R3G280-RU26-81

EC centrifugal fan - RadiCal

backward curved, single inlet

for railway applications



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Nominal data

Type	**R3G280-RU26-81**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Type of data definition		fa
Speed (rpm)	min^{-1}	2350
Power input	W	252
Current draw	A	10.5
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011

		Actual	Request 2015
01 Overall efficiency η_{es}	%	62.3	46.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		78	62
05 Variable speed drive		Yes	

09 Power input P_e	kW	0.32
09 Air flow q_v	m^3/h	1495
09 Pressure increase p_{fs}	Pa	437
10 Speed (rpm) n	min^{-1}	2275
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-143852

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Technical features

Mass	3 kg
Size	280 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	PA UL94 V0 plastic
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 24 KM; (motor); electronics IP 66 / 69 K
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H3
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
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Lowering input - Fault output (high-side switch max. 30 mA) - INVLIN (control input, inverse linear) - Output limit -Load dump (58 V) - Motor current limit - Soft start - Set value input Lin 0-10 VDC / PWM (1.4, V corresponds to V=min, 10 V corresponds to V=max) - Temperature derating - Overvoltage detection
Electrical leads	Standby current less than 500 µA
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Lateral
Protection class	III
Product conforming to standard	EN 45545-2, HL3: 2013; EN 50155: 2008; EN 61373, Cat. 1B: 2010
Approval	EAC
Remark	EMC regulation: EN 50121-3-2 in preparation

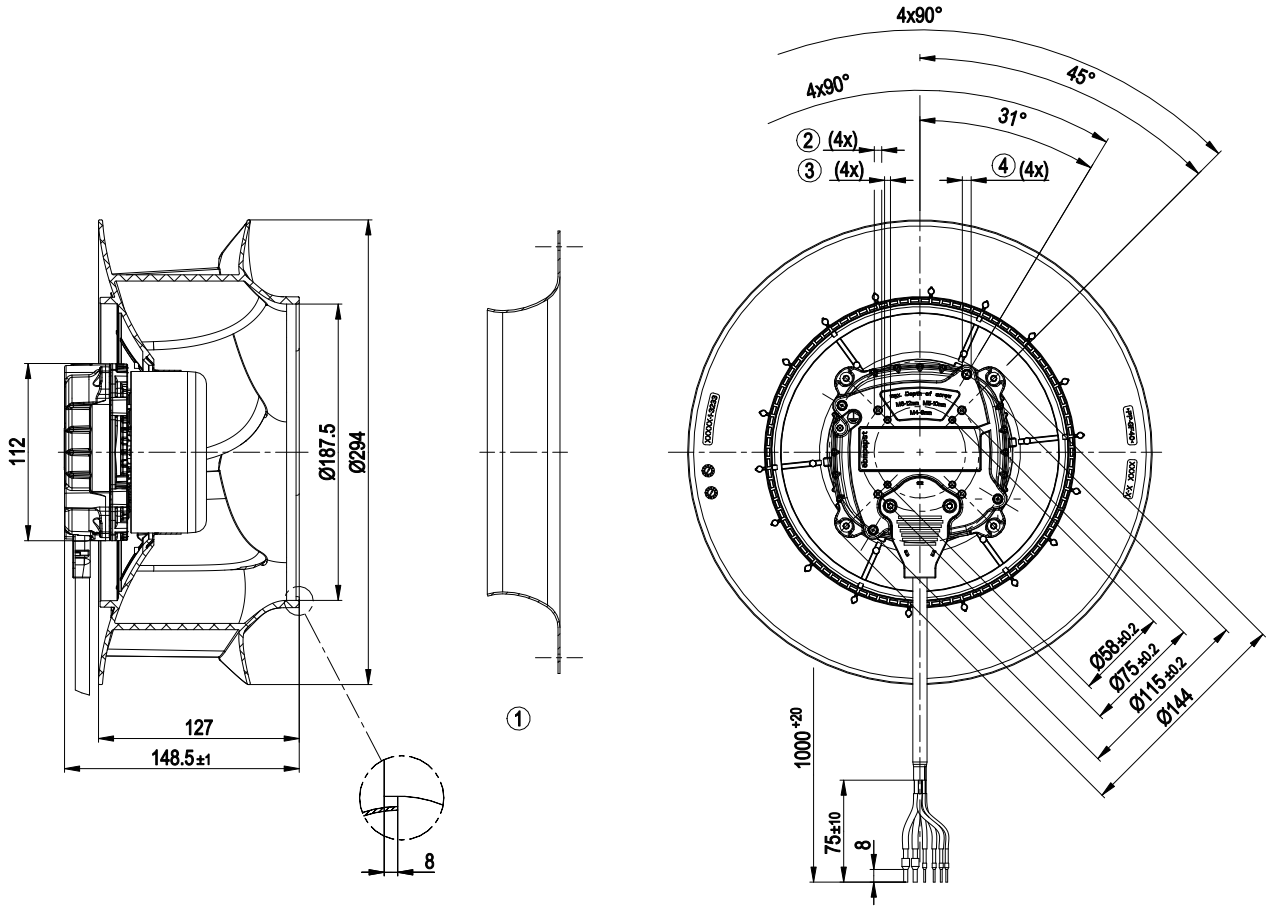
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Product drawing



