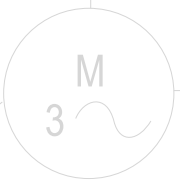# Automation

Variable Speed Drives

weg

Variable Speed Drives

Summary

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

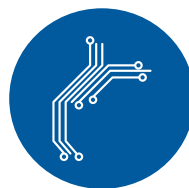**Easy parameter setting**

High compaction degree

Modern design

Effective motor protection
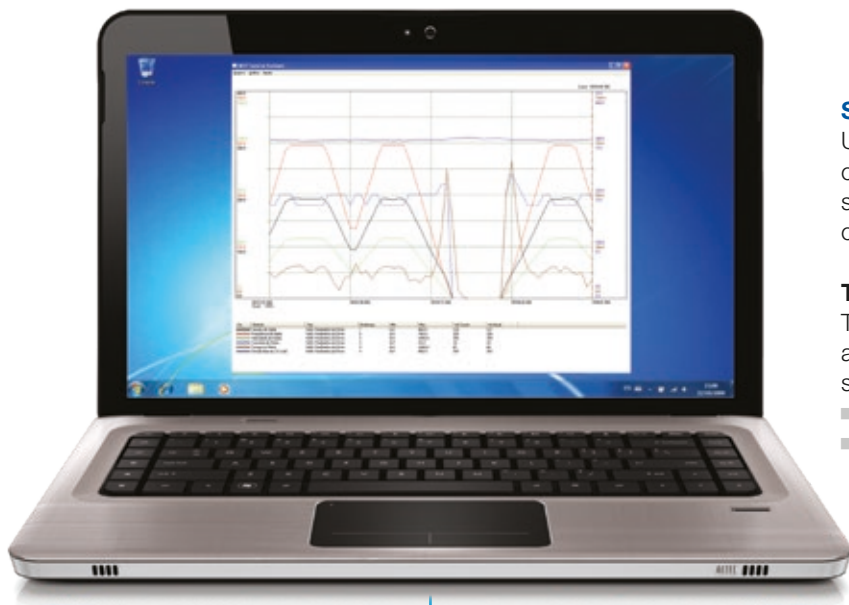
Free programming software

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
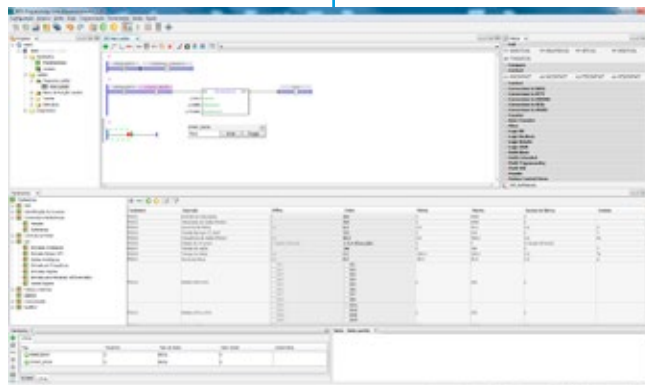
WEG Ladder Programmer (WLP)
Software for Windows® environment that enables the programming in Ladder language of various WEG product families.
- Edition of the program by means of several Ladder function blocks
- Compilation of the program in Ladder for a language compatible with the devices
- Transfer of the compiled program to the devices
- Reading of the program installed on the devices[1]
- Online monitoring of the program running on the devices
- Point-to-point communication with the devices through serial in RS232 or USB[2]
- Serial communication in RS485 with up to 30 devices[3]
- 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.
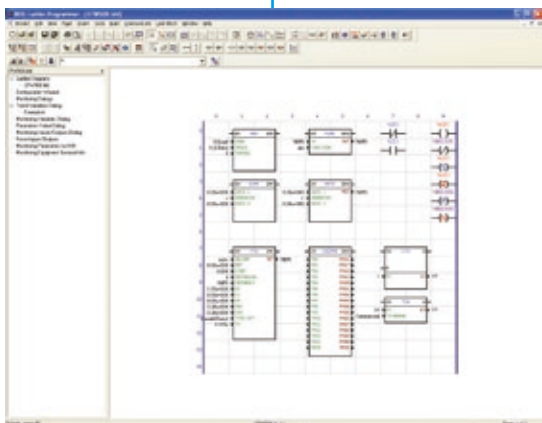
Applications

