R3G190-RC05-40

EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G190-RC05-40 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R3G190-RC05-40**
Motor	**M3G055-BI**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2600
Power consumption	W	48
Current draw	A	0.46
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

EC centrifugal fan - RadiCal

backward-curved, single-intake

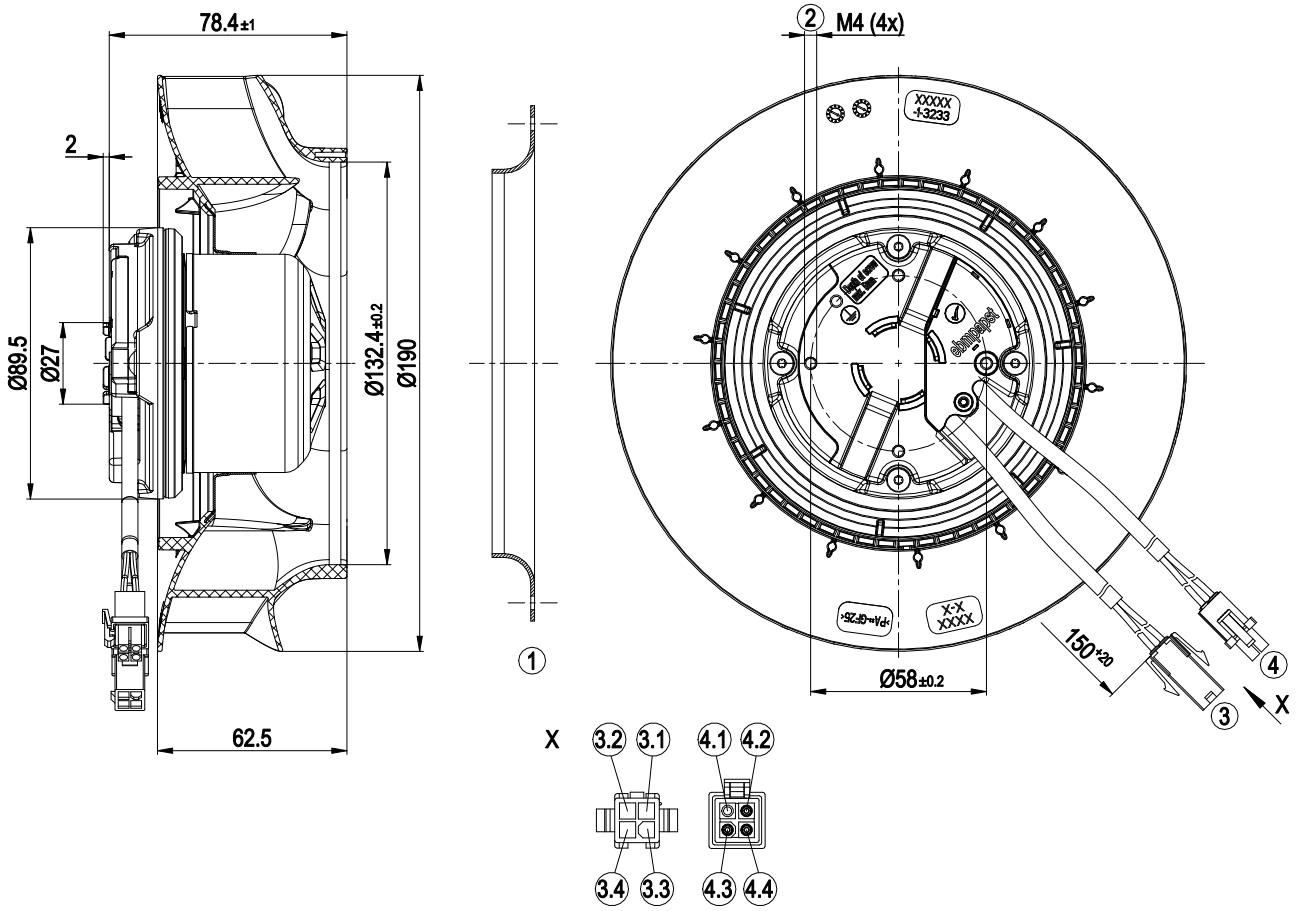
Technical description

Weight	1 kg
Size	190 mm
Motor size	55
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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 mounting	Ball bearing
Technical features	- 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 - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
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	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; CE

