EC centrifugal fan - RadiCal

backward curved, single inlet

R3G190-RC11-36 ebmpapst Datasheet
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Nominal data

Type	**R3G190-RC11-36**
Motor	**M3G055-BI**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2968
Power input	W	65
Current draw	A	1.05
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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Technical features

Mass	1.1 kg
Size	190 mm
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 1004-7 + 60730; CSA C22.2 No.77

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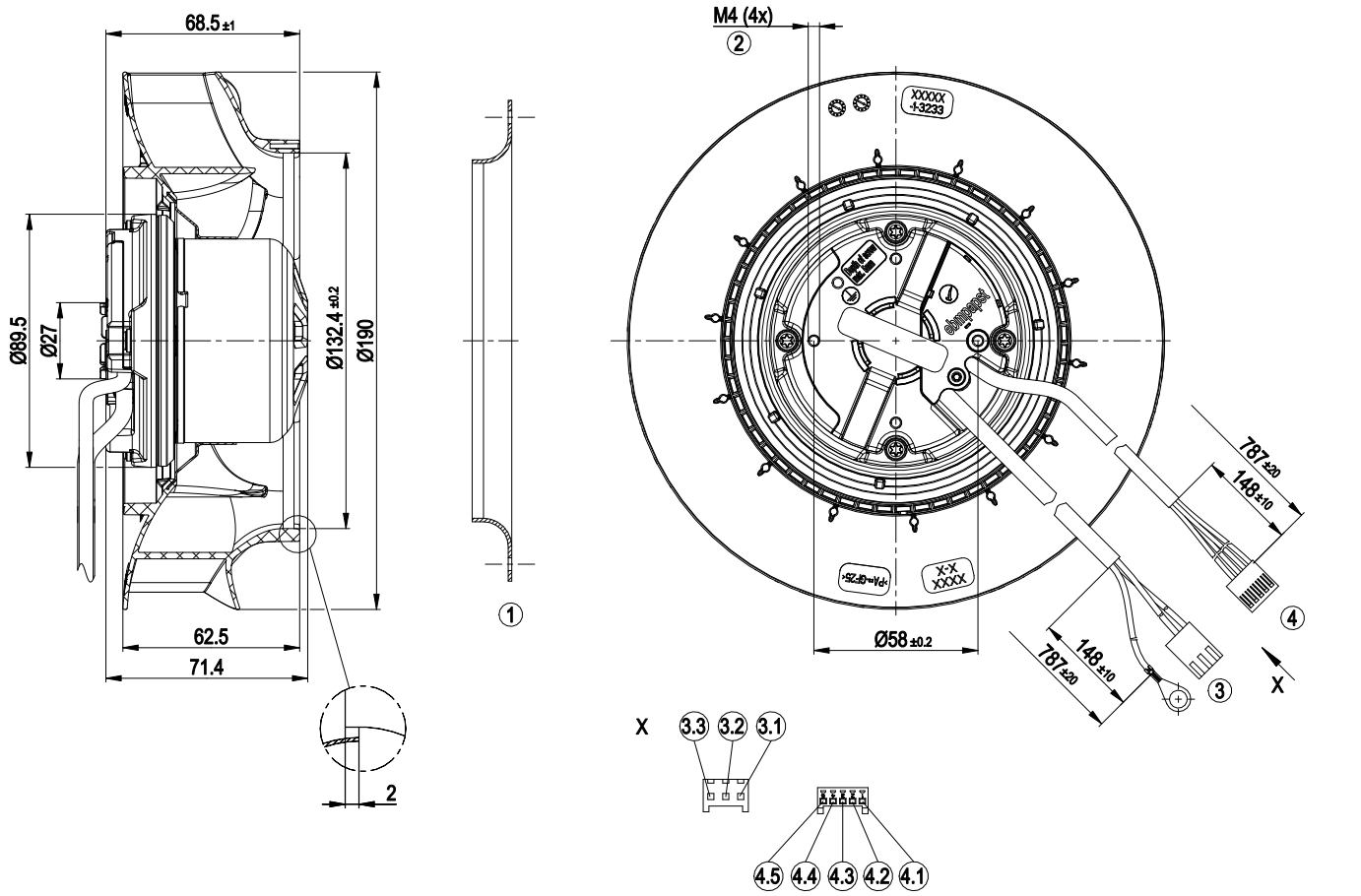
Product drawing



1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line PVC 3G AWG20, 3-pole connector housing AMP 770849-3, 2x plug contact AMP 350980-2, 1x contact stud Ø6.3 (green/yellow) crimped
3.1	L (black)
3.2	N (blue)
3.3	not used
4	Connection line PVC 4x AWG22, 5-pole connector housing AMP 1375820-5, 4x plug contact AMP 770601-1
4.1	0-10 V PWM (yellow)
4.2	GND (blue)
4.3	+10 V (red)
4.4	Tach (white)
4.5	not used

