R3G280-RU65-89

EC centrifugal fan

backward curved, single inlet

for railway applications

R3G280-RU65-89 ebmpapst Datasheet
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County court Stuttgart · HRA 590344

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Nominal data

Type	**R3G280-RU65-89**	
Motor	**M3G084-CF**	
Nominal voltage	VDC	26
Nominal voltage range	VDC	16 .. 32
Type of data definition		fa
Speed (rpm)	min^{-1}	2830
Power input	W	460
Current draw	A	18.0
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

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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	- Start at 85 °C (2 min.) permitted - Fault output (high-side switch max. 30 mA) -Load dump (58 V) - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Standstill upon cable break - Temperature derating - Overvoltage detection - Over-temperature protected electronics - Line undervoltage 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 15085-1, CPC3: 2007; EN 45545-2, HL3: 2013; EN 50155: 2008; EN 61373, Cat. 1B: 2010
Remark	EMC regulation: EN 50121-3-2 in preparation

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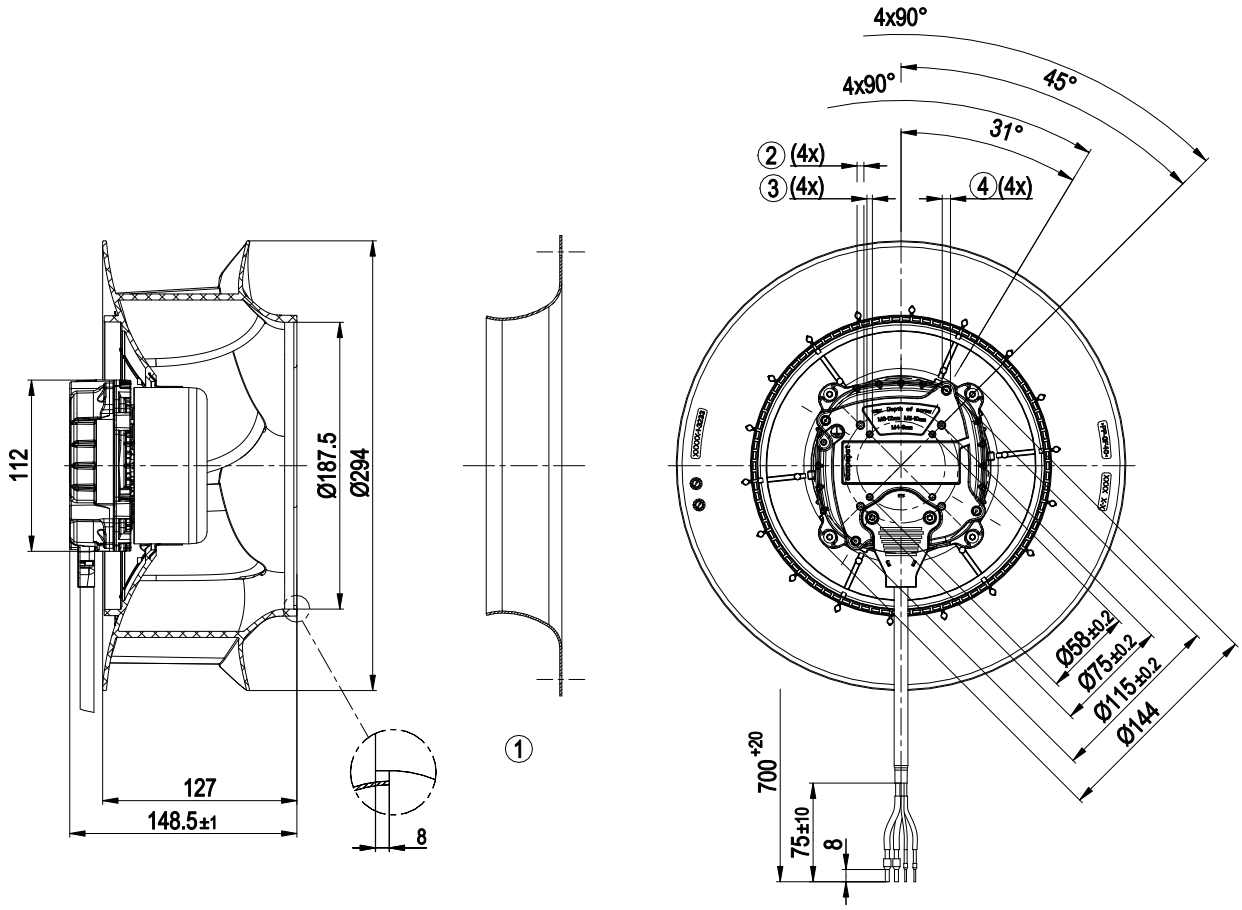
Product drawing



