D4E146-LV11-31

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Nominal data

Type	**D4E146-LV11-31**	
Motor	**M4E068-CF**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50
Method of obtaining data		fa
Valid for approval/standard		CE
Speed (rpm)	min^{-1}	780
Power consumption	W	65
Current draw	A	0.29
Capacitor	µF	2
Capacitor voltage	VDB	400
Capacitor standard		S2 (CE)
Min. back pressure	Pa	0
Min. back pressure	inH2O	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50
Starting current	A	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	2.7 kg
Fan size	146 mm
Rotor surface	Unpainted
Terminal box material	PP plastic
Impeller material	PA plastic
Housing material	PP plastic
Guard grille material	PA plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
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	Via terminal box, capacitor integrated and connected
Motor protection	Temperature limiter manual reset
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

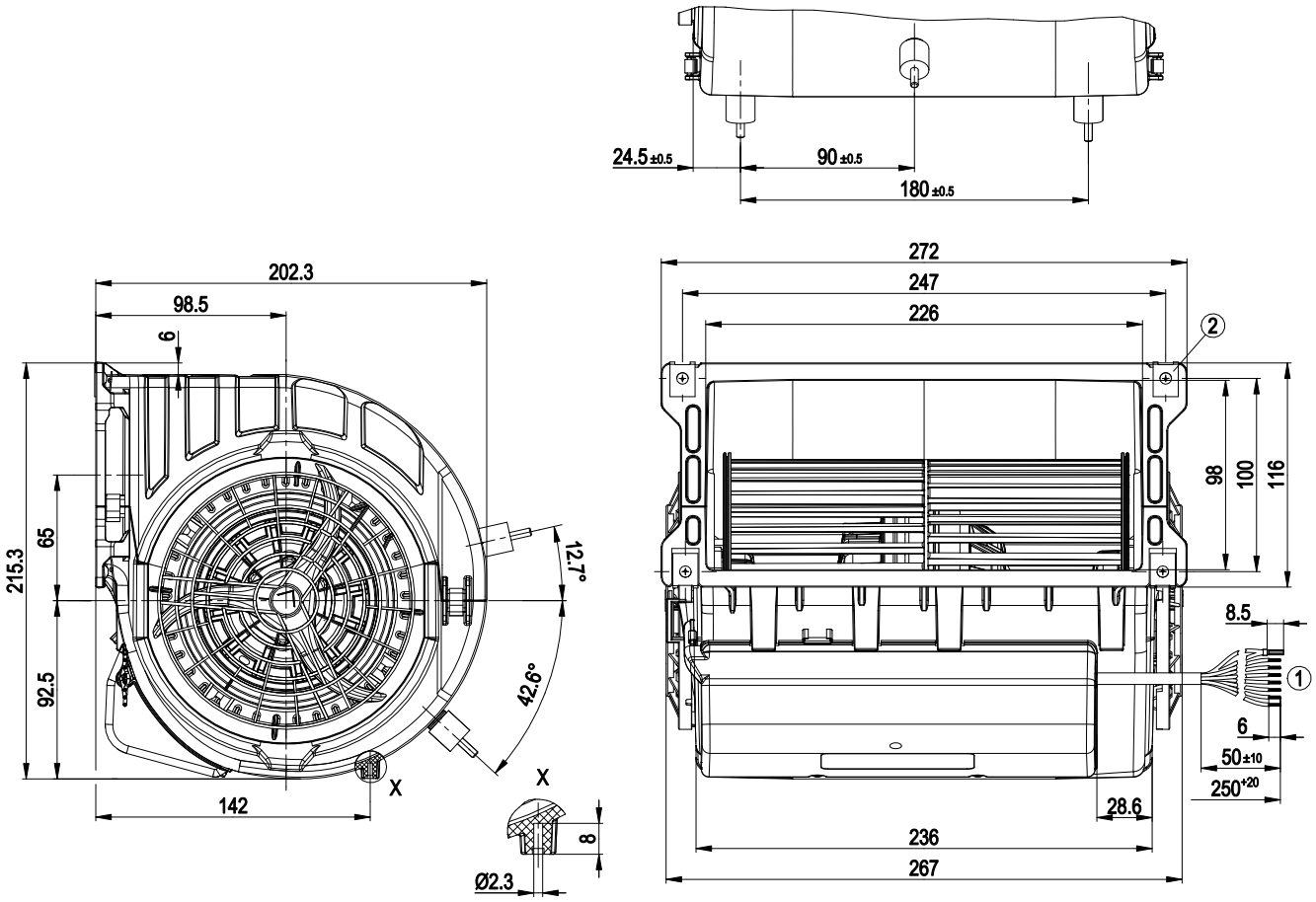
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Product drawing



1	Cable PFA AWG20, 7x splices, 1x crimped ferrule
2	4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus material thickness of attachment)

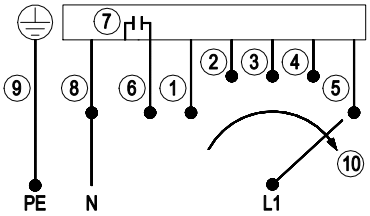
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Connection diagram



The switch must interrupt the circuit when switching.