Cement & Mining

Chemicals, Petrochemicals, Oil & Gas

Sugar & Alcohol
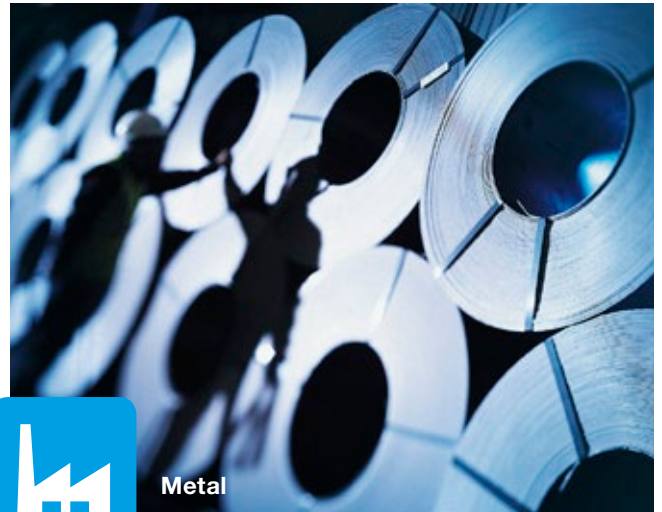
Metal

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		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.

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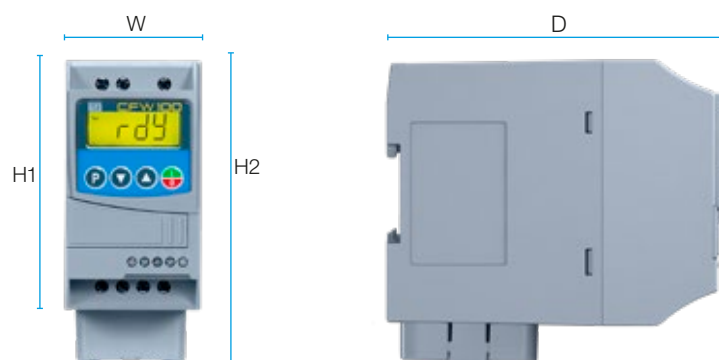
Frame	H1	H2	W	D	Weight
	mm (in)	mm (in)	mm (in)	mm (in)	kg (lb)
A	100.0 (3.94)	-	55.0 (2.17)	129.0 (5.08)	0.48 (1.05)
B	-	117.0 (4.60)	55.0 (2.17)	129.0 (5.08)	0.57 (1.25)
C	-	125.6 (4.94)	55.0 (2.17)	129.0 (5.08)	0.61 (1.34)

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

CE $\,$ c(UL)us $\,$ IRAM

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		0.55		0.75		0.5
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 Modules[6]

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	Lower slot	1	-	1	3	-	-	-	-	-	-	-
CFW300-IODR[1]		-	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)

Front view

Side view
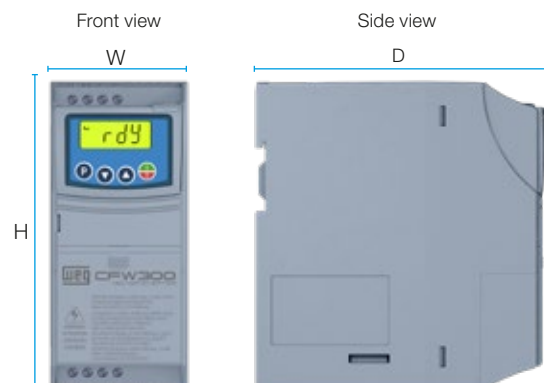
CFW500
Compact for Machines in General

