AC centrifugal fan - RadiCal

backward-curved, single-intake

R2D225-RA26-11 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**R2D225-RA26-11**
Motor	**M2D068-DF**

Phase		3~	3~	3~
Nominal voltage	VAC	400	400	480
Wiring		Y	Y	Y
Frequency	Hz	50	60	60
Method of obtaining data		ml	ml	ml
Valid for approval/standard		CE	CE	UL 2111
Speed (rpm)	min^{-1}	2530	2700	2900
Power consumption	W	150	200	235
Current draw	A	0.27	0.33	0.33
Min. back pressure	Pa	0	0	0
Min. back pressure	in. wg	0	0	0
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	80	55	55
Starting current	A	0.74	0.72	0.83

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

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	43.6	42.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		63.1	62
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.14
09 Air flow q_v	m^3/h	705
09 Pressure increase p_{fs}	Pa	318
10 Speed (rpm) n	min^{-1}	2555
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-140430

AC centrifugal fan - RadiCal

backward-curved, single-intake

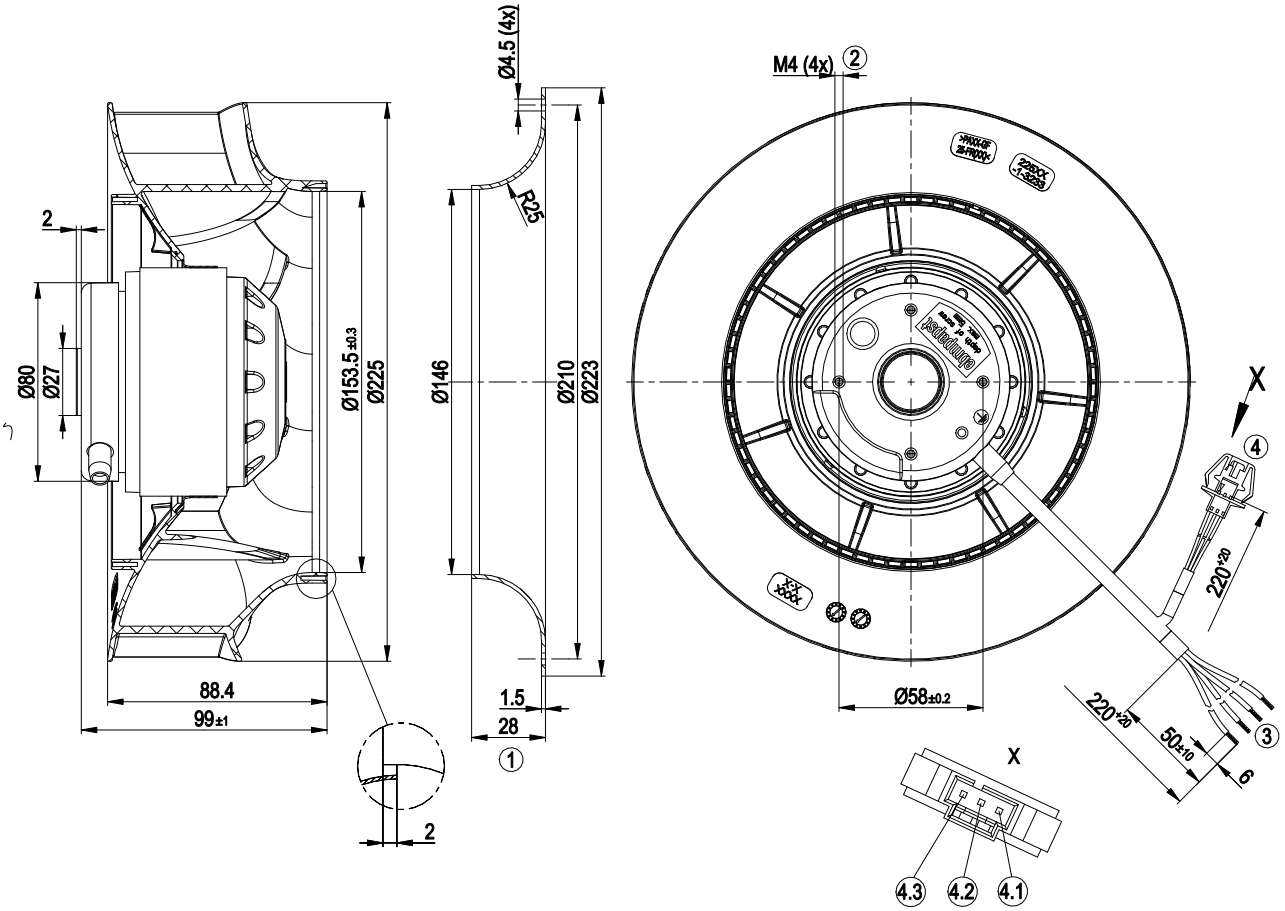
Technical description

Weight	2.2 kg
Size	225 mm
Motor size	68
Rotor surface	Painted black
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F2-1; H1+
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; CE
Approval	CSA C22.2 No. 77; UL 1004-3; CCC

AC centrifugal fan - RadiCal

backward-curved, single-intake

Product drawing

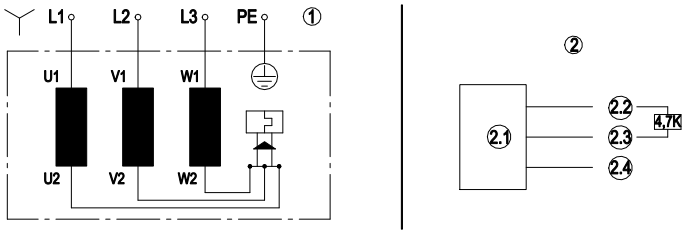


1	Accessory part: inlet ring 96358-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PFA AWG20 (green/yellow AWG18), 4x crimped splices
4	Cable Raychem Spec. 44, AWG24, 3-pole connector housing Molex 70107-0037, 3x plug pin Molex 16-02-0078
4.1	+ (red)
4.2	out (white)
4.3	0 V (black)

AC centrifugal fan - RadiCal

backward-curved, single-intake

Connection diagram



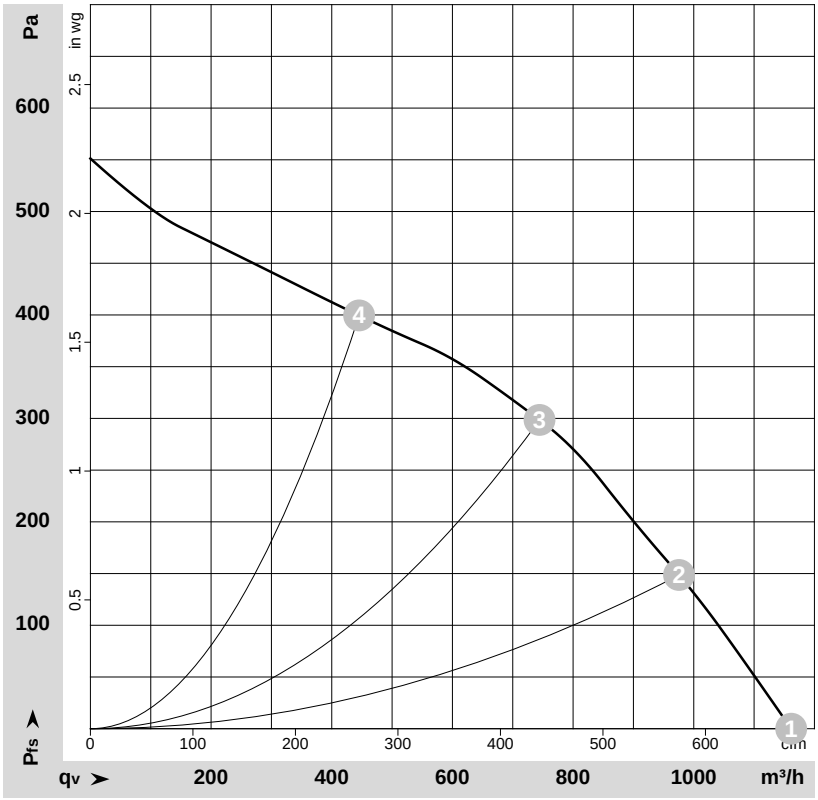
Note: Change of rotation direction by reversing two phases

1	Fan connection diagram
L1	black
L2	blue
L3	brown
PE	green/yellow
2	Hall IC circuit
2.1	Hall IC
2.2	red (+5 V)
2.3	white (out)
2.4	black (0 V)

AC centrifugal fan - RadiCal

backward-curved, single-intake

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-140430-1

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

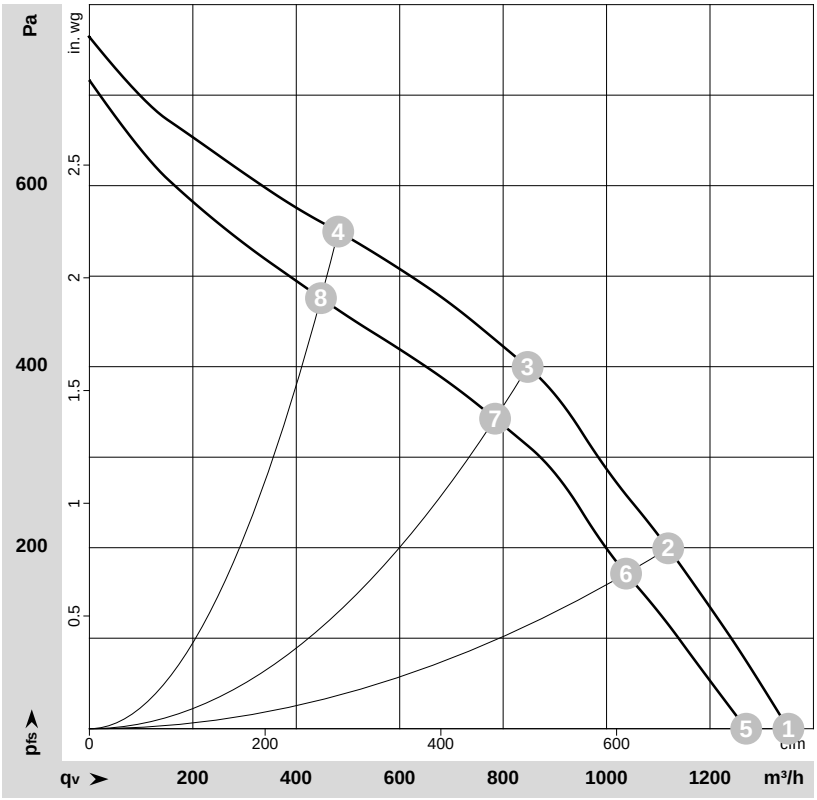
	Wired	U	f	n	P_e	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	Y	400	50	2645	122	0.24	66	74	1160	0	685	0.00
2	Y	400	50	2560	142	0.26	62	69	975	150	575	0.60
3	Y	400	50	2530	150	0.27	57	65	745	300	440	1.20
4	Y	400	50	2595	130	0.24	61	69	445	400	260	1.61

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = 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

AC centrifugal fan - RadiCal

backward-curved, single-intake

Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-140437-1
Measurement: LU-140433-1

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

	Wired	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	480	60	3065	192	0.28	70	78	1350	0	795	0.00
2	Y	480	60	2935	226	0.32	66	74	1120	200	660	0.80
3	Y	480	60	2900	235	0.32	61	69	845	400	500	1.61
4	Y	480	60	3025	202	0.29	65	74	480	550	285	2.21
5	Y	400	60	2880	171	0.28			1270	0	745	0.00
6	Y	400	60	2720	198	0.32			1040	171	610	0.69
7	Y	400	60	2700	200	0.33			785	343	460	1.38
8	Y	400	60	2810	180	0.29			450	476	265	1.91

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = 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