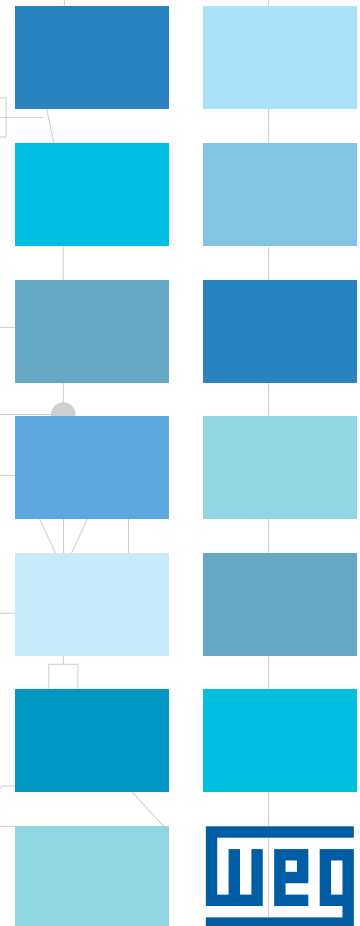
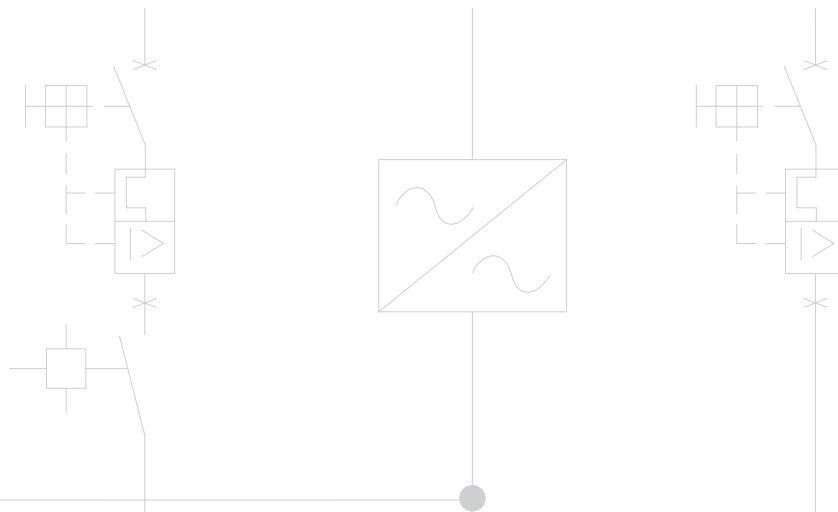


# CFW701 HVAC-R

## Variable Frequency Drives



# Full HVAC-R Capability

WEG, a leading supplier of drive technology, as well as automation solutions, has enhanced the line of variable frequency drives for heating, ventilation, air conditioning and refrigeration. The CFW701 was designed with the features and functions required for HVAC systems, with the same reliability, robustness and energy-efficient control known in our industrial lines. WEG now brings this technology to hospitals, airports, office buildings, hotels, shopping centers or other similar facilities.



## Complete Range

- 1.5 to 3 HP (1.1 to 2.2 kW): 200-240 V ac - Single-phase
- 1.5 to 75 HP (1.1 to 55 kW): 220-240 V ac - Three-phase
- 2 to 175 HP (1.5 to 132 kW): 380-480 V ac - Three-phase
- 2 to 150 HP (1.5 to 110 kW): 500-600 V ac - Three-phase

## Friendly Programming

- Oriented start-up: step by step
- Easy and intuitive operation
- Parameter groups: shortcut to the parameters of interest
- Engineering units, such as: °C, °F, bar, mbar, psi, m<sup>3</sup>, gal, kW, rpm and others



## Highlights

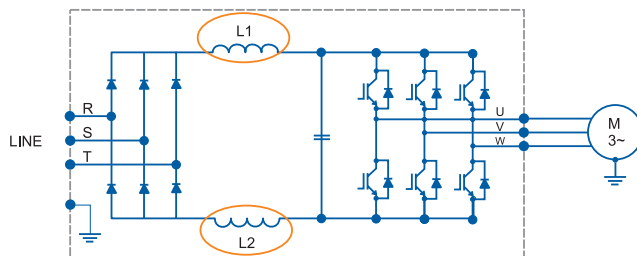


### Conformal Coated (3C2)

- VFD life-time is extended: protects against dust, humidity, high temperature and chemicals

### Harmonic Mitigation with Inductor

- No line reactance required
- No restrictions for installation, minimum impedance is not required
- Meets IEC 61000-3-12 requirements with built-in DC link choke



### PLC Function Built-In

Programming flexibility combined with network and I/O make the CFW701 a powerful part of an integrated system. (free WLP software in [www.weg.net](http://www.weg.net))



### RFI Filter Built-In

- Meets mandatory harmonic current standard EN 61000-3-12

### Communication Protocols as Standard

- BACnet MS/TP
- Metasys N2
- Modbus-RTU



### Thermal Management

- It is possible to monitor heat sink and inside air temperature thus ensuring protection to critical components e.g. IGBTs and control board
- Fans installed closed to heatsink are controlled based on the temperature of power modules
- Readings of fan operation hours can be analyzed through parameters as well as alarm or fault messages are displayed
- Easy removal of fans for easy maintenance and/or replacement



## The Best Partners for Your HVAC-R Applications



## Optimal Warranty: 3 Years

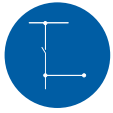
- Thirty-six (36) month warranty when WEG motor is applied with LV VFD and soft-starters
- Go to [www.weg.net/us](http://www.weg.net/us) and click on optimal warranty for further information

## Availability

- Widest range of CFW701 in stock
- 8 WEG warehouses in USA



## Special Functions



### Bypass

Using one of its relay outputs the CFW701 allows the motor to be started cross the line. External circuit is needed for this operation.



### Fire Mode

This function makes the drive inhibit its internal faults, making the motor run during adverse conditions without stopping the process.



### Advanced PID - 3 x PID

Three PID control loops: one controls the process by itself (the one the motor is running) and two are additional PID loops for use to control independent process variables (it might be for the control of external process not related to what the main PID loop is handling). This eliminates the use of an additional PID controller.



### Broken Belt

Monitors motor torque and prevents the drive from running with no load in case of a broken belt.



### Sleep / Wake-Up Mode

Prevents the operation of the motor at low speeds for a amount of time programmed. Wake-up mode determines the time the drive is restarted.



### Dry Pump

Prevents the pump from running with no load.



### PTC

For monitoring PTC sensor.



### Filter Maintenance Alarm

Warns about the need to replace the filter.



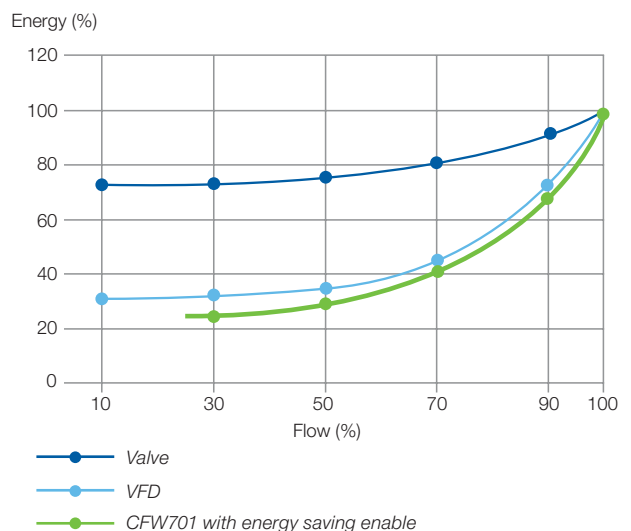
### Short Cycle Protection

Prevents a compressor / motor from being switched on and off in short periods of time.



