EC centrifugal fan - RadiCal

backward curved, single inlet

R3G280-RNA8-01 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G280-RNA8-01**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Type of data definition		fa
Speed	min-1	1850
Power input	W	140
Current draw	A	5.8
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*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		60.1	39.1	43.1
Efficiency grade N		79	58	62
Power input P_e	kW	0.16		
Air flow q_v	m³/h	1205		
Pressure increase p_{fs}	Pa	266		
Speed n	min-1	1775		

Data established at point of optimum efficiency

ebmpapst

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Technical features

Mass	2.41 kg
Size	280 mm
Surface of rotor	Coated in black
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44
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 - Over-temperature protected electronics
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
Protection class	I (if protective earth is connected by customer at the connection point of the housing)
Product conforming to standard	EN 60950-1

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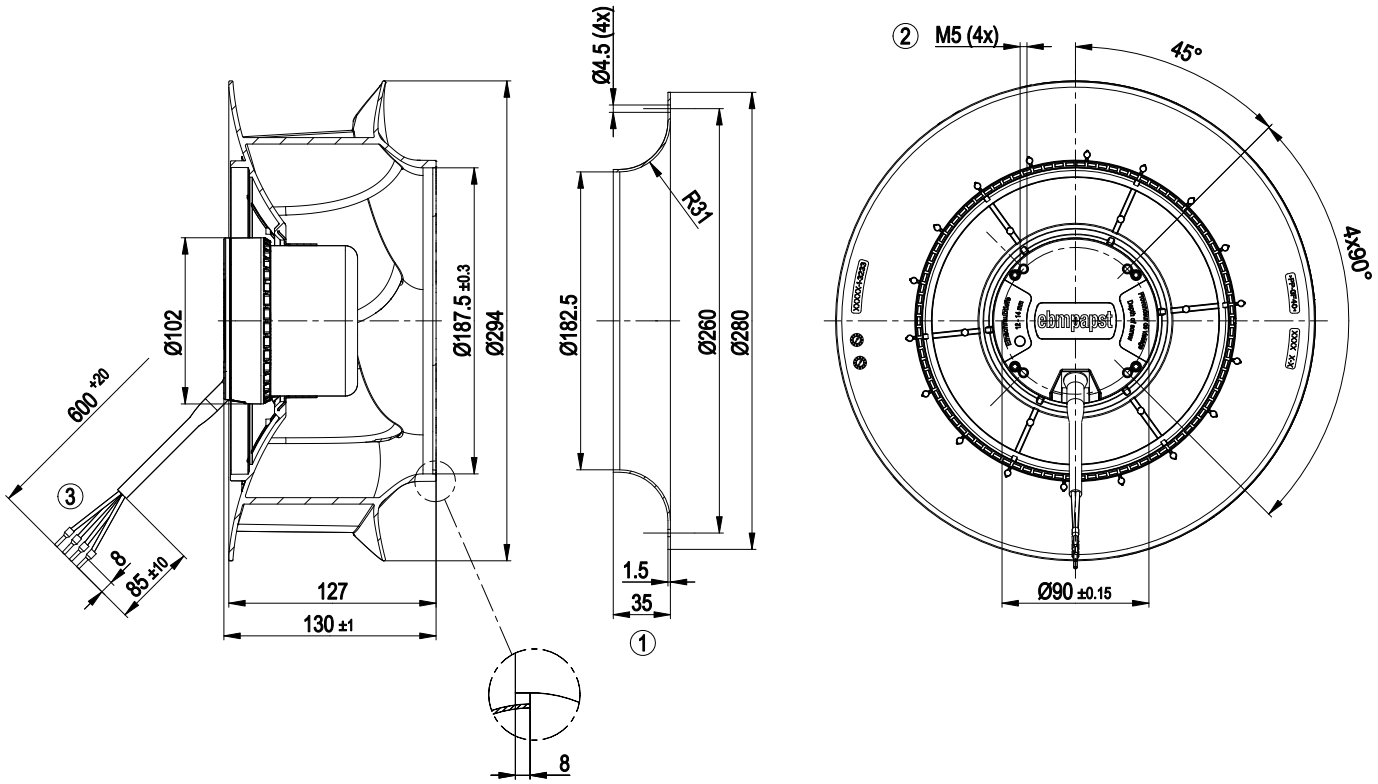
Product drawing



1	Accessory part: Inlet nozzle 96360-2-4013, not included in the standard scope of delivery
2	Connection line PVC AWG 16, 4x crimped core-end sleeves
3	Depth of screw max. 12 - 14 mm

