D2E146-HS45-A4

AC centrifugal fan

forward curved, dual inlet

with housing (flange)

D2E146-HS45-A4 ebmpapst Datasheet
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County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**D2E146-HS45-A4**
Motor	**M2E068-DF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		ml	ml
Valid for approval / standard		CE	CE
Speed	min^{-1}	2050	2000
Power input	W	240	290
Current draw	A	1.05	1.28
Motor capacitor	µF	7	7
Capacitor voltage	VDB	400	400
Capacitor standard		P2 (CE)	P2 (CE)
Min. back pressure	Pa	200	185
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	45

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	3 kg
Size	146 mm
Surface of rotor	Uncoated
Material of terminal box	PP plastic, black
Material of impeller	PP plastic, white
Housing material	PP plastic, black
Motor suspension	Motor mounted anti-vibration on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 20
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
Operation mode	S1
Motor bearing	Calotte bearing
Speed steps	3
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	Capacitor mounted; 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 60335-2-31; CE

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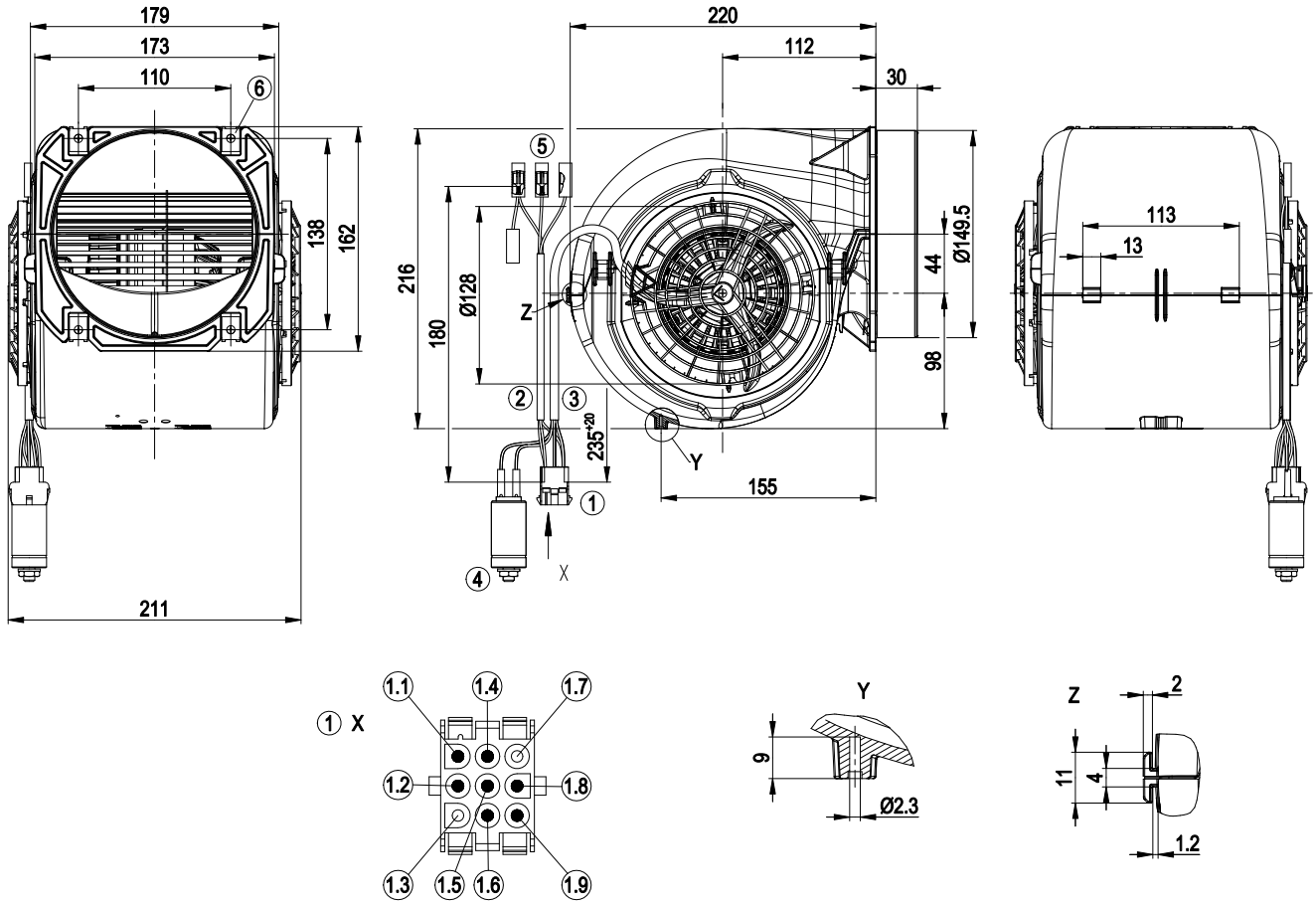
Product drawing



