

R2E160-AY47-01

# AC centrifugal fan

forward curved, single inlet



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## Nominal data

Type	R2E160-AY47-01		
Motor	M2E068-EC		
Phase		1~	1~
Nominal voltage	VAC	230	230
Frequency	Hz	50	60
Type of data definition		fa	ml
Valid for approval / standard		CE	CE
Speed	min <sup>-1</sup>	2100	2100
Power input	W	240	280
Current draw	A	1.05	1.23
Motor capacitor	µF	6	6
Capacitor voltage	VDB	400	400
Min. back pressure	Pa	0	50
Max. ambient temperature	°C	50	30

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

		Actual	Request 2013	Request 2015
Installation category	A			
Efficiency category	Static			
Variable speed drive	No			
Specific ratio*	1.01			
Overall efficiency $\eta_{es}$		27.4	25.6	32.6
Efficiency grade N		38.8	37	44
Power input $P_e$	kW	0.16		
Air flow $q_v$	m <sup>3</sup> /h	365		
Pressure increase $p_{fs}$	Pa	442		
Speed n	min <sup>-1</sup>	2595		

Data established at point of optimum efficiency



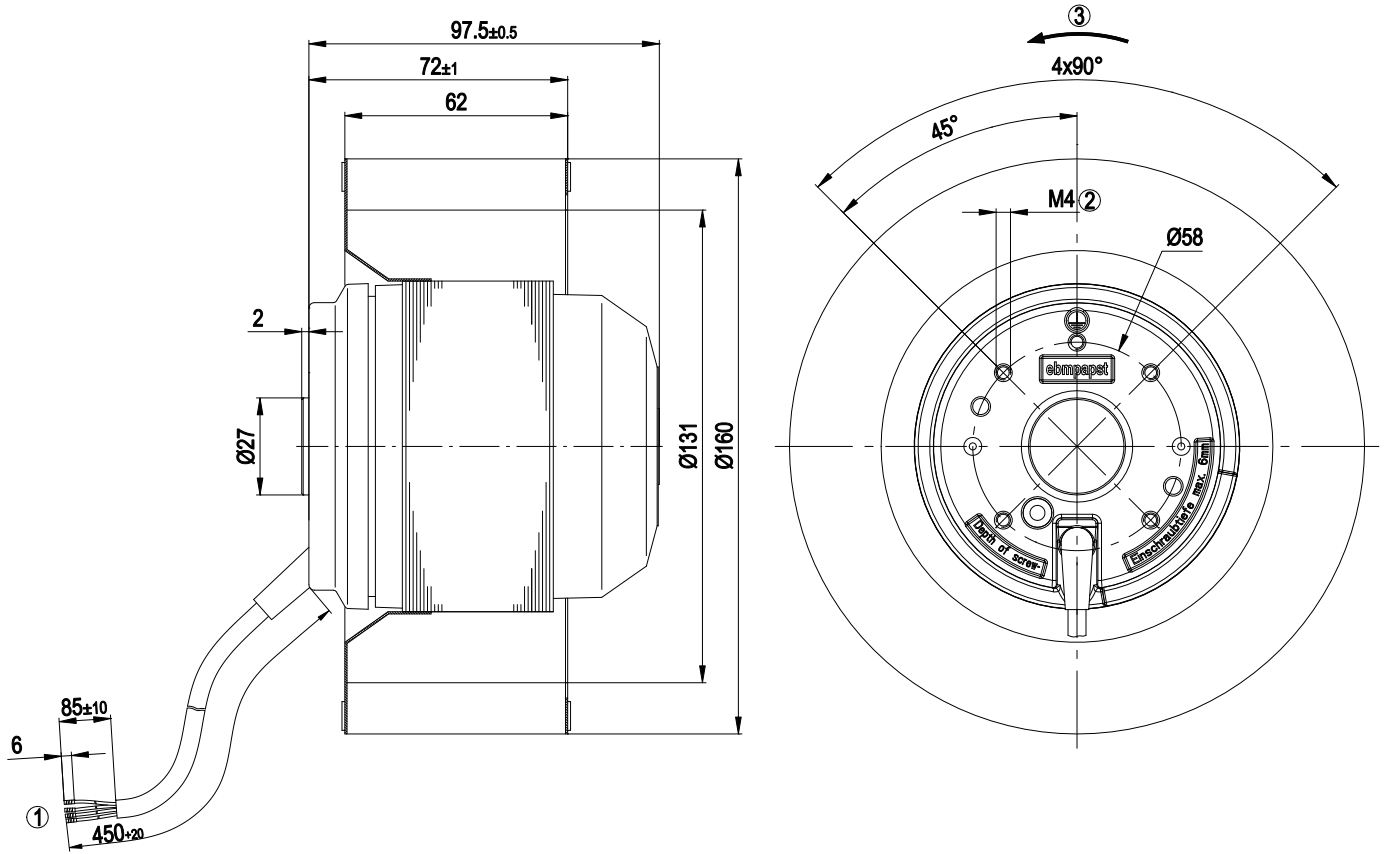
### Technical features

<b>Mass</b>	2.6 kg
<b>Size</b>	160 mm
<b>Surface of rotor</b>	Partially cast in aluminium
<b>Material of impeller</b>	Sendzimir galvanized sheet steel
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 44
<b>Insulation class</b>	"B"
<b>Humidity class</b>	F0
<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>Cable exit</b>	Variable
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1; CE
<b>Approval</b>	CCC

