EC centrifugal fan - RadiCal®

backward curved, single inlet

R3G310-RN99-01 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G310-RN99-01**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Type of data definition		fa
Speed	min^{-1}	1580
Power input	W	108
Current draw	A	4.5
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*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	62.3	38.8	42.8
Efficiency grade N		81.5	58	62
Power input P_e	kW	0.15		
Air flow q_v	m^3/h	1605		
Pressure increase p_{fs}	Pa	185		
Speed n	min^{-1}	1525		

Data definition with optimum efficiency. LU-153392
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	2.83 kg
Size	310 mm
Surface of rotor	Coated in black
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 55022 (Class B, household environment)
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Variable
Product conforming to standard	EN 60950-1
Approval	EAC

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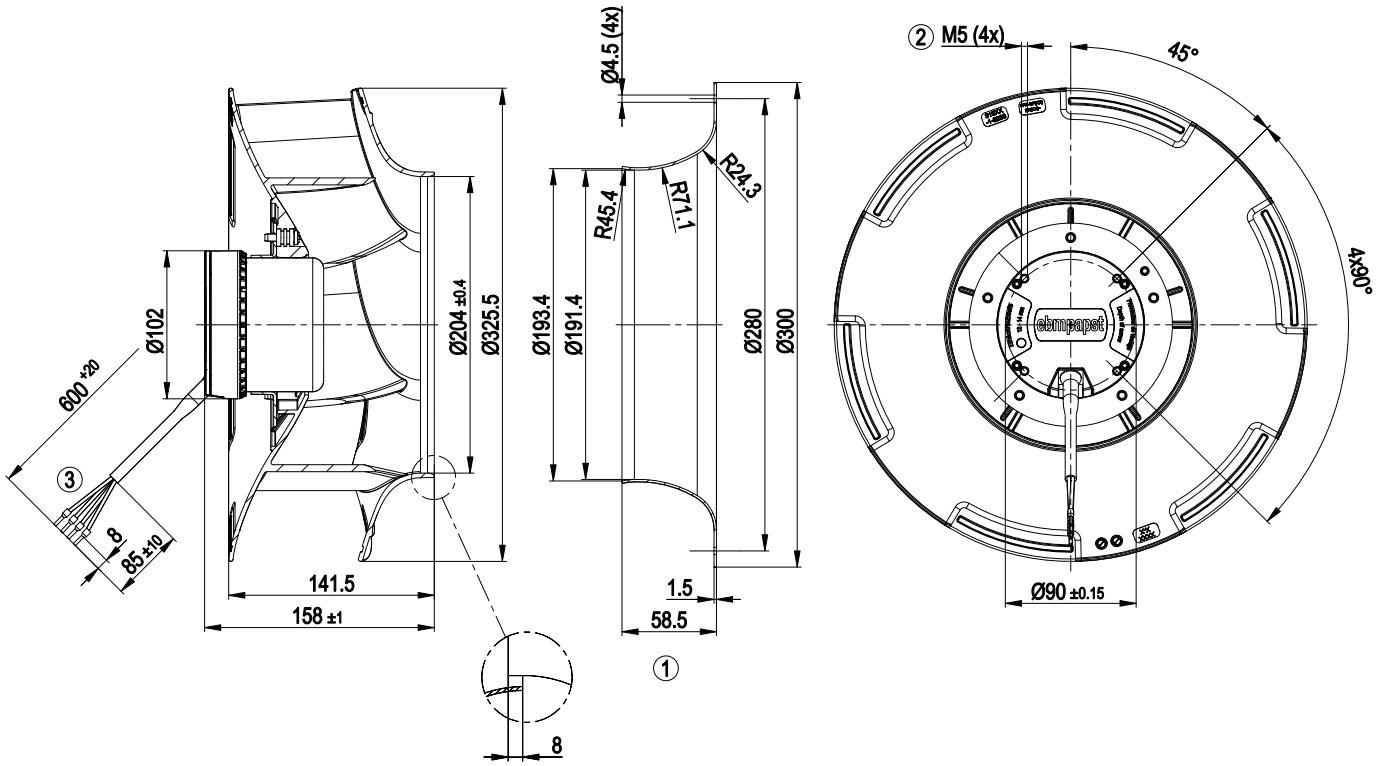
Product drawing



1	Accessory part: Inlet nozzle 31000-2-4013 not included in scope of delivery
2	Depth of screw max. 14 mm
3	Connection line PVC AWG16, 4x crimped core-end sleeves

