EC centrifugal fan - RadiCal®

backward curved, single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G400-RP45-61**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	1300
Power input	W	330
Current draw	A	1.5
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	64.3	42.3	46.3
Efficiency grade N		80	58	62
Power input P_{ed}	kW	0.32		
Air flow q_v	m^3/h	2805		
Pressure increase p_{fs}	Pa	242		
Speed n	min^{-1}	1270		

Data definition with optimum efficiency. LU-140434
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

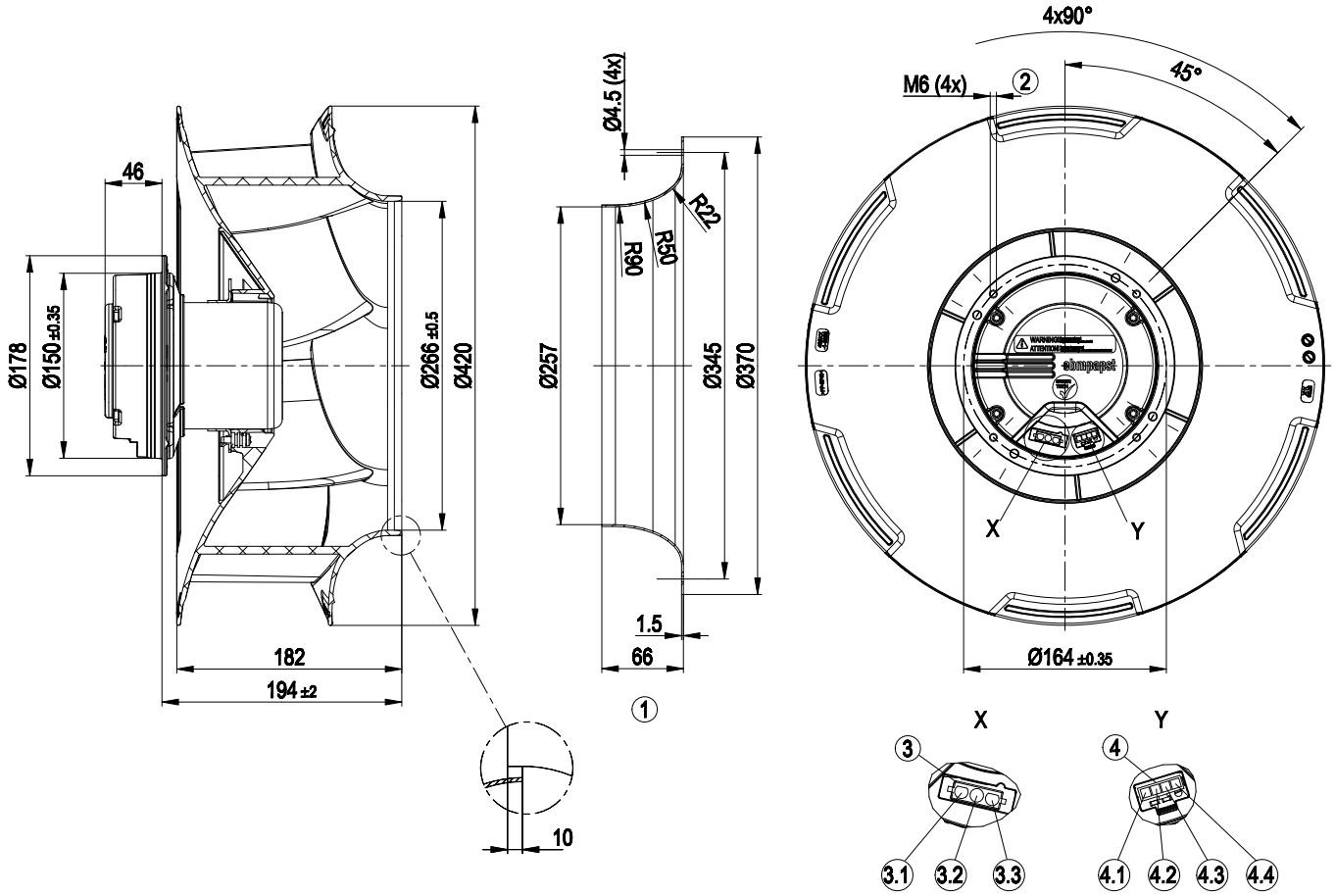
Mass	6 kg
Size	400 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity class	F0
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display: reversible voltage output 0 V / +15 V - Integrated PID controller - Motor current limit - PFC, active - RS485 ebmBUS - Soft start - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CSA C22.2 Nr.77; EAC; UL 2111

