R3G280-RNB4-02

EC centrifugal fan - RadiCal®

backward curved, single inlet

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G280-RNB4-02**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Type of data definition		fa
Speed	min^{-1}	1900
Power input	W	140
Current draw	A	3.0
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}	%	66.2	39.1	43.1
Efficiency grade N		85.1	58	62
Power input P_e	kW	0.16		
Air flow q_v	m^3/h	1205		
Pressure increase p_{fs}	Pa	292		
Speed n	min^{-1}	1820		

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

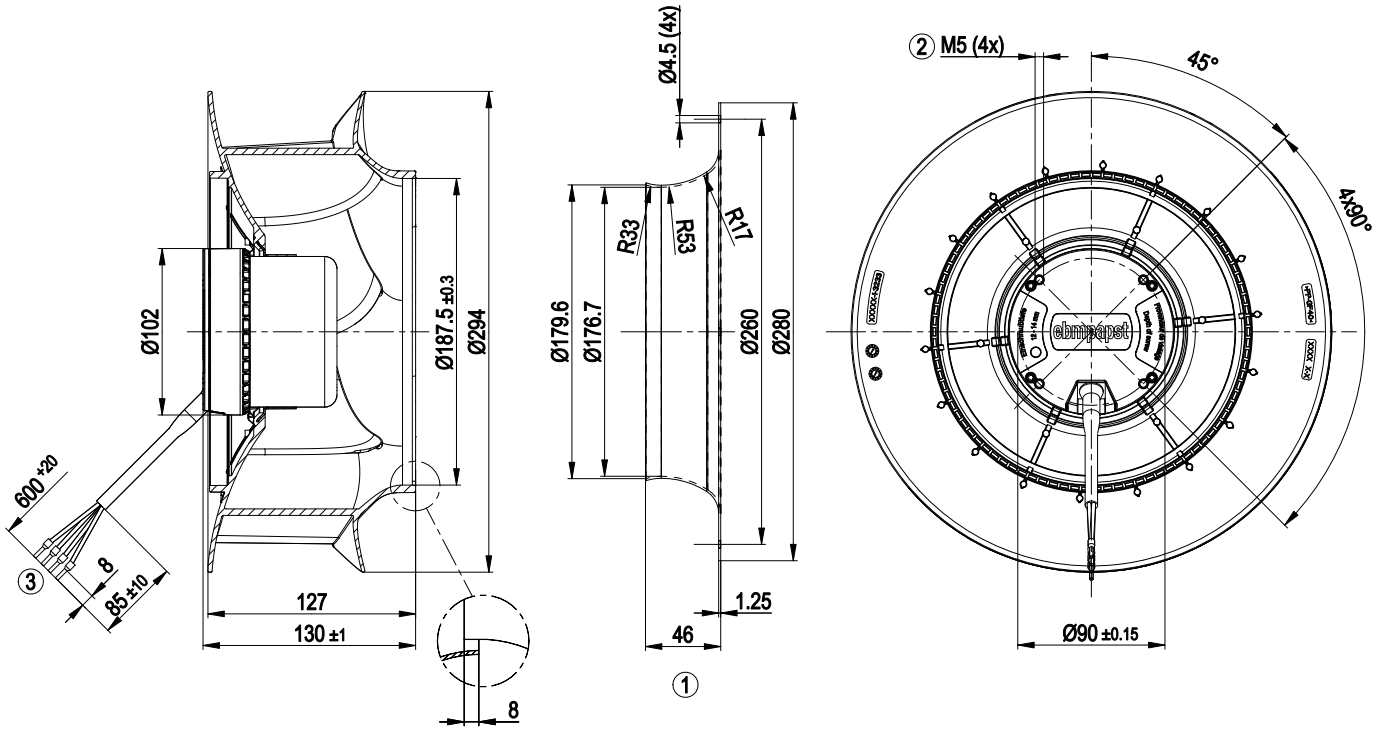
Mass	2.41 kg
Size	280 mm
Surface of rotor	Coated in black
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ 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	GOST

