	1.29
5	48	3100	34	0.83	565	0	335	0.00
6	48	2960	39	0.89	440	110	260	0.44
7	48	2880	40	0.93	300	200	175	0.80
8	48	3005	38	0.87	140	270	85	1.08
9	36	2530	20	0.63	465	0	275	0.00
10	36	2440	22	0.69	360	74	215	0.30
11	36	2385	24	0.72	245	136	145	0.55
12	36	2455	22	0.67	115	182	70	0.73

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

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