1	1x Tyco connector housing 927231-1, 7x Tyco plug pin 926887-1
1.1	L (brown)
1.2	N (blue)
1.3	not used
1.4	N -motor- (blue)
1.5	L Level 3 -motor- (black)
1.6	L Level 2 -motor- (grey)
1.7	not used
1.8	L Level 1 -motor- (white)
1.9	PE (green/yellow)
2	Connection line ETFE AWG18, 3x Stocko RSB threaded pin 8160 158, 1x AMP threaded pin 3-160256-1, 4x AMP connector housing 1-735075-0
3	Connection line ETFE 6x AWG22, 1x AWG20
4	operating capacitor
5	Separate customer connection for additional consumer (L, N, 2x PE), 4x threaded pin 6.3x0.8, 4x Tyco receptacle housing 1-735075-0
6	4x 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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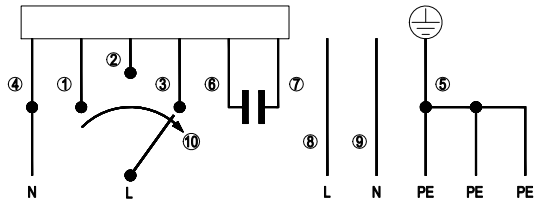
Connection screen



When changing speeds, the switch must break the circuit.

1	Level 1 (min.)	2	Level 2	3	Level 3 (max.)
4	N	5	PE protective earth	6	operating capacitor
7	operating capacitor	8	L	9	N
10	Speed increase				

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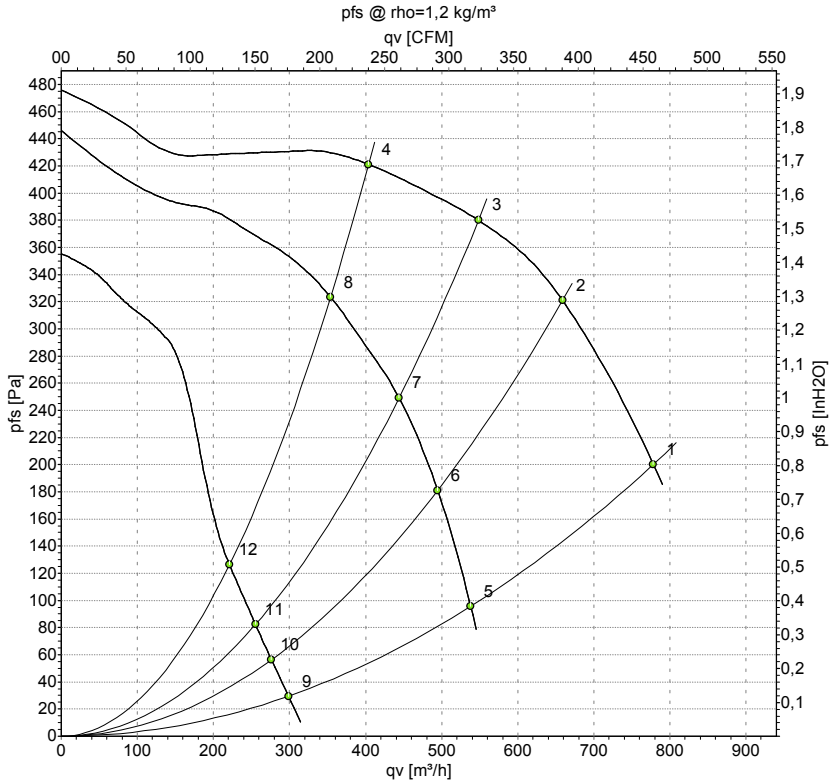
Charts: Air flow 50 Hz