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

Reference	Power supply (V)		Frame size	Braking IGBT	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
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	Single-phase or three-phase	200-240	A	Not available	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			B	Built-in	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			B	Built-in	16		4.0		5.0		5.0
CFW500C24P0T2DB20			C	Built-in	24		5.5		7.5		7.5
CFW500D28P0T2DB20			D	Built-in	28		7.5		10		10
CFW500D33P0T2DB20					33		9.2		12.5		10
CFW500D47P0T2DB20					47		11		15		15
CFW500E56P0T2DB20			E	Built-in	56		15		20		20
CFW500A01P0T4NB20	Three-phase	380-480	A	Not available	1.0	415	0.37	460	0.5	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			C	Built-in	14		7.5		10		10
CFW500C16P0T4DB20					16		7.5		12.5		10
CFW500D24P0T4DB20			D	Built-in	24		11		15		15
CFW500D31P0T4DB20					31		15		25		25
CFW500E39P0T4DB20			E	Built-in	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[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	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[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	-	-	-	-	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)

W Front view   P Side view
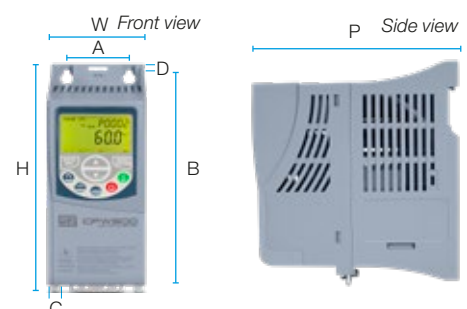
Note: for the dimensions in the NEMA version, refer to the user's manual.

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 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 (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 [1]											
						Normal duty (ND)						**Heavy duty (HD)**					
				Rated output current (A)		IEC				UL		IEC				UL	
Reference	Power supply (V)	Frame size	Braking IGBT	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
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		C	Built-in	45	36		11		15		15		9.2		10		10
CFW700C54P0T2DB20				54	45		15		20		20		11		15		15
CFW700C70P0T2DB20				70	56		22		25		25		15		20		20
CFW700D86P0T2DBN1		D	Built-in	86	70		22		30		30		22		25		25
CFW700D0105T2DBN1				105	86		30		40		40		22		30		30
CFW700E0142T2DB20C3		E	Built-in	142	115		45		60		50		30		40		40
CFW700E0180T2DB20C3				180	142		55		75		60		45		60		50
CFW700E0211T2DB20C3				211	180		55		75		75		55		75		60
CFW700E0142T2NB20C3				142	115		45		60		50		30		40		40
CFW700E0180T2NB20C3				180	142		55		75		60		45		60		50
CFW700E0211T2NB20C3				211	180		55		75		75		55		75		60
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		3.0		2.2		3.0		3.0
CFW700A10P0T4DB20				10	10		4.0		7.5		5.0		4.0		7.5		5.0
CFW700A13P5T4DB20				13.5	11		5.5		10		7.5		5.5		7.5		7.5
CFW700B17P0T4DB20		B	Built-in	17	13.5		9.2		10		10		5.5		10		7.5
CFW700B24P0T4DB20				24	19		11		20		15		9.2		15		10
CFW700B31P0T4DB20				31	25		15		25		20		11		20		15
CFW700C38P0T4DB20		C	Built-in	38	33		18.5		30		25		15		25		20
CFW700C45P0T4DB20				45	38		22		30		30		18.5		30		25
CFW700C58P5T4DB20				58.5	47		30		50		40		22		30		30
CFW700D70P5T4DBN1		D	Built-in	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		60
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).
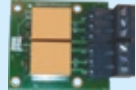
Specification

