R3G355-RP31-61

EC centrifugal fan - RadiCal

backward-curved, single-intake

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Nominal data

Type	**R3G355-RP31-61**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1550
Power consumption	W	300
Current draw	A	1.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40
Starting current	A	1.6

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	65.1	45.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		81.2	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.29
09 Air flow q_v	m^3/h	2405
09 Pressure increase p_{fs}	Pa	257
10 Speed (rpm) n	min^{-1}	1525
11 Specific ratio*		1.00

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-178949

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Technical description

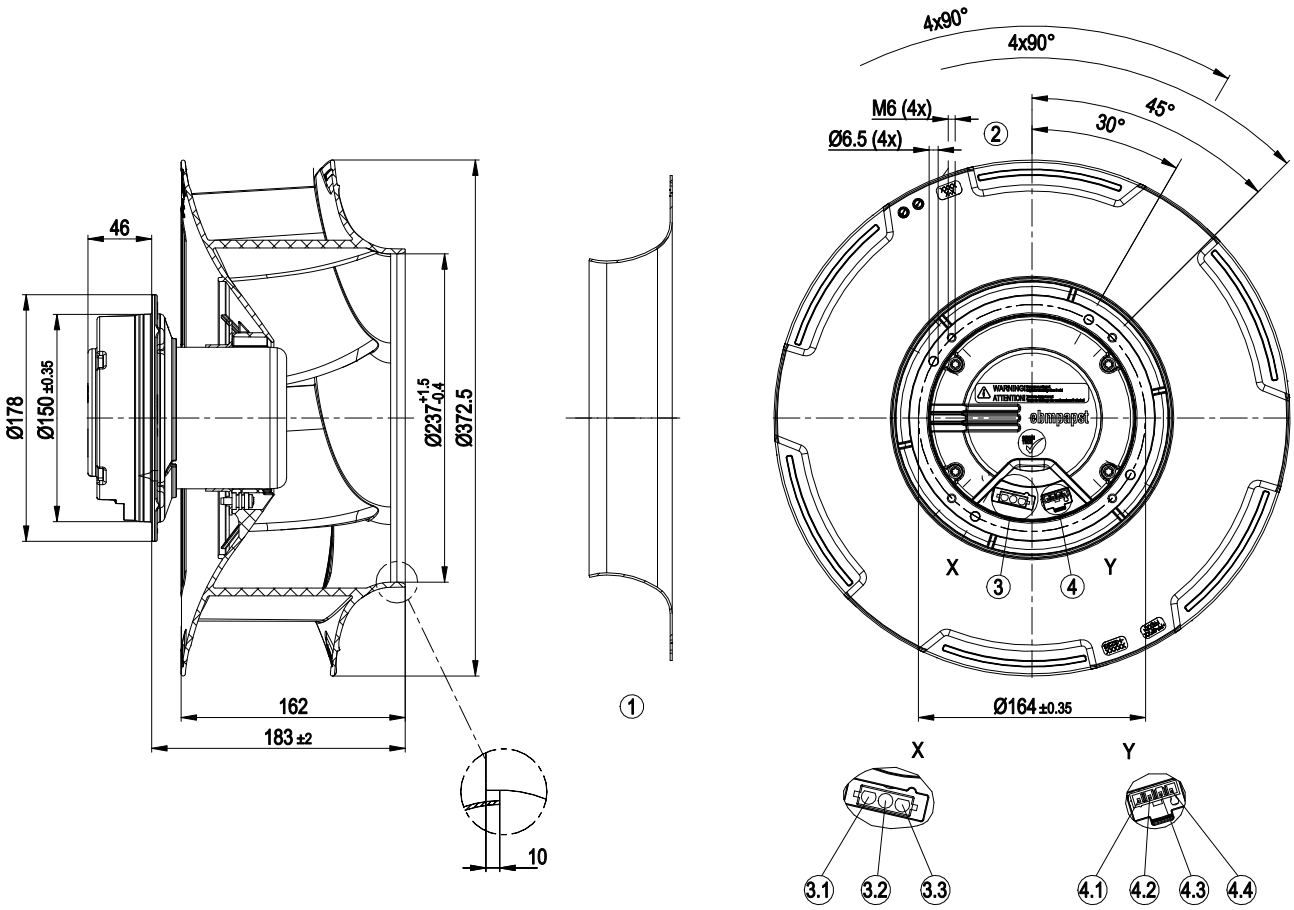
Weight	5.4 kg
Fan size	355 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
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 top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display: reversible voltage output 0 V / +15 V - Integrated PID controller - Motor current limitation - PFC, active - RS-485 ebmBUS - Soft start - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure 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 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	UL 1004-3; CSA C22.2 No. 77; EAC

