D2E146-HR93-A1

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

Nominal data

Type	**D2E146-HR93-A1**
Motor	**M2E068-CF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		fa	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	1030	1630
Power input	W	140	145
Current draw	A	0.62	0.65
Motor capacitor	µF	3.5	3.5
Capacitor voltage	VDB	400	400
Capacitor standard		P2 (CE)	P2 (CE)
Min. back pressure	Pa	0	150
Max. ambient temperature	°C	50	45
Starting current	A	0.65	0.67

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

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Technical features

Mass	2.6 kg
Size	146 mm
Material of terminal box	PP plastic, black
Material of impeller	PP plastic, white
Housing material	PP plastic, black
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 20; Depending on installation and position
Insulation class	"F"
Humidity class	F0
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Motor bearing	Ball bearing
Speed steps	4
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	Via terminal box, integrated capacitor connected via terminal box; With plug
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	VDE; GOST

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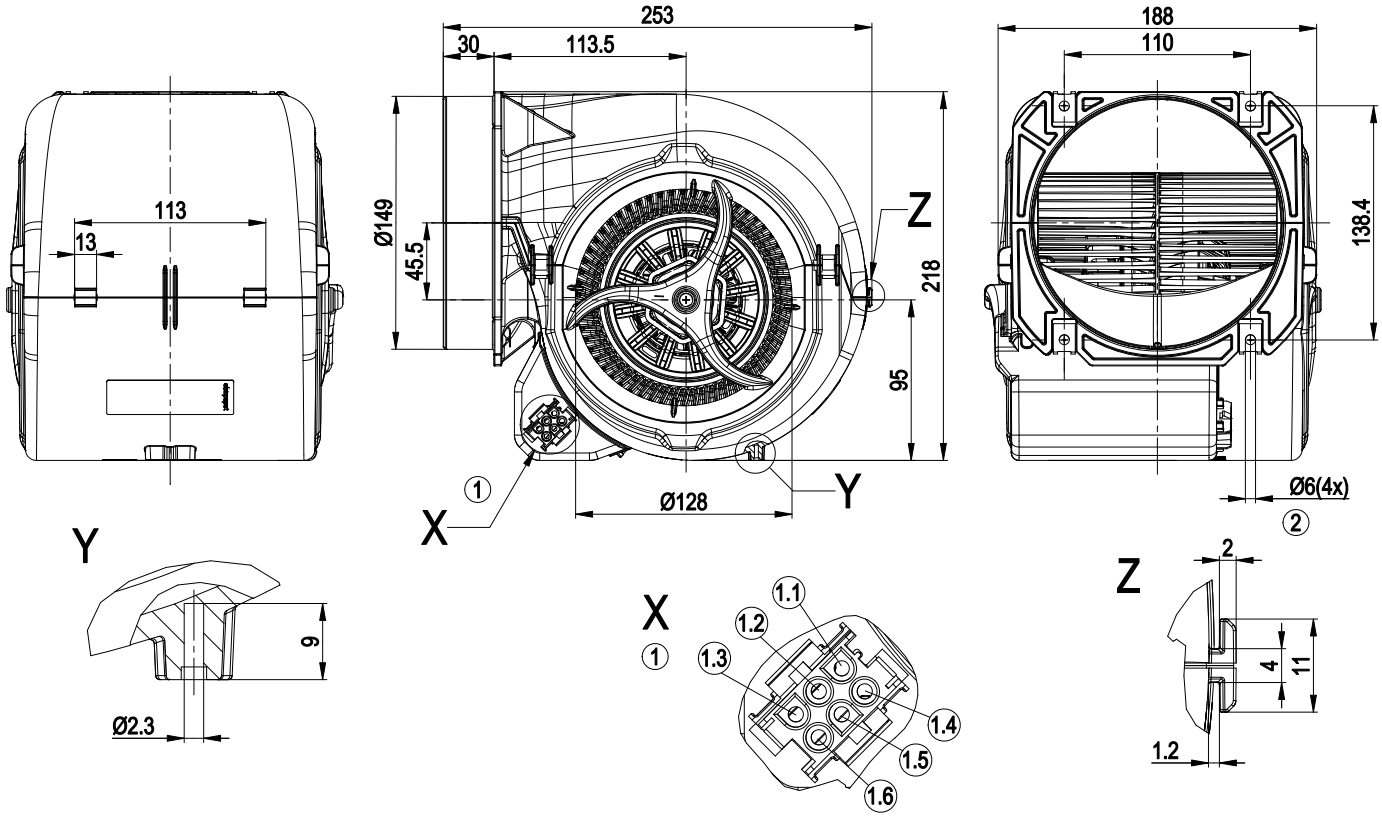
Product drawing



