D2E146-KB27-13

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

D2E146-KB27-13 ebmpapst Datasheet
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Nominal data

Type	**D2E146-KB27-13**
Motor	**M2E068-CF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		fa	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1250	1950
Power consumption	W	140	150
Current draw	A	0.62	0.66
Capacitor	µF	3.5	3.5
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (CE)
Min. back pressure	Pa	0	200
Min. back pressure	inH2O	0	0.8
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	45	45
Starting current	A	0.63	0.66

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	2.8 kg
Fan size	146 mm
Rotor surface	Unpainted
Terminal box material	PP plastic, black
Impeller material	PA plastic, galvanized sheet-metal plate
Housing material	PP plastic, black
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
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
Speed levels	4
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Via terminal box, capacitor integrated and connected; With plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Motor capacitor according to EN 60252-1 in safety protection class	S2
Conformity with standards	EN 60335-1; CE

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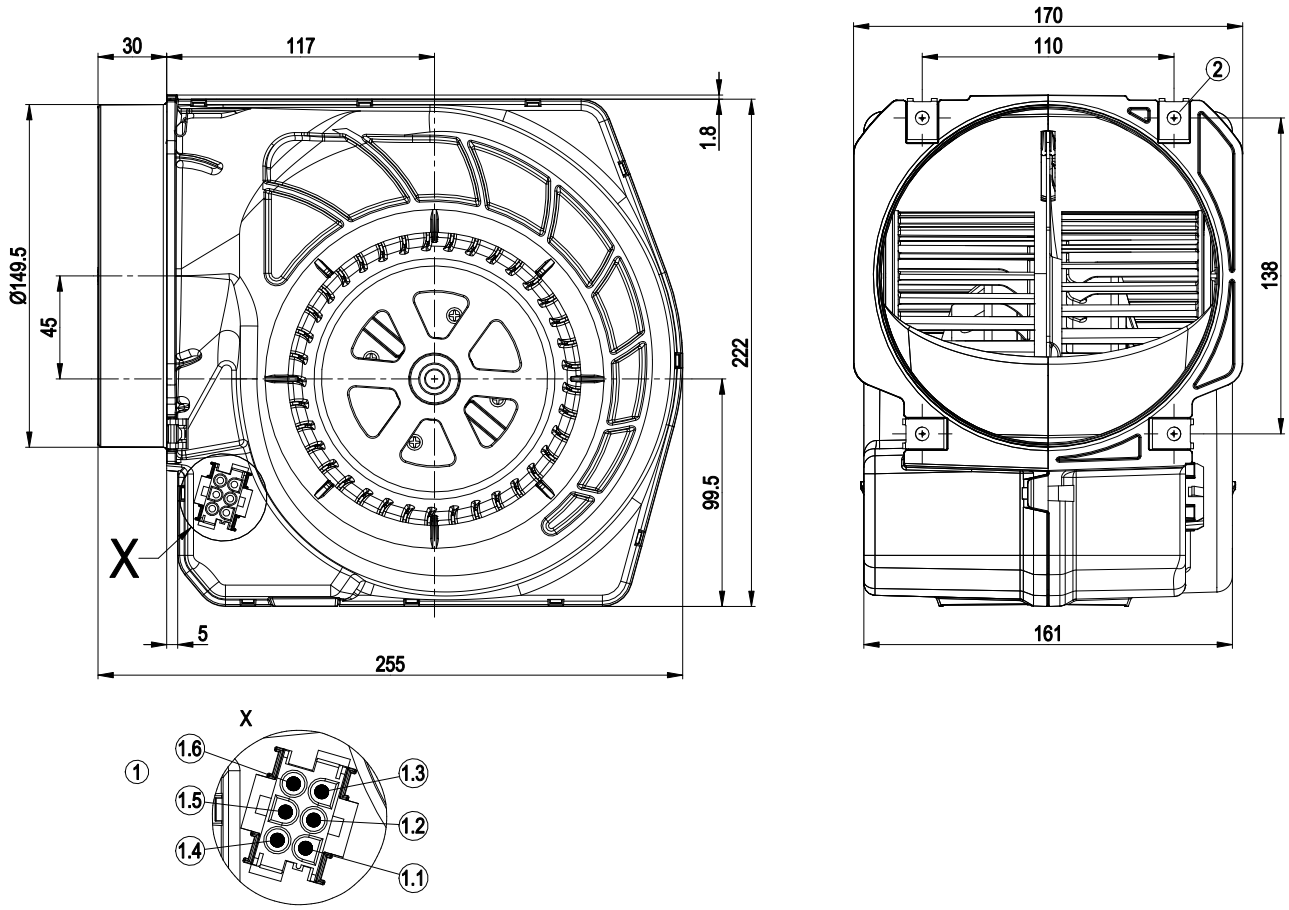
Product drawing