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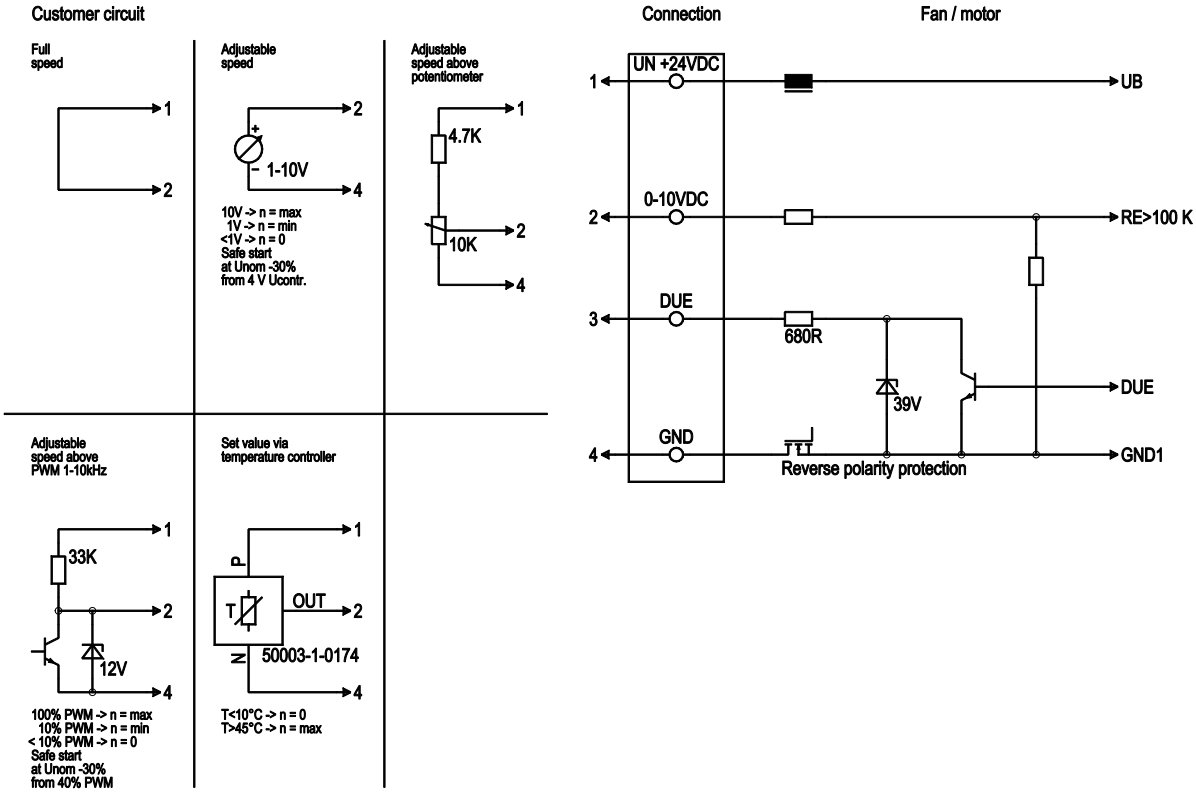
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	1	Un +24 VDC	red	Power supply 24 VDC, residual ripple 3.5 %
	2	0-10 VDC	yellow	Control input Re>100 K
	3	Tach	white	Speed monitoring output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference mass

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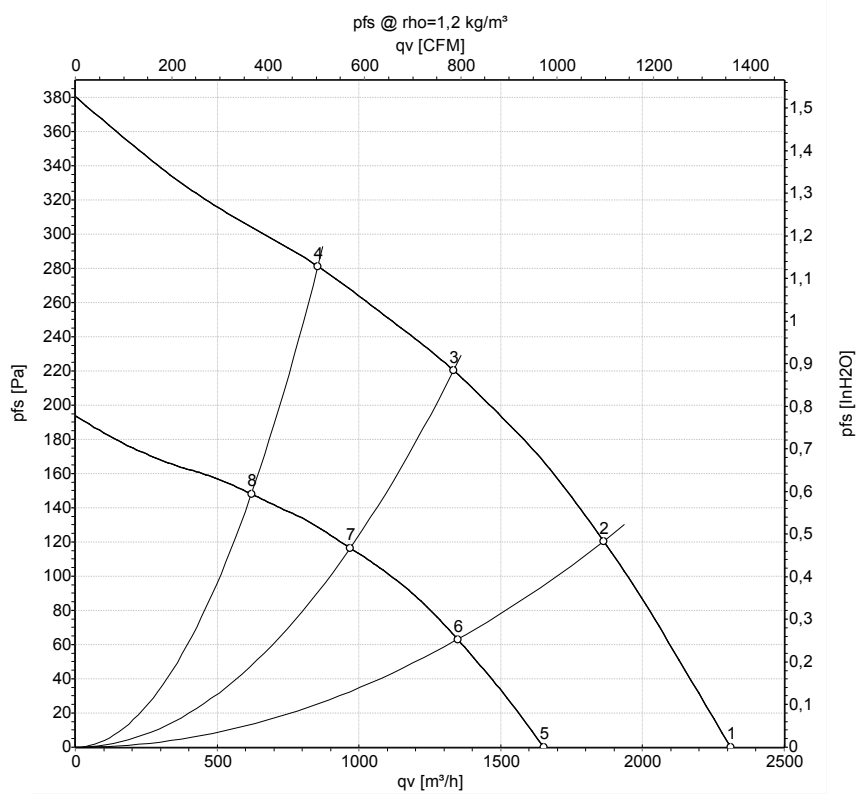
Charts: Air flow



Measurement: LU-164047
Measurement: LU-164090

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	n	P_{ed}	I	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa
1	24-28	1580	108	4.5*	2310	0
2	24-28	1510	132	5.5*	1865	120
3	24-28	1485	138	5.8*	1335	220
4	24-28	1510	131	5.5*	855	280
5	16	1135	42	2.61	1655	0
6	16	1100	51	3.17	1350	63
7	16	1085	54	3.38	970	116
8	16	1100	51	3.19	620	148

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · * = Current measured at rated voltage · qv = Air flow · p_{fs} = Pressure increase