D4E146-LV55-01

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)



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Nominal data

Type	**D4E146-LV55-01**
Motor	**M4E068-CF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		fa	fa
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	780	710
Power consumption	W	65	68
Current draw	A	0.29	0.30
Capacitor	µF	2	2
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (CE)
Min. back pressure	Pa	0	0
Min. back pressure	inH2O	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	40
Starting current	A	0.33	0.33

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	2.55 kg
Fan size	146 mm
Rotor surface	Unpainted
Terminal box material	PP plastic
Impeller material	PA plastic
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44
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	5
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	With plug; Via terminal box, capacitor integrated and connected
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Axial
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

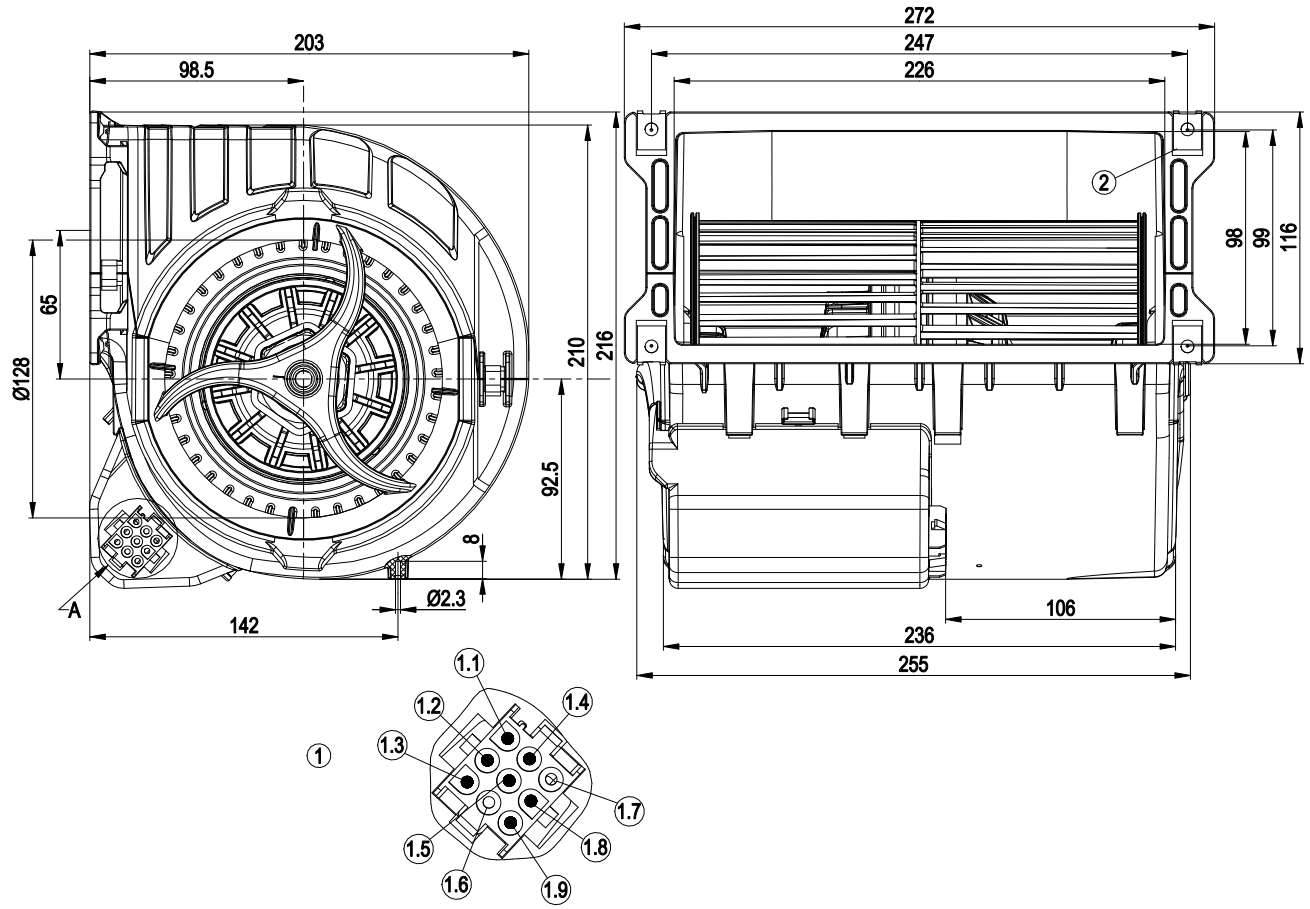
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Product drawing



