D2E140-HR27-09

AC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Nominal data

Type	**D2E140-HR27-09**
Motor	**M2E068-CF**

Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed (rpm)	min^{-1}	1550	2300
Power consumption	W	150	175
Current draw	A	0.67	0.73
Capacitor	µF	4	4
Capacitor voltage	VDB	400	400
Capacitor standard		S2 (CE)	S2 (CE)
Min. back pressure	Pa	50	300
Min. back pressure	inH2O	0.2	1.2
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	50	50
Starting current	A	0.71	0.75

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	2.4 kg
Fan size	140 mm
Impeller material	PP plastic
Housing material	PP plastic
Direction of rotation	Clockwise, 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	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
Approval	CSA C22.2 No. 113; UL 507

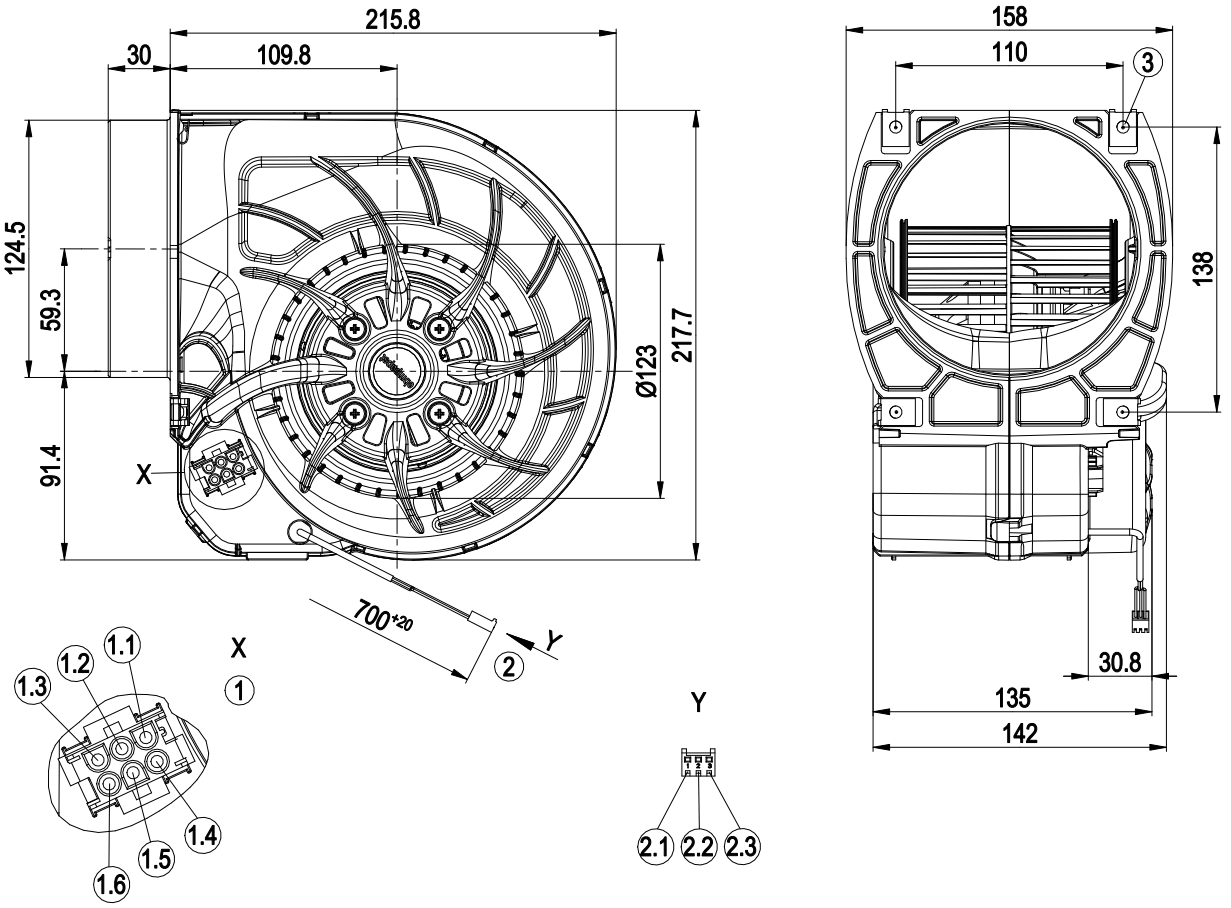
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Product drawing



