

R3G190-AF50-01

EC centrifugal fan

backward curved, single inlet

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Nominal data

Type	R3G190-AF50-01	
Motor	M3G074-BF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50
Type of data definition		rfa
Speed	min ⁻¹	3900
Power input	W	135
Current draw	A	1.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

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Technical features

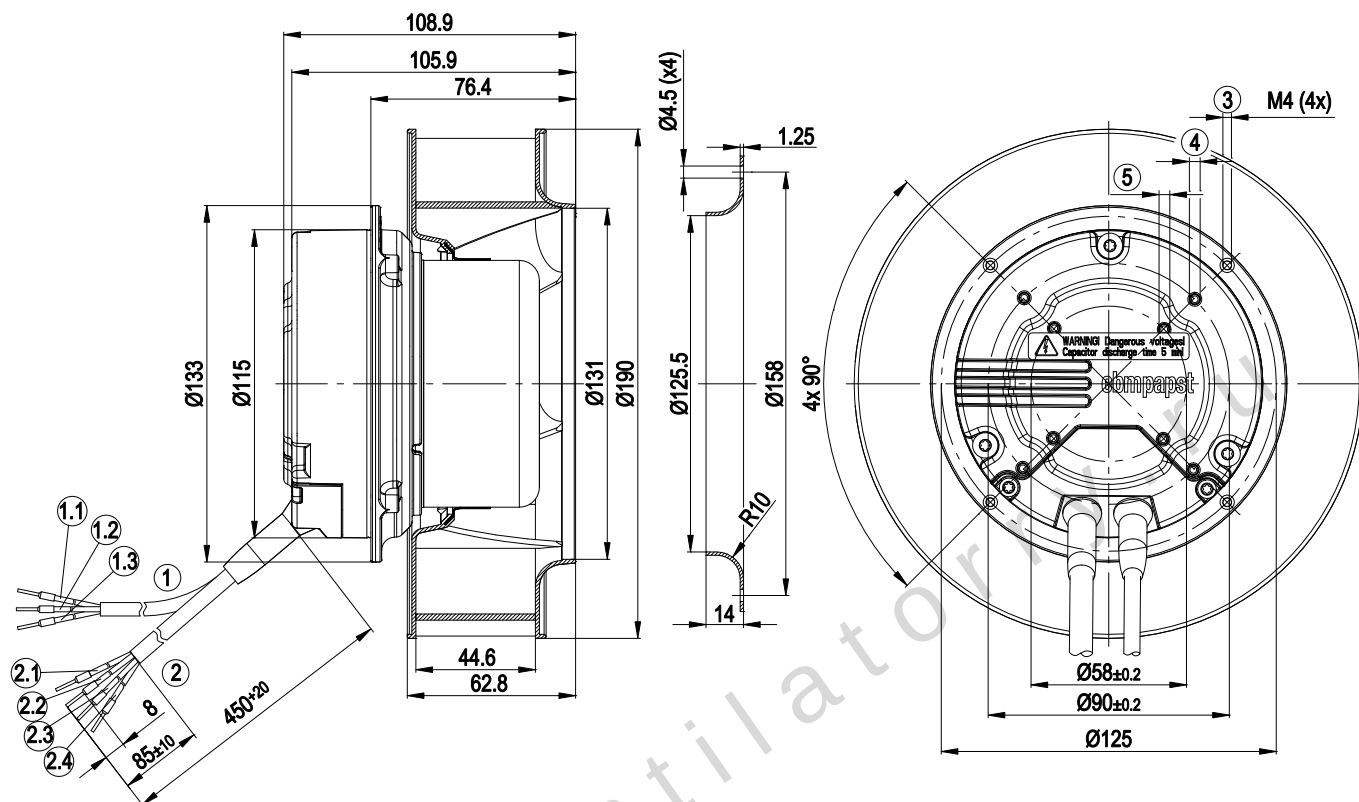
Leakage current	<= 3.5 mA
Size	190 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Any
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
EMC interference immunity	Acc. to EN 61000-6-2
Humidity class	F3-1
Insulation class	"B"
Cable exit	Variable
Condensate discharge holes	None
Motor bearing	Ball bearing
Mass	1.8 kg
Material of impeller	Plastic PA66, fibreglass-reinforced
Motor protection	Thermal overload protector (TOP) wired internally
Product conforming to standard	CE; EN 60335-1
Surface of rotor	Galvanised
Number of blades	7
Type of protection	IP 44; Depending on installation and position
Protection class	I
Technical features	- Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Approval	CSA C22.2 Nr.113; UL 507

