R4E280-AK53-09

AC centrifugal fan

backward-curved, single-intake

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R4E280-AK53-09**
Motor	**M4E068-DF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ce	ce
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	710	660
Power consumption	W	72	78
Current draw	A	0.33	0.35
Capacitor	µF	2	2
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (CE)
Min. back pressure	Pa	0	0
Min. back pressure	inH2O	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	65	50

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

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Technical description

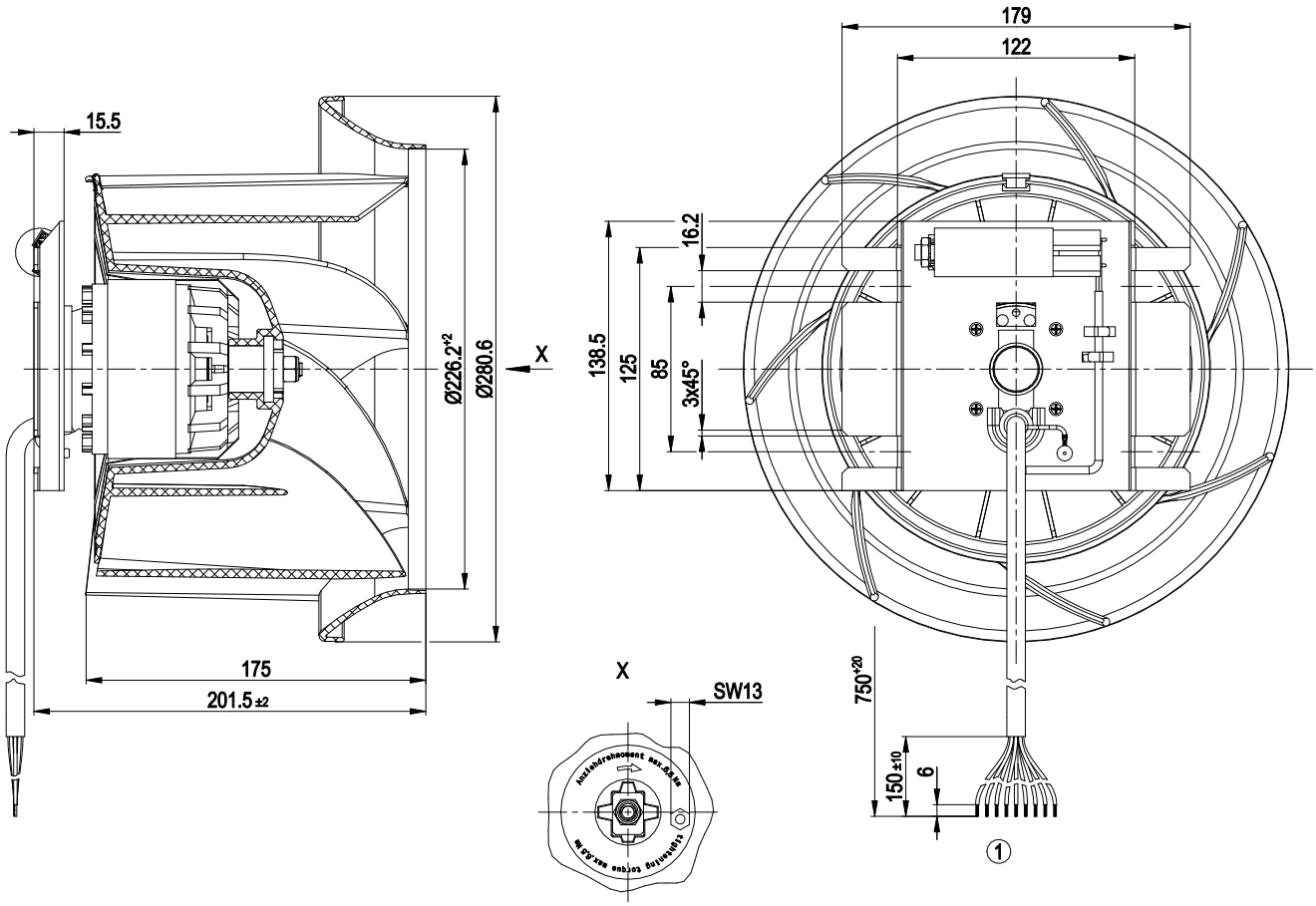
Weight	3 kg
Fan size	280 mm
Rotor surface	Painted black
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Speed levels	5
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)
Motor capacitor according to EN 60252-1 in safety protection class	S2
Conformity with standards	EN 60335-1; CE

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Product drawing



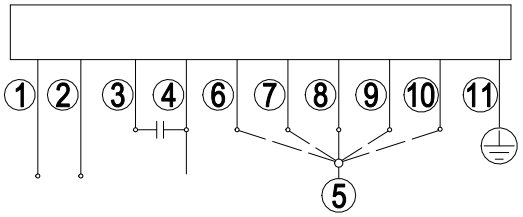
1	Cable ETFE AWG20, 9x crimped splices

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Connection diagram



Note: High speed (step 5); low speed (step 1)