Reference	Power supply (V)		Frame size	Braking IGBT	Rated output current (A)		Normal duty (ND) IEC Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	UL Power supply (V) 60 Hz	HP	Heavy duty (HD) IEC Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	UL Power supply (V) 60 Hz	HP
					ND	HD												
CFW700B02P9T5DB20	Three-phase	500-600 V ac	B	Built-in	2.9	2.7		1.5		2.0		2.0		1.5		2.0		2.0
CFW700B04P2T5DB20			B		4.2	3.8		2.2		3.0		3.0		2.2		3.0		2.0
CFW700B07P0T5DB20			B		7.0	6.5		4.0		5.0		5.0		4.0		5.0		5.0
CFW700B10P0T5DB20			B		10	9.0		5.5		7.5		7.5		5.5		7.5		7.5
CFW700B12P0T5DB20			B		12	10		7.5		10		10		5.5		7.5		7.5
CFW700B17P0T5DB20			B		17	17		11		15		15		11		15		15
CFW700C22P0T5DB20			C		22	19		15		20		20		11		20		15
CFW700C27P0T5DB20			C		27	22		18.5		25		25		15		20		20
CFW700C32P0T5DB20			C		32	27		22		30		30		18.5		25		25
CFW700C44P0T5DB20			C		44	36		30		40		40		22		30		30
CFW700E53P0T5DB20C3			E		53	44	525	37	575	50	575	50	525	30	575	40	575	40
CFW700E63P0T5DB20C3			E		63	53		45		60		60		37		50		50
CFW700E80P0T5DB20C3			E		80	66		55		75		75		45		75		60
CFW700E0107T5DB20C3			E		107	90		75		100		100		55		100		75
CFW700E0125T5DB20C3			E		125	107		90		125		125		75		100		100
CFW700E0150T5DB20C3			E		150	122		110		150		150		90		125		100
CFW700E53P0T5NB20C3			E	Not built-in[2]	53	44		37		50		50		30		40		40
CFW700E63P0T5NB20C3			E		63	53		45		60		60		37		50		50
CFW700E80P0T5NB20C3			E		80	66		55		75		75		45		75		60
CFW700E0107T5NB20C3			E		107	90		75		100		100		55		100		75
CFW700E0125T5NB20C3			E		125	107		90		125		125		75		100		100
CFW700E0150T5NB20C3			E		150	122		110		150		150		90		125		100

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

IP20

IP55

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

Note: designed for exclusive industrial or professional use.

- 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

Certifications

Benefits

Free WLP and SuperDrive G2 programming software

Built-in SoftPLC function - the functionalities of a PLC added to the CFW11
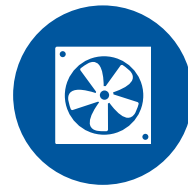
Smart thermal management of the fan (ON/OFF and Speed)

Vectrue Technology®: high precision in speed and torque control - VVW (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