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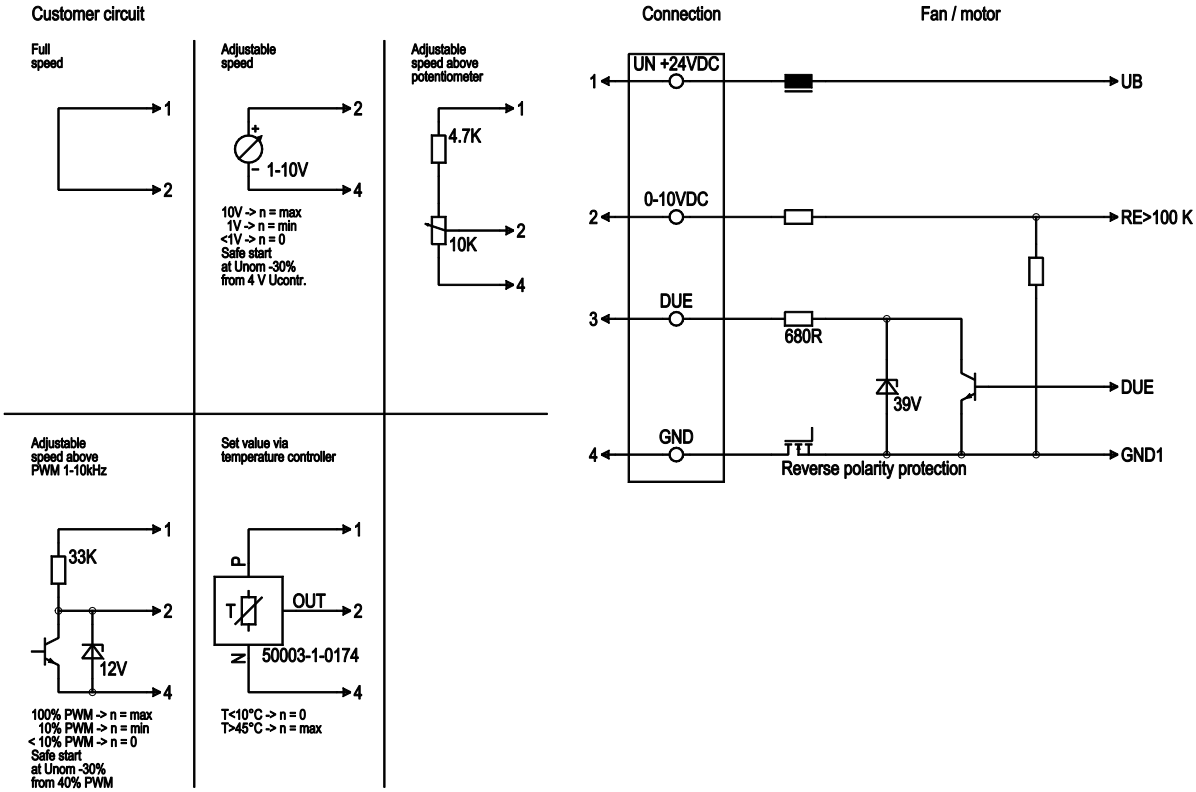
Connection screen



Line	No.	Signal	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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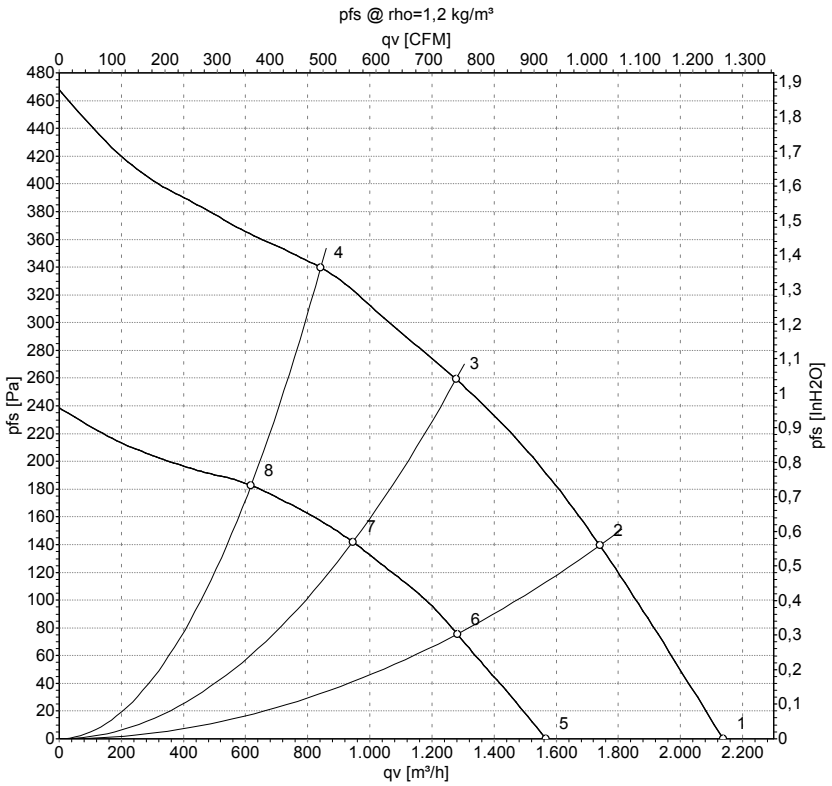
Charts: Air flow



Measurement: LU-139983
Measurement: LU-139987

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	24-28	1850	140	5.80*	66	74	2135	0
2	24-28	1800	161	6.71*	62	68	1740	140
3	24-28	1775	169	7.04*	59	65	1275	260
4	24-28	1815	157	6.53*	60	66	840	340
5	16	1365	57	3.53			1565	0
6	16	1325	65	4.07			1280	76
7	16	1310	69	4.31			945	142
8	16	1340	63	3.92			615	183

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