R3G280-RM21-05

EC centrifugal fan

backward curved, single inlet

R3G280-RM21-05 ebmpapst Datasheet
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Nominal data

Type	**R3G280-RM21-05**	
Motor	**M3G074-CF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	43 .. 53
Type of data definition		cs
Speed (rpm)	min^{-1}	1820
Power input	W	150
Current draw	A	3.2
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}	%	66.5	42.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		85.7	62
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.15
09 Air flow q_v	m³/h	1405
09 Pressure increase p_{fs}	Pa	229
10 Speed (rpm) n	min^{-1}	1785
11 Specific ratio*		1.00

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-173892

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Technical features

Mass	2.7 kg
Size	280 mm
Surface of rotor	Galvanised
Material of impeller	Plastic PP, galvanised round sheet-metal plate
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
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, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Cable break detection with control line - Output limit - Emergency operation - Soft start - PWM control input - Overvoltage detection - Line undervoltage detection
Motor protection	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 60335-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730

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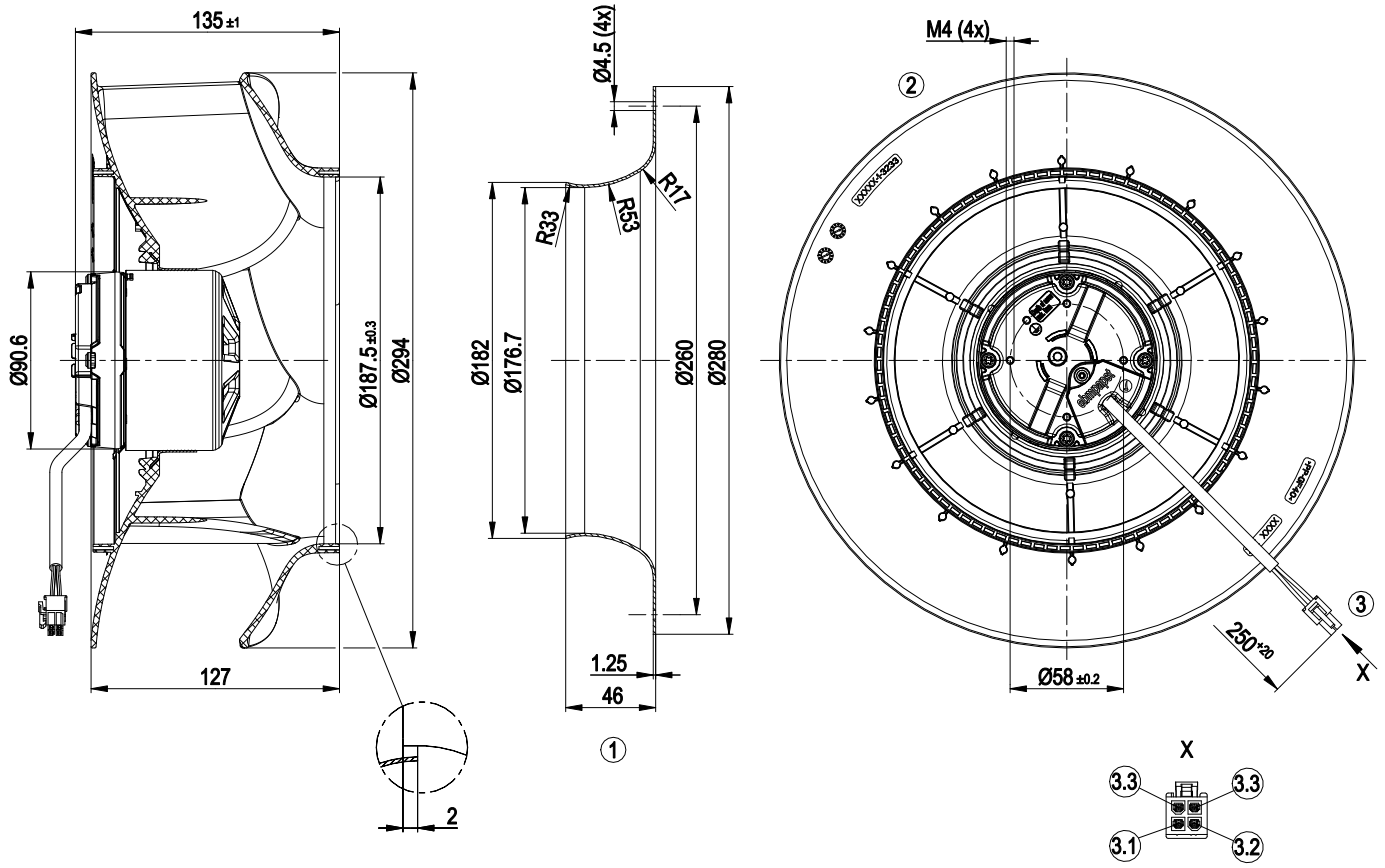
Product drawing



1	Accessory part: Inlet nozzle 28000-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line PVC AWG18, receptacle housing 4-pole Stocko EH 715-004-003-960, 4x female connector Stocko RBB 8230.120
3.1	Power supply 48 V
3.2	Reference earth
3.3	Control input with wire break detection with n=max
3.4	Speed monitoring output, 1 pulse per revolution, Isink max = 10 mA

