EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G630-RB32-79 ebmpapst Datasheet
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Nominal data

Type	**R3G630-RB32-79**
Motor	**M3G150-IF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1300
Power consumption	W	2800
Current draw	A	4.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	65	56
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	2.67
09 Air flow q_v	m^3/h	11140
09 Pressure increase p_{fs}	Pa	531
10 Speed (rpm) n	min^{-1}	1300
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-146905

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Technical description

Weight	29 kg
Size	630 mm
Motor size	150
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
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	On rotor side
Mode	S1
Motor mounting	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (parameter setting) - External release input - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - 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), except EN 61000-3-2 for professionally used equipment with a total rated power greater than 1 kW
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC

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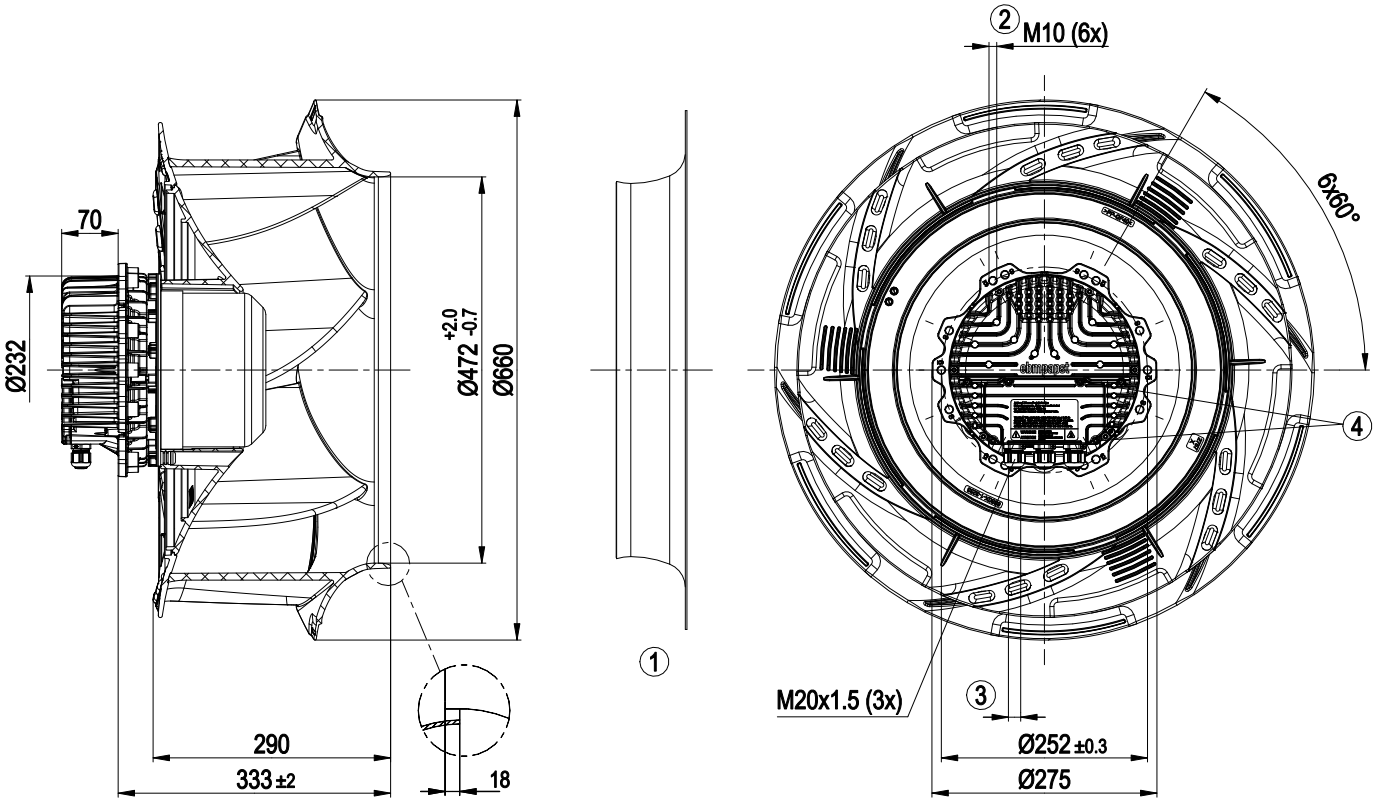
Product drawing



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 ± 0.6 Nm
4	Tightening torque 3.5 ± 0.5 Nm