Reference	Power supply (V)	Frame size	Braking IGBT	ND	HD	ND IEC Power supply (V) 50 Hz	ND IEC kW	ND IEC Power supply (V) 60 Hz	ND IEC HP	ND UL Power supply (V) 60 Hz	ND UL HP	HD IEC Power supply (V) 50 Hz	HD IEC kW	HD IEC Power supply (V) 60 Hz	HD IEC HP	HD UL Power supply (V) 60 Hz	HD UL 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
CFW110007S20FAZ				7.0	7.0		1.5		2.0		2.0		1.5		2.0		2.0
CFW110010S2SZ				10	10		2.2		3.0		3.0		2.2		3.0		3.0
CFW110006B2SZ	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
CFW110007B2SZ				7.0	7.0		1.5		2.0		2.0		1.5		2.0		2.0
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
CFW110010T2SZ				10	8.0		2.2		3.0		3.0		1.5		2.0		2.0
CFW110013T2SZ				13	11		3.0		4.0		3.0		3		3.0		3.0
CFW110016T2SZ				16	13		4.0		5.0		5.0		3		4.0		3.0
CFW110024T2SZ		B	Built-in	24	20		5.5		7.5		7.5		5.5		6.0		5.0
CFW110028T2SZ				28	24		7.5		10		10		5.5		7.5		7.5
CFW110033T2SZ				33.5	28		9.2		12.5		10		7.5		10		10
CFW110045T2SZ		C	Built-in	45	36		11		15		15		9.2		12.5		10
CFW110054T2SZ				54	45		15		20		20		15		15		15
CFW110070T2SZ				70	56		22		25		25		15		20		20
CFW110086T2SZ		D	Built-in	86	70		22		30		30		22		25		25
CFW110105T2SZ				105	86		30		40		40		22		30		30
CFW110142T20DBZ		E	Built-in	142	115		45		50		50		30		40		40
CFW110180T20DBZ				180	142		55		75		60		45		50		50
CFW110211T20DBZ				211	180		55		75		75		55		75		60
CFW110142T2SZ			Not built-in[2]	142	115		45		50		50		30		40		40
CFW110180T2SZ				180	142		55		75		60		45		50		50
CFW110211T2SZ				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	2.0	415	1.5	460	2.0	460	2.0
CFW110005T4SZ				5.0	5.0		2.2		3.0		3.0		2.2		3.0		3.0
CFW110007T4SZ				7.0	5.5		3.0		5.0		3.0		2,2		3.0		3.0
CFW110010T4SZ				10	10		4.0		7.5		5.0		4.0		7.5		5.0
CFW110013T4SZ				13.5	11		5.5		10		7.5		5.5		7.5		7.5
CFW110017T4SZ		B	Built-in	17	13.5		9.2		10		10		5.5		10		7.5
CFW110024T4SZ				24	19		11		20		15		9.2		15		10
CFW110031T4SZ				31	25		15		25		20		11		20		15
CFW110038T4SZ		C	Built-in	38	33		18.5		30		25		15		25		20
CFW110045T4SZ				45	38		22		30		30		18,5		30		25
CFW110058T4SZ				58.5	47		30		50		40		22		30		30
CFW110070T4SZ		D	Built-in	70.5	61		37		60		50		30		50		40
CFW110088T4SZ				88	73		45		75		60		37		60		50
CFW110105T40DBZ		E	Built-in	105	88		55		75		75		45		75		60
CFW110142T40DBZ				142	115		75		100		100		55		100		75
CFW110180T40DBZ				180	142		90		150		150		75		100		100
CFW110211T40DBZ				211	180		110		150		150		90		150		150
CFW110105T4SZ			Not built-in[2]	105	88		55		75		75		45		75		60
CFW110142T4SZ				142	115		75		100		100		55		100		75
CFW110180T4SZ				180	142		90		150		150		75		100		100
CFW110211T4SZ				211	180		110		180		150		90		150		150
CFW110242T4SZ		F	Not built-in; use external accessory DBW03	242	211		132		200		200		110		150		150
CFW110312T4SZ				312	242		160		270		250		132		200		200
CFW110370T4SZ				370	312		200		300		300		160		250		250
CFW110477T4SZ				477	370		260		350		400		200		300		300
CFW110515T4SZ		G		515	477		300		450		400		280		400		400
CFW110601T4SZ				601	515		355		500		500		300		450		400
CFW110720T4SZ				720	560		400		610		600		315		500		400
CFW110760T4SZ				760	600		450		680		600		330		550		500
CFW110795T4SZ		H[3]	Not built-in; use external accessory DBW04	795	637		450		680		600		355		550		500
CFW110877T4SZ				877	715		500		750		700		400		610		500
CFW111062T4SZ				1,062	855		560		850		900		500		750		700
CFW111141T4SZ				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.