### Energy Saving

Depending on the motor speed and load conditions, flux is reduced decreasing losses and therefore efficiency is improved.



# Energy Saving

The future depends on conscious and sustainable actions as the world grows fast and for this, modern automated solutions are required. Technology is already present in our lives, and, in order to produce the energy that drives all the innovations, somebody has to foot the bill. What are you doing to grow sustainably?



**42%** of the energy consumed worldwide today is used by industry.



**68%** of the energy used in industry is consumed by electric motors.

Save even more energy by using the CFW701 HVAC-R together with the W22 Premium motors, which have the best efficiency in the market. This solution can help you reduce power consumption by approximately 15%, thus contributing to sustainable development of the planet.



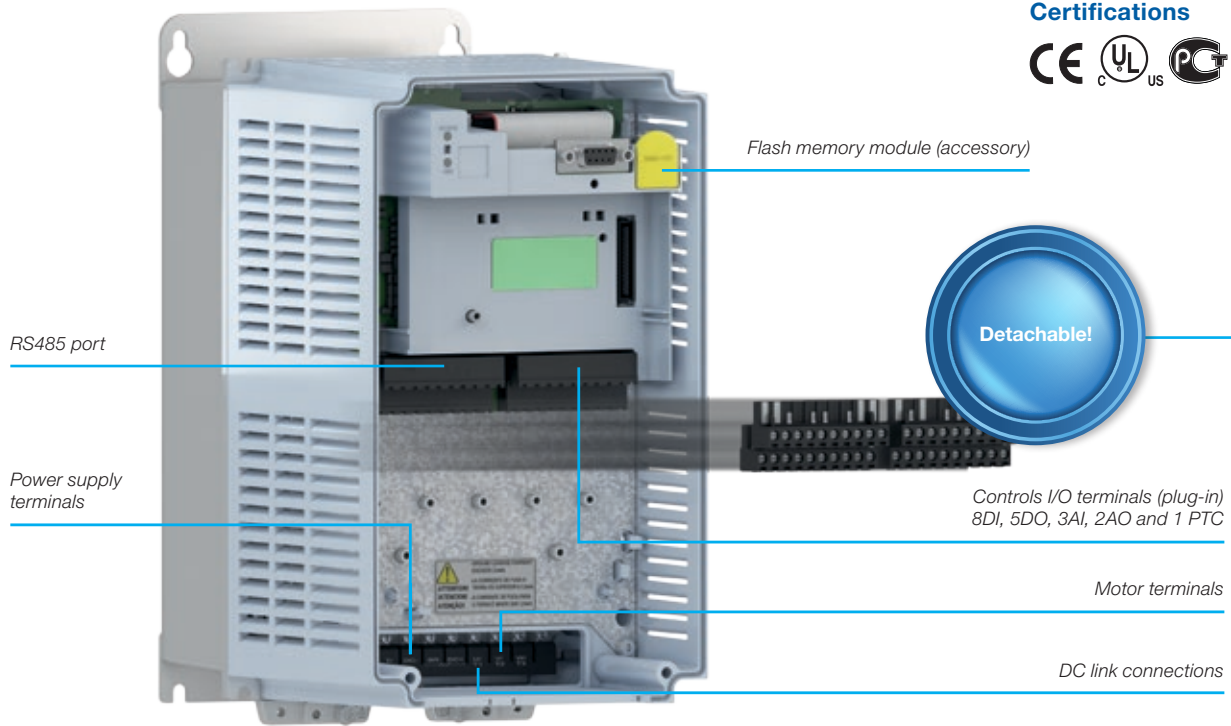
Use energy in a conscious way

## Go Green!

Calculate on our website the payback of the investment achieved by the use of frequency inverters in your application: [www.weg.net](http://www.weg.net)

