EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G355-RC03-10 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	**R3G355-RC03-10**
Motor	**M3G074-DF**

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}	650
Power consumption	W	26
Current draw	A	0.53
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

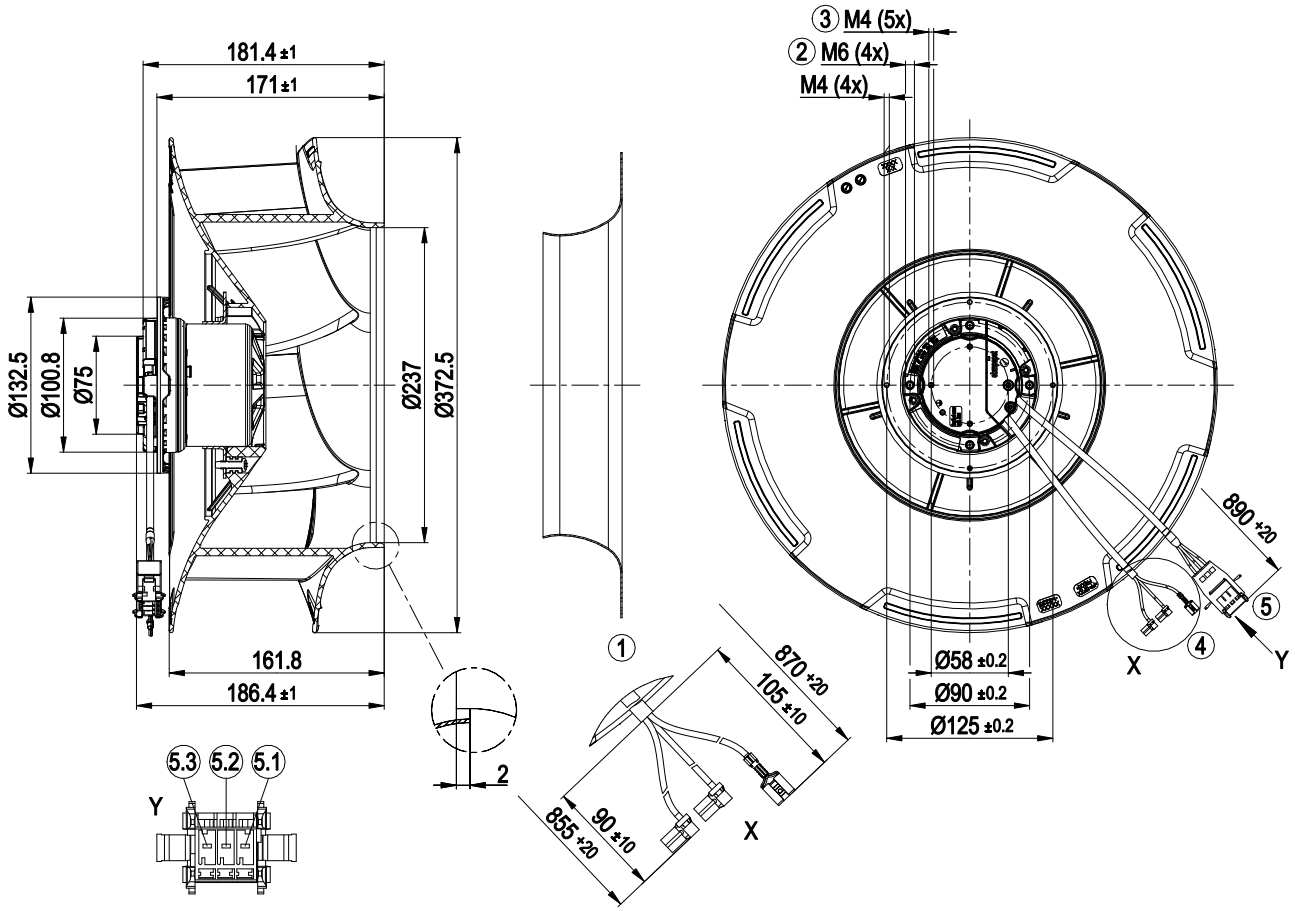
Technical description

Weight	3.38 kg
Size	355 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	PP plastic
Number of blades	6
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - 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 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 assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

