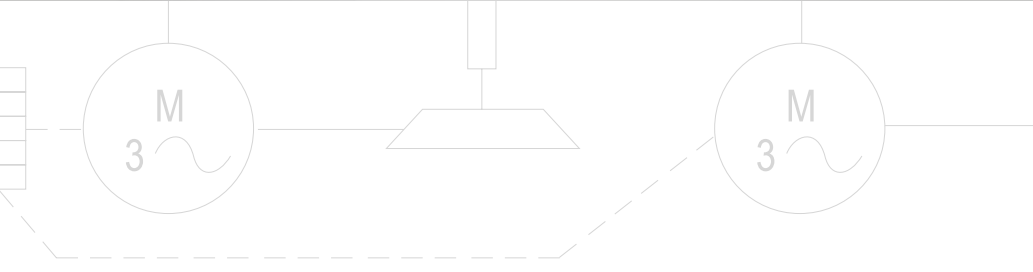
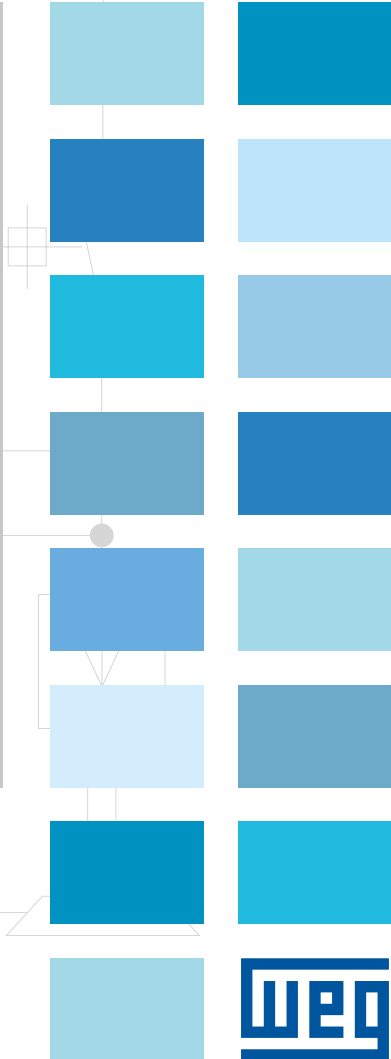
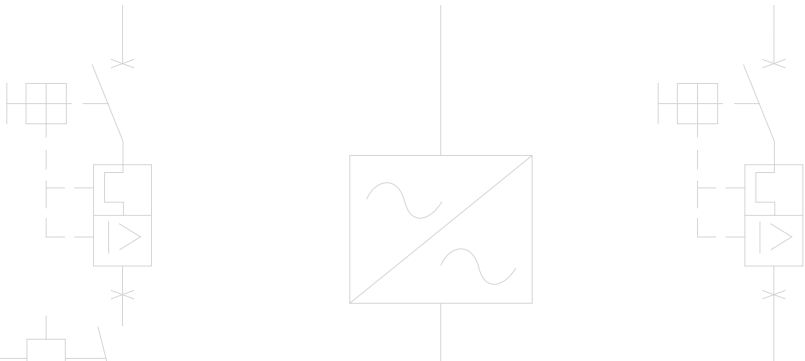


