R1G190-RD04-02

EC centrifugal fan - RadiCal

backward-curved, single-intake

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Nominal data

Type	**R1G190-RD04-02**
Motor	**M1G074-BF**

Nominal voltage	VDC	12
Nominal voltage range	VDC	8 .. 16
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min^{-1}	3180
Power consumption	W	60
Current draw	A	5.7
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

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	1.4 kg
Fan size	190 mm
Rotor surface	Galvanized
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP24 KM; (motor); electronics IP66 / 69K
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2+
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+70 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection
Motor protection	Reverse polarity and locked-rotor protection
With cable	Axial
Approval	UL 507; EAC

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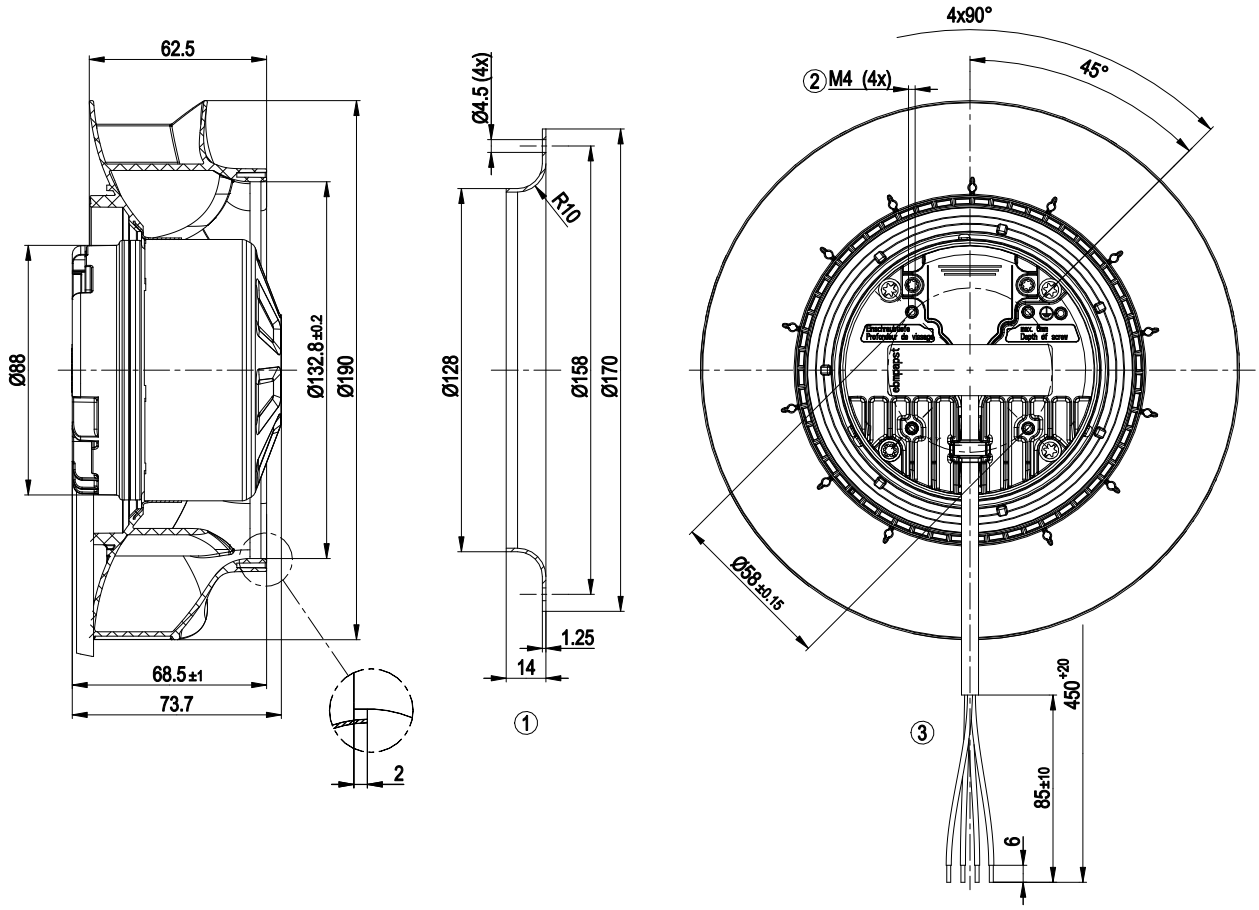
Product drawing



1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Cable PVC 4x AWG18, insulating hose, 4x crimped splices