EC centrifugal fan - RadiCal

backward-curved, single-intake

Product drawing

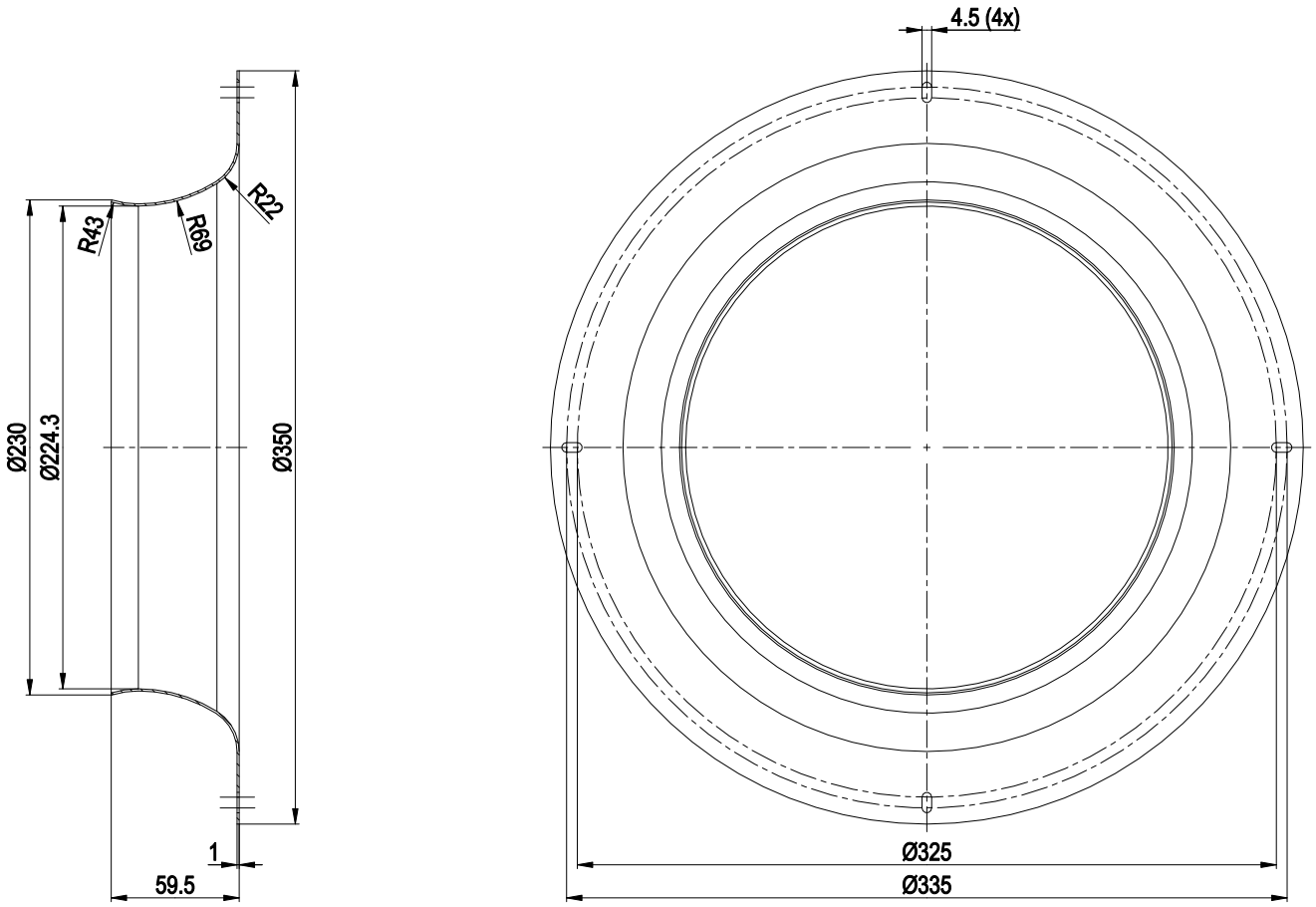


1	Accessory part: inlet ring 35500-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Max. clearance for screw 5 mm
4	Cable PVC AWG20
	2x flat push-on receptacle TE 150699-2 4.8-0.8; 1x flat push-on receptacle Stocko RSB 79000 F 6.3-1
5	Cable PVC AWG22
	3-pole connector housing WAGO multi-plug system 769-603/005-000
5.1	0-10 V/PWM
5.2	GND
5.3	+10 V