1	AMP Universal Mate-N-Lok coded plug system; connector shell: AMP 926 682-3; 6x plug pin AMP 926 886-1
1.1	L = step 1
1.2	L = step 2
1.3	L = step 3
1.4	L = step 4
1.5	N
1.6	Protective earth
2	4 x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material)

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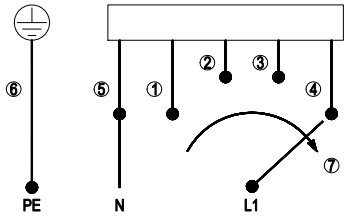
Connection screen



When changing speeds, switch must break the circuit

1	Step 1 (min.)	2	Step 2	3	Step 3
4	Step 4 (max.)	5	N	6	PE protective earth
7	Speed increase				

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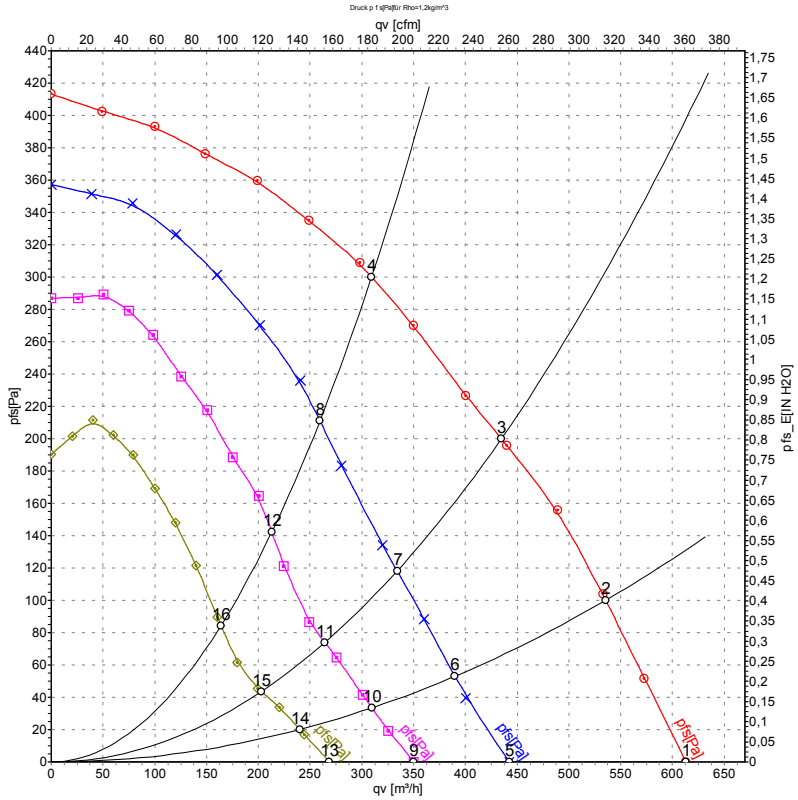
Charts: Air flow 50 Hz



Measurement: LU-134210
Measurement: LU-134212
Measurement: LU-134214
Measurement: LU-134219