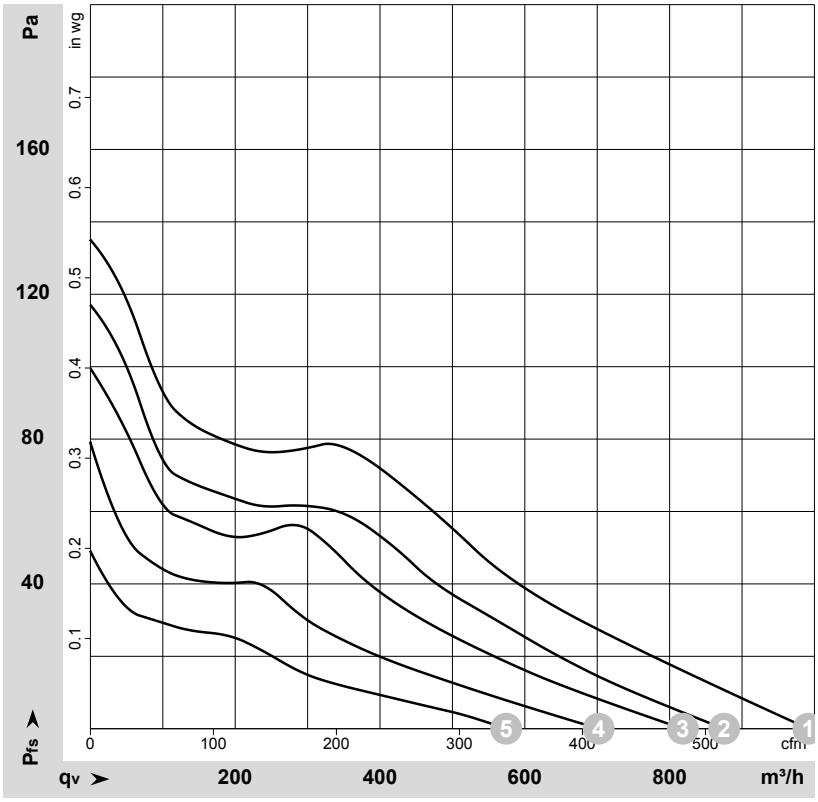
1	TOP (yellow)
2	TOP (yellow)
3	brown + capacitor
4	N (blue)
5	L1
6	Step 1 / min. (white)
7	Step 2 (red)
8	Step 3 (gray)
9	Step 4 (orange)
10	Step 5 / max. (black)
11	PE (green/yellow)

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-40281-1
Measurement: LU-40282-1
Measurement: LU-40283-1
Measurement: LU-40284-1
Measurement: LU-40285-1

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

	Stage	U	f	n	P_e	I	q_V	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	cfm	inH2O
1	5	230	50	710	72	0.33	990	585	0.00
2	4	230	50	630	64	0.28	875	515	0.00
3	3	230	50	580	59	0.26	820	480	0.00
4	2	230	50	500	53	0.24	700	415	0.00
5	1	230	50	420	46	0.22	575	340	0.00

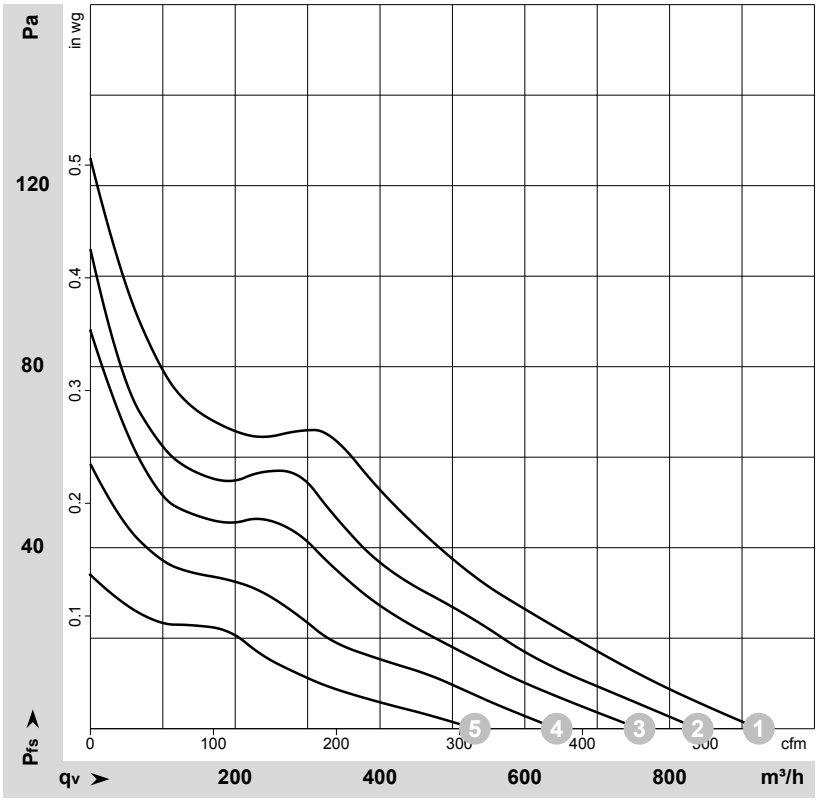
U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow

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Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-40286-1
Measurement: LU-40287-1
Measurement: LU-40288-1
Measurement: LU-40289-1
Measurement: LU-40290-1

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

	Stage	U	f	n	P_e	I	q_V	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	cfm	inH2O
1	5	230	60	660	78	0.35	925	545	0.00
2	4	230	60	590	69	0.31	840	495	0.00
3	3	230	60	545	63	0.29	760	445	0.00
4	2	230	60	475	55	0.27	645	380	0.00
5	1	230	60	395	46	0.23	530	315	0.00

U = Power supply · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow

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