1	Coded plug system Tyco Universal-Mate-N-Lok; connector housing: Tyco 926682-3; 6x plug pin Tyco 926886-1
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 (screw length at least 14.5 mm plus thickness of mounting material)

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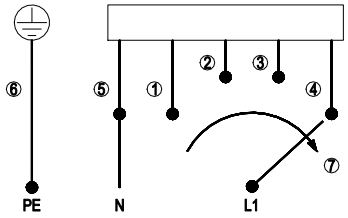
Connection diagram



The switch must interrupt the circuit when switching.

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

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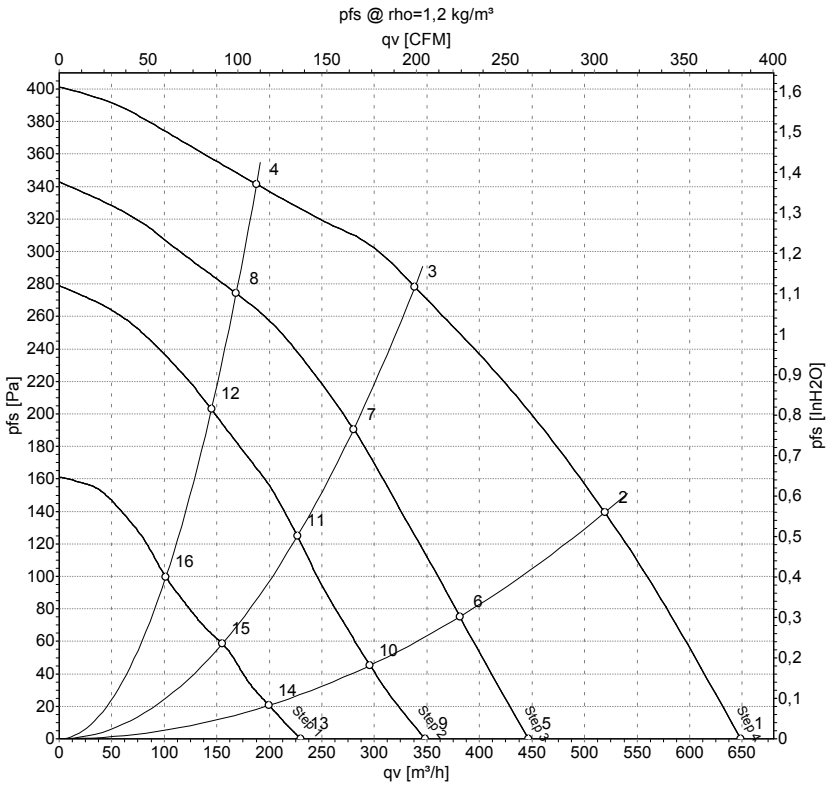
Curves: Air performance 50 Hz



Measurement: LU-151125-1
Measurement: LU-151622-1
Measurement: LU-151626-1
Measurement: LU-151630-1

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

	Stage	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	4	230	50	1250	140	0.62	54	68	650	0	380	0.00
2	4	230	50	1710	131	0.57	56	69	520	140	305	0.56
3	4	230	50	2205	114	0.50	57	70	340	280	200	1.12
4	4	230	50	2440	103	0.45	59	71	190	340	110	1.36
5	3	230	50	915	96	0.45	46	60	445	0	265	0.00
6	3	230	50	1270	92	0.44	49	62	380	75	225	0.30
7	3	230	50	1840	82	0.41	53	65	280	192	165	0.77
8	3	230	50	2185	71	0.38	57	69	170	274	100	1.10
9	2	230	50	715	80	0.39	41	53	350	0	205	0.00
10	2	230	50	1000	77	0.38	44	56	295	45	175	0.18
11	2	230	50	1500	72	0.37	48	60	225	125	135	0.50
12	2	230	50	1880	65	0.35	53	65	145	203	85	0.81
13	1	230	50	495	64	0.33	30	42	230	0	135	0.00
14	1	230	50	685	63	0.32	34	45	200	21	120	0.08
15	1	230	50	1020	61	0.32	38	50	155	59	90	0.24
16	1	230	50	1345	58	0.31	44	55	100	99	60	0.40