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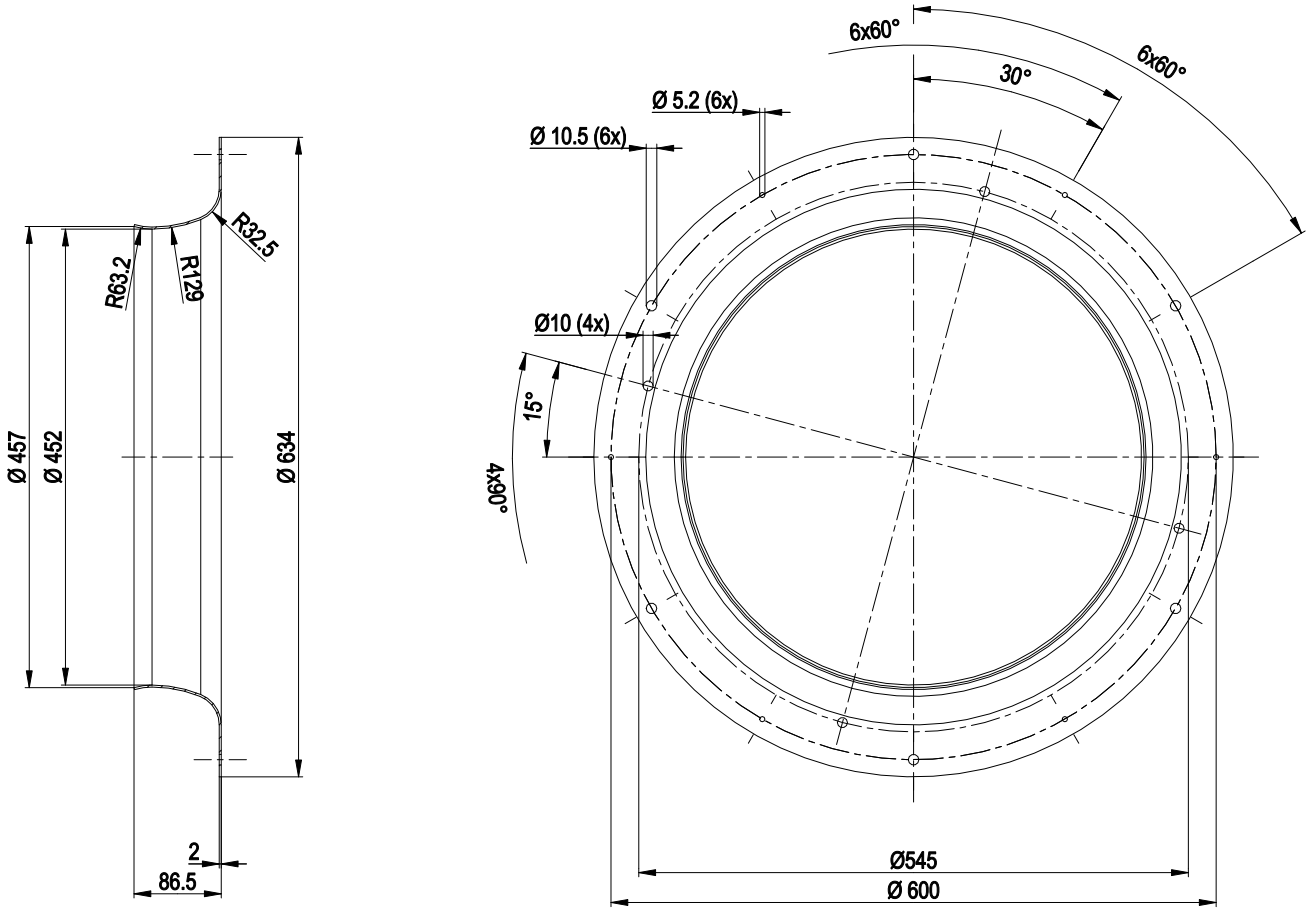
Accessory part



