R3G280-RU65-88

Ingersoll-Rand/Thermoking

EC centrifugal fan - RadiCal

backward-curved, single-intake

for rail applications



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Nominal data

Type	**R3G280-RU65-88**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 32
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2830
Power consumption	W	460
Current draw	A	19.0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

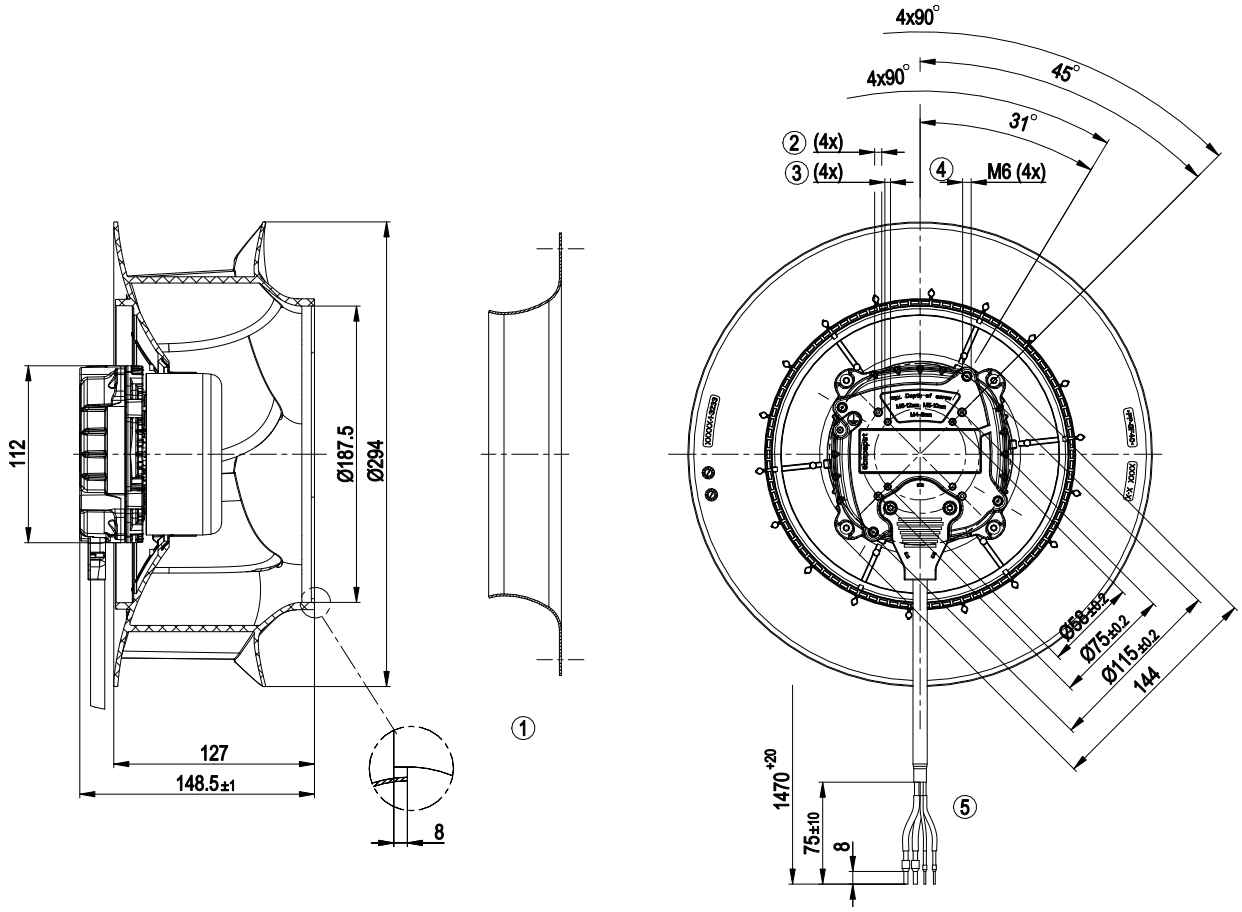
Weight	3 kg
Size	280 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA plastic UL94 V0
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP24 KM; (motor); electronics IP66 / 69K
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H3
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor mounting	Ball bearing
Motor bearing	(sealed)
Technical features	-Start at 85 °C (2 min) permitted - Fault output (high-side switch max. 30 mA) - Load dump (58 V) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Standstill on cable break - Temperature derating - Overvoltage detection - Thermal overload protection for electronics - Line undervoltage detection
Electrical hookup	Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
With cable	Lateral
Protection class	III
Conformity with standards	EN 15085-1, CPC3: 2007; EN 45545-2, HL3: 2013; EN 50155: 2008; EN 61373, Cat. 1B: 2010
Comment	E1 approval in preparation; EMC regulation: EN 50121-3-2 in preparation