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Product drawing



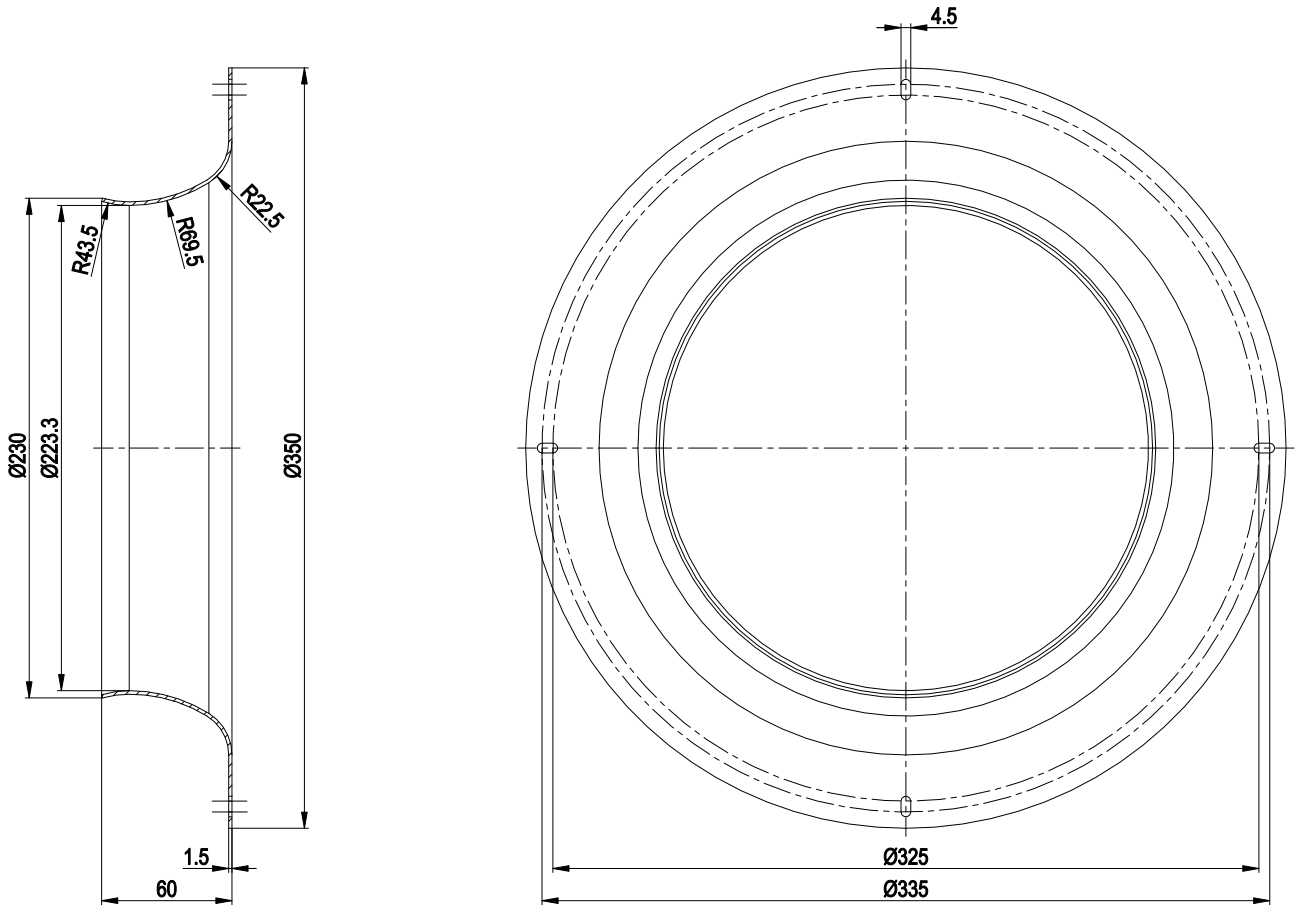
1	Accessory part: inlet ring 35500-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Header Lonco no. C63502-3A, mating connectors with sockets not included in scope of delivery
3.1	PE
3.2	N
3.3	N
4	4-pole header Molex 39-30-2040, mating connector with sockets not included in scope of delivery
4.1	RSB
4.2	RSA
4.3	+15 V; in case of fault: 0 V
4.4	0 V; in case of fault: +15 V

