

R3G630-RB30-19

# EC centrifugal fan - RadiCal

backward-curved, single-intake



R3G630-RB30-19 ebmpapst Datasheet

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Limited partnership · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

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## Nominal data

Type	R3G630-RB30-19	
Motor	M3G150-IF	
Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min <sup>-1</sup>	1270
Power consumption	W	2600
Current draw	A	8.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

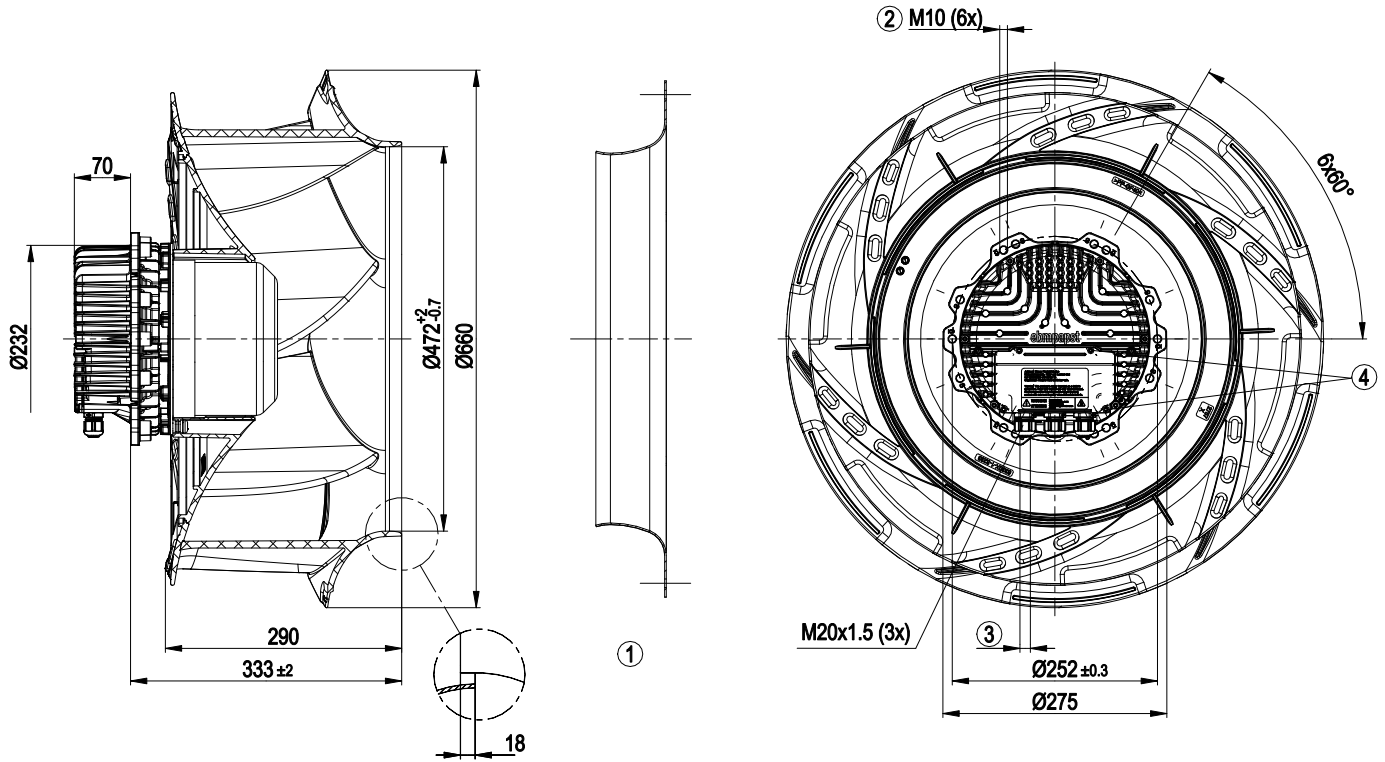
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment  
Subject to change