# Automation

## 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



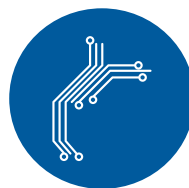
Modern design



Effective motor protection



Free programming software

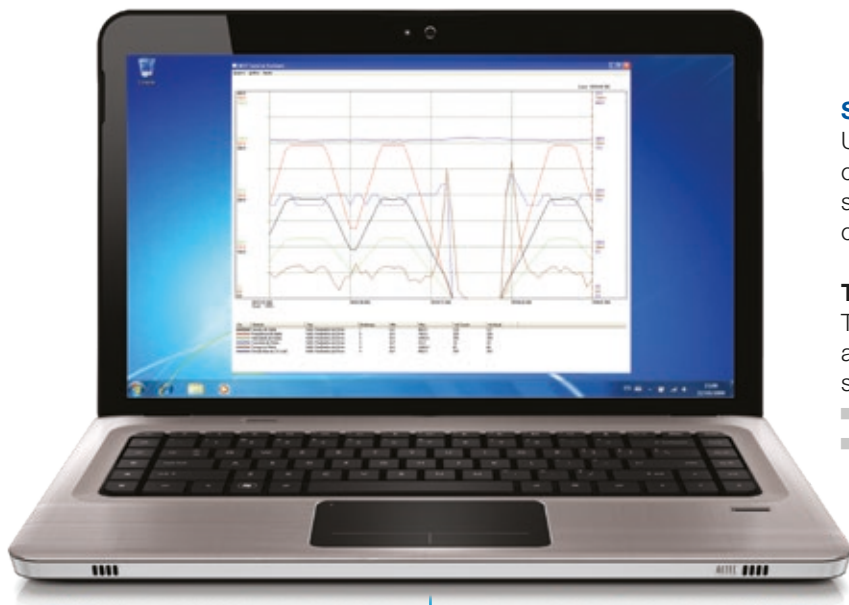


Special functions



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

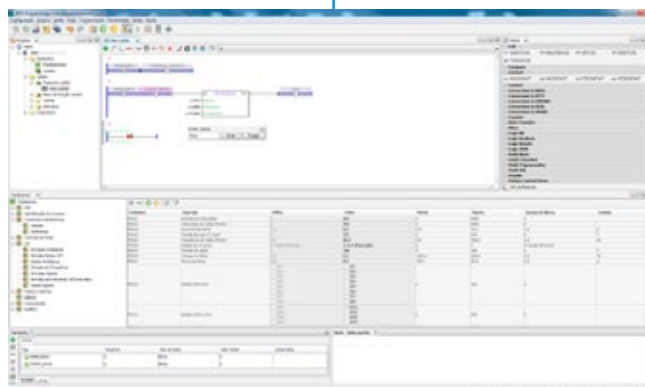
Trend charts for online monitoring of parameters and other variables within the SuperDrive G2 software.

- Easy operation and view
- Free on [www.weg.net](http://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

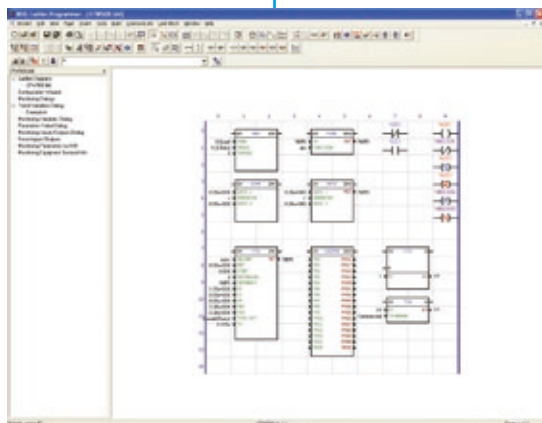


### WEG Ladder Programmer (WLP)

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 devices<sup>1)</sup>
- Online monitoring of the program running on the devices
- Point-to-point communication with the devices through serial in RS232 or USB<sup>2)</sup>
- Serial communication in RS485 with up to 30 devices<sup>3)</sup>
- 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 <sup>1)</sup>					
					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		0.75		1.0		1.5

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](http://www.weg.net).

## Accessories

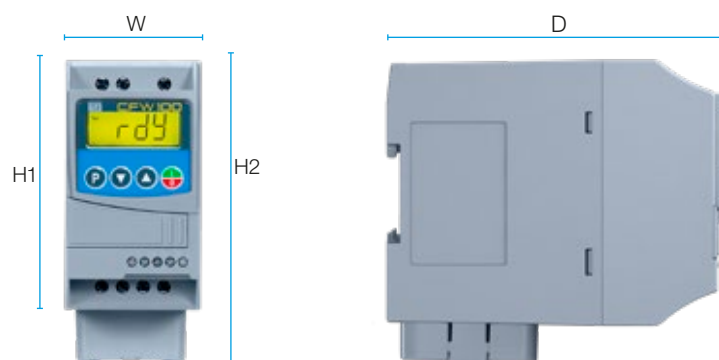
Reference	Description	Illustrative figures	
<b>Control accessories</b>			
CFW100-CRS485	RS485 communication module		
CFW100-CUSB	USB communication module with 2 m cable		
CFW100-IOA	I/O expansion module with 1 analog input and 1 analog output		
CFW100-IOADR	I/O expansion and infrared remote control module <sup>1)</sup>		
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		
CFW100-CBLT	Bluetooth® communication module		
<b>Flash memory</b>			
CFW100-MMF	Flash memory module (3 m cable included)		
<b>External HMI</b>			
CFW100-KHMIR	CFW100 remote interface kit (CFW100-CRS485 + 3 m cable included)		
<b>Radiofrequency filter (RFI)</b>			
CFW100-KFABC	Footprint radiofrequency kit <sup>2)</sup> , category C2, for frames A, B or C		
<b>Others</b>			
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 <sup>1)</sup>													
					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](http://www.weg.net).

## Plug-In Modules<sup>6)</sup>

Reference	Slots <sup>5)</sup>	Inputs		Outputs		USB <sup>4)</sup>	Bluetooth	Infrared and NTC sensors <sup>3)</sup>	Input for encoder <sup>2)</sup>	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-CBLT		-	-	-	-	-	-	1	-	-	-	-	-
CFW300-IOAR	Lower slot	1	-	1	3	-	-	-	-	-	-	-	
CFW300-IODR <sup>1)</sup>		-	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.