1	Accessory part: inlet nozzle 28000-2-4013 (not included in standard scope of delivery)
2	Depth of screw max. 10 mm, pilot hole prepared for self-tapping M5 screw
3	Depth of screw max. 8 mm, pilot hole prepared for self-tapping M4 screw
4	Depth of screw max. 12 mm, pilot hole prepared for self-tapping M6 screw
5	Connection line (railway) 2x 2.5 mm², 4x 1.0 mm², 6x crimped core-end sleeves

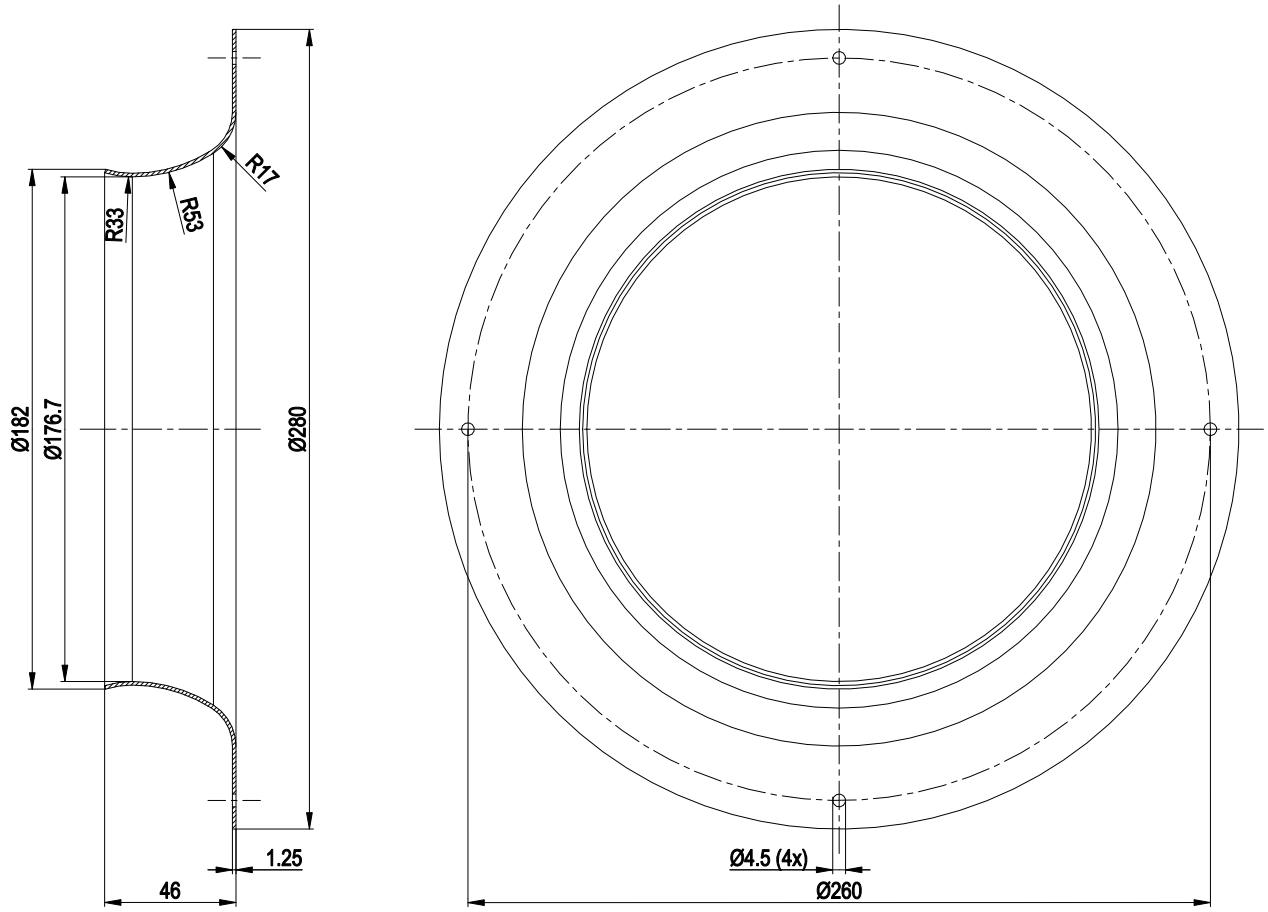
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Accessory part