### Technical description

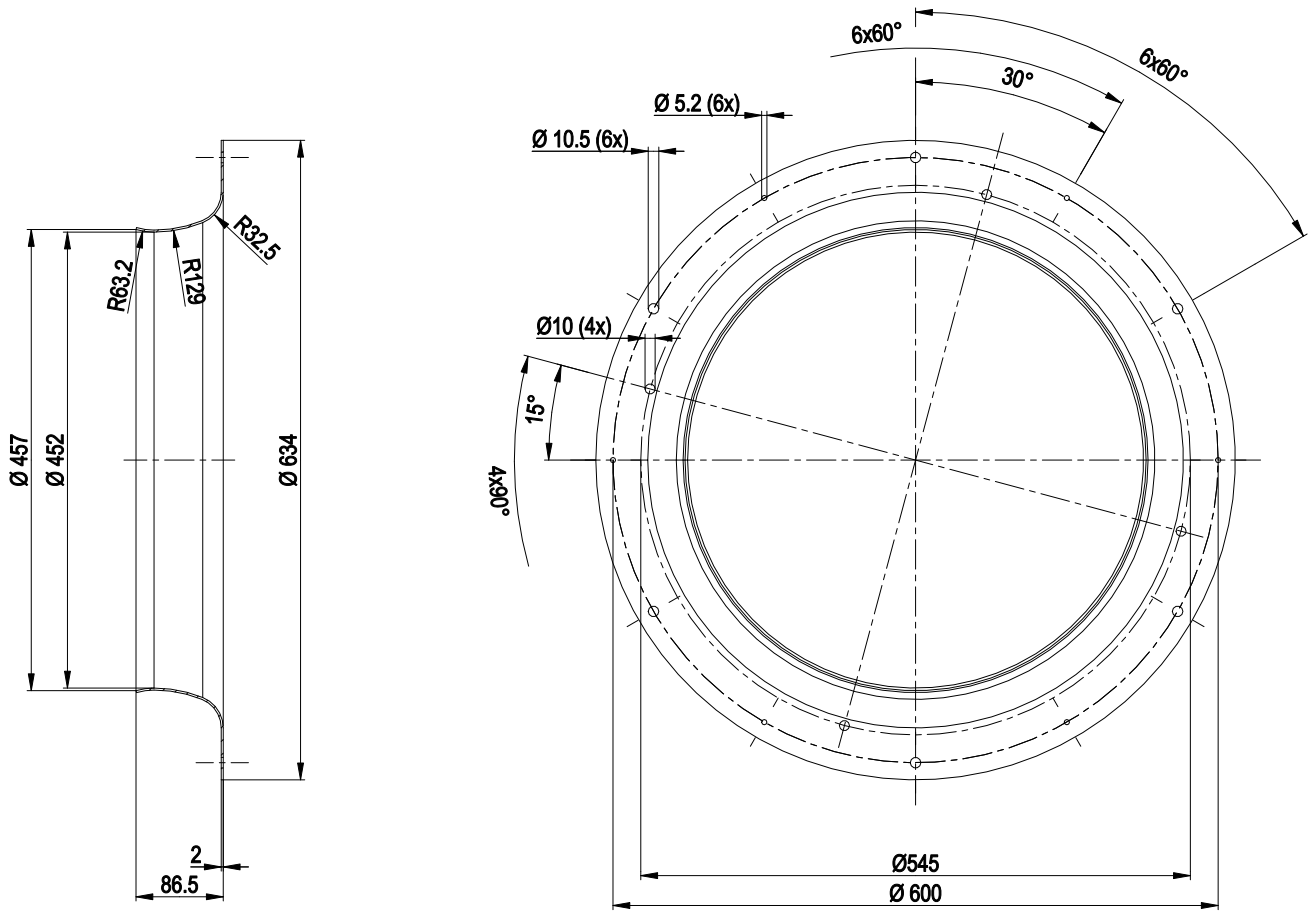
<b>Weight</b>	30 kg
<b>Fan size</b>	630 mm
<b>Rotor surface</b>	Painted black
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	PP plastic
<b>Number of blades</b>	6
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	F4-1
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Output 20 VDC, max. 50 mA</li> <li>- Output for slave 0-10 V</li> <li>- Operation and alarm display</li> <li>- Input for sensor 0-10 V or 4-20 mA</li> <li>- External 24 V input (parameter setting)</li> <li>- External release input</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Motor current limitation</li> <li>- PFC, passive</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-4 (industrial environment)
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Reverse polarity and locked-rotor protection
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 61800-5-1; CE
<b>Approval</b>	C22.2 No.77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730

Product drawing



1	Accessory part: inlet ring 63300-2-4013 not included in scope of delivery
2	Max. clearance for screw 25 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque $4 \pm 0.6$ Nm
4	Tightening torque $3.5 \pm 0.5$ Nm

