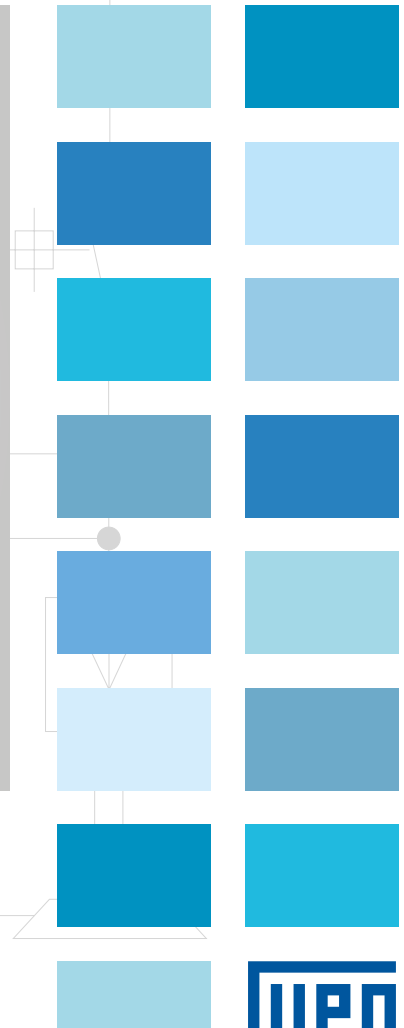
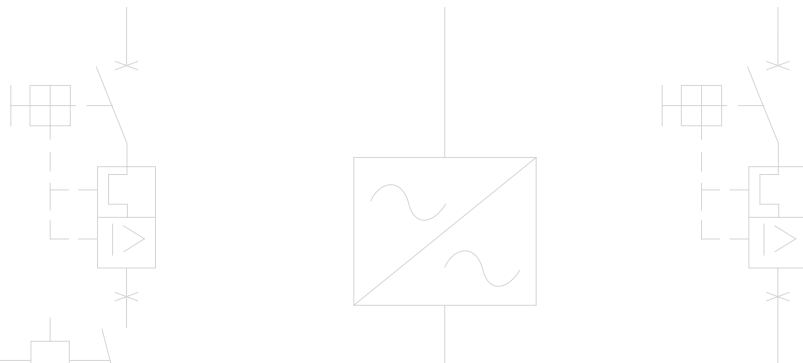


Automation

Variable Speed Drives





Variable Speed Drives

Summary

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CONVENIENCE ALL THE TIME



High-performance and energy-efficient solutions, WEG variable speed drives use cutting-edge technology for speed variation of three-phase induction motors.

Offering a modern design and easy installation, they can be used in a great variety of industrial segments and also in different kinds of projects. WEG variable speed drives also speed up the operations, in addition to helping preserve the environment.





Main Benefits



Simple installation and operation



Easy parameter setting



High compaction degree



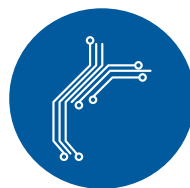
Modern design



Effective motor protection



Free programming software



Special functions



Excellent cost-effectiveness

Connectivity



SuperDrive G2

Using the SuperDrive G2 software, it is possible to change, monitor, and graphically view the variable speed drives variables via connection to a personal computer.

Trend Function

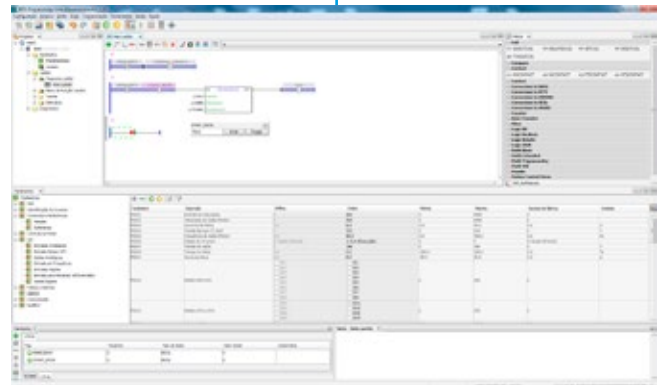
Trend charts for online monitoring of parameters and other variables within the SuperDrive G2 software.

- Easy operation and view
- Free on www.weg.net

WEG Programming Suite (WPS)

Integrated tool that assists in the creation of automation applications, allowing graphical monitoring, parameter setting and programming in Ladder language (IEC 61131-3) of various WEG product families.

- Multi-Products, meeting the requirements of a wide range of WEG products
- Multi-Use, allowing:
 - Parameter setting of the devices
 - Programming of the devices in Ladder language
 - Monitoring of the devices
 - Assistance in the creation and configuration of automation applications



WEG Ladder Programmer (WLP)

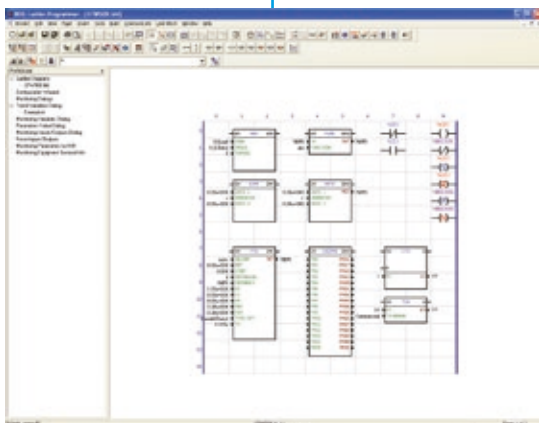
Software for Windows® environment that enables the programming in Ladder language of various WEG product families.

- Edition of the program by means of several Ladder function blocks
- Compilation of the program in Ladder for a language compatible with the devices
- Transfer of the compiled program to the devices
- Reading of the program installed on the devices¹⁾
- Online monitoring of the program running on the devices
- Point-to-point communication with the devices through serial in RS232 or USB²⁾
- Serial communication in RS485 with up to 30 devices³⁾
- Online help with all the functions and blocks present in the software

Notes: 1) For devices that supports the upload function.

2) For devices that have a USB communication port.

3) Through an RS232-to-RS485 converter connected to the PC.



Applications



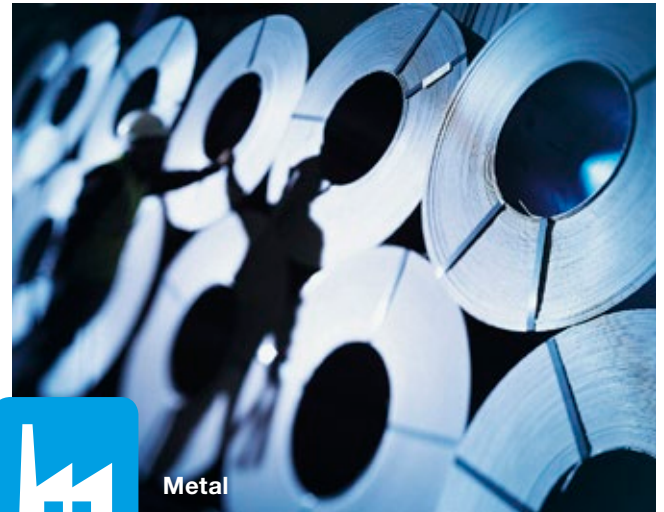
Cement & Mining



Chemicals, Petrochemicals, Oil & Gas



Sugar & Alcohol



Metal



Water & Wastewater



Paper & Cellulose

CFW100

Micro Variable Speed Drive



Compact size, high performance, easy to use,
ideal for small machines.

Characteristics

- Power supply: 200-240 V (single-phase)
- Rated currents: 1.6 A to 4.2 A (0.25 to 1 HP)
- Vector (VVW) or scalar (V/f) control
- Built-in SoftPLC function
- Built-in operating interface (HMI)
- Surface or DIN-rail mounting
- Degree of protection IP20
- Removable external fan
- Fault or alarm diagnosis
- Various accessories for network communication, input and output expansion, RFI filter - all of them using the Plug & Play concept

- Electronic protection against motor overload
- Operating interface (HMI) included
- Flash memory module (accessory)
- RS485 communication (accessory)
- USB communication (accessory)
- Free SuperDrive G2 and WLP programming software
- Remote control (accessory)

Certifications



Specification


Standard Version

Reference	Power supply (V)		Frame size	Rated output current (A)	Maximum applicable motor ¹⁾								
					IEC			UL					
					Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP			
CFW100A01P6S220	Single-phase	200-240	A	1.6	230	0.25	220	0.33	230	0.33			
CFW100B02P6S220			B	2.6							0.55	0.75	0.75
CFW100C04P2S220			C	4.2									

Notes: 1) The power values for maximum applicable motor shown in the table above are reference values and valid for WEG motors, IEC motor powers are based on motor WEG four-pole W22 High Efficiency IE2, three-phase induction motors with power supply of 220 V or 230 V, UL motor power are based on WEG four pole W22 Premium.

The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current. For further information, please refer to the catalog available on our website www.weg.net.

Accessories

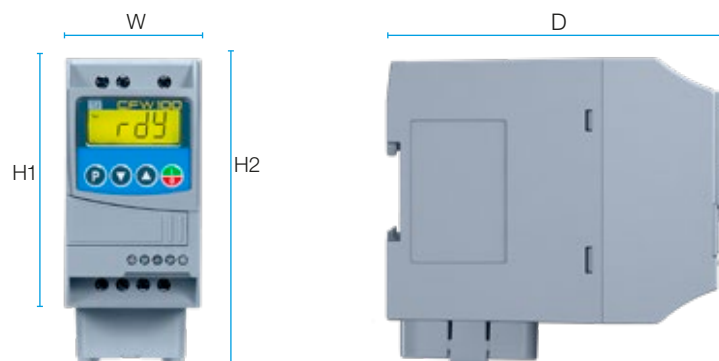
Reference	Description	Illustrative figures	
Control accessories			
CFW100-CRS485	RS485 communication module		
CFW100-CUSB	USB communication module with 2 m cable		
CFW100-IOA	I/O expansion module with 1 analog input and 1 analog output		
CFW100-IOADR	I/O expansion and infrared remote control module ¹⁾		
CFW100-IOAR	I/O expansion module with 1 analog input and 1 relay output		
CFW100-IOD	I/O expansion module with 4 isolated (configurable) NPN or PNP digital inputs		
CFW100-CCAN	CANopen and DeviceNet communication module		
Flash memory			
CFW100-MMF	Flash memory module (3 m cable included)		
External HMI			
CFW100-KHMIR	CFW100 remote interface kit (CFW100-CRS485 + 3 m cable included)		
Radiofrequency filter (RFI)			
CFW100-KFABC	Footprint radiofrequency kit ²⁾ , category C2, for frames A, B or C		
Others			
PLMP	Adapter kit for surface mounting, mounting with screws, set with two units		

Notes: 1) The I/O expansion and infrared remote control module contains: 1 NTC sensor with cable (1 m), 1 infrared (IR) remote control, 1 infrared receiver cable (1.5 m), 1 NTC sensor input, 1 analog current input (0-10 or 2-20 mA), 1 analog voltage input (0-10 V dc), 3 digital NO outputs (240 V ac);

2) The footprint radiofrequency filter is an externally mounted accessory with the CFW100 installed on the filter itself. The inverter is mounted on the filter surface, and the electrical connection between the filter and the CFW100 is accomplished through the filter coupling guide. Then the assembly can be fastened to a DIN rail.

