W3G910-CG06-80

EC axial fan - HyBlade

sickled blades (S series)

with full round nozzle, Transformator fan

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Nominal data

Type	**W3G910-CG06-80**
Motor	**M3G112-IA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		fa
State		prelim.
Speed (rpm)	min^{-1}	650
Power input	W	530
Current draw	A	0.85
Max. back pressure	Pa	75
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 in accordance with ecodesign regulation EU 327/2011 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	42.4	32.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		49.7	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.71
09 Air flow q_v	m^3/h	13425
09 Pressure increase p_{fs}	Pa	74
10 Speed (rpm) n	min^{-1}	650
11 Specific ratio*		1.00

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

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

LU-176907

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Technical features

Mass	50 kg
Size	910 mm
Motor size	112
Surface of rotor	Coated in black
Material of terminal box	PP plastic
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted, coated sheet steel blank, sprayed with PP plastic
Material of wall ring	Sheet steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Material of guard grille	Steel, coated in white aluminium plastic (RAL 9006)
Number of blades	5
Direction of air flow	A
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2+T
Note ambient temperature	Occasional start-up between -40 °C and -25 °C is permissible. For continuous operation at ambient temperatures below -25 °C (e.g. refrigeration applications), a fan version with special low-temperature bearings must be used.
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 top
Condensation drainage holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start -Maximum EEPROM write cycles 100,000 - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Temperature derating - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical connection	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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Approval	CSA C22.2 no. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1
Remark	Standard conformity as per EN 60335-1 in preparation

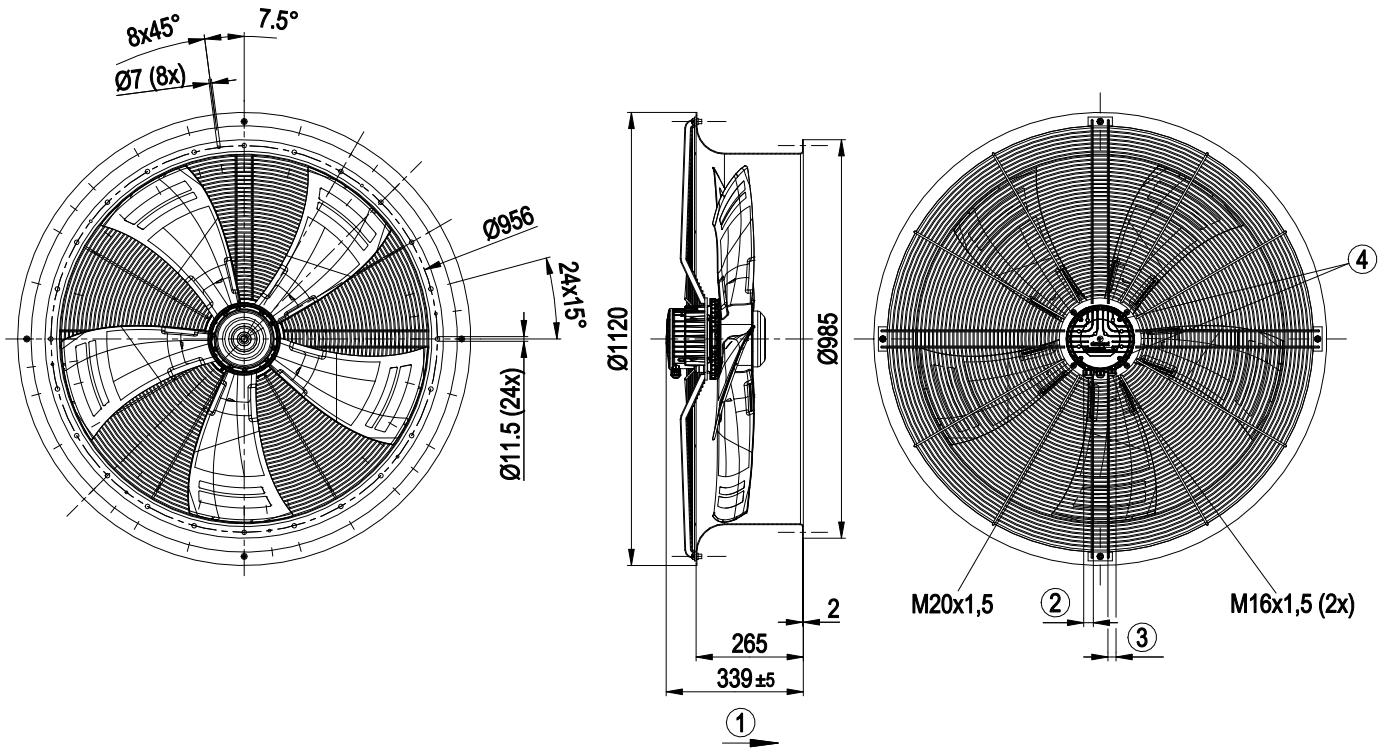
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Product drawing



1	Direction of air flow "A"
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8±0.3 Nm (use the provided seal) Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8±0.3 Nm
3	Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8±0.3 Nm (use the provided seal) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8±0.3 Nm
4	Tightening torque 1.5±0.2 Nm