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1030	140	0.62	48	60	615	0
2	230	50	1425	133	0.58	47	60	535	100
3	230	50	1840	125	0.55	50	62	435	200
4	230	50	2220	112	0.50	54	67	310	300
5	230	50	850	100	0.47			440	0
6	230	50	1050	96	0.46			390	52
7	230	50	1415	93	0.45			335	118
8	230	50	1845	85	0.42			260	211
9	230	50	605	83	0.41			350	0
10	230	50	840	81	0.40			310	33
11	230	50	1130	79	0.39			265	74
12	230	50	1520	74	0.38			215	142
13	230	50	480	72	0.36			270	0
14	230	50	665	72	0.36			240	20
15	230	50	880	70	0.35			205	43
16	230	50	1175	68	0.35			165	84

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
p_{fs} = Pressure increase

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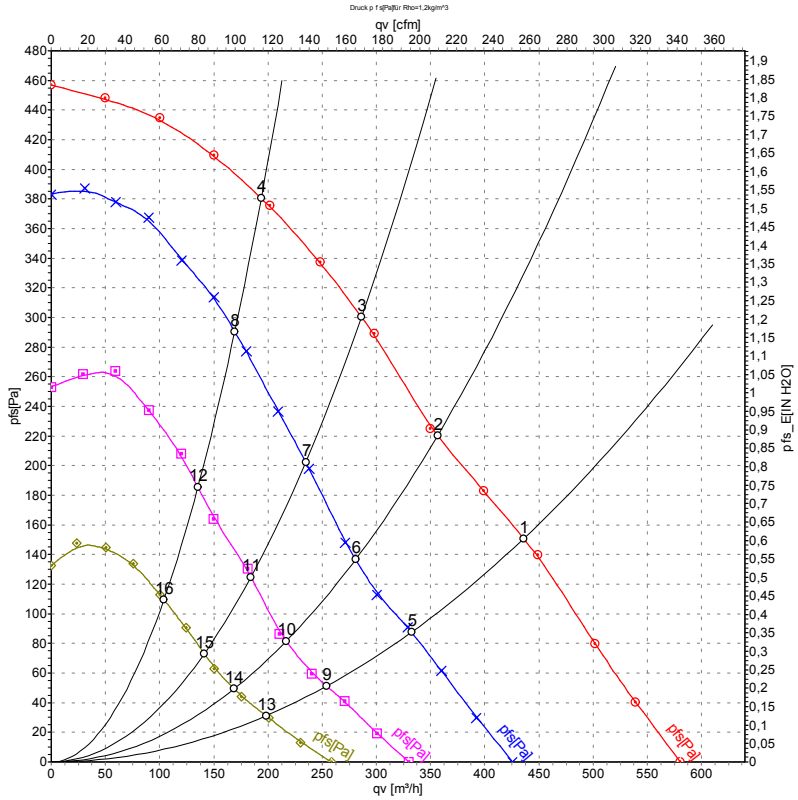
Charts: Air flow 60 Hz



Measurement: LU-134220
Measurement: LU-134223
Measurement: LU-134224
Measurement: LU-134225

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	60	1630	145	0.65	48	60	435	150
2	230	60	1905	144	0.63	51	64	355	220
3	230	60	2210	141	0.62	54	67	285	300
4	230	60	2465	139	0.61	58	71	195	380
5	230	60	1225	102	0.51			330	88
6	230	60	1505	101	0.51			280	137
7	230	60	1815	98	0.50			235	203
8	230	60	2160	92	0.49			170	290
9	230	60	960	83	0.44			255	51
10	230	60	1180	82	0.44			215	81
11	230	60	1440	80	0.43			185	126
12	230	60	1745	77	0.43			135	186
13	230	60	755	71	0.39			200	31
14	230	60	925	71	0.39			170	49
15	230	60	1105	68	0.38			140	73
16	230	60	1350	69	0.39			105	110

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
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