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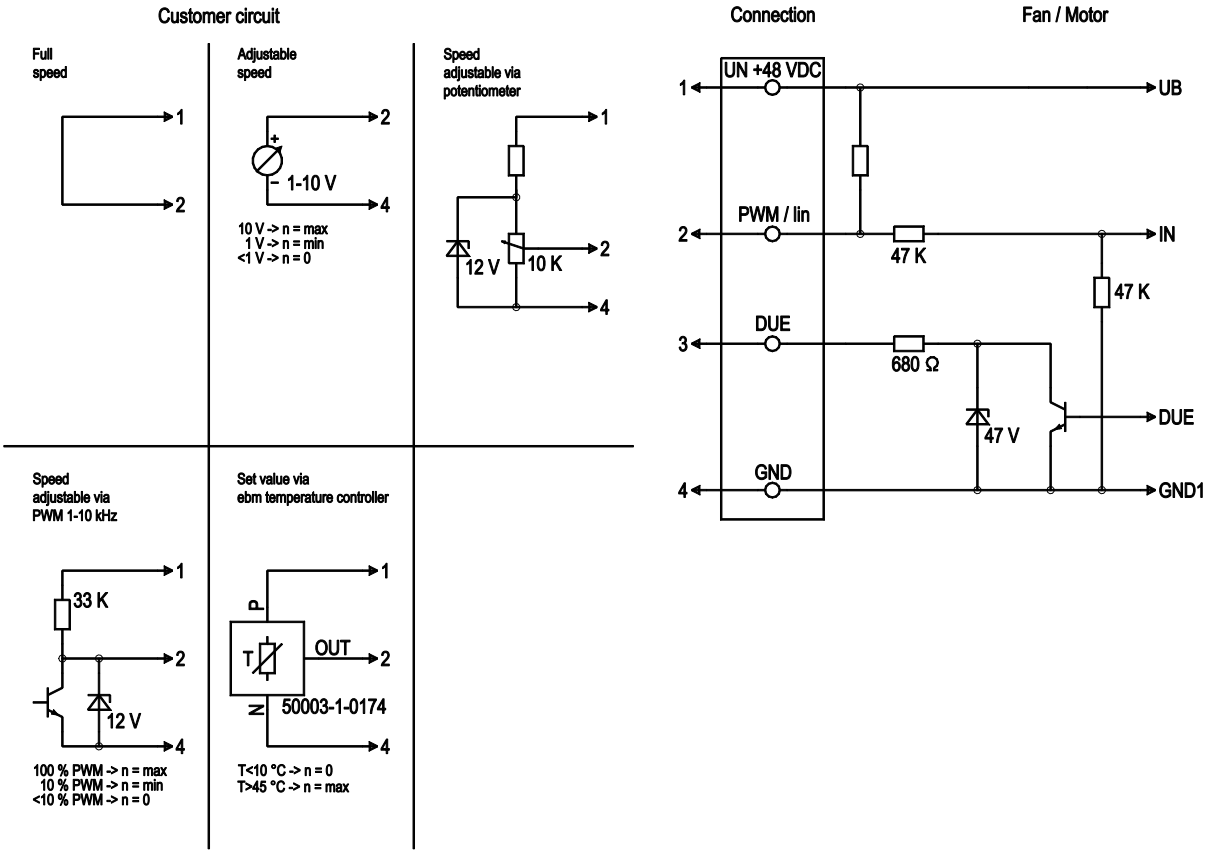
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	Un +48 VDC	red	Power supply 48 VDC
1	2	PWM/LIN	yellow	Control input with wire break detection with n=max
1	3	DUE	white	Speed monitoring output, 1 pulse per revolution, Isink max = 10 mA
1	4	GND	blue	Reference earth

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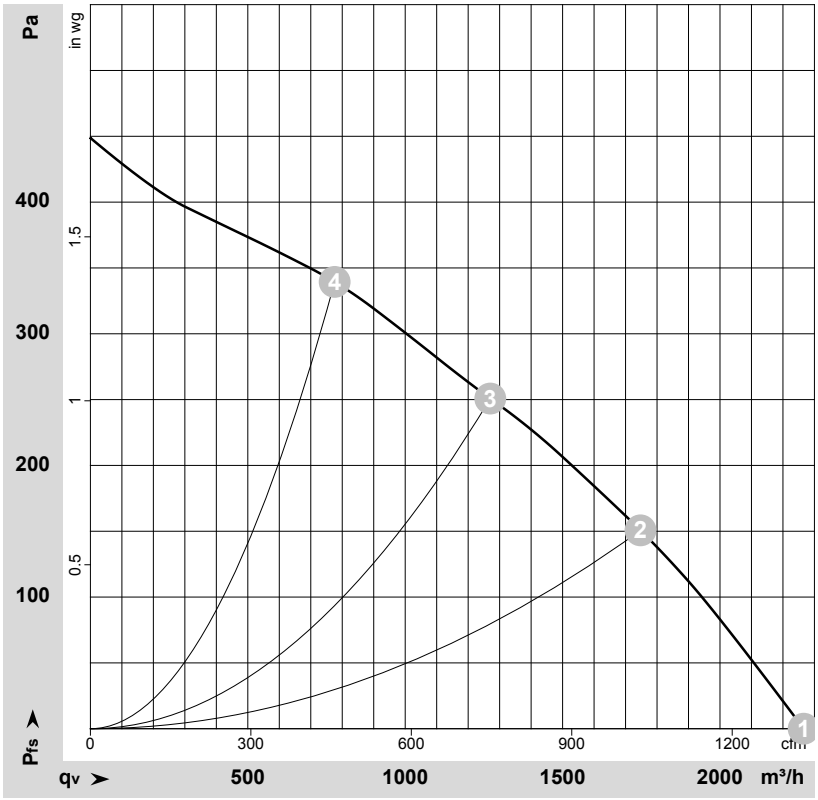
Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-173892-1

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	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	48	1915	138	2.93	66	74	2265	0	1335	0.00
2	48	1820	150	3.20	62	68	1745	150	1030	0.60
3	48	1780	150	3.20	63	68	1270	250	745	1.00
4	48	1865	150	3.20	63	69	775	340	455	1.36

U = Supply voltage · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow · p_{fs} = Pressure increase