R4D400-AD22-12

AC centrifugal fan

backward-curved, single-intake

R4D400-AD22-12 ebmpapst Datasheet
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Nominal data

Type	**R4D400-AD22-12**
Motor	**M4D094-HA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Wiring		Δ	Y	Δ	Y
Frequency	Hz	60	60	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1610	1220	1670	1390
Power consumption	W	750	515	820	610
Current draw	A	1.44	0.93	1.55	0.9
Min. back pressure	Pa	0	0	0	0
Min. back pressure	inH2O	0	0	0	0
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	40	60	50
Starting current	A	4.7	1.6	6.6	2.2

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	8.7 kg
Fan size	400 mm
Rotor surface	Painted black
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	F5
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 (2010); CE
Approval	CSA C22.2 No. 100; UL 1004-1

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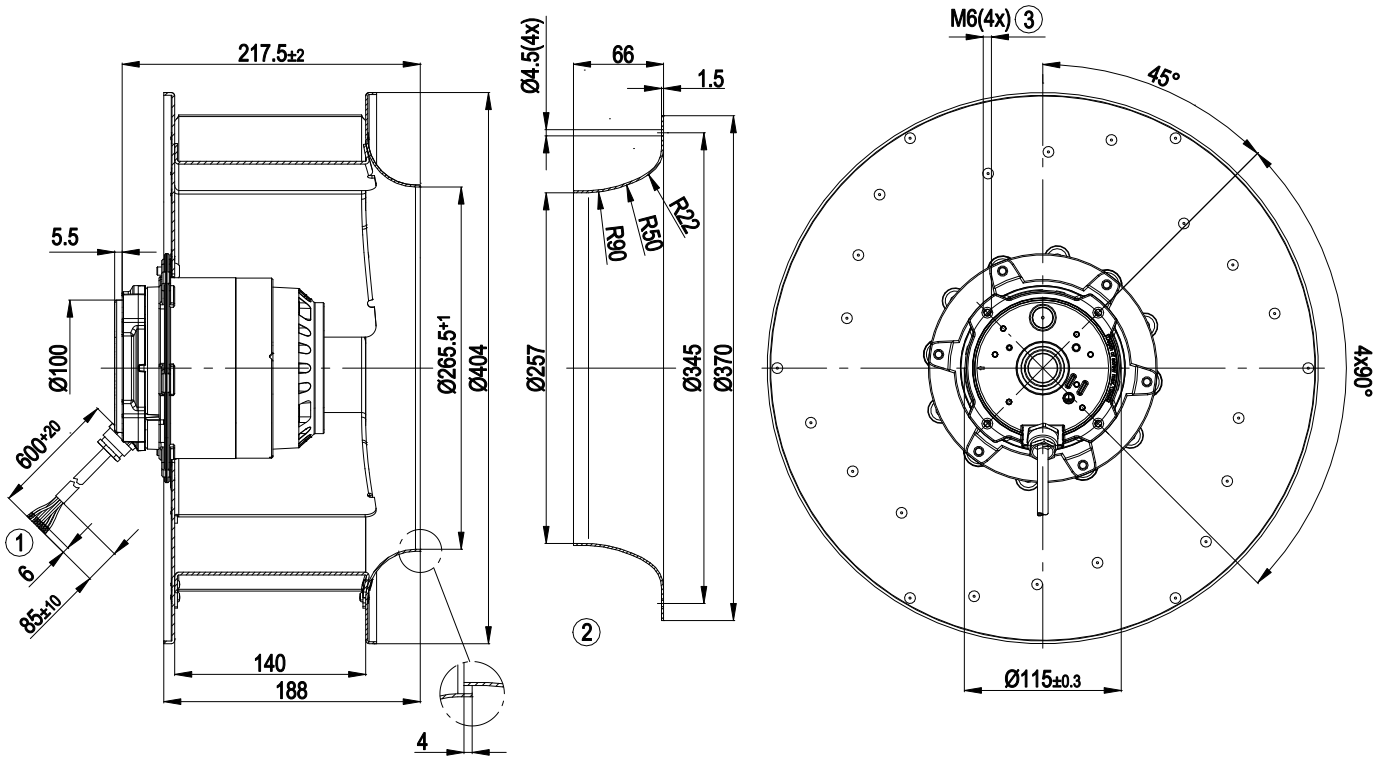
Product drawing



1	Cable PFA 9G 0.5 mm², 9 x crimped splices
2	Accessory part: Inlet ring 54476-2-4013, not included in scope of delivery, other inlet rings on request
3	Max. clearance for screw 12 mm