EC centrifugal fan - RadiCal

backward-curved, single-intake

Accessory part

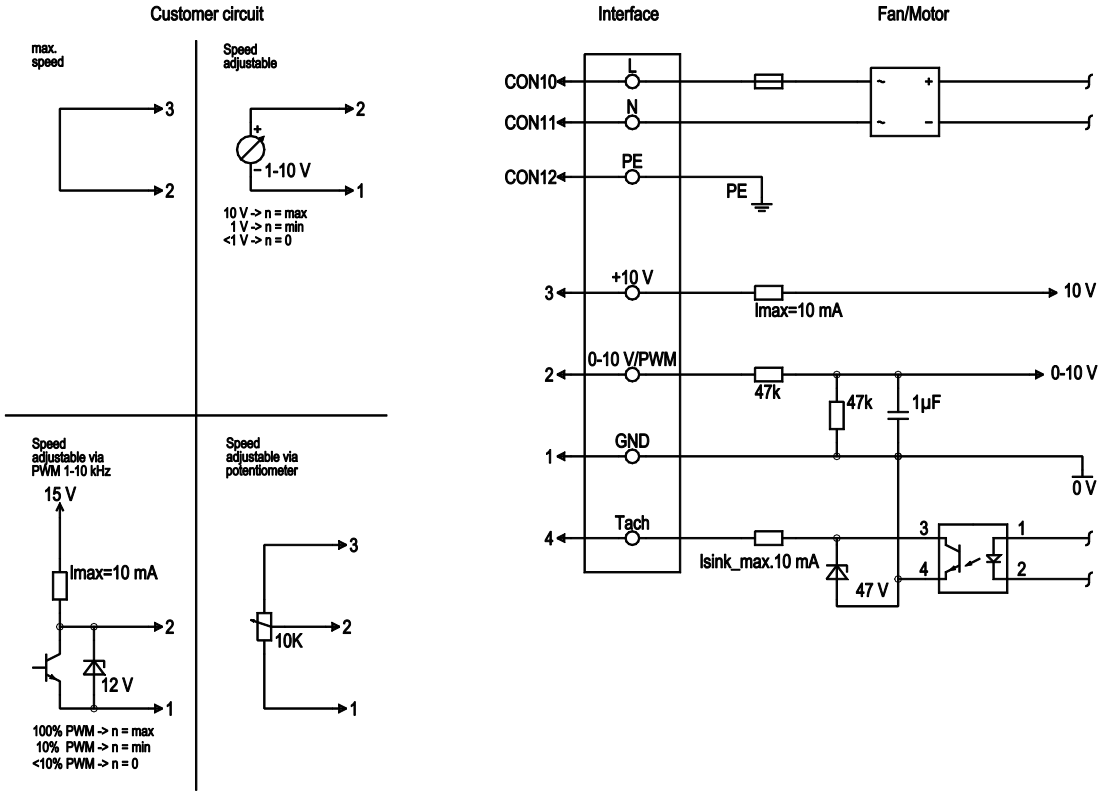


Inlet ring 35500-2-4013

EC centrifugal fan - RadiCal

backward-curved, single-intake

Connection diagram

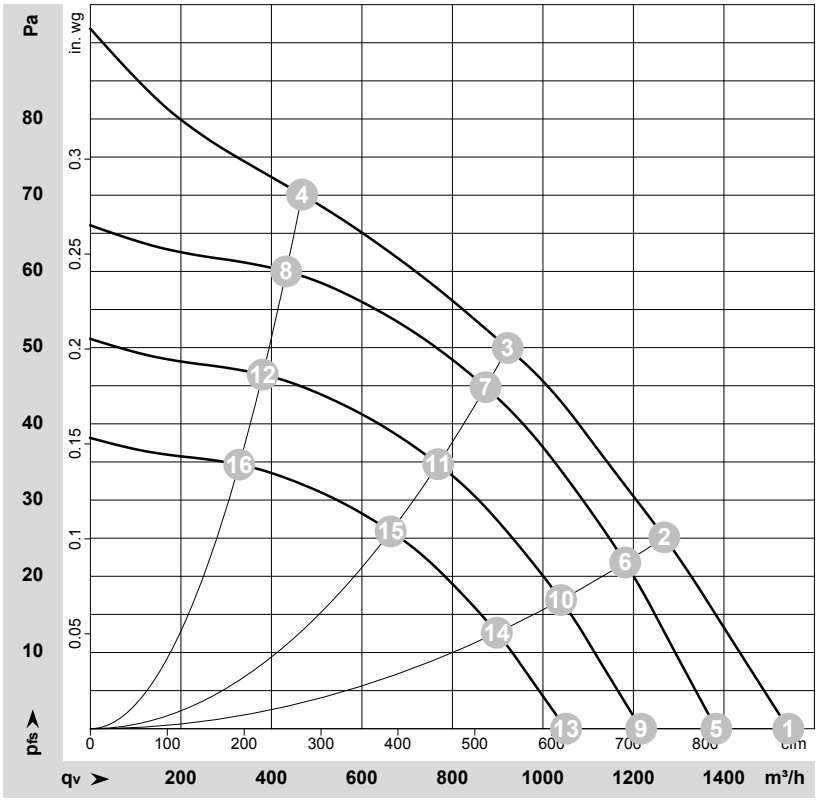


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	-	not brought out via wire
	3	+10 V	red	Fixed voltage output 10 VDC +/-3%, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometers), SELV
	1	GND	blue	Reference ground for control interface, SELV

EC centrifugal fan - RadiCal

backward-curved, single-intake

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-206895-1

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~	115	50	695	21	0.44	1540	0	910	0.00
2	1~	115	50	670	25	0.50	1270	25	745	0.10
3	1~	115	50	650	26	0.53	920	50	545	0.20
4	1~	115	50	675	24	0.49	470	70	275	0.28
5	1~	115	50	625	15	0.31	1385	0	815	0.00
6	1~	115	50	625	20	0.40	1180	22	695	0.09
7	1~	115	50	625	22	0.45	875	45	515	0.18
8	1~	115	50	625	19	0.39	435	60	255	0.24
9	1~	115	50	550	10.0	0.21	1215	0	715	0.00
10	1~	115	50	550	14	0.28	1040	17	610	0.07
11	1~	115	50	550	15	0.30	770	35	450	0.14
12	1~	115	50	550	13	0.26	380	46	225	0.18
13	1~	115	50	475	7.0	0.14	1050	0	620	0.00
14	1~	115	50	475	9.0	0.18	900	13	530	0.05
15	1~	115	50	475	10.0	0.20	665	26	390	0.10
16	1~	115	50	475	8.0	0.17	330	35	195	0.14

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