R4E450-AK01-01

AC centrifugal fan

backward-curved, single-intake



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Nominal data

Type	**R4E450-AK01-01**	
Motor	**M4E110-GF**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Method of obtaining data		ml
Valid for approval/standard		-
Speed (rpm)	min^{-1}	1250
Power consumption	W	680
Current draw	A	3
Capacitor	µF	14
Capacitor voltage	VDB	400
Min. back pressure	Pa	0
Min. back pressure	inH2O	0
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	70

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

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Technical description

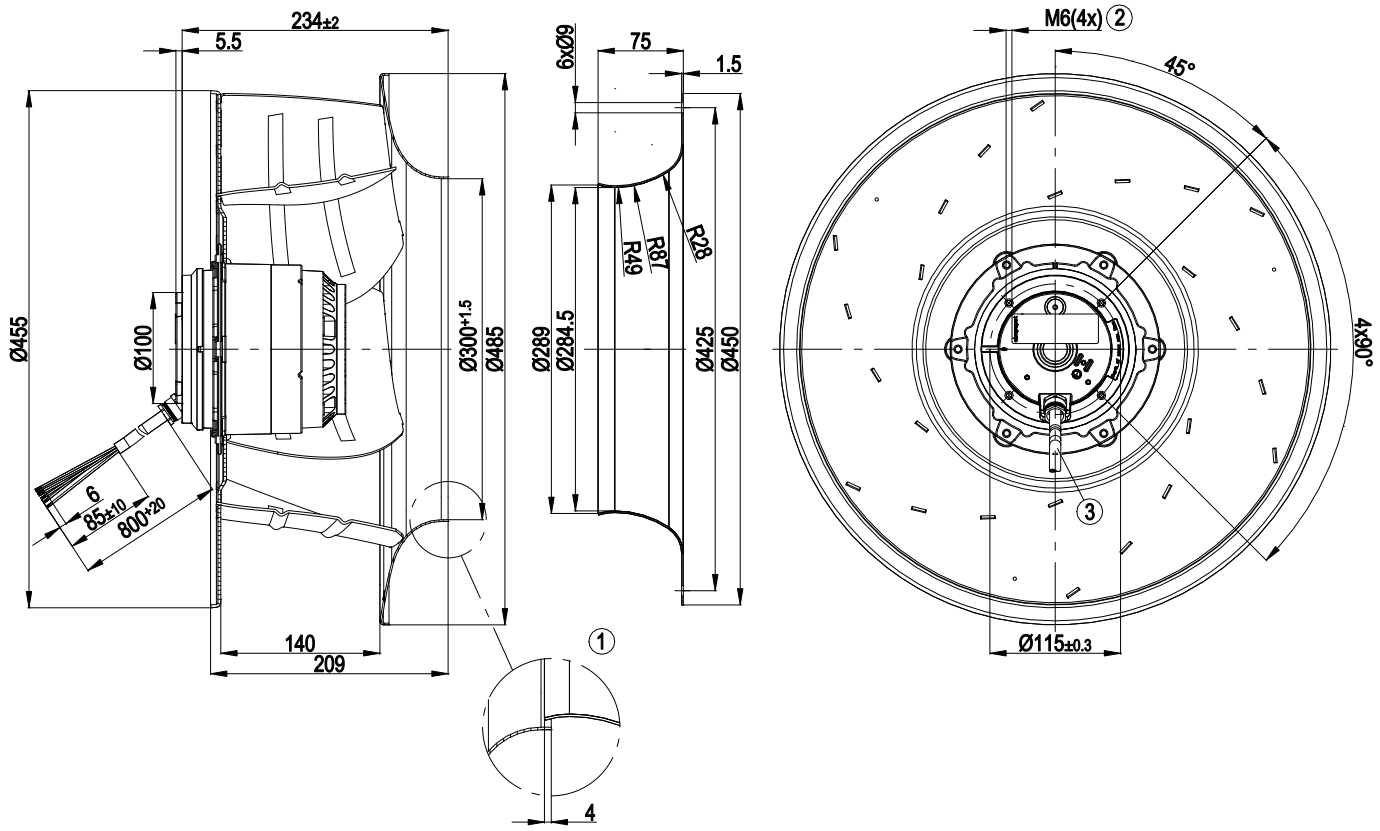
Weight	12 kg
Fan size	450 mm
Rotor surface	Cast in aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (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)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1
Approval	CSA C22.2 No. 100; UL 1004-1; VDE; EAC; CCC

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Product drawing



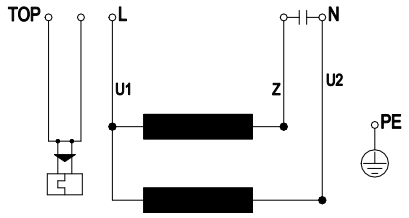
1	Accessory part: Inlet ring 63045-2-4013 not included in scope of delivery, other inlet rings on request
2	Max. clearance for screw 12 mm
3	Cable silicone 6G 0.75 mm², 6x crimped splices

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Connection diagram



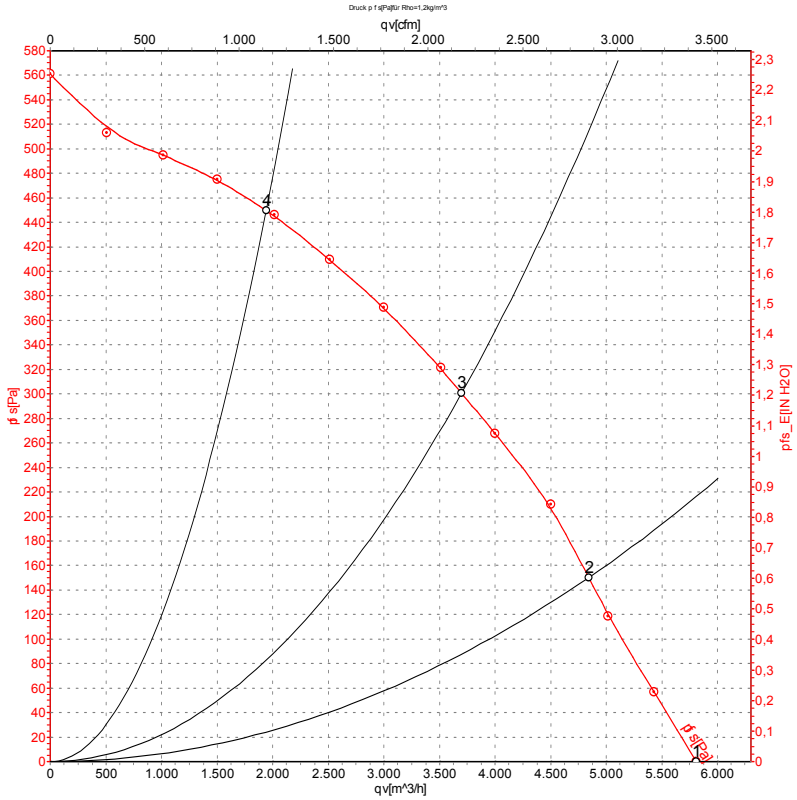
TOP	2x gray	U1	blue	Z	brown
U2	black	PE	green/yellow		

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Curves: Air performance 50 Hz



Measurement: LU-101528-1

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	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	inH2O
1	230	50	1350	574	2.51	70	78	5810	0	3420	0.00
2	230	50	1305	646	2.80	66	74	4840	150	2850	0.60
3	230	50	1250	680	3.00	62	69	3700	300	2180	1.20
4	230	50	1305	635	2.76	66	74	1940	450	1140	1.81

U = Power supply · 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

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