R4D225-AK10-06

AC centrifugal fan

forward-curved, single-intake

R4D225-AK10-06 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R4D225-AK10-06**
Motor	**M4D094-FA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Y	Y
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1350	1500
Power consumption	W	380	540
Current draw	A	0.75	0.94
Min. back pressure	Pa	0	50
Min. back pressure	inH2O	0	0.2
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	90	60
Starting current	A	2.8	2.7

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_e	%	40.3	38.4
02 Measurement category		B	
03 Efficiency category		Total	
04 Efficiency grade N		50.9	49
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.21
09 Air flow q_v	m^3/h	910
09 Pressure increase p_f	Pa	340
10 Speed (rpm) n	min^{-1}	1430
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_f / 100 000 Pa

LU-56990

ebmpapst

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Technical description

Weight	6.03 kg
Fan size	225 mm
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2004); CE
Approval	EAC

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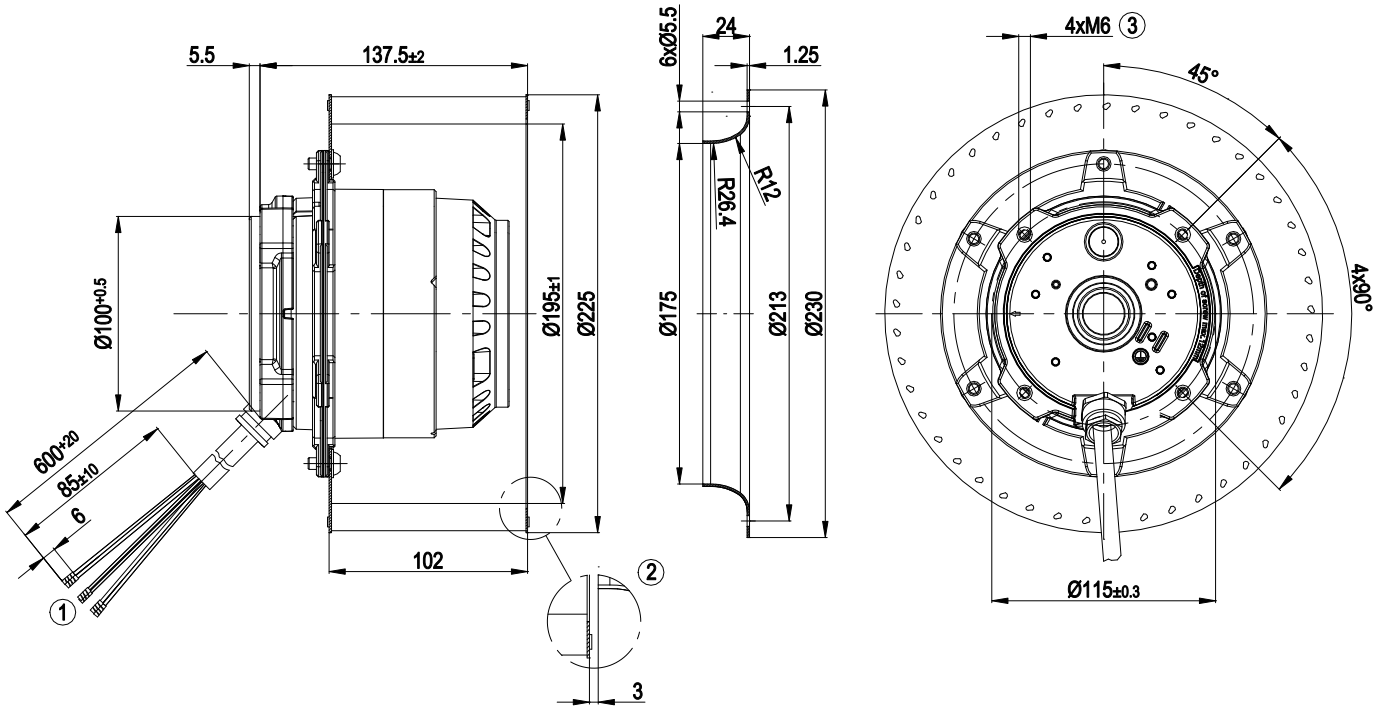
Product drawing



1	Cable silicone, 6x crimped splices
2	Accessory part: inlet ring 09605-2-4013 not included in scope of delivery
3	Max. clearance for screw 12 mm

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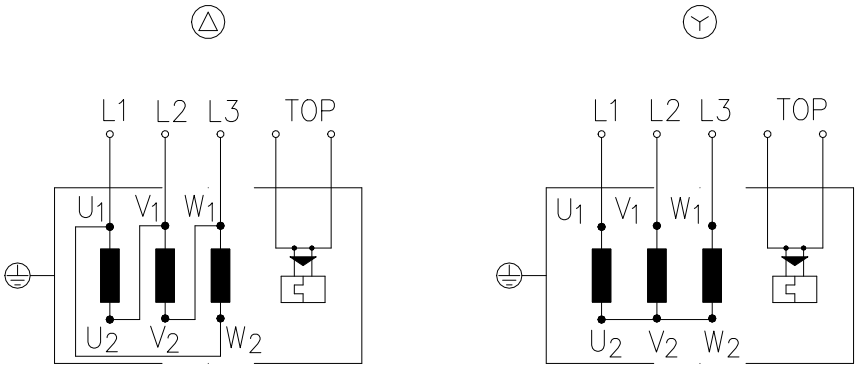
Connection diagram