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Product drawing



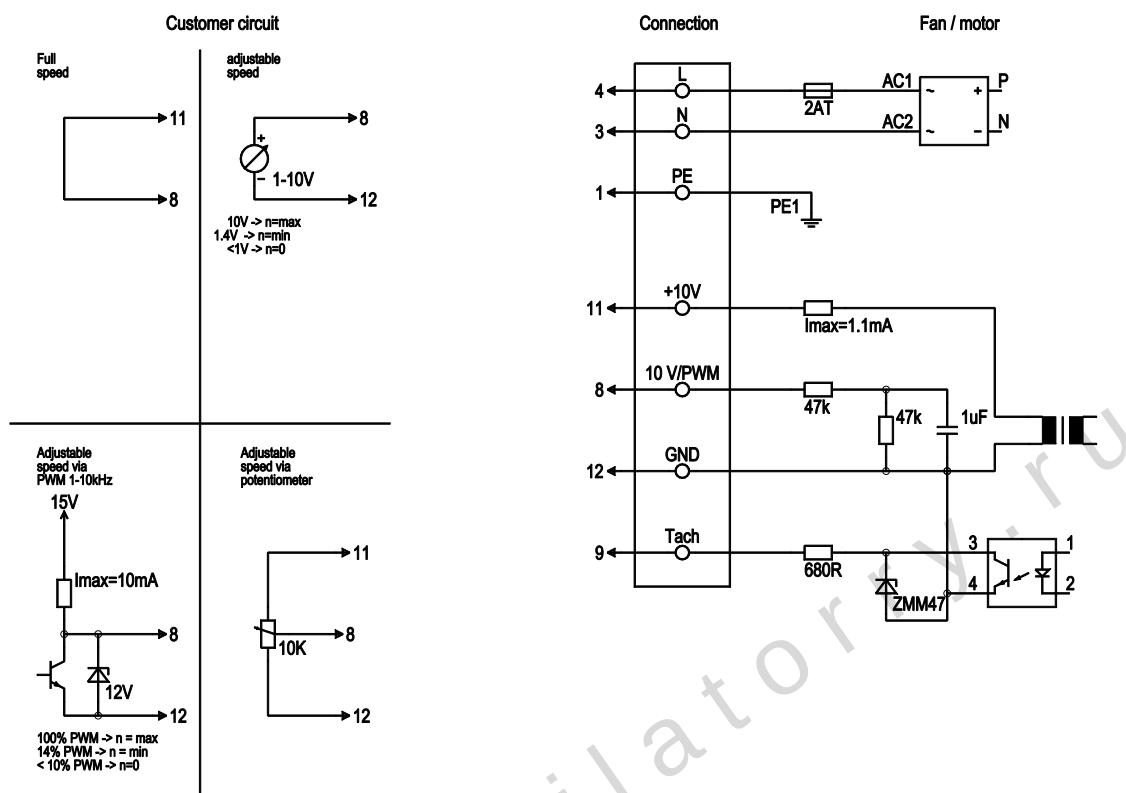
1	Connection line AWG18, 3x crimped core-end sleeves
2	Connection line AWG22, 4x crimped core-end sleeves
1.1	L (black)
1.2	N (blue)
1.3	PE (green / yellow)
2.1	Tach output (white)
2.2	GND (blue)
2.3	+10V (red)
2.4	0-10V (yellow)
3	Depth of screw min. 8 mm, max. 10 mm
4	Pilot hole prepared for self-tapping screw M4, depth of screw max. 6 mm
5	Pilot hole prepared for self-tapping screw M4, depth of screw max. 8 mm

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Connection screen



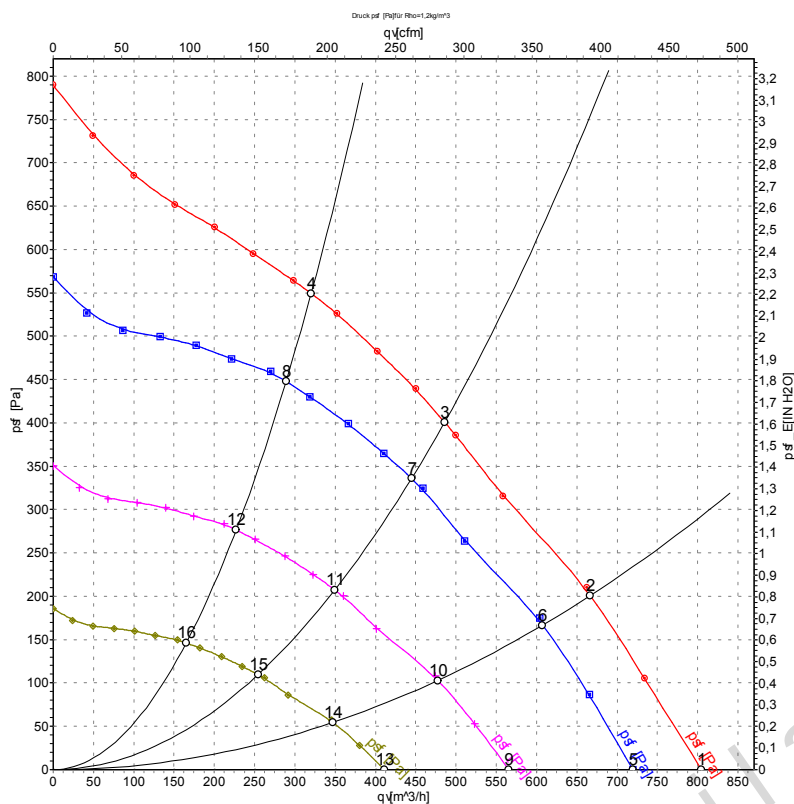
Line	No.	Signal	Colour	Function / assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 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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Charts: Air flow 50 Hz



Measurement: LU-73992

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	f	n	P ₁	I	LpA _{in}	qv	P _{sf}
	V	Hz	min ⁻¹	W	A	dB(A)	m ³ /h	Pa
1	230	50	3900	135	1.00	74	805	0
2	230	50	3845	145	1.06	71	665	200
3	230	50	3840	150	1.10	68	485	400
4	230	50	3875	141	1.05	68	320	550
5	230	50	3500	98	0.72	71	720	0
6	230	50	3500	110	0.81	69	605	170
7	230	50	3500	114	0.85	66	445	336
8	230	50	3500	104	0.78	66	290	448
9	230	50	2750	48	0.35	66	565	0
10	230	50	2750	53	0.39	63	475	105
11	230	50	2750	55	0.41	60	350	208
12	230	50	2750	50	0.38	60	225	276
13	230	50	2000	18	0.13	59	410	0
14	230	50	2000	20	0.15	56	345	56
15	230	50	2000	21	0.16	51	255	110
16	230	50	2000	19	0.15	51	165	146