

# AC centrifugal fan

forward curved, dual inlet  
with housing (large flange)

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## Nominal data

Type	D4E180-CA02-02		
Motor	M4E068-LA		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		fa	fa
Valid for approval / standard		CE	CE
Speed	min <sup>-1</sup>	1250	1280
Power input	W	380	495
Current draw	A	1.68	2.16
Motor capacitor	µF	10	10
Capacitor voltage	VDB	400	400
Min. back pressure	Pa	0	0
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	60	35
Starting current	A	3.3	3.1

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	B
Efficiency category	Total
Variable speed drive	No
Specific ratio*	1.00

\* Specific ratio =  $1 + p_f / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency $\eta_e$	%	32	31.4	38.4
Efficiency grade N		42.6	42	49
Power input $P_e$	kW	0.21		
Air flow $q_v$	m <sup>3</sup> /h	1130		
Pressure increase $p_f$	Pa	219		
Speed n	min <sup>-1</sup>	1410		

Data definition with optimum efficiency. LU-105030  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



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## Technical features

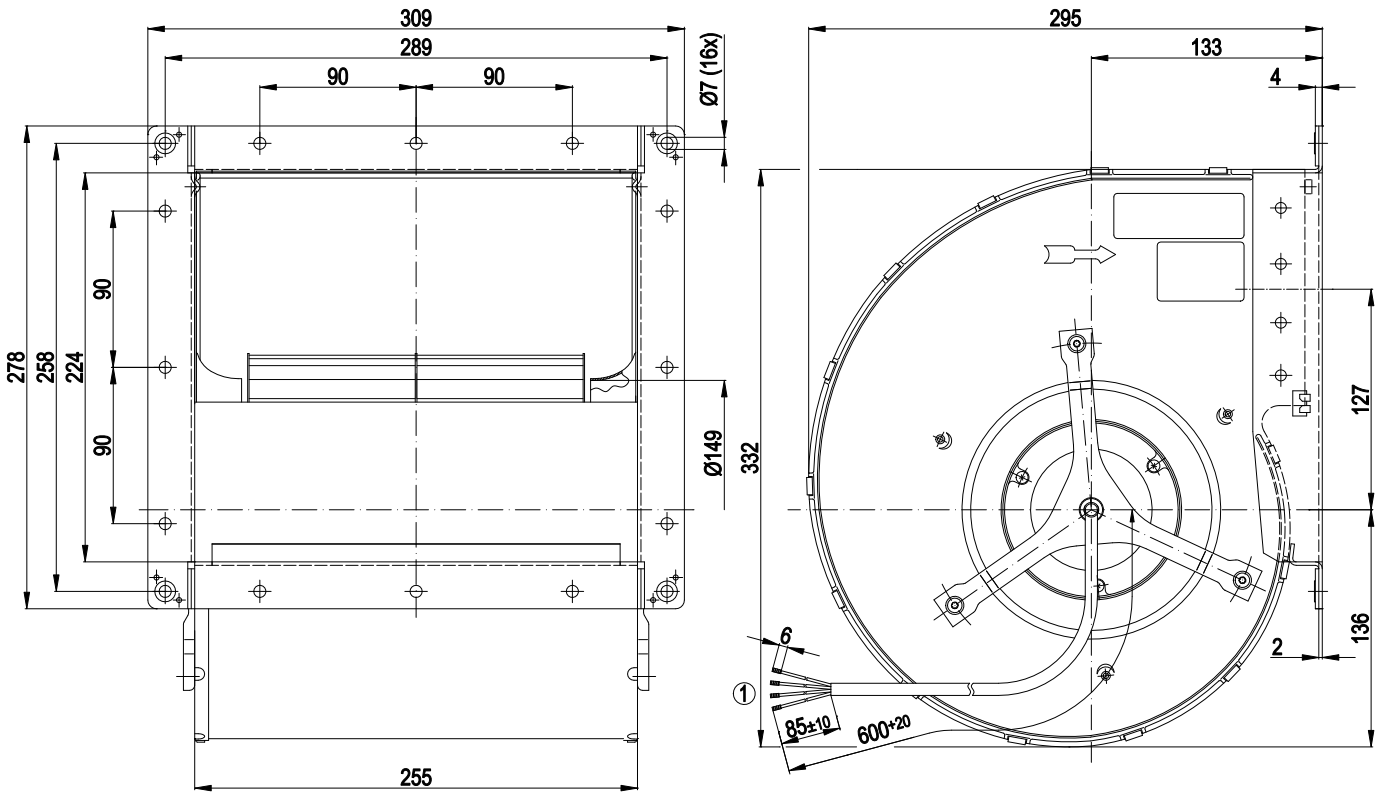
<b>Mass</b>	10.24 kg
<b>Size</b>	180 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of impeller</b>	Sheet steel, hot-galvanised
<b>Housing material</b>	Sheet steel, hot-galvanised
<b>Motor suspension</b>	Motor anti-vibration mounted on both sides
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	IP 54
<b>Insulation class</b>	"B"
<b>Humidity class</b>	F3-1
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	< 0.75 mA
<b>Motor protection</b>	Thermal overload protector (TOP) wired internally
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1
<b>Approval</b>	CCC



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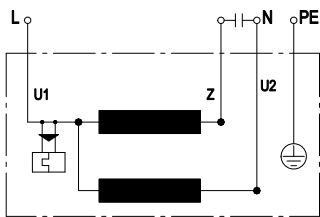
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## Product drawing



