EC centrifugal fan

backward-curved, single-intake

R3G190-RC11-27 ebmpapst Datasheet
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Nominal data

Type	**R3G190-RC11-27**
Motor	**M3G055-BI**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2968
Power consumption	W	65
Current draw	A	1.05
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	1.2 kg
Fan size	190 mm
Rotor surface	Thick-film passivated
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
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, open rotor
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for motor
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CSA C22.2 No. 77; UL 2111

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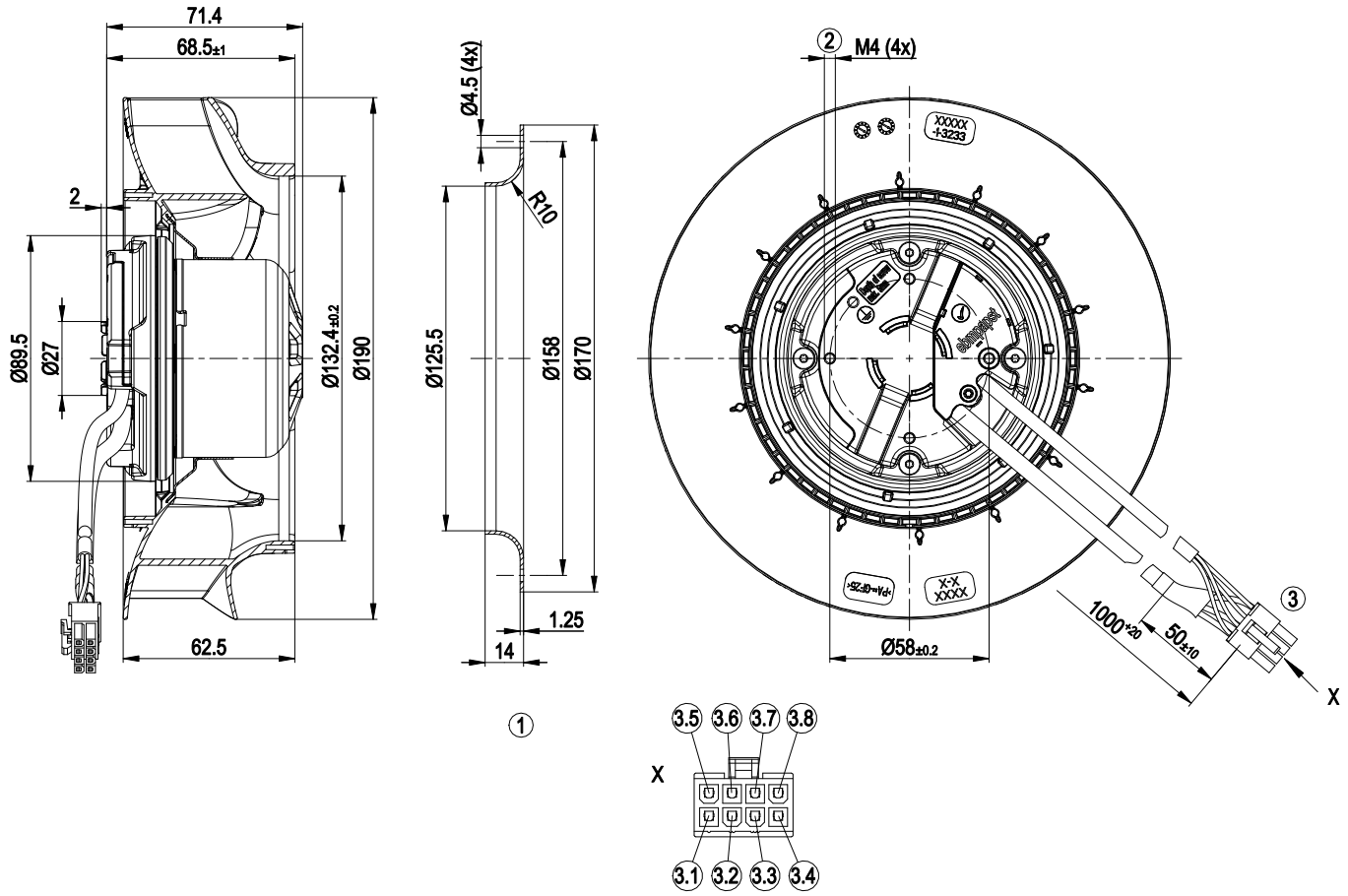
Product drawing



1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PVC AWG20, cable PVC AWG22, 8-pole connector housing Molex 46992-0810, 7x socket Molex 39-00-0059
3.1	L (black)
3.2	N (blue)
3.3	not used
3.4	PE (green/yellow)
3.5	+10 V (red)
3.6	GND (blue)
3.7	0-10 V (yellow)
3.8	Tach (white)