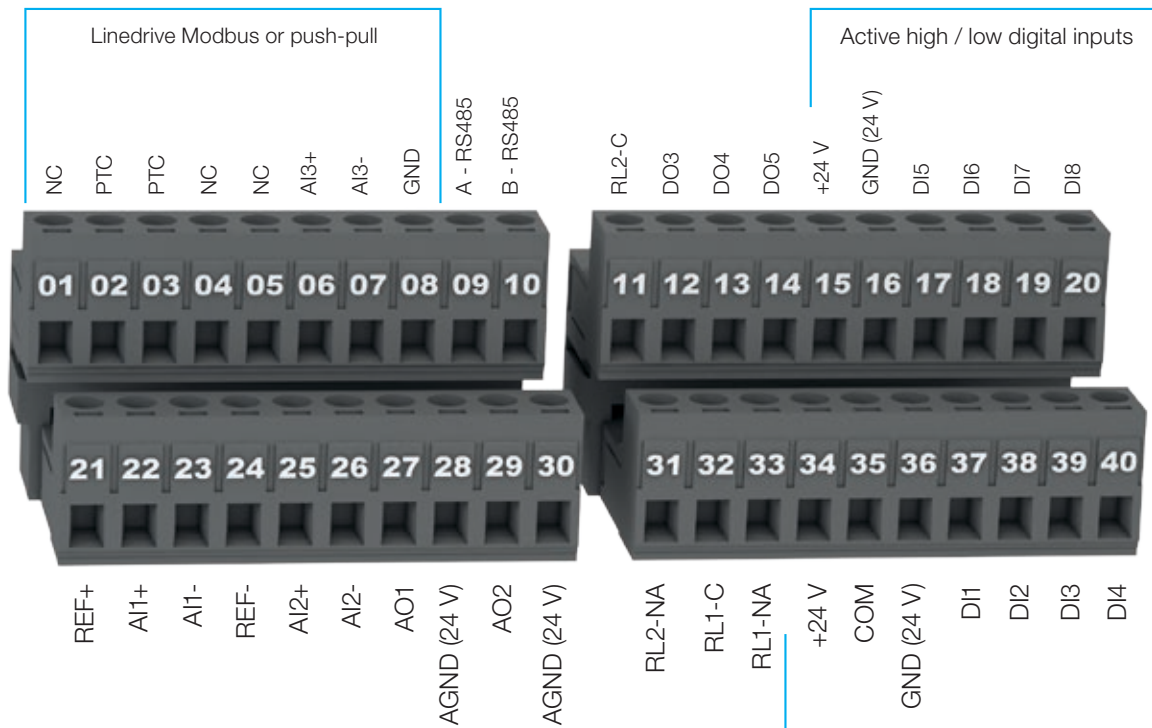
## Simplicity

### Certifications

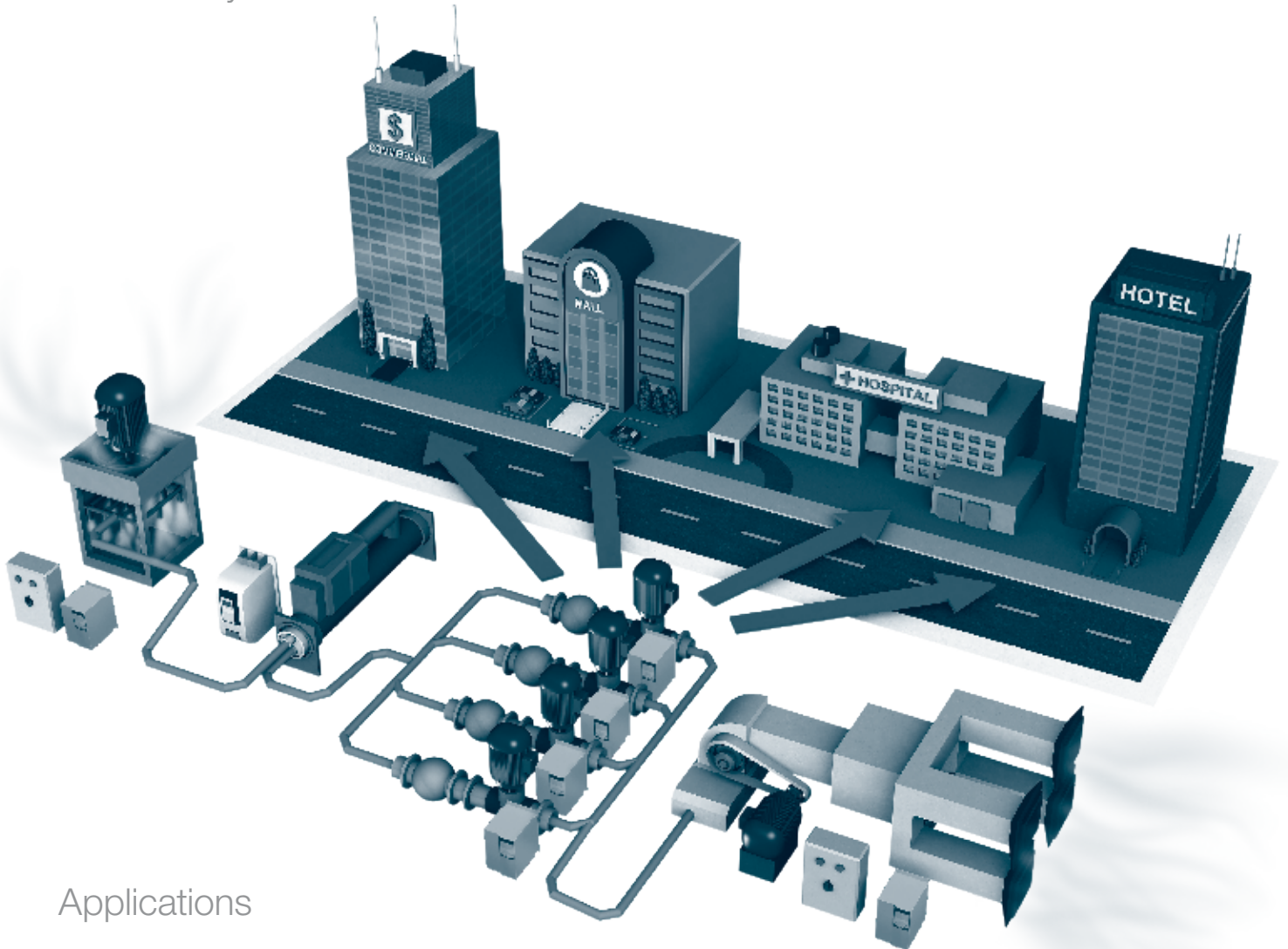


## Technical Features

### Features Included in the Standard Product

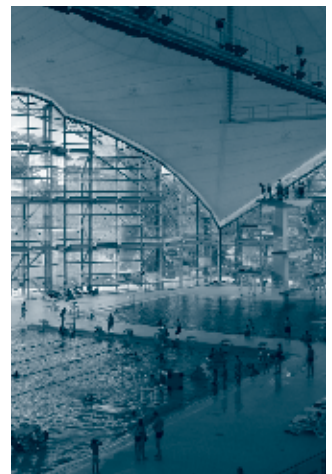
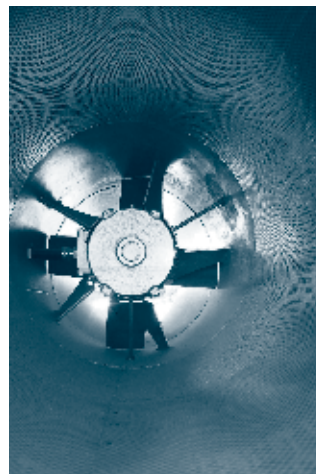


## HVAC-R Systems



## Applications

- Hospitals
- Airports
- Malls
- Stadiums
- Schools and universities
- Hotels and restaurants
- Commercial building
- Residential
- Pumps and fans
- Compressors
- Condensers
- Evaporators
- Cooling towers
- Boilers
- Chillers



## Product Coding

The CFW701 code identifies its construction characteristics, nominal current, voltage range and options. Using the product code, you may select the CFW701 required for your application simply and quickly.

Product and series	Drive identification				Braking option	Protection class	RFI emission level	Safety stop	External control voltage	Hardware revision	Software version
	Frame	Rated current	Supply phases	Rated voltage							
CFW701	A	03P6	T	4	NB	N1	C3 <sup>(1)(2)</sup>	Y1	W1	---	---
CFW701	Check table below NB = without dynamic braking DB = with dynamic braking 20 = IP20 21 = IP21 (not available for frame size E) N1 = NEMA1 Blank = with no RFI filter C3 = meets category 3 of IEC 61800-3 standard, with internal RFI filter Blank = without STO (Safe Torque Off) function Y1 = with STO (Safe Torque Off) function, meets EN 954-1/ISO 13849-1, category 3 Blank = without 24 V dc power supply W1 = with 24 V dc power supply Blank = standard Hx = special hardware Blank = standard Sx = special software										

Frame size	Rated output current	Supply phases	Supply voltage	Braking feature	Protection class	RFI emission level <sup>(1)(2)</sup>											
A	06P0 = 6.0 Amps	S = single-phase	2 = 200...240 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1	C3											
	07P0 = 7.0 Amps																
	10P0 = 10.0 Amps																
A	07P0 = 7.0 Amps	T = three-phase	2 = 200...240 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1												
	10P0 = 10.0 Amps																
	13P0 = 13.0 Amps																
	16P0 = 16.0 Amps																
B	24P0 = 24.0 Amps						T = three-phase	2 = 200...240 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1							
	28P0 = 28.0 Amps																
	33P5 = 33.5 Amps																
C	45P0 = 45.0 Amps										T = three-phase	2 = 200...240 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1			
	54P0 = 54.0 Amps																
	70P0 = 70.0 Amps																
D	86P0 = 86.0 Amps					T = three-phase									2 = 200...240 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1
	0105 = 105.0 Amps																
E	0142 = 142.0 Amps	T = three-phase	2 = 200...240 V ac	NB or DB	20 = IP20 21 = IP21 N1 = NEMA1												
	0180 = 180.0 Amps																
	0211 = 211.0 Amps																
A	03P6 = 3.6 Amps																
	05P0 = 5.0 Amps																
	07P0 = 7.0 Amps																
	10P0 = 10.0 Amps																
	13P5 = 13.5 Amps																
B	17P0 = 17.0 Amps						T = three-phase	4 = 380...480 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1							
	24P0 = 24.0 Amps																
	31P0 = 31.0 Amps																
C	38P0 = 38.0 Amps					T = three-phase					4 = 380...480 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1				
	45P0 = 45.0 Amps																
	58P5 = 58.0 Amps																
D	70P5 = 70.0 Amps	T = three-phase	4 = 380...480 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1												
	88P0 = 88.0 Amps																
E	0105 = 105.0 Amps													T = three-phase	4 = 380...480 V ac	NB or DB	20 = IP20 21 = IP21 N1 = NEMA1
	0142 = 142.0 Amps																
	0180 = 180.0 Amps																
	0211 = 211.0 Amps																



## Product Coding

Frame size	Rated output current	Supply phases	Supply voltage	Braking feature	Protection class	RFI emission level <sup>(1)(2)</sup>
B	02P9 = 2.9 Amps	T = three-phase	5 = 500...600 V ac	DB	20 = IP20 21 = IP21 N1 = NEMA1	C3
	04P2 = 4.2 Amps					
	07P0 = 7.0 Amps					
	10P0 = 10.0 Amps					
	12P0 = 12.0 Amps					
17P0 = 17.0 Amps						
D	22P0 = 22.0 Amps			NB or DB	21 = IP21 N1 = NEMA1	
	27P0 = 27.0 Amps					
	32P0 = 32.0 Amps					
	44P0 = 44.0 Amps					
E	53P0 = 53.0 Amps			20 = IP20 N1 = NEMA1		
	63P0 = 63.0 Amps					
	80P0 = 80.0 Amps					
	0107 = 107.0 Amps					
	0125 = 125.0 Amps					
	0150 = 150.0 Amps					

Notes: 1) RFI filter.