1	Accessory part: Inlet nozzle 28000-2-4013 not included in scope of delivery.
2	Thread reach max. 10 mm, pilot hole prepared for self-tapping M5 screw
3	Thread reach max. 8 mm, pilot hole prepared for self-tapping M4 screw
4	Thread reach max. 12 mm, pilot hole prepared for self-tapping M6 screw
5	Connection line halogen-free, BETAtrans® 3 GKW 6 mm², 2x crimped core-end sleeves (brown, black), BETAtrans® 3 GKW 1 mm², 2x crimped core-end sleeves (yellow, white)

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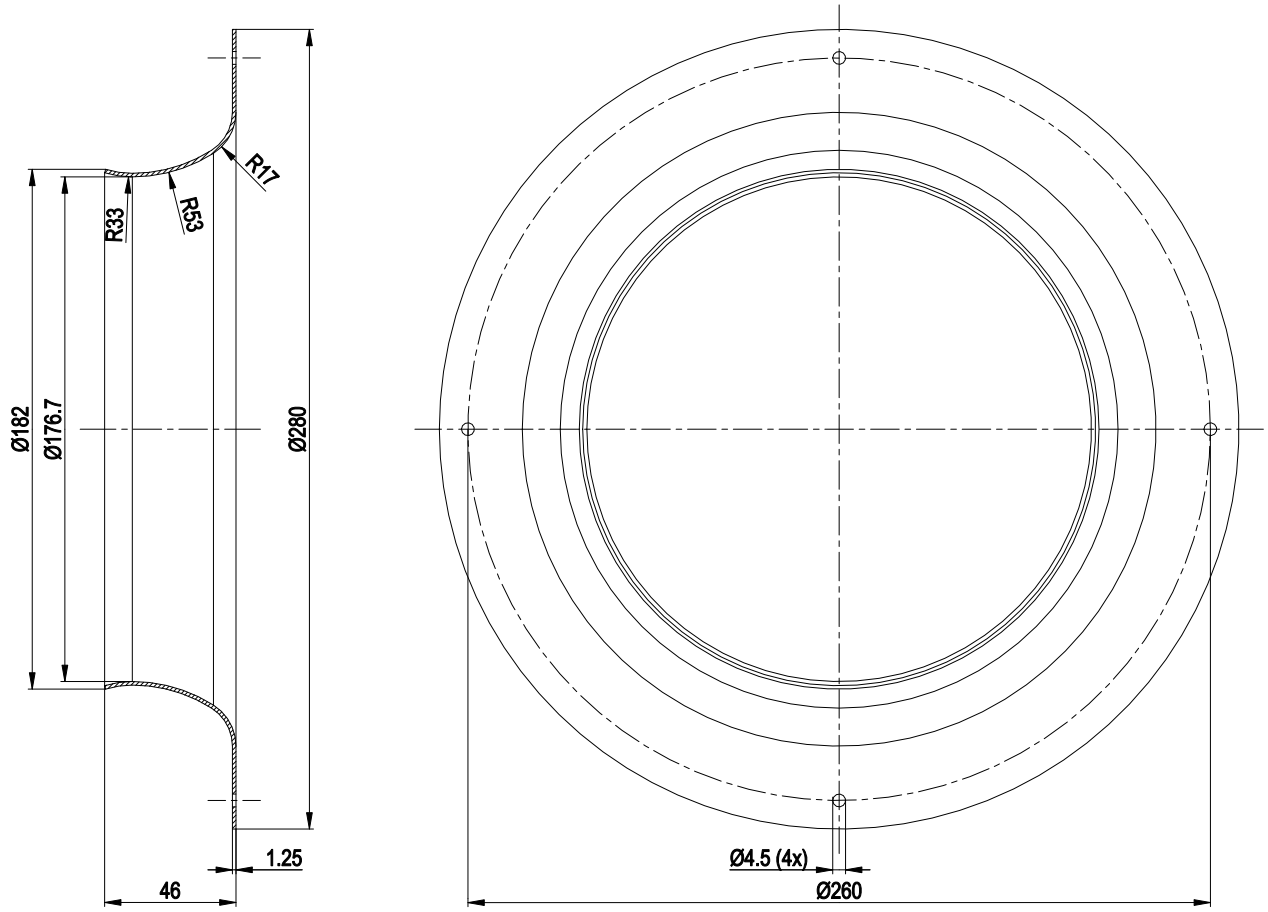
Accessory part



