R3G250-BB01-I9

EC centrifugal fan - RadiPac

backward curved, single inlet

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Nominal data

Type	**R3G250-BB01-I9**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed (rpm)	min^{-1}	3520
Power input	W	740
Current draw	A	3.24
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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	63.9	50.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		75.8	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.73
09 Air flow q_v	m^3/h	1845
09 Pressure increase p_{fs}	Pa	844
10 Speed (rpm) n	min^{-1}	3520
11 Specific ratio*		1.01

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

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

LU-176507

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Technical features

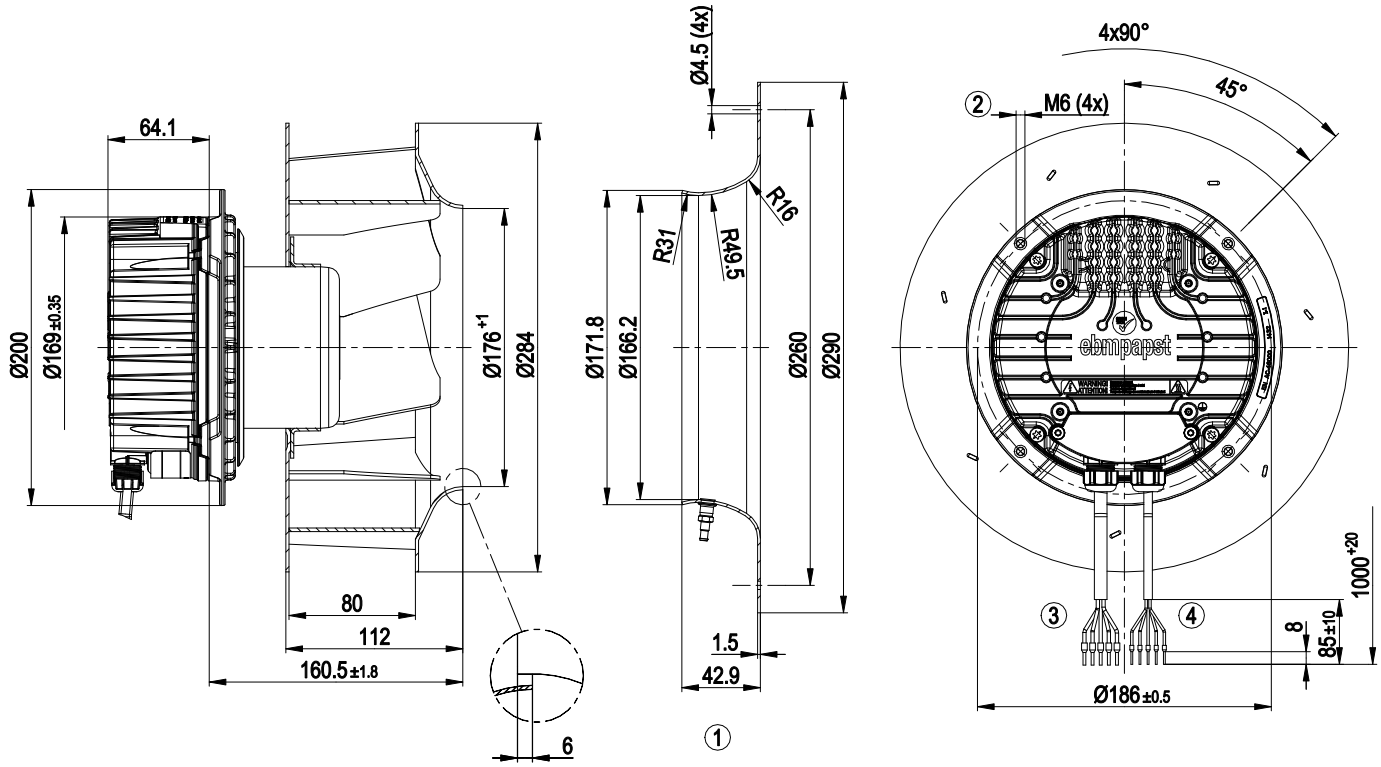
Mass	4.4 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H1
Note ambient temperature	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at ambient temperatures below -25°C (e.g. refrigeration applications) we recommend our fan version with special low-temperature bearings.
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 - Operation and alarm display - Alarm relay - Integrated PID controller - Output limit - 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; EN 60335-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730