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

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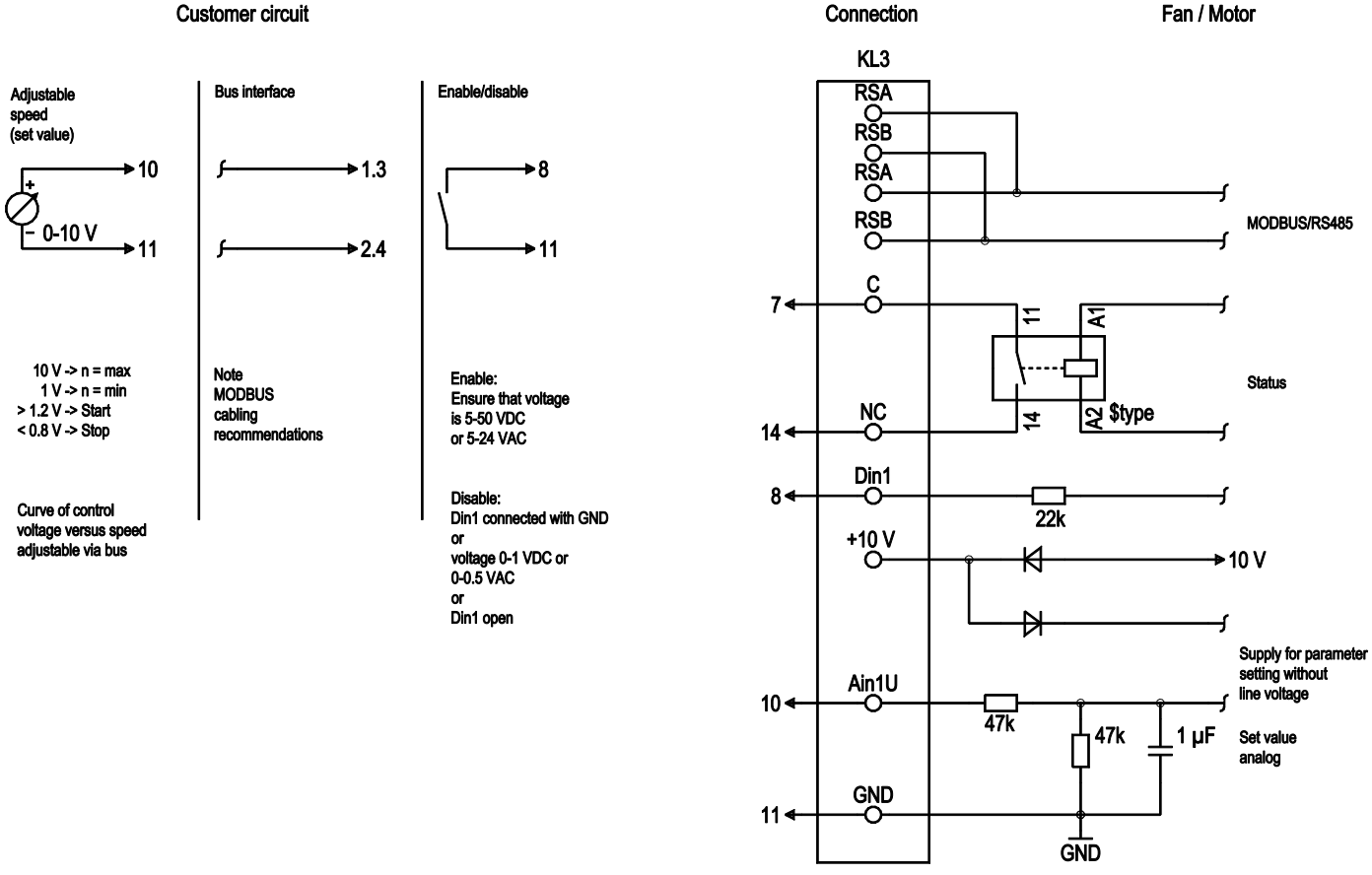
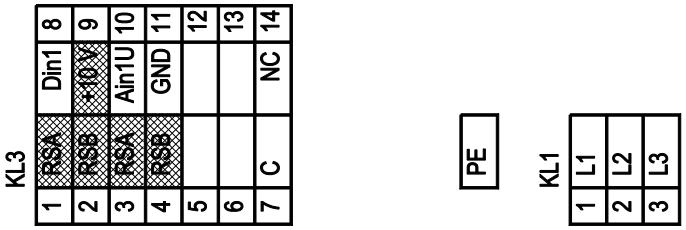
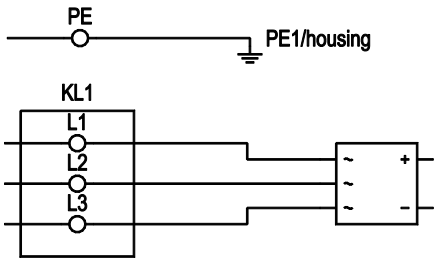
Connection diagram



