R3G355-RJ75-01

EC centrifugal fan - RadiCal®

backward curved, single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G355-RJ75-01**
Motor	**M3G112-EA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min^{-1}	2400
Power input	W	1140
Current draw	A	1.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+60

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*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		62.2	48.1	52.1
Efficiency grade N		72.1	58	62
Power input P_{ed}	kW	1.13		
Air flow q_v	m^3/h	3570		
Pressure increase p_{fs}	Pa	654		
Speed n	min^{-1}	2405		

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

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Technical features

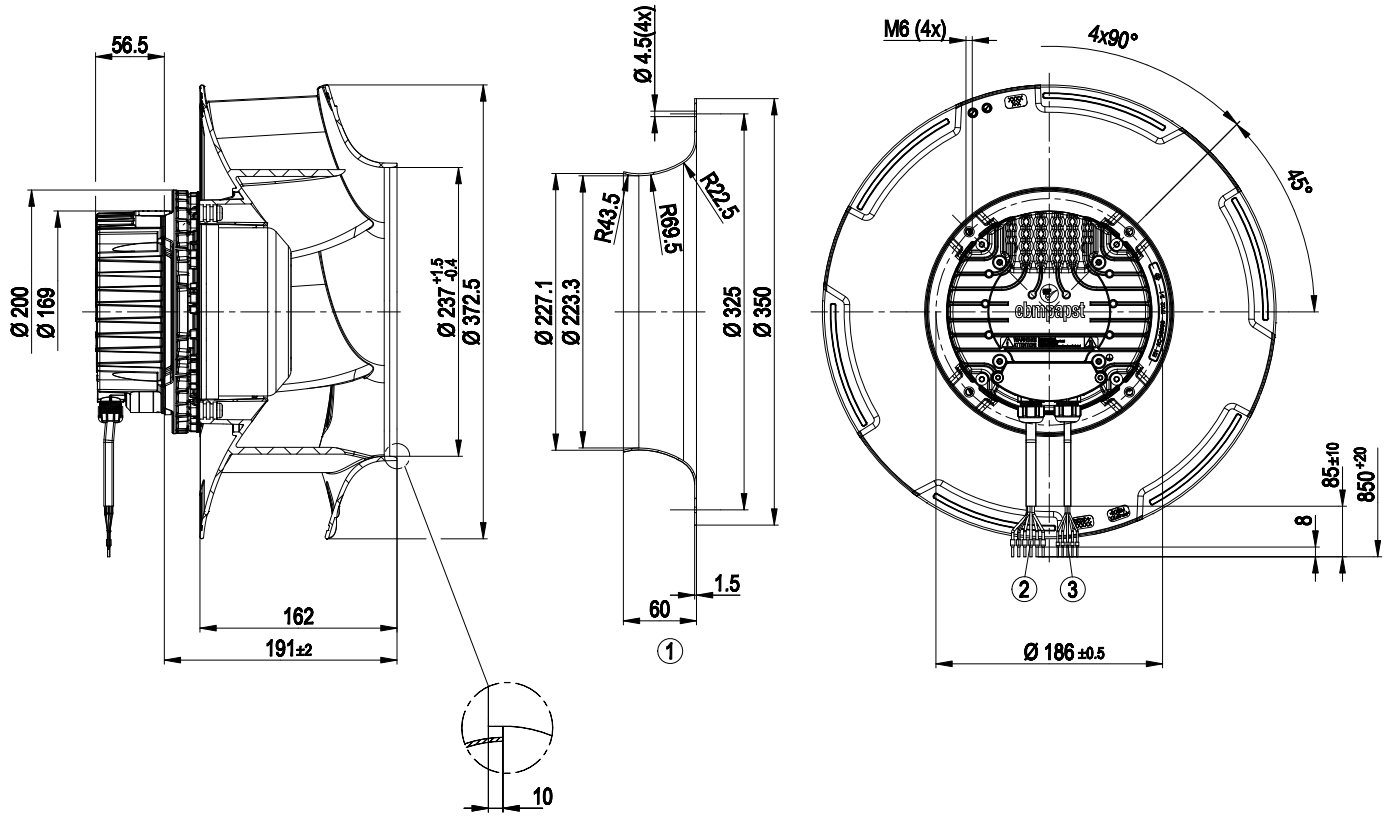
Mass	8.4 kg
Size	355 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Operation and alarm display - Direction of rotation selection counter-clockwise / clockwise - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - Alarm relay - Integrated PID controller - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1
Approval	GOST