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Product drawing



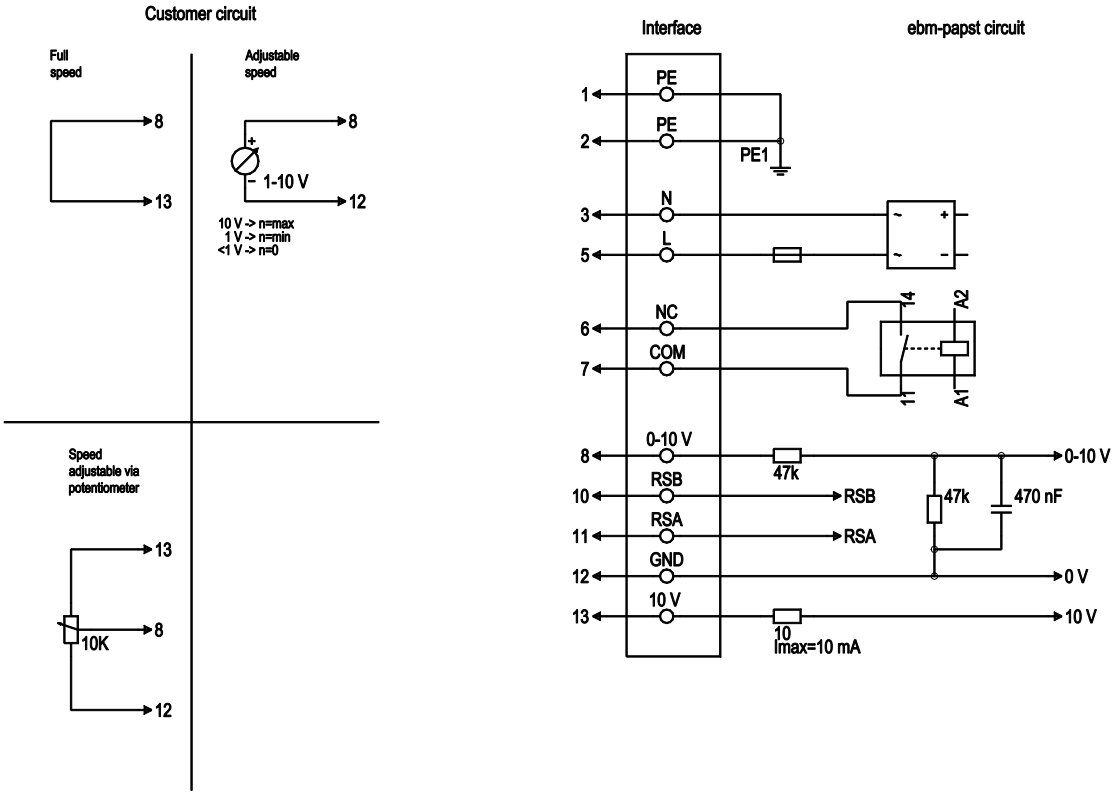
1	Accessory part: Inlet nozzle 25075-2-4013 with pressure tap (k-factor: 70) not included in scope of delivery
2	Thread reach max. 16 mm
3	Connection line PVC AWG18, 5x crimped core-end sleeves
4	Connection line PVC AWG22, 5x crimped core-end sleeves

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Connection screen



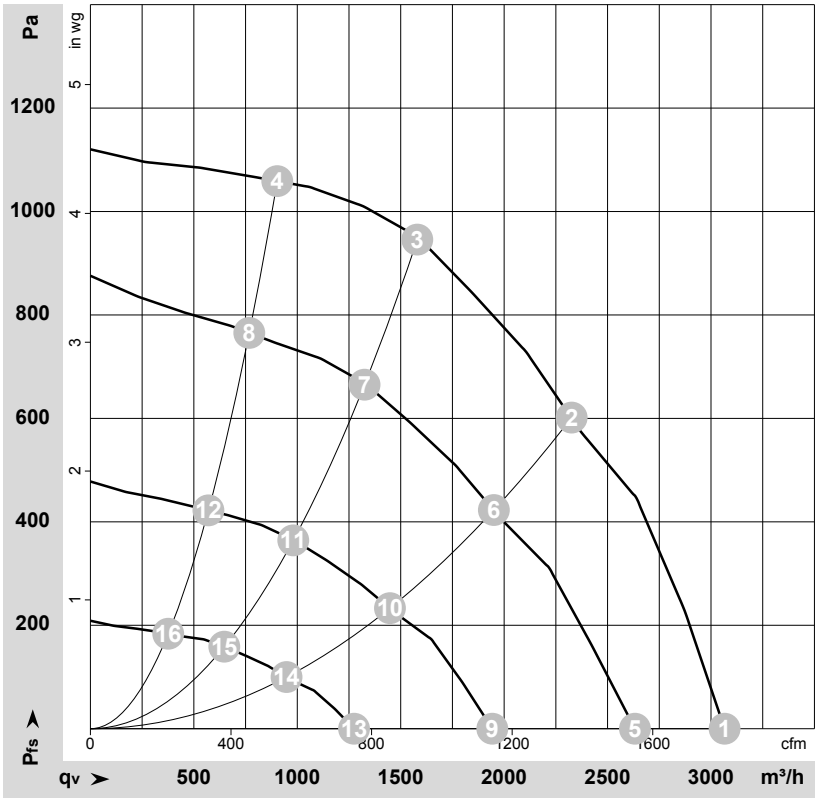
No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	5	L	black	Supply voltage, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 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



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-176507-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	3520	558	2.45	3065	0	1805	0.00
2	230	50	3520	706	3.09	2325	600	1370	2.41
3	230	50	3520	740	3.24	1600	945	940	3.79
4	230	50	3520	626	2.74	905	1060	530	4.26
5	230	50	3030	357	1.59	2630	0	1550	0.00
6	230	50	2970	423	1.87	1950	422	1150	1.69
7	230	50	2960	448	1.98	1325	668	780	2.68
8	230	50	3000	401	1.78	770	765	450	3.07
9	230	50	2250	164	0.76	1945	0	1145	0.00
10	230	50	2220	194	0.89	1450	233	850	0.94
11	230	50	2215	200	0.91	980	365	575	1.47
12	230	50	2230	178	0.82	570	422	335	1.69
13	230	50	1490	61	0.36	1275	0	750	0.00
14	230	50	1475	69	0.39	950	100	560	0.40
15	230	50	1470	72	0.40	645	159	380	0.64
16	230	50	1475	67	0.38	375	184	220	0.74

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

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