Accessory part: Inlet nozzle 28000-2-4013 not included in scope of delivery

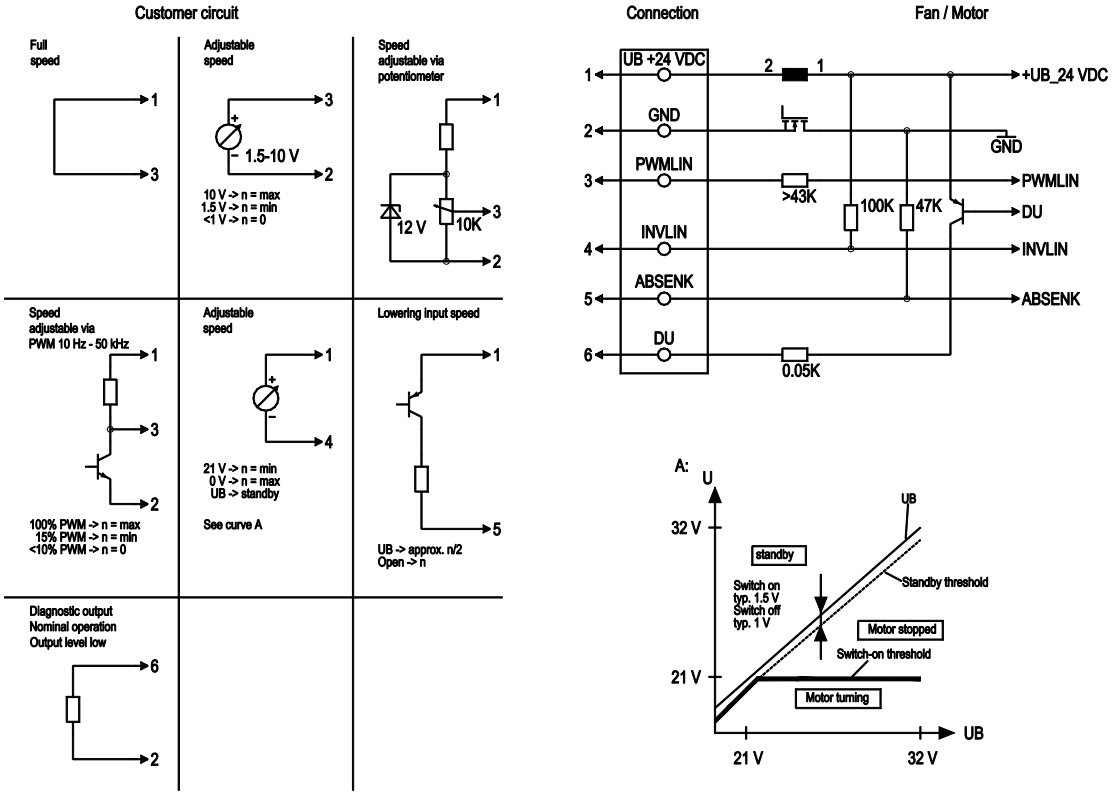
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	UB +24 VDC	black	Power supply 24 VDC
1	2	GND	brown	Power supply GND, reference ground
1	3	PWM/LIN	yellow	Analogue voltage control input 0-10 V or PWM
1	4	INVLIN	orange	Control input, inverse linear
1	5	ABSENK	blue	Lowering input
1	6	DIAG	white	Diagnostic output