EC centrifugal fan - RadiCal

backward-curved, single-intake

Product drawing

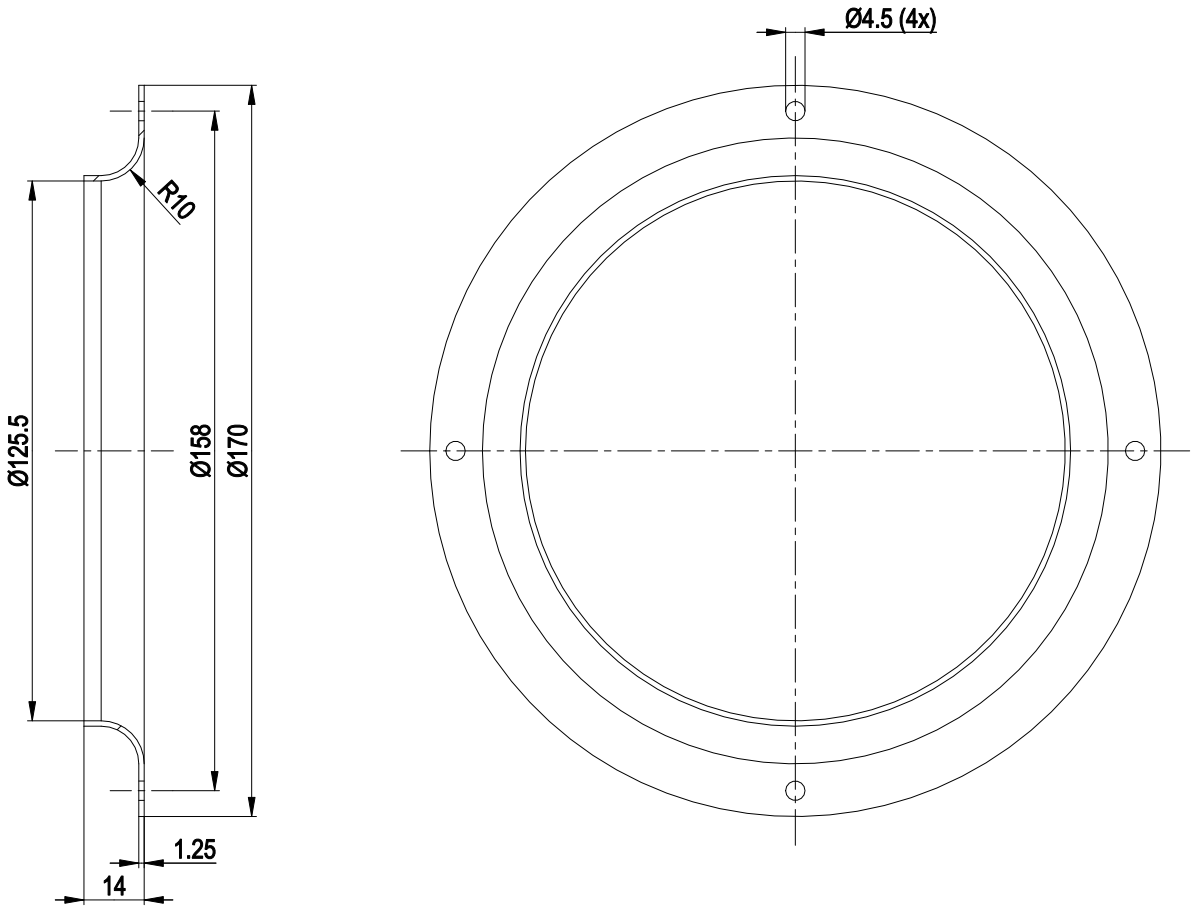


1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PVC AWG20
	4-pole connector housing TE 794939-1, 3x plug pin TE 170360-1
3.1	PE (green/yellow)
3.2	N (blue)
3.3	L (black)
3.4	not used
4	Cable PVC AWG22
	4-pole connector housing TE 794805-1, 3x socket TE 170362-1
4.1	not used
4.2	GND (blue)
4.3	0-10 V/PWM (yellow)
4.4	Tach (white)

