W3G910-GN46-27

EC axial fan - HyBlade®

sickled blades (S series)

with full square nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W3G910-GN46-27**	
Motor	**M3G112-GA**	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	480
Power input	W	310
Current draw	A	1.4
Max. back pressure	Pa	50
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}	%	43.9	26.2	30.2
Efficiency grade N		53.7	36	40
Power input P_{ed}	kW	0.28		
Air flow q_v	m^3/h	10955		
Pressure increase p_{fs}	Pa	37		
Speed n	min^{-1}	485		

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

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Technical features

Mass	52 kg
Size	910 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of wall ring	Sheet steel, pre-galvanised and plastic-coated in pebble-grey (RAL 7032)
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - Alarm relay - Integrated PID controller - Motor current limit - PFC, active - RS485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE

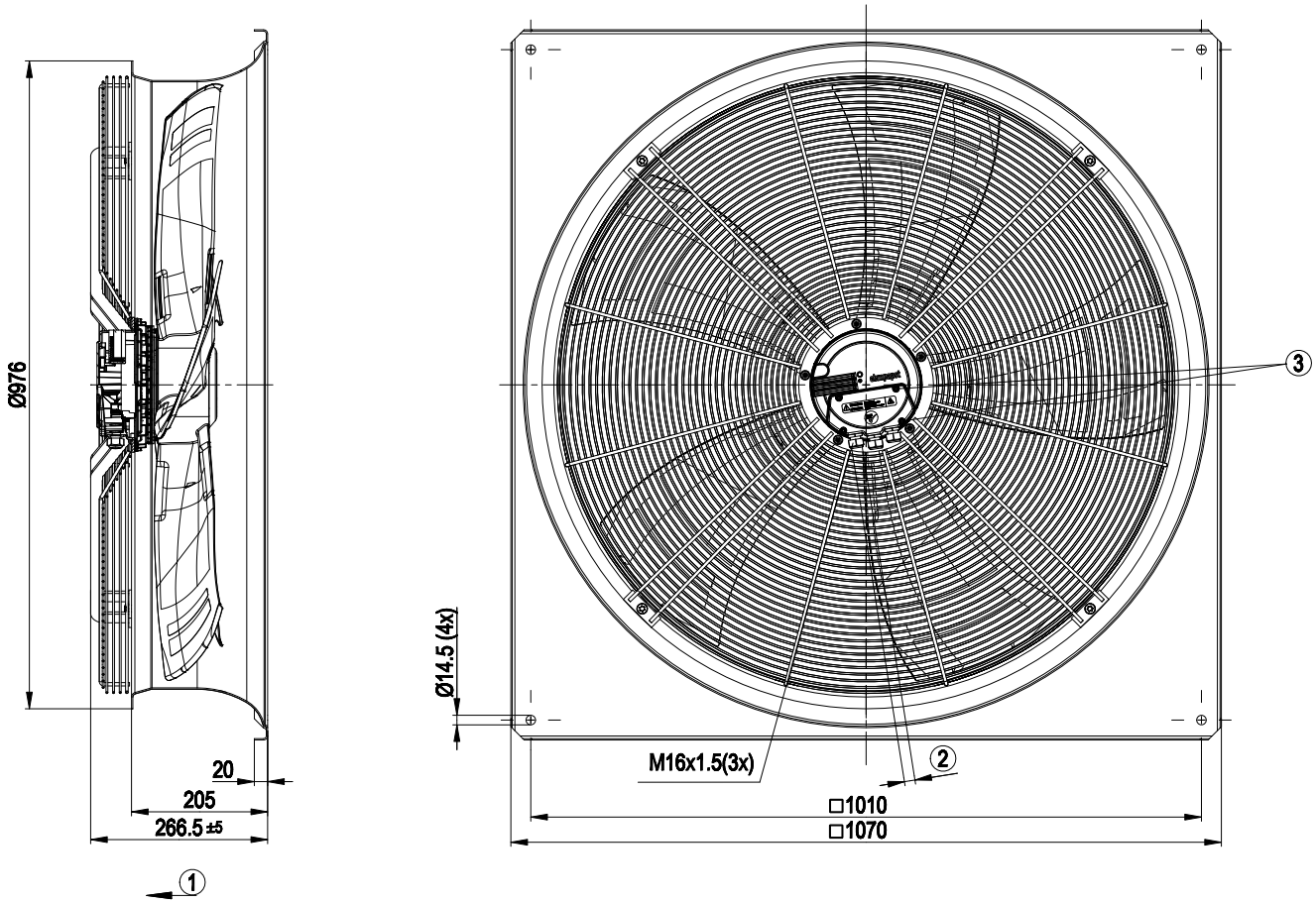
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Product drawing