Specification

Standard Version

Reference	Power supply (V)	Frame size	Braking IGBT	ND	HD	ND IEC Power supply (V) 50 Hz	ND IEC kW	ND IEC Power supply (V) 60 Hz	ND IEC HP	ND UL Power supply (V) 60 Hz	ND UL HP	HD IEC Power supply (V) 50 Hz	HD IEC kW	HD IEC Power supply (V) 60 Hz	HD IEC HP	HD UL Power supply (V) 60 Hz	HD UL HP
CFW110002T5ONFYZ	500-600 V ac	B	Built-in	2.9	2.7		1.5		2.0		2.0		1.5		2.0		2.0
CFW110004T5ONFYZ		B	Built-in	4.2	3.8		2.2		3.0		3.0		2.2		3.0		2.0
CFW110007T5ONFYZ		B	Built-in	7.0	6.5		4.0		5.0		5.0		4.0		5.0		5.0
CFW110010T5ONFYZ		B	Built-in	10	9.0		5.5		7.5		7.5		5.5		7.5		7.5
CFW110012T5ONFYZ		B	Built-in	12	10		7.5		10		10		5.5		7.5		7.5
CFW110017T5ONFYZ		B	Built-in	17	17		11		15		15		11		15		15
CFW110022T5ONFYZ		C	Built-in	22	19		15		20		20		11		20		15
CFW110027T5ONFYZ		C	Built-in	27	22		18.5		25		25		15		20		20
CFW110032T5ONFYZ		C	Built-in	32	27		22		30		30		18.5		25		25
CFW110044T5ONFYZ		C	Built-in	44	36		30		40		40		22		30		30
CFW110053T6OYZ	500-690 V ac	E	Built-in	53	44		37		50		50		30		40		40
CFW110063T6OYZ		E	Built-in	63	53		45		60		60		37		50		50
CFW110080T6OYZ		E	Built-in	80	66		55		75		75		45		75		60
CFW110107T6OYZ		E	Built-in	107	90		75		100		100		55		100		75
CFW110125T6OYZ		E	Built-in	125	107	525	90	575	125	575	125	525	75	575	100	575	100
CFW110150T6OYZ		E	Built-in	150	122		110		150		150		90		125		100
CFW110170T6OYZ		F	Not built-in; use the DBW03 external accessory	170	150		110		175		150		110		150		150
CFW110216T6OYZ		F		216	180		160		200		250		132		175		150
CFW110289T6OYZ		F		289	240		200		300		300		160		250		250
CFW110315T6OYZ		G		315	289		220		350		300		200		300		300
CFW110365T6OYZ		G		365	315		260		380		350		220		350		300
CFW110435T6OYZ		G		435	357		300		450		450		260		380		350
CFW110472T6OYZ		G		472	418		330		500		500		300		430		450
CFW110584T6OYZ		H[2]	Not built-in; use the DBW04 external accessory	584	504		400		600		600		370		550		500
CFW110625T6OYZ		H[2]		625	540		450		650		700		370		550		600
CFW110758T6OYZ		H[2]		758	614		560		750		800		450		680		600
CFW110804T6OYZ		H[2]		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.
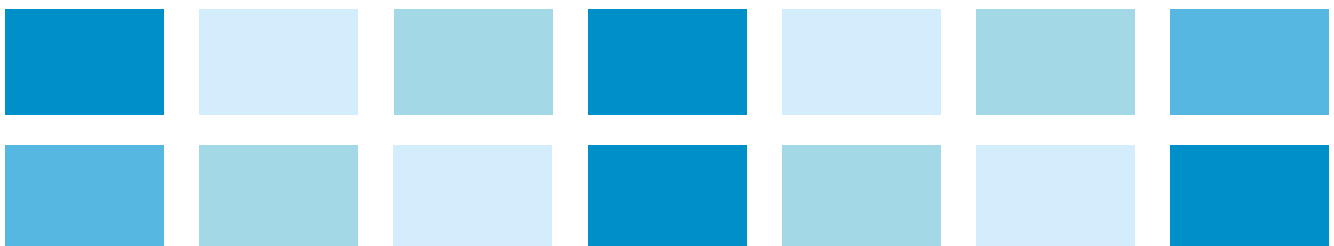
Accessories

	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-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