Accessory part



Accessory part: inlet ring 63300-2-4013 not included in scope of delivery



## Connection diagram



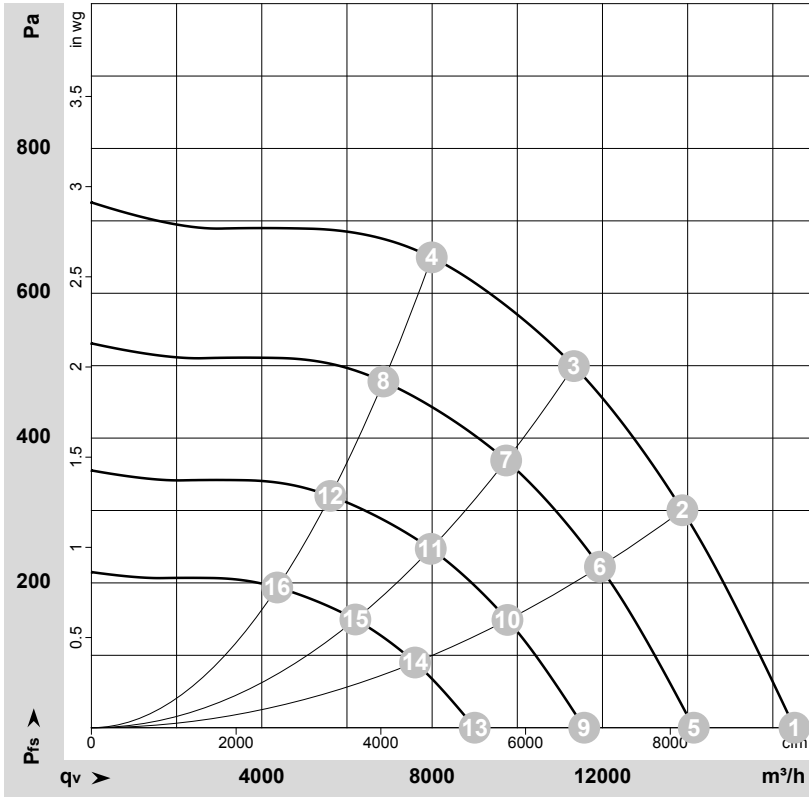
No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply 3-phase 200-240 VAC, 50/60 Hz
KL 1	2	L2	Supply connection, power supply 3-phase 200-240 VAC, 50/60 Hz
KL 1	3	L3	Supply connection, power supply 3-phase 200-240 VAC, 50/60 Hz
PE		PE	Ground connection, PE connection
KL 2	1	NO	Status relay, floating status contact, make for failure
KL2	2	COM	Status relay, floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL2	3	NC	Status relay, floating status contact, break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL 3	3 / 10	GND	Reference ground for control interface; SELV
KL 3	4	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1I; SELV
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof power supply for external devices (e.g. pot); SELV
KL 3	6	Ain1 I	Analog input 1, set value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain1U; SELV
KL 3	7	Din1	Digital input 1: enable electronics, enable: pin open or applied voltage 5-50 VDC disable: bridge to GND or applied voltage < 1 VDC reset function: triggers software reset after a level change to < 1 VDC; SELV
KL 3	8	Din2	Digital input 2: Switching parameter sets 1/2, according to EEPROM setting, the valid or used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: pin open or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	9	Din3	Digital input 3: according to EEPROM setting, the integrated controller's direction of action can be selected as normal/inverse via bus or digital input normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage < 1 VDC; SELV
KL 3	11	Ain2 U	Analog input 2, measured value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2I; SELV
KL 3	12	+ 20 V	Fixed voltage output 20 VDC, +20 V ±5/-10%, max. 50 mA, short-circuit-proof power supply for external devices (e.g. sensors); SELV



No.	Conn.	Designation	Function/assignment
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2U; SELV
KL 3	14	Aout	Analog output 0-10 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV



## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-162062-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	p <sub>fs</sub>	qv	p <sub>fs</sub>
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	CFM	inH <sub>2</sub> O
1	Y	200	50	1270	1706	5.43	82	89	92	16510	0	9715	0.00
2	Y	200	50	1270	2324	7.22	75	81	86	13875	300	8170	1.20
3	Y	200	50	1270	2600	8.00	70	77	82	11330	500	6670	2.01
4	Y	200	50	1270	2554	7.75	71	78	83	7990	650	4705	2.61
5	Y	200	50	1100	1072	3.41	78	85	88	14145	0	8325	0.00
6	Y	200	50	1100	1481	4.60	71	78	82	11940	225	7030	0.90
7	Y	200	50	1100	1623	5.03	66	73	78	9740	370	5730	1.49
8	Y	200	50	1100	1610	4.89	67	74	79	6855	481	4035	1.93
9	Y	200	50	900	587	1.87	73	80	83	11570	0	6810	0.00
10	Y	200	50	900	811	2.52	66	73	77	9770	151	5750	0.61
11	Y	200	50	900	889	2.75	61	68	73	7970	248	4690	1.00
12	Y	200	50	900	882	2.68	62	69	74	5610	322	3300	1.29
13	Y	200	50	700	276	0.88	67	74	77	9000	0	5295	0.00
14	Y	200	50	700	382	1.19	60	66	71	7600	91	4470	0.37
15	Y	200	50	700	418	1.30	55	62	67	6195	150	3645	0.60
16	Y	200	50	700	415	1.26	56	63	68	4365	195	2570	0.78

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
 LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · p<sub>fs</sub> = Pressure increase