1	Direction of air flow "V"
2	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 2±0.3 Nm
3	Tightening torque 3.5±0.5 Nm

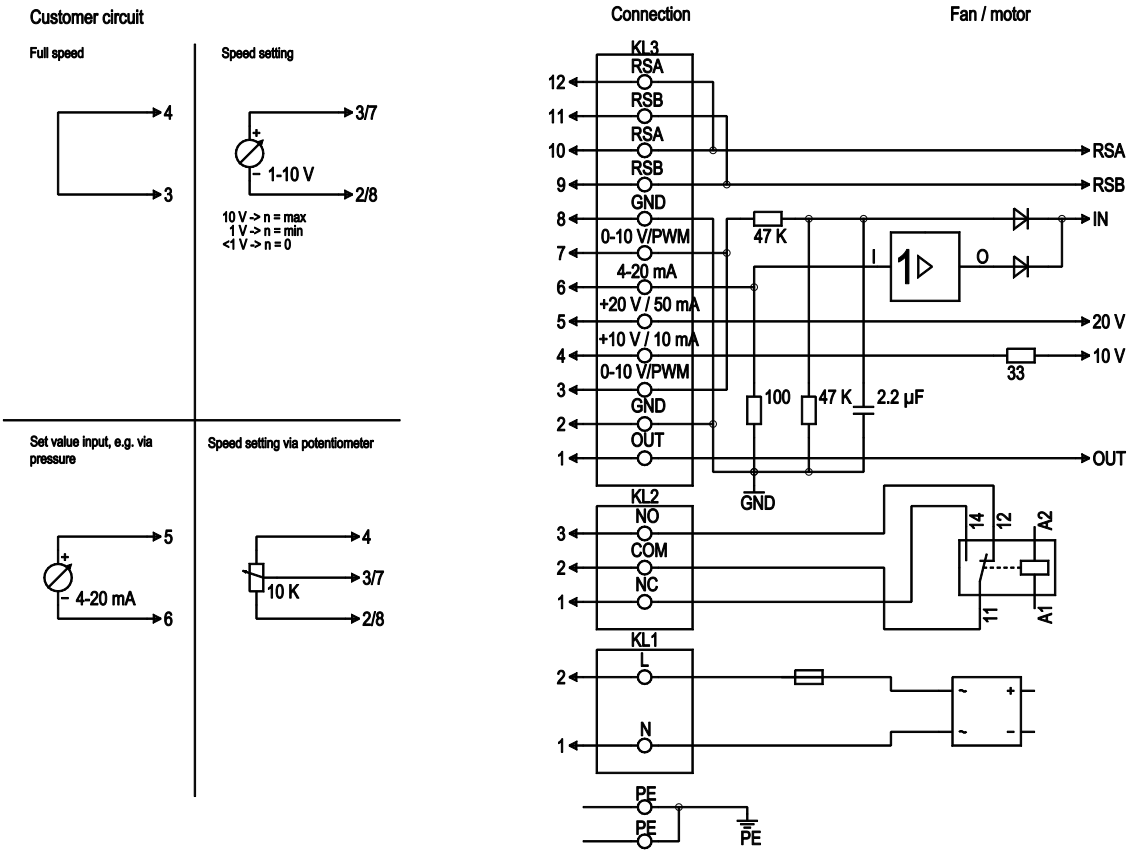
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Connection screen



