

DATASHEET

Variable Speed Drives



Product coding : CFW500D31P0T4DB20C3H00
 : 12608840
 Product reference : CFW500
 Accessory module (control) : Without plug-in

Power supply : 380-480 V
 Input minimum-maximum voltage : 323-528 V
 - In : 3
 - Out : 3

Supply voltage range	380-480 V	
Overload cycle	Normal Overload (ND)	Heavy Overload (HD)
Rated current (HD)	31	31
Overload current for 60 sec (HD)	50	50
Overload current for 3 sec (HD)	60	60

Maximum applicable motor:

Voltage/Frequency	Power (HP/kW) [1]	
	Normal Overload (ND)	Heavy Overload (HD)
380V / 50Hz	Not applicable	20 / 15
380V / 60Hz	Not applicable	20 / 15
400V / 50Hz	Not applicable	20 / 15
400V / 60Hz	Not applicable	20 / 15
440V / 50Hz	Not applicable	20 / 15
440V / 60Hz	Not applicable	20 / 15
460V / 60Hz	Not applicable	25 / 18,5
480V / 60Hz	Not applicable	25 / 18,5

Accessory module (control) : Without plug-in
 Dynamic braking [2] : Standard with braking
 External electronic supply 24Vcc : Not available
 Safety Stop : Not available
 Internal RFI filter : With filter (C3 category)
 : Not available
 Link Inductor : No
 Memory card : Not included in the product
 USB port : Only with plug-in
 Line frequency : 50/60Hz
 Line frequency range (minimum - maximum) : 48-62 Hz
 Phase unbalance : Less or equal to 3% of input rated line voltage
 Transient voltage and overvoltage : Category III
 Single-phase input current [3] : Not applicable
 Three-phase input current [3] : 37,8 A
 Power factor : 0,75
 Displacement factor : 0,98
 Rated efficiency : $\geq 97\%$
 Maximum connections (power up cycles - on/off) per hour : 10 (1 each 6 minutes)
 DC power supply : Allow
 Standard switching frequency : 5 kHz
 Selectable switching frequency : 2,5 and 15 kHz
 Real-time clock : Not available
 COPY Function : Yes, by MMF
 Dissipated power:

Mounting type	Overload	
	ND	HD
Surface	500 W	500 W
Flange	Not applicable	Not applicable

Source available to the user

Output voltage : 24 Vcc
 Maximum capacity : 150 mA
 Power supply : Switched-mode power supply
 Control method : V/f, VVW, Sensorless and Encoder
 Encoder interface : Only with plug-in
 Control output frequency : 0-500 Hz
 Frequency resolution : 0,015 Hz
 - Speed resolution : 1% of rated speed
 - Speed range : 1:20

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- Speed resolution	: 1% of rated speed
- Speed range	: 1:30
- Speed resolution	: 0,5% of rated speed
- Speed range	: 1:100
- Speed resolution	: 0,1% of nominal speed
- Speed range	: Up to 0 rpm

Quantity (standard)	: Only with plug-in
Levels	: Not applicable
Impedance for voltage input	: Not applicable
Impedance for current input	: Not applicable
Function	: Not applicable
Maximum allowed voltage	: Not applicable

Quantity (standard)	: Only with plug-in
Activation	: Not applicable
Maximum low level	: Not applicable
Minimum high level	: Not applicable
Input current	: Not applicable
Maximum input current	: Not applicable
Function	: Not applicable
Maximum allowed voltage	: Not applicable

Analog outputs

Analog outputs - Quantity (standard)	: Only with plug-in
Levels	: Not applicable
RL for voltage output	: Not applicable
RL for current output	: Not applicable
Function	: Not applicable

Digital outputs

Digital outputs - Quantity (standard)	: 3 NO relay and 1 transistor
Maximum voltage	: Not applicable
Maximum current	: Not applicable
Function	: Not applicable

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Available protection

- Output phase-phase overcurrente/Short
- Overcurrent/Short circuit phase-ground
- Under/Overvoltage in power
- Heat sink overtemperature
- Motor overload
- IGBT's modules overload
- Fault/External alarm
- Programming error

Operation interface (HMI)