Change of rotation direction by reversing two phases

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

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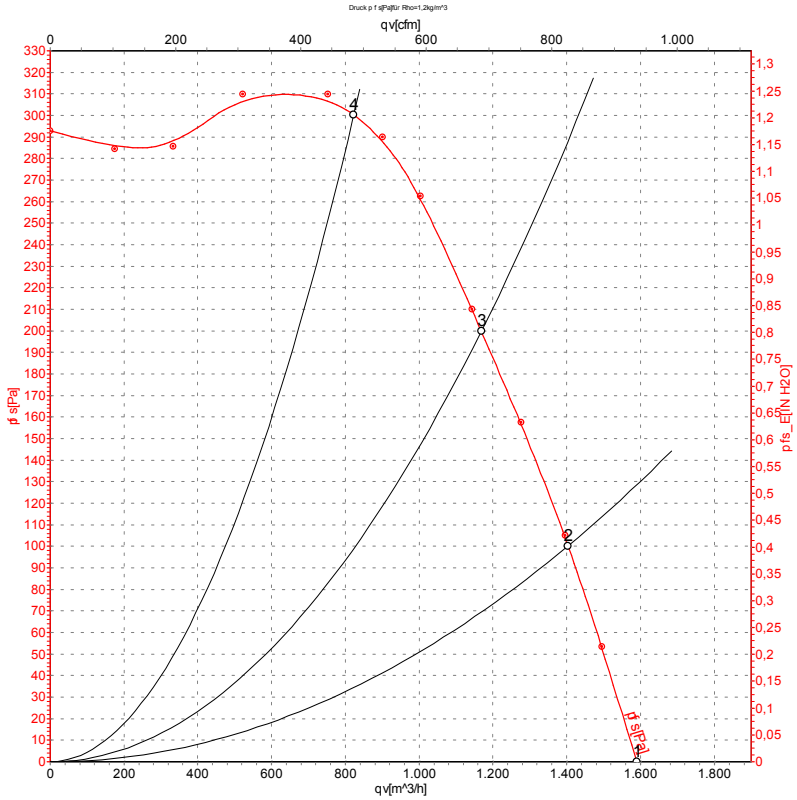
Curves: Air performance 50 Hz Y



Measurement: LU-56986-1

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	1350	380	0.75	1590	0	935	0.00
2	Y	400	50	1380	326	0.69	1405	100	825	0.40
3	Y	400	50	1405	266	0.63	1170	200	690	0.80
4	Y	400	50	1435	194	0.57	825	300	485	1.20

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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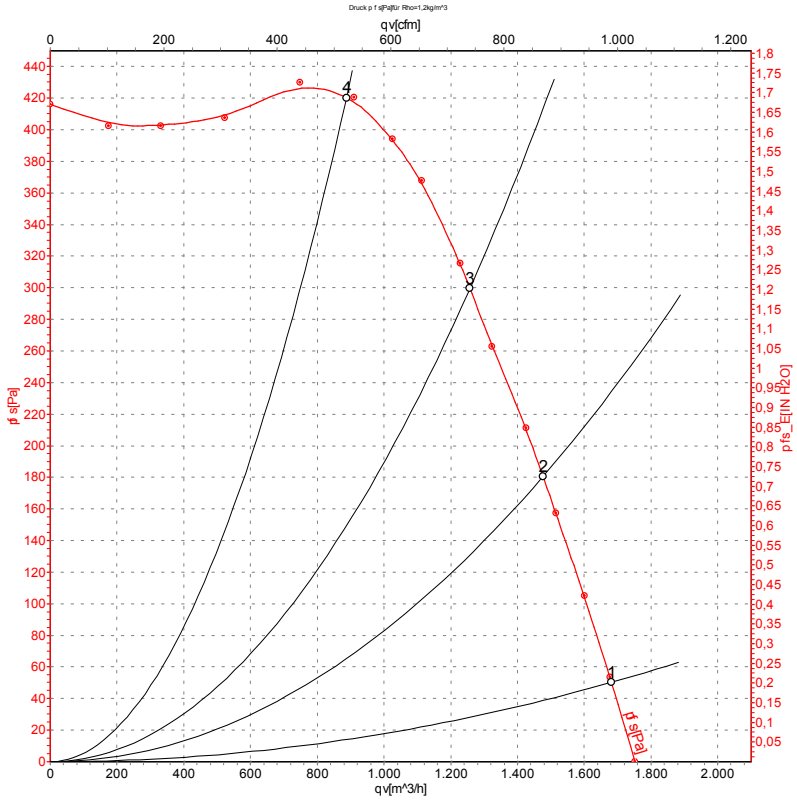
Curves: Air performance 60 Hz Y



Measurement: LU-56987-1

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	1500	540	0.94	1680	50	990	0.20
2	Y	400	60	1570	457	0.81	1475	180	870	0.72
3	Y	400	60	1615	380	0.70	1255	300	740	1.20
4	Y	400	60	1680	269	0.55	885	420	520	1.69

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