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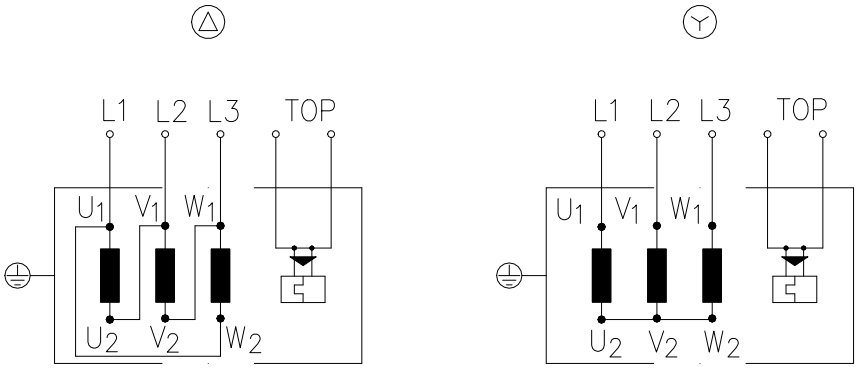
Connection diagram



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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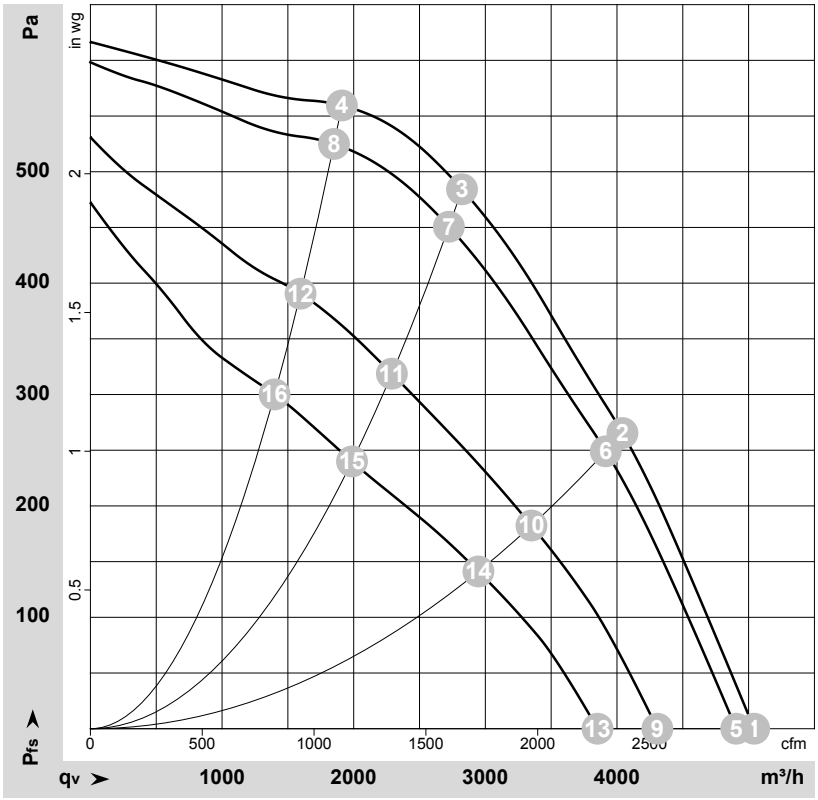
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-104794-1
Measurement: LU-104787-1
Measurement: LU-104600-1
Measurement: LU-104598-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Δ	480	60	1690	709	1.33	5040	0	2970	0.00
2	Δ	480	60	1675	776	1.38	4040	267	2380	1.07
3	Δ	480	60	1670	820	1.55	2825	486	1660	1.95
4	Δ	480	60	1680	746	1.34	1910	562	1125	2.26
5	Δ	400	60	1650	651	1.22	4905	0	2890	0.00
6	Δ	400	60	1625	716	1.30	3915	250	2305	1.00
7	Δ	400	60	1610	750	1.44	2725	450	1605	1.81
8	Δ	400	60	1630	684	1.24	1850	525	1090	2.11
9	Y	480	60	1425	560	0.81	4305	0	2535	0.00
10	Y	480	60	1380	600	0.87	3350	183	1970	0.73
11	Y	480	60	1390	610	0.90	2290	319	1350	1.28
12	Y	480	60	1405	574	0.83	1595	392	940	1.57
13	Y	400	60	1275	480	0.85	3850	0	2265	0.00
14	Y	400	60	1215	502	0.89	2945	142	1735	0.57
15	Y	400	60	1220	515	0.93	1985	240	1170	0.96
16	Y	400	60	1230	485	0.86	1400	301	825	1.21

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