I/O = Inputs and outputs.

Dimensions



Frame	H1	H2	W	D	Weight
	mm (in)	mm (in)	mm (in)	mm (in)	kg (lb)
A	100.0 (3.94)	-	55.0 (2.17)	129.0 (5.08)	0.48 (1.05)
B	-	117.0 (4.60)	55.0 (2.17)	129.0 (5.08)	0.57 (1.25)
C	-	125.6 (4.94)	55.0 (2.17)	129.0 (5.08)	0.61 (1.34)

CFW300

Mini Variable Speed Drive



Reduced size, easy to use, ideal for applications in machines and in industrial processes in general.

Characteristics

- Rated output current of 1.6 to 15.2 A (0.25 HP / 0.18 kW to 5 HP / 3.7 kW), single-phase power supply 100-127 V ac, 200-240 V ac single or three-phase, or 280-340 V dc
- 4 configurable (PNP or NPN) digital inputs, 1 relay output 0.5 A / 250 V ac, 1 analog input 0-10 V dc / 4-20 mA
- Control modes: V/f, quadratic V/f or VVW vector control
- 2 slots for function expansion, such as communication or number of I/Os
- Conformal coating: coating class 3C2 (IEC 60721-3-3) on the internal circuits for greater protection in harsh environments
- Built-in SoftPLC function - the functionalities of a PLC added to the CFW300
- Free WPS programming and monitoring software
- Degree of protection IP20
- Footprint EMC filter (accessory)
- Protection, alarm and diagnosis functions

- Operating interface (HMI) with built-in LED display
- "S" linear ramp, slip compensation, electronic potentiometer, PID, multispeed with up to eight programmable speeds, JOG, DC braking
- IGBT module (dynamic braking) included in frame B
- Smart thermal management of the fan

Certifications



Note: designed for exclusive industrial or professional use.

Specification

Standard Version

Reference	Power supply (V)		Frame size	Rated output current (A)	Maximum applicable motor ¹⁾														
					IEC				UL										
					Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP									
CFW300A01P6S1NB20	Single-phase	110-127 V ac	A	1.6	230	0.25	220	0.33	230	0.33									
CFW300A02P6S1NB20				2.6							0.55	0.75	0.5						
CFW300A04P2S1NB20				4.2							1.1	1.5	1.0						
CFW300A06P0S1NB20				6.0							1.5	2.0	1.5						
CFW300A01P6S2NB20	Single-phase	200-240 V ac	A	1.6	230	0.25	220	0.33	230	0.33									
CFW300A02P6S2NB20				2.6							0.55	0.75	0.5						
CFW300A04P2S2NB20				4.2							1.1	1.5	1.0						
CFW300A06P0S2NB20				6.0							1.5	2.0	1.5						
CFW300A07P3S2NB20			7.3	1.5							2.0	2.0							
CFW300B10P0B2DB20			B	10.0							2.2	3.0	3.0						
CFW300A01P6T2NB20				Three-phase							200-240 V ac	A	1.6	230	0.25	220	0.33	230	0.33
CFW300A02P6T2NB20													2.6						
CFW300A04P2T2NB20	4.2	1.1			1.5	1.0													
CFW300A06P0T2NB20	6.0	1.5	2.0		1.5														
CFW300A07P3T2NB20	7.3	1.5	2.0		2.0														
CFW300B10P0B2DB20	B	10.0	2.2		3.0	3.0													
CFW300B15P2T2DB20		15.2	4.0		5.0	5.0													
CFW300A01P6D3NB20		DC link	280-380 V dc		A	1.6	230	0.25	220	0.33		230	0.33						
CFW300A02P6D3NB20				2.6		0.55					0.75			0.5					
CFW300A04P2D3NB20	4.2			1.1		1.5					1.0								
CFW300A06P0D3NB20	6.0			1.5		2.0					1.5								
CFW300A07P3D3NB20	7.3			1.5	2.0	2.0													
CFW300B10P0B2DB20	B			10.0	2.2	3.0					3.0								
CFW300B15P2T2DB20				15.2	4.0	5.0					5.0								

Notes: 1) The power values for maximum applicable motor shown in the table above are reference values and valid for WEG motors, IEC motor powers are based on motor WEG four-pole W22 High Efficiency IE2, three-phase induction motors with power supply of 220 V or 230 V. UL motor power are based on WEG four pole W22 Premium.

The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current. For further information, please refer to the catalog available on our website www.weg.net.

Plug-In Modules⁶⁾

Reference	Slots ⁵⁾	Inputs		Outputs		USB ⁴⁾	Infrared and NTC sensors ³⁾	Input for encoder ²⁾	Fieldbus communication			
		Analog	Digital	Analog	Relay digital				RS485	RS232	CANopen	Profibus-DP
CFW300-CRS485	Upper slot	-	-	-	-	-	-	-	1	-	-	-
CFW300-CRS232		-	-	-	-	-	-	-	-	1	-	-
CFW300-CCAN		-	-	-	-	-	-	-	-	-	1	-
CFW300-CPDP		-	-	-	-	-	-	-	-	-	-	1
CFW300-CUSB		-	-	-	-	-	1	-	-	-	-	-
CFW300-IOAR		1	-	1	3	-	-	-	-	-	-	-
CFW300-IODR ¹⁾	Lower slot	-	4	-	3	-	-	-	-	-	-	
CFW300-IOAENC		1	-	2	-	-	-	1	-	-	-	
CFW300-IOADR		1	-	-	3	-	1	-	-	-	-	

Notes: 1) Configurable (NPN or PNP) isolated digital inputs;

2) Incremental encoder (A/A - B/B), power supply of +5 V @ 100 mA for the encoder, maximum frequency of 400 kHz;

3) Remote control and battery included;

4) USB cable included;

5) 1 plug-in module in the upper slot (network communication or accessibility) and 1 plug-in module in the lower slot (input/output expansion) allowed;

6) The standard version of the CFW300 already has 4 (configurable) PNP or NPN digital inputs, 1 analog input 0-10 V dc / 4-20 mA and 1 relay output 0.5 A / 250 V ac.

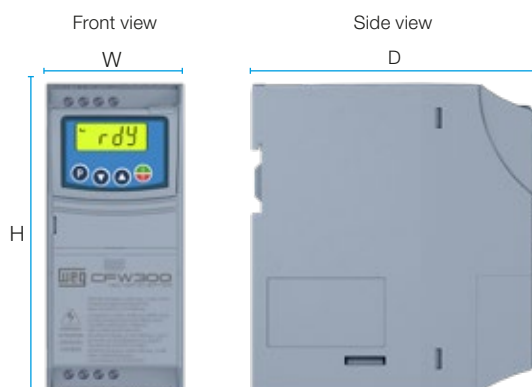
Dimensions

Dimensions without Filter

Frame	H	W	D	Weight
	mm (in)	mm (in)	mm (in)	kg (lb)
A	157.9 (6.22)	70.0 (2.76)	148.4 (5.84)	0.90 (1.98)
B	198.9 (8.08)	70.0 (2.76)	158.4 (6.24)	1.34 (2.95)

Dimensions with Filter

Frame	H	W	D	Weight
	mm (in)	mm (in)	mm (in)	kg (lb)
A	196.0 (7.72)	70.0 (2.76)	190.0 (7.48)	1.30 (2.86)
B	237.0 (9.93)	70.0 (2.76)	200.1 (7.88)	1.80 (3.96)



CFW500

Compact for Machines in General

Compact drive with high performance and functionality, ideal for a great variety of industrial applications.



Characteristics

- Power supply: 200-600 V
- Rated currents: 1 to 56 A (0.25 to 30 HP / 0.18 to 22 kW)
- Control modes: VVW (Voltage Vector WEG), V/f (scalar) or Vector Control (sensorless or with encoder)
- Software applications dedicated to pumping - Pump Genius
- Plug & Play Concept
- Built-in SoftPLC function - the functionalities of a PLC added to the CFW500
- Smart thermal management of the fan
- Degree of protection IP20 or NEMA1
- Operating interface (HMI) in LCD with backlight
- RFI filter according to the levels of EN 61800-3 standard (optional)
- Communication: CANopen, DeviceNet and Profibus-DP, EtherNet/IP, Modbus-TCP, PROFINET IO, RS485 and RS232 (available as accessories)

- Flash memory module (optional): data transfer (parameters and application) between inverters without having to turn them on
- Free WLP and SuperDrive G2 programming software
- Side-by-side mount: installation without space between the inverters, streamlining the panel size

Certifications



Note: designed for exclusive industrial or professional use.

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

Specification

Version with Plug-In IOS Module Included

CFW500 variable speed drive					Maximum applicable motor ¹⁾															
Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)	IEC				UL										
						Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP									
CFW500A01P6S2NB20	Single-phase	200-240	A	Not available	1.6	230	0.25	220	0.33	230	0.33									
CFW500A02P6S2NB20					2.6						0.5	0.75								
CFW500A04P3S2NB20					4.3						1.1	1.5								
CFW500A07P0S2NB20					7.0						1.5	2.0								
CFW500A01P6B2NB20					1.6						230	0.25	220	0.33	230	0.33				
CFW500A02P6B2NB20	2.6	0.5	0.75																	
CFW500A04P3B2NB20	4.3	1.1	1.5																	
CFW500B07P3B2DB20	7.3	1.5	2.0																	
CFW500B10P0B2DB20	10	2.2	3.0																	
CFW500A07P0T2NB20	Single-phase or three-phase	200-240	A	Not available	7.0	230	1.5	220	2.0	230	2.0									
CFW500A09P6T2NB20					9.6						2.2	3.0								
CFW500B16P0T2DB20					16						4.0	5.0								
CFW500C24P0T2DB20			B	Built-in	24						5.5	7.5	7.5							
CFW500D28P0T2DB20					28						7.5	10								
CFW500D33P0T2DB20					33						9.2	12.5								
CFW500D47P0T2DB20			C	Built-in	47						11	15	15							
CFW500E56P0T2DB20					56						15	20								
CFW500A01P0T4NB20					Three-phase						200-240	A	Not available	1.0	230	0.37	460	230	460	0.5
CFW500A01P6T4NB20			1.6	0.75										1.0						
CFW500A02P6T4NB20			2.6	1.1										1.5						
CFW500A04P3T4NB20			4.3	1.5								3.0								
CFW500A06P1T4NB20			6.1	3.0								4.0								
CFW500B02P6T4DB20			B	Built-in								2.6	1.1	1.5						1.5
CFW500B04P3T4DB20												4.3	1.5	3.0						
CFW500B06P5T4DB20	6.5	3.0				4.0														
CFW500B10P0T4DB20	C	Built-in	10	4.0		7.5	7.5													
CFW500C14P0T4DB20			14	7.5		10														
CFW500C16P0T4DB20			16	7.5		12.5														
CFW500D24P0T4DB20	D	Built-in	24	11		15	15													
CFW500D31P0T4DB20			31	15		25														
CFW500E39P0T4DB20			39	18.5		30														
CFW500E49P0T4DB20	E	Built-in	49	22		40	40													
CFW500C01P7T5DB20			1.7	0.75	1.5	1.0														
CFW500C03P0T5DB20			3.0	1.5	2.0															
CFW500C04P3T5DB20	Three-phase	500-600	C	Built-in	4.3	525	2.2	575	4.0	575	3.0									
CFW500C07P0T5DB20					7.0						4.0	6.0								
CFW500C10P0T5DB20					10						5.5	10								
CFW500C12P0T5DB20					12						7.5	12.5								

Notes: 1) Motor powers are reference values, valid for WEG IEC or NEMA three-phase induction motors. The motor powers for IEC standard are based on WEG W22 IE2, High-Efficiency, 4-pole motors with power supply of 220 V, 380 V and 600 V. The motor powers for UL standard are based on WEG W22 NEMA Premium, 4-pole motors with power supply of 230 V, 440 or 575 V. The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current.
2) The CFW500-IOS standard plug-in module is included in this reference.