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

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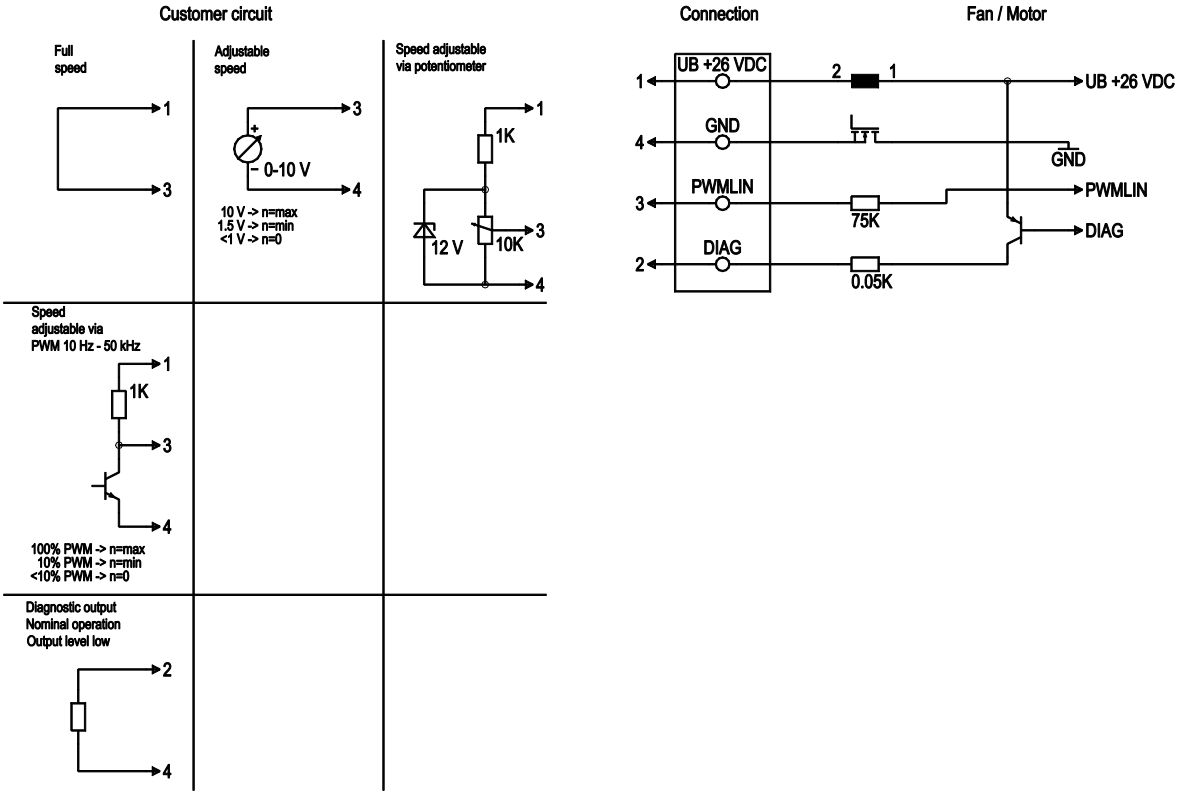
Connection screen



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

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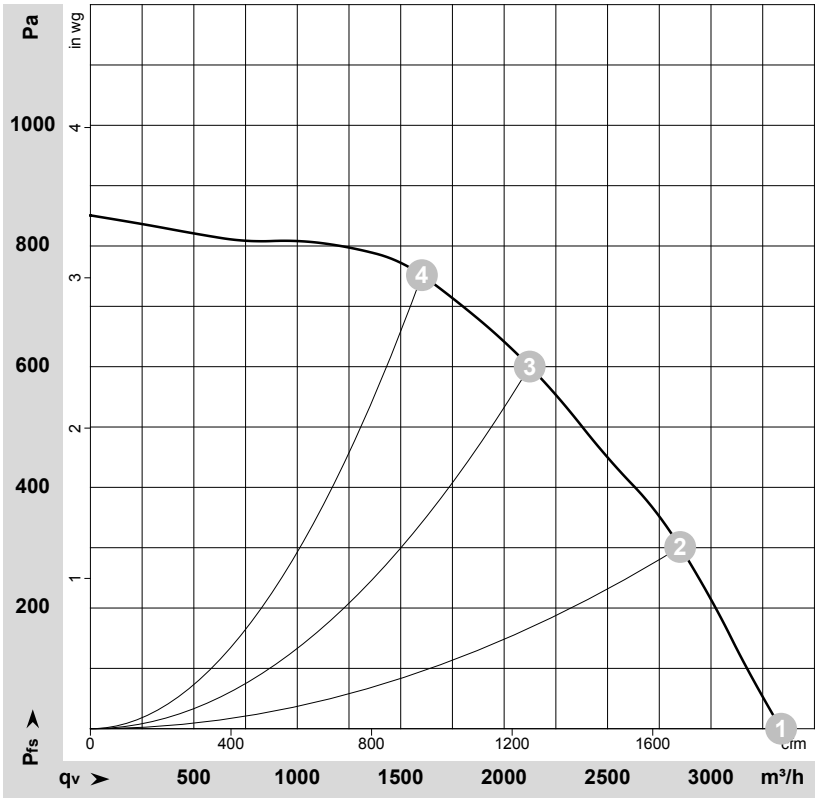
Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-175089-1

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	26	2830	460	18.00	78	85	3340	0	1965	0.00
2	26	2810	584	22.41	74	81	2850	300	1680	1.20
3	26	2810	645	24.77	70	77	2125	600	1250	2.41
4	26	2835	623	23.89	70	77	1605	750	945	3.01

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