R3G190-AF50-01

EC centrifugal fan

backward-curved, single-intake

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R3G190-AF50-01**
Motor	**M3G074-BF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3900
Power consumption	W	135
Current draw	A	1.0
Min. ambient temperature	°C	-25
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

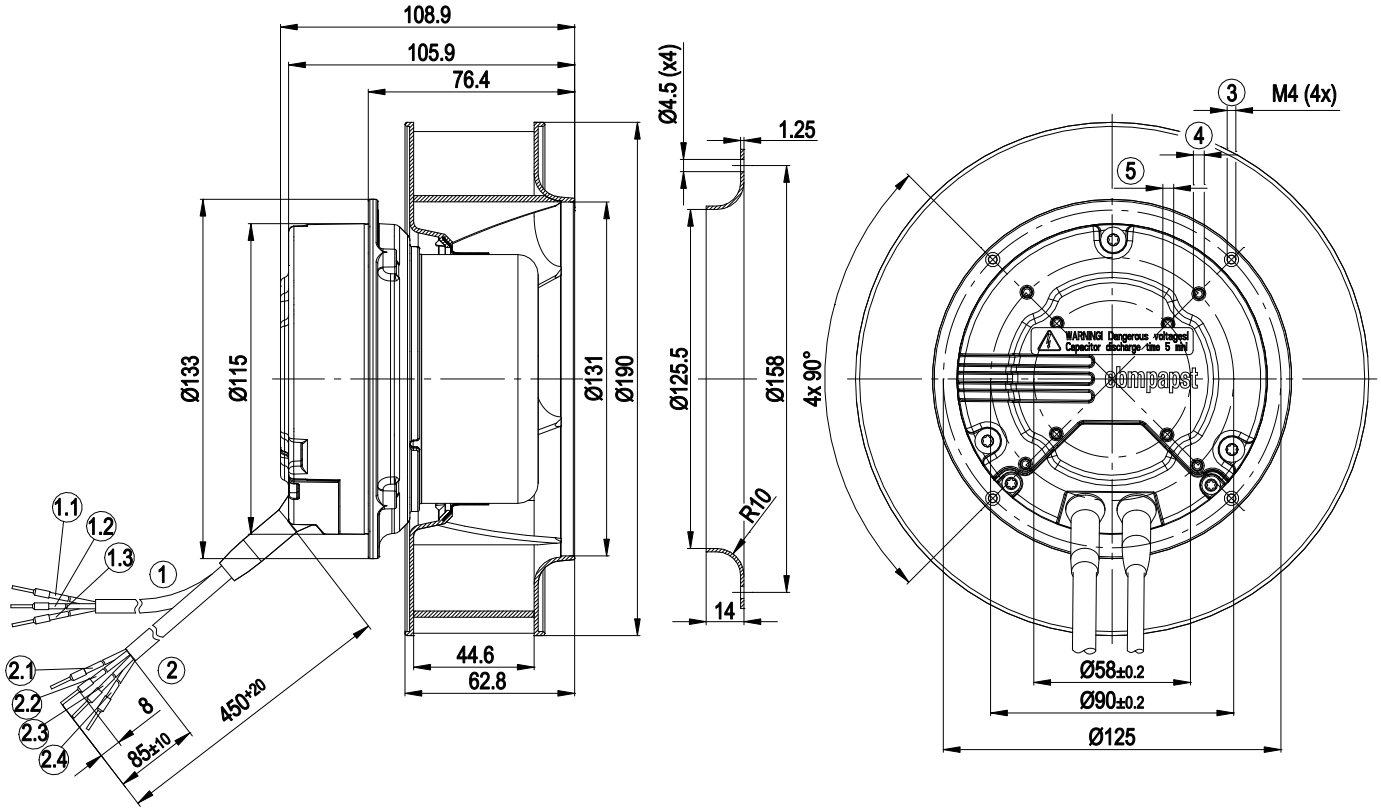
Weight	1.8 kg
Fan size	190 mm
Rotor surface	Galvanized
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. 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	- Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/motor
EMC immunity to interference	According to EN 61000-6-2
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1
Approval	CSA C22.2 No. 113; UL 507

