

R1G190-AB25-02

# EC centrifugal fan

backward-curved, single-intake



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## Nominal data

Type	R1G190-AB25-02	
Motor	M1G055-CF	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min <sup>-1</sup>	2950
Power consumption	W	51
Current draw	A	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

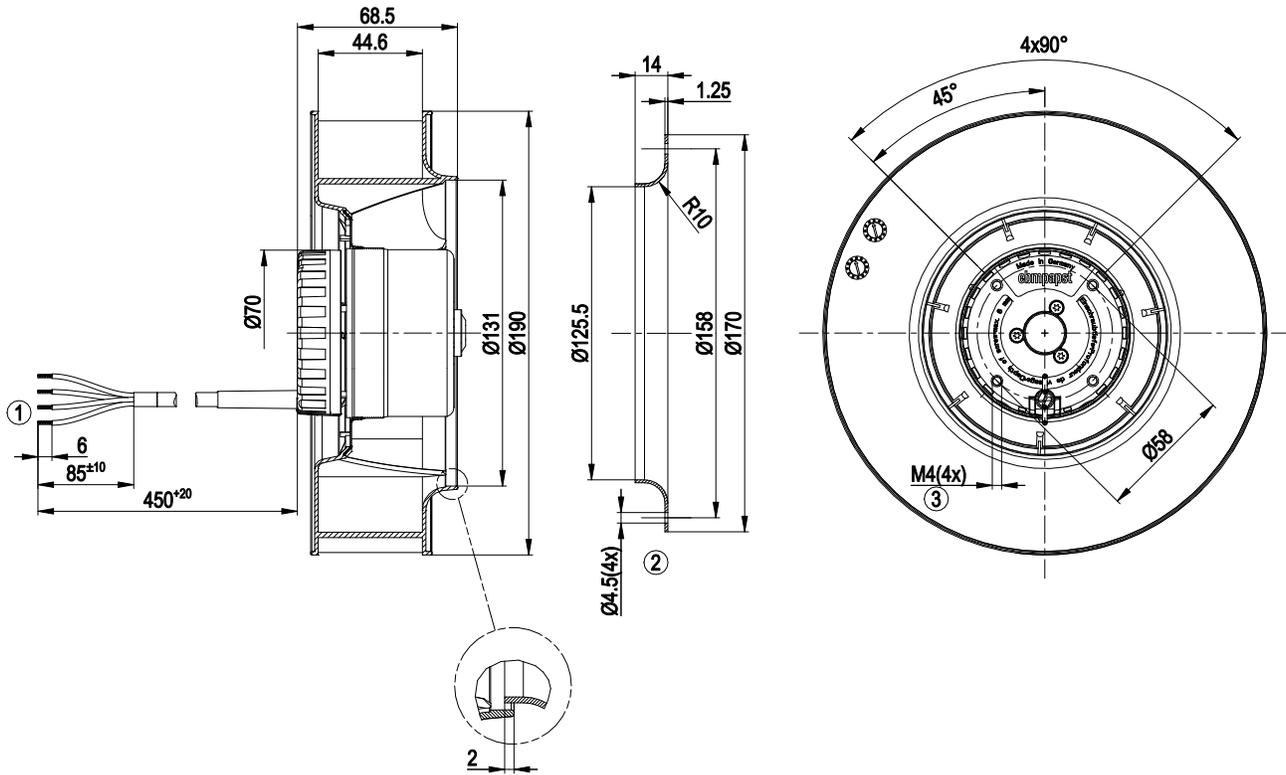
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



