W3G500-CD63-80

EC axial fan - HyBlade

sickled blades (S series)

with full round nozzle, Transformator fan

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Nominal data

Type	**W3G500-CD63-80**
Motor	**M3G112-GA**

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}	1770
Power input	W	960
Current draw	A	1.5
Max. back pressure	Pa	240
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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	46.4	34.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		52.1	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	1.27
09 Air flow q_v	m^3/h	7405
09 Pressure increase p_{fs}	Pa	267
10 Speed (rpm) n	min^{-1}	1745
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-175645

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Technical features

Mass	25 kg
Size	500 mm
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, coated with white aluminium plastic (RAL 9006)
Material of guard grille	Steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Number of blades	5
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H2+
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) we recommend our fan version with special low-temperature bearings.
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
Condensate discharge 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 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
Approval	UL 1004-7 + 60730; C22.2 Nr.77 + CAN/CSA-E60730-1; EAC

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Remark	Standard conformity as per EN 60335-1 in preparation

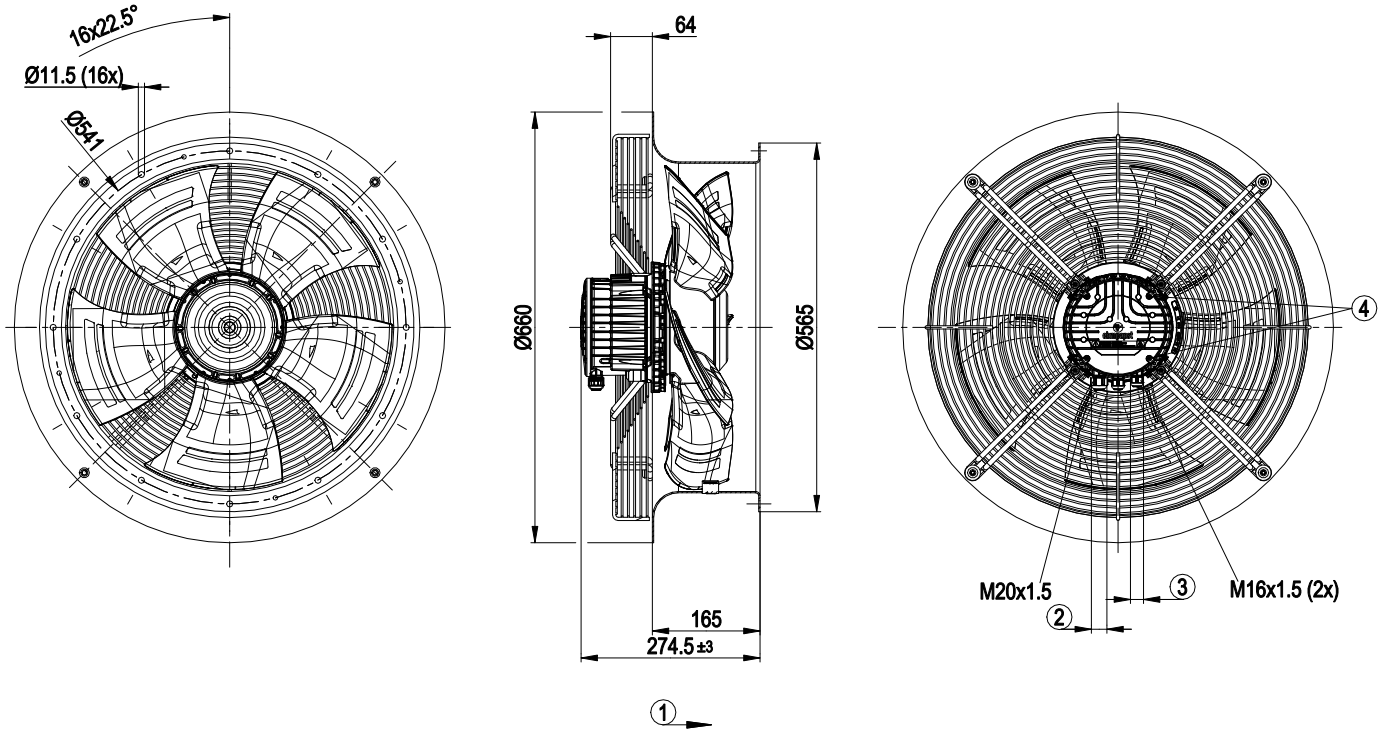
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Product drawing