IP55 / NEMA12
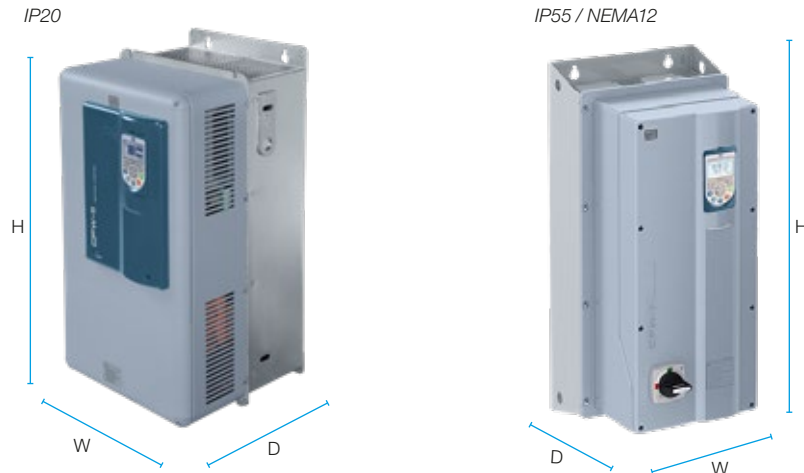
IP20 Models

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[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 facitilies.

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 (VVW)
- 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

Reference	CFW501 HVAC-R variable speed drive					Maximum applicable motor[1]				
	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	Built-in	16		4.0		5.0		5.0
CFW501B17P0T2DB20C3					17		4.0		5.0		5.0
CFW501B19P4T2DB20C3					19.4		5.5		5.0		5.0
CFW501C24P0T2DB20C3			C		24		5.5		7.5		7.5
CFW501A01P0T4NB20C3	Three-phase	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			B	Built-in	2.6		1.1		1.5		1.0
CFW501B04P3T4DB20C3					4.3		1.5		3.0		2.0
CFW501B06P5T4DB20C3					6.5		3.0		3.0		3.0
CFW501B10P0T4DB20C3					10		4.0		7.5		5.0
CFW501C14P0T4DB20C2			C		14		7.5		10		10
CFW501C16P0T4DB20C2					16		7.5		10		10
CFW501D24P0T4DB20C3			D		24		11		20		15
CFW501D31P0T4DB20C3					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 guindance. 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[2] | | | | Rated output current (A) | Maximum applicable motor[1] | | | | | |
| | | | | | IEC | | | | UL | |
Reference	Power supply (V)		Frame size	Braking IGBT	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		1.5		2.0		1.5
CFW701A07P0S2DB20C3	Single-phase	200-240	A		7.0		1.5		2.0		2.0
CFW701A10P0S2DB20C3					10		2.2		3.0		3.0
CFW701A07P0T2DB20C3			A		7.0		1.5		2.0		2.0
CFW701A10P0T2DB20C3			A		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			B		28		7.5		10		10
CFW701B33P5T2DB20C3					33.5		9.2		12.5		10
CFW701C45P0T2DB20C3	Three-phase	200-240	C		45	230	11	220	15	230	15
CFW701C54P0T2DB20C3			C		54		15		20		20
CFW701C70P0T2DB20C3					70		18.5		25		25
CFW701D86P0T2DBN1C3			D		86		22		30		30
CFW701D0105T2DBN1C3			D		105		30		40		40
CFW701E0142T2DB20C3					142		37		50		50
CFW701E0180T2DB20C3					180		45		60		60
CFW701E0211T2DB20C3			E		211		55		75		75
CFW701E0142T2NB20C3				Not included[3]	142		37		50		50
CFW701E0180T2NB20C3				Not included[3]	180		45		60		60
CFW701E0211T2NB20C3					211		55		75		75
CFW701A03P6T4DB20C3			A	Not available	3.6		1.5		2.0		2.0
CFW701A05P0T4DB20C3			A		5.0		2.2		3.0		3.0
CFW701A07P0T4DB20C3			A		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			B		24		11		20		15
CFW701B31P0T4DB20C3					31		15		25		20
CFW701C38P0T4DB20C3			C		38		18.5		30		25
CFW701C45P0T4DB20C3			C		45		22		30		30
CFW701C58P5T4DB20C3	Three-phase	380-480	C	Built-in	58.5	415	30	460	50	460	40
CFW701D70P5T4DBN1C3			D		70.5		37		60		50
CFW701D88P0T4DBN1C3			D		88		45		75		60
CFW701E0105T4DB20C3					105		55		75		75
CFW701E0142T4DB20C3					142		75		125		100
CFW701E0180T4DB20C3					180		90		150		150
CFW701E0211T4DB20C3			E		211		110		150		150
CFW701E0105T4NB20C3				Not included[3]	105		55		75		75
CFW701E0142T4NB20C3				Not included[3]	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]				Rated output current (A)	Maximum applicable motor[1]					
					IEC				UL	
Reference	Power supply (V)		Frame size	Braking IGBT	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		53		37		50		50
CFW701E63P0T5DB20C3					63		45		60		60
CFW701E80P0T5DB20C3					80		55		75		75
CFW701E0107T5DB20C3					107		75		100		100
CFW701E0125T5DB20C3					125		90		125		125
CFW701E0150T5DB20C3					150		110		150		150
CFW701E53P0T5NB20C3				Not included[3]	53		37		50		50
CFW701E63P0T5NB20C3					63		45		60		60
CFW701E80P0T5NB20C3					80		55		75		75
CFW701E0107T5NB20C3					107		75		100		100
CFW701E0125T5NB20C3					125		90		125		125
CFW701E0150T5NB20C3					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 protection[1]
- 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 conectivity 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.