Categories:

- Category C1: inverters with voltages below 1,000 V, for use in the first environment.
- Category C2: inverters with voltages below 1,000 V, with plugs or mobile installation, when used in the first environment, must be installed and started-up by a qualified professional.
- Category C3: inverters with voltages below 1,000 V, developed for use in the second environment and not designed for use in the first environment.

Environments:

- First environment: environments that include household installations, such as buildings directly connected, without intermediate transformer, to a low-voltage power supply grid, which supplies buildings used for domestic purposes.
- Second environment: includes all the buildings other than those directly connected to a low-voltage power supply grid, which supplies buildings used for domestic purposes.

For the RFI filters of external installations, refer to the CFW701 user manual.

2) For C2 or C1 categories, according to Appendix B of User's Manual to get that information and installation instruction.



## Drive Ratings

The correct way to select a VFD is to match its output current with the motor rated current. However, the tables below present the approximate motor power for each VFD model. Use the motor power ratings below only as a guide. Motor rated currents may vary with speed and manufacturer.

Motor volts	Motor HP	Rated current (A)	Catalog number	Frame size	Enclosure	Braking transistor
230 V	Input power supply: single-phase 200-240 V					
	1.5	6	CFW701 A 06P0 S2 DB N1 C3	A	NEMA1	Yes
	2	7	CFW701 A 07P0 S2 DB N1 C3	A	NEMA1	Yes
	3	10	CFW701 A 10P0 S2 DB N1 C3	A	NEMA1	Yes
	Input power supply: three-phase 200-240 V					
	2	7	CFW701 A 07P0 T2 DB N1 C3	A	NEMA1	Yes
	3	10	CFW701 A 10P0 T2 DB N1 C3	A	NEMA1	Yes
	5	13	CFW701 A 13P0 T2 DB N1 C3	A	NEMA1	Yes
	5	16	CFW701 A 16P0 T2 DB N1 C3	A	NEMA1	Yes
	7.5	24	CFW701 B 24P0 T2 DB N1 C3	B	NEMA1	Yes
	10	28	CFW701 B 28P0 T2 DB N1 C3	B	NEMA1	Yes
	10	33.5	CFW701 B 33P5 T2 DB N1 C3	B	NEMA1	Yes
	15	45	CFW701 C 45P0 T2 DB N1 C3	C	NEMA1	Yes
	20	54	CFW701 C 54P0 T2 DB N1 C3	C	NEMA1	Yes
	25	70	CFW701 C 70P0 T2 DB N1 C3	C	NEMA1	Yes
	30	86	CFW701 D 86P0 T2 DB N1 C3	D	NEMA1	Yes
	40	105	CFW701 D 0105 T2 DB N1 C3	D	NEMA1	Yes
50/60	142	CFW701 E 0142 T2 NB N1 C3	E	NEMA1	No	
75	180	CFW701 E 0180 T2 NB N1 C3	E	NEMA1	No	
75	211	CFW701 E 0211 T2 NB N1 C3	E	NEMA1	No	
460 V	Input power supply: three-phase 380-480 V					
	2	3.6	CFW701 A 03P6 T4 DB N1 C3	A	NEMA1	Yes
	3	5	CFW701 A 05P0 T4 DB N1 C3	A	NEMA1	Yes
	5	7	CFW701 A 07P0 T4 DB N1 C3	A	NEMA1	Yes
	7.5	10	CFW701 A 10P0 T4 DB N1 C3	A	NEMA1	Yes
	10	13	CFW701 A 13P5 T4 DB N1 C3	A	NEMA1	Yes
	10/15	17	CFW701 B 17P0 T4 DB N1 C3	B	NEMA1	Yes
	15/20	24	CFW701 B 24P0 T4 DB N1 C3	B	NEMA1	Yes
	25	31	CFW701 B 31P0 T4 DB N1 C3	B	NEMA1	Yes
	30	38	CFW701 C 38P0 T4 DB N1 C3	C	NEMA1	Yes
	30	45	CFW701 C 45P0 T4 DB N1 C3	C	NEMA1	Yes
	40/50	58.5	CFW701 C 58P5 T4 DB N1 C3	C	NEMA1	Yes
	60	70.5	CFW701 D 70P5 T4 DB N1 C3	D	NEMA1	Yes
	75	88	CFW701 D 88P0 T4 DB N1 C3	D	NEMA1	Yes
	75	105	CFW701 E 0105 T4 NB N1 C3	E	NEMA1	No
	100	142	CFW701 E 0142 T4 NB N1 C3	E	NEMA1	No
	150	180	CFW701 E 0180 T4 NB N1 C3	E	NEMA1	No
150	211	CFW701 E 0211 T4 NB N1 C3	E	NEMA1	No	
575 V	Input power supply: three-phase 500-600 V					
	2	2.9	CFW701 B 02P9 T5 DB N1 C3	B	NEMA1	Yes
	3	4.2	CFW701 B 04P2 T5 DB N1 C3	B	NEMA1	Yes
	5	7	CFW701 B 07P0 T5 DB N1 C3	B	NEMA1	Yes
	7.5	10	CFW701 B 10P0 T5 DB N1 C3	B	NEMA1	Yes
	10	12	CFW701 B 12P0 T5 DB N1 C3	B	NEMA1	Yes
	15	17	CFW701 B 17P0 T5 DB N1 C3	B	NEMA1	Yes
	20	22	CFW701 D 22P0 T5 NB N1 C3	D	NEMA1	No
	25	27	CFW701 D 27P0 T5 NB N1 C3	D	NEMA1	No
	30	32	CFW701 D 32P0 T5 NB N1 C3	D	NEMA1	No
	40	44	CFW701 D 44P0 T5 NB N1 C3	D	NEMA1	No
	50	53	CFW701 E 53P0 T5 NB N1 C3	E	NEMA1	No
	60	63	CFW701 E 63P0 T5 NB N1 C3	E	NEMA1	No
	75	80	CFW701 E 80P0 T5 NB N1 C3	E	NEMA1	No
	100	107	CFW701 E 0107 T5 NB N1 C3	E	NEMA1	No
	125	125	CFW701 E 0125 T5 NB N1 C3	E	NEMA1	No
	150	150	CFW701 E 0150 T5 NB N1 C3	E	NEMA1	No

Notes: HP rating based on FLA values from WEG W22, 2 and 4 poles, 230 V ac, 460 V ac and 575 V ac, NEMA premium motors.  
 Use as a guide only. Motor FLA may vary with speed and manufacturer.  
 Always compare motor FLA to nominal AMPS of VFD and overload conditions.