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Product drawing



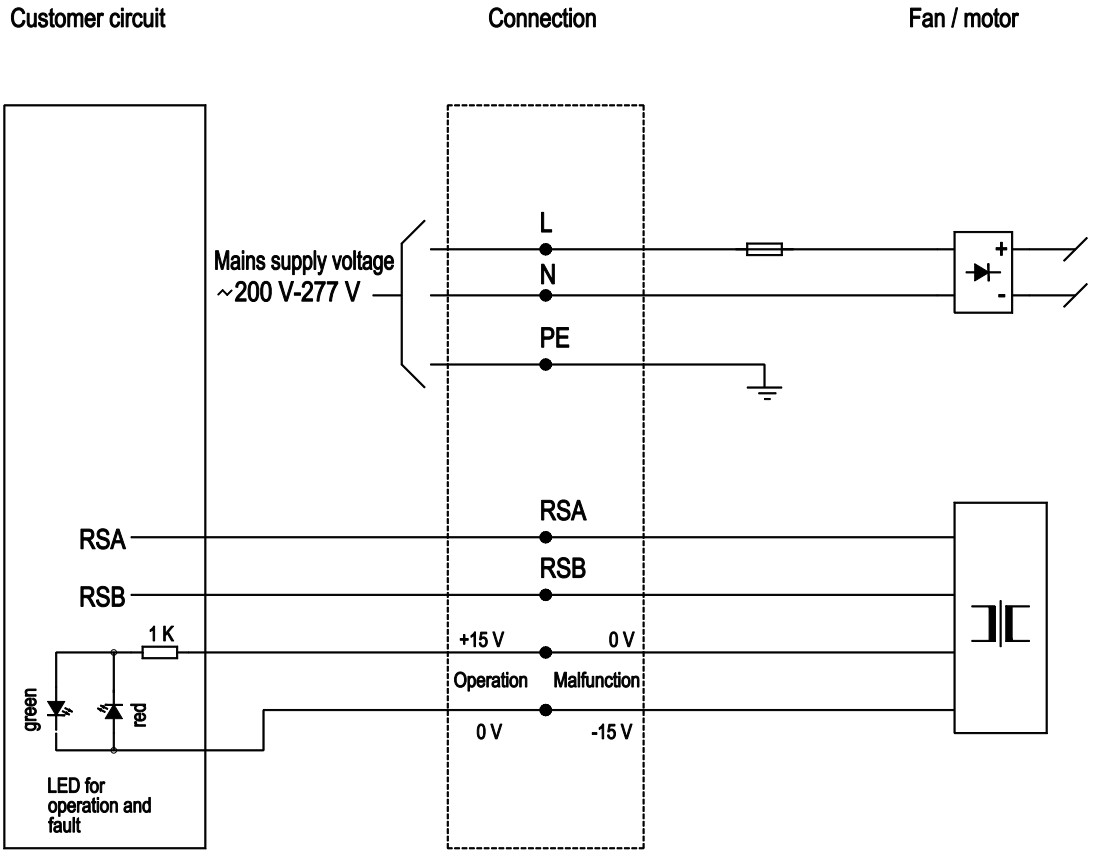
1	Accessory part: Inlet nozzle 54476-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 10 mm
3	Strip Lonco No. C63502-3A, mating connectors with female terminals are not included in the standard scope of delivery
3.1	PE
3.2	L
3.3	N
4	Strip 4-pole Molex 39-30-2040, mating connectors with female connectors not included in scope of delivery
4.1	RSB
4.2	RSA
4.3	+15 V; in the event of fault: 0 V
4.4	0 V; in the event of fault: +15 V

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Connection screen

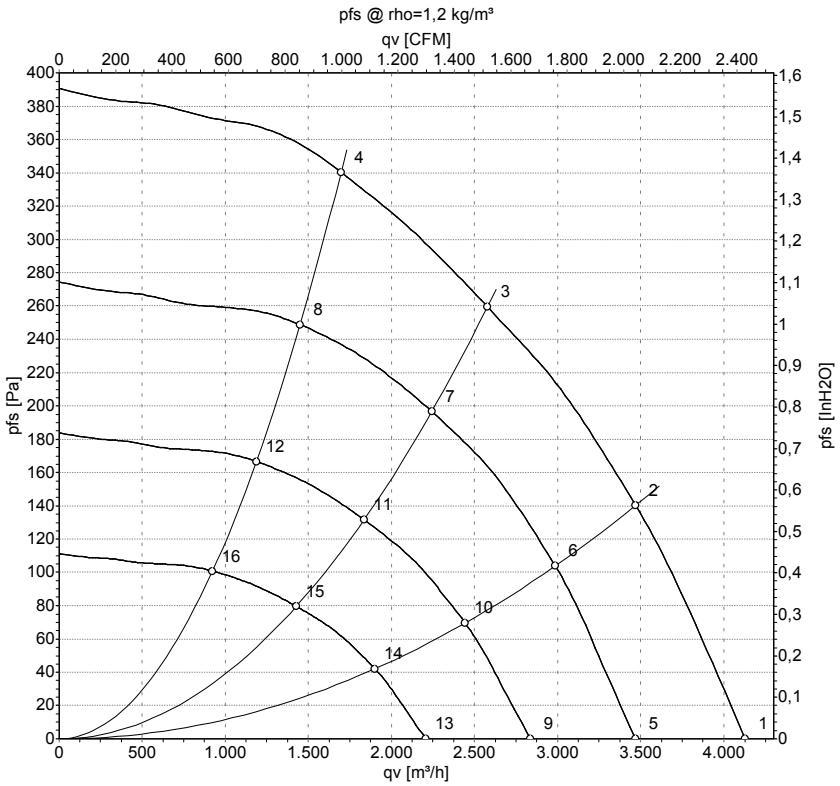


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Charts: Air flow 50 Hz



Measurement: LU-142789

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}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1300	267	1.16	72	78	4130	0
2	230	50	1300	313	1.37	67	73	3470	140
3	230	50	1300	330	1.50	59	66	2575	260
4	230	50	1300	308	1.35	58	67	1695	340
5	230	50	1100	158	0.69	67	74	3465	0
6	230	50	1100	199	0.87	63	69	2985	104
7	230	50	1100	217	0.95	55	63	2245	197
8	230	50	1100	192	0.84	54	63	1450	249
9	230	50	900	87	0.38	62	69	2835	0
10	230	50	900	109	0.48	58	64	2445	69
11	230	50	900	119	0.52	50	58	1835	132
12	230	50	900	105	0.46	49	58	1185	167
13	230	50	700	41	0.18	56	62	2205	0
14	230	50	700	51	0.22	52	58	1900	42
15	230	50	700	56	0.25	44	51	1425	80
16	230	50	700	50	0.22	43	51	925	101

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
p_{fs} = Pressure increase

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