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-Disconnector 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 redution in the EMC level, some cases even more, taking advantage of the motor and VSD distance, thus increasing the EMC class.
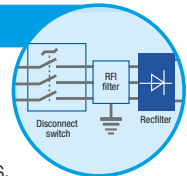
IP66/NEMA 4X Protection Degree

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.
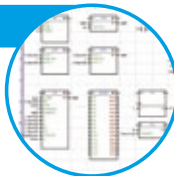
SuperDrive G2

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

Specification

Standard Version

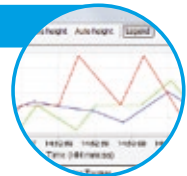| MW500 variable speed drive for decentralized solutions					Maximum applicable motor[1]					
					IEC				UL	
Reference[2)3]	Power supply (V)	Frame size	Braking IGBT	Rated output current (A)	Power supply (V) 50 Hz	kW	Power supply (V) 60 Hz	HP	Power supply (V) 60 Hz	HP
MW500 without disconnecting switch and without RFI filter										
MW500A04P3S2DB66H00	Single-phase	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	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	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	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	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	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	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	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-Effciency, 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[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 ±2 Hz	50/60 Hz ±2 Hz	50/60 Hz ±2 Hz	50/60 Hz ±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
		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
		-	-	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	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
	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	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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Global Presence

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Availability is to have a global support network

Partnership is to create solutions that suit your needs

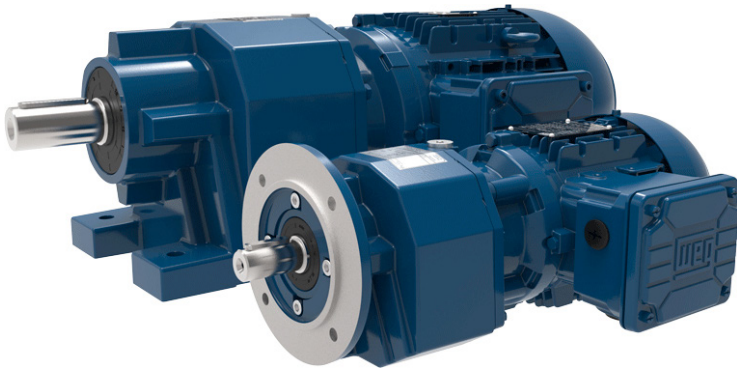**Competitive edge** is to unite technology and innovation

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