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Product drawing



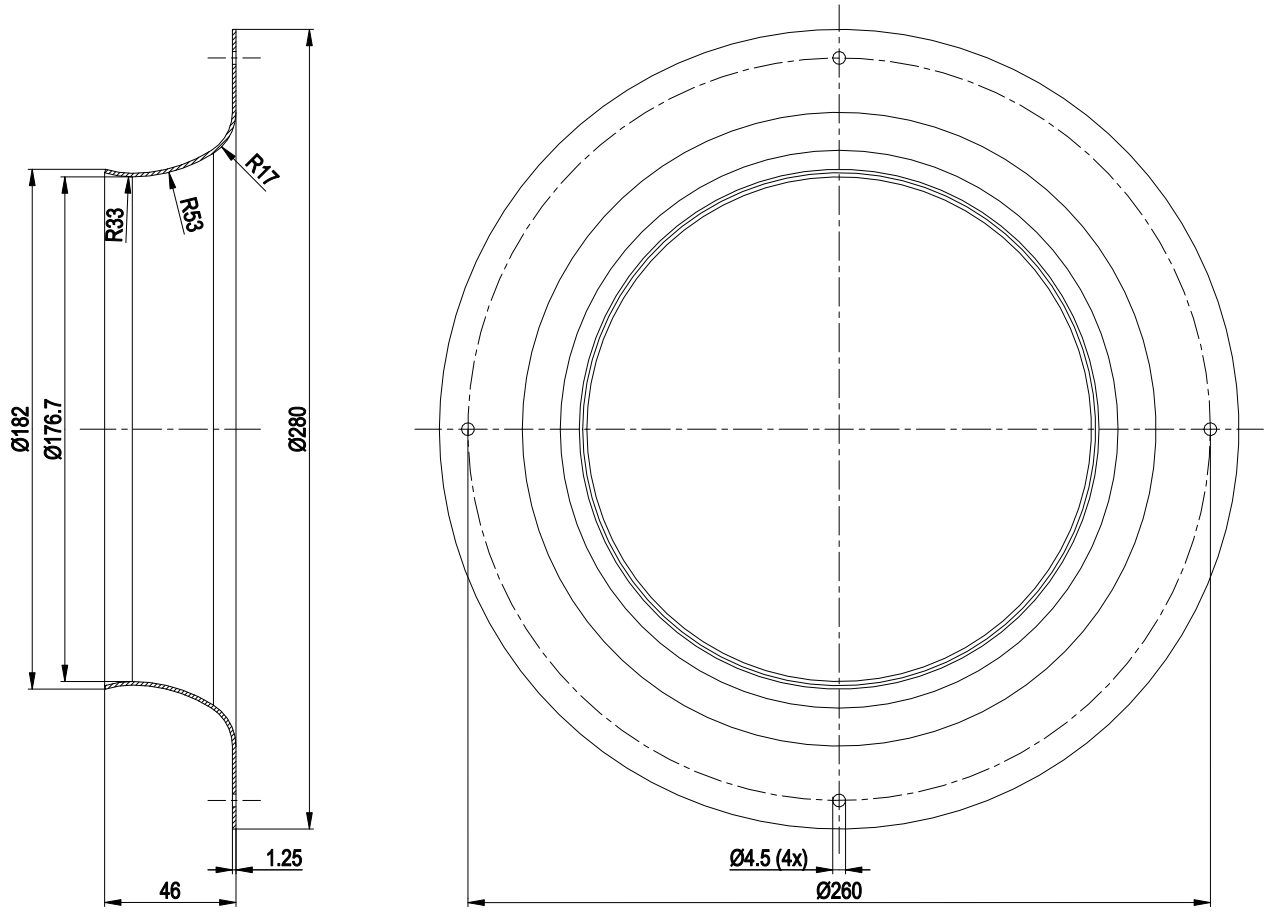
1	Accessory part: inlet ring 28000-2-4013 not included in scope of delivery.
2	Max. clearance for screw 10 mm, tapping hole ready for self-tapping M5 screw
3	Max. clearance for screw 8 mm, tapping hole ready for self-tapping M4 screw
4	Max. clearance for screw 12 mm
5	Cable halogen-free, BETAtrans® GKW R 2.5 mm², 2x crimped ferrules (brown, black), BETAtrans® GKW R 1.0 mm², 2x crimped ferrules (yellow, white)