## Accessories and Optional

The CFW701 VFD was developed to meet the hardware configurations required by a wide range of applications. The table below presents the available options:

Option	Type <sup>1)</sup>	Description	Optional item code <sup>2)</sup>	Accessory code	Available
Braking IGBT	Optional	Used in high-inertia applications for the fast stop of the motor by means of an external braking resistance. Resistance not included. For the calculation of the braking resistance, refer to the CFW701 user manual	DB	-	Factory installation only
Degree of protection	Accessory	For an IP20 product according to IEC standards. This version does not come with a KIP21X or KN1X kit inside the product box	20 <sup>3)</sup>	-	User installation <sup>3)</sup>
		For a IP21 product according to IEC standards. This version comes with a KIP21X kit inside the product box but not installed on the CFW701	21 <sup>4)</sup>	KIP21A-01 (frame size A) KIP21B-01 (frame size B) KIP21C-01 (frame size C) KIP21D-01 (frame size D)	User installation <sup>4)</sup>
		For a NEMA 1 product according to NEMA standards. This product comes with a KN1X kit inside the product box but not installed on the CFW701	N1 <sup>5)</sup>	KN1A-02 (frame size A) KN1B-02 (frame size B) KN1C-02 (frame size C) KN1E-01 (frame size D - 105 A and 142 A) KN1E-02 (frame size D - 180 A and 211 A)	User installation <sup>5)</sup>
Safety stop	Optional	After the activation of the safety stop function, the PWM pulses in the output of the drive are blocked. It is according to ISO 13849-1 and EN 954-1 / category 3	Y1	-	Factory installation only
24 V dc external power supply for feeding control circuit	Optional	It is a board on the power circuit containing a DC converter with a 24 V dc input and outputs suitable to supply voltage to the control circuit of CFW701	W1	-	Factory installation only
Flash memory module	Accessory	Used to download the programming of a CFW701 to others (copy function)	-	MMF-02	User installation
Mounting frame for remote keypad	Accessory	Used to transfer the operation to the panel door or machine console. Maximum distance of 10 m. Degree of protection IP56	-	RHMIF-03	User installation
Cables for remote keypad	Accessory	Used to connect the CFW701 to the remote keypad (CAB-RS-XM)	-	CAB-RS-XM, where cables with lengths (X) of 1, 2, 3, 5, 7.5 and 10 meters	User installation

Notes: 1) Optional = hardware resources added to the CFW701 in the manufacturing process. Accessory = hardware resource requested as a separated item.  
 2) Request the product according to the Product Coding table.  
 3) If you have N1 or 21 version, the VFD can be used as IP20 without installing the KIP21X and/or KN1X kit.  
 4) Frame size E it is IP21 as standard without KIP21X kit.  
 5) Frame size D it is NEMA1 as standard without KN1X kit.

## Dimensions and Weights

Frame size IP20	Height in. (mm)	Width in. (mm)	Depth in. (mm)	Weight lbs. (kg)
A	9.73 (247)	5.71 (145)	8.94 (227)	13.9 (6.3)
B	11.53 (293)	7.46 (190)	8.94 (227)	22.9 (10.4)
C	14.88 (378)	8.67 (220)	11.52 (293)	45.2 (20.5)
D	19.84 (504)	11.81 (300)	12.00 (305)	71.8 (32.6)
E	24.4 (620)	13.2 (335)	14.1 (358)	143.3 (65.0)



Frame size NEMA1	Height in. (mm)	Width in. (mm)	Depth in. (mm)	Weight lbs. (kg)
A	12.02 (305)	5.71 (145)	8.94 (227)	15.7 (7.1)
B	13.82 (351)	7.46 (190)	8.94 (227)	24.9 (11.3)
C	17.64 (448.1)	8.67 (220)	11.52 (293)	47.2 (21.4)
D	19.84 (504)	11.81 (300)	12.00 (305)	71.8 (32.6)
E	<sup>1)</sup>	13.2 (335)	14.1 (358)	<sup>2)</sup>

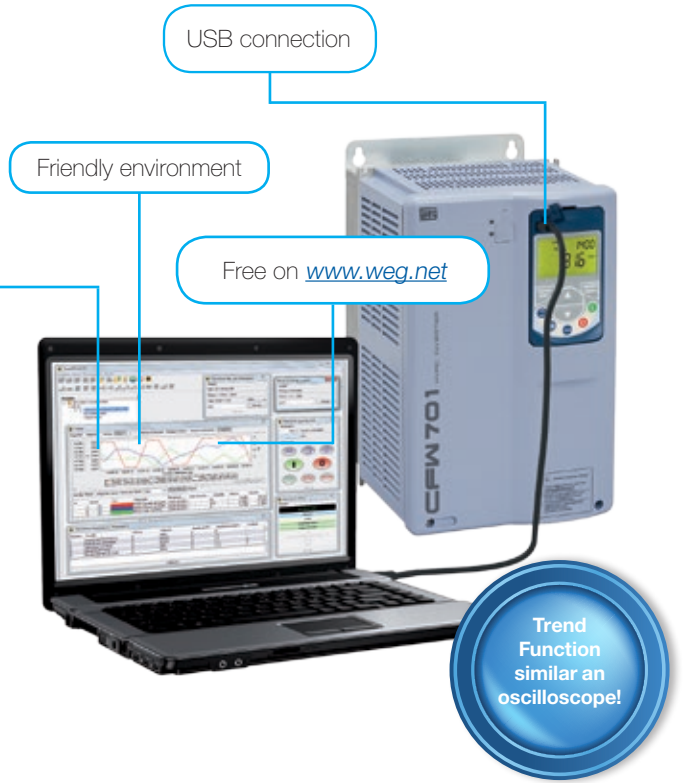


Notes: 1) 28.94 (735) = 0142 T2, 0105 T4, 0142 T4 and T5 models 32.63 (828.9) = 0180 T2/T4, 0211 T2/T4  
 2) 147.97 (67.12) = 0142 T2, 0105 T4, 0142 T4 and T5 models 152.78 (69.3) = 0180 T2/T4, 0211 T2/T4

## Free Software

### SuperDrive G2

Software application for programming, control and monitoring of WEG VFD.

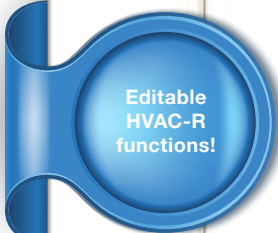
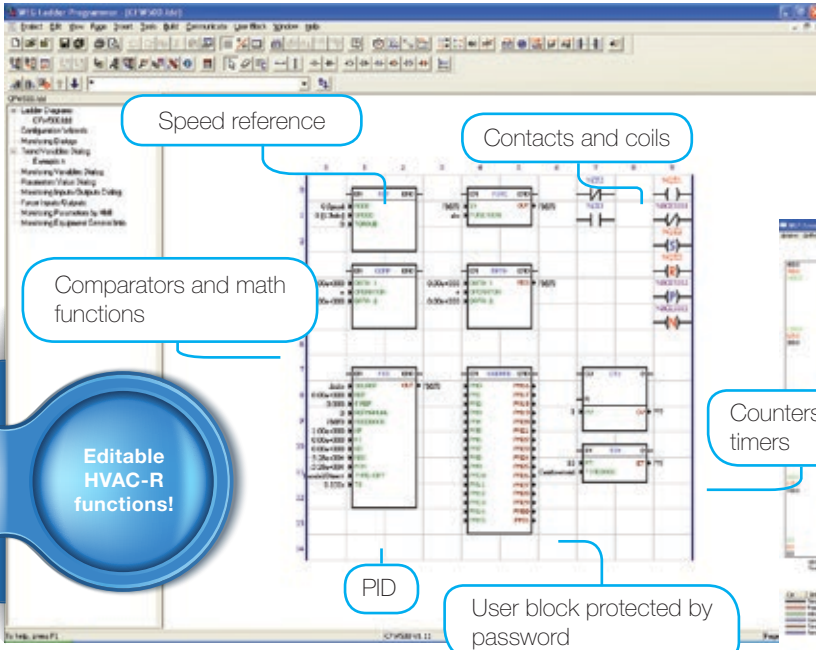