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Product drawing



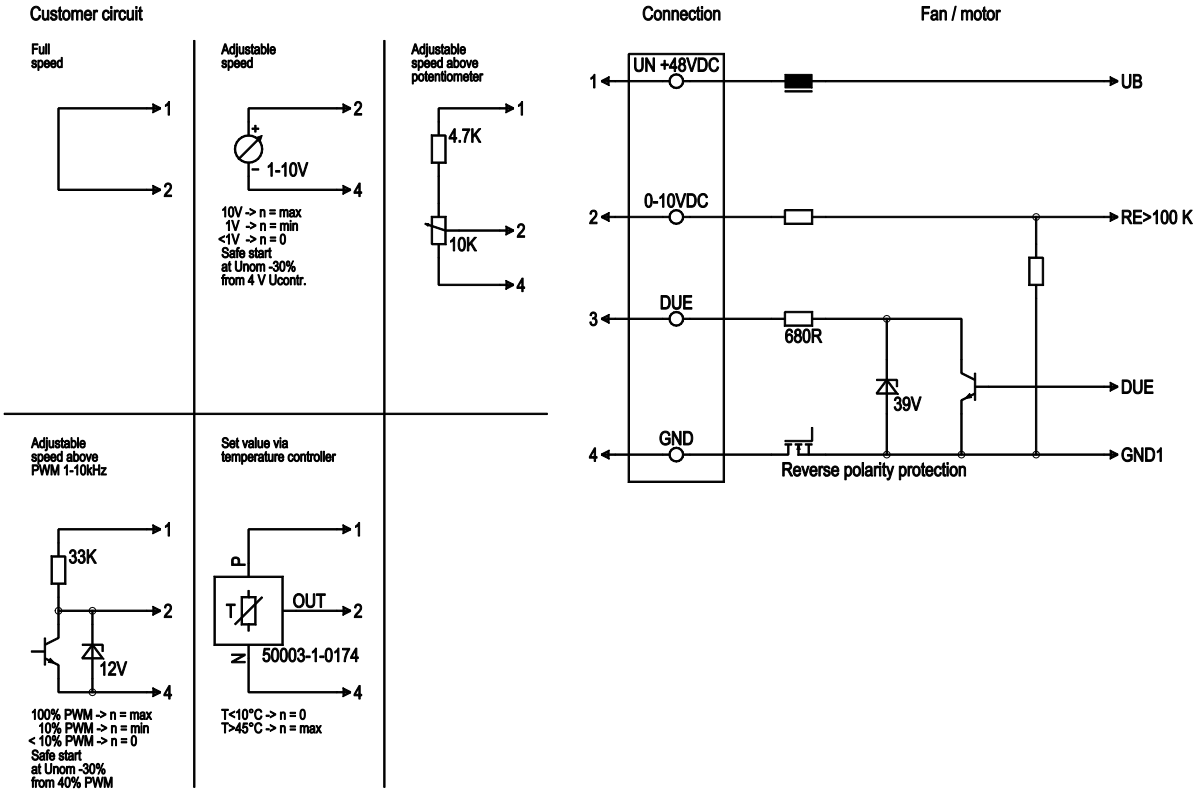
1	Accessory part: Inlet nozzle 28000-2-4013 not included in scope of delivery
2	Depth of screw max. 14 mm
3	Connection line PVC AWG16, 4x crimped core-end sleeves

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Connection screen



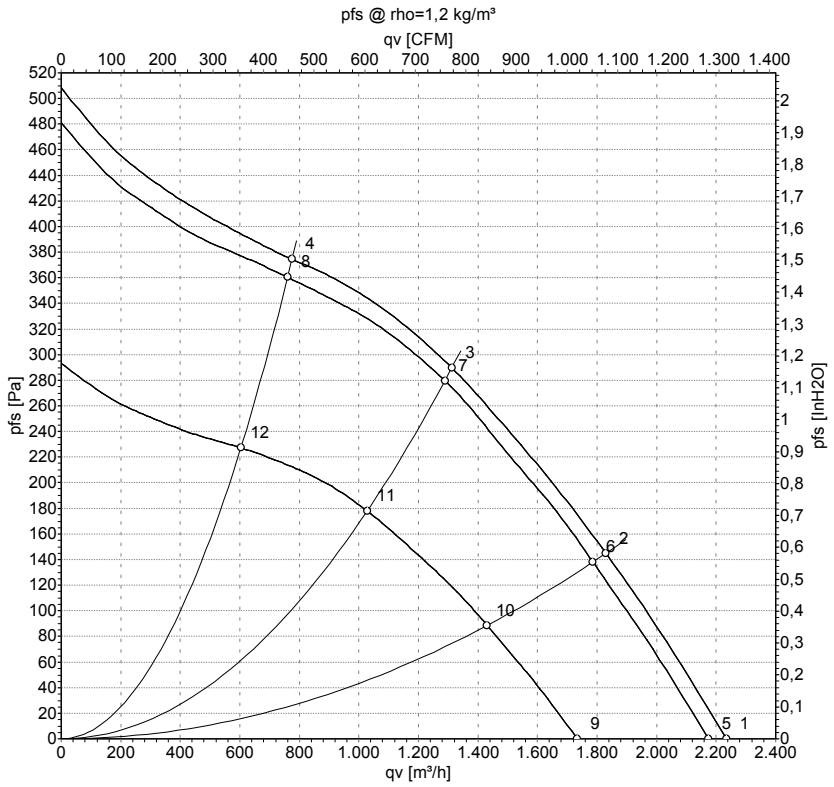
Line	No.	Signal	Colour	Function / assignment
	1	Un +48 VDC	red	Power supply 48 VDC, residual ripple 3.5 %
	2	0-10 VDC	yellow	Control input Re>100 K
	3	Tach	white	Speed monitoring output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference mass

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Charts: Air flow



Measurement: LU-141165
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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	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	57	1940	154	2.71			2235	0
2	57	1875	177	3.11			1830	145
3	57	1860	182	3.19			1310	290
4	57	1910	165	2.90			775	374
5	48	1900	140	3.00	66	74	2175	0
6	48	1830	163	3.39	62	68	1785	140
7	48	1820	168	3.51	60	65	1290	280
8	48	1865	154	3.20	62	70	760	360
9	36	1515	75	2.08			1735	0
10	36	1475	86	2.39			1430	89
11	36	1465	89	2.46			1030	178
12	36	1495	81	2.24			605	228

U = Supply voltage · 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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