R3G133-RA03-03

EC centrifugal fan - RadiCal

backward curved, single inlet

R3G133-RA03-03 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**R3G133-RA03-03**
Motor	**M3G045-AI**

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}	3950
Power input	W	30
Current draw	A	0.50
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

EC centrifugal fan - RadiCal

backward curved, single inlet

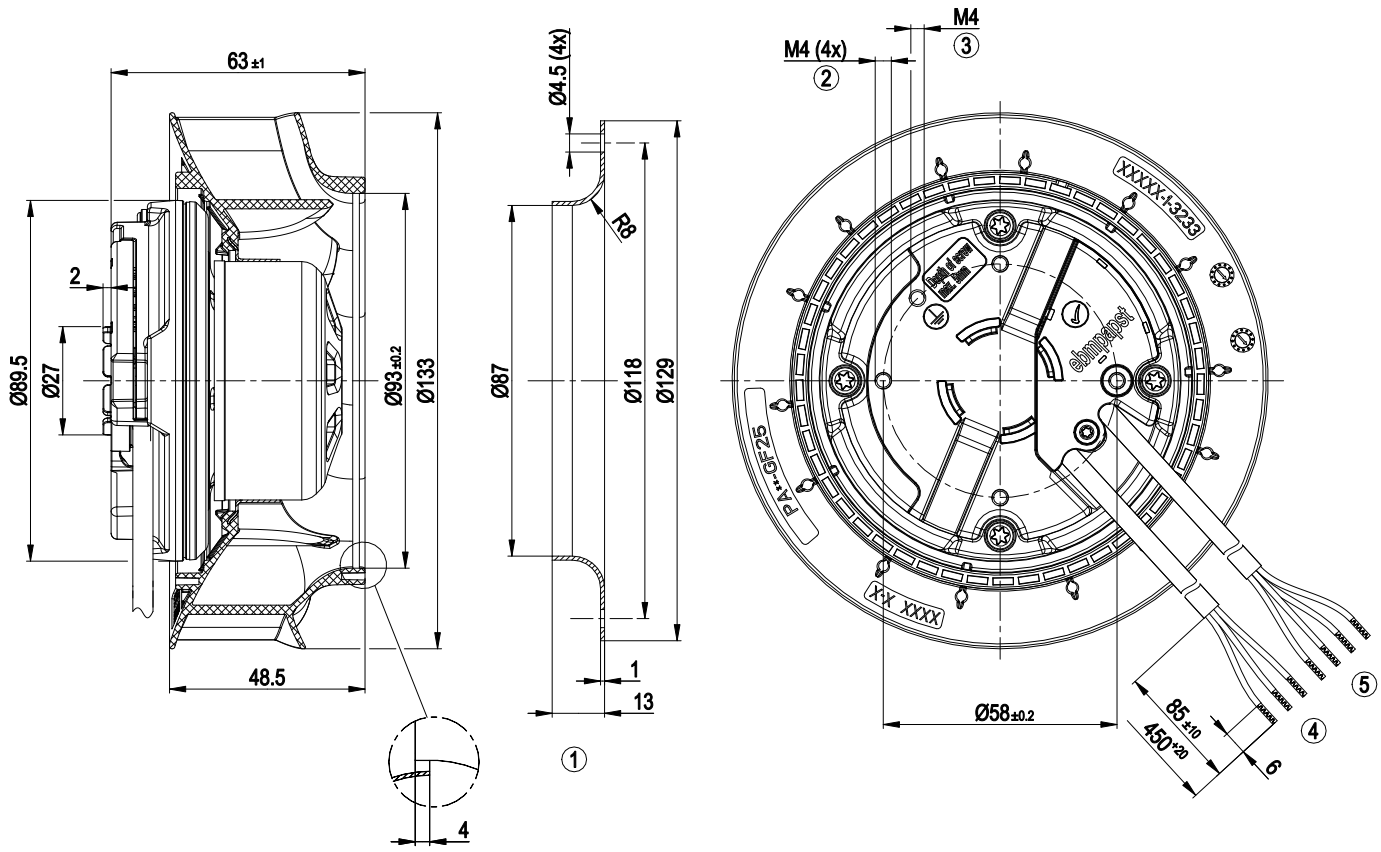
Technical features

Mass	0.6 kg
Size	133 mm
Surface of rotor	Thick layer passivated
Material of electronics housing	Die-cast aluminium
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H1
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 - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household 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	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730; EAC

