EC centrifugal fan - RadiCal

backward curved, single inlet

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**R1G175-RC63-06**
Motor	**M1G055-BD**

Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 32
Type of data definition		fa
Speed (rpm)	min^{-1}	3050
Power input	W	35
Current draw	A	1.65
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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Technical features

Mass	0.8 kg
Size	175 mm
Motor size	55
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Number of blades	7
Balance quality per DIN ISO 21940-11	G 6.3
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP20
Insulation class	"B"
Humidity (F) / environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensation drainage holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 55022 (Class B, household environment)
Electrical connection	Connector with connection line
Cable exit	Variable
Safety classification	III; Requires supply with safety extra-low voltage SELV. This component to be built-in can have several local protection class ratings. The specification refers to the basic design of this component. The final protection class is based on the intended installation and connection of the component. If there is a PE connection point on the housing, it must not be visible after installation.
Product conforming to standard	EN 62368-1
Approval	VDE; CSA C22.2 no. 100; EAC; UL 1004-1

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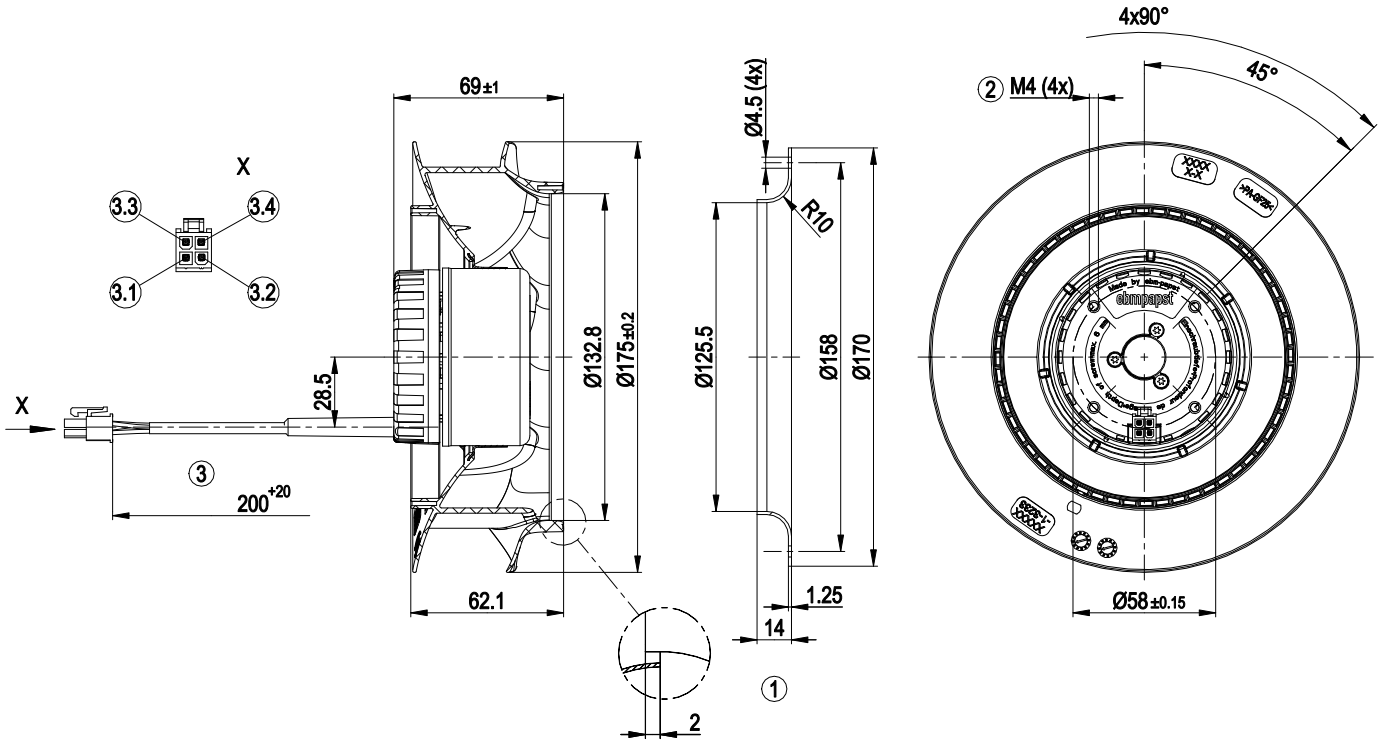
Product drawing



1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery
2	Thread reach max. 6 mm
3	Connection line PVC AWG20 with connector housing 4-pole Molex 39-01-2040, 4x female connector Molex 39-00-0059
3.1	UN +24 VDC (red)
3.2	GND (blue)
3.3	0-10 VDC (yellow)
3.4	Tach (white)