EC centrifugal fan - RadiCal

backward-curved, single-intake

Accessory part

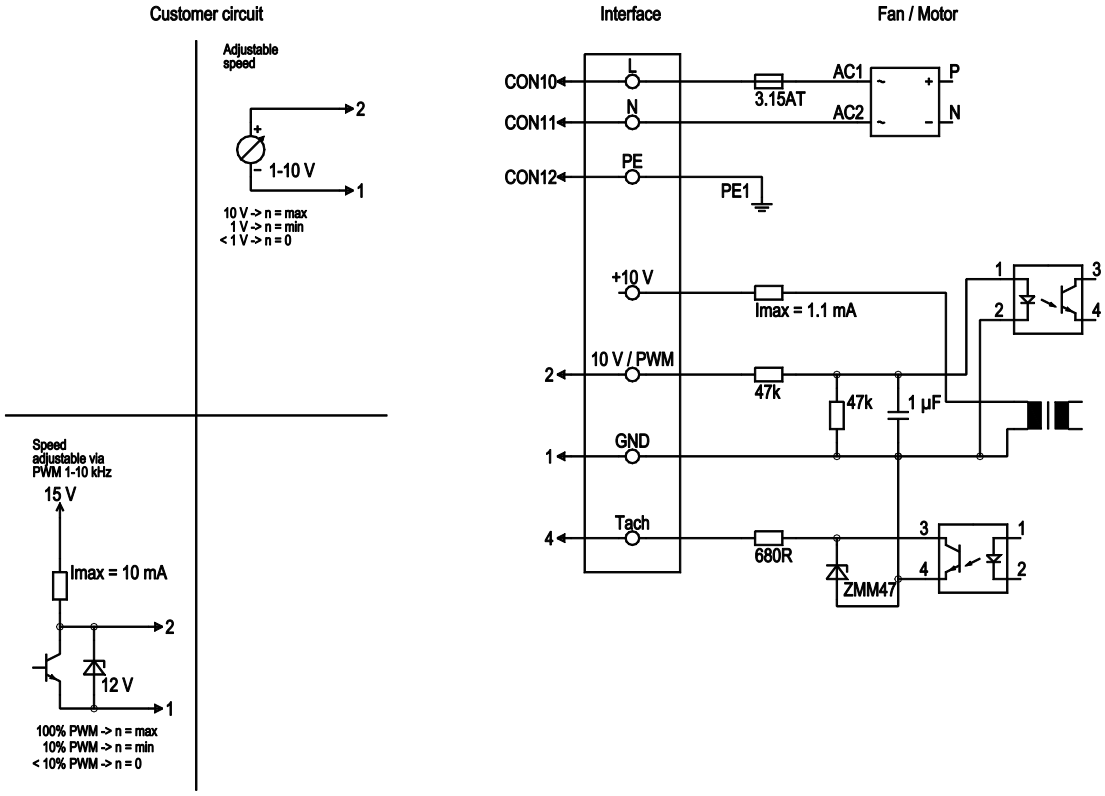


1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery

EC centrifugal fan - RadiCal

backward-curved, single-intake

Connection diagram

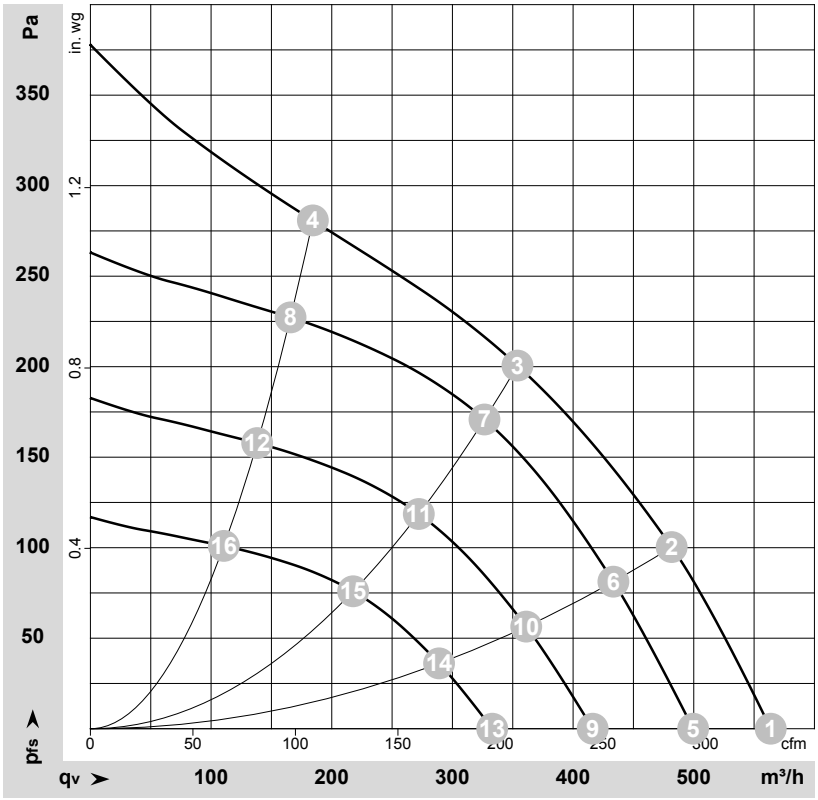


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0-10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	4	Tacho	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink_max = 10 mA

EC centrifugal fan - RadiCal

backward-curved, single-intake

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-190015-1

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

	Wired	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	1~	230	50	2710	41	0.40	565	0	330	0.00
2	1~	230	50	2670	43	0.43	480	100	285	0.40
3	1~	230	50	2600	48	0.46	355	200	210	0.80
4	1~	230	50	2665	43	0.42	185	280	110	1.12
5	1~	230	50	2400	28	0.28	500	0	295	0.00
6	1~	230	50	2400	32	0.31	435	81	255	0.33
7	1~	230	50	2400	38	0.36	325	172	190	0.69
8	1~	230	50	2400	31	0.31	165	227	100	0.91
9	1~	230	50	2000	16	0.16	415	0	245	0.00
10	1~	230	50	2000	18	0.18	360	56	210	0.22
11	1~	230	50	2000	22	0.21	270	119	160	0.48
12	1~	230	50	2000	18	0.18	140	158	80	0.63
13	1~	230	50	1600	8.0	0.08	335	0	195	0.00
14	1~	230	50	1600	9.0	0.09	290	36	170	0.14
15	1~	230	50	1600	11	0.11	220	76	130	0.31
16	1~	230	50	1600	9.0	0.09	110	101	65	0.41

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase