R3G160-RB31-13

EC centrifugal fan - RadiCal

forward-curved, single-intake

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Nominal data

Type	**R3G160-RB31-13**
Motor	**M3G055-BD**

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}	4300
Power consumption	W	85
Current draw	A	0.75
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

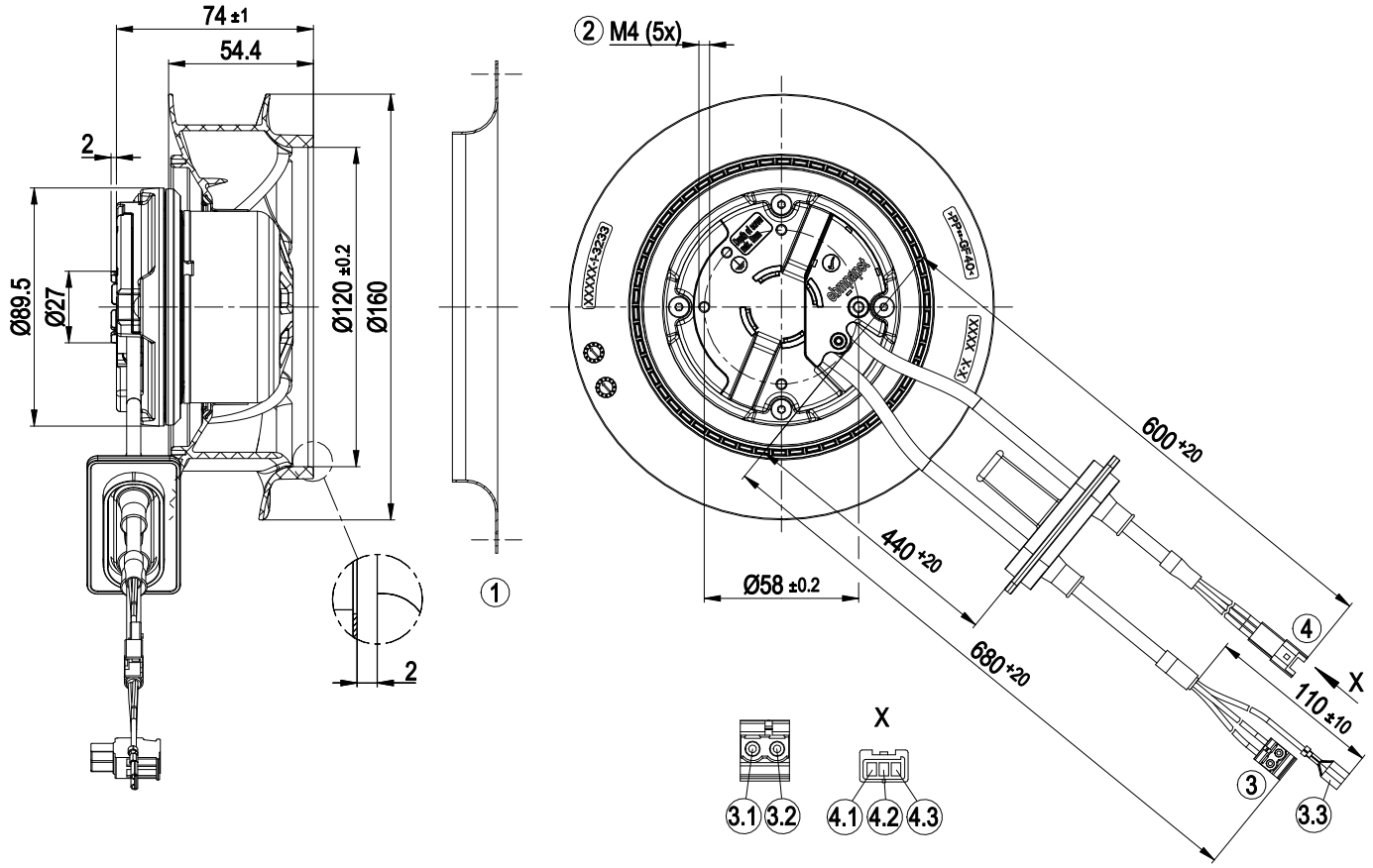
Weight	1.24 kg
Size	160 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	PP plastic, galvanized sheet-metal plate
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	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 bearing	Ball bearing; (sealed)
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
Electrical hookup	Connector with cable
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; EN 60335-1; CE