No.	Pin	Signal	Function / assignment
PE		PE	Protective earth connection
KL1	1, 2	N, L	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, normally closed connection
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open connection
KL3	1	OUT	Analogue output, 0-10 VDC, max. 3 mA, SELV, Output of the current motor level control coefficient: 1 V corresponds to 10% level control coefficient, 10 V correspond to 100% level control coefficient.
KL3	2, 8	GND	Reference mass for control interface, SELV
KL3	3, 7	0-10 V	Use control / actual value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for ext. devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA, supply voltage for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / actual value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for ebmBus, RSB, SELV
KL3	10, 12	RSA	RS485 interface for ebmBus, RSA, SELV

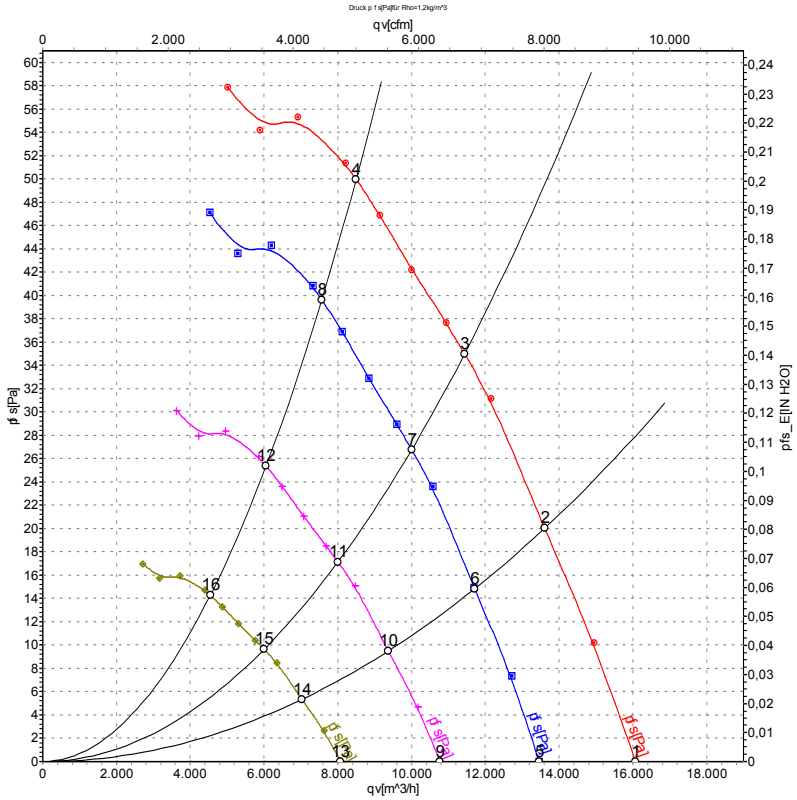
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Charts: Air flow 50 Hz



Measurement: LU-125219

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}	LwA_{out}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	230	50	510	229	1.01	57	63	63	16070	0
2	230	50	495	264	1.17	54	61	62	13610	20
3	230	50	485	285	1.25	53	60	59	11440	35
4	230	50	480	310	1.40	55	62	62	8495	50
5	230	50	425	134	0.60	53	60	59	13460	0
6	230	50	425	168	0.74	51	57	59	11710	15
7	230	50	425	190	0.84	50	57	56	10000	27
8	230	50	425	218	0.96	53	60	60	7570	40
9	230	50	340	69	0.31	48	55	54	10770	0
10	230	50	340	86	0.38	46	53	54	9370	10
11	230	50	340	98	0.43	45	52	52	8000	17
12	230	50	340	111	0.49	48	55	55	6055	25
13	230	50	255	29	0.13	42	48	48	8075	0
14	230	50	255	36	0.16	40	46	48	7025	5
15	230	50	255	41	0.18	39	46	45	6000	10
16	230	50	255	47	0.21	41	49	49	4540	14

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 · LwA_{out} = Sound power level outlet side
qv = Air flow · p_{fs} = Pressure increase

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