R2D250-RA10-18

AC centrifugal fan - RadiCal

backward curved, single inlet

for railway applications

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Nominal data

Type	**R2D250-RA10-18**
Motor	**M2D068-EC**

Phase		3~
Nominal voltage	VAC	400
Connection		Y
Frequency	Hz	50
Type of data definition		ml
Valid for approval / standard		CE
Speed (rpm)	min^{-1}	2500
Power input	W	200
Current draw	A	0.33
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	80
Starting current	A	0.95

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	2.9 kg
Size	250 mm
Motor size	68
Surface of rotor	Coated in black
Material of impeller	Plastic PA, round sheet-metal plate coated in black
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP44; Depending on installation and position
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H1+
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Rotor on bottom
Condensation drainage holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Lateral
Safety classification	I; If a protective earth is connected by the customer This component to be built-in can have several local protection class ratings. The specification refers to the basic design of this component. The final protection class is based on the intended installation and connection of the component.
Product conforming to standard	EN 45545-2, R22/R23, HL3: 2013; IEC 61373: 2010
Approval	EAC
Remark	Prerequisite for operation is a Class 1 vehicle electrical system architecture according to EN 50533

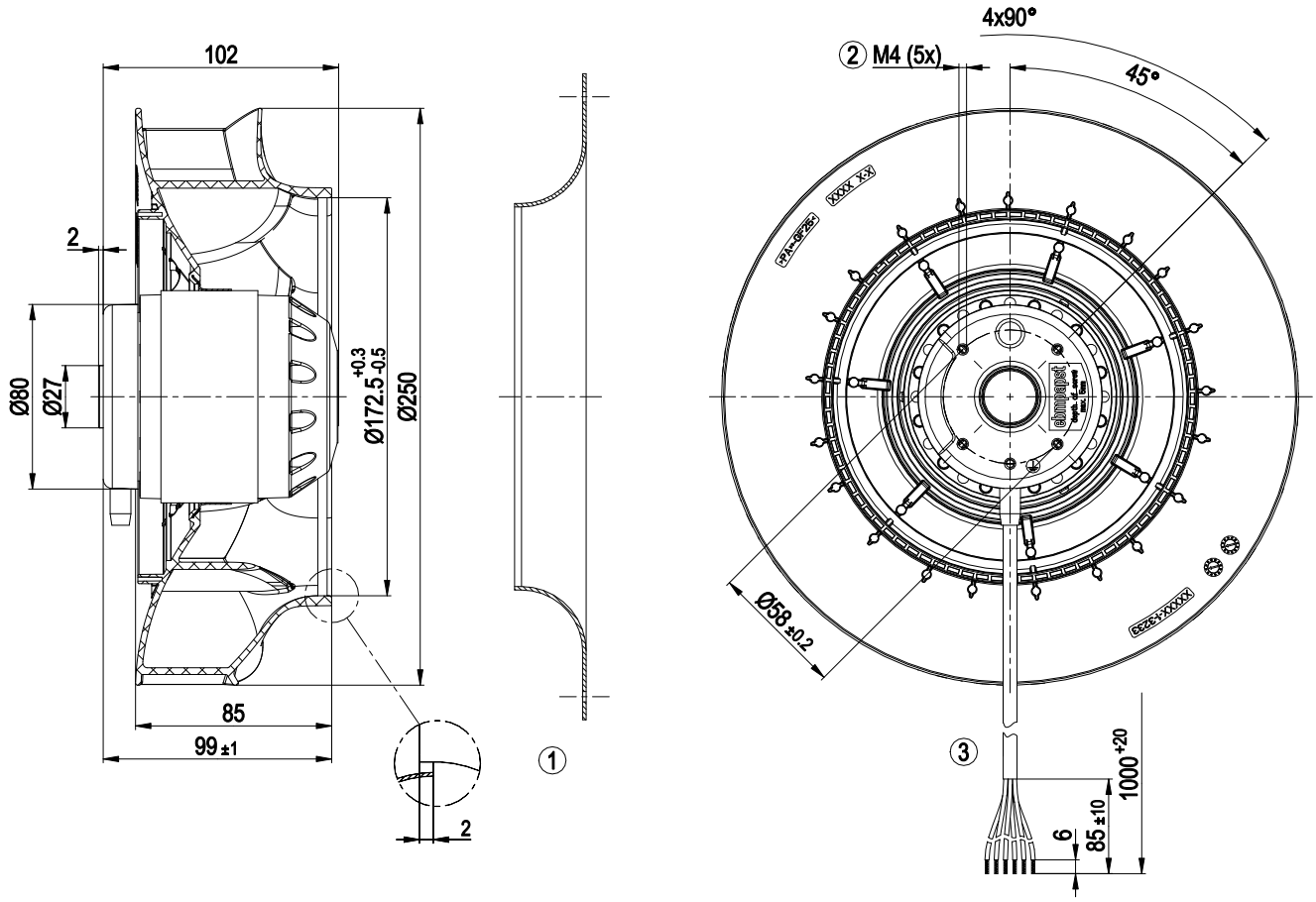
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Product drawing



