

# EC axial fan

sickled blades (S series), single inlet

Wall ring with guard grille

W3G450-TC28-30 ebmpapst Datasheet FansCo

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## Nominal data

Type	W3G450-TC28-30	
Motor	M3G084-FA	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Type of data definition		ml
Speed	min <sup>-1</sup>	1300
Power input	W	345
Current draw	A	2.2
Max. back pressure	Pa	125
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	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

		Actual	Request 2015			
01 Overall efficiency $\eta_{es}$	%	42.6	30.7	09 Power input $P_{ed}$	kW	0.34
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	4005
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	118
04 Efficiency grade N		51.9	40	10 Speed n	min <sup>-1</sup>	1305
05 Variable speed drive		Yes		11 Specific ratio <sup>*</sup>		1.00

Data definition with optimum efficiency.

The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

<sup>\*</sup> Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

LU-124620



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## Technical features

<b>Mass</b>	11 kg
<b>Size</b>	450 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of blades</b>	Press-fitted sheet steel blank, sprayed with PP plastic
<b>Material of wall ring</b>	PP plastic
<b>Number of blades</b>	5
<b>Direction of air flow</b>	"V"
<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>	+ 70 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensate discharge holes</b>	Rotor-side
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing with anti-freezing grease
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Motor current limit</li> <li>- PFC, passive</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage detection</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC harmonics</b>	Acc. to EN 61000-3-2/3
<b>EMC interference emission</b>	Acc. to EN 61000-6-3 (household environment)
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 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