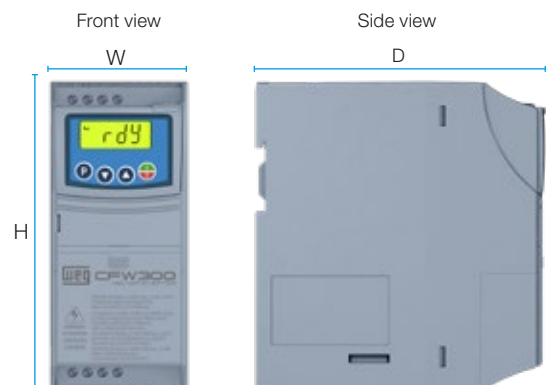
## Dimensions

### 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.*

# Specification

## Version with Plug-In IOS Module Included

CFW500 variable speed drive					Maximum applicable motor <sup>1)</sup>																
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						0.55	0.5	0.75								
CFW500A04P3S2NB20					4.3						1.1	1.0	1.5								
CFW500A07P0S2NB20					7.0						1.5	2.0	2.0								
CFW500A01P6B2NB20					1.6						230	0.25	220	0.33	230	0.33					
CFW500A02P6B2NB20	2.6	0.55	0.5	0.75																	
CFW500A04P3B2NB20	4.3	1.1	1.0	1.5																	
CFW500B07P3B2DB20	7.3	1.5	2.0	2.0																	
CFW500B10P0B2DB20	10	2.2	3.0	3.0																	
CFW500A07P0T2NB20	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	3.0								
CFW500B16P0T2DB20					16						4.0	5.0	5.0								
CFW500C24P0T2DB20			B	Built-in	24						5.5	7.5	7.5	7.5							
CFW500D28P0T2DB20					28						7.5	10	10								
CFW500D33P0T2DB20					33						9.2	12.5	10								
CFW500D47P0T2DB20					47						11	15	15								
CFW500E56P0T2DB20			C	Built-in	56						15	20	20	20							
CFW500A01P0T4NB20					Three-phase						380-480	A	Not available	1.0	415	0.37	460	460	0.5		
CFW500A01P6T4NB20														1.6					0.75	1.0	0.75
CFW500A02P6T4NB20														2.6					1.1	1.5	2.0
CFW500A04P3T4NB20	4.3	1.5				3.0	3.0														
CFW500A06P1T4NB20	6.1	3.0	4.0	5.0																	
CFW500B02P6T4DB20	B	Built-in	2.6	1.1		1.5	2.0														
CFW500B04P3T4DB20			4.3	1.5		3.0	3.0														
CFW500B06P5T4DB20			6.5	3.0		4.0	5.0														
CFW500B10P0T4DB20			10	4.0		7.5	7.5														
CFW500C14P0T4DB20			14	7.5		10	10														
CFW500C16P0T4DB20	C	Built-in	16	7.5		12.5	10														
CFW500D24P0T4DB20			24	11	15	15															
CFW500D31P0T4DB20			31	15	25	25															
CFW500E39P0T4DB20			39	18.5	30	30															
CFW500E49P0T4DB20			49	22	40	40															
CFW500C01P7T5DB20	Three-phase	500-600	C	Built-in	1.7	525	0.75	575	1.5	575	1.0										
CFW500C03P0T5DB20					3.0						1.5	2.0	2.0								
CFW500C04P3T5DB20					4.3						2.2	4.0	3.0								
CFW500C07P0T5DB20					7.0						4.0	6.0	5.0								
CFW500C10P0T5DB20					10						5.5	10	7.5								
CFW500C12P0T5DB20					12						7.5	12.5	10								

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.

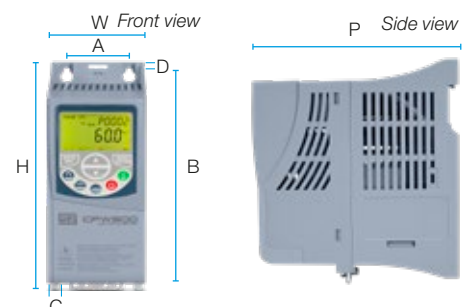
## Accessories

Plug-in module	Functions														
	Inputs		Outputs			USB port	Input for encoder <sup>3)</sup>	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 <sup>2)</sup>	1	1	4	1	-	-	-	1	-	-	-	-	1	1
CFW500-ENC	5 <sup>2)</sup>	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	-	-	-	1	-
CFW500-CRS232	2	1	1	1	1	-	-	1	1	-	-	-	-	-	1
CFW500-CRS485 <sup>1)</sup>	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](http://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)



Note: for the dimensions in the NEMA version, refer to the user's manual.



# 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<sub>e</sub> / SIL Cl<sub>2</sub> 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.

# Specification

## Standard Version

CFW700 variable speed drive					Maximum applicable motor <sup>1)</sup>																							
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										
CFW700A06P0S2DB20C3	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										
CFW700A07P0S2DB20C3					7.0	7.0		1.5		2.0		2.0		1.5		2.0		2.0										
CFW700A10P0S2DB20					10	10		2.2		3.0		3.0		2.2		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		1.5		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		1.5		2.0		2.0										
CFW700A13P0T2DB20					13	11		3.0		3.0		3.0		3.0		3.0		3.0										
CFW700A16P0T2DB20					16	13		4.0		5.0		5.0		3.0		3.0		3.0										
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		15		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		7.5	7.5																
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			45	38			22	30	30	18.5	30	25																
CFW700C58P5T4DB20	C	Built-in	58.5	47			415	30	460	50	460	40	415	22	460		30	460		30		460		30				
CFW700D70P5T4DBN1			70.5	61			37	60	60	30	60	50																
CFW700D88P0T4DBN1			88	73			45	75	75	37	60	60																
CFW700E0105T4DB20C3			105	88			55	75	75	45	75	75																
CFW700E0142T4DB20C3			142	115			75	100	100	55	100	100																
CFW700E0180T4DB20C3	E	Not built-in <sup>2)</sup>	180	142			90	150	150	75	150	150																
CFW700E0211T4DB20C3			211	180			110	150	150	90	150	150																
CFW700E0105T4NB20C3			105	88			55	75	75	45	75	75																
CFW700E0142T4NB20C3			142	115			75	100	100	55	100	100																
CFW700E0180T4NB20C3			180	142			90	150	150	75	150	150																
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).



