W3G450-CO02-32

EC axial fan - HyBlade®

sickled blades (S series)

Wall ring with guard grille

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W3G450-CO02-32**	
Motor	**M3G074-DF**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	980
Power input	W	163
Current draw	A	1.34
Max. back pressure	Pa	74
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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	Yes
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	39.8	24.6	28.6
Efficiency grade N		51.2	36	40
Power input P_{ed}	kW	0.16		
Air flow q_v	m^3/h	3505		
Pressure increase p_{fs}	Pa	61		
Speed n	min^{-1}	1000		

Data definition with optimum efficiency. LU-138244
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Size	450 mm
Material of blades	PP-GF40 plastic
Material of wall ring	Sheet steel, pre-galvanised and coated in black plastic
Material of guard grille	Steel, phosphated and coated in black plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F3-1
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, open rotor
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	PTC resistor
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)

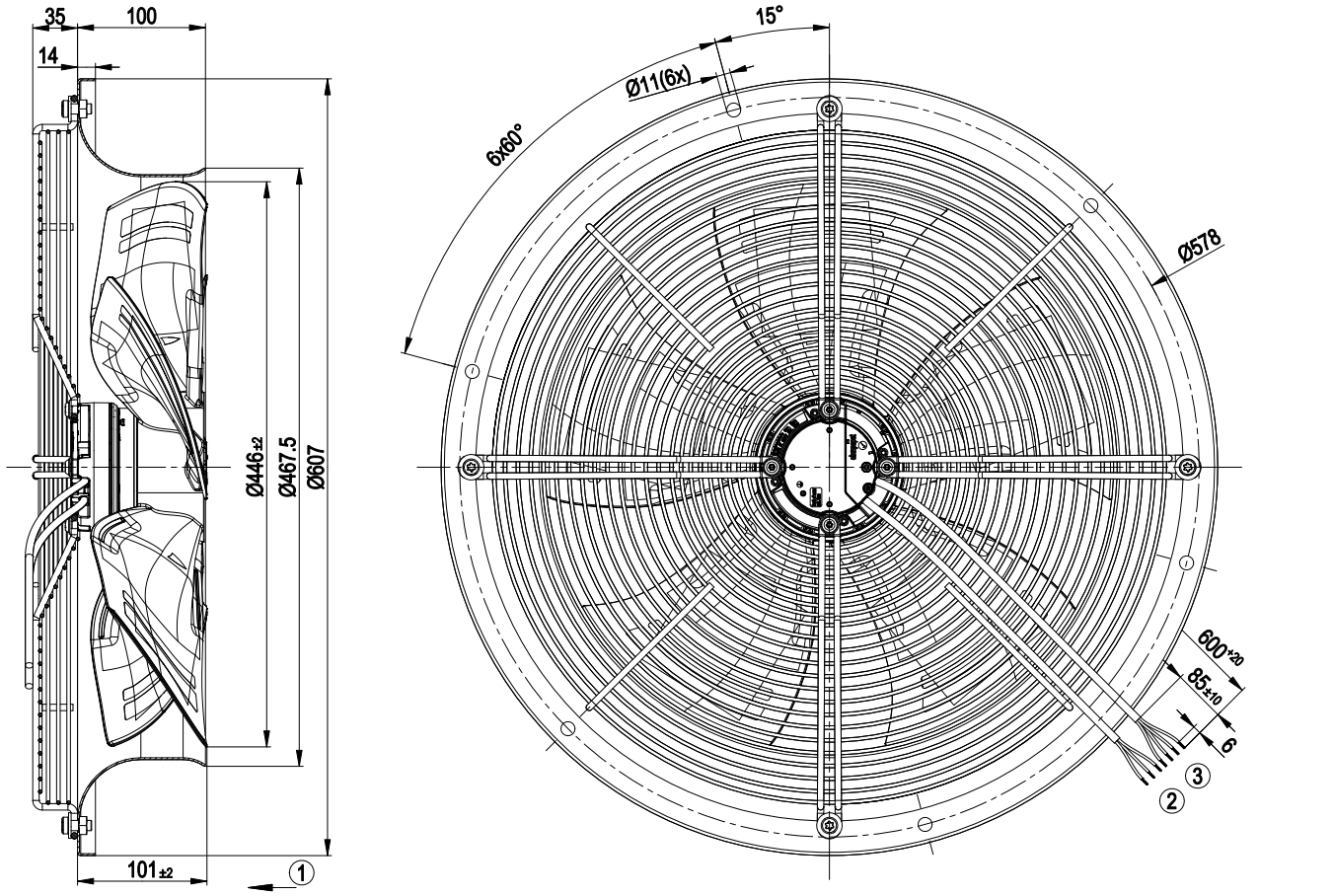
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Product drawing



1	Direction of air flow "V"
2	Connection line PVC 3G AWG20, 3x brass lead tips crimped
3	Connection line PVC 4X AWG22, 4x brass lead tips crimped