### Trend Function

- On-line graphic monitoring of parameters/variables
- Possibility to export an image with the respective graph based upon the selected period

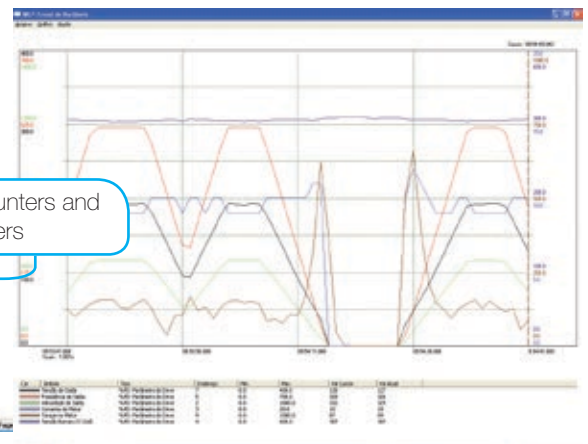
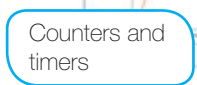
### SoftPLC - Built-in on the Standard Product

Functionalities of a PLC available as standard, allowing the creation of applications. The WLP software and the SoftPLC functionality are a smart and simple way to make your CFW701, motor and application work together.

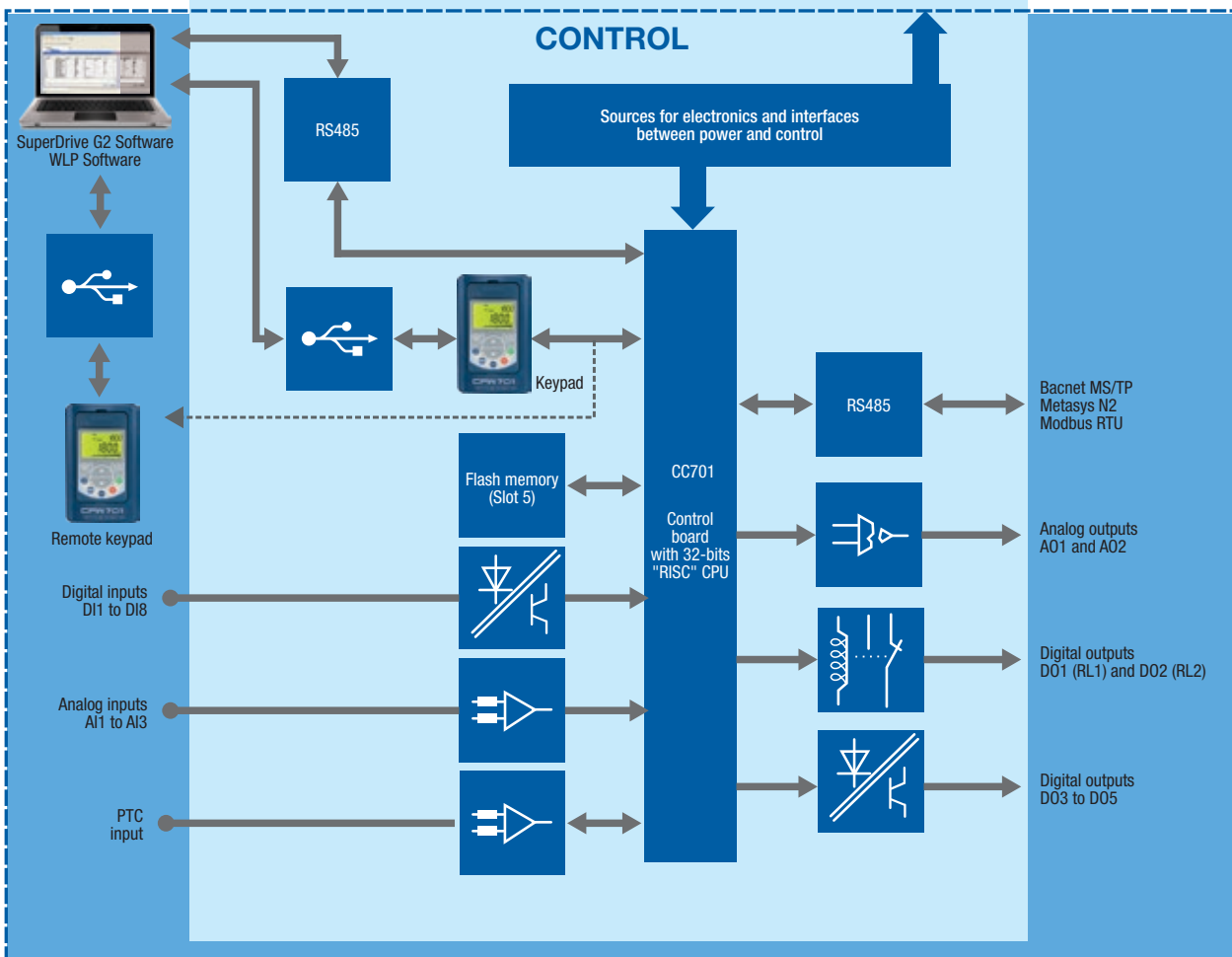
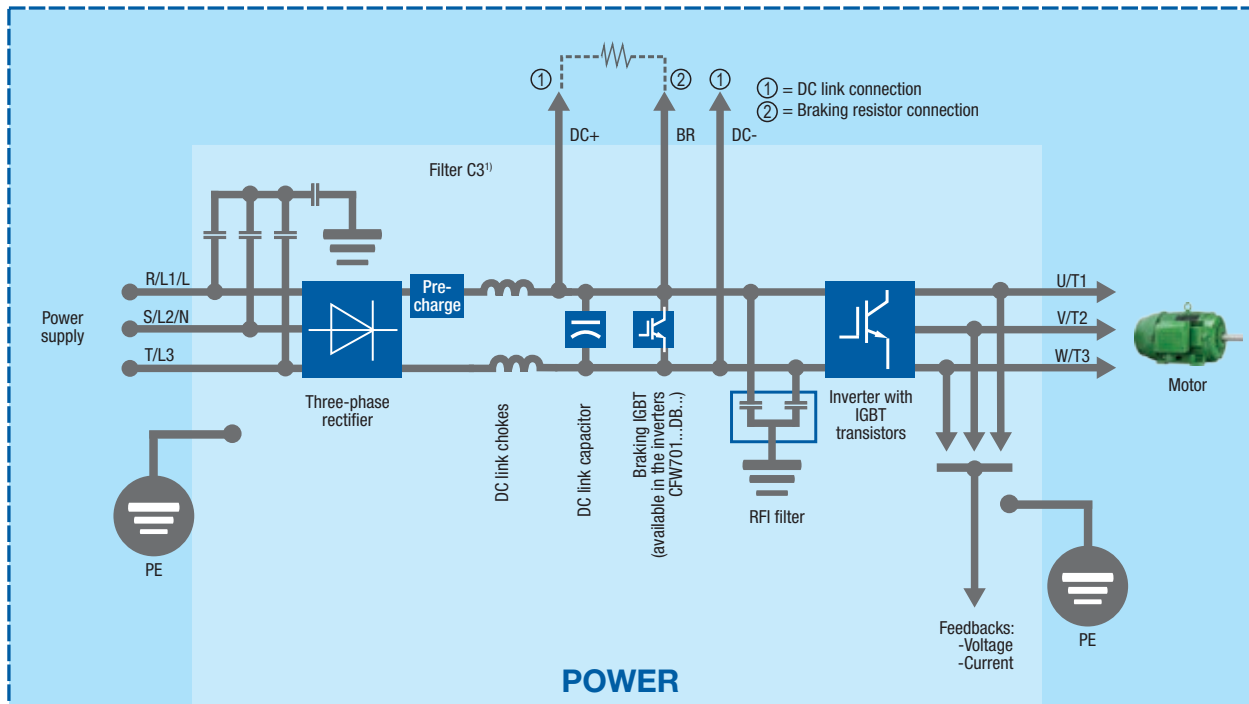