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Product drawing



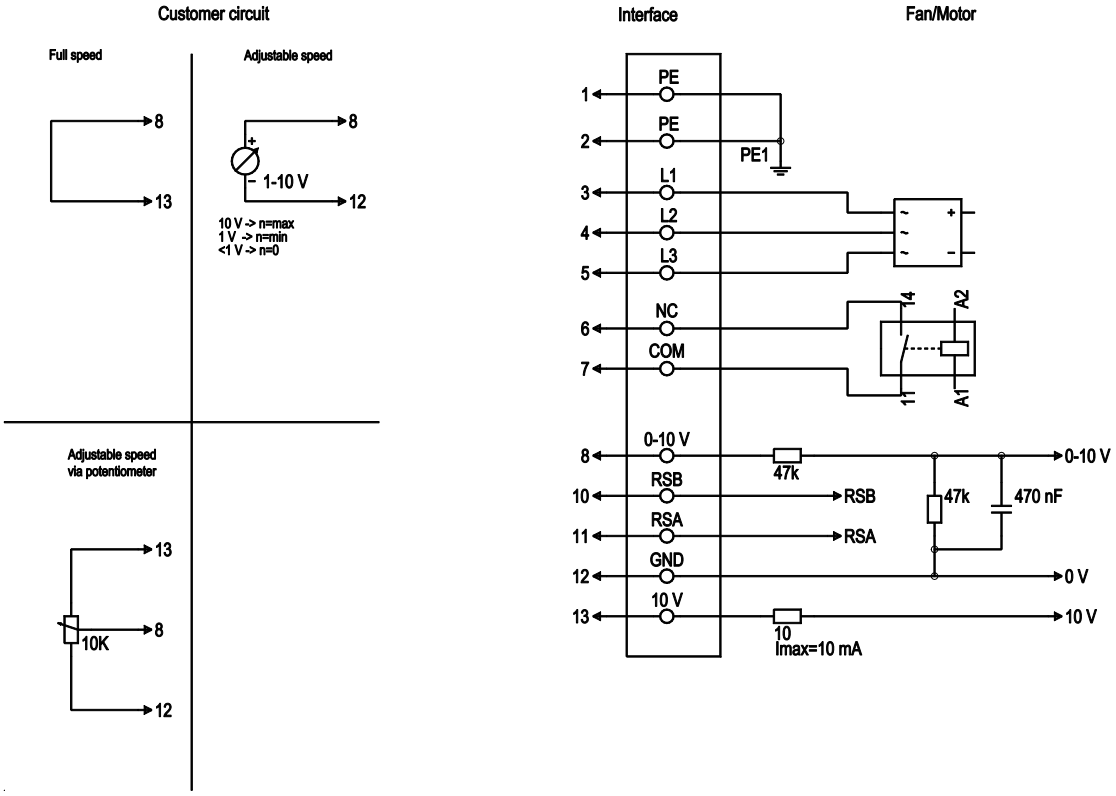
1	Accessory part: inlet nozzle 35500-2-4013 not included in scope of delivery.
2	Depth of screw 8 - 10 mm
3	Connection line PVC AWG18, 6x crimped core-end sleeves
4	Connection line PVC AWG22, 5 x crimped core-end sleeves

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Connection screen



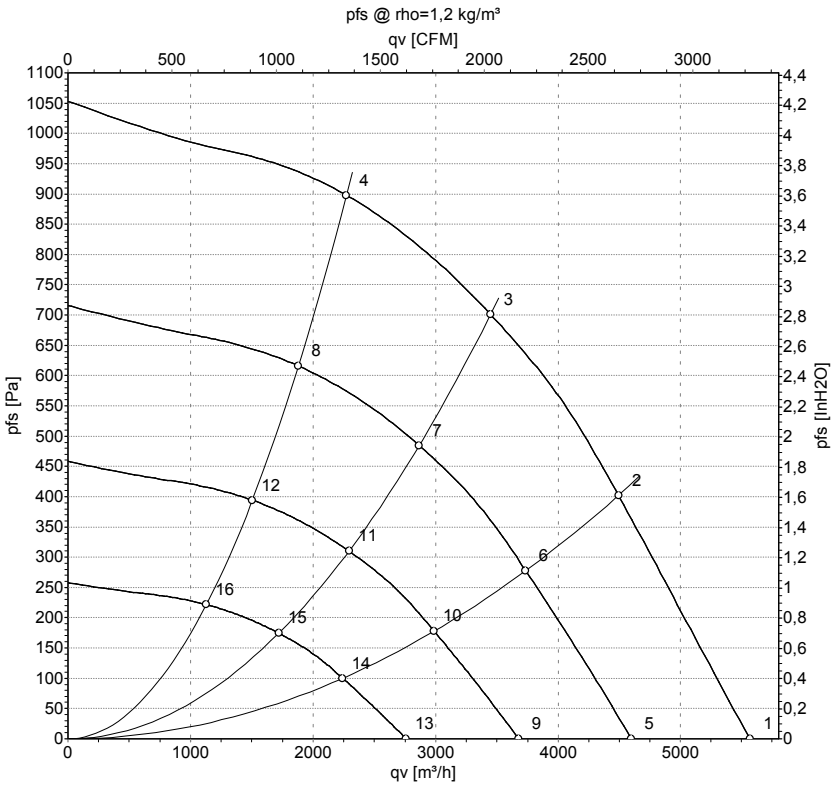
Line	No.	Signal	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3, 4, 5	L1, L2, L3	black	Supply voltage, neutral conductor, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analogue input 1 (set value); 0-10 V; Ri=100kΩ; parametrisable curve
2	10	RSB	brown	RS485 interface for Modbus, RSB
2	11	RSA	white	RS485 interface for Modbus, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. potentiometer)

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Charts: Air flow 50 Hz



Measurement: LU-152811

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}	LwA_{out}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	400	50	2400	787	1.27	84	91	93	5565	0
2	400	50	2400	1039	1.65	76	83	88	4490	400
3	400	50	2400	1140	1.80	70	76	83	3450	700
4	400	50	2400	1088	1.72	71	79	84	2270	900
5	400	50	2000	444	0.71	80	86	89	4600	0
6	400	50	2000	597	0.95	71	78	83	3735	278
7	400	50	2000	651	1.03	65	72	79	2865	485
8	400	50	2000	618	0.98	67	74	79	1880	619
9	400	50	1600	228	0.37	74	80	83	3680	0
10	400	50	1600	306	0.49	66	73	78	2990	178
11	400	50	1600	333	0.53	59	66	73	2295	311
12	400	50	1600	316	0.50	61	68	74	1505	396
13	400	50	1200	96	0.15	67	73	76	2760	0
14	400	50	1200	129	0.21	58	65	71	2240	100
15	400	50	1200	141	0.22	52	59	66	1720	175
16	400	50	1200	133	0.21	54	61	66	1130	223

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 · LwA_{out} = Sound power level outlet side
qv = Air flow · p_{fs} = Pressure increase

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