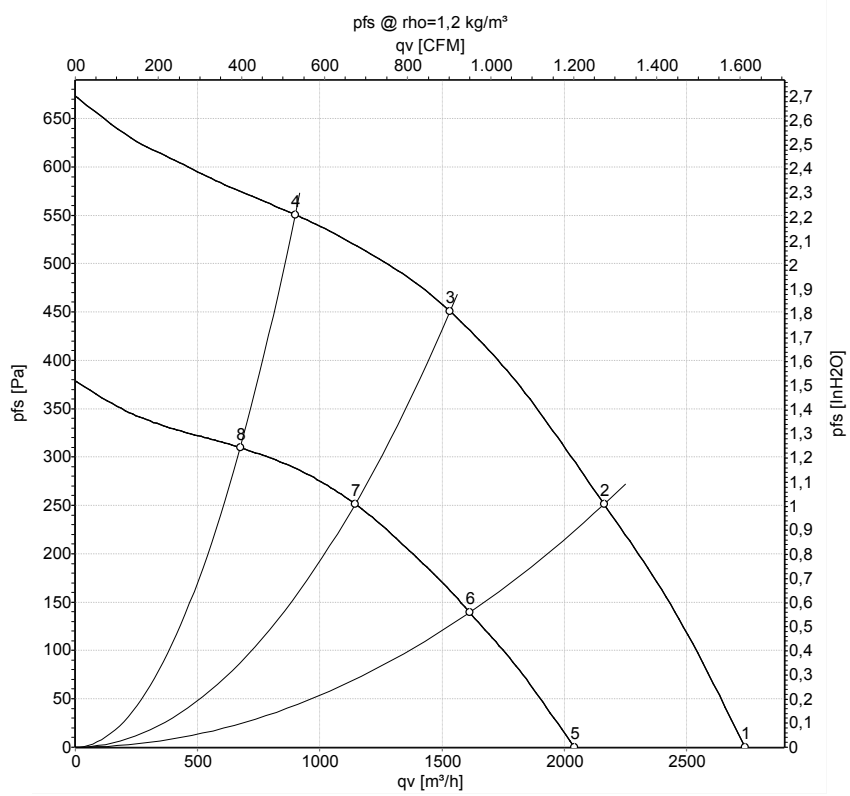
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Charts: Air flow



Measurement: LU-160664-1
Measurement: LU-160865-1

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	in. wg
1	24-32	2350	252		72	80	2740	0	1610	0.00
2	24-32	2280	298		69	75	2165	250	1275	1.00
3	24-32	2265	309		67	73	1530	450	900	1.81
4	24-32	2305	278		68	74	900	550	530	2.21
5	16	1745	107	6.70			2040	0	1200	0.00
6	16	1715	123	7.70			1610	140	950	0.56
7	16	1700	133	8.32			1145	252	675	1.01
8	16	1730	118	7.42			675	310	395	1.24

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

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