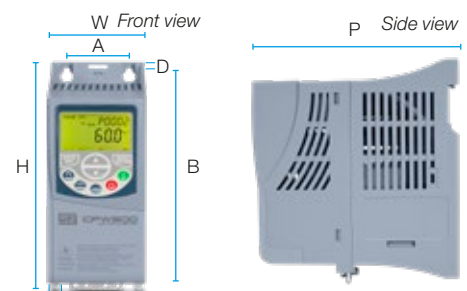
Accessories

Plug-in module	Functions														
	Inputs		Outputs			USB port	Input for encoder ³⁾	Fieldbus networks						Supply	
	Digital	Analog	Analog	Digital relay	Digital transistor			CANopen DeviceNet	RS232	RS485	Profibus-DP	EtherNet/IP	Modbus-TCP	PROFINET IO	10 V
CFW500-IOS	4	1	1	1	1	-	-	-	1	-	-	-	-	1	1
CFW500-IOD	8	1	1	1	4	-	-	-	1	-	-	-	-	1	1
CFW500-IOAD	6	3	2	1	3	-	-	-	1	-	-	-	-	1	1
CFW500-IOR	5 ²⁾	1	1	4	1	-	-	-	1	-	-	-	-	1	1
CFW500-ENC	5 ²⁾	1	1	4	1	-	1	-	1	-	-	-	-	1	1
CFW500-CUSB	4	1	1	1	1	1	-	-	1	-	-	-	-	1	1
CFW500-CCAN	2	1	1	1	1	-	-	1	-	-	-	-	-	1	-
CFW500-CRS232	2	1	1	1	1	-	-	1	1	-	-	-	-	-	1
CFW500-CRS485 ¹⁾	4	2	1	2	1	-	-	-	2	-	-	-	-	1	1
CFW500-CPDP	2	1	1	1	1	-	-	-	1	1	-	-	-	-	1
CFW500-CETH-IP	2	1	1	1	1	-	-	-	1	-	1	-	-	-	1
CFW500-CEMB-TCP	2	1	1	1	1	-	-	-	1	-	-	1	-	-	1
CFW500-CEPN-IO	2	1	1	1	1	-	-	-	1	-	-	-	1	-	1

Notes: 1) All plug-in module models have at least one RS485 port. The CFW500-CRS485 plug-in module has two RS485 ports.
The CFW500 allows the installation of one plug-in module per unit.
2) The Dis input is always NPN, and it cannot be configured for PNP unlike the others.
3) Incremental encoder (A/A - B/B).
Refer to the installation guides of the plug-in modules on www.weg.net.
For the other CFW500 installation accessories, refer to the product catalog or the user's manual.

Dimensions

Frame	A	B	C	D	H	W	P	Weight
	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	kg (lb)
A	50 (1.97)	175 (6.89)	11.9 (0.47)	7.2 (0.28)	189 (7.44)	75 (2.95)	150 (5.91)	0.8 (1.76)
B	75 (2.95)	185 (7.3)	11.8 (0.46)	7.3 (0.29)	199 (7.83)	100 (3.94)	160 (6.3)	1.2 (2.65)
C	100 (3.94)	195 (7.7)	16.7 (0.66)	5.8 (0.23)	210 (8.27)	135 (5.31)	165 (6.5)	2 (4.4)
D	125 (4.92)	290 (11.41)	27.5 (1.08)	10.2 (0.4)	306.6 (12.1)	180 (7.08)	166.5 (6.55)	4.3 (9.48)
E	150 (5.9)	330 (13)	34 (1.34)	10.6 (0.4)	350 (13.8)	220 (8.7)	191.5 (7.5)	10 (22.05)



CFW700

Variable Speed Drive for General Use

Excellent performance and advanced resources included in the standard version; ideal for a great variety of industrial applications.



Characteristics

- Power supply: 200-600 V
- Rated currents: 2.7 to 211 A (1.5 to 175 HP)
- Control modes: VVW (Voltage Vector WEG), V/f (scalar) or Vector Control (sensorless or with encoder)
- Plug & Play Concept
- Built-in SoftPLC function - the functionalities of a PLC added to the CFW700
- Smart thermal management
- Degree of protection IP20, IP21, NEMA1 or IP55
- Built-in DC link reactor (reduces harmonic distortion)
- Built-in input for incremental encoder and RS485 (Modbus) communication port
- Operating interface (HMI) in LCD with backlight and USB port
- RFI filter according to the levels of EN 61800-3 standard (optional)

- Optimal Braking® - braking technology of WEG inverters
- Optimal Flux® - used with constant torque loads
- Communication: CANopen, DeviceNet and Profibus-DP (optional)
- Safe Torque OFF (STO) safety stop module:
 - Category 3 PL_e / SIL Cl2 with TÜV Rheinland® certification according to EN ISO 13849-1, IEC 61800-5-2, IEC 62061 and IEC 61508
- Flash memory module (optional)
- Free WLP and SuperDrive G2 programming software
- Built-in disconnecting switch on IP55 models (optional)
- Side-by-side mount, allowing the installation without space between the inverters, streamlining the panel size

Certifications



Note: designed for exclusive industrial or professional use.

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

Specification

Standard Version

CFW700 variable speed drive					Maximum applicable motor ¹⁾																							
Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)		Normal duty (ND)						Heavy duty (HD)															
					ND	HD	IEC			UL			IEC			UL												
							Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP	Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP										
CFW700A06POS2DB20C3	Single-phase	200-240 V ac	A	Built-in	6.0	5.0	230	1.5	220	2.0	230	1.5	230	1.1	220	1.5	230	1.5										
CFW700A07POS2DB20C3					7.0	7.0		1.5		2.0		2.0		2.0		2.0												
CFW700A10POS2DB20					10	10		2.2		3.0		3.0		3.0		3.0												
CFW700A06P0B2DB20	Single-phase or three-phase	200-240 V ac	A	Built-in	6.0	5.0	230	1.5	220	2.0	230	1.5	230	1.1	220	1.5	230	1.0										
CFW700A07P0B2DB20					7.0	7.0		1.5		2.0		2.0		2.0		2.0												
CFW700A07P0T2DB20	Three-phase	200-240 V ac	A	Built-in	7.0	5.5	230	1.5	220	2.0	230	2.0	230	1.1	220	1.5	230	1.0										
CFW700A10P0T2DB20					10	8.0		2.2		3.0		3.0		3.0														
CFW700A13P0T2DB20					13	11		3.0		3.0		3.0		3.0														
CFW700A16P0T2DB20					16	13		4.0		5.0		5.0		5.0														
CFW700B24P0T2DB20			B	Built-in	24	20		5.5		7.5		7.5		5.5		5.0		5.0										
CFW700B28P0T2DB20					28	24		7.5		10		10		5.5		7.5		7.5										
CFW700B33P5T2DB20					33.5	28		9.2		10		10		7.5		10		10										
CFW700C45P0T2DB20					45	36		11		15		15		9.2		10		10										
CFW700C54P0T2DB20			C	Built-in	54	45		15		20		20		11		15		15										
CFW700C70P0T2DB20					70	56		22		25		25		15		20		20										
CFW700D86P0T2DBN1					86	70		22		30		30		22		25		25										
CFW700D105T2DBN1					105	86		30		40		40		22		30		30										
CFW700E0142T2DB20C3			E	Built-in	142	115		45		60		60		30		40		40										
CFW700E0180T2DB20C3					180	142		55		75		75		45		60		60										
CFW700E0211T2DB20C3					211	180		55		75		75		55		75		75										
CFW700E0142T2NB20C3					142	115		45		60		60		30		40		40										
CFW700E0180T2NB20C3					180	142		55		75		75		45		60		60										
CFW700E0211T2NB20C3					211	180		55		75		75		55		75		75										
CFW700A03P6T4DB20					Three-phase	380-480 V ac		A		Built-in		3.6		3.6		415		1.5	460	2.0	460	2.0	415	1.5	460	2.0	460	2.0
CFW700A05P0T4DB20												5.0		5.0				2.2		3.0		3.0		2.2		3.0		3.0
CFW700A07P0T4DB20	7.0	5.5					3.0		5.0		5.0	2.2	3.0	3.0														
CFW700A10P0T4DB20	10	10					4.0		7.5		7.5	4.0	7.5	7.5														
CFW700A13P5T4DB20	13.5	11					5.5	10	10	5.5	10	10																
CFW700B17P0T4DB20	B	Built-in					17	13.5	9.2	10	10	5.5	10	10														
CFW700B24P0T4DB20			24	19			11	20	15	9.2	15	10																
CFW700B31P0T4DB20			31	25			15	25	20	11	20	15																
CFW700C38P0T4DB20			38	33			18.5	30	25	15	25	20																
CFW700C45P0T4DB20	C	Built-in	45	38			22	30	30	18.5	30	25																
CFW700C58P5T4DB20			58.5	47			30	40	40	22	30	40																
CFW700D70P5T4DBN1			70.5	61			37	60	50	30	50	40																
CFW700D88P0T4DBN1			88	73			45	75	60	37	60	50																
CFW700E0105T4DB20C3	E	Not built-in ²⁾	105	88			55	75	75	45	75	75																
CFW700E0142T4DB20C3			142	115			75	100	100	55	100	75																
CFW700E0180T4DB20C3			180	142			90	150	150	75	100	100																
CFW700E0211T4DB20C3			211	180			110	150	150	90	150	150																
CFW700E0105T4NB20C3			105	88			55	75	75	45	75	60																
CFW700E0142T4NB20C3			142	115			75	100	100	55	100	75																
CFW700E0180T4NB20C3			180	142			90	150	150	75	100	100																
CFW700E0211T4NB20C3			211	180	110	150	150	90	150	150																		

Notes: 1) The motor power ratings are just reference values, valid for WEG 4-pole standard motors with frequency of 60 Hz and supply voltage of 220, 380, 440 or 600 V. The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current.
2) The braking IGBT on frame E may be internally mounted by including DB in the smart code or externally mounted by including NB in the smart code and using the DBW03.
RFI filter already included as standard on models of frame "E".