### Trace Function

- On-line graphic monitoring of parameters/variables
- Configurable up to six channels



# Block Diagram



Note: 1) The capacitor against the ground filter C3 (in the models size A, it is possible to meet category C2) must be disconnected for IT networks and grounded delta. Refer to the input connections on CFW701 user manual.

## Technical Data

Power supply	Voltage and power range	1-phase, 200-240 V ac (+10% - 15%) 1.5 to 3 HP (1.1 to 2.2 kW)		
		3-phase, 200-240 V ac (+10% - 15%) 1.5 to 75 HP (1.1 to 55 kW)		
		3-phase, 380-480 V ac (+10% - 15%) 2 to 150 HP (1.5 to 110 kW)		
		3-phase, 500-600 V ac (+10% - 15%) 2 to 150 HP (1.5 to 110 kW)		
	Frequency	50...60 Hz (+/-2%_48 to 63 Hz)		
Control	Displacement factor	>0.98		
	Efficiency	>97%		
	Power factor	0.94 for three-phase input at nominal conditional 0.70 for single-phase input at nominal conditional		
	Frequency range	0 to 3.4 x motor rated frequency (0403). The rated frequency is programmable up to 300 Hz (V/Hz) and 120 Hz (vector mode) Switching Frequency data must be observed for speed limits		
	Switching frequency	Standard: 5 kHz (A, B, C, D frames)		
		2.5 kHz for all models frame E 380-480 V		
		2.5 kHz for frame E models 142/180 Amps (ND) 200-240 V		
		2.5 kHz for frame E model 211 Amps (ND/HD) 200-240 V		
		Available options for 2.5/5/10 kHz (check for derating)		
	Overload capacity	Normal duty (ND)	110% for 1min every 10min	
	Acceleration time	0 to 999s		
Deceleration time	0 to 999s			
Normal Duty (ND)	110% for 1min every 10min			
Heavy Duty (HD)	150% for 1min every 10min			
Environment	Temperature	-10 to 50 °C (14 to 122 °F) for most of models. For operating temperature of each model the table "dimensions, weight and temperature" shall be checked		
		-10...60 °C for frames A, B, C and D (up to 45 °C without derating for models 13 A and 24 A / 200...240 V, 7 and 10 A / 380...480 V and up to 50 °C without derating for the other models) and -10...55 °C for frame E (up to 45 °C without derating). If derating has to be considered have 2% current reduction for each °C above the specific operating temperature		
	Humidity	5 to 90% with no condensation		
Altitude	0 to 1,000 meters with no derating			
	Up to 4,000 meters with current reduction of 1% for each 100 meters above 1,000 meters			
Braking methods	Dynamic braking	Available as standard for frame sizes A, B, C and D for 460 V and D for 660 V. For frame size E "DB" models has to be used. An extra resistor must be fitted in for dynamic braking capability		
	Optimal braking	There is no need for braking resistor		
	DC braking	DC current applied to motor		
Performance	V/F	Speed control	Regulation: 1% of rated speed	
			Speed variation range 1:20	
	Voltage vector WW		Regulation: 1% of rated speed	
			Speed variation range 1:30	
I/Os	Inputs	Digital	8 x isolated bidirectional 24 V	
		Analog	2 x +/-10 V, 11 bits + signal (differential) or 0/4...20 mA, 11 bits (differential) Impedance: 400 kW for voltage signal / 500 W for current signal	
	Output	Relay	2 x relay NO/NC contact (240 V ac/1 A) 4 x open drain (24 V/200 mA)	
		Analog	1 x 0/4 - 20 mA 11 bits	
			2 x 0...10 V or 0/4...20 mA, 11 bits (not isolates from inverter ground)	
	24 V power supply capacity	500 mA (available for the user, including I/Os)		
Communication	Modbus-RTU BACnet MS/TP Metasys N2	RS485 built-in (available in controlterminals)		
		RS485 built-in / SuperDrive and WLP software		
	USB built in	SuperDrive and WLP software		

## Technical Data - Standards

Safety standards	UL 508C	Power conversion equipment
	UL 840	Insulation coordination including clearances and creepage distances for electrical equipment
	EN 61800-51	Safety requirements electrical thermal and energy
	EN 50178	Electronic equipment for use in power installations
	EN 60204-1	Safety of machinery. Electrical equipment of machines. Part: General requirement Note: For a machine to comply with this standard, the manufacturer of the machine is responsible for installing an emergency stop device and a device for disconnection from the power line
	EN 60146 (IEC)	Semiconductor converters
	EN 61800-2	Adjustable speed electrical power drive systems - Part 2: General requirements - Ratings specifications for low voltage adjustable frequency AC power drive systems
Electromagnetic compatibility standards	EN 61800-3	Adjustable speed electrical power drive systems - Part 3: EMC product standard including specific test methods
	EN 55011	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment CISPR11 - Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
	EN 61000-4-2	Electromagnetic Compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test
	EN 61000-4-3	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 3: Radiated, radio-frequency, electromagnetic field immunity test
	EN 61000-4-4	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test
	EN 61000-4-5	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 5: Surge immunity test
	EN 61000-4-6	Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 6: Immunity to conducted disturbances, induced by radio-frequency fields
Mechanical construction standards	EN 60529	Degrees of protection provided by enclosures (IP code)
	UL 50	Enclosures for electrical equipment



# WEG Worldwide Operations

## ARGENTINA

WEG EQUIPAMIENTOS  
ELECTRICOS  
San Francisco - Cordoba  
Phone: +54 3564 421 484  
[info-ar@weg.net](mailto:info-ar@weg.net)  
[www.weg.net/ar](http://www.weg.net/ar)

WEG PINTURAS - Pulverlux  
Buenos Aires  
Phone: +54 11 4299 8000  
[tintas@weg.net](mailto:tintas@weg.net)

## AUSTRALIA

WEG AUSTRALIA  
Victoria  
Phone: +61 3 9765 4600  
[info-au@weg.net](mailto:info-au@weg.net)  
[www.weg.net/au](http://www.weg.net/au)

## AUSTRIA

WATT DRIVE - WEG Group  
Markt Piesting  
Phone: +43 2633 404 0  
[watt@wattdrive.com](mailto:watt@wattdrive.com)  
[www.wattdrive.com](http://www.wattdrive.com)

## BELGIUM

WEG BENELUX  
Nivelles - Belgium  
Phone: +32 67 88 84 20  
[info-be@weg.net](mailto:info-be@weg.net)  
[www.weg.net/be](http://www.weg.net/be)

