W3G450-CC28-53

EC axial fan - HyBlade

sickle-shaped blades (S series)

Fan housing with guard grille

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Nominal data

Type	**W3G450-CC28-53**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1300
Power consumption	W	345
Current draw	A	2.2
Max. back pressure	Pa	125
Max. back pressure	in. wg	0.5
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	42.6	30.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.34
09 Air flow q_v	m^3/h	4005
09 Pressure increase p_{fs}	Pa	118
10 Speed (rpm) n	min^{-1}	1305
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-124620

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Technical description

Weight	9.6 kg
Size	450 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - PFC, passive - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-3 + 60730-1

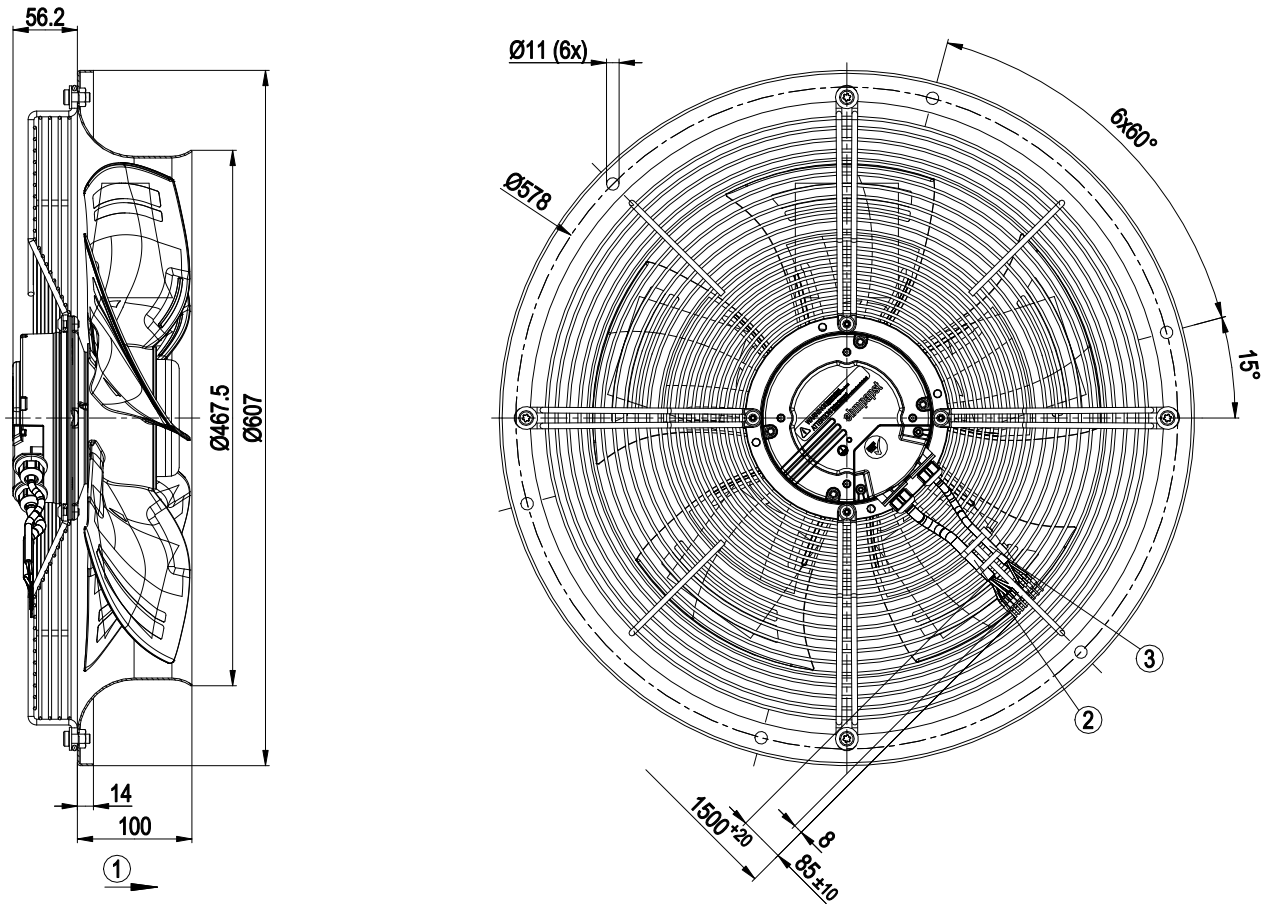
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Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG18
	5x wire-end ferrule
3	Cable PVC AWG22
	3x wire-end ferrule