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Accessory part



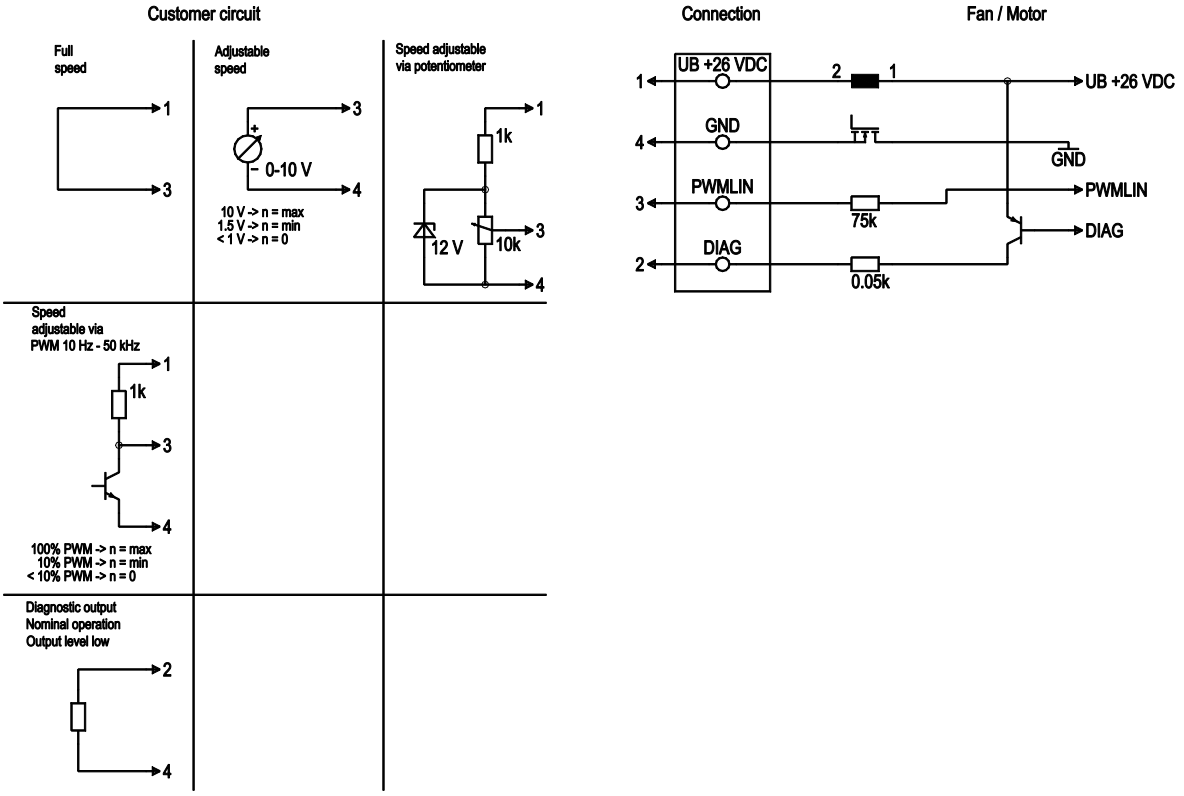
Accessory part: inlet ring 28000-2-4013 not included in scope of delivery

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Connection diagram



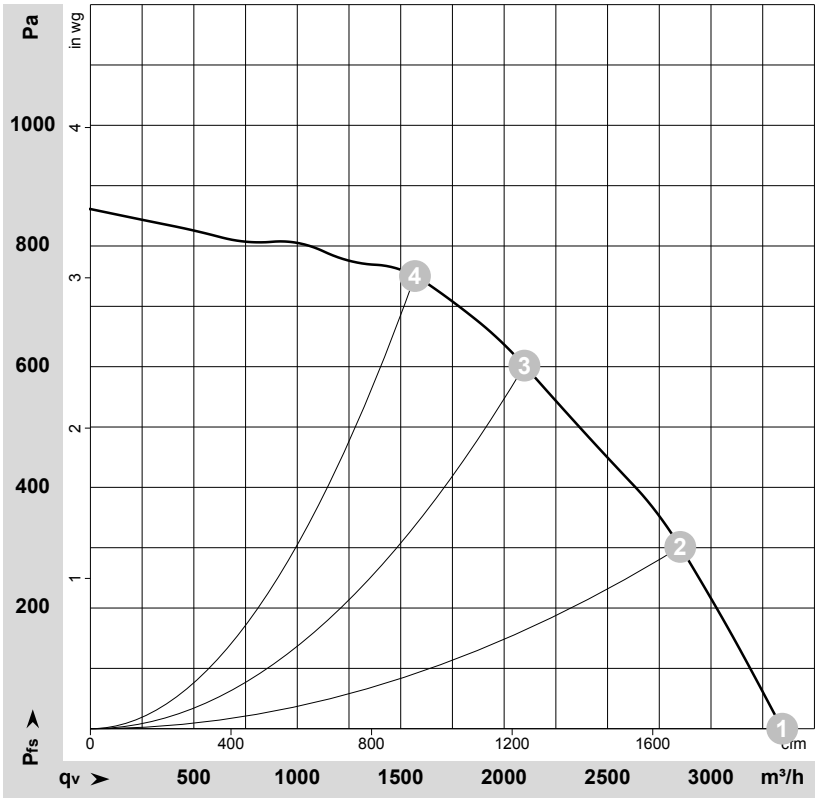
No.	Conn.	Designation	Color	Function/assignment
1	1	UB +26 VDC	black	Power supply 26 VDC
1	2	DIAG	white	Diagnostic output
1	3	PWMLIN	yellow	Analog voltage control input 0-10 V or PWM
1	4	GND	brown	Power supply GND, reference ground

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Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-170974-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

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	in. wg
1	24	2830	460	19.00	78	85	3345	0	1970	0.00
2	24	2830	595	24.69	74	81	2850	300	1680	1.20
3	24	2815	651	27.09	70	77	2100	600	1235	2.41
4	24	2845	631	26.19	70	77	1570	750	925	3.01

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

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