1	Accessory part: Inlet nozzle 96420-2-4013 (not included in scope of delivery)
2	Thread reach max. 5 mm
3	Connection line, halogen-free, railway application EN 45545, 6G 0.5 mm²
	6x lead tip

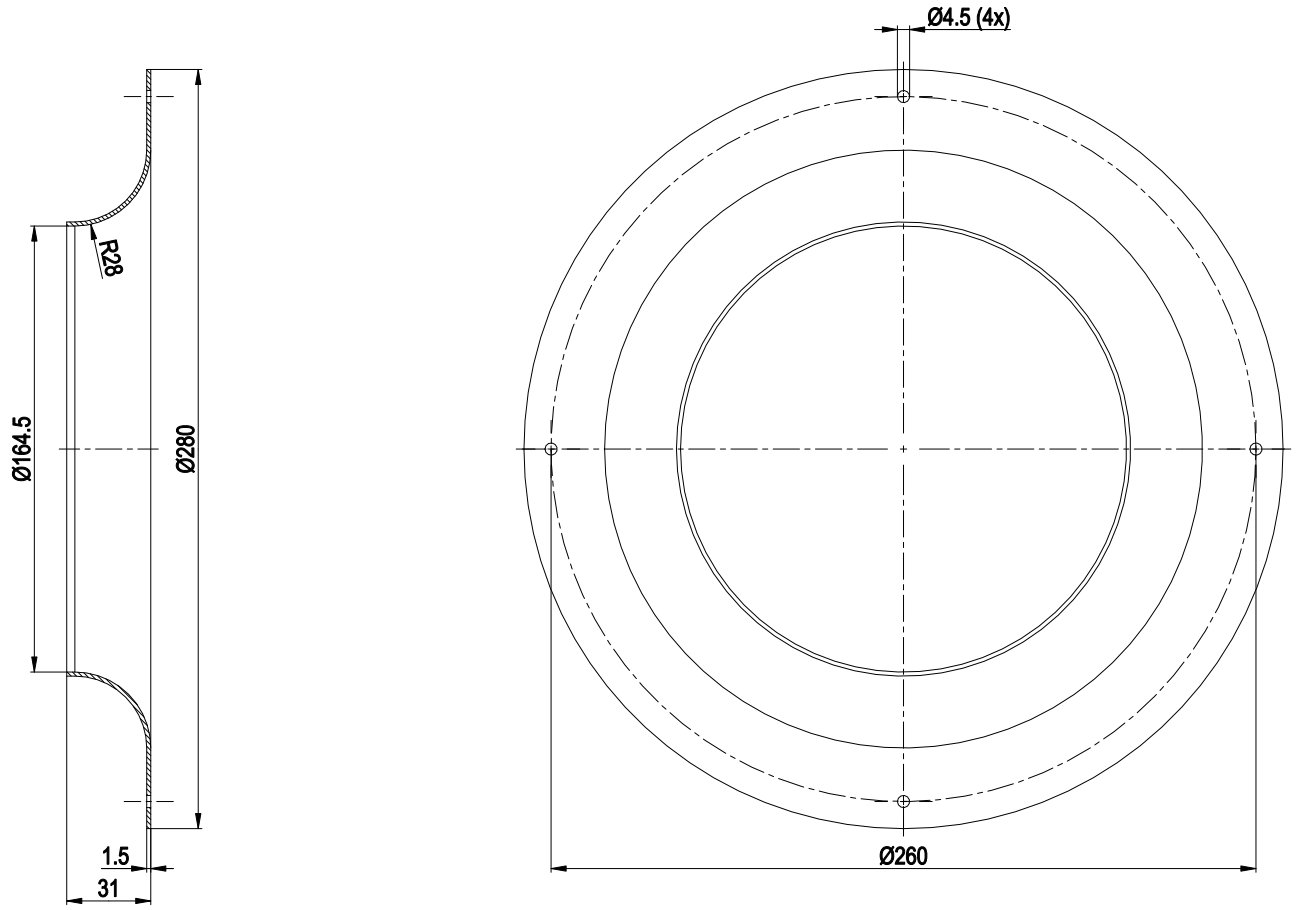
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Accessory part