## BRAZIL

WEG EQUIPAMENTOS ELÉTRICOS  
Jaraguá do Sul - Santa Catarina  
Phone: +55 47 3276-4002  
[info-br@weg.net](mailto:info-br@weg.net)  
[www.weg.net/br](http://www.weg.net/br)

## CHILE

WEG CHILE  
Santiago  
Phone: +56 2 784 8900  
[info-cl@weg.net](mailto:info-cl@weg.net)  
[www.weg.net/cl](http://www.weg.net/cl)

## CHINA

WEG NANTONG  
Nantong - Jiangsu  
Phone: +86 0513 8598 9333  
[info-cn@weg.net](mailto:info-cn@weg.net)  
[www.weg.net/cn](http://www.weg.net/cn)

## COLOMBIA

WEG COLOMBIA  
Bogotá  
Phone: +57 1 416 0166  
[info-co@weg.net](mailto:info-co@weg.net)  
[www.weg.net/co](http://www.weg.net/co)

## ECUADOR

WEG ECUADOR  
Quito  
Phone: 5144 339/342/317  
[wegecuador@weg.net](mailto:wegecuador@weg.net)  
[www.weg.net/ec](http://www.weg.net/ec)

## FRANCE

WEG FRANCE  
Saint Quentin Fallavier - Lyon  
Phone: +33 4 74 99 11 35  
[info-fr@weg.net](mailto:info-fr@weg.net)  
[www.weg.net/fr](http://www.weg.net/fr)

## GERMANY

WEG GERMANY  
Kerpen  
Phone: +49 2237 9291 0  
[info-de@weg.net](mailto:info-de@weg.net)  
[www.weg.net/de](http://www.weg.net/de)

## WEG BALINGEN

Balingen  
Phone: +49 7433 9041 0  
[info@weg-antriebe.de](mailto:info@weg-antriebe.de)  
[www.weg-antriebe.de](http://www.weg-antriebe.de)

## GHANA

ZEST ELECTRIC GHANA -  
WEG Group  
Accra  
Phone: +233 30 27 664 90  
[info@zestghana.com.gh](mailto:info@zestghana.com.gh)  
[www.zestghana.com.gh](http://www.zestghana.com.gh)

## INDIA

WEG ELECTRIC INDIA  
Bangalore - Karnataka  
Phone: +91 80 4128 2007  
[info-in@weg.net](mailto:info-in@weg.net)  
[www.weg.net/in](http://www.weg.net/in)

## WEG INDUSTRIES INDIA

Hosur - Tamil Nadu  
Phone: +91 4344 301 577  
[info-in@weg.net](mailto:info-in@weg.net)  
[www.weg.net/in](http://www.weg.net/in)

## ITALY

WEG ITALIA  
Cinisello Balsamo - Milano  
Phone: +39 02 6129 3535  
[info-it@weg.net](mailto:info-it@weg.net)  
[www.weg.net/it](http://www.weg.net/it)

## JAPAN

WEG ELECTRIC MOTORS  
JAPAN  
Yokohama City - Kanagawa  
Phone: +81 45 550 3030  
[info-jp@weg.net](mailto:info-jp@weg.net)  
[www.weg.net/jp](http://www.weg.net/jp)

## MALAYSIA

WATT EURO-DRIVE - WEG Group  
Shah Alam - Selangor  
Phone: 603 78591626  
[info@wattdrive.com.my](mailto:info@wattdrive.com.my)  
[www.wattdrive.com](http://www.wattdrive.com)

## MEXICO

WEG MEXICO  
Huehuetoca  
Phone: +52 55 5321 4231  
[info-mx@weg.net](mailto:info-mx@weg.net)  
[www.weg.net/mx](http://www.weg.net/mx)

## VOLTRAN - WEG Group

Tizayuca - Hidalgo  
Phone: +52 77 5350 9354  
[www.voltran.com.mx](http://www.voltran.com.mx)

## NETHERLANDS

WEG NETHERLANDS -  
Oldenzaal - Overijssel  
Phone: +31 541 571 080  
[info-nl@weg.net](mailto:info-nl@weg.net)  
[www.weg.net/nl](http://www.weg.net/nl)

## PERU

WEG PERU  
Lima  
Phone: +51 1 209 7600  
[info-pe@weg.net](mailto:info-pe@weg.net)  
[www.weg.net/pe](http://www.weg.net/pe)

## PORTUGAL

WEG EURO  
Maia - Porto  
Phone: +351 22 9477705  
[info-pt@weg.net](mailto:info-pt@weg.net)  
[www.weg.net/pt](http://www.weg.net/pt)

## RUSSIA and CIS

WEG ELECTRIC CIS  
Saint Petersburg  
Phone: +7 812 363 2172  
[info-ru@weg.net](mailto:info-ru@weg.net)  
[www.weg.net/ru](http://www.weg.net/ru)

## SOUTH AFRICA

ZEST ELECTRIC MOTORS  
WEG Group  
Johannesburg  
Phone: +27 11 723 6000  
[info@zest.co.za](mailto:info@zest.co.za)  
[www.zest.co.za](http://www.zest.co.za)

## SPAIN

WEG IBERIA  
Madrid  
Phone: +34 91 655 30 08  
[info-es@weg.net](mailto:info-es@weg.net)  
[www.weg.net/es](http://www.weg.net/es)

## SINGAPORE

WATT EURO-DRIVE - WEG Group  
Singapore  
Phone: +65 6 862 2220  
[watteuro@watteuro.com.sg](mailto:watteuro@watteuro.com.sg)  
[www.wattdrive.com](http://www.wattdrive.com)

WEG SINGAPORE  
Singapore  
Phone: +65 68589081  
[info-sg@weg.net](mailto:info-sg@weg.net)  
[www.weg.net/sg](http://www.weg.net/sg)

## SCANDINAVIA

WEG SCANDINAVIA  
Kungsbacka - Sweden  
Phone: +46 300 73 400  
[info-se@weg.net](mailto:info-se@weg.net)  
[www.weg.net/se](http://www.weg.net/se)

## UK

WEG ELECTRIC MOTORS U.K.  
Redditch - Worcestershire  
Phone: +44 1527 513 800  
[info-uk@weg.net](mailto:info-uk@weg.net)  
[www.weg.net/uk](http://www.weg.net/uk)

## UNITED ARAB EMIRATES

WEG MIDDLE EAST  
Dubai  
Phone: +971 4 813 0800  
[info-ae@weg.net](mailto:info-ae@weg.net)  
[www.weg.net/ae](http://www.weg.net/ae)

## USA

WEG ELECTRIC  
Duluth - Georgia  
Phone: +1 678 249 2000  
[info-us@weg.net](mailto:info-us@weg.net)  
[www.weg.net/us](http://www.weg.net/us)

ELECTRIC MACHINERY -  
WEG Group  
Minneapolis - Minnesota  
Phone: +1 612 378 8000  
[www.electricmachinery.com](http://www.electricmachinery.com)

## VENEZUELA

WEG INDUSTRIAS VENEZUELA  
Valencia - Carabobo  
Phone: +58 241 821 0582  
[info-ve@weg.net](mailto:info-ve@weg.net)  
[www.weg.net/ve](http://www.weg.net/ve)

For those countries where there is not a WEG own operation, find our local distributor at [www.weg.net](http://www.weg.net).



WEG Electric Corp.  
6655 Sugarloaf Parkway  
Duluth, GA 30097  
Phone: 1-800-ASK-4WEG  
[www.weg.net](http://www.weg.net)