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Accessory part



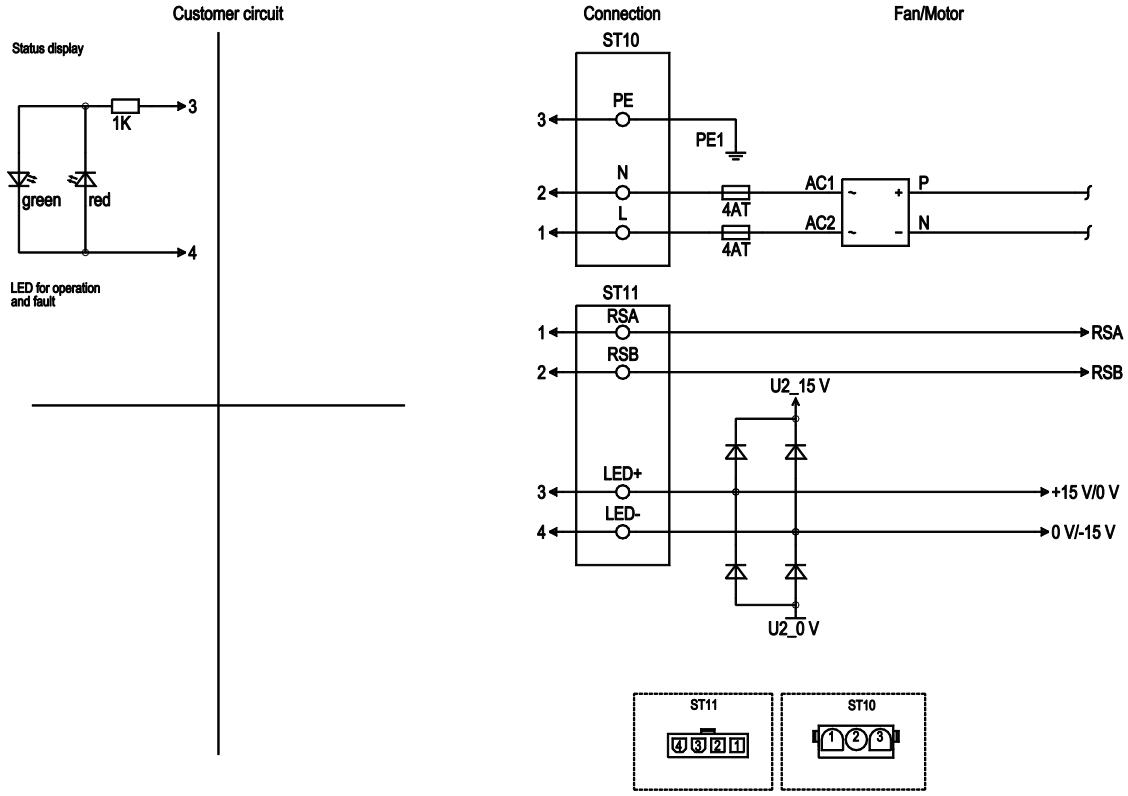
Inlet ring 35500-2-4013 not included in scope of delivery

