D2E146-AP50-E1

AC centrifugal fan

forward curved, dual inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D2E146-AP50-E1**
Motor	**M2E068-EC**

Phase		1~	1~	1~
Nominal voltage	VAC	230	230	230
Frequency	Hz	50	60	60
Type of data definition		ml	ml	ml
Valid for approval / standard		CE	CE	UL 2111
Speed	min^{-1}	2600	2700	2700
Power input	W	250	340	355
Current draw	A	1.1	1.5	1.6
Motor capacitor	µF	8	8	8
Capacitor voltage	VDB	400	400	400
Min. back pressure	Pa	420	455	455
Min. ambient temperature	°C	-25	-25	-25
Max. ambient temperature	°C	65	40	40

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	No
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	33.6	26.6	33.6
Efficiency grade N		44	37	44
Power input P_e	kW	0.23		
Air flow q_v	m^3/h	620		
Pressure increase p_{fs}	Pa	435		
Speed n	min^{-1}	2625		

Data definition with optimum efficiency. LU-77448
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	4.6 kg
Size	146 mm
Surface of rotor	Uncoated
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Material of guard grille	Steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Motor suspension	Motor mounted via brackets on one side
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
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
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	CSA C22.2 Nr.77; UL 2111

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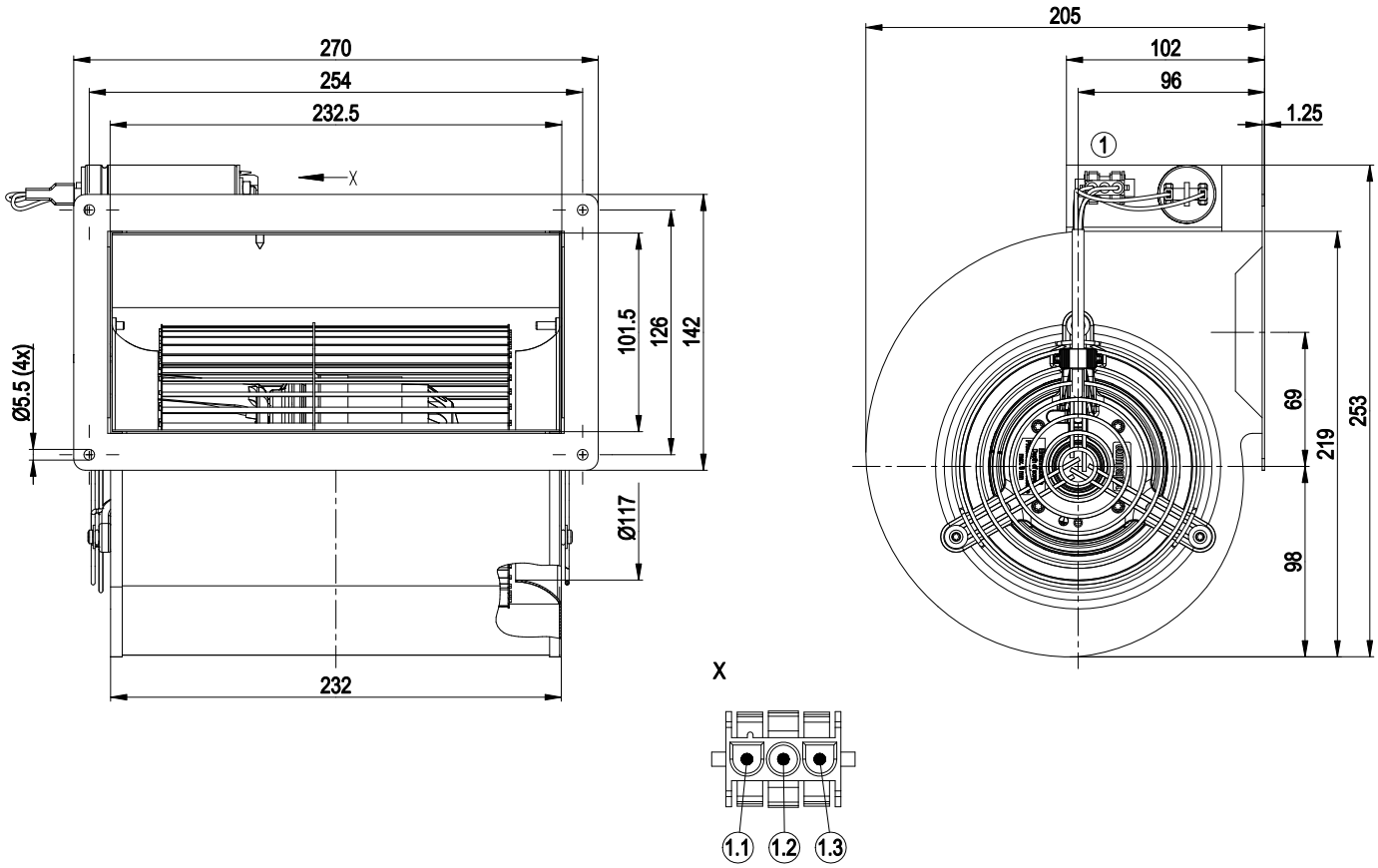
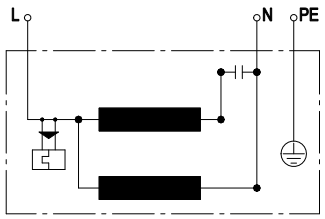
Product drawing