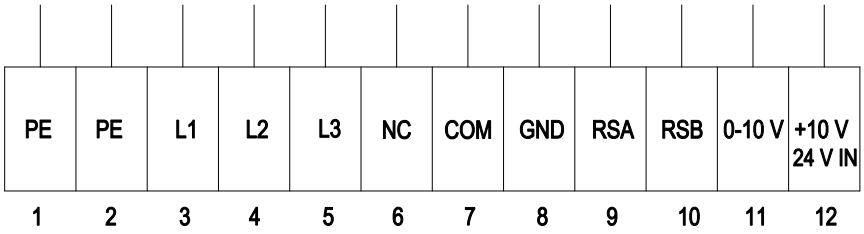
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Connection screen



No.	Conn.	Designation	Function / assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	L1	Power supply
	4	L2	Power supply
	5	L3	Power supply
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on mains side and basic insulation on control interface side
	7	COM	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on mains side and basic insulation on control interface side
	8	GND	Signal ground for control interface, SELV
	9	RSA	RS-485 interface for MODBUS, RSA; SELV
	10	RSB	RS-485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analogue input (set value) SELV, 0-10 V, Ri=100kΩ, parametrisable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V +/-3%, max. 10 mA short-circuit-proof, power supply for ext. devices (e.g. potentiometer); Fixed voltage input 24 VDC for parameter setting via MODBUS without mains power supply

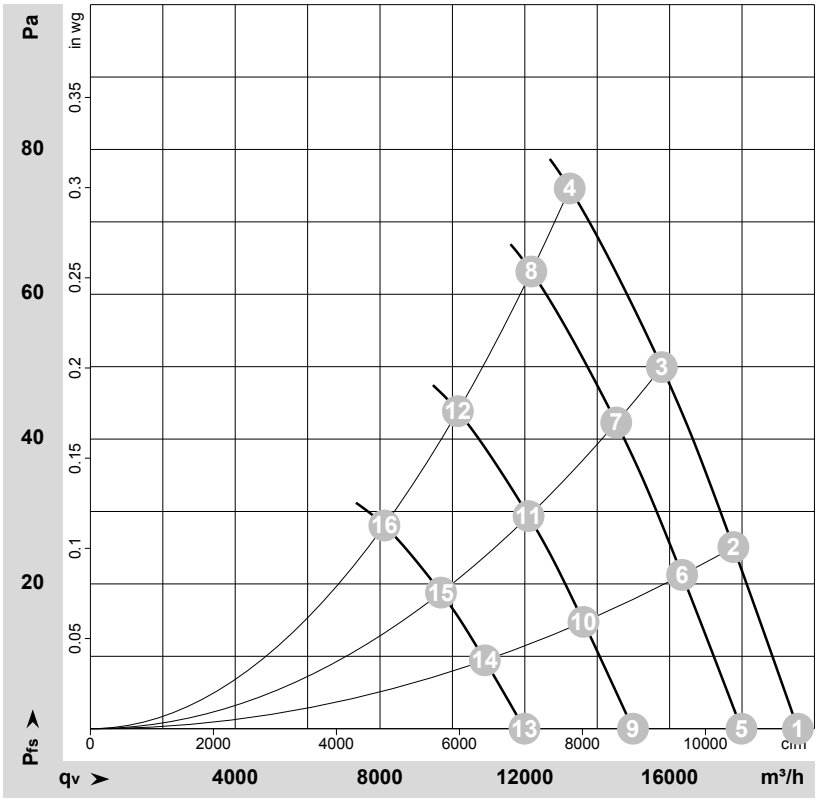
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-176907-1

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}	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	400	50	650	530	0.85	67	74	73	19545	0	11505	0.00
2	400	50	650	599	0.95	66	73	73	17760	25	10455	0.10
3	400	50	650	659	1.04	66	72	72	15785	50	9290	0.20
4	400	50	650	717	1.12	66	72	72	13240	75	7795	0.30
5	400	50	600	413	0.67	65	72	71	17985	0	10585	0.00
6	400	50	600	467	0.74	64	71	71	16345	22	9620	0.09
7	400	50	600	514	0.81	64	70	70	14525	43	8550	0.17
8	400	50	600	558	0.88	64	70	70	12180	64	7170	0.26
9	400	50	500	239	0.39	60	67	67	14985	0	8820	0.00
10	400	50	500	270	0.43	59	66	66	13620	15	8015	0.06
11	400	50	500	297	0.47	59	66	65	12105	30	7125	0.12
12	400	50	500	323	0.51	60	66	65	10150	44	5975	0.18
13	400	50	400	122	0.20	54	62	61	11990	0	7055	0.00
14	400	50	400	138	0.22	54	61	60	10895	10	6415	0.04
15	400	50	400	152	0.24	54	60	60	9685	19	5700	0.08
16	400	50	400	165	0.26	54	60	60	8120	28	4780	0.11

U = Supply voltage · f = Frequency · n = Speed (rpm) · 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
q_V = Air flow · p_{fs} = Pressure increase

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