1	Coded plug system: 9-pole connector housing tyco 927231-5, 7x plug pin tyco 926886-1
1.1	Step 1 (min.)
1.2	Step 2
1.3	Step 3
1.4	Step 4
1.5	Step 5 (max.)
1.6	-
1.7	-
1.8	N
1.9	Protective earth
2	4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus material thickness of attachment)

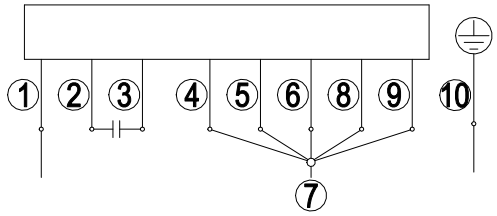
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Connection diagram



Note: High speed (step V); low speed (step I)

1	= N = blue	2	brown	3	yellow
4	Step I white	5	Step II red	6	Step III gray
7	L1	8	Step IV orange	9	Step V black
10	PE				

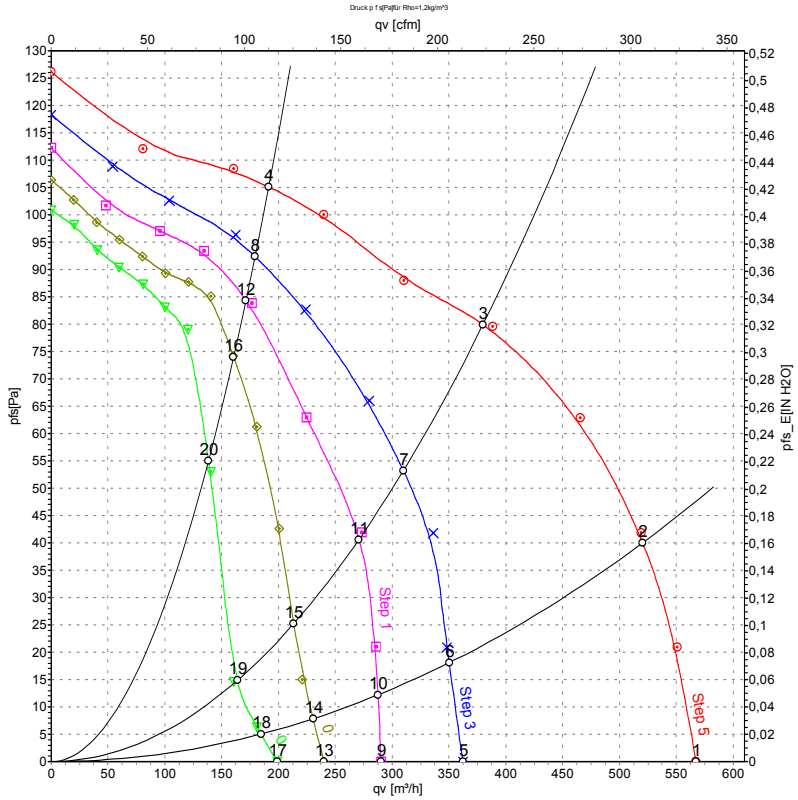
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Curves: Air performance 50 Hz



Measurement: LU-58986-1
Measurement: LU-58988-1
Measurement: LU-58990-1
Measurement: LU-58992-1
Measurement: LU-58994-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	5	230	50	780	65	0.29	565	0	335	0.00
2	5	230	50	1055	57	0.25	520	40	305	0.16
3	5	230	50	1270	47	0.20	380	80	225	0.32
4	5	230	50	1380	39	0.17	190	105	110	0.42
5	4	230	50	530	53	0.23	360	0	215	0.00
6	4	230	50	740	50	0.23	350	18	205	0.07
7	4	230	50	1055	43	0.20	310	53	180	0.21
8	4	230	50	1310	33	0.15	180	93	105	0.37
9	3	230	50	430	48	0.22	290	0	170	0.00
10	3	230	50	595	47	0.21	285	14	170	0.06
11	3	230	50	930	43	0.20	270	43	160	0.17
12	3	230	50	1240	32	0.15	170	85	100	0.34
13	2	230	50	365	45	0.21	240	0	140	0.00
14	2	230	50	480	45	0.20	230	7	135	0.03
15	2	230	50	720	42	0.19	215	25	125	0.10
16	2	230	50	1185	32	0.15	160	74	95	0.30
17	1	230	50	300	43	0.20	200	0	115	0.00
18	1	230	50	405	43	0.19	185	5	110	0.02
19	1	230	50	570	42	0.19	165	13	95	0.05
20	1	230	50	1105	32	0.16	140	56	80	0.22