# AC centrifugal fan

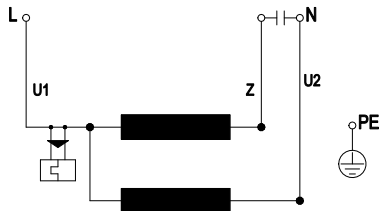
forward curved, single inlet

## Product drawing



1	Connection line PVC, 4x brass lead tips crimped
2	Screw depth max. 5 mm
3	Direction of rotation clockwise, seen on rotor

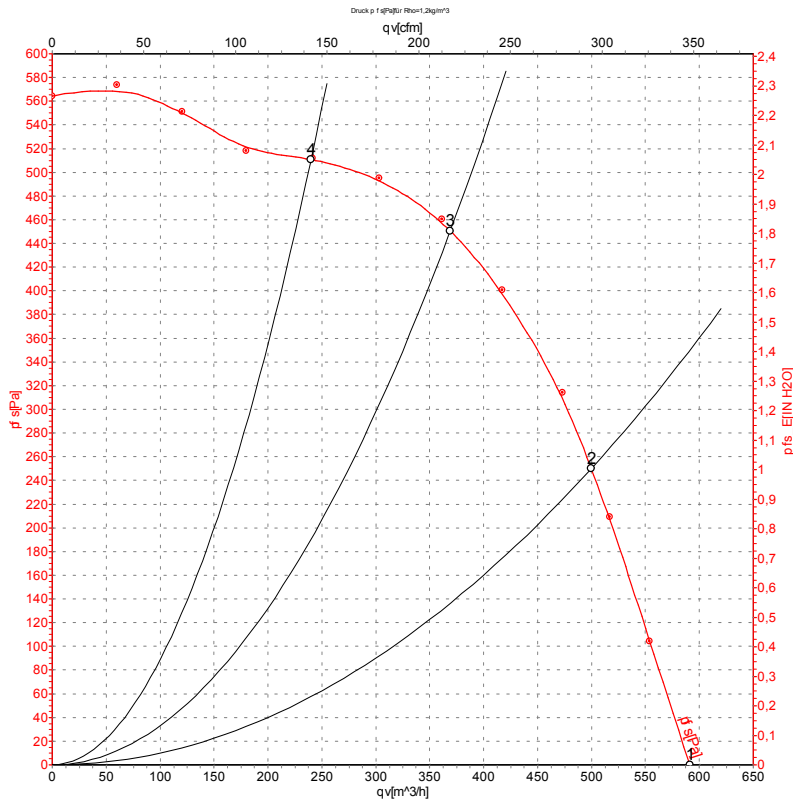
## Connection screen



U1	blue	Z	brown	U2	black
PE	green/yellow				



## Charts: Air flow 50 Hz



Measurement: LU-104987

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.

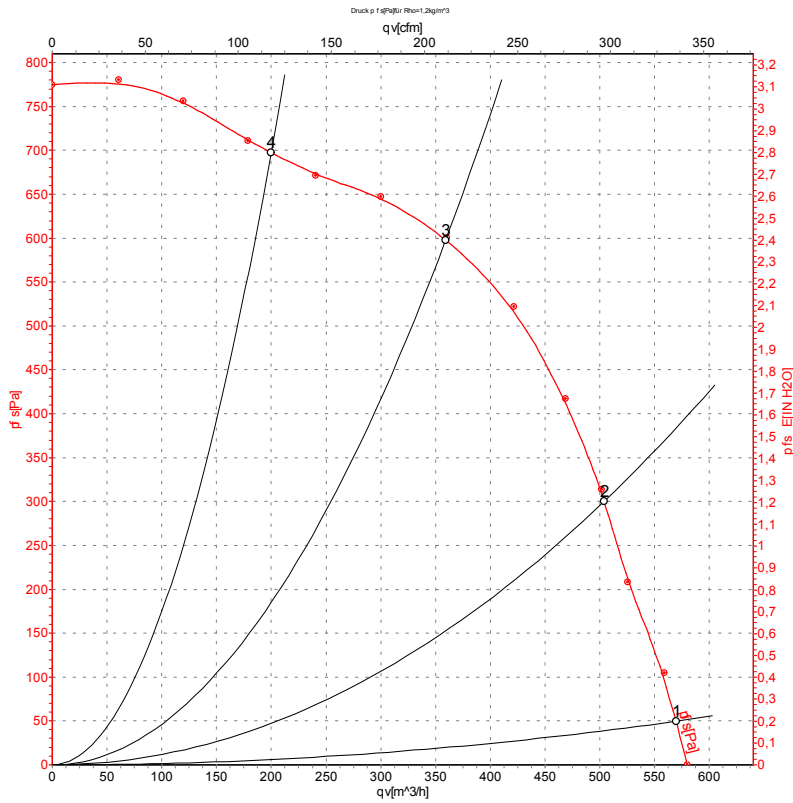
## Measured values

	U	f	n	P <sub>e</sub>	I	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	230	50	2100	240	1.05	590	0
2	230	50	2375	200	0.87	500	250
3	230	50	2585	164	0.71	370	450
4	230	50	2715	137	0.59	240	510

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



## Charts: Air flow 60 Hz



Measurement: LU-104989

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	60	2100	280	1.23	570	50
2	230	60	2500	258	1.12	505	300
3	230	60	2940	210	0.94	360	600
4	230	60	3180	172	0.80	200	700

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