Aviability	: Included in the product
Installation	: Fixed HMI
Number of HMI buttons	: 9
Display	: Numeric LCD
Indication accuracy	: 5% of rated current
Speed resolution	: 0,1 Hz
Standard HMI degree of protection	: IP20
HMI battery type	: Not applicable
HMI battery life expectancy	: Not applicable
Remote HMI type	: Accessory
Remote HMI frame	: Not applicable
Remote HMI degree of protection	: IP54

Enclosure	: IP20
Degree of pollution	: 2

RoHS	: Yes
Conformal Coating	: 3C2

- Size	: D
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- Height : 306,6 mm / 12.1 in
 - Width : 180 mm / 7.09 in
 - Depth : 166,5 mm / 6.56 in
 - Weight : 4,3 kg / 9.5 lb

Mechanical Installation

Mounting position : Surface or DIN rail
 Fixing screw : M6
 Tightening torque : 4,5 N.m / 3.32 lb.ft
 Allows side-by-side assembly : No
 Minimum spacing around the inverter:
 - Top : 40 mm / 1.57 in
 - Bottom : 50 mm / 1.97 in
 - Front : 50 mm / 1.97 in
 - Side : 40 mm / 1.57 in

Cable gauges and tightening torques:

	Recommended cable gauge	Recommended tightening torque
Power	10,0 mm ² (8 AWG)	1,76 N.m / 1,30 lb.ft
Braking	10,0 mm ² (8 AWG)	1,76 N.m / 1,30 lb.ft
Grounding	10,0 mm ² (8 AWG)	0,5 N.m / 0.37 lb.ft
Control	0,5 to 1,5 mm ² (20 to 14 AWG)	0,5 N.m / 0.37 lb.ft

SoftPLC : Yes, incorporated
 Maximum breaking current : 48,0 A
 Minimum resistance for the brake resistor : 18 Ω
 Recommended aR fuse : FNH00-63K-A
 Recommended circuit breaker : MPW65-3-U050
 Disconnect switch : Not applicable
 Motor coupling box : Not applicable

Standards

Safety	<ul style="list-style-type: none"> - UL 508C - Power conversion equipment. - UL 840 - Insulation coordination including clearances and creepage distances for electrical equipment. - EN 61800-5-1 - Safety requirements electrical, thermal and energy. - EN 50178 - Electronic equipment for use in power installations. - EN 60204-1-Safety of machinery. Electrical equipment of machines. Part 1: General requirements. Note: To have a machine in accordance with that standard, the manufacturer of the machine is responsible for the installation of an emergency-stop device and a network switching equipment. - EN 60146 (IEC 146) - Semiconductor converters. - EN 61800-2 - Adjustable speed electrical power drive systems - Part 2: General requirements - Rating specifications for low voltage adjustable frequency AC power drive systems.
Electromagnetic Compatibility	<ul style="list-style-type: none"> - EN 61800-3 - Adjustable speed electrical power drive systems - Part 3: EMC product standard including specific test methods. - EN 55011 - Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment. - CISPR 11 - Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement. - EN 61000-4-2 - Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test. - EN 61000-4-3 - Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 3: Radiated, radio-frequency, electromagnetic field immunity test. - EN 61000-4-4 - Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test. - EN 61000-4-5 - Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 5: Surge immunity test. - EN 61000-4-6 - Electromagnetic compatibility (EMC)- Part 4: Testing and measurement techniques - Section 6: Immunity to conducted disturbances, induced by radio-frequency fields.
Mechanical Construction	- EN 60529 e UL 50

Notes

- 1) Motor power is orientative, valid for standard WEG Motors of IV poles. The correct sizing must be done according to the nominal current of the motor used, which must be less than or equal to the rated output current of the inverter;
- 2) Braking resistor is not included;
- 3) Considering minimum line impedance of 1%;
- 4) For more information, refer to the user manual of CFW500;