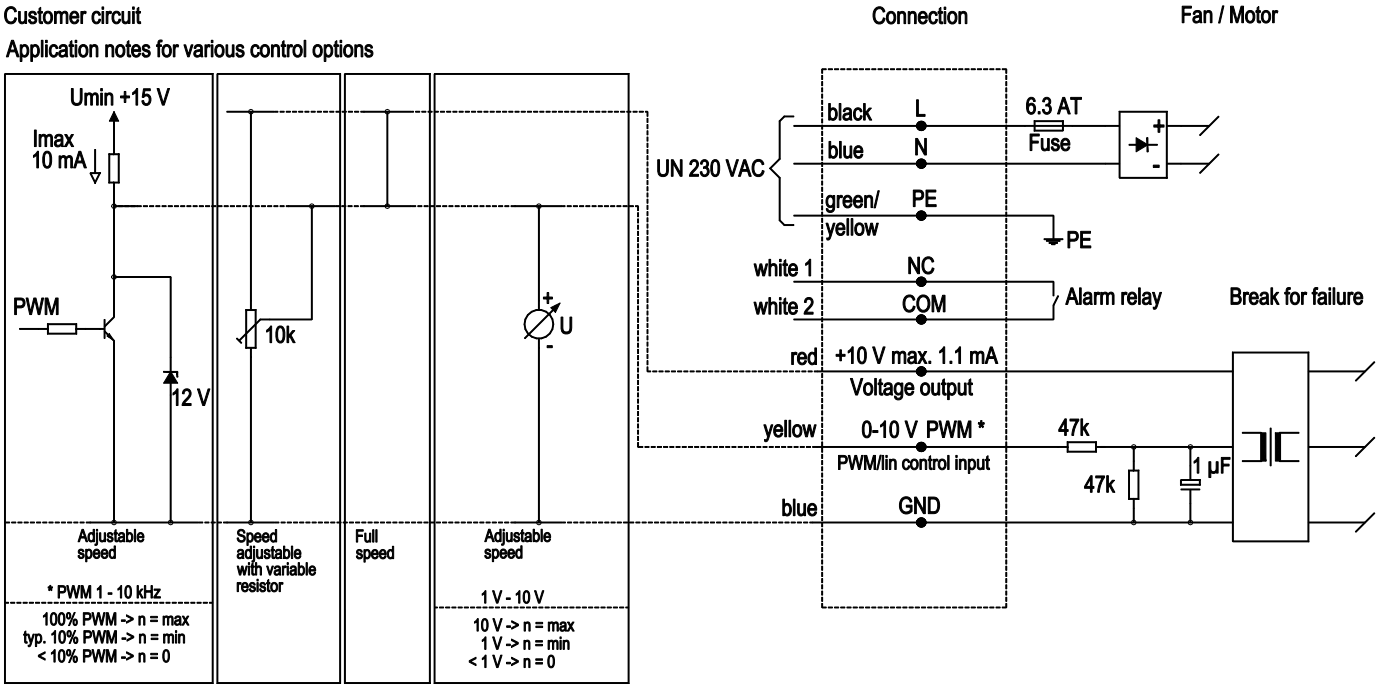
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Connection diagram



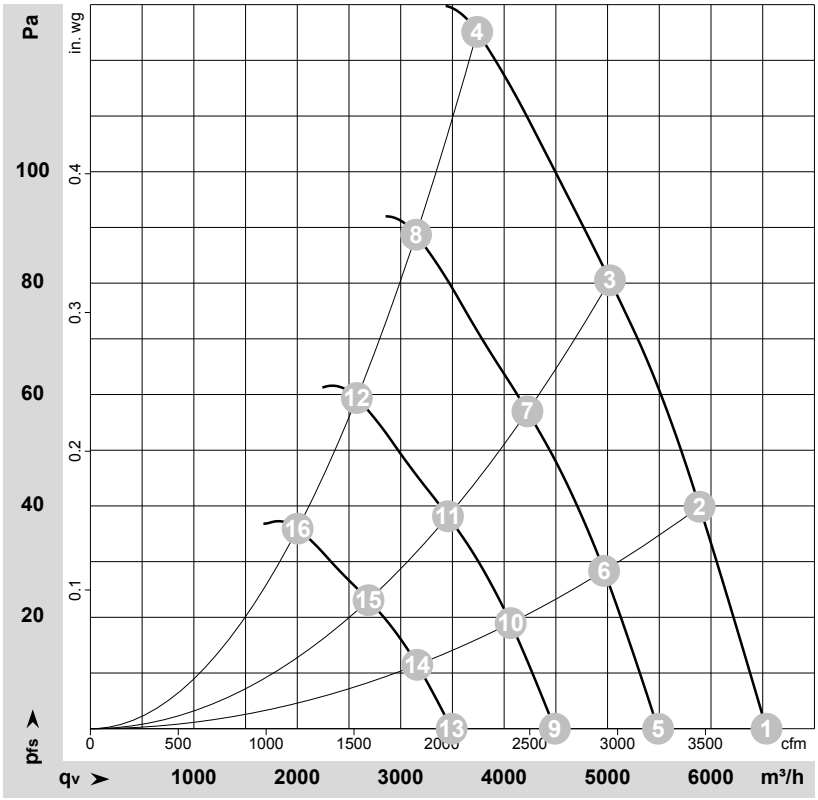
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-124620-1

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

	Wired	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	1~	230	50	1300	270	1.72	65	71	72	6535	0	3845	0.00
2	1~	230	50	1300	300	1.92	62	68	69	5890	40	3465	0.16
3	1~	230	50	1300	328	2.08	59	65	67	5025	80	2955	0.32
4	1~	230	50	1300	345	2.20	62	69	69	3740	125	2200	0.50
5	1~	230	50	1100	160	1.02	60	67	67	5490	0	3230	0.00
6	1~	230	50	1100	180	1.15	58	64	65	4965	29	2925	0.12
7	1~	230	50	1100	196	1.24	55	61	62	4225	57	2485	0.23
8	1~	230	50	1100	207	1.32	57	64	65	3150	89	1855	0.36
9	1~	230	50	900	87	0.56	55	61	62	4490	0	2645	0.00
10	1~	230	50	900	99	0.63	53	59	60	4065	19	2390	0.08
11	1~	230	50	900	107	0.68	50	56	57	3455	38	2035	0.15
12	1~	230	50	900	114	0.72	52	59	60	2575	59	1515	0.24
13	1~	230	50	700	41	0.26	49	55	56	3495	0	2055	0.00
14	1~	230	50	700	46	0.30	46	52	53	3160	12	1860	0.05
15	1~	230	50	700	50	0.32	44	49	51	2690	23	1585	0.09
16	1~	230	50	700	53	0.34	46	53	53	2005	36	1180	0.14

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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