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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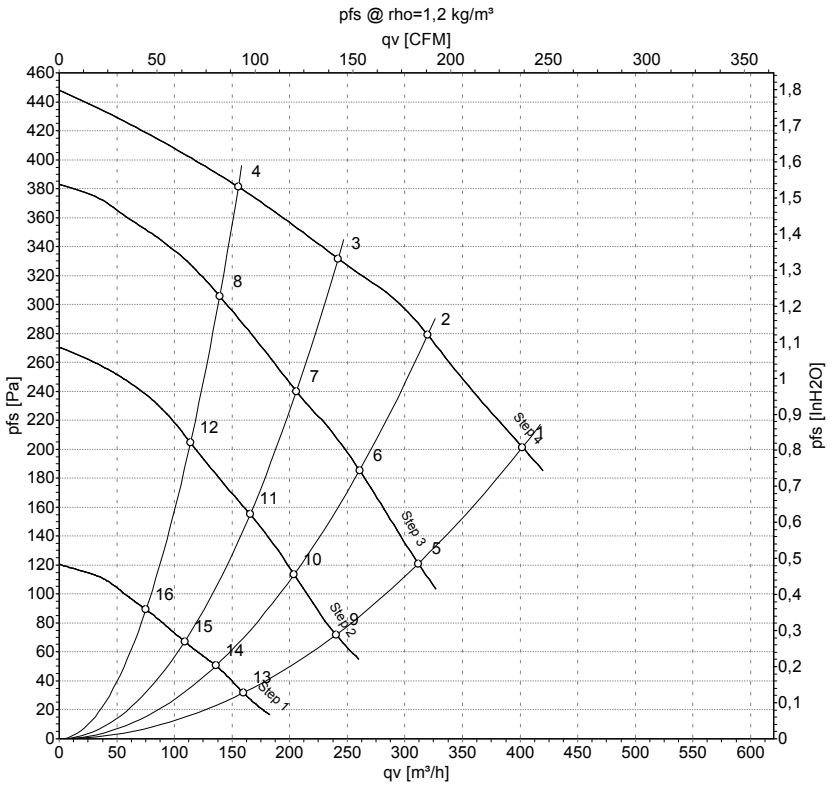
Curves: Air performance 60 Hz



Measurement: LU-151634-1
Measurement: LU-151640-1
Measurement: LU-151644-1
Measurement: LU-151646-1

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

	Stage	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	4	230	60	1950	150	0.66	55	68	400	200	235	0.80
2	4	230	60	2160	144	0.63	57	70	320	280	190	1.12
3	4	230	60	2380	142	0.62	59	71	240	330	140	1.32
4	4	230	60	2575	137	0.61	61	73	155	380	90	1.53
5	3	230	60	1505	97	0.50	50	63	310	121	185	0.49
6	3	230	60	1815	92	0.49	52	65	260	186	155	0.75
7	3	230	60	2075	89	0.49	55	67	205	239	120	0.96
8	3	230	60	2300	87	0.48	57	69	140	306	80	1.23
9	2	230	60	1180	79	0.43	45	57	240	71	140	0.29
10	2	230	60	1420	75	0.42	48	60	205	113	120	0.45
11	2	230	60	1660	74	0.42	50	62	165	155	100	0.62
12	2	230	60	1895	73	0.42	53	65	115	204	65	0.82
13	1	230	60	795	62	0.36	36	47	160	31	95	0.12
14	1	230	60	950	60	0.35	39	50	135	51	80	0.20
15	1	230	60	1105	60	0.35	42	53	110	67	65	0.27
16	1	230	60	1275	60	0.35	46	57	75	90	45	0.36

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