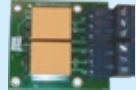



ND = Normal Duty (normal overload = 110% of the rated current for one minute or 150% of the rated current for 3 seconds; one overload every 10 minutes).
HD = Heavy Duty (heavy overload = 150% of the rated current for one minute or 200% of the rated current for 3 seconds; one overload every 10 minutes).

Specification

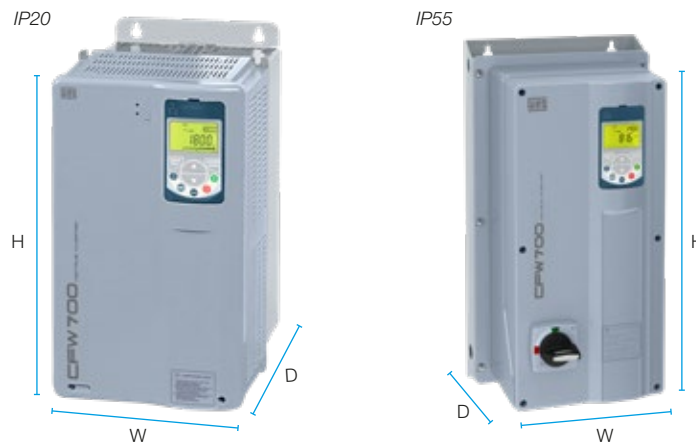
CFW700 variable speed drive						Maximum applicable motor ¹⁾																	
Reference	Power supply (V)	Frame size	Braking IGBT	Rated output current (A)		Normal duty (ND)						Heavy duty (HD)											
				ND	HD	IEC			UL			IEC		UL									
						Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP	Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP						
CFW700B02P9T5DB20	Three-phase 500-600 V ac	B	Built-in	2.9	2.7	525	575	575	575	525	575	525	575	575	575	575	575	575					
CFW700B04P2T5DB20				4.2	3.8														2.2	3.0	3.0	2.2	3.0
CFW700B07P0T5DB20				7.0	6.5														4.0	5.0	5.0	4.0	5.0
CFW700B10P0T5DB20				10	9.0														5.5	7.5	7.5	5.5	7.5
CFW700B12P0T5DB20				12	10														7.5	10	10	7.5	10
CFW700B17P0T5DB20				17	17														11	15	15	11	15
CFW700C22P0T5DB20				22	19														15	20	20	15	20
CFW700C27P0T5DB20				27	22														18.5	25	25	18.5	25
CFW700C32P0T5DB20				32	27														22	30	30	22	30
CFW700C44P0T5DB20				44	36														30	40	40	30	40
CFW700E53P0T5DB20C3				53	44														37	50	50	30	40
CFW700E63P0T5DB20C3				63	53														45	60	60	37	50
CFW700E80P0T5DB20C3				80	66														55	75	75	45	60
CFW700E107T5DB20C3				107	90														75	100	100	55	75
CFW700E125T5DB20C3		125	107	90	125	125	75	100															
CFW700E150T5DB20C3		150	122	110	150	150	90	125															
CFW700E53P0T5NB20C3		53	44	37	50	50	30	40															
CFW700E63P0T5NB20C3		63	53	45	60	60	37	50															
CFW700E80P0T5NB20C3		80	66	55	75	75	45	60															
CFW700E107T5NB20C3		107	90	75	100	100	55	75															
CFW700E125T5NB20C3		125	107	90	125	125	75	100															
CFW700E150T5NB20C3		150	122	110	150	150	90	125															



Plug-In Modules and Accessories

Reference	Plug-in modules and accessories	Slot	
CAN-01	CAN interface module (CANopen / DeviceNet)	3	-
Profibus-DP-01	Profibus-DP communication module	3	-
Others			
CCK-01	Module with two relay outputs		
KN1A-02	NEMA1 conduit kit for frame A		
KN1B-02	NEMA1 conduit kit for frame B		
KN1C-02	NEMA1 conduit kit for frame C		
KN1E-01	NEMA1 kit for models 105 and 142 A of frame E		
KN1E-02	NEMA1 kit for models 180 and 211 A of frame E		
KIP21A-01	IP21 kit for frame A		
KIP21B-01	IP21 kit for frame B		
KIP21C-01	IP21 kit for frame C		
KIP21D-01	IP21 kit for frame D		
PCSA-01	Power cable shield kit for frame A		
PCSB-01	Power cable shield kit for frame B		
PCSC-01	Power cable shield kit for frame C		
PCSD-01	Power cable shield kit for frame D		
PCSE-01	Power cable shield kit for frame E		
CCS-01	Control cable shield kit - included in the standard product		
CONRA-02	Control rack with CC11 board		-
DBW030380D3848SZ	Dynamic braking module, inverter supply voltage 380-480 V AC, effective braking current 380 A, braking power 300 kW.		
DBW030250D5069SZ	Dynamic braking module, inverter supply voltage 500-690 V AC, effective braking current 250 A, braking power 300 kW.		

Dimensions



Frame	H mm (in) ³⁾			W mm (in)		D mm (in)			Weight kg (lb)		
	IP20	NEMA1	IP55	IP20 / NEMA1	IP55	IP20 / NEMA1	IP55 ⁴⁾		IP20	NEMA1	IP55
							D1	D2			
A	270 (10.61)	305 (12.02)	-	145 (5.71)	-	227 (8.94)	-	-	6.3 (13.9)	7.1 (15.7)	-
B	316 (12.43)	351 (13.82)	529 (20.83)	190 (7.46)	273 (10.75)	227 (8.94)	237 (9.33)	279.1 (10.99)	10.4 (22.9)	11.3 (24.9)	17.0 (37.4)
C	405 (15.95)	448.1 (17.64)	670 (26.38)	220 (8.67)	307 (12.09)	293 (11.52)	306 (12.05)	348.1 (13.7)	20.5 (45.2)	21.4 (47.2)	30.0 (66.1)
D	550 (21.63)	-	754 (29.69)	300 (11.81)	375 (14.76)	305 (12.00)	301.3 (11.86)	338.6 (13.33)	32.6 (71.8)	-	49.0 (108.02)
E	675 (26.6)	¹⁾	1.000 (39.37)	335 (13.2)	430 (16.93)	358 (14.1)	388.8 (15.31)	419 (16.5)	65.0 (143.3)	²⁾	96.0 (211.64)

Notes: 1) Height 735 (28.94) = 0142 T2, 0105 T4, 0142 T4 and all T5 models. Height 828.9 (32.63) = 0180 T2 / T4, 0211 T2 / T4.

2) Weight 67.12 (147.97) = 0142 T2, 0105 T4, 0142 T4 and all T5 models. Weight 69.3 (152.78) = 0180 T2 / T4, 0211 T2 / T4.

3) The height does not take into account the grounding connection terminals.

4) D1= Without disconnecting switch. D2= With disconnecting switch.

CFW11

Variable Speed Drive for
Industrial Systems



The CFW11 line was developed for applications from the simplest to the most complex cases, presenting a wide range of functions, excellent static and dynamic response, and high overload capacity. In addition, it has several resources that simplify the configuration, installation and operation.



Characteristics

- Power supply: 200-690 V
- Rated currents: 3.6 to 2,850 A (2 to 2,500 HP)
- Plug & Play Concept
- Degree of protection IP20, IP21, NEMA1 or IP55
- Built-in DC link reactor (reduces harmonic distortion), eliminating the necessity to add a line reactance and complying with the requirements of IEC 61000-3-12 regarding harmonic levels
- Option of connecting to a single DC link
- Built-in USB communication port
- Real time clock
- Input and output expansion through plug-in modules
- Operating interface (HMI) in LCD with backlight
- RFI filter according to the levels of EN 61800-3 (optional in frames A to D and built-in in frames E to H)
- Communication: CANopen, DeviceNet, Modbus, Profibus-DP, EtherNet/IP, Modbus-TCP, PROFINET IO and EtherCAT (available with plug-in modules)
- Safe Torque OFF (STO) safety stop module: Category 3 PLe / SIL Cl2 with TÜV Rheinland® certification according to EN ISO 13849-1, IEC 61800-5-2, IEC 62061 and IEC 61508
- Flash memory module (included)
- Built-in disconnecting switch on IP55 models (optional)
- Side-by-side mounting, allowing the installation without space between the inverters, streamlining the panel size

Note: designed for exclusive industrial or professional use.

Certifications



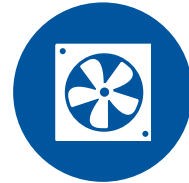
Benefits



Free WLP and SuperDrive G2 programming software



Built-in SoftPLC function - the functionalities of a PLC added to the CFW11



Smart thermal management of the fan (ON/OFF and Speed)



Vectrue Technology®: high precision in speed and torque control - VVV (Voltage Vector WEG), Vector Control with and without encoder (sensorless), WMagnet



Optimal Flux® - which increases the performance of the set (inverter + motor) and eliminates the necessity of independent ventilation or motor oversizing in constant torque applications running at low speeds



Optimal Braking® - high-performance braking method exclusive of WEG inverters that eliminates the necessity of braking resistors