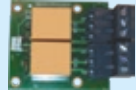




# Specification

CFW700 variable speed drive					Maximum applicable motor <sup>1)</sup>																				
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	Built-in	2.9	2.7	525	575	575	575	525	575	575	525	575	575	575	575	575							
CFW700B04P2T5DB20				4.2	3.8														1.5	2.0	2.0	1.5	2.0		
CFW700B07P0T5DB20				7.0	6.5														2.2	3.0	3.0	2.2	3.0		
CFW700B10P0T5DB20				10	9.0														4.0	5.0	5.0	4.0	5.0		
CFW700B12P0T5DB20				12	10														5.5	7.5	7.5	5.5	7.5		
CFW700B17P0T5DB20				17	17														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				E	Not built-in <sup>2)</sup>														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																	

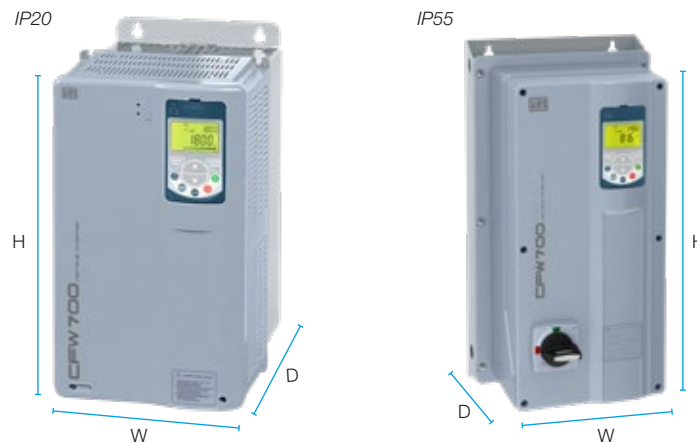




## Plug-In Modules and Accessories

Reference	Plug-in modules and accessories	Slot	
CAN-01	CAN interface module (CANopen / DeviceNet)	3	-
Profibus-DP-01	Profibus-DP communication module	3	-
<b>Others</b>			
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) <sup>3)</sup>			W mm (in)		D mm (in)			Weight kg (lb)		
	IP20	NEMA1	IP55	IP20 / NEMA1	IP55	IP20 / NEMA1	IP55 <sup>4)</sup>		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)	<sup>1)</sup>	1.000 (39.37)	335 (13.2)	430 (16.93)	358 (14.1)	388.8 (15.31)	419 (16.5)	65.0 (143.3)	<sup>2)</sup>	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