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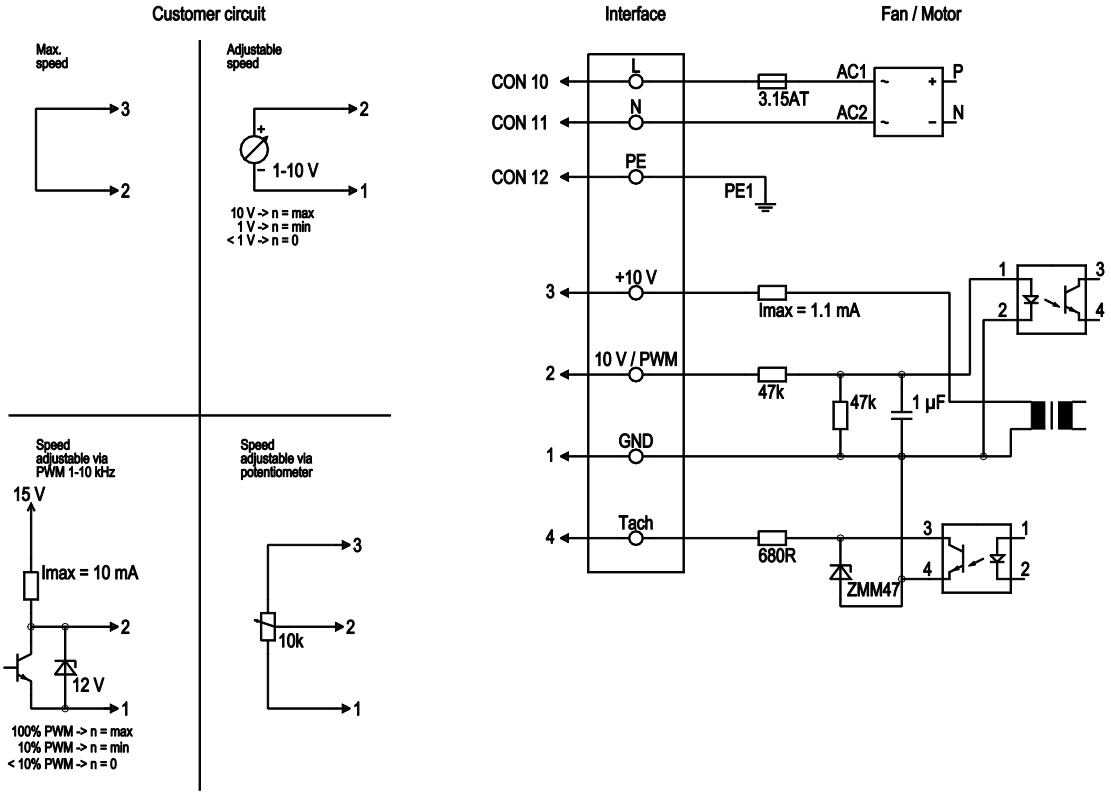
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 115 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	3	10V/ max 1.1mA	red	Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof.
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	1	GND	blue	GND connection for control interface
	4	Tacho	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

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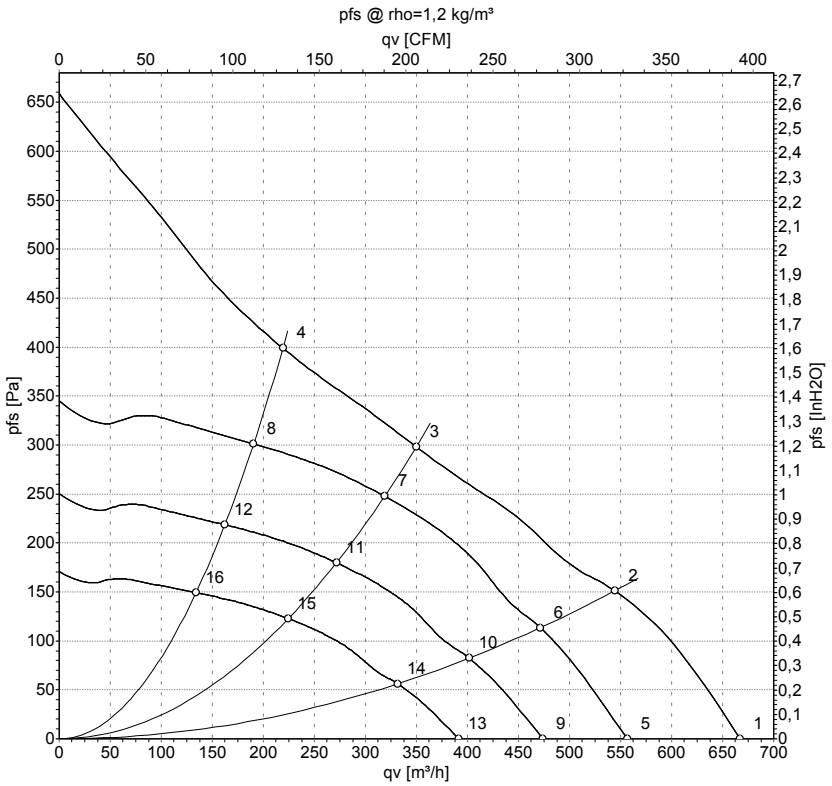
Curves: Air performance 50 Hz



Measurement: LU-147449-1

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}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	115	50	3235	65	1.05	65	73	665	0	395	0.00
2	115	50	3120	65	1.05	60	67	545	150	320	0.60
3	115	50	2970	65	1.05	58	66	350	300	205	1.20
4	115	50	3105	65	1.05	61	70	220	400	130	1.61
5	115	50	2700	39	0.56	61	68	555	0	325	0.00
6	115	50	2700	43	0.62	56	64	470	115	275	0.46
7	115	50	2700	50	0.73	56	63	320	248	190	1.00
8	115	50	2700	43	0.63	58	66	190	301	110	1.21
9	115	50	2300	24	0.35	57	64	475	0	280	0.00
10	115	50	2300	26	0.39	52	60	400	84	235	0.34
11	115	50	2300	31	0.45	51	59	270	180	160	0.72
12	115	50	2300	26	0.39	54	62	160	218	95	0.88
13	115	50	1900	14	0.20	52	59	390	0	230	0.00
14	115	50	1900	15	0.22	47	55	330	57	195	0.23
15	115	50	1900	17	0.25	47	55	225	123	130	0.49
16	115	50	1900	15	0.22	49	57	135	149	80	0.60

U = Power supply · f = Frequency · 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