Specification

Standard Version

CFW11 variable speed drive					Maximum applicable motor ¹⁾																					
Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)		Normal duty (ND)				Heavy duty (HD)															
							IEC		UL		IEC		UL													
					ND	HD	Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP	Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP								
CFW110006S20FAZ	Single-phase	200-240 V ac	A	Built-in	6.0	5.0	230	1.5	220	2.0	230	1.5	230	1.1	220	1.5	230	1.0								
7.0					7.0	2.0		3.0		2.0		3.0		2.0		2.0										
10					10	2.2		3.0		3.0		3.0		3.0		3.0										
CFW110010S2SZ	Single-phase or three-phase	200-240 V ac	A	Built-in	6.0	5.0	230	1.5	220	2.0	230	1.5	230	1.1	220	1.5	230	1.0								
7.0					7.0	1.5		2.0		2.0		2.0		2.0		2.0										
10					10	2.2		3.0		3.0		3.0		3.0		3.0										
CFW110007T2SZ	Three-phase	200-240 V ac	A	Built-in	7.0	5.5	230	1.5	220	2.0	230	2.0	230	1.1	220	1.5	230	1.0								
10					8.0	2.2		3.0		3.0		1.5		2.0												
13					11	3.0		4.0		3.0		3		3.0		3.0										
16					13	4.0		5.0		5.0		3		4.0		3.0										
24					20	5.5		7.5		7.5		5.5		6.0		5.0										
28					24	7.5		10		10		5.5		7.5		7.5										
33.5			28	9.2	12.5	10		7.5		10		10														
45			36	11	15	15		9.2		12.5		10														
54			45	15	20	20		11		15		15														
70			56	22	25	25		15		20		20														
86			70	22	30	30		22		25		25														
105			86	30	40	40		22		30		30														
142			115	45	50	50		30		40		40														
180			142	55	75	60		45		50		50														
211			180	55	75	75		55		75		60														
142			115	45	50	50		30		40		40														
180			142	55	75	60		45		50		50														
211			180	55	75	75		55		75		60														
CFW110003T4SZ			Three-phase	380-480 V ac	A	Built-in		3.6		3.6		415		1.5		460		2.0	460	1.5	415	2.0	460	2.0	460	2.0
5.0								5.0		2.2				3.0				3.0		2.2		3.0		3.0		
7.0								5.5		3.0				5.0				3.0		2.2		3.0		3.0		
10								10		4.0				7.5				5.0		4.0		7.5		5.0		
13.5								11		5.5				10				7.5		5.5		7.5		7.5		
17								13.5		9.2				10				10		5.5		10		7.5		
24	19	11			20	15	9.2	15	10																	
31	25	15			25	20	11	20	15																	
38	33	18.5			30	25	15	25	20																	
45	38	22			30	30	18.5	30	25																	
58.5	47	30			50	40	22	30	30																	
70.5	61	37			60	50	30	50	40																	
88	73	45			75	60	37	60	50																	
105	88	55			75	75	45	75	60																	
142	115	75			100	100	55	100	75																	
180	142	90			150	150	75	100	100																	
211	180	110			150	150	90	150	150																	
105	88	55			75	75	45	75	60																	
142	115	75			100	100	55	100	75																	
180	142	90			150	150	75	100	100																	
211	180	110			180	150	90	150	150																	
242	211	132			200	200	110	150	150																	
312	242	160			270	250	132	200	200																	
370	312	200			300	300	160	250	250																	
477	370	260			350	400	200	300	300																	
515	477	300			450	400	280	400	400																	
601	515	355			500	500	300	450	400																	
720	560	400			610	600	315	500	400																	
760	600	450			680	600	330	550	500																	
795	637	450			680	600	355	550	500																	
877	715	500			750	700	400	610	500																	
1,062	855	560			850	900	500	750	700																	
1,141	943	630			970	1,000	560	750	800																	

Notes: 1) The motor power ratings are just reference values, valid for WEG W22 IE2 or HGF (higher power ratings) 4-pole motors with frequency of 60 Hz, and supply voltage of 220, 380 and 575 V. The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current.
 2) The braking IGBT on frame E may be internally mounted by including DB in the smart code or externally mounted by leaving the field blank in the smart code and using the DBW03. Frames F, G and H do not have built-in internal braking IGBT; in this case, the DBW03 (frames F and G) or DBW04 (size H) external accessory must be used.
 3) The CFW11 inverters size H do not have the inductor on the internal DC link; therefore, they must use one or two external line reactances in the inverter input power supply.
 - Models frame H at 380-480 V (all currents) and models 628 A and 703 A at 600-690 V (T6) have a double rectifier bridge, which allows the connection in 6 or 12 pulses, requiring two input reactances - one for each rectifier bridge.
 - The other models of frame H must use an input reactance.
 - For further explanations, refer to the user's manual or contact WEG Automation sales department.

Accessories

	Reference	Description	Slot	Image
Communication	RS485-01	RS485 communication module (Modbus-RTU and BACnet)	3	
	RS232-01	RS232 communication module (Modbus-RTU)	3	
	CAN/RS485-01	CAN/RS485 interface module (Modbus-RTU and BACnet, DeviceNet and CANopen)	3	
	CAN-01	CAN interface module (DeviceNet and CANopen)	3	
	PROFIBUSDP-01	Profibus-DP V1 communication module	3	
	ETHERCAT-01	EtherCAT communication module	3	
	PROFDP-05	Profibus-DP V1 communication module	4	
	DEVICENET-05	DeviceNet communication module (Anybus-CC)	4	
	RS232-05	RS232 interface module (Modbus-RTU)	4	
	RS485-05	RS485 interface module (Modbus-RTU)	4	
	MODBUSTCP-05	RS485 interface module (Modbus-RTU) - 1 port	4	
		RS485 interface module (Modbus-TCP) - 2 ports	4	
	PROFINETIO-05	PROFINET IO communication module - 1 port	4	
		PROFINET IO communication module - 2 ports	4	
ETHERNETIP-05	EtherNet/IP communication module - 1 port	4		
	EtherNet/IP communication module - 2 ports	4		
PLC function expansion	PLC11-01	Module with PLC functions (for further details, refer to the CFW11 catalog)	1, 2 and 3	
	PLC11-02	Module with PLC functions (for further details, refer to the CFW11 catalog)		

Note: for the other installation accessories of the CFW11, refer to the product catalog or the user's manual.

Dimensions

CFW11



IP20 Models

Frame	H mm (in)	W mm (in)	D mm (in)	Weight kg (lb)		
				200-240 V ac	380-480 V ac	500-690 V ac
A	270 (10.62)	145 (5.70)	227 (8.93)	6.3 (13.9)	6.3 (13.9)	-
B	316 (12.44)	190 (7.98)	227 (8.93)	9.1 (20.0)	10.4 (22.9)	9.1 (20.0)
C	405 (15.95)	220 (8.67)	293 (11.52)	17.9 (39.5)	20.5 (45.2)	19.6 (43.2)
D	550 (21.65)	300 (11.81)	305 (12.00)	31.4 (69.2)	32.6 (71.8)	34 (75.0)
E	675 (26.57)	335.2 (13.2)	358.2 (14.1)	65 (143.3)	65 (143.3)	64 (141.0)
F	1,234 (48.58)	430 (16.93)	360 (14.17)	-	140 (308.64)	168 (371.0)
G	1,264 (49.76)	535 (21.06)	426 (16.77)	-	215 (474)	258 (569.0)
H	1,414 (55.66)	686 (27.0)	420.8 (16.56)	-	220 (485)	213 (469.9)

IP55 / NEMA12 Models

Frame	H	W	D1 ¹⁾	D2 ²⁾	Weight kg (lb)
	mm (in)	mm (in)	mm (in)	mm (in)	
B	529 (20.82)	273 (10.74)	237 (9.33)	279.1 (10.98)	17 (37.5)
C	679 (26.37)	307 (12.08)	348 (13.70)	348.1 (13.70)	30 (66.2)
D	754 (29.68)	375 (14.76)	338.8 (13.33)	338.6 (13.33)	49 (108.0)
E	1,000 (39.37)	430 (16.93)	388.8 (15.31)	419 (16.5)	65 (143.3)

Notes: 1) D1 = Without disconnecting switch.

2) D2 = With disconnecting switch.



CFW501

Compact Variable Speed Drive for HVAC-R Systems

The CFW501 line was developed with resources dedicated to HVAC-R applications. It has compact sizes and special functions for such market, making this VSD the ideal solution to drive pumps and fans, allowing it to be used in shopping malls, hospitals, hotels, airports and similar facilities.

Characteristics

- Power supply: 200-480 V
- Rated currents: 1.0 to 31 A (0.25 to 20 HP)
- Control types: scalar (V/f) and Voltage Vector WEG (VWV)
- Low input harmonic distortion
- Special functions:
 - Energy saving - lower motor electric power consumption and higher efficiency
 - Dry pump - protects the pump in case of lack of water and signals the fault
 - The protection against short circuits increases the useful life of compressors
 - Bypass - the motor can be directly driven through the power line
 - Fire mode - when activated, the protections are disabled and the inverter continues to operate even under adverse conditions. Ideal for applications in fume extraction
 - Broken belt - indication of malfunction of the fan belt



- SoftPLC - the functionalities of a PLC added to the CFW501 HVAC-R
- Sleep mode - the motor is prevented from operating at low speeds for long periods, increasing the system lifetime
- Advanced PID
- RFI filter
- Operating interface (HMI) with specific units for HVAC-R applications
- BACnet, Metasys N2 and Modbus-RTU communication protocols
- Free WLP and SuperDrive G2 programming softwares

Certifications



Note: designed for exclusive industrial or professional use.

Specification

Version with RS485 Plug-In Module Included

CFW501 HVAC-R variable speed drive					Maximum applicable motor ¹⁾														
Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)	IEC				UL									
						Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP								
CFW501A01P6T2NB20C3	Three-phase	200-240	A	Not available	1.6	230	0.25	220	0.33	230	0.33								
CFW501A02P6T2NB20C3					2.6		0.55		0.75		0.5								
CFW501A04P3T2NB20C3					4.3		1.1		1.5		1.0								
CFW501A07P0T2NB20C3					7.0		1.5		2.0		2.0								
CFW501A09P6T2NB20C3					9.6		2.2		3.0		3.0								
CFW501A12P2T2NB20C3					12.2		3.0		3.0		3.0								
CFW501B16P0T2DB20C3		B	380-480	B	Built-in		16		4.0		5.0	5.0	5.0						
CFW501B17P0T2DB20C3							17		4.0		5.0	5.0							
CFW501B19P4T2DB20C3							19.4		5.5		5.0	5.0							
CFW501C24P0T2DB20C3							24		5.5		7.5	7.5							
CFW501A01P0T4NB20C3							A		380-480		A	Not available	1.0	415	0.25	460	0.33	460	0.33
CFW501A01P6T4NB20C3													1.6		0.55		1.0		0.75
CFW501A02P6T4NB20C3	2.6	1.1	1.5	1.0															
CFW501A04P3T4NB20C3	4.3	1.5	3.0	2.0															
CFW501A06P1T4NB20C3	6.1	3.0	3.0	3.0															
CFW501B02P6T4DB20C3	2.6	1.1	1.5	1.0															
CFW501B04P3T4DB20C3	B	380-480	B	Built-in	4.3	1.5		3.0	3.0	2.0									
CFW501B06P5T4DB20C3					6.5	3.0		3.0	3.0										
CFW501B10P0T4DB20C3					10	4.0		7.5	5.0										
CFW501C14P0T4DB20C2					14	7.5		10	10										
CFW501C16P0T4DB20C2					16	7.5		10	10										
CFW501D24P0T4DB20C3					24	11		20	15										
CFW501D31P0T4DB20C3	D	380-480	D	Built-in	31	11	25	20											

Notes: 1) The power values for maximum applicable motor shown in the table above are reference values and valid for WEG motors. IEC motor powers are based on motor WEG four-pole W22 High Efficiency IE2 three-phase induction motors. NEMA motor power are based on WEG four pole W22 Premium. Motor rated currents may vary with speed and manufacturer, use the motor power ratings below only as a guidance. The proper sizing of the CFW501 to be used must be determined as a function of the rated current of the motor used.

Dimensions

Frames	H	W	D	Weight kg (lb)
	mm (in)	mm (in)	mm (in)	
A	189 (7.44)	75 (2.95)	150 (5.91)	0.8 (1.76)
B	199 (7.83)	100 (3.94)	160 (6.30)	1.2 (2.65)
C	210 (8.27)	135 (5.31)	165 (6.50)	2 (4.4)
D	306.6 (12.1)	180 (7.08)	166.5 (6.55)	4.3 (9.47)



CFW701

Variable Speed Drive for HVAC-R Systems



Special functions of an inverter with a wide range of powers, ideal for HVAC-R applications.