1	Step 1 / min. (white)
2	Step 2 (orange)
3	Step 3 (red)
4	Step 4 (gray)
5	Step 5 / max. (black)
6	Capacitor, signal TB open (yellow)
7	Capacitor
8	N (blue)
9	PE (green/yellow)
10	Speed increasing

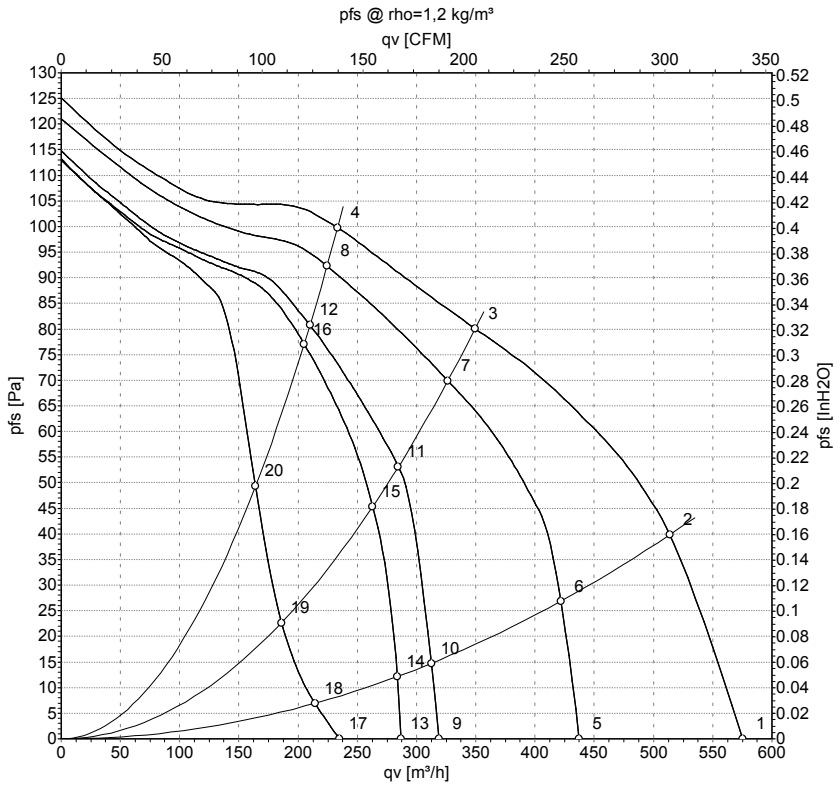
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Curves: Air performance 50 Hz



Measurement: LU-142089-1
Measurement: LU-142100-1
Measurement: LU-142104-1
Measurement: LU-142092-1
Measurement: LU-142094-1

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

	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	230	50	780	65	0.29	575	0	340	0.00
2	230	50	1150	57	0.25	515	40	305	0.16
3	230	50	1320	46	0.20	350	80	205	0.32
4	230	50	1375	41	0.18	235	100	135	0.40
5	230	50	700	60	0.26	435	0	255	0.00
6	230	50	975	53	0.24	420	31	250	0.12
7	230	50	1230	43	0.20	325	70	190	0.28
8	230	50	1320	38	0.17	225	92	130	0.37
9	230	50	530	53	0.24	320	0	190	0.00
10	230	50	700	50	0.23	315	15	185	0.06
11	230	50	1090	43	0.20	285	53	165	0.21
12	230	50	1245	37	0.17	210	81	125	0.33
13	230	50	475	51	0.23	285	0	170	0.00
14	230	50	665	49	0.22	285	15	165	0.06
15	230	50	990	44	0.20	265	46	155	0.18
16	230	50	1215	36	0.17	205	77	120	0.31
17	230	50	395	20	0.17	235	0	140	0.00
18	230	50	505	20	0.16	215	7	125	0.03
19	230	50	710	20	0.16	185	22	110	0.09
20	230	50	980	20	0.15	165	49	95	0.20

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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