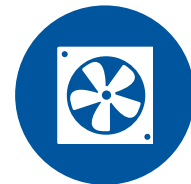
### Benefits



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 <sup>1)</sup>													
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
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		
10					10	2.2		3.0				2.2		3.0		2.0		
CFW110007S20FAZ	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				1.5		2.0		1.5		
10					10	1.5		2.0				1.5		2.0		1.5		
CFW110007B2SZ	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				1.5		2.0		1.5		
10					10	1.5		2.0				1.5		2.0		1.5		
CFW110007T2SZ	Three-phase	200-240 V ac	A	Built-in	7.0	5.5	230	1.5	220	2.0	230	1.5	230	1.1	220	1.5	230	1.0
CFW110010T2SZ					10	8.0		2.2				3.0		3.0		1.5		2.0
CFW110013T2SZ					13	11		3.0				4.0		3.0		3		3.0
CFW110016T2SZ					16	13		4.0				5.0		5.0		3		4.0
CFW110024T2SZ					24	20		5.5				7.5		7.5		5.5		6.0
CFW110028T2SZ					28	24		7.5				10		10		5.5		7.5
CFW110033T2SZ					33.5	28		9.2				12.5		10		7.5		10
CFW110045T2SZ					45	36		11				15		15		9.2		12.5
CFW110054T2SZ			54	45	15	20		20				11		15				
CFW110070T2SZ			70	56	22	25		25				15		20				
CFW110086T2SZ			86	70	22	30		30				22		25				
CFW110105T2SZ			105	86	30	40		40				22		30				
CFW110142T2ODBZ			142	115	45	50		50				30		40				
CFW110180T2ODBZ			180	142	55	75		60				45		50				
CFW110211T2ODBZ			211	180	55	75		75				55		75				
CFW110142T2SZ			142	115	45	50		50				30		40				
CFW110180T2SZ	180	142	55	75	60	45	50											
CFW110211T2SZ	211	180	55	75	75	55	75											
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
CFW110005T4SZ					5.0	5.0		2.2				3.0		3.0		2.2		3.0
CFW110007T4SZ					7.0	5.5		3.0				5.0		3.0		2.2		3.0
CFW110010T4SZ					10	10		4.0				7.5		5.0		4.0		7.5
CFW110013T4SZ					13.5	11		5.5				10		7.5		5.5		7.5
CFW110017T4SZ					17	13.5		9.2				10		10		5.5		7.5
CFW110024T4SZ					24	19		11				20		15		9.2		10
CFW110031T4SZ					31	25		15				25		20		11		15
CFW110038T4SZ			38	33	18.5	30		25				15		20				
CFW110045T4SZ			45	38	22	30		30				18.5		25				
CFW110058T4SZ			58.5	47	30	50		40				22		30				
CFW110070T4SZ			70.5	61	37	60		50				30		40				
CFW110088T4SZ			88	73	45	75		60				37		50				
CFW110105T4ODBZ			105	88	55	75		75				45		60				
CFW110142T4ODBZ			142	115	75	100		100				55		75				
CFW110180T4ODBZ			180	142	90	150		150				75		100				
CFW110211T4ODBZ			211	180	110	150		150				90		150				
CFW110105T4SZ			105	88	55	75		75				45		60				
CFW110142T4SZ			142	115	75	100		100				55		75				
CFW110180T4SZ			180	142	90	150		150				75		100				
CFW110211T4SZ			211	180	110	180		150				90		150				
CFW110242T4SZ			242	211	132	200		200				110		150				
CFW110312T4SZ			312	242	160	270		250				132		200				
CFW110370T4SZ			370	312	200	300		300				160		250				
CFW110477T4SZ			477	370	260	350		400				200		300				
CFW110515T4SZ			515	477	300	450		400				280		400				
CFW110601T4SZ			601	515	355	500		500				300		400				
CFW110720T4SZ			720	560	400	610		600				315		400				
CFW110760T4SZ			760	600	450	680		600				330		500				
CFW110795T4SZ			795	637	450	680		600				355		500				
CFW110877T4SZ			877	715	500	750		700				400		500				
CFW111062T4SZ			1,062	855	560	850		900				500		700				
CFW111141T4SZ			1,141	943	630	970		1,000				560		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.

# Specification

## Standard Version

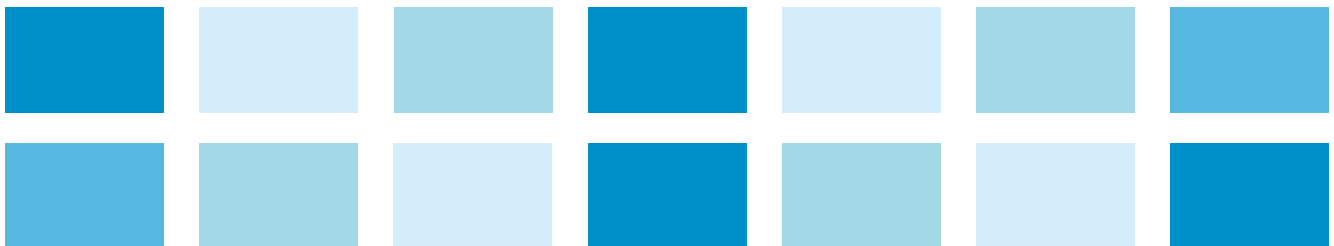
CFW11 variable speed drive					Maximum applicable motor <sup>1)</sup>																		
Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)		Normal duty (ND)						Heavy duty (HD)										
					ND	HD	IEC				UL		IEC				UL						
							Power supply (V) 50 Hz	kW	Power supply (V) 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					
CFW110002T5ONFYZ	Three-phase	500-600 V ac	B	Built-in	2.9	2.7	525	1.5	2.0	2.0	575	100	575	525	1.5	2.0	575	2.0					
CFW110004T5ONFYZ					4.2	3.8													2.2	3.0	3.0	2.2	3.0
CFW110007T5ONFYZ					7.0	6.5													4.0	5.0	5.0	4.0	5.0
CFW110010T5ONFYZ					10	9.0													5.5	7.5	7.5	5.5	7.5
CFW110012T5ONFYZ					12	10													7.5	10	10	7.5	10
CFW110017T5ONFYZ			17		17	11													15	15	11	15	
CFW110022T5ONFYZ			22		19	15													20	20	15	20	
CFW110027T5ONFYZ			27		22	18.5													25	25	18.5	25	
CFW110032T5ONFYZ			32		27	22													30	30	22	25	
CFW110044T5ONFYZ			44		36	30													40	40	30	30	
CFW110053T60YZ		500-690 V ac	E	Built-in	53	44	37	50	50	37	40	40	30	40									
CFW110063T60YZ					63	53	45	60	60	37	50												
CFW110080T60YZ					80	66	55	75	75	45	75												
CFW110107T60YZ					107	90	75	100	100	55	100												
CFW110125T60YZ					125	107	90	125	125	75	100												
CFW110150T60YZ			150		122	110	150	150	90	125													
CFW110170T60YZ			170		150	110	175	150	110	150													
CFW110216T60YZ			F		Not built-in; use the DBW03 external accessory	216	180	160	200	250	132	175	150										
CFW110289T60YZ						289	240	200	300	300	160	250	250										
CFW110315T60YZ						315	289	220	350	300	200	300	300										
CFW110365T60YZ		365		315		260	380	350	220	350	300												
CFW110435T60YZ		435		357		300	450	450	260	380	350												
CFW110472T60YZ		472	418	330	500	500	300	430	450														
CFW110584T60YZ		H <sup>2)</sup>	Not built-in; use the DBW04 external accessory	584	504	400	600	600	370	550	500												
CFW110625T60YZ				625	540	450	650	700	370	550	600												
CFW110758T60YZ				758	614	560	750	800	450	680	600												
CFW110804T60YZ				804	682	560	850	900	500	750	700												

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 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.