	Inlet nozzle 96420-2-4013

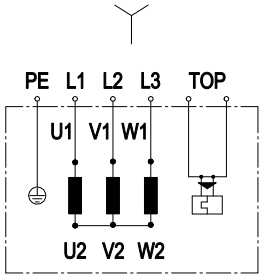
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Connection screen



Note: Direction of rotation changes when two phases are reversed

Y	Star connection	L1	= U1 = black	L2	= V1 = blue
L3	= W1 = brown	PE	green/yellow	TOP	2x grey

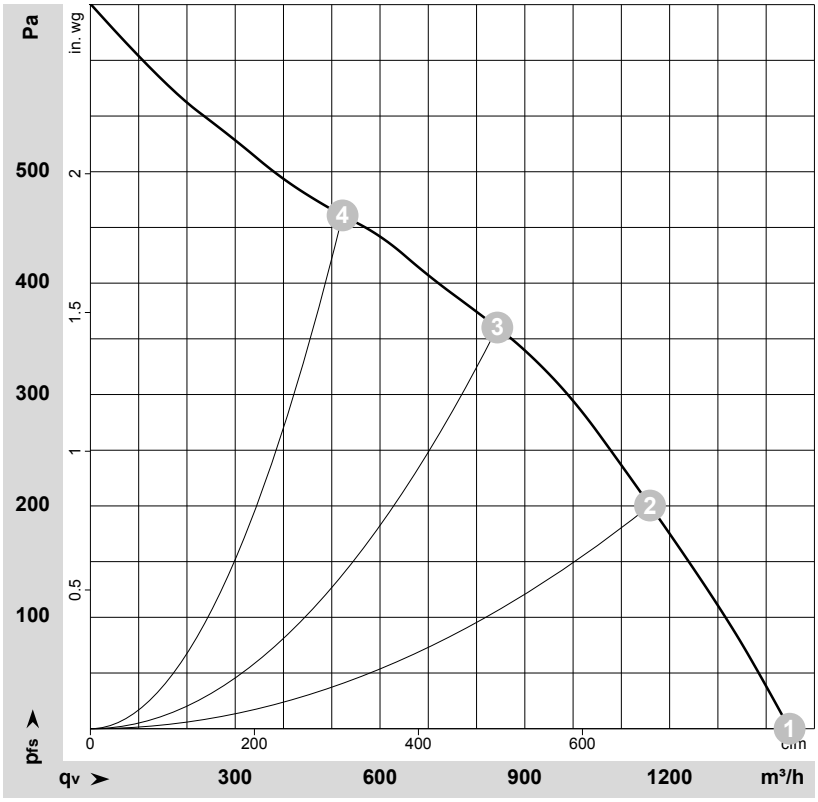
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-132665-1

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

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	400	50	2625	159	0.27	68	76	1450	0	855	0.00
2	Y	400	50	2515	195	0.32	63	71	1160	200	680	0.80
3	Y	400	50	2500	200	0.33	60	67	845	360	495	1.45
4	Y	400	50	2550	177	0.30	65	72	520	460	305	1.85

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_e = 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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