W3G630-CG98-80

EC axial fan - HyBlade

sickle-shaped blades (S series)

with round full nozzle, Transformer fan

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Nominal data

Type	**W3G630-CG98-80**
Motor	**M3G112-IA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		fa
Status		prelim.
Speed (rpm)	min^{-1}	1160
Power consumption	W	730
Current draw	A	1.15
Max. back pressure	Pa	180
Max. back pressure	inH2O	0.72
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}	%	44.7	33.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	1.02
09 Air flow q_v	m^3/h	9395
09 Pressure increase p_{fs}	Pa	162
10 Speed (rpm) n	min^{-1}	1165
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-173032

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Technical description

Weight	25.2 kg
Fan size	630 mm
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted, painted sheet steel blank, sprayed with PP plastic
Fan housing material	Sheet steel, galvanized and coated with white aluminum plastic (RAL 9006)
Guard grille material	Steel, coated with white-aluminum plastic (RAL 9006)
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2+
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings.
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 top
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Temperature derating - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	C22.2 No.77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730

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Comment	Conformity with EN 60335-1 in preparation

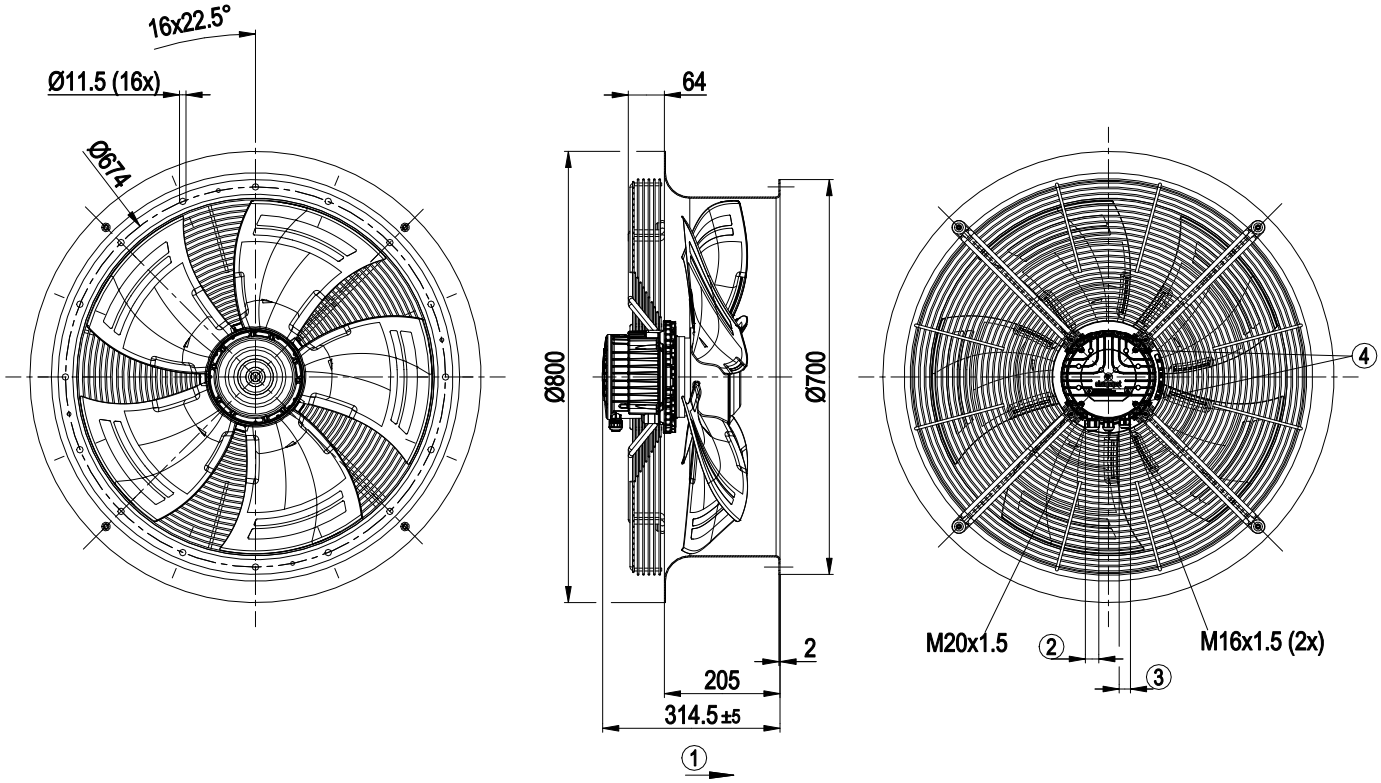
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Product drawing