**Important!**

The rated current of the CFW11 for supply voltage at 690 V is different from the rated value indicated in the smart code. In order to prevent specification errors, please refer to the user's manual available on our website.



## Accessories

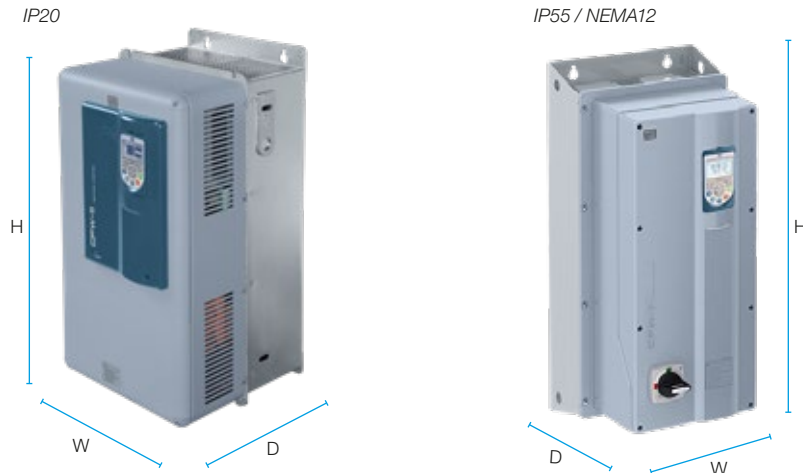
	Reference	Description	Slot	Image
Communication	RS485-01	RS485 communication module (Modbus-RTU and BACnet)	3	
	RS232-01	RS232 communication module (Modbus-RTU)	3	
	CAN/RS485-01	CAN/RS485 interface module (Modbus-RTU and BACnet, DeviceNet and CANopen)	3	
	CAN-01	CAN interface module (DeviceNet and CANopen)	3	
	PROFIBUSDP-01	Profibus-DP V1 communication module	3	
	ETHERCAT	EtherCAT communication module	3	
	PROFIBUS-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	
	MODBUS-TCP-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	W	D	Weight kg (lb)		
	mm (in)	mm (in)	mm (in)	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 <sup>1)</sup>	D2 <sup>2)</sup>	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 <sup>1)</sup>													
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							
CFW501A01P6T2NB20	Three-phase	200-240	A	Not available	1.6	230	0.25	220	0.33	230	0.33							
CFW501A02P6T2NB20					2.6		0.55		0.75		0.5							
CFW501A04P3T2NB20					4.3		1.1		1.5		1.0							
CFW501A07P0T2NB20					7.0		1.5		2.0		2.0							
CFW501A09P6T2NB20					9.6		2.2		3.0		3.0							
CFW501A12P2T2NB20					12.2		3.0		3.0		3.0							
CFW501B16P0T2DB20			B	Built-in	16		4.0		5.0		5.0							
CFW501B17P0T2DB20					17		4.0		5.0		5.0							
CFW501B19P4T2DB20					19.4		5.5		5.0		5.0							
CFW501C24P0T2DB20					24		5.5		7.5		7.5							
CFW501A01P0T4NB20					Three-phase		380-480		A		Not available	1.0	415	0.25	460	0.33	460	0.33
CFW501A01P6T4NB20												1.6		0.55		1.0		0.75
CFW501A02P6T4NB20	2.6	1.1	1.5	1.0														
CFW501A04P3T4NB20	4.3	1.5	3.0	2.0														
CFW501A06P1T4NB20	6.1	3.0	3.0	3.0														
CFW501B02P6T4DB20	B	Built-in	2.6	1.1		1.5		1.0										
CFW501B04P3T4DB20			4.3	1.5		3.0		2.0										
CFW501B06P5T4DB20			6.5	3.0		3.0		3.0										
CFW501B10P0T4DB20			10	4.0		7.5		5.0										
CFW501C14P0T4DB20			C	D		14		7.5	10	10								
CFW501C16P0T4DB20						16		7.5	10	10								
CFW501D24P0T4DB20	24	11				20		15										
CFW501D31P0T4DB20	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 HVACR 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 <sup>2)</sup>					Maximum applicable motor <sup>1)</sup>									
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		7.0						1.5	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	Not included <sup>3)</sup>	142	37	50	50								
CFW701E0180T2DB20C3			180	45	60	60								
CFW701E0211T2DB20C3			211	55	75	75								
CFW701E0142T2NB20C3			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					D						58.5	30	50	40
CFW701D70P5T4DBN1C3			70.5								37	60	50	
CFW701D88P0T4DBN1C3			88								45	75	60	
CFW701E0105T4DB20C3			105								55	75	75	
CFW701E0142T4DB20C3			142								75	125	100	
CFW701E0180T4DB20C3			180	90		150	150							
CFW701E0211T4DB20C3			E	Not included <sup>3)</sup>	211	110	150	150						
CFW701E0105T4NB20C3					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 <sup>2)</sup>					Maximum applicable motor <sup>1)</sup>								
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	500-600	Built-in	53	525	37	575	50	575	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						Not included <sup>3)</sup>		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) <sup>3)</sup>			W mm (in)		D mm (in)			Weight kg (lb)		
	IP20	NEMA1	IP55	IP20 / NEMA1	IP55	IP20 / NEMA1	IP55 <sup>4)</sup>		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)	<sup>1)</sup>	1.000 (39.37)	335 (13.2)	430 (16.93)	358 (14.1)	388.8 (15.31)	419 (16.5)	65 (143.3)	<sup>2)</sup>	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 protection<sup>1)</sup>
- 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 and WLP software
- 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.