1	Coded plug system: 6-pole connector housing tyco 926682-3, 6x plug pin tyco 926886-1
1.1	L step 1 (white) (min.)
1.2	Step 2 (red)
1.3	Step 3 (gray)
1.4	Step 4 (black)
1.5	N (blue)
1.6	PE (green/yellow)
2	Cable Raychem Spec. 44, AWG24, 3-pole connector housing tyco 1375820-3, 3x plug pin tyco 1375819-1 crimped
2.1	+5 V (red)
2.2	0 V (black)
2.3	out (white)
3	4x sheet metal nut for thread EN ISO 1478-ST4.8 (screw length at least 14.5 mm plus thickness of mounting material)

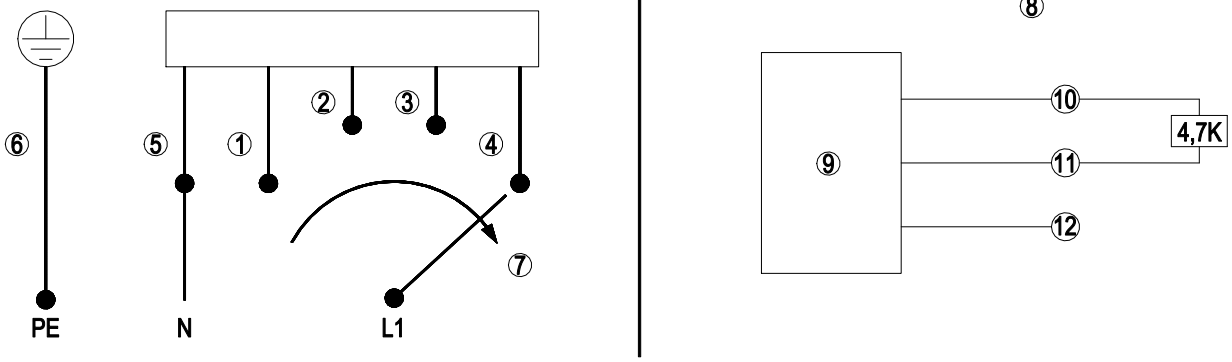
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Connection diagram



The switch must interrupt the circuit on switching.

1	Step 1 / min. (white)
2	Step 2 (red)
3	Step 3 (gray)
4	Step 4 (black)
5	N (blue)
6	PE (green/yellow)
7	Speed increasing
8	Hall IC circuit
9	Hall IC
10	+5 V (red)
11	out (white)
12	0 V (black)

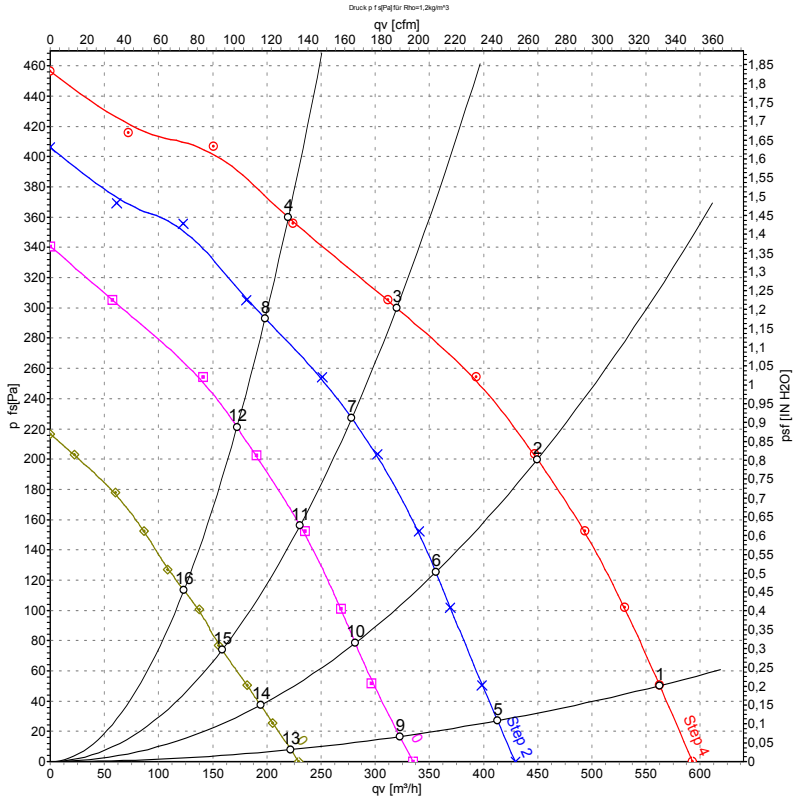
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Curves: Air performance 50 Hz