1 Connection line PVC 4G 0.5 mm<sup>2</sup>, 4 x brass lead tips crimped

## Connection screen



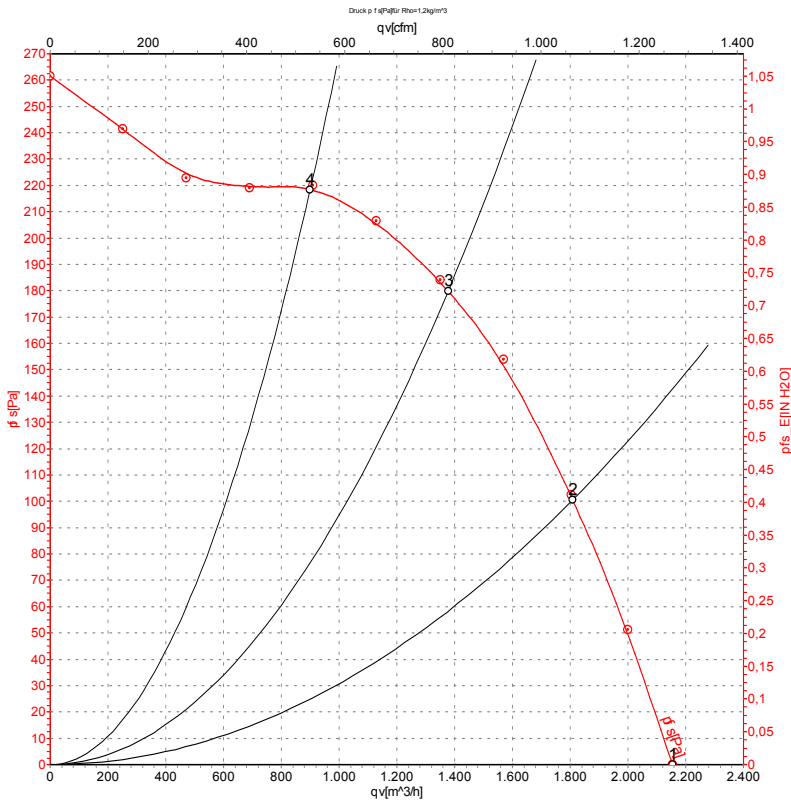
U1	blue	Z	brown	U2	black
PE	green/yellow				



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## Charts: Air flow 50 Hz



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 <sub>e</sub>	I	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	230	50	1250	380	1.68	2155	0
2	230	50	1330	302	1.34	1810	100
3	230	50	1385	245	1.10	1375	180
4	230	50	1430	191	0.89	900	220

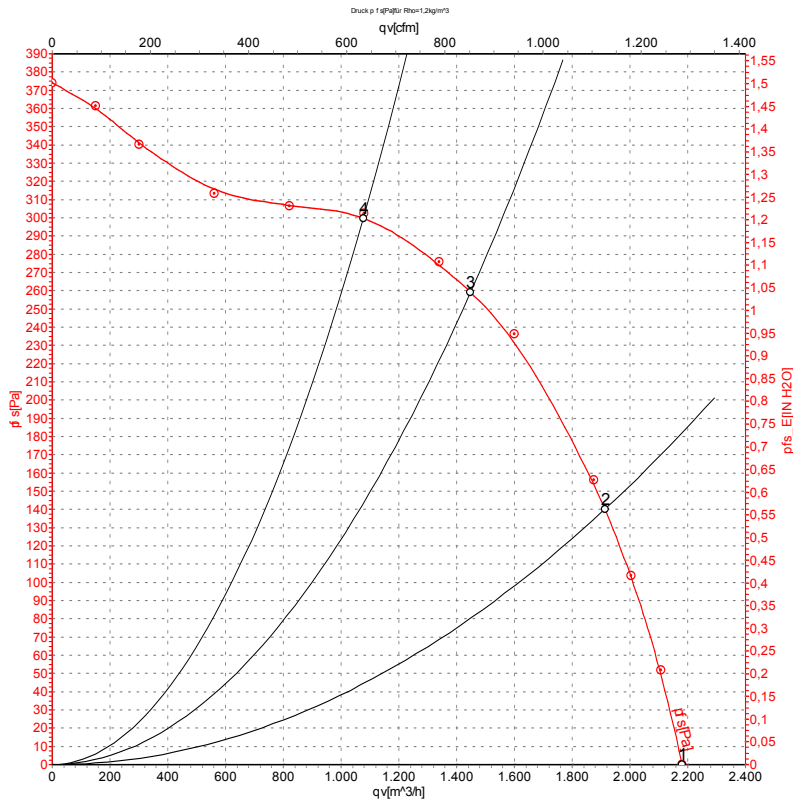
U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · P<sub>fs</sub> = Pressure increase



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## Charts: Air flow 60 Hz



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: L<sub>wA</sub> measured as per ISO 13347 / L<sub>pA</sub> 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 <sub>e</sub>	I	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m³/h	Pa
1	230	60	1280	495	2.16	2180	0
2	230	60	1470	410	1.79	1915	140
3	230	60	1600	331	1.48	1450	260
4	230	60	1660	280	1.29	1075	300

U = Supply voltage · f = Frequency · n = Speed · P<sub>e</sub> = Power input · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