1	Direction of air flow "A"
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque 2.5 ± 0.4 Nm
3	Cable diameter min. 6 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm Cable diameter min. 4 mm, max. 7 mm, tightening torque 2.5 ± 0.4 Nm (included seal must be used)
4	Tightening torque 1.5 ± 0.2 Nm

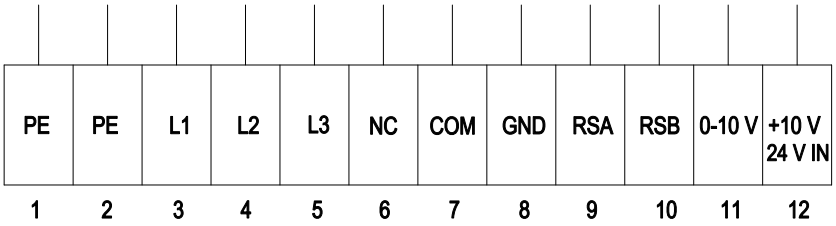
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Connection diagram



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 supply 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 supply side and basic insulation on control interface side
	8	GND	Reference ground for control interface, SELV
	9	RSA	RS485 interface for MODBUS, RSA; SELV
	10	RSB	RS485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply

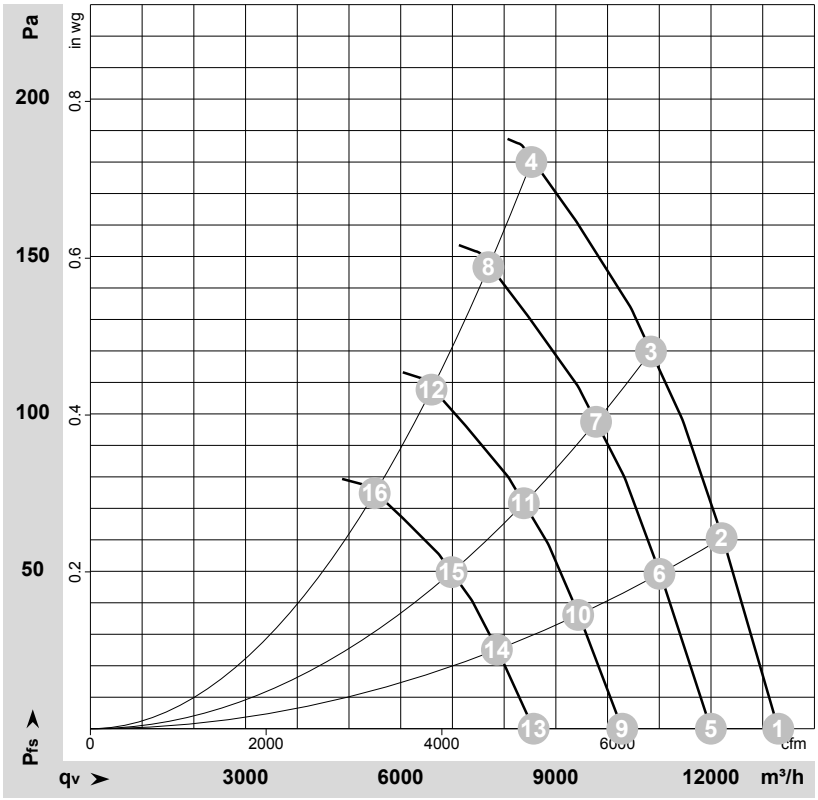
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-173032-1

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

	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	inH2O
1	400	50	1160	730	1.15	74	81	80	13300	0	7830	0.00
2	400	50	1160	842	1.30	72	79	78	12205	60	7185	0.24
3	400	50	1160	942	1.45	71	77	76	10840	120	6380	0.48
4	400	50	1160	1050	1.60	71	76	76	8525	180	5020	0.72
5	400	50	1050	537	0.84	71	78	78	12000	0	7060	0.00
6	400	50	1050	616	0.95	69	76	76	11005	50	6475	0.20
7	400	50	1050	692	1.06	68	74	74	9780	98	5755	0.39
8	400	50	1050	771	1.18	68	74	74	7695	148	4530	0.59
9	400	50	900	338	0.53	67	74	74	10285	0	6055	0.00
10	400	50	900	388	0.60	65	72	72	9430	37	5550	0.15
11	400	50	900	436	0.67	64	70	70	8380	72	4935	0.29
12	400	50	900	486	0.75	64	70	70	6595	108	3880	0.43
13	400	50	750	196	0.30	63	70	69	8570	0	5045	0.00
14	400	50	750	225	0.35	61	68	67	7860	25	4625	0.10
15	400	50	750	252	0.39	59	66	65	6985	50	4110	0.20
16	400	50	750	281	0.43	60	65	65	5495	75	3235	0.30

U = Power supply · 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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