Characteristics

- Power supply: 200-600 V
- Rated currents: 2.9 to 211 A (2.0 to 175 HP)
- IP20, IP21, NEMA1 or IP55 degree of protection
- Special functions:
 - Energy saving
 - Dry pump - protection of the pump in case of lack of water and signals the fault
 - The protection against short circuits increases the useful life of compressors
 - Bypass - the motor can be directly driven through the power line
 - Fire mode - when activated, the protections are disabled and the inverter continues to operate even under adverse conditions. Ideal for applications in fume extraction
 - SoftPLC - the functionalities of a PLC added to the CFW701 HVAC-R
 - Sleep mode - the motor is prevented from operating at low speeds for long periods, increasing the system useful life

- RFI filter
- Inductor on the DC link
- Operating interface (HMI) with specific units for HVAC applications
- BACnet, Metasys N2 and Modbus-RTU communication protocols
- Free WLP and SuperDrive G2 programming software
- Built-in USB communication port

Certifications



Note: designed for exclusive industrial or professional use.

Specification

Standard Version

CFW701 HVAC-R variable speed drive ²⁾					Maximum applicable motor ¹⁾												
Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)	IEC				UL							
					ND	Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP						
CFW701A06P0S2DB20C3	Single-phase	200-240	A	Built-in	6.0	230	1.5	220	2.0	230	1.5						
CFW701A07P0S2DB20C3					7.0						1.5	2.0	2.0				
CFW701A10P0S2DB20C3					10						2.2	3.0	3.0				
CFW701A07P0T2DB20C3	Three-phase	200-240	A	Built-in	7.0						1.5	2.0	2.0	2.0			
CFW701A10P0T2DB20C3					10						2.2	3.0	3.0				
CFW701A13P0T2DB20C3					13						3.0	4.0	3.0				
CFW701A16P0T2DB20C3					16						4.0	5.0	5.0				
CFW701B24P0T2DB20C3					B						24	5.5	7.5	7.5			
CFW701B28P0T2DB20C3											28	7.5	10	10			
CFW701B33P5T2DB20C3			C		33.5						9.2	12.5	10				
CFW701C45P0T2DB20C3					45						11	15	15				
CFW701C54P0T2DB20C3					54						15	20	20				
CFW701C70P0T2DB20C3					70						18.5	25	25				
CFW701D86P0T2DBN1C3					D						86	22	30	30			
CFW701D0105T2DBN1C3											105	30	40	40			
CFW701E0142T2DB20C3	E	200-240	E	Built-in	142	37	50	50	50								
CFW701E0180T2DB20C3					180	45	60	60									
CFW701E0211T2DB20C3					211	55	75	75									
CFW701E0142T2NB20C3					Not included ³⁾	142	37	50	50								
CFW701E0180T2NB20C3						180	45	60	60								
CFW701E0211T2NB20C3						211	55	75	75								
CFW701A03P6T4DB20C3	Three-phase	380-480	A	Not available	3.6	415	1.5	460	2.0	460	2.0						
CFW701A05P0T4DB20C3					5.0						2.2	3.0	3.0				
CFW701A07P0T4DB20C3					7.0						3.0	5.0	3.0				
CFW701A10P0T4DB20C3					10						4.0	7.5	5.0				
CFW701A13P5T4DB20C3					13.5						5.5	10	7.5				
CFW701B17P0T4DB20C3					B						17	9.2	10	10			
CFW701B24P0T4DB20C3			24								11	20	15				
CFW701B31P0T4DB20C3			31								15	25	20				
CFW701C38P0T4DB20C3			C		38						18.5	30	25				
CFW701C45P0T4DB20C3					45						22	30	30				
CFW701C58P5T4DB20C3					58.5						30	50	40				
CFW701D70P5T4DBN1C3			D		70.5						37	60	50				
CFW701D88P0T4DBN1C3					88						45	75	60				
CFW701E0105T4DB20C3			E		380-480						E	Built-in	105	55	75	75	75
CFW701E0142T4DB20C3													142	75	125	100	
CFW701E0180T4DB20C3													180	90	150	150	
CFW701E0211T4DB20C3													211	110	150	150	
CFW701E0105T4NB20C3													Not included ³⁾	105	55	75	75
CFW701E0142T4NB20C3														142	75	125	100
CFW701E0180T4NB20C3														180	90	150	150
CFW701E0211T4NB20C3														211	110	150	150

Notes: 1) Motor powers are reference values, valid for WEG W22 IE2 or HGF (higher power) 4-pole motors with frequency of 60 Hz, voltage of 220, 380 or 575 V. The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current. ND = Normal duty; for operation in HD = heavy duty, refer to the user's manual.

2) All CFW701 models come with RFI filter included.

3) The braking IGBT on frame E may be internally mounted by including DB in the smart code or externally mounted by leaving the field blank in the smart code and using the DBW03.

Specification

Standard Version

CFW701 HVAC-R variable speed drive ²⁾					Maximum applicable motor ¹⁾							
Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)	IEC				UL		
					ND	Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP	
CFW701B02P9T5DB20C3	Three-phase	500-600	B	Built-in	2.9	525	1.5	575	2.0	575	2.0	
CFW701B04P2T5DB20C3					4.2		2.2		3.0		3.0	
CFW701B07P0T5DB20C3					7.0		4.0		5.0		5.0	
CFW701B10P0T5DB20C3					10		5.5		7.5		7.5	
CFW701B12P0T5DB20C3					12		7.5		10		10	
CFW701B17P0T5DB20C3					17		11		15		15	
CFW701D22P0T5DBN1C3					D		22		15		20	20
CFW701D27P0T5DBN1C3							27		18.5		25	25
CFW701D32P0T5DBN1C3							32		22		30	30
CFW701D44P0T5DBN1C3							44		30		40	40
CFW701E53P0T5DB20C3			E	Not included ³⁾		53	37	50	50			
CFW701E63P0T5DB20C3						63	45	60	60			
CFW701E80P0T5DB20C3						80	55	75	75			
CFW701E107T5DB20C3						107	75	100	100			
CFW701E125T5DB20C3						125	90	125	125			
CFW701E150T5DB20C3						150	110	150	150			
CFW701E53P0T5NB20C3						53	37	50	50			
CFW701E63P0T5NB20C3						63	45	60	60			
CFW701E80P0T5NB20C3						80	55	75	75			
CFW701E107T5NB20C3						107	75	100	100			
CFW701E125T5NB20C3	125	90	125	125								
CFW701E150T5NB20C3	150	110	150	150								

Notes: 1) Motor powers are reference values, valid for WEG W22 IE2 or HGF (higher power) 4-pole motors with frequency of 60 Hz, voltage of 220, 380 or 575 V.

The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current. ND = Normal duty; Option in HD=Heavy duty available; refer to the user's manual to check the available power ranges.

2) All CFW701 models come with RFI filter included.

3) The braking IGBT on frame E may be internally mounted by including DB in the smart code or externally mounted by leaving the field blank in the smart code and using the DBW03.



Dimensions

CFW701

IP20 Models



IP55 / NEMA12 Models



Frame	H mm (in) ³⁾			W mm (in)		D mm (in)			Weight kg (lb)		
	IP20	NEMA1	IP55	IP20 / NEMA1	IP55	IP20 / NEMA1	IP55 ⁴⁾		IP20	NEMA1	IP55
							P1	P2			
A	270 (10.61)	305 (12.02)	-	145 (5.71)	-	227 (8.94)	-	-	6.3 (13.9)	7.1 (15.7)	-
B	316 (12.43)	351 (13.82)	529 (20.83)	190 (7.46)	273 (10.75)	227 (8.94)	237 (9.33)	279.1 (10.99)	10.4 (22.9)	11.3 (24.9)	17 (37.4)
C	405 (15.95)	448.1 (17.64)	670 (26.38)	220 (8.67)	307 (12.09)	293 (11.52)	306 (12.05)	348.1 (13.7)	20.5 (45.2)	21.4 (47.2)	30 (66.1)
D	-	550 (21.63)	754 (29.69)	300 (11.81)	375 (14.76)	305 (12.0)	301.3 (11.86)	338.6 (13.33)	-	32.6 (71.8)	49 (108.02)
E	675 (26.6)	¹⁾	1.000 (39.37)	335 (13.2)	430 (16.93)	358 (14.1)	388.8 (15.31)	419 (16.5)	65 (143.3)	²⁾	96 (211.64)

Notes: 1) Height 735 (28.94) = 0142 T2, 0105 T4, 0142 T4 and all T5 models. Height 828.9 (32.63) = 0180 T2 / T4, 0211 T2 / T4.
 2) Weight 67.12 (147.97) = 0142 T2, 0105 T4, 0142 T4 and all T5 models. Weight 69.3 (152.78) = 0180 T2 / T4, 0211 T2 / T4.
 3) The height does not take into account the grounding connection terminals.
 4) P1= Without disconnecting switch. P2= With disconnecting switch.



MW500

Variable Speed Drive for Decentralized Solutions

The MW500 is a high-performance variable speed drive used to control three-phase induction motors. Its dedicated functions and high degree of protection (IP66 / NEMA4X) allows its use in applications that require a high level of precision and robustness.

Furthermore, the MW500 presents excellent flexibility, as it can be directly installed on the wall or mounted on the motor, reducing the cabling and panel costs.

Characteristics

- Three-phase power supply: 380-480 V
- Rated current: 4.3 to 10 A (1.5 to 6 HP)
- VVW vector or V/f scalar control
- SoftPLC - the functionalities of a PLC added to the MW500
- Saving of space and electrical installation
- Low harmonic distortion - compliance with IEC 61000-3-12 standard
- Aluminum frame
- NEMA4X/IP66 protection¹⁾
- It can be coupled to the WEG W22 motor line or wall mounted
- Built-in braking IGBT
- Dedicated terminals to connect a PTC to the motor
- Operating temperature: -25 to 40 °C
- Built-in disconnecting switch (optional)

- LED status indicators
- Compatible with the plug-in modules of the CFW500 Series
- Standard RS485 network
- Free SuperDrive G2, WLP and WPS softwares for programming and monitoring, with possibility of connectivity via Bluetooth using PC or Smartphone (IOS and Android)
- Optional items:
 - Remote HMI
 - RFI filter
 - Network communication protocols: RS232, RS485, Profibus-DP, CANopen, DeviceNet, EtherNet/IP, Modbus-TCP and PROFINET IO

Certifications



Notes: 1) Fully protected against the ingress of dust and strong water jets.
Designed for exclusive industrial or professional use.

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۳

Special Functions



Conector IP66/NEMA 4X
Special conector for Remote HMI (M8)



Analog Potentiometer Built-In
No need HMI to operate



Fins Instead of Fan
Reduce maintenance cost



LED Indicators
Status indication



Remote HMI
Simple and intuitive



Switch-Disconnecter Built-In (Optional)
Easy and safe machine maintenance

Characteristics

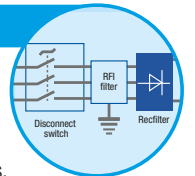
Conformal Coating

Increasing the lifetime, protecting the electronic boards against corrosive atmospheres. Classified as 3C2 according to IEC 60721-3-3.