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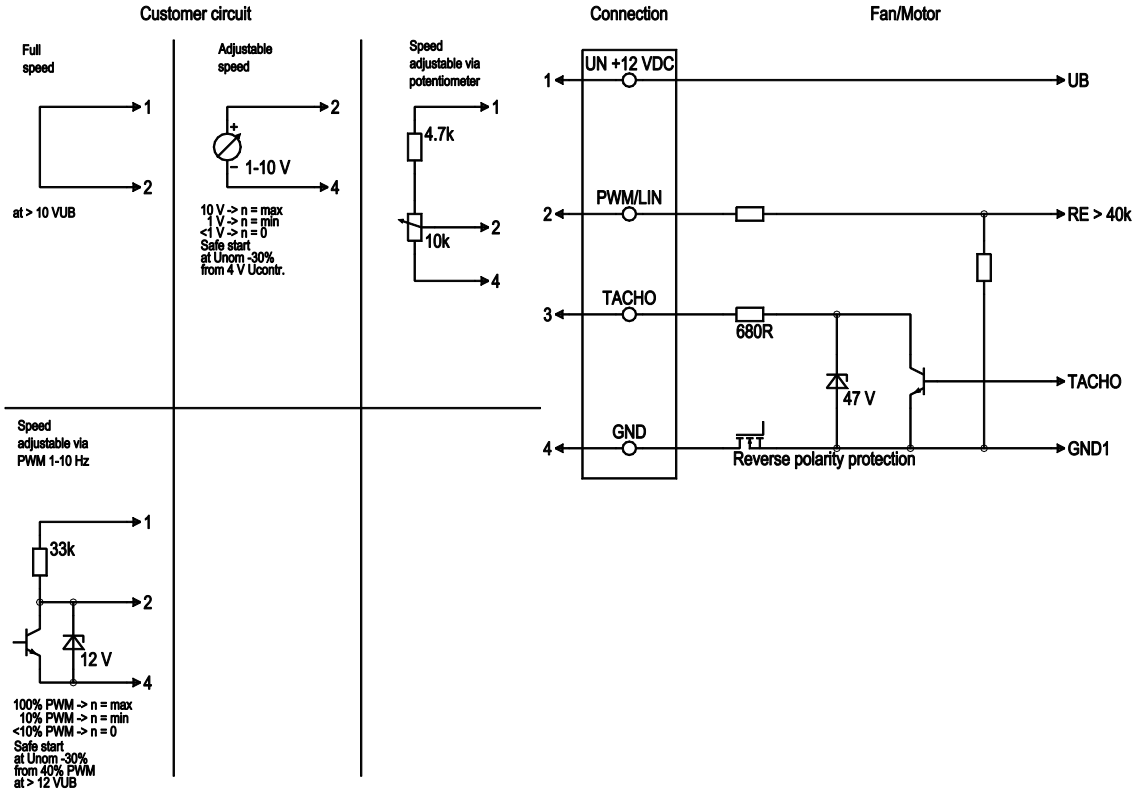
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	1	Un +12VDC	red	Power supply 12 VDC, see nameplate for voltage range, maximum ripple 3.5%
	2	PWM/LIN	yellow	Control input Re > 40k (PWM 1-10 kHz / 0-10 V)
	3	Tacho	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference ground

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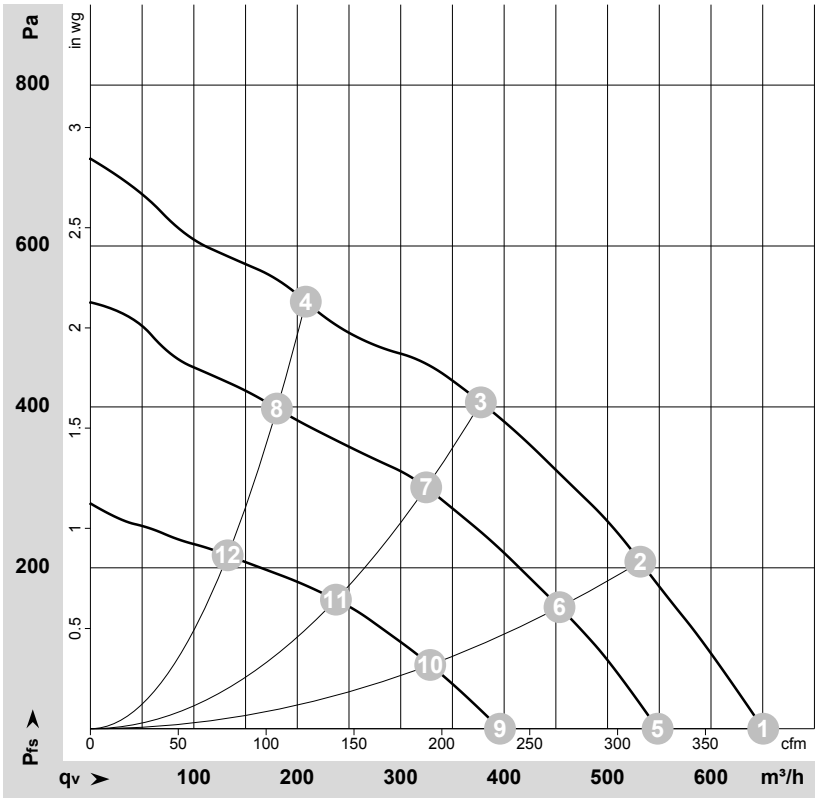
Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-164875-1
Measurement: LU-164789-1
Measurement: LU-164872-1

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	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	16	3695	92	6.70			650	0	385	0.00
2	16	3630	97	7.13			530	208	315	0.84
3	16	3595	103	7.51			375	406	220	1.63
4	16	3715	91	6.67			210	531	120	2.13
5	12	3180	60	5.70	68	76	550	0	325	0.00
6	12	3125	63	5.90	63	71	455	150	265	0.60
7	12	3090	66	6.17	60	68	325	300	190	1.20
8	12	3205	60	5.63	63	71	180	398	105	1.60
9	8	2350	26	3.62			395	0	235	0.00
10	8	2310	26	3.78			330	79	195	0.32
11	8	2285	27	3.92			235	160	140	0.64
12	8	2360	25	3.58			135	216	80	0.87

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side · qv = Air flow
p_{fs} = Pressure increase

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