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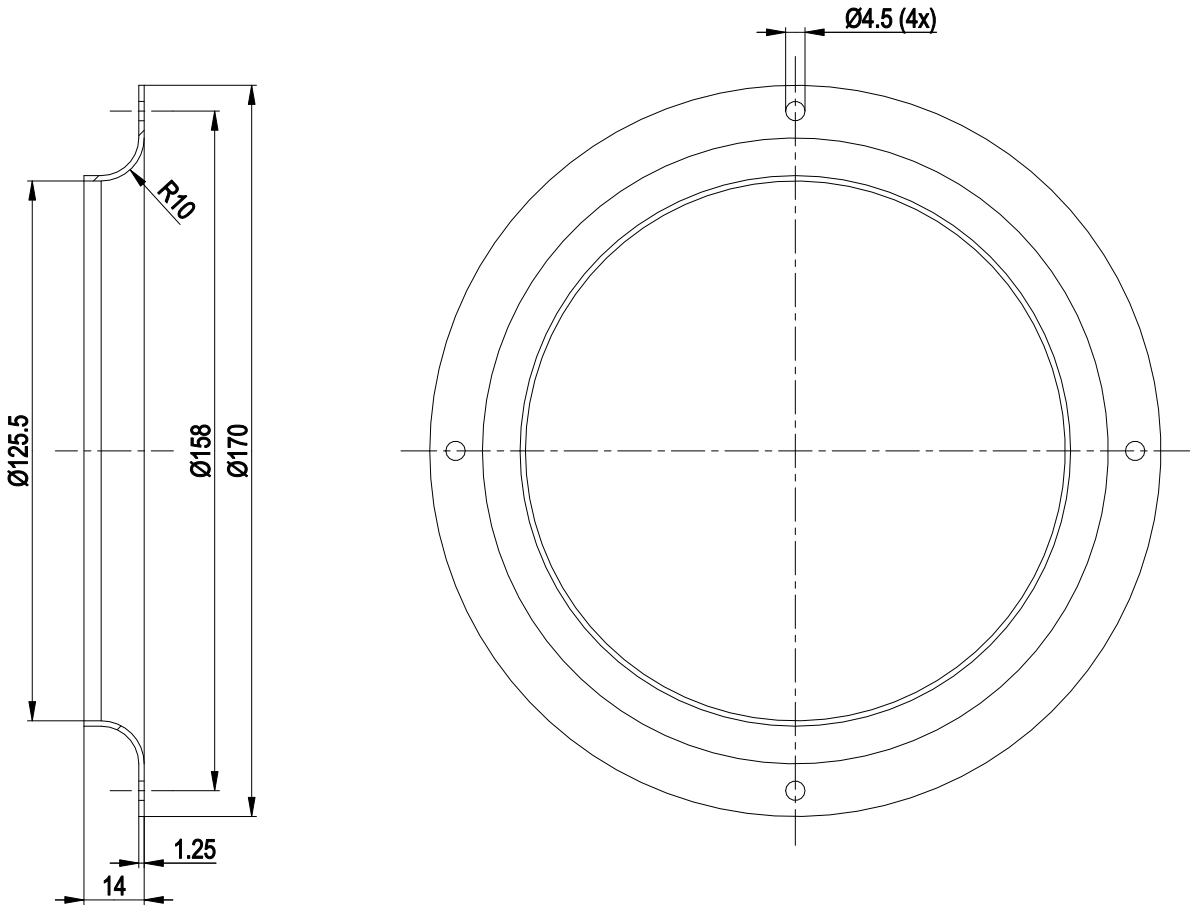
Accessory part