EC centrifugal fan - RadiCal

backward curved, single inlet

Product drawing

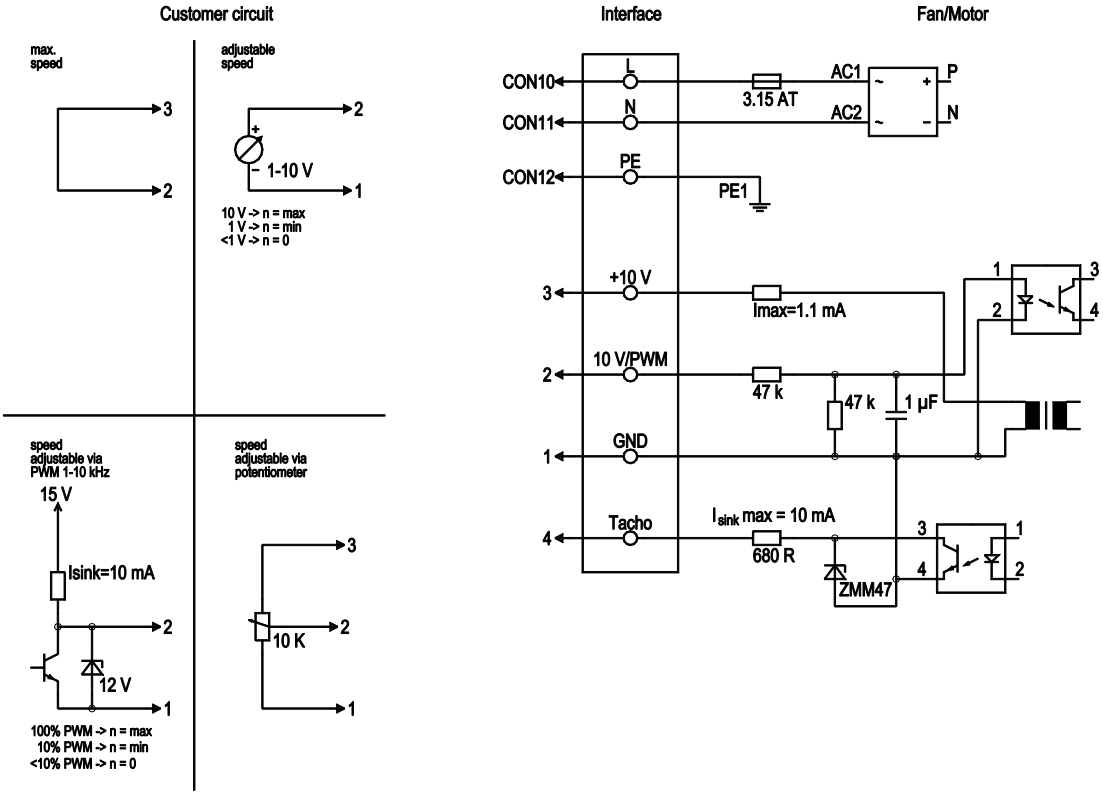


1	Accessory part: Inlet nozzle 09566-2-4013, not included in scope of delivery
2	Thread reach max. 5 mm
3	Thread reach max. 5 mm
4	Connection line PVC 3G AWG20, 3x lead tips crimped
5	Connection line PVC 4x AWG22, 4x lead tips crimped

EC centrifugal fan - RadiCal

backward curved, single inlet

Connection screen

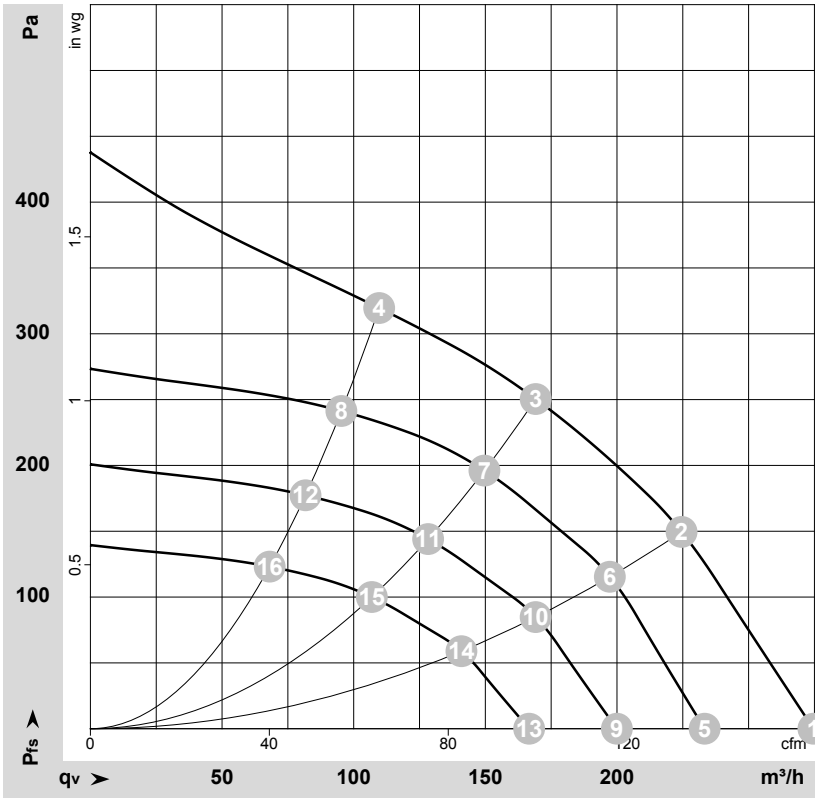


No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 115 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA

EC centrifugal fan - RadiCal

backward curved, single inlet

Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-178627-1

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	4120	27	0.46	60	68	275	0	160	0.00
2	115	50	3975	30	0.50	56	64	225	150	130	0.60
3	115	50	3950	30	0.50	54	61	170	250	100	1.00
4	115	50	4025	28	0.49	57	64	110	320	65	1.28
5	115	50	3500	16	0.28	55	63	235	0	135	0.00
6	115	50	3500	20	0.35	53	60	195	119	115	0.48
7	115	50	3500	21	0.36	50	58	150	196	90	0.79
8	115	50	3500	19	0.32	53	61	95	241	55	0.97
9	115	50	3000	10.0	0.18	52	60	200	0	120	0.00
10	115	50	3000	13	0.22	49	57	170	88	100	0.35
11	115	50	3000	13	0.22	47	54	130	144	75	0.58
12	115	50	3000	12	0.20	49	57	80	177	50	0.71
13	115	50	2500	6.0	0.10	47	55	165	0	100	0.00
14	115	50	2500	7.0	0.13	44	52	140	61	85	0.24
15	115	50	2500	8.0	0.13	42	50	105	100	65	0.40
16	115	50	2500	7.0	0.12	44	52	70	123	40	0.49

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