### Technical description

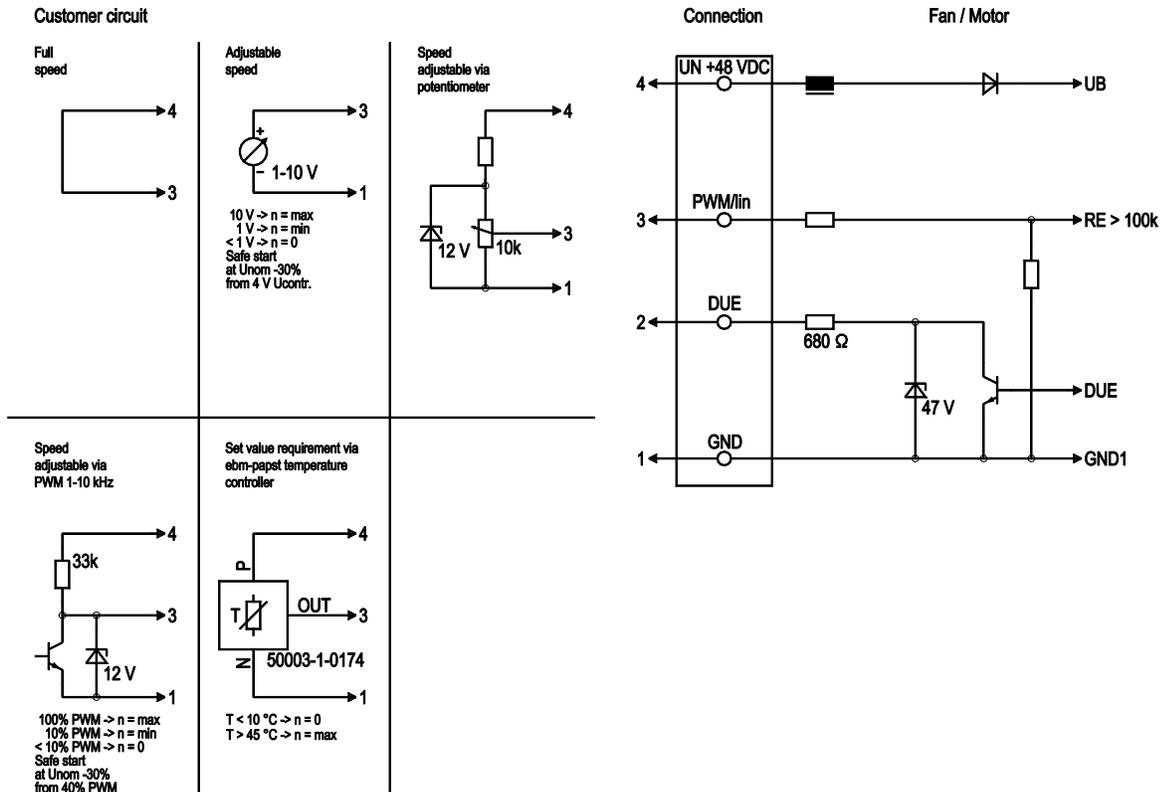
<b>Weight</b>	1.0 kg
<b>Fan size</b>	190 mm
<b>Rotor surface</b>	Painted black
<b>Impeller material</b>	PA 6.6 plastic, glass-fiber reinforced
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP22; installation- and position-dependent
<b>Insulation class</b>	"B"
<b>Moisture (F) / Environmental (H) protection class</b>	F0
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+ 80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	- 40 °C
<b>Installation position</b>	Any
<b>Condensation drainage holes</b>	None
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-3 (household environment)
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>With cable</b>	Variable
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 60950-1
<b>Approval</b>	EAC; CCC

## Product drawing



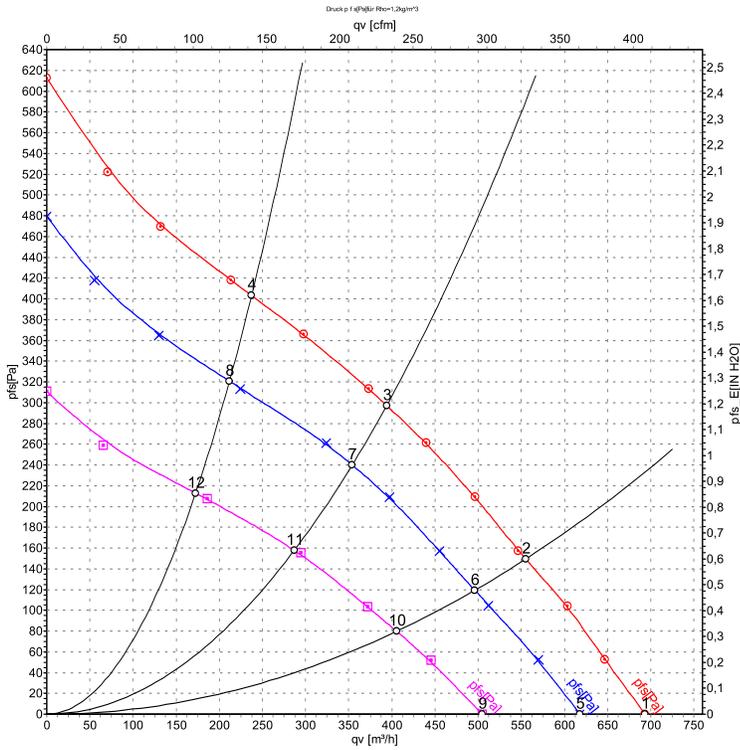
1	Cable AWG20 4x 0.5 mm <sup>2</sup> , 4x crimped splices
2	Accessory part: inlet ring 09576-2-4013, not included in scope of delivery
3	Max. clearance for screw 6 mm

## 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%

## Curves: Air performance



Measurement: LU-51398-1  
 Measurement: LU-51397-1  
 Measurement: LU-51399-1

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	inH <sub>2</sub> O
1	57	3310	71	1.38	695	0	410	0.00
2	57	3215	75	1.46	555	149	325	0.60
3	57	3160	77	1.51	395	297	230	1.19
4	57	3245	74	1.44	235	403	140	1.62
5	48	2950	51	1.20	620	0	365	0.00
6	48	2875	54	1.24	495	120	290	0.48
7	48	2835	56	1.29	355	240	210	0.96
8	48	2900	53	1.21	210	320	125	1.28
9	36	2395	28	0.87	505	0	295	0.00
10	36	2335	30	0.94	405	80	240	0.32
11	36	2315	31	0.96	285	159	170	0.64
12	36	2365	29	0.91	170	213	100	0.86

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



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