RFI Filter

With C2/C3 options, the VSD faces a reduction in the EMC level, some cases even more, taking advantage of the motor and VSD distance, thus increasing the EMC class.



IP66/NEMA 4X Protection Degree

Key to the decentralized solution, the IP66 provides protection against contact with internal live parts and the ingress of dust or water.



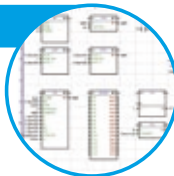
Black Color

The black color increases the enclosure dissipation capability, helping the drive support up to 50 °C on motor mounting without derating.



SoftPLC

Functions to streamline operation and increase performance, in many cases eliminating the necessity of an external PLC, optimizing and simplifying the system.



SuperDrive G2

Special software, allowing the parameter setting, command and monitoring of VSD, in this last option, simulating an oscilloscope with Trend function.



Specification

Standard Version

MW500 variable speed drive for decentralized solutions						Maximum applicable motor ¹⁾										
Reference ²⁾³⁾	Power supply (V)	Frame size	Braking IGBT	Rated output current (A)	IEC				UL							
					Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP						
MW500 without disconnecting switch and without RFI filter																
MW500A04P3S2DB66H00	Single-phase	200-240 V ac	A	Built-in	4.3	230	1.1	220	1.5	230	1.0					
MW500A06P0S2DB66H00					6.0		1.5		2.0		1.5					
MW500A02P6T4DB66H00	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5					
MW500A04P3T4DB66H00					4.3		1.5		3.0		2.0					
MW500B06P5T4DB66H00					B		Built-in		6.5		3.0	4.0	3.0			
MW500B10P0T4DB66H00									10		4.0	7.5	5.0			
MW500C14P0T4DB66H00			C	Built-in	14		7.5		10		7.5					
MW500C16P0T4DB66H00					16		7.5		10		10					
MW500 without disconnecting switch and with RFI filter																
MW500A04P3S2DB66C2H00			Single-phase	200-240 V ac	A		Built-in		4.3		230	1.1	220	1.5	230	1.0
MW500A06P0S2DB66C2H00	6.0	1.5				2.0		1.5								
MW500A02P6T4DB66C2H00	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5					
MW500A04P3T4DB66C2H00					4.3		1.5		3.0		2.0					
MW500B06P5T4DB66C2H00					B		Built-in		6.5		3.0	4.0	3.0			
MW500B10P0T4DB66C2H00									10		4.0	7.5	5.0			
MW500C14P0T4DB66C2H00			C	Built-in	14		7.5		10		7.5					
MW500C16P0T4DB66C2H00					16		7.5		10		10					
MW500 with disconnecting switch and without RFI filter																
MW500A04P3S2DB66DSH00			Single-phase	200-240 V ac	A		Built-in		4.3		230	1.1	220	1.5	230	1.0
MW500A06P0S2DB66DSH00	6.0	1.5				2.0		1.5								
MW500A02P6T4DB66DSH00	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5					
MW500A04P3T4DB66DSH00					4.3		1.5		3.0		2.0					
MW500B06P5T4DB66DSH00					B		Built-in		6.5		3.0	4.0	3.0			
MW500B10P0T4DB66DSH00									10		4.0	7.5	5.0			
MW500C14P0T4DB66DSH00			C	Built-in	14		7.5		10		7.5					
MW500C16P0T4DB66DSH00					16		7.5		10		10					
MW500 with disconnecting switch and with RFI filter																
MW500A04P3S2DB66C2DSH00			Single-phase	200-240 V ac	A		Built-in		4.3		230	1.1	220	1.5	230	1.0
MW500A06P0S2DB66C2DSH00	6.0	1.5				2.0		1.5								
MW500A02P6T4DB66C2DSH00	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5					
MW500A04P3T4DB66C2DSH00					4.3		1.5		3.0		2.0					
MW500B06P5T4DB66C2DSH00					B		Built-in		6.5		3.0	4.0	3.0			
MW500B10P0T4DB66C2DSH00									10		4.0	7.5	5.0			
MW500C14P0T4DB66C2DSH00			C	Built-in	14		7.5		10		7.5					
MW500C16P0T4DB66C2DSH00					16		7.5		10		10					

Notes: 1) Motor powers showed are reference values, valid for WEG IEC or NEMA three-phase induction motors. The motor powers for IEC standard are based on WEG W22 IE2, High-Efficiency, 4-pole motors with power supply of 220 V, 230 V, 415 V or 460 V. The motor powers for UL standard are based on WEG W22 NEMA Premium, 4-pole motors with power supply of 230 V or 460 V. The proper sizing must be always determined according to the rated current of the motor, which must be lower than or equal to the inverter rated output current.

2) The reference "A56" in the smart code refers to MW500 with 56 mm terminal box adapter.

If necessary, MW500 can be supplied with 70 mm terminal box adapter. It is necessary to replace "A56" by "A70" in the smart codes above.

3) The CFW500-IO5 plug-in module is not included in this references.

Accessories

Plug-In Modules

Plug-in module	Inputs		Outputs			USB Port	Communication networks		V dc source	
	Digital	Analog	Analog	Relay	Transistor		Modbus-RTU RS485	Others	10 V	24 V
CFW500-IOS	4	1	1	1	1	-	1	-	1	1
CFW500-IOD	8	1	1	1	4	-	1	-	1	1
CFW500-IOAD	6	3	2	1	3	-	1	-	1	1
CFW500-IOR	5	1	1	4	1	-	1	-	1	1
CFW500-CUSB	4	1	1	1	1	1	1	-	1	1
CFW500-CCAN	2	1	1	1	1	-	1	CANopen/DeviceNet	1	1
CFW500-CRS232	2	1	1	1	1	-	1	RS232	-	1
CFW500-CRS485 ¹⁾	4	1	1	2	1	-	2	-	1	1
CFW500-CPDP	2	1	1	1	1	-	1	Profibus-DP	-	1
CFW500-CEMB-TCP	2	1	1	1	1	-	1	Modbus-TCP	-	1
CFW500-CEPN-IO	2	1	1	1	1	-	1	PROFINET IO	-	1
CFW500-CETH-IP	2	1	1	1	1	-	1	EtherNet/IP	-	1

Notes: 1) All plug-in module models have at least one RS485 port. The CFW500-CRS485 plug-in module has two RS485 ports.

The MW500 allows the installation of one plug-in module per unit.

The plug-in modules are the same as those used on the MW500.

For the other installation accessories of the MW500, refer to the product catalog or the user's manual.

Dimensions



Frame	H	W	D1 ¹⁾	D2 ²⁾	Weight kg (lb)
	mm (in)	mm (in)	mm (in)	mm (in)	
A	240 (9.45)	161.5 (6.36)	127.6 (5.02)	174.4 (6.87)	3.7 (8.16)
B	269 (10.61)	189 (7.46)	144 (5.67)	191 (7.51)	5.3 (11.68)
C	304.5 (12.0)	219.5 (8.6)	171.6 (6.8)	218.4 (8.6)	8.9 (19.62)

Notes: 1) D1 = Without disconnecting switch.

2) D2 = With disconnecting switch.

Comparison

Comparison		CFW100	CFW300	CFW500	MW500
Power supply	Single-phase	-	110-127 V	-	-
		200-240 V	200-240 V	200-240 V	200-240 V
	Three-phase	-	200-240 V	200-240 V	-
		-	-	380-480 V	380-480 V
		-	-	500-600 V	-
	DC Link	-	280-340 V dc	-	-
	Frequency	50/60 Hz \pm 2 Hz	50/60 Hz \pm 2 Hz	50/60 Hz \pm 2 Hz	50/60 Hz \pm 2 Hz
	Power factor	-	-	-	-
	Displacement factor (cos ϕ)	-	-	-	-
	Tolerance to voltage variations	- 15% to 10% of the rated voltage	- 15% to 10% of the rated voltage	- 15% to 10% of the rated voltage	- 15% to 10% of the rated voltage
	Overvoltages	Category III (EN 61010/UL 508C)	Category III (EN 61010/UL 508C)	Category III (EN 61010/UL 508C)	Category III (EN 61010/UL 508C)
Minimum impedance	0.5% of the line voltage	1% of the line voltage	1% of the line voltage	3% of the line voltage	
Rated output current	110-127 V (single-phase input/ three-phase 220 V output)	-	1.6 to 6.0 A	-	-
	200-240 V (single-phase input/ three-phase output)	1.6 to 4.2 A	1.6 to 10.0 A	1.6 to 10.0 A	4.3 to 6.0 A
	200-240 V (three-phase input and output)	-	1.6 to 15.2 A	1.6 to 56.0 A	-
	380-480 V	-	-	1.0 to 49.0 A	2.6 to 16.0 A
	500-600 V	-	-	1.7 to 12.0 A	-
	600-690 V	-	-	-	-
Control	Types	V/f Scalar	V/f Scalar	V/f Scalar	V/f Scalar
		VVV: voltage vector WEG	VVV: voltage vector WEG	VVV: voltage vector WEG	VVV: voltage vector WEG
		-	V/f quadratic	V/f quadratic	V/f quadratic
		-	-	Sensorless vector	-
		-	-	Vector with encoder	-
		-	-	-	-
	Power supply	-	Switched-mode power supply	Switched-mode power supply	Switched-mode power supply
	Typical efficiency	\geq 97%	\geq 97%	\geq 97%	\geq 97%
	Switching frequency	2.5 to 15 kHz	2.5 to 15 kHz	2.5 to 15 kHz	1.5 to 15 kHz
	Output frequency	0 to 300 Hz	0 to 400 Hz	0 to 500 Hz	0 to 500 Hz
	Resolution	0.1 Hz	0.1 Hz	0.015 Hz	0.015 Hz
Overload	HD: 150% for 1 minute every 10 minutes	HD: 150% for 1 minute every 10 minutes	HD: 150% for 1 minute every 10 minutes	HD: 150% for 1 minute every 10 minutes	
RFI filter	External accessory	External accessory	Internal optional item	Internal optional item	
Braking IGBT	-	Internal included (frame B)	Internal included (frames B, C, D and E)	Internal included	
Operating interface HMI	Built-in	Built-in	Built-in	Remote optional	

Comparison

Comparison		CFW501	CFW701	CFW700	CFW11
Power supply	Single-phase	-	-	-	-
		-	200-240 V	200-240 V	200-240 V
	Three-phase	200-240 V	200-240 V	200-240 V	200-240 V
		380-480 V	380-480 V	380-480 V	380-480 V
		-	500-600 V	500-600 V	500-600 V
		-	-	-	600-690 V
	DC Link	-	-	-	462-747 V dc 574-1025 V dc
	Frequency	50/60 Hz ±2 Hz	50/60 Hz ±2 Hz	50/60 Hz ±2 Hz	50/60 Hz ±2 Hz
	Power factor	-	0.94 three-phase input 0.70 single-phase input	0.94 three-phase input 0.70 single-phase input	0.94 three-phase input 0.70 single-phase input
	Displacement factor (cos φ)	-	>0,98	>0,98	>0,98
	Tolerance to voltage variations	-15% to 10% of the rated voltage	-15% to 10% of the rated voltage	-15% to 10% of the rated voltage	-15% to 10% of the rated voltage
Overtolerances	Category III (EN 61010/UL 508C)	Category III (EN 61010/UL 508C)	Category III (EN 61010/UL 508C)	Category III (EN 61010/UL 508C)	
Minimum impedance	1% of the line voltage	Not necessary (reactance on the DC link included)	Not necessary (reactance on the DC link included)	Not necessary (reactance on the DC link included)	
Rated output current	110-127 V (single-phase input/ three-phase 220 V output)	-	-	-	-
	200-240 V (single-phase input/ three-phase output)	-	6.0 to 10.0 A	6.0 to 10.0 A	6.0 to 10.0 A
	200-240 V (three-phase input and output)	1.6 to 24.0 A	7.0 to 211.0 A	6.0 to 211.0 A	6.0 to 211.0 A
	380-480 V	1.0 to 31.0 A	3.6 to 211 A	3.6 to 211 A	3.6 to 2850.0 A
	500-600 V	-	2.9 to 150 A	2.9 to 150 A	2.7 to 2232.0 A
	600-690 V	-	-	-	2.7 to 2028.0 A
Control	Types	V/f Scalar	V/f Scalar	V/f Scalar	V/Hz Scalar
		VVW: voltage vector WEG	VVW: voltage vector WEG	VVW: voltage vector WEG	VVW: voltage vector WEG
		V/f quadratic	V/f quadratic	V/f quadratic	V/f quadratic
		-	Sensorless vector	Sensorless vector	Sensorless vector
		-	-	Vector with encoder	Vector with encoder
		-	-	-	WMagnet vector with or without encoder
	Power supply	Switched-mode power supply	Switched-mode power supply	Switched-mode power supply	Switched-mode power supply
	Typical efficiency	≥97%	≥97%	≥97%	≥97%
	Switching frequency	2.5 to 15 kHz	1.25 to 10 kHz	1.25 to 10 kHz	1.25 to 10 kHz
	Output frequency	0 to 500 Hz	0 Hz to 300 Hz in the scalar mode and 30 Hz to 120 Hz in the vector mode	0 Hz to 300 Hz in the scalar mode and 30 Hz to 120 Hz in the vector mode	0 Hz to 300 Hz in the scalar mode and 30 Hz to 120 Hz in the vector mode
Resolution	0.015 Hz	Refer to the user's manual	Refer to the user's manual	Refer to the user's manual	
Overload	HD: 150% for 1 minute every 10 minutes	HD: 150% for 1 minute every 10 minutes ND: 110% for 1 minute every 10 minutes	HD: 150% for 1 minute every 10 minutes ND: 110% for 1 minute every 10 minutes	HD: 150% for 1 minute every 10 minutes ND: 110% for 1 minute every 10 minutes	
RFI filter	Internal included	Internal included	Internal included (frame E) Internal optional (frames A, B, C, D)	Included internal (frames E, F, G and H) Internal optional (frames A, B, C, D)	
Braking IGBT	Internal included (frames B, C, D)	Internal included (frames A, B, C, D) Internal optional (frame E)	Internal included (frames A, B, C, D) Internal or external optional (frame E)	Internal included (frames A, B, C, D) Internal optional (frame E) or external optional (frames F and G)	
Operating interface HMI	Built-in	Built-in, detachable	Built-in, detachable	Built-in, detachable	

Comparison

Comparison		CFW100	CFW300	CFW500	MW500
Inputs	Digital	4 built-in (isolated) 4 additional (accessory)	4 built-in (isolated) 4 additional (accessory)	Up to 8 (accessory), isolated	Up to 8 (accessory)
	Analog	1 (voltage or current, with accessory)	1 built-in, insulated (voltage or current) 1 additional (voltage or current, with accessory)	Up to 3 (voltage or current, with accessory), isolated	Up to 3 (voltage or current, with accessory), isolated
Outputs	Digital	Up to 3 relay outputs (with accessory)	1 relay output 0.5 A, built-in Up to 3 relay outputs (with accessory)	Up to 4 relay outputs 0.5 A, (accessory) Up to 4 transistor outputs (accessory), isolated	Up to 4 relay outputs 0.5 A, (accessory) Up to 4 transistor outputs (accessory), isolated
	Analog	Up to 1 (voltage or current, with accessory)	Up to 2 (voltage or current, with accessory)	Up to 2 (voltage or current, with accessory), isolated	Up to 2 (voltage or current, with accessory)
Communication	USB	Accessory	Accessory	Accessory	Accessory
	Serial	RS485 (accessory)	RS232 or RS485 (accessory)	RS232 or RS485 (accessory)	RS232 or RS485 (accessory)
	Infrared	Accessory	Accessory	-	-
	Fieldbus	CANopen / DeviceNet (accessory)	CANopen / DeviceNet, Profibus-DP (accessory)	CANopen / DeviceNet, Profibus-DP, EtherNet/IP, Modbus-TCP, PROFINET IO (accessory)	CANopen / DeviceNet, Profibus-DP, EtherNet/IP, Modbus-TCP, PROFINET IO (accessory)
Function expansion		Flash memory module (accessory) Remote HMI (accessory)	Flash memory module (accessory) Remote HMI (accessory) Incremental encoder (accessory)	Flash memory module (accessory) Remote HMI (accessory) Incremental encoder (accessory)	Flash memory module (accessory) Remote HMI (accessory) Front switch-disconnector (optional)
Special functions incorporated		Built-in SoftPLC Flying start / ride through Multispeed PID PID Energy saving	Built-in SoftPLC Flying start / ride through Multispeed PID PID Energy saving	Built-in SoftPLC Flying start / ride through Multispeed PID PID Energy saving	Built-in SoftPLC Flying start / ride through Multispeed PID PID
Software applications		-	Evaporative coolers	Pump Genius Simplex Pump Genius Multipump Load lifting	-
Braking methods		DC braking	DC braking Dynamic braking	DC braking Dynamic braking	DC braking Dynamic braking
Free configuration software		WPS	WPS	SuperDrive G2; WLP	SuperDrive G2; WLP
Protection rating		IP20	IP20	IP20 NEMA1	IP66 / NEMA4X
Air relative humidity		5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing
Maximum operating temperature without current derating		0 to 50 °C	0 to 50 °C	0 to 50 °C - IP20, without RFI filter 0 to 40 °C - IP20, with RFI filter, NEMA1 or side by side	0 to 50 °C - installation on the motor 0 to 40 °C - vertical installation
Altitude		Up to 4,000 m (up to 1,000 m without current or voltage derating)	Up to 4,000 m (up to 1,000 m without current or voltage derating)	Up to 4,000 m (up to 1,000 m without current or voltage derating)	Up to 4,000 m (up to 1,000 m without current or voltage derating)

Comparison

Comparison		CFW501	CFW701	CFW700	CFW11
Inputs	Digital	4 built-in, isolated	8 built-in, isolated	8 built-in, isolated	6 built-in, isolated Up to 9 additional (accessory)
	Analog	2 built-in, isolated, voltage or current	3 built-in (2 configurable voltage or current, 1 current) 1 additional (accessory) 1 built-in PTC input	2 built-in (voltage or current)	2 built-in, isolated (voltage or current) Up to 2 additional (accessory)
Outputs	Digital	2 relay outputs 0.5 A, built-in 1 built-in transistor output, isolated	2 relay outputs 0.75 A, built-in 2 additional relay outputs (accessory) 3 built-in transistor outputs, isolated	1 relay output 0.75 A, built-in 2 additional relay outputs (accessory) 4 built-in transistor outputs, isolated	3 relay outputs 2.0 A, built-in Up to 4 additional relay outputs (with accessory) Up to 8 transistor outputs (with accessory), isolated
	Analog	1 built-in, isolate (voltage or current)	2 built-in, not isolated (voltage or current)	2 built-in, not isolated (voltage or current)	2 built-in, isolated (voltage or current) Up to 2 additional (accessory)
Communication	USB	-	Built into the HMI	Built into the HMI	Built-in
	Serial	2 built-in RS485 ports	RS485 (built-in)	RS485 (built-in)	RS232 or RS485 (accessory)
	Infrared	-	-	-	-
	Fieldbus	BACNet or Metasys N2	Modbus-RTU, BACNet or Metasys N2 (default)	CANopen / DeviceNet, Profibus-DP (accessory)	CANopen / DeviceNet, Profibus-DP, EtherNet/IP, Modbus-RTU, Modbus-TCP, PROFINET IO, EtherCAT (accessory)
Function expansion		Flash memory module (accessory) Remote HMI (accessory)	Flash memory module (accessory) Remote HMI (accessory) Front switch-disconnector (optional for models IP55)	Flash memory module (accessory) Remote HMI (accessory) Front switch-disconnector (optional for models IP55)	Flash memory module (accessory) Remote HMI (accessory) Front switch-disconnector (optional for models IP55)
Special functions incorporated		Built-in SoftPLC Flying start/ride through Energy saving PID Torque control Sleep mode Protection against dry pump Protection against broken belt Protection against short cycles Bypass Fire mode	Built-in SoftPLC Flying start/ride through Energy saving Multispeed PID Torque control Optimal flux Sleep mode Protection against dry pump Protection against broken belt Protection against short cycles Bypass Fire mode Skip frequency	Built-in SoftPLC Flying start/ride through Energy saving Multispeed PID Torque control Optimal flux Skip frequency	Built-in SoftPLC Flying start/ride through Energy saving Multispeed PID Torque control Optimal flux Skip frequency
Software applications		-	-	Load handling	Load handling Winding machine Pump Genius
Braking methods		DC braking	DC braking Dynamic braking Optimal braking	DC braking Dynamic braking Optimal braking	DC braking Dynamic braking Optimal braking
Free configuration software		SuperDrive G2; WLP	SuperDrive G2; WLP	SuperDrive G2; WLP	SuperDrive G2; WLP
Protection rating		IP20 NEMA1	IP20 NEMA1 / IP20 IP21 NEMA1 / IP21 IP55 / NEMA 12	IP20 NEMA1 / IP20 IP21 NEMA1 / IP21 IP55 / NEMA 12	IP20 NEMA1 / IP20 IP21 NEMA1 / IP21 IP55 / NEMA 12
Air relative humidity		5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing
Maximum operating temperature without current derating		0 a 50 °C (for further information, refer to the user's manual)	-10 to 50 °C (for further information, refer to the user's manual)	-10 to 50 °C (for further information, refer to the user's manual)	-10 to 50 °C (for further information, refer to the user's manual)
Altitude		Up to 4,000 m (up to 1,000 m without current or voltage derating)	Up to 4,000 m (up to 1,000 m without current or voltage derating)	Up to 4,000 m (up to 1,000 m without current or voltage derating)	Up to 4,000 m (up to 1,000 m without current or voltage derating)

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