Measurement: LU-45277-1
Measurement: LU-45279-1
Measurement: LU-45281-1
Measurement: LU-45283-1

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	4	230	50	1550	150	0.67	565	50	330	0.20
2	4	230	50	2000	142	0.62	450	200	265	0.80
3	4	230	50	2310	125	0.57	320	300	190	1.20
4	4	230	50	2430	122	0.54	220	360	130	1.45
5	3	230	50	1155	105	0.51	415	27	245	0.11
6	3	230	50	1590	98	0.49	355	125	210	0.50
7	3	230	50	1995	89	0.46	280	227	165	0.91
8	3	230	50	2190	82	0.44	200	293	115	1.18
9	2	230	50	925	87	0.44	325	16	190	0.06
10	2	230	50	1265	84	0.43	280	78	165	0.31
11	2	230	50	1690	77	0.41	230	157	135	0.63
12	2	230	50	1915	72	0.40	170	221	100	0.89
13	1	230	50	650	71	0.37	220	8	130	0.03
14	1	230	50	870	69	0.37	195	37	115	0.15
15	1	230	50	1170	67	0.36	160	74	95	0.30
16	1	230	50	1380	65	0.35	125	113	70	0.45

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

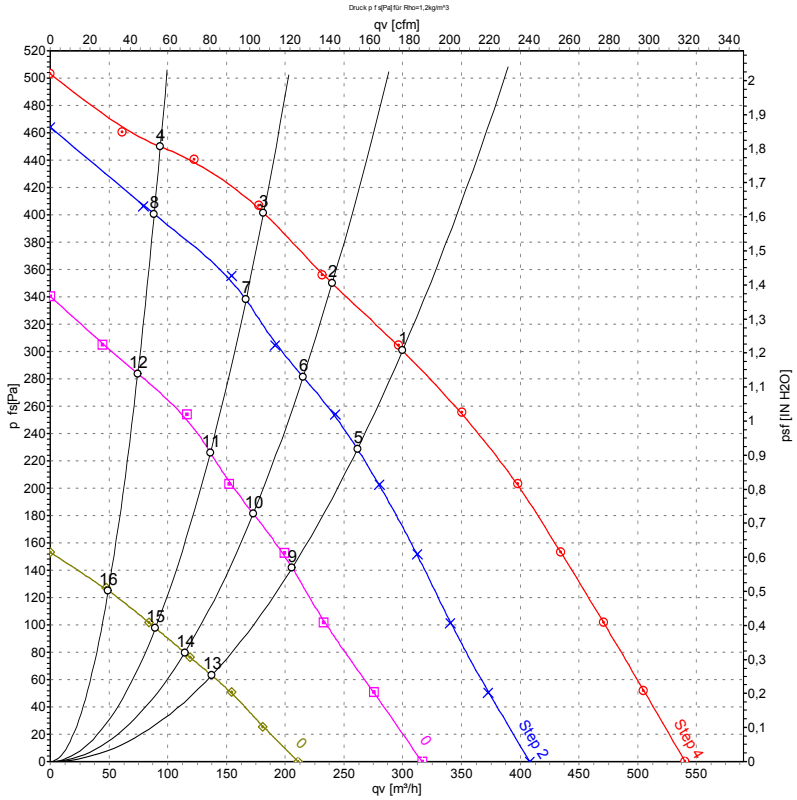
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Curves: Air performance 60 Hz



Measurement: LU-45278-1
Measurement: LU-45280-1
Measurement: LU-45282-1
Measurement: LU-45284-1

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	4	230	60	2300	165	0.73	300	300	175	1.20
2	4	230	60	2420	162	0.71	240	350	140	1.41
3	4	230	60	2515	160	0.70	180	400	105	1.61
4	4	230	60	2640	159	0.70	95	450	55	1.81
5	3	230	60	2010	105	0.57	260	228	155	0.92
6	3	230	60	2175	102	0.56	215	281	125	1.13
7	3	230	60	2310	100	0.56	165	339	100	1.36
8	3	230	60	2500	96	0.55	90	400	50	1.61
9	2	230	60	1590	85	0.49	205	143	120	0.57
10	2	230	60	1740	84	0.48	175	181	100	0.73
11	2	230	60	1900	82	0.48	135	226	80	0.91
12	2	230	60	2095	79	0.48	75	284	45	1.14
13	1	230	60	1075	67	0.40	135	63	80	0.25
14	1	230	60	1185	67	0.40	115	80	65	0.32
15	1	230	60	1270	66	0.40	90	98	55	0.39
16	1	230	60	1420	65	0.40	50	126	30	0.51

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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