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Product drawing



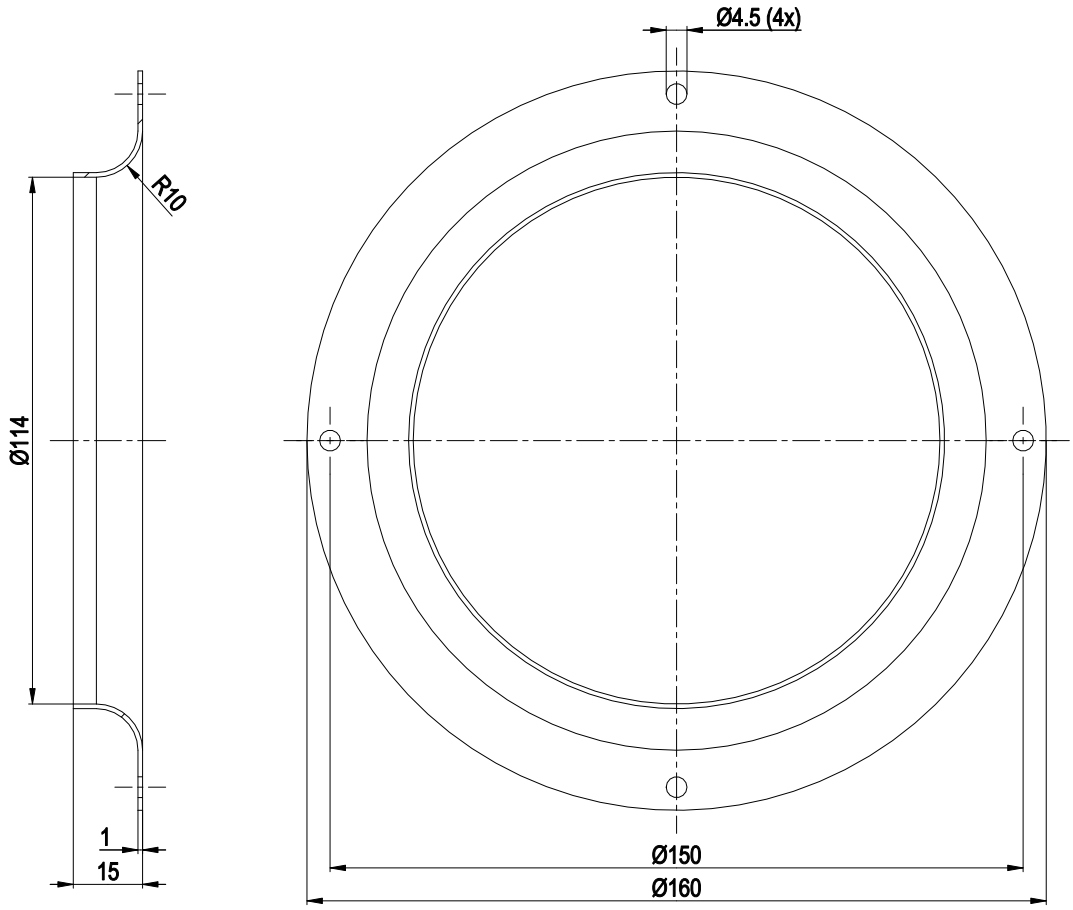
1	Accessory part: Inlet ring 09567-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable AWG20
	2-pole connector housing Dinkle 2ESDP-02P, 2x splice
3.1	L
3.2	N
3.3	Flat push-on receptacle 6.3 x 0.8 (PE)
4	Cable PVC AWG22
	3-pole connector housing JST XARR-03VF-WGT4, 3x plug pin JST SXAM-01T-P0.6
4.1	0-10 V/PWM
4.2	GND
4.3	Tach

