

DATASHEET

Variable Speed Drives



Product coding : CFW500B16P0T2DB20
 Product code : 11895099
 Product reference : CFW500
 Accessory module (control) : CFW500-IOS

Basic data

Power supply : 200-240 V
 Input minimum-maximum voltage : 170-264 V
 - In : 3
 - Out : 3

Supply voltage range	200-240 V	
Overload cycle	Normal Overload (ND)	Heavy Overload (HD)
Rated current (HD)	16	16
Overload current for 60 sec (HD)	20	20
Overload current for 3 sec (HD)	30	30

Maximum applicable motor:

Voltage/Frequency	Power (HP/kW) [1]	
	Normal Overload (ND)	Heavy Overload (HD)
220V / 50Hz	Not applicable	5,5 / 4
220V / 60Hz	Not applicable	5 / 3,7
230V / 50Hz	Not applicable	5,5 / 4
230V / 60Hz	Not applicable	5 / 3,7
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable

Accessory module (control) : CFW500-IOS
 Dynamic braking [2] : Standard with braking
 External electronic supply 24Vcc : Not available
 Safety Stop : Not available
 Internal RFI filter : Without filter
 External RFI filter : 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] : 19,5 A
 Power factor : 0,83
 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	185 W	185 W
Flange	Not applicable	Not applicable

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

DATASHEET

Variable Speed Drives



- 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)	: 1
Levels	: 0-10V, 0-20mA and 4-20mA
Impedance for voltage input	: 100 k Ω
Impedance for current input	: 500 Ω
Function	: Programmable
Maximum allowed voltage	: 30 Vcc

Quantity (standard)	: 1
Activation	: Active low and high
Maximum low level	: 5 V (low) e 15 V (high)
Minimum high level	: 9 V (low) e 20 V (high)
Input current	: 4,5 mA
Maximum input current	: 5,5 mA
Function	: Programmable
Maximum allowed voltage	: 30 Vcc

Analog outputs

Analog outputs - Quantity (standard)	: 1
Levels	: 0 to 10V, 0 to 20mA and 4 to 20mA
RL for voltage output	: 10 k Ω
RL for current output	: 500 Ω
Function	: Programmable

Digital outputs - Quantity (standard)	: 1 NO/NC relay and 1 transistor
Maximum voltage	: 240 Vca and 24 Vcc
Maximum current	: 0,5 A and 150 mA
Function	: Programmable

- Modbus-RTU (with accessory: Any plug-in module)
- Modbus/TCP (with accessory CFW500-CEMB-TCP)
- Profibus DP (with accessory: CFW500-CPDP)
- Profibus DPV1 (with accessory: CFW500-CPDP)
- Profinet (with accessory CFW500-CEPN-IO)
- CANopen (with accessory: CFW500-CCAN)
- DeviceNet (with accessory: CFW500-CCAN)
- EtherNet/IP (with accessory CFW500-CETH-IP)
- EtherCAT (Not available)
- BACnet (Not aplicable)

- 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

Availiability	: 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	: B
- Height	: 199 mm / 7.8 in
- Width	: 100 mm / 3.9 in

DATASHEET

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- Depth : 160 mm / 6.3 in
 - Weight : 1,2 kg / 2.6 lb

Mechanical Installation

Mounting position : Surface or DIN rail
 Fixing screw : M4
 Tightening torque : 2 N.m / 1.48 lb.ft
 Allows side-by-side assembly : Yes, maximum ambient temperature 40°C
 - Top : 35 mm / 1.38 in
 - Bottom : 50 mm / 1.97 in
 - Front : 40 mm / 1.57 in
 - Side : 15 mm / 0.59 in

Cable gauges and tightening torques:

	4,0 mm ² (12 AWG)	0,5 N.m / 0.37 lb.ft
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	4,0 mm ² (12 AWG)	0,5 N.m / 0.37 lb.ft
	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 : 20,0 A
 Minimum resistance for the brake resistor : 20 Ω
 Recommended aR fuse : FNH00-40K-A
 Recommended circuit breaker : MPW40-3-U025
 Disconnect switch : Not applicable
 Motor coupling box : Not applicable

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	- 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 60529 e UL 50

Certifications

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;
- 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).