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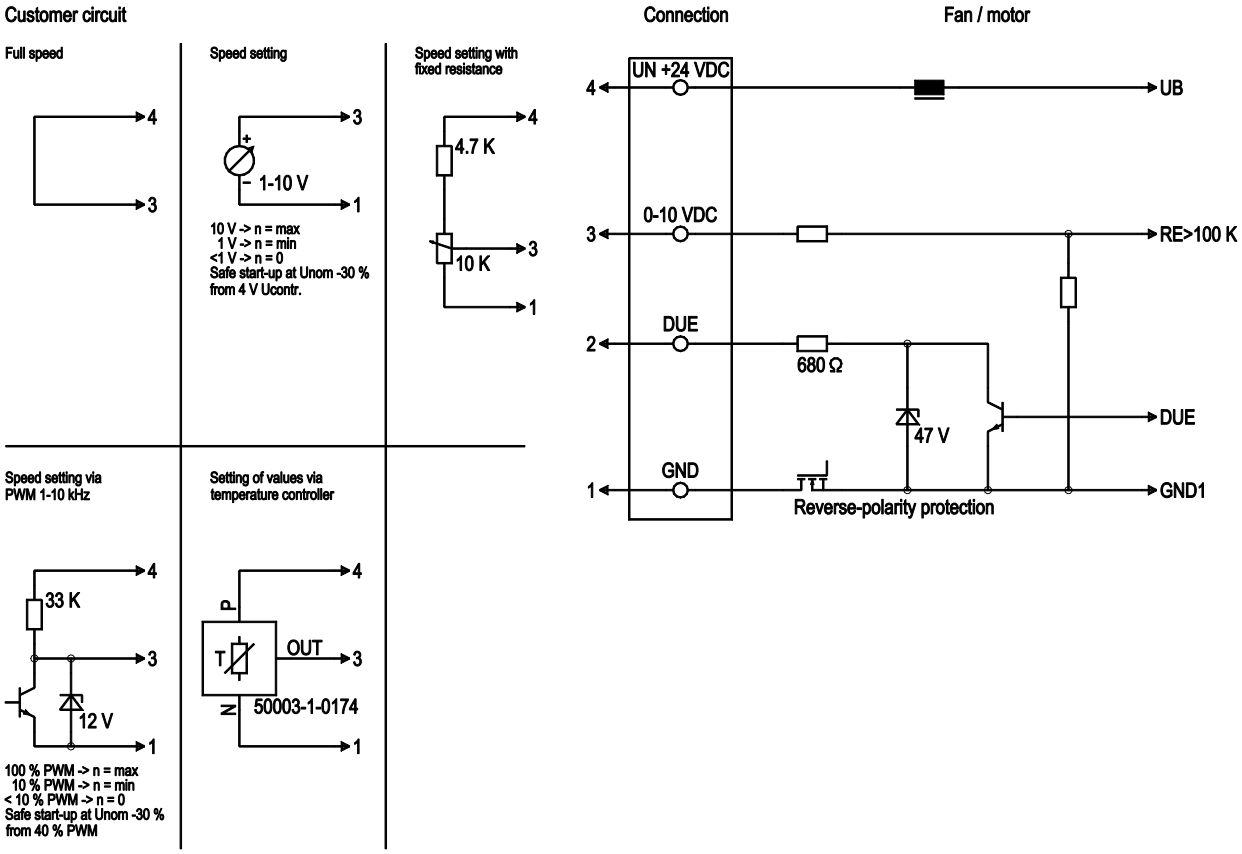
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	GND	blue	Reference mass
1	2	Tach	white	Speed monitoring output, 2 pulses per rotation, Isink max = 10 mA
1	3	0-10 VDC	yellow	Control input Re > 100 K
1	4	Un +24 VDC	red	Power supply 24 VDC, residual ripple 3.5 %

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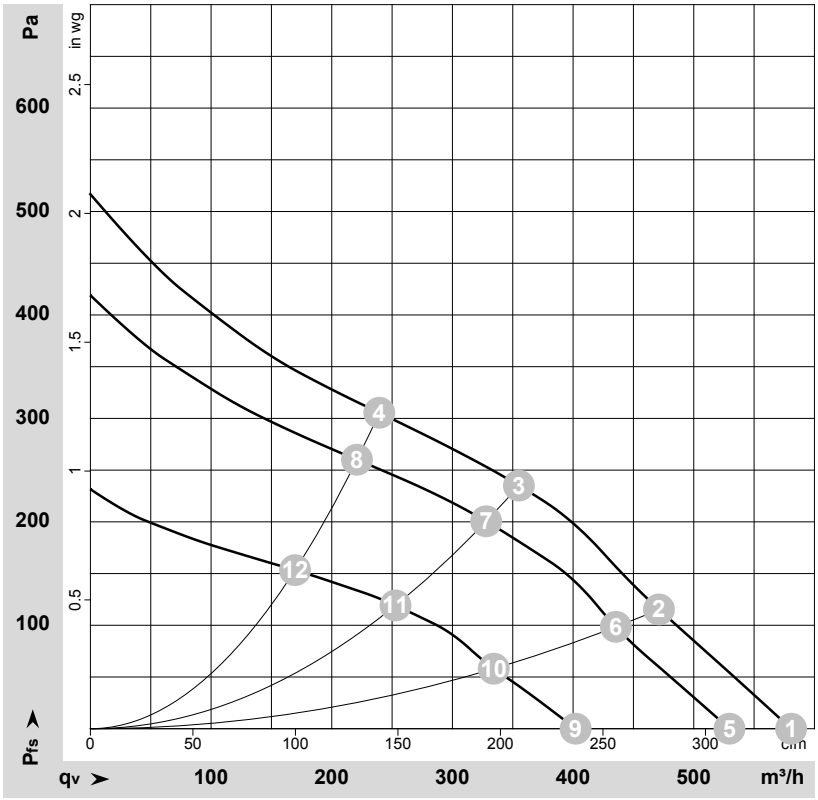
Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-171154-1
Measurement: LU-171074-1
Measurement: LU-171153-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	28	3360	45	1.86	580	0	340	0.00
2	28	3160	47	1.97	470	115	275	0.46
3	28	3125	48	2.01	355	236	210	0.95
4	28	3165	47	1.97	240	305	140	1.22
5	24	3050	35	1.65	530	0	310	0.00
6	24	2925	37	1.77	435	100	255	0.40
7	24	2905	38	1.80	330	200	195	0.80
8	24	2935	38	1.77	220	260	130	1.04
9	16	2330	16	1.12	400	0	235	0.00
10	16	2250	18	1.23	335	57	195	0.23
11	16	2235	18	1.24	255	119	150	0.48
12	16	2255	17	1.22	170	153	100	0.61

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