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Accessory part



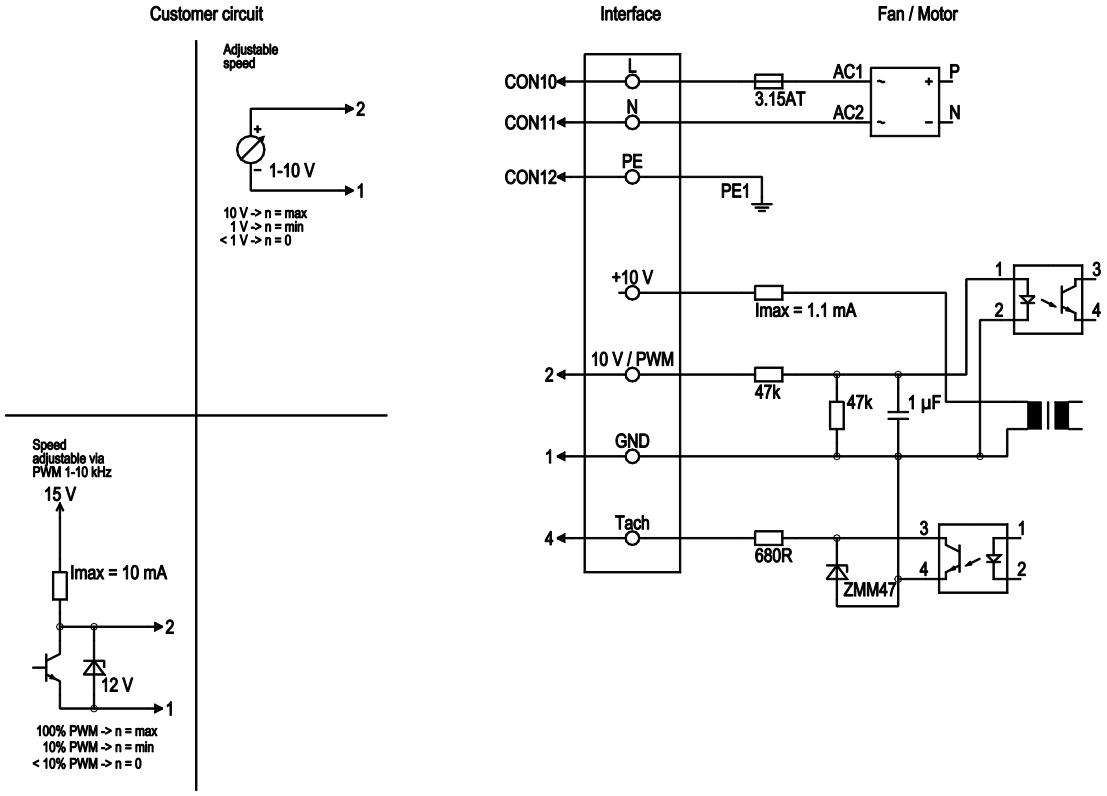
Inlet ring 09567-2-4013

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Connection diagram



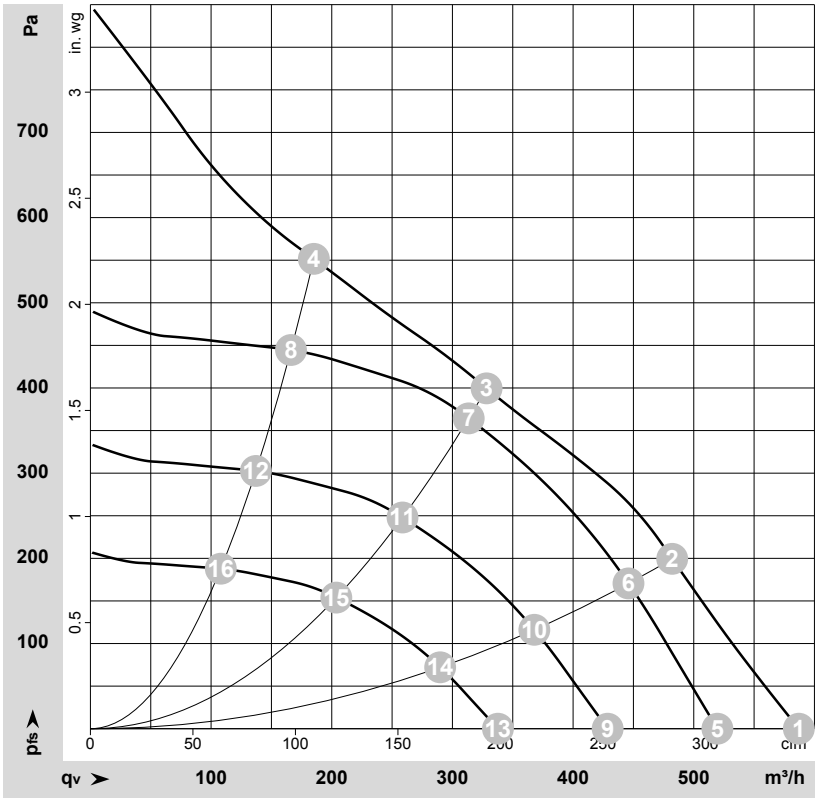
No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0-10V PWM	yellow	Control input 0-10 V or PWM, electrically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

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-213451-1

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	4520	85	0.75	585	0	345	0.00
2	1~	230	50	4325	85	0.75	480	200	285	0.80
3	1~	230	50	4300	85	0.75	330	400	195	1.61
4	1~	230	50	4455	85	0.75	185	550	110	2.21
5	1~	230	50	4000	57	0.50	520	0	305	0.00
6	1~	230	50	4000	65	0.57	445	171	265	0.69
7	1~	230	50	4000	71	0.62	315	364	185	1.46
8	1~	230	50	4000	60	0.52	165	445	100	1.79
9	1~	230	50	3300	32	0.28	430	0	250	0.00
10	1~	230	50	3300	36	0.32	370	116	215	0.47
11	1~	230	50	3300	40	0.35	260	248	150	1.00
12	1~	230	50	3300	33	0.29	135	303	80	1.22
13	1~	230	50	2600	16	0.14	340	0	200	0.00
14	1~	230	50	2600	18	0.16	290	72	170	0.29
15	1~	230	50	2600	20	0.17	205	154	120	0.62
16	1~	230	50	2600	16	0.14	110	188	65	0.75

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

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