1	Connection line PFA AWG20, Tyco 3-pin connector housing 2178474-2, 3x Tyco female connector 926884-1
1.1	N (black)
1.2	PE (green/yellow)
1.3	L (blue)

Connection screen



L	blue	N	black	PE	green/yellow

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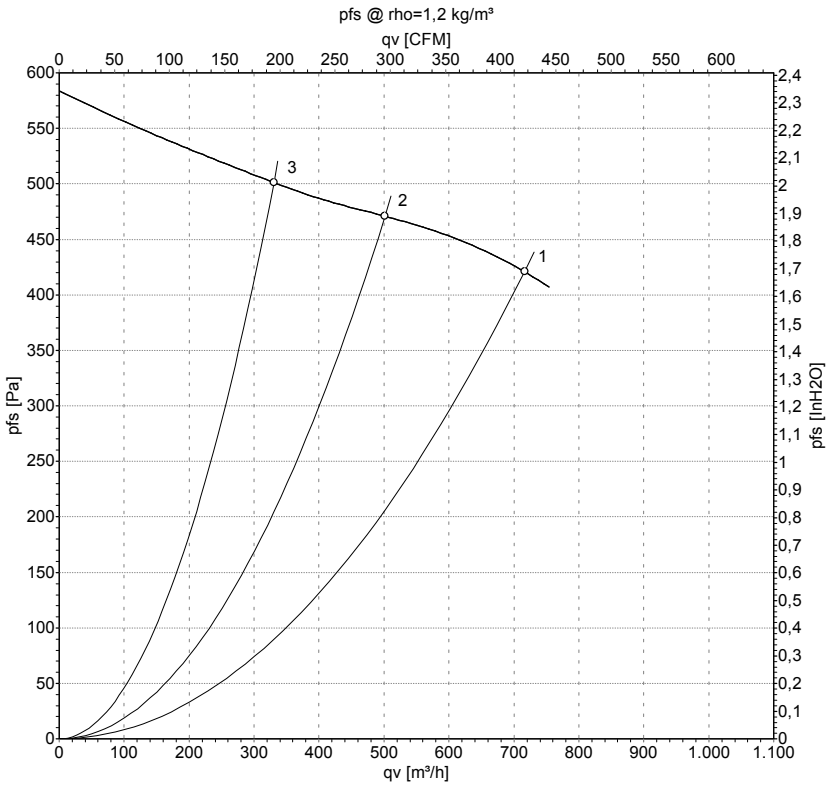
Charts: Air flow 50 Hz Y



Measurement: LU-77448

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	2600	250	1.10	715	420
2	230	50	2690	212	0.94	500	470
3	230	50	2765	186	0.83	330	500

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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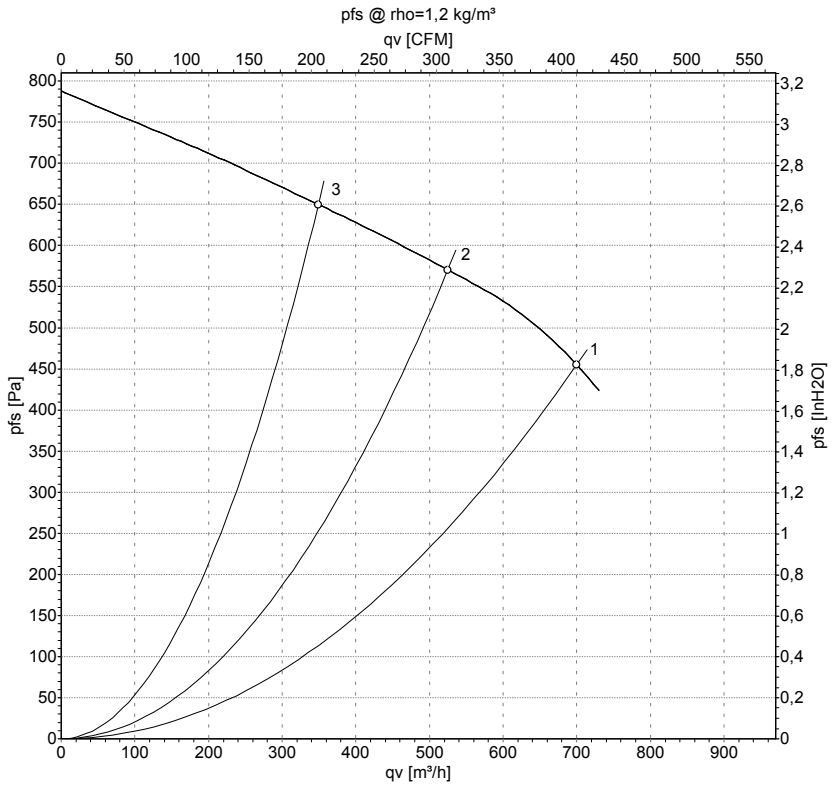
Charts: Air flow 60 Hz Y



Measurement: LU-77449

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	2700	340	1.50	700	455
2	230	60	2955	307	1.39	525	570
3	230	60	3135	274	1.28	350	650

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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