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Product drawing



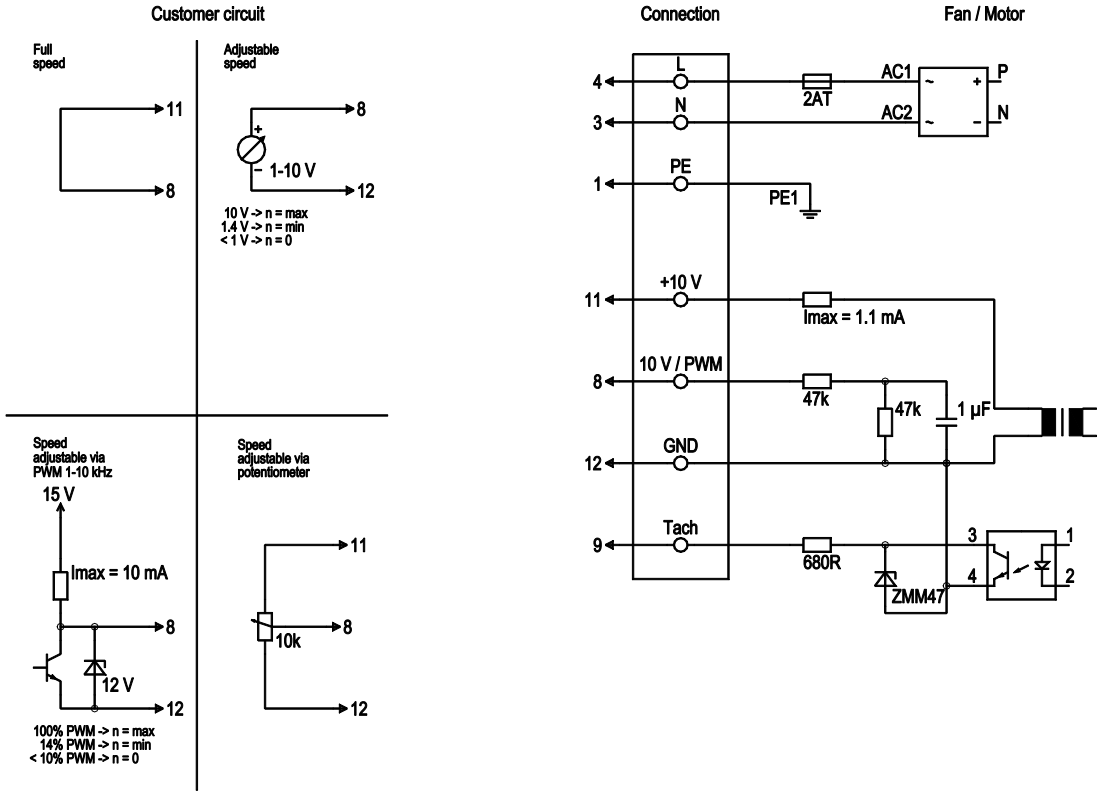
1	Cable AWG18, 3x crimped ferrules.
2	Cable AWG22, 4x crimped ferrules.
1.1	L (black)
1.2	N (blue)
1.3	PE (green/yellow)
2.1	Tach output (white)
2.2	GND (blue)
2.3	+10 V (red)
2.4	0-10 V (yellow)
3	Clearance for screw min. 8 mm, max. 10 mm
4	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 6 mm
5	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 8 mm

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Connection diagram



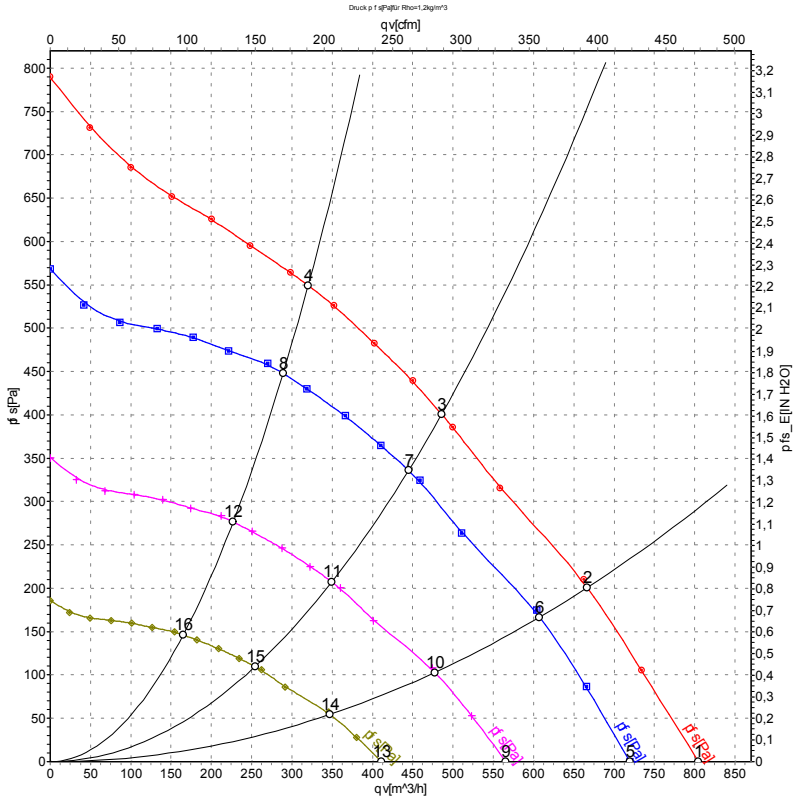
No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V/max. 1.1 mA, electrically isolated
	12	GND	blue	GND connection for control interface

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Curves: Air performance 50 Hz



Measurement: LU-73992-1

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	f	n	P_{ed}	I	LpA_{in}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	3900	135	1.00	74	805	0	475	0.00
2	230	50	3845	145	1.06	71	665	200	390	0.80
3	230	50	3840	150	1.10	68	485	400	285	1.61
4	230	50	3875	141	1.05	68	320	550	190	2.21
5	230	50	3500	98	0.72	71	720	0	425	0.00
6	230	50	3500	110	0.81	69	605	170	355	0.68
7	230	50	3500	114	0.85	66	445	336	260	1.35
8	230	50	3500	104	0.78	66	290	448	170	1.80
9	230	50	2750	48	0.35	66	565	0	335	0.00
10	230	50	2750	53	0.39	63	475	105	280	0.42
11	230	50	2750	55	0.41	60	350	208	205	0.84
12	230	50	2750	50	0.38	60	225	276	135	1.11
13	230	50	2000	18	0.13	59	410	0	240	0.00
14	230	50	2000	20	0.15	56	345	56	205	0.22
15	230	50	2000	21	0.16	51	255	110	150	0.44
16	230	50	2000	19	0.15	51	165	146	95	0.59

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

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