1	Direction of air flow "A"
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque 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 (use must be made of sealing ring provided)
4	Tightening torque 1.5±0.2 Nm

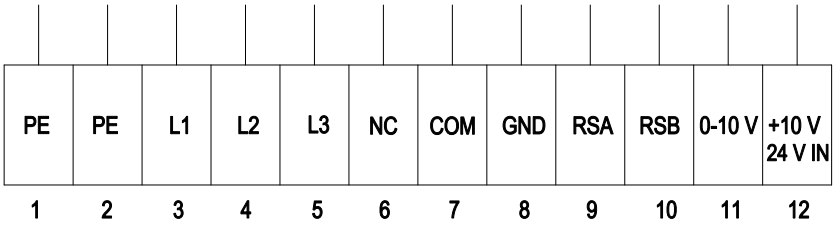
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Connection screen



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

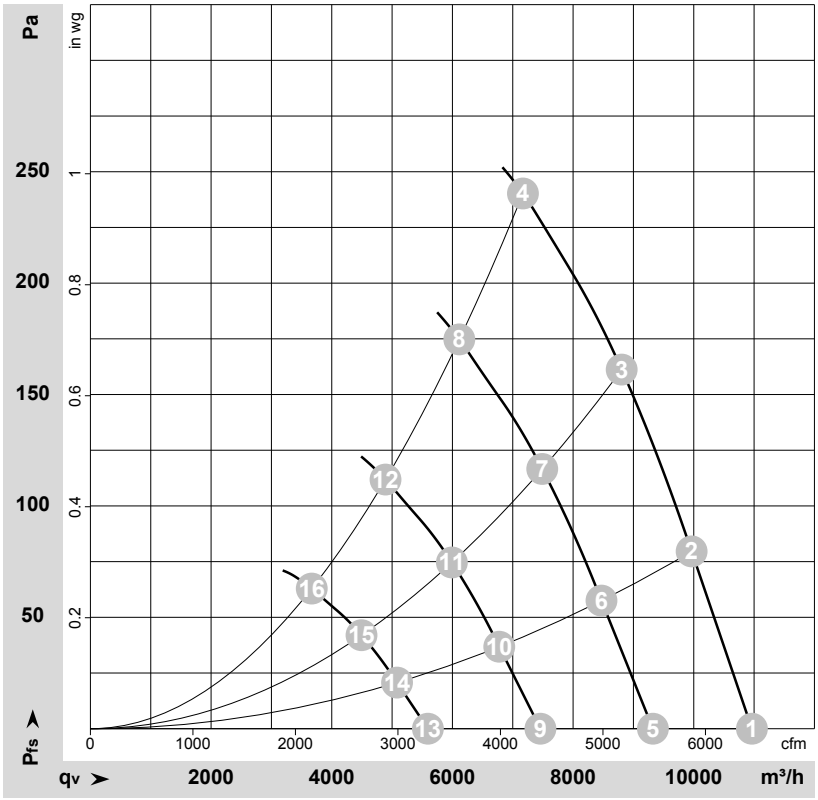
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174921-1

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	inH2O
1	400	50	1770	960	1.50	80	87	86	10965	0	6455	0.00
2	400	50	1770	1063	1.63	78	85	84	9965	80	5865	0.32
3	400	50	1770	1165	1.79	77	83	83	8805	160	5180	0.64
4	400	50	1770	1277	1.96	76	83	82	7170	240	4220	0.96
5	400	50	1500	590	0.91	76	83	82	9325	0	5485	0.00
6	400	50	1500	653	1.00	74	81	80	8470	57	4985	0.23
7	400	50	1500	717	1.10	73	79	79	7490	117	4410	0.47
8	400	50	1500	792	1.21	72	79	78	6115	175	3600	0.70
9	400	50	1200	302	0.47	70	77	76	7460	0	4390	0.00
10	400	50	1200	334	0.51	69	75	74	6775	37	3990	0.15
11	400	50	1200	367	0.56	67	73	73	5990	75	3525	0.30
12	400	50	1200	405	0.62	67	73	72	4890	112	2880	0.45
13	400	50	900	127	0.20	63	70	69	5595	0	3295	0.00
14	400	50	900	141	0.22	61	68	67	5080	21	2990	0.08
15	400	50	900	155	0.24	60	66	66	4495	42	2645	0.17
16	400	50	900	171	0.26	59	66	65	3670	63	2160	0.25

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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