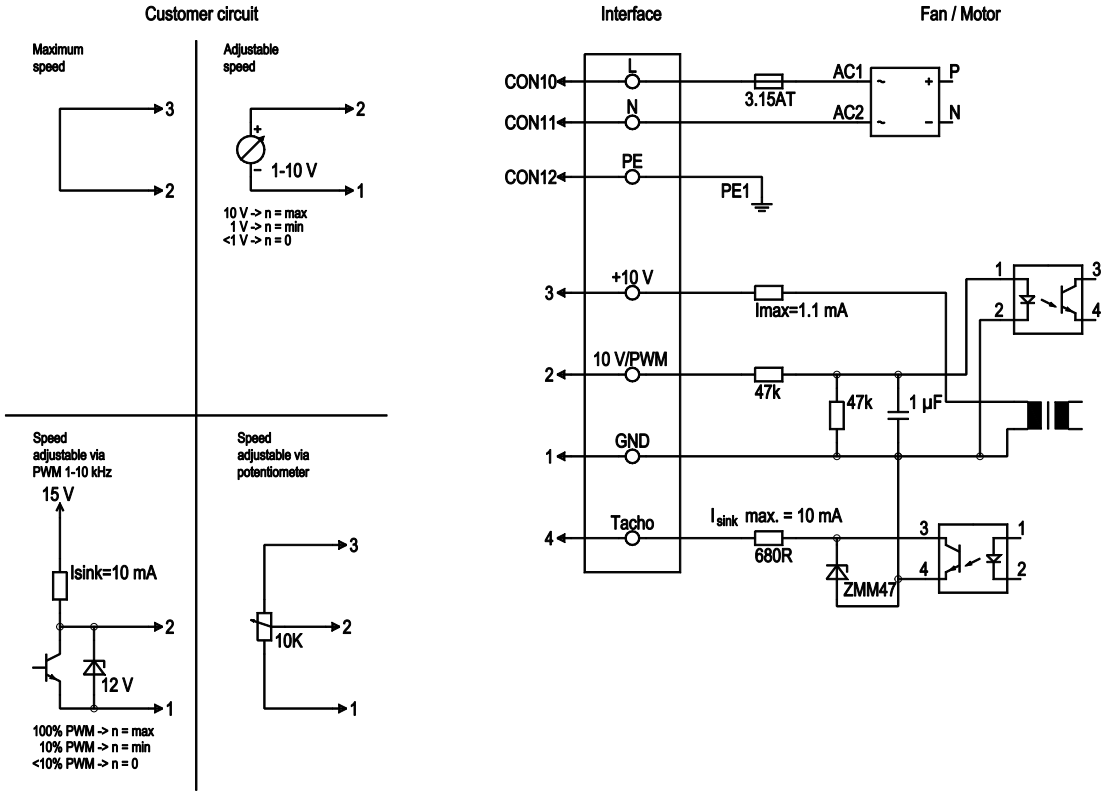
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, for voltage range refer to rating plate
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND - Connection for control interface
	2	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof, Isink = 10 mA
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA

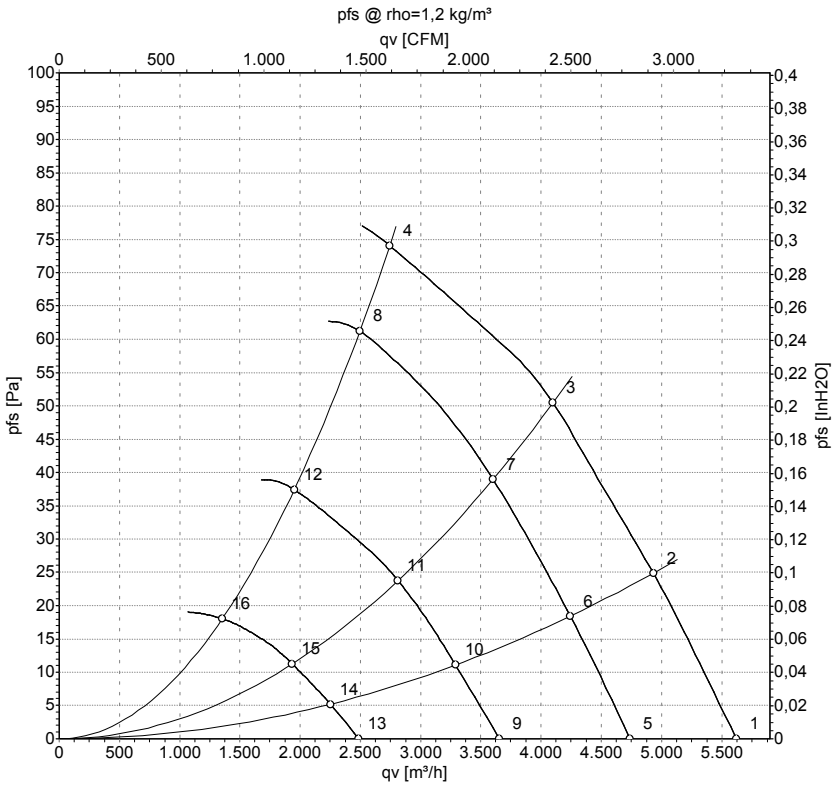
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Charts: Air flow 50 Hz



Measurement: LU-138244
Measurement: LU-138246
Measurement: LU-138247
Measurement: LU-138250

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_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1110	163	1.34	59	66	5620	0
2	230	50	1065	163	1.34	57	64	4930	25
3	230	50	1030	163	1.34	55	61	4100	50
4	230	50	980	163	1.34	58	66	2745	74
5	230	50	935	100	0.86			4740	0
6	230	50	920	108	0.92			4245	18
7	230	50	905	115	0.97			3600	39
8	230	50	885	124	1.05			2495	61
9	230	50	720	48	0.45			3655	0
10	230	50	715	52	0.48			3290	11
11	230	50	705	55	0.50			2815	24
12	230	50	695	60	0.53			1950	37
13	230	50	500	18	0.18			2485	0
14	230	50	495	19	0.19			2250	5
15	230	50	490	20	0.20			1935	11
16	230	50	485	22	0.21			1355	18

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · qv = Air flow
p_{fs} = Pressure increase

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