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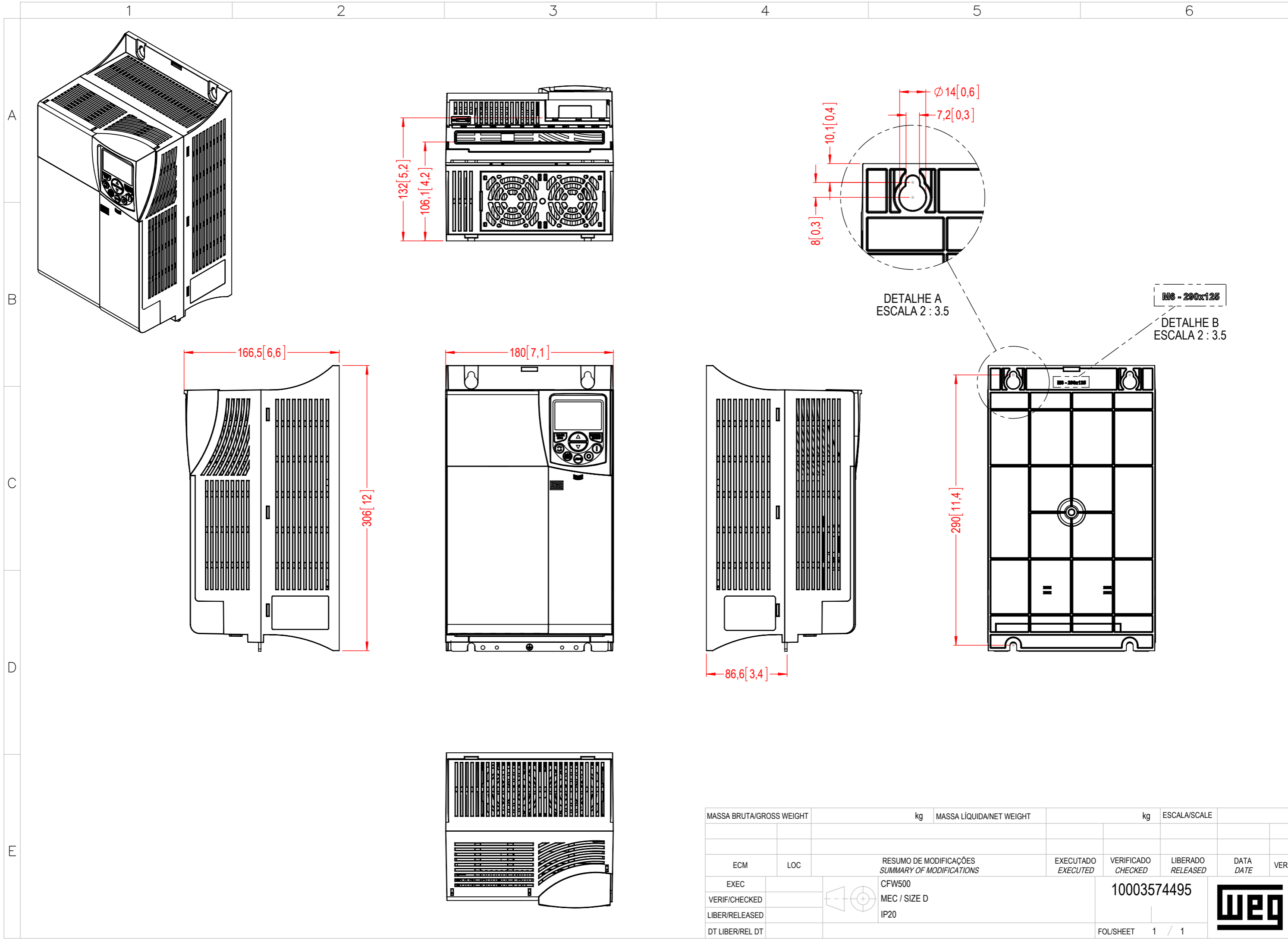
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5) All images are merely illustrative.

6) For operation with switching frequency above nominal, apply derating to the output current (refer to the user manual).



MASSA BRUTA/GROSS WEIGHT		kg	MASSA LÍQUIDA/NET WEIGHT		kg	ESCALA/SCALE	
ECM	LOC	RESUMO DE MODIFICAÇÕES SUMMARY OF MODIFICATIONS			EXECUTADO EXECUTED	VERIFICADO CHECKED	LIBERADO RELEASED
EXEC		CFW500			10003574495		
VERIF/CHECKED		MEC / SIZE D					
LIBER/RELEASED		IP20					
DT LIBER/REL DT					FOL/SHEET 1 / 1		