AC centrifugal fan

backward-curved, single-intake

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R4E310-AE05-19**
Motor	**M4E074-EI**

Phase		1~	1~	1~
Nominal voltage	VAC	230	230	230
Frequency	Hz	50	60	60
Method of obtaining data		fa	fa	fa
Valid for approval/standard		CE	UL 2111	CE
Speed (rpm)	min^{-1}	1440	1680	1680
Power consumption	W	125	175	165
Current draw	A	0.66	0.78	0.73
Capacitor	µF	4	4	4
Capacitor voltage	VDB	400	400	400
Capacitor standard			UL	
Min. back pressure	Pa	0	0	0
Min. back pressure	inH2O	0	0	0
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	55	50	60

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

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Technical description

Weight	4.4 kg
Fan size	310 mm
Rotor surface	Painted black
Impeller material	PA plastic
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) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1
Approval	UL 2111; CSA C22.2 No. 77

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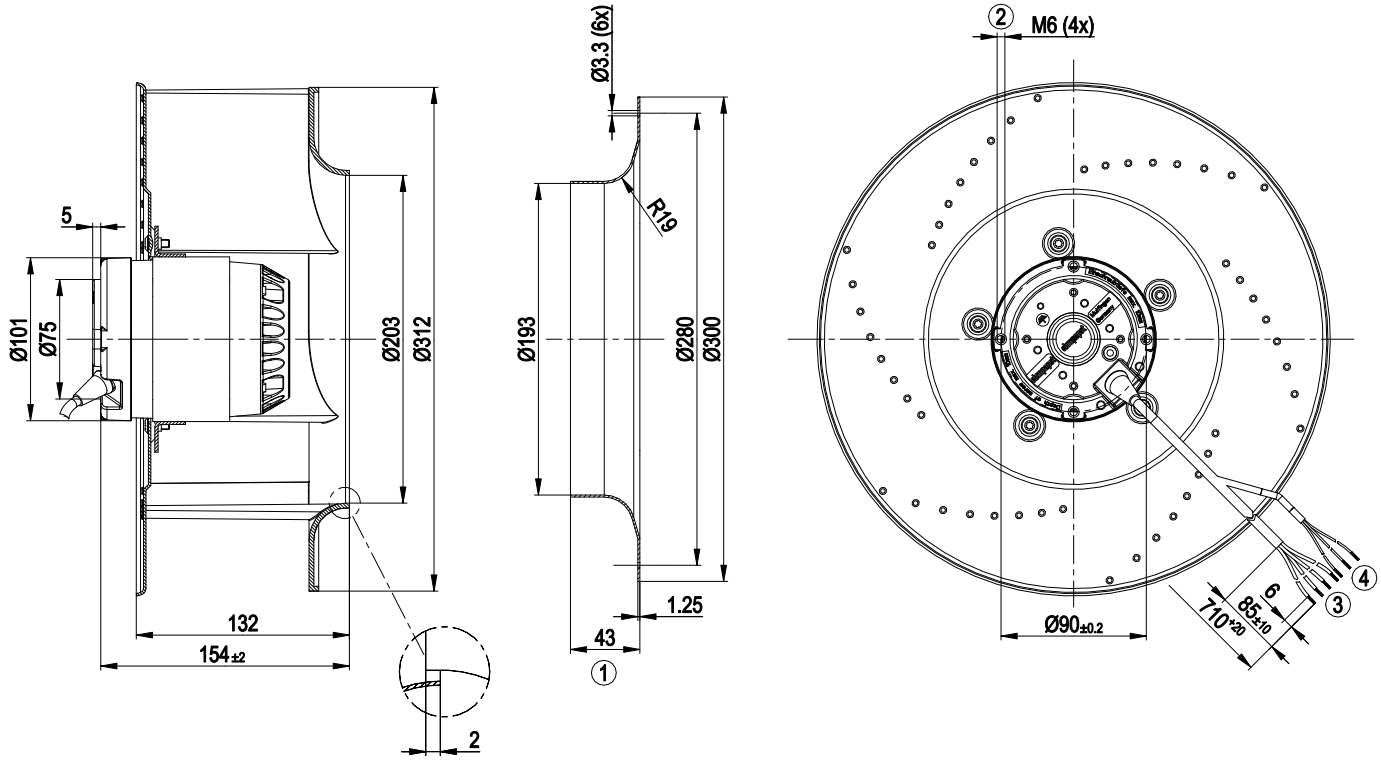
Product drawing



1	Accessory part: inlet ring 09621-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Cable PVC 4G AWG20, 4x crimped splices
4	Cable AWG26, 3x crimped splices

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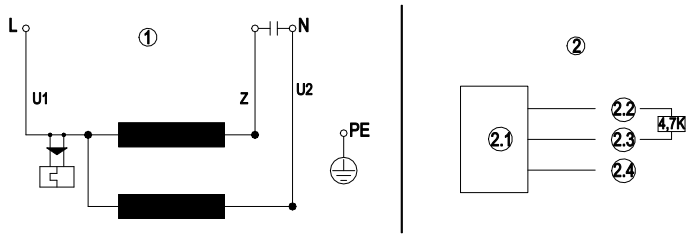
Connection diagram