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

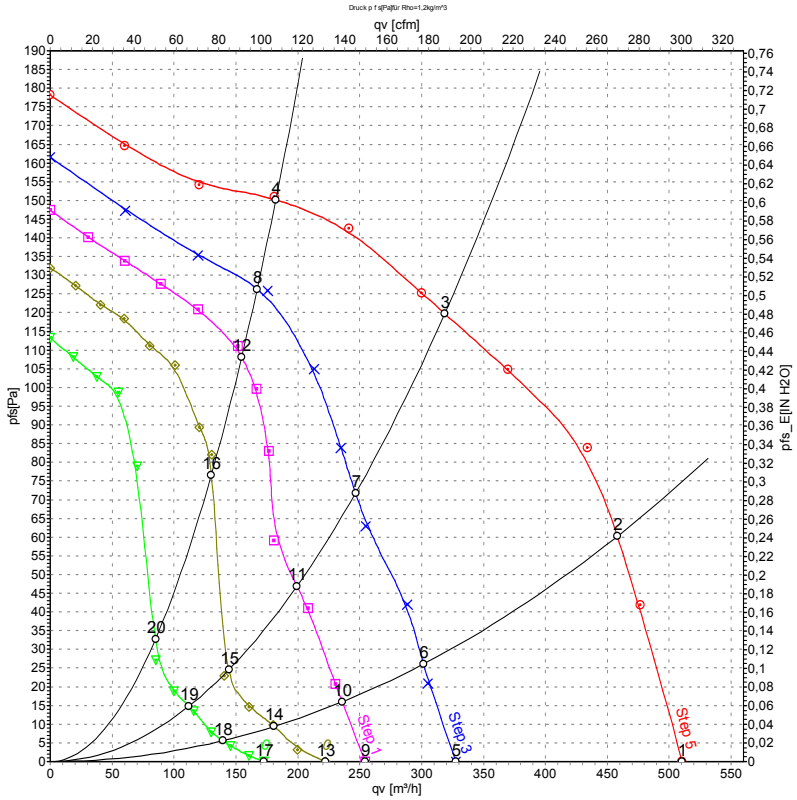
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Curves: Air performance 60 Hz



Measurement: LU-58987-1
Measurement: LU-58989-1
Measurement: LU-58991-1
Measurement: LU-58993-1
Measurement: LU-58995-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	5	230	60	710	68	0.30	510	0	300	0.00
2	5	230	60	1160	63	0.28	460	60	270	0.24
3	5	230	60	1505	53	0.24	320	120	190	0.48
4	5	230	60	1655	44	0.21	180	150	105	0.60
5	4	230	60	480	52	0.24	330	0	195	0.00
6	4	230	60	740	51	0.24	300	26	180	0.10
7	4	230	60	1180	46	0.22	245	72	145	0.29
8	4	230	60	1525	35	0.19	165	127	100	0.51
9	3	230	60	385	47	0.22	255	0	150	0.00
10	3	230	60	580	46	0.22	235	16	140	0.06
11	3	230	60	940	44	0.21	200	47	115	0.19
12	3	230	60	1430	34	0.18	155	109	90	0.44
13	2	230	60	310	43	0.20	220	0	130	0.00
14	2	230	60	480	42	0.20	180	10	105	0.04
15	2	230	60	675	42	0.20	145	21	85	0.08
16	2	230	60	1290	34	0.18	130	82	75	0.33
17	1	230	60	260	40	0.19	170	0	100	0.00
18	1	230	60	400	40	0.19	140	6	80	0.02
19	1	230	60	555	39	0.19	110	15	65	0.06
20	1	230	60	805	38	0.19	85	28	50	0.11

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

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