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Connection diagram



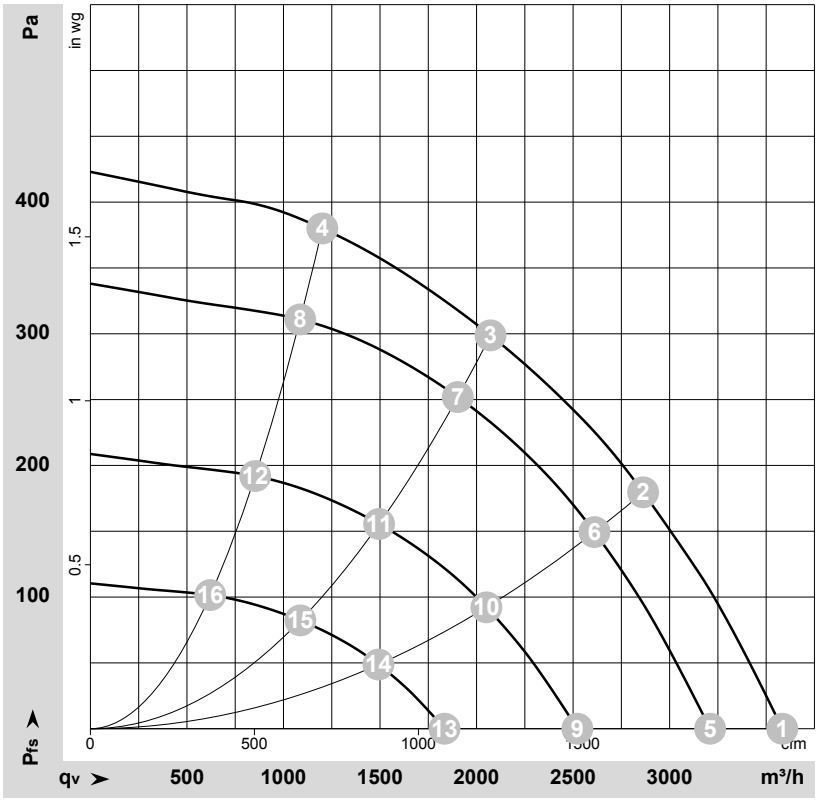
No.	Conn.	Designation	Color	Function/assignment
10	1	L		Power supply, phase, 50/60 Hz
10	2	N		Power supply, neutral conductor, 50/60 Hz
10	3	PE		Protective earth
11	1	RSA		RS485 interface for ebmBUS, RSA, SELV
11	2	RSB		RS485 interface for ebmBUS, RSB, SELV
11	3	LED +		Voltage output 15 V (+15%/-10%), max. 30 mA, power supply for external devices (e.g. status display for LED), SELV
11	4	LED -		Reference ground for control interface, SELV

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-178949-1

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

	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	inH2O
1	230	50	1550	216	0.95	3585	0	2110	0.00
2	230	50	1550	284	1.24	2865	180	1685	0.72
3	230	50	1550	300	1.30	2070	300	1220	1.20
4	230	50	1550	271	1.19	1200	380	705	1.53
5	230	50	1400	155	0.68	3210	0	1890	0.00
6	230	50	1400	216	0.94	2610	149	1535	0.60
7	230	50	1400	232	1.01	1905	252	1120	1.01
8	230	50	1400	201	0.88	1085	312	640	1.25
9	230	50	1100	75	0.33	2520	0	1485	0.00
10	230	50	1100	105	0.46	2050	92	1205	0.37
11	230	50	1100	112	0.49	1495	156	880	0.63
12	230	50	1100	97	0.43	855	192	505	0.77
13	230	50	800	29	0.13	1835	0	1080	0.00
14	230	50	800	40	0.18	1490	49	880	0.20
15	230	50	800	43	0.19	1085	82	640	0.33
16	230	50	800	37	0.16	620	102	365	0.41

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

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