1	Fan connection diagram
U1	blue
Z	brown
U2	black
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)

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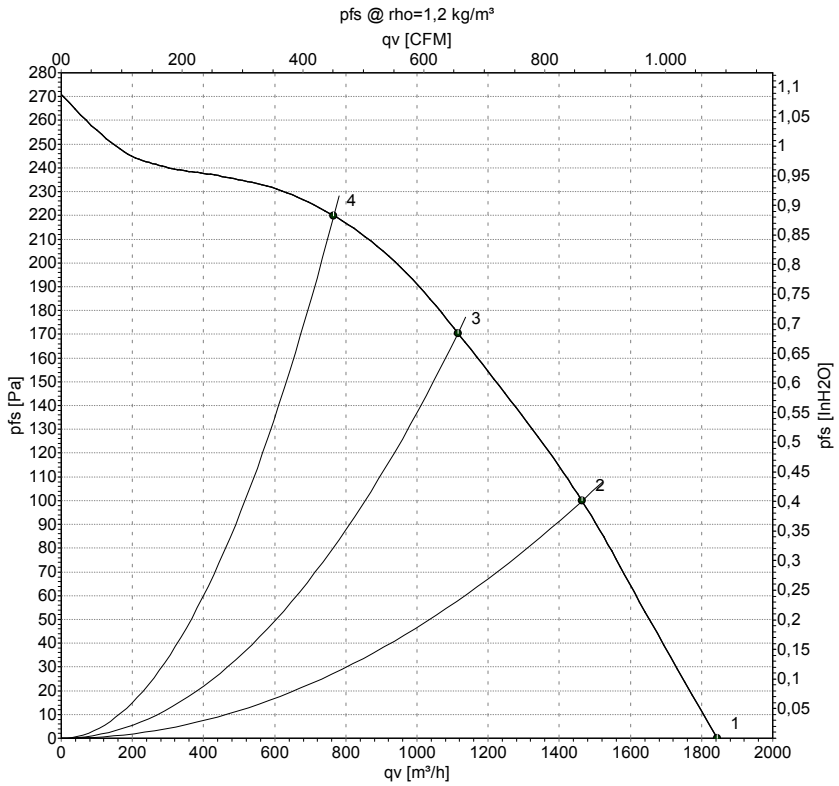
Curves: Air performance 50 Hz



Measurement: LU-28203-1

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

	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	1440	125	0.66	1845	0	1085	0.00
2	230	50	1415	140	0.71	1465	100	860	0.40
3	230	50	1415	143	0.72	1115	170	655	0.68
4	230	50	1415	141	0.71	765	220	450	0.88

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

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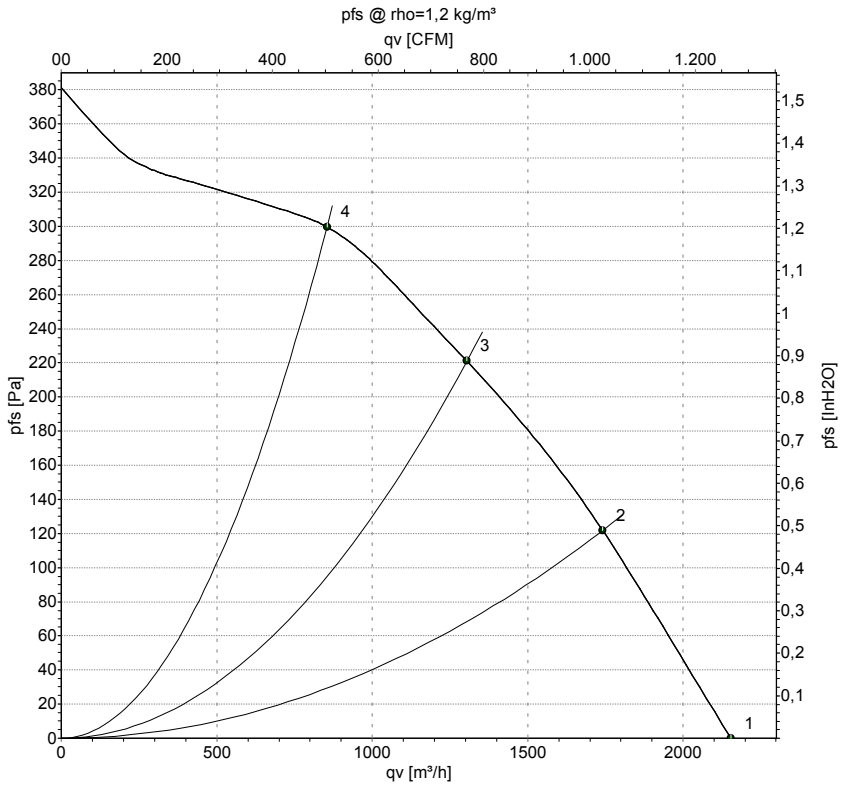
Curves: Air performance 60 Hz



Measurement: LU-28204-1

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

	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	60	1680	165	0.73	2155	0	1265	0.00
2	230	60	1635	187	0.82	1740	120	1025	0.48
3	230	60	1625	192	0.84	1305	220	770	0.88
4	230	60	1630	191	0.84	855	300	505	1.20

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