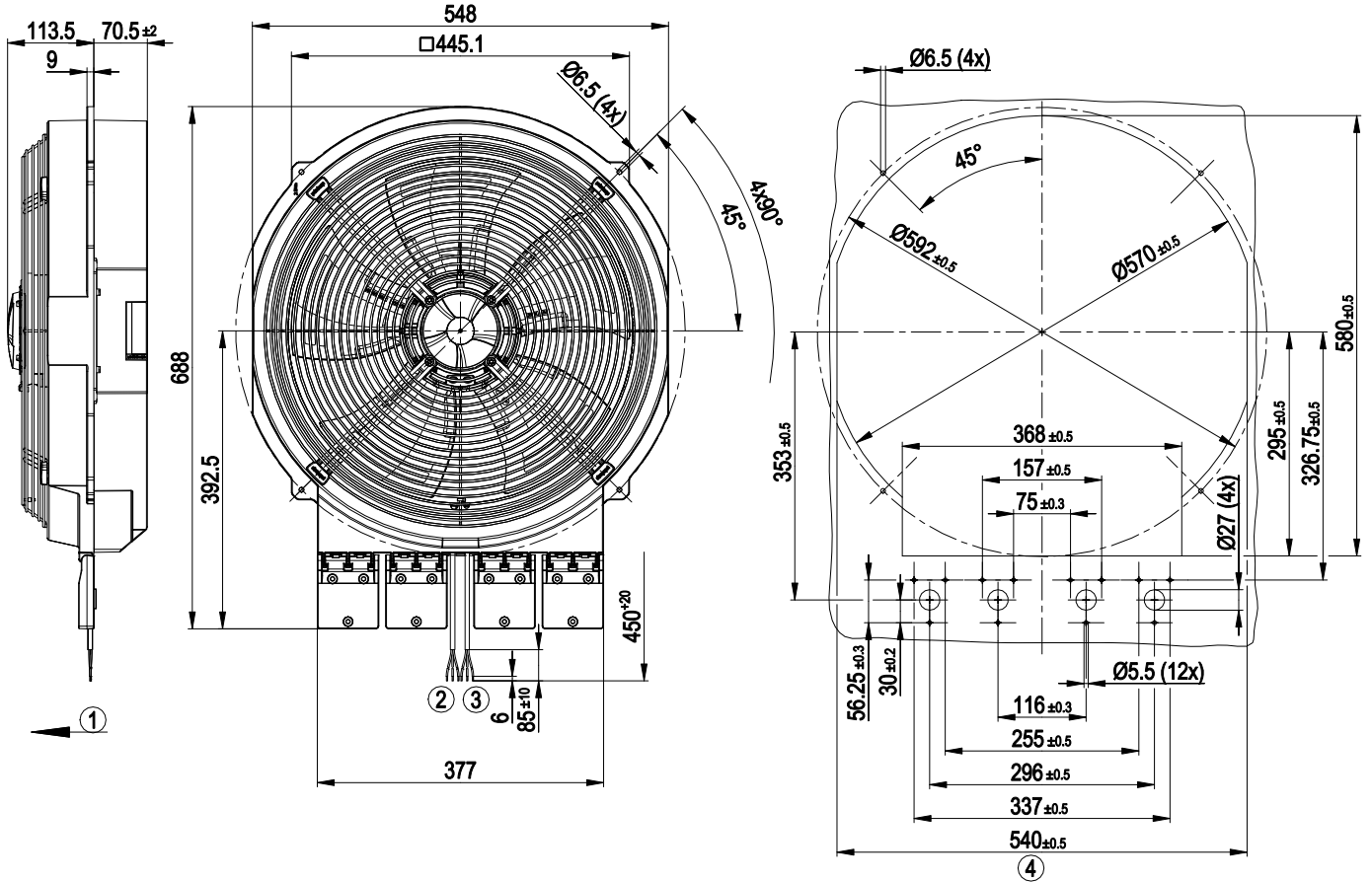


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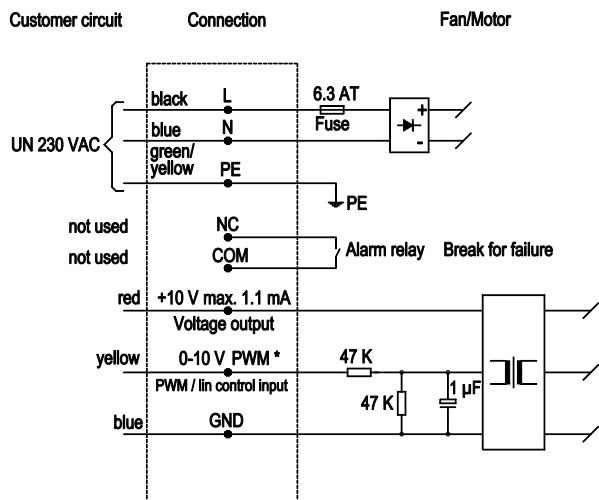
Wall ring with guard grille

## Product drawing



1	Direction of air flow "V"
2	Connection line PVC AWG18, 3x lead tips crimped
3	Control line PVC AWG22, 3x lead tips crimped
4	Mounting dimensions

## Connection screen

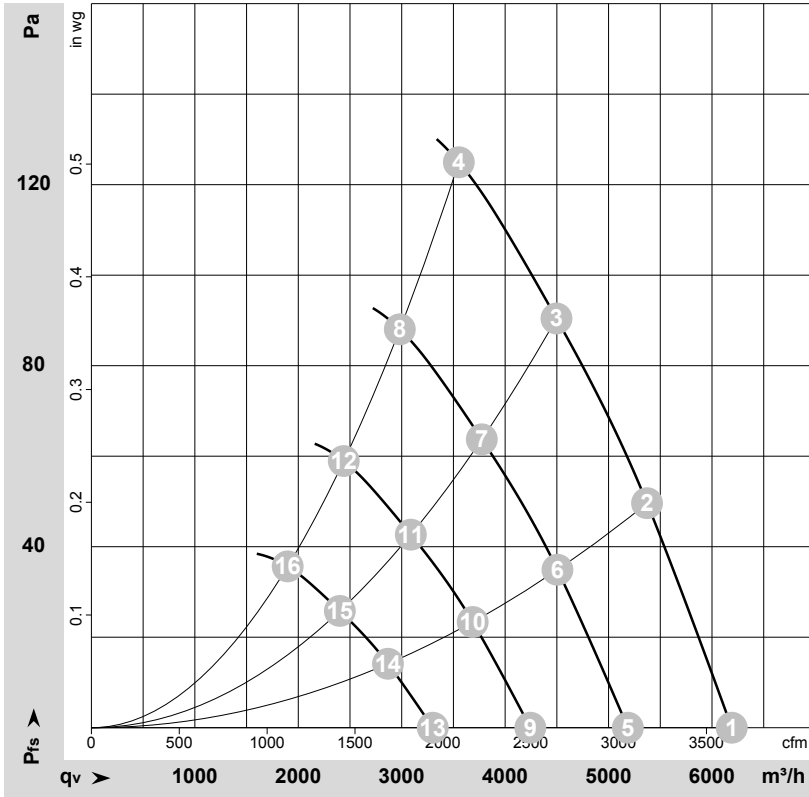


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## Charts: Air flow 50 Hz



$\rho = 1,15 \text{ kg/m}^3 \pm 2\%$

Measurement: LU-146536

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	m <sup>3</sup> /h	Pa
1	230	50	1300	265	1.77	64	70	71	6190	0
2	230	50	1300	301	2.00	62	68	69	5370	50
3	230	50	1300	325	2.15	61	67	69	4495	90
4	230	50	1300	345	2.20	64	70	71	3550	125
5	230	50	1100	156	1.04	60	66	67	5185	0
6	230	50	1100	178	1.18	57	63	65	4505	35
7	230	50	1100	192	1.27	57	63	64	3775	64
8	230	50	1100	205	1.35	59	66	66	2980	88
9	230	50	900	85	0.57	55	61	62	4245	0
10	230	50	900	97	0.64	52	58	60	3685	23
11	230	50	900	105	0.70	52	58	59	3090	43
12	230	50	900	112	0.74	54	61	61	2440	59
13	230	50	700	40	0.27	49	54	56	3300	0
14	230	50	700	46	0.30	46	52	53	2865	14
15	230	50	700	50	0.33	45	51	53	2400	26
16	230	50	700	53	0.35	48	55	55	1900	36

U = Supply voltage · f = Frequency · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · LwA<sub>out</sub> = Sound power level outlet side  
 qv = Air flow · p<sub>fs</sub> = Pressure increase