1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery

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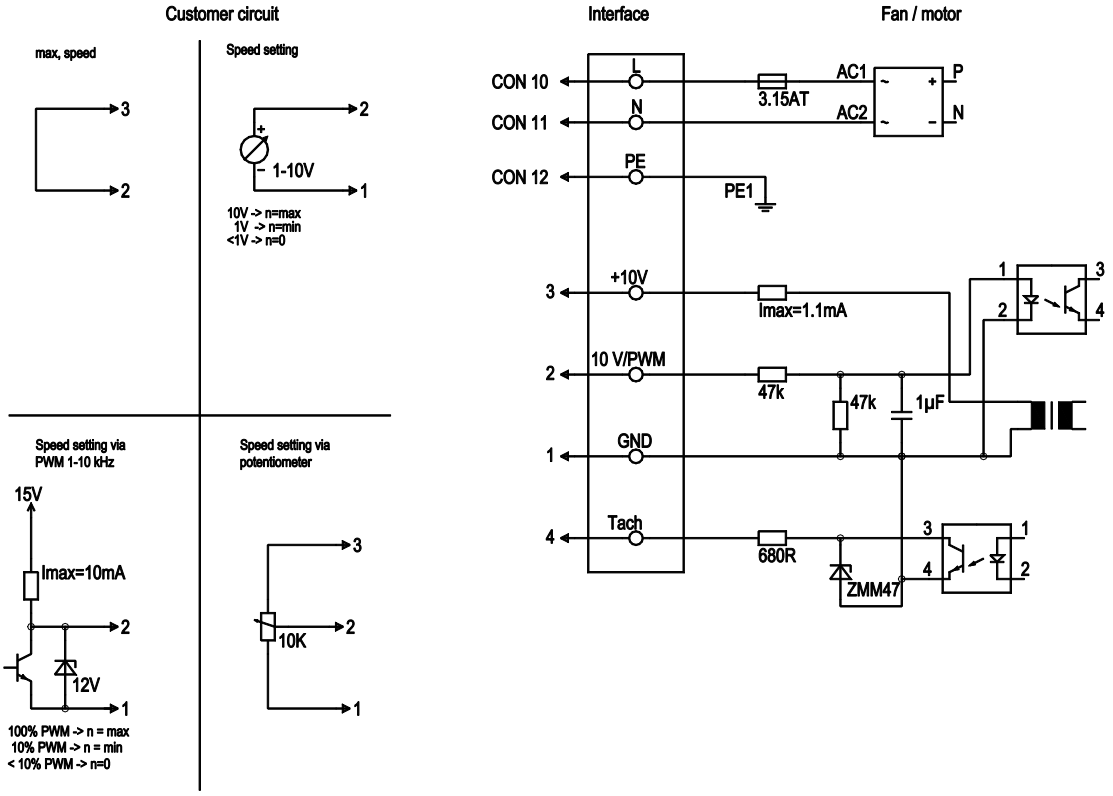
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 115 VAC, 50- 60 Hz, for voltage range refer to rating plate
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	3	10V/ max 1.1mA	red	Voltage output 10V/ 1.1mA, 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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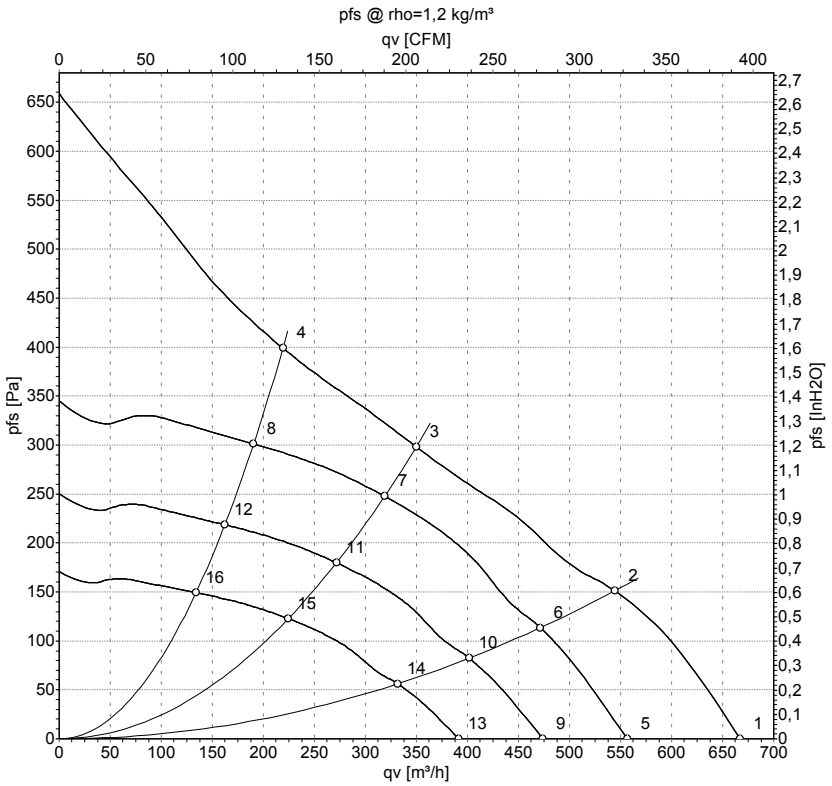
Charts: Air flow 50 Hz



Measurement: LU-147449-1

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_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	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 = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow p_{fs} = Pressure increase