## 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

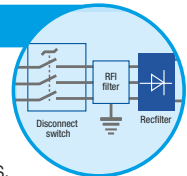
### Conformal Coating

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.



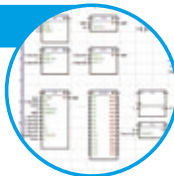
### Black Color

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 <sup>1)</sup>					
Reference <sup>2)3)</sup>	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	
<b>MW500 without disconnecting switch and without RFI filter</b>											
MW500A04P3S2DB66H00A56	Single-phase	200-240 V ac	A	Built-in	4.3	230	1.1	220	1.5	230	1.0
MW500A06P0S2DB66H00A56					6.0		1.5		2.0		1.5
MW500A02P6T4DB66H00A56	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5
MW500A04P3T4DB66H00A56					4.3		1.5		3.0		2.0
MW500B06P5T4DB66H00A56			B	Built-in	6.5		3.0		4.0		3.0
MW500B10P0T4DB66H00A56					10		4.0		7.5		5.0
MW500C14P0T4DB66H00A56			C	Built-in	14		7.5		10		7.5
MW500C16P0T4DB66H00A56					16		7.5		10		10
<b>MW500 without disconnecting switch and with RFI filter</b>											
MW500A04P3S2DB66C2H00A56	Single-phase	200-240 V ac	A	Built-in	4.3	230	1.1	220	1.5	230	1.0
MW500A06P0S2DB66C2H00A56					6.0		1.5		2.0		1.5
MW500A02P6T4DB66C2H00A56	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5
MW500A04P3T4DB66C2H00A56					4.3		1.5		3.0		2.0
MW500B06P5T4DB66C2H00A56			B	Built-in	6.5		3.0		4.0		3.0
MW500B10P0T4DB66C2H00A56					10		4.0		7.5		5.0
MW500C14P0T4DB66C2H00A56			C	Built-in	14		7.5		10		7.5
MW500C16P0T4DB66C2H00A56					16		7.5		10		10
<b>MW500 with disconnecting switch and without RFI filter</b>											
MW500A04P3S2DB66DSH00A56	Single-phase	200-240 V ac	A	Built-in	4.3	230	1.1	220	1.5	230	1.0
MW500A06P0S2DB66DSH00A56					6.0		1.5		2.0		1.5
MW500A02P6T4DB66DSH00A56	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5
MW500A04P3T4DB66DSH00A56					4.3		1.5		3.0		2.0
MW500B06P5T4DB66DSH00A56			B	Built-in	6.5		3.0		4.0		3.0
MW500B10P0T4DB66DSH00A56					10		4.0		7.5		5.0
MW500C14P0T4DB66DSH00A56			C	Built-in	14		7.5		10		7.5
MW500C16P0T4DB66DSH00A56					16		7.5		10		10
<b>MW500 with disconnecting switch and with RFI filter</b>											
MW500A04P3S2DB66C2DSH00A56	Single-phase	200-240 V ac	A	Built-in	4.3	230	1.1	220	1.5	230	1.0
MW500A06P0S2DB66C2DSH00A56					6.0		1.5		2.0		1.5
MW500A02P6T4DB66C2DSH00A56	Three-phase	380-480 V ac	A	Built-in	2.6	415	1.1	460	1.5	460	1.5
MW500A04P3T4DB66C2DSH00A56					4.3		1.5		3.0		2.0
MW500B06P5T4DB66C2DSH00A56			B	Built-in	6.5		3.0		4.0		3.0
MW500B10P0T4DB66C2DSH00A56					10		4.0		7.5		5.0
MW500C14P0T4DB66C2DSH00A56			C	Built-in	14		7.5		10		7.5
MW500C16P0T4DB66C2DSH00A56					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-IOS 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 <sup>1)</sup>	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 <sup>1)</sup>	D2 <sup>2)</sup>	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 ±2 Hz	50/60 Hz ±2 Hz	50/60 Hz ±2 Hz	50/60 Hz ±2 Hz
	Power factor	-	-	-	-
	Voltage variation	-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
	Overtages	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 7.0 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 10.0 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	≥97%	≥97%	≥97%	≥97%
	Switching frequency	2.5 to 15 kHz	2.5 to 15 kHz	2.5 to 15 kHz	2.5 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
	Voltage variation	-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
Overtages	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/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	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	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	HD: 150% for 1 minute every 10 minutes ND: 110% for 1 minute every 10 minutes	
RFI filter	Internal included	Internal included	Internal optional (frames A, B, C, D)	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	Built-in	Built-in	