Measurement: LU-153610
Measurement: LU-153613
Measurement: LU-153615

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	2050	240	1.05	780	200
2	230	50	2270	214	0.94	660	320
3	230	50	2415	197	0.87	550	380
4	230	50	2540	177	0.79	405	420
5	230	50	1435	185	0.86	540	99
6	230	50	1725	173	0.82	495	183
7	230	50	1975	159	0.78	445	251
8	230	50	2250	139	0.71	355	324
9	230	50	820	148	0.70	300	29
10	230	50	980	145	0.69	275	56
11	230	50	1155	142	0.68	255	82
12	230	50	1450	135	0.66	220	126

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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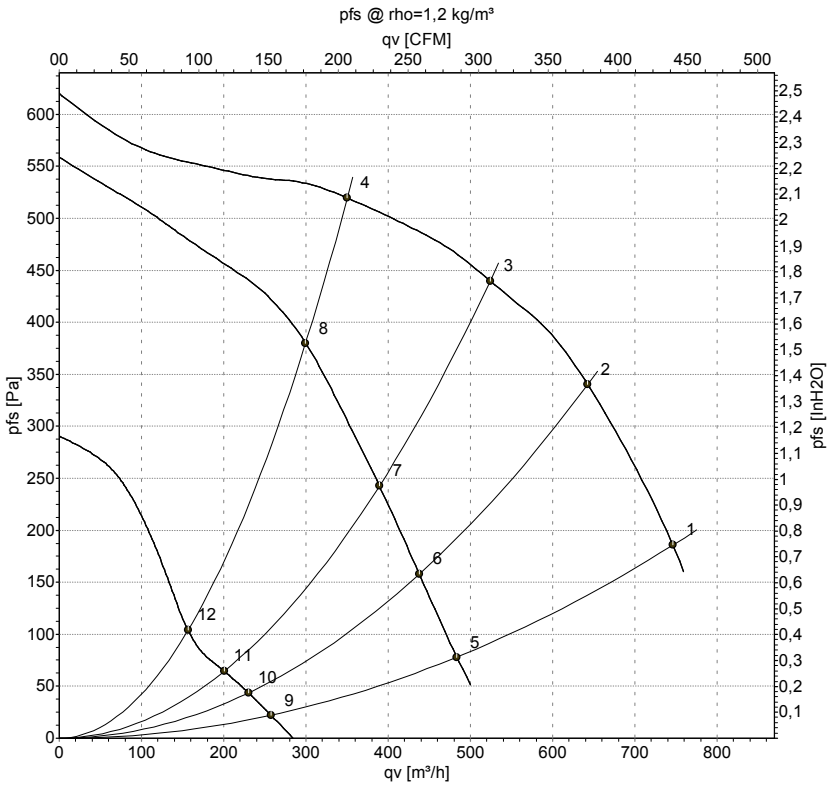
Charts: Air flow 60 Hz



Measurement: LU-153979
Measurement: LU-153980
Measurement: LU-153981

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	60	2000	290	1.28	745	185
2	230	60	2335	278	1.23	645	340
3	230	60	2580	266	1.19	525	440
4	230	60	2895	245	1.12	350	520
5	230	60	1300	193	0.94	485	77
6	230	60	1610	190	0.93	440	158
7	230	60	1940	183	0.92	390	243
8	230	60	2485	162	0.88	300	384
9	230	60	725	145	0.73	260	22
10	230	60	880	142	0.73	230	44
11	230	60	1035	140	0.72	200	65
12	230	60	1275	139	0.72	155	98

U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase