R4D310-AS18-10

AC centrifugal fan

backward-curved, single-intake



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R4D310-AS18-10**
Motor	**M4D068-EC**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Wiring		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Method of obtaining data		fa	fa	fa	fa
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1400	1600	1400	1600
Power consumption	W	110	150	110	150
Current draw	A	0.55	0.52	0.32	0.3
Min. back pressure	Pa	0	0	0	0
Min. back pressure	inH2O	0	0	0	0
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	65	55	65	55

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	43	42.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		62.5	62
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.14
09 Air flow q_v	m^3/h	1465
09 Pressure increase p_{fs}	Pa	151
10 Speed (rpm) n	min^{-1}	1350
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-106601

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Technical description

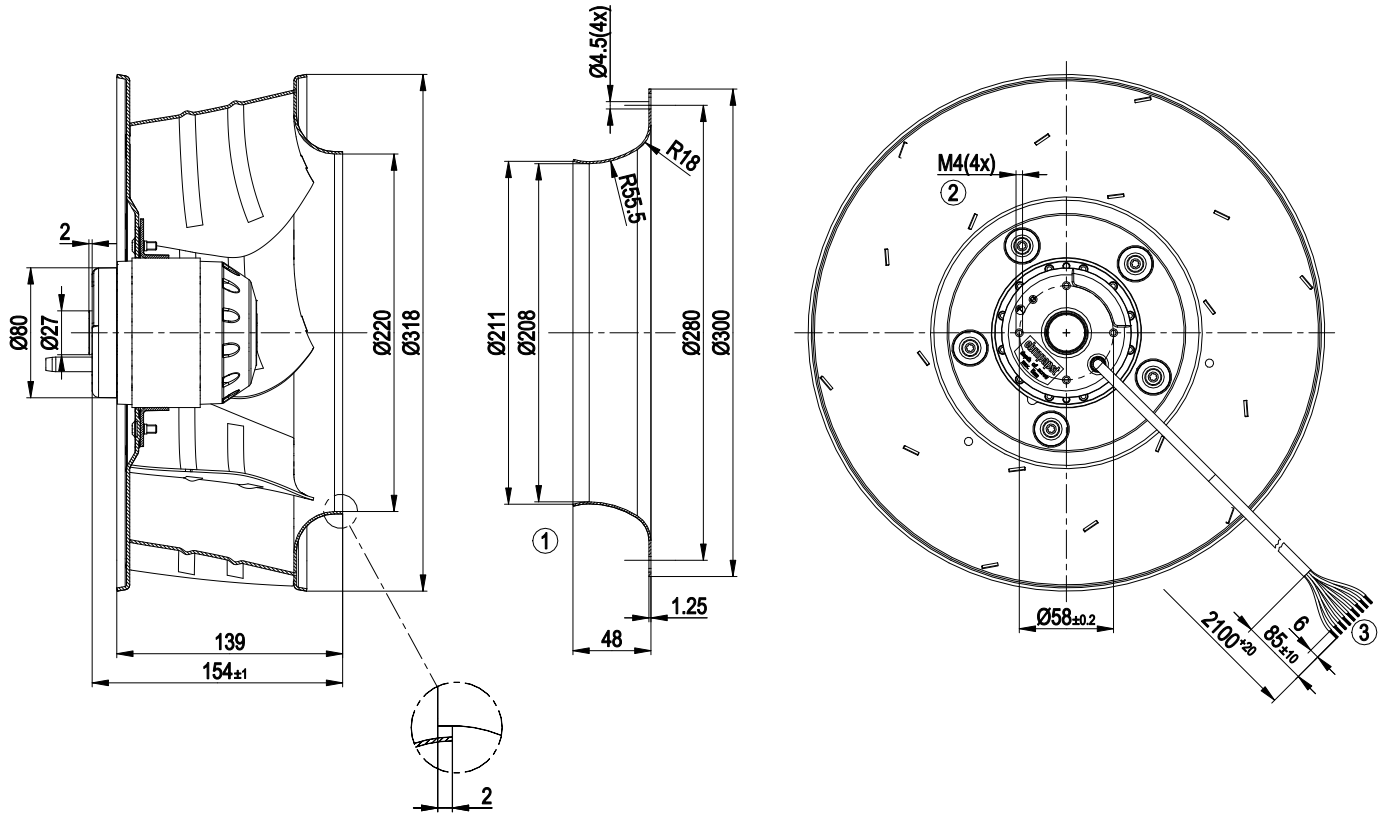
Weight	3.9 kg
Fan size	310 mm
Rotor surface	Painted black
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0+
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) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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Product drawing



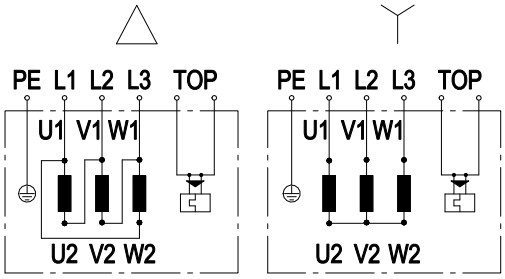
1	Accessory part: Inlet ring 31050-2-4013 not included in scope of delivery, other inlet rings on request
2	Max. clearance for screw 5 mm
3	Cable PUR AWG20 9G, 9x crimped splices

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Connection diagram



Note: Change of rotation direction by reversing two phases

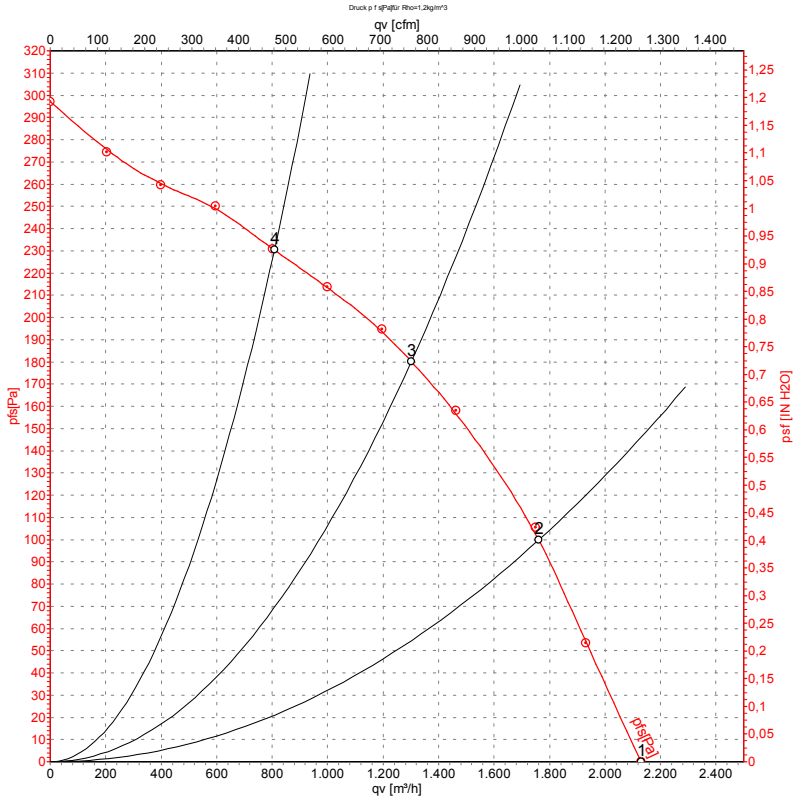
Δ	Delta connection	Y	Star connection	L1	black
L2	blue	L3	brown	U1	black
V1	blue	W1	brown	U2	green
V2	white	W2	yellow	TOP	2x gray
PE	green/yellow				

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Curves: Air performance 50 Hz



Measurement: LU-106601-1

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	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	Y	400	50	1400	110	0.32	2130	0	1255	0.00
2	Y	400	50	1380	132	0.32	1760	100	1035	0.40
3	Y	400	50	1355	143	0.33	1300	180	765	0.72
4	Y	400	50	1375	133	0.32	810	230	475	0.92

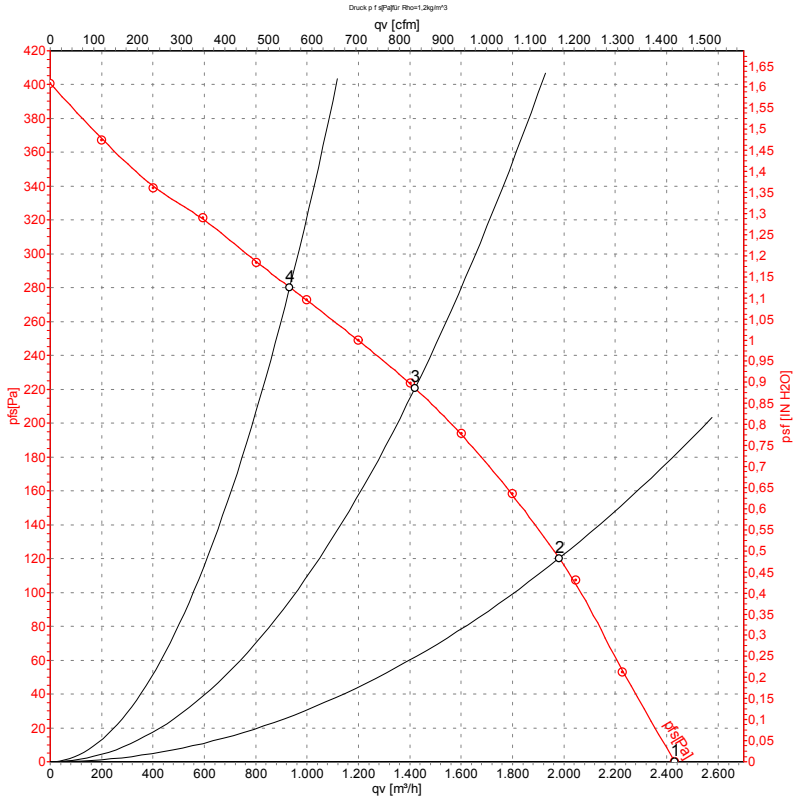
Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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Curves: Air performance 60 Hz



Measurement: LU-106604-1

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	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	Y	400	60	1600	150	0.30	2430	0	1430	0.00
2	Y	400	60	1545	180	0.34	1980	120	1165	0.48
3	Y	400	60	1500	201	0.37	1420	220	835	0.88
4	Y	400	60	1525	188	0.35	930	280	550	1.12

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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