## 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)	Up to 8 (accessory)
	Analog	1 additional (voltage or current, with accessory)	1 built-in (voltage or current) 1 additional (accessory)	Up to 3 (voltage or current, with accessory)	Up to 3 (voltage or current, with accessory)
Outputs	Digital	Up to 3 relay (with accessory)	1 built-in relay output Up to 3 relay (with accessory)	Up to 4 relay outputs (accessory) Up to 4 transistor outputs (accessory)	Up to 4 relay outputs (accessory) Up to 4 transistor outputs (accessory)
	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)	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)
	Bluetooth	Accessory	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 disconnecting switch (optional)
Special functions incorporated		Built-in SoftPLC Energy saving Flying start / ride through Multispeed PID	Built-in SoftPLC Energy saving Flying start / ride through Multispeed PID	Built-in SoftPLC Energy saving Flying start / ride through Multispeed PID	Built-in SoftPLC Flying start / ride through Multispeed 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		SuperDrive G2; WLP	WPS	SuperDrive G2; WLP	SuperDrive G2; WLP
Degree of protection		IP20 (standard)	IP20 (standard)	IP20 (standard) or NEMA1 (optional)	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
Temperature		0 to 50 °C without current derating	0 to 50 °C without current derating	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 1,000 m without current or voltage derating	Up to 1,000 m without current or voltage derating	Up to 1,000 m without current or voltage derating	Up to 1,000 m without current or voltage derating

## Comparison

Comparison		CFW501	CFW701	CFW700	CFW11
Inputs	Digital	Up to 4 (accessory)	8 built-in (isolated)	4 built-in (isolated) 4 additional (accessory)	8 built-in (isolated) Up to 9 additional (accessory)
	Analog	Up to 2 (voltage or current, with accessory)	4 built-in (2 configurable voltage or current, 1 current and 1 PTC) 1 additional (accessory)	2 built-in (voltage or current)	2 built-in (voltage or current) Up to 2 additional (accessory)
Outputs	Digital	Up to 2 relay outputs (accessory) up to 1 transistor output (accessory)	2 built-in relay outputs 2 additional relay outputs (accessory) 3 built-in transistor outputs	Up to 3 relay (with accessory)	3 built-in relay outputs Up to 4 additional relay outputs (with accessory) Up to 8 transistor outputs (with accessory)
	Analog	Up to 1 (voltage or current, with accessory)	2 built-in (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-in	Built-in	Built-in
	Serial	2x RS485 (accessory)	RS485 (accessory)	RS232 or RS485 (accessory)	RS232 or RS485 (accessory)
	Bluetooth	-	-	-	-
	Infrared	-	-	-	-
	Fieldbus	BACnet or Metasys N2 (accessory)	Modbus-RTU BACnet or Metasys N2 (accessory)	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 disconnecting switch (optional)	Flash memory module (accessory) Remote HMI (accessory) Front disconnecting switch (optional)	Flash memory module (accessory) Remote HMI (accessory) Front disconnecting switch (optional)
Special functions incorporated		Built-in SoftPLC Energy saving Flying start / ride through PID Torque control Sleep mode Protection against dry pump Protection against broken belt Protection against short cycles Bypass Fire mode	Built-in SoftPLC Energy saving Flying start / ride through 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 Energy saving Flying start / ride through Multispeed PID Torque control Optimal flux Skip frequency	Built-in SoftPLC Energy saving Flying start / ride through 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
Degree of protection		IP20 (standard) or NEMA1 (optional)	IP20 (standard) NEMA1 / IP20 (optional) IP21 (optional) NEMA1 / IP21 (optional) IP55 (optional)	IP20 (standard) NEMA1 / IP20 (optional) IP21 (optional) NEMA1 / IP21 (optional) IP55 (optional)	IP20 (standard) NEMA1 / IP20 (optional) IP21 (optional) NEMA1 / IP21 (optional) IP55 (optional)
Air relative humidity		5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing
Temperature		0 to 50 °C - IP20 0 to 40 °C - IP20, NEMA1 or side by side	-10 to 50 °C (refer to the user's manual for further details)	-10 to 50 °C (refer to the user's manual for further details)	-10 to 50 °C (refer to the user's manual for further details)
Altitude		Up to 1,000 m without current or voltage derating	Up to 1,000 m without current or voltage derating	Up to 1,000 m without current or voltage derating	Up to 1,000 m without current or voltage derating



# Global presence is essential, as much as understanding your needs.

## Global Presence

With more than 30.000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our **CFW Variable speed drives** is the right choice for your application and business, assuring safety, efficiency and reliability.



**Availability** is to have a global support network



**Partnership** is to create solutions that suit your needs



**Competitive edge** is to unite technology and innovation



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