Terminal box connection diagram





shaded gray => not brought out via leads

No.	Conn.	Designation	Function/assignment
KL1	1, 2, 3	L1, L2, L3	Supply connection, power supply; for nominal voltage range see technical data
PE	PE	PE	Ground connection, PE connection
KL3	7	C	Status relay, floating status contact, break for failure; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL3	14	NC	Status relay, floating status contact, break for failure; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL3	1.3	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL3	2, 4	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL3	11	GND	Reference ground for control interface; SELV
KL3	10	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1 I; SELV
KL3	9	+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

No.	Conn.	Designation	Function/assignment
KL3	8	Din1	Digital input 1: enable electronics; SELV Enable -> 5-50 VDC / 5-24 VAC Disable -> 0-1 VDC / 0-0.5 VAC or bridge to GND or open

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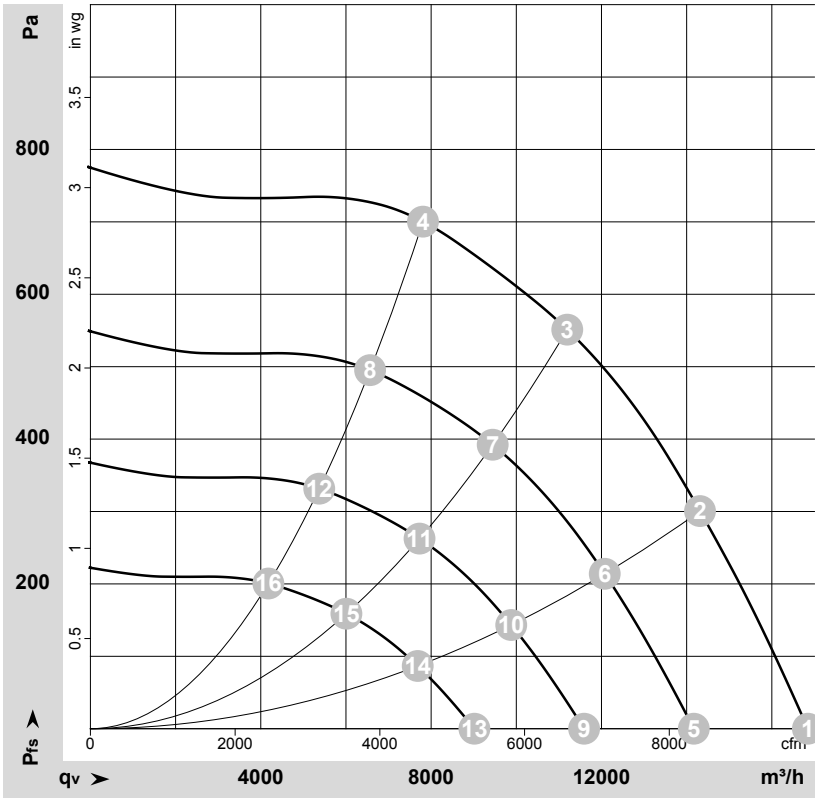
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-164207-1

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	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	400	50	1300	1820	2.86	80	88	92	16845	0	9915	0.00
2	Y	400	50	1300	2455	3.79	74	81	87	14315	300	8425	1.20
3	Y	400	50	1300	2800	4.20	70	78	83	11195	550	6590	2.21
4	Y	400	50	1300	2711	4.17	72	79	84	7810	700	4595	2.81
5	Y	400	50	1100	1082	1.70	76	83	88	14170	0	8340	0.00
6	Y	400	50	1100	1478	2.28	70	77	82	12075	216	7110	0.87
7	Y	400	50	1100	1679	2.58	65	73	79	9445	395	5560	1.59
8	Y	400	50	1100	1611	2.48	68	75	80	6565	498	3865	2.00
9	Y	400	50	900	593	0.93	71	78	83	11590	0	6825	0.00
10	Y	400	50	900	809	1.25	65	72	77	9880	145	5815	0.58
11	Y	400	50	900	920	1.41	60	68	74	7730	264	4550	1.06
12	Y	400	50	900	882	1.36	62	70	75	5375	333	3160	1.34
13	Y	400	50	700	279	0.44	64	72	76	9015	0	5305	0.00
14	Y	400	50	700	381	0.59	58	66	71	7685	88	4525	0.35
15	Y	400	50	700	433	0.66	54	62	67	6010	160	3540	0.64
16	Y	400	50	700	415	0.64	56	63	69	4180	201	2460	0.81

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase