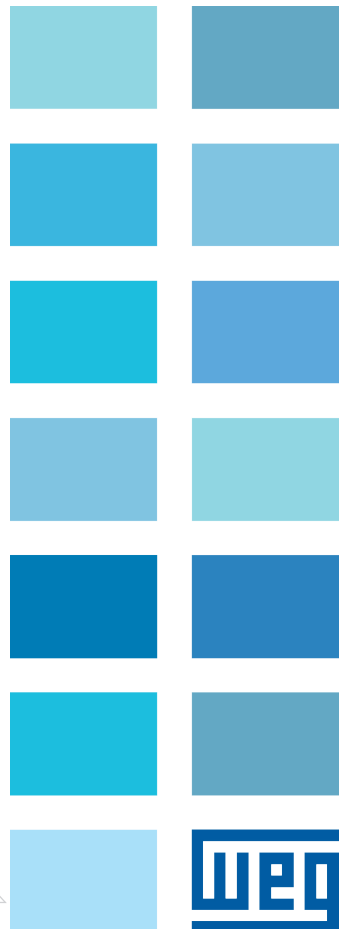
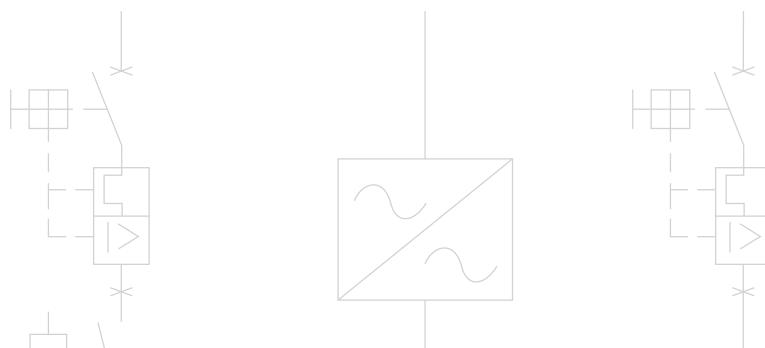


# CFW300

## Variable Frequency Drive



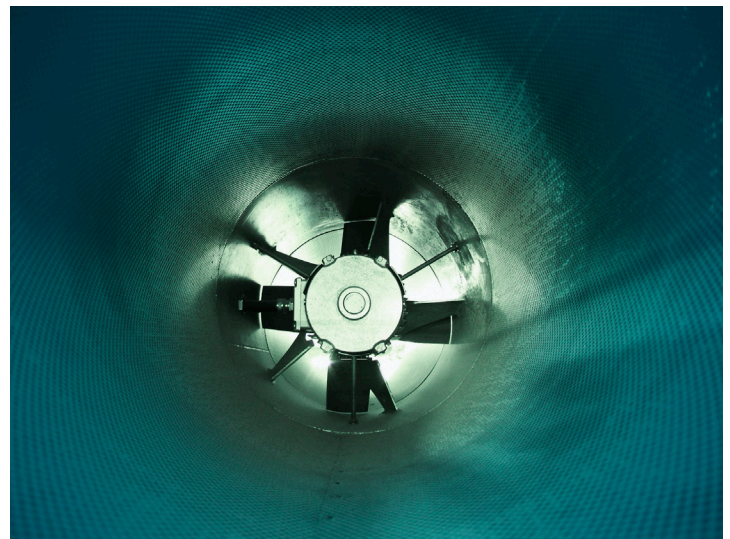
## CFW300

The CFW300 variable frequency drive is a high-performance VFD for three-phase induction motors. It is ideal for applications on machines or equipment that require precise control with easy setup and operation.

The CFW300 features a compact size with contactor-style electrical connections (top in / bottom out). The VFD's performance can be scaled to match the application by selecting WEG vector control (VVW) or scalar control (V/F). The CFW300 includes built-in operator interface (HMI) and SoftPLC with free WPS programming software for custom tailored control schemes. A variety of plug-in option modules for additional I/O and communications protocols may be added to provide extended capabilities, making the CFW300 a flexible and cost effective solution for your variable speed requirements.

### Applications

- Centrifugal pumps
- Fans / Blowers
- Blenders / Mixers
- Centrifuges
- Compressors
- Conveyors
- Roller Tables
- Granulators
- Commercial Dryers
- Rotary Filters



### Flexibility

**Flash Memory Module (CFW300-MMF)**  
Download original parameter values to multiple other CFW300 VFDs without the need to apply power to the drives.

**Two Expansion Slots for Option Modules**

- Slot for Communication Modules
- Slot for Input / Output Modules

**RFI Filter (CFW300-KFA or CFW300-KFB)**  
Category C2 or C3 Reduces electromagnetic interference

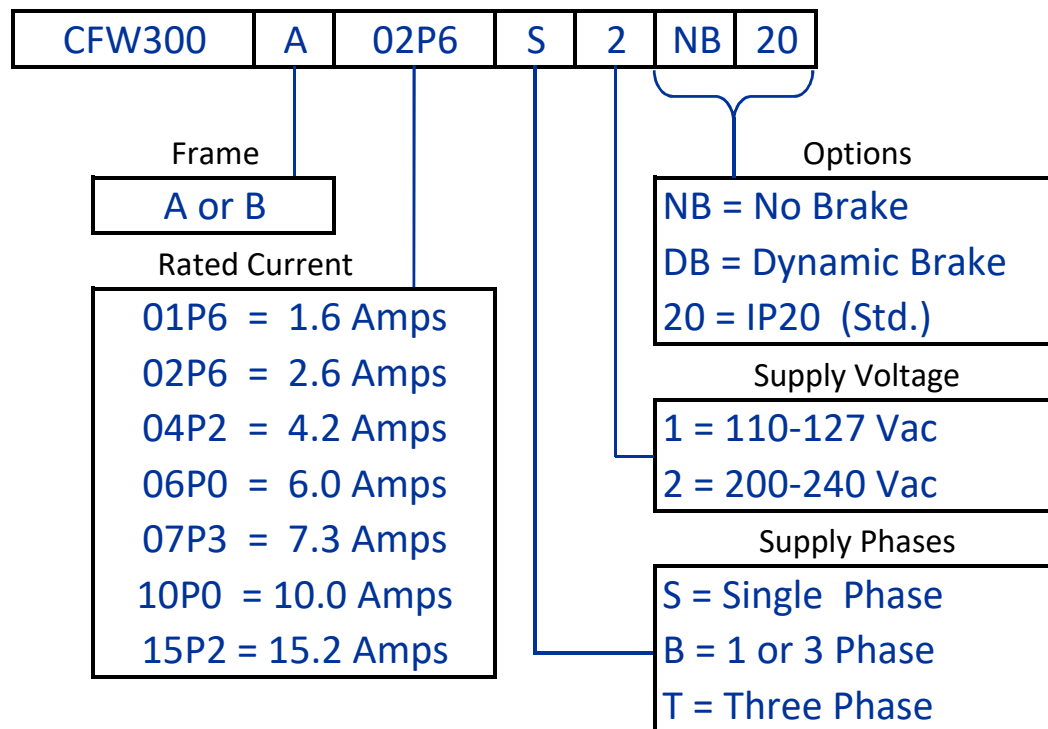
**Easy Cooling Fan Removal and Replacement**

**Remote Keypad (HMI) (CFW300-KHMIR)**

**Conformal Coated Circuit Boards**  
Class 3C2 coating for all circuit boards as standard provides greater protection against airborne contaminants. Meets IEC 60721-3-3 requirements for corrosive environments



## CFW300 Catalog Number Sequence



### IP20 Enclosure

Motor Voltage	Motor HP <sup>1</sup>	Drive Output Amps <sup>2</sup>	Catalog Number	Braking Transistor	Frame Size	Dimensions (in.) HxWxD	Approx. Weight Lbs. (kg)	List Price	Multiplier Symbol
230 Vac / 3 Phase	<b>Input Power Supply: Single-Phase 110-127 Vac</b>								
	1/4 or 1/3	1.6	<a href="#">CFW300A01P6S1NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$361</b>	V1
	3/4	2.6	<a href="#">CFW300A02P6S1NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$394</b>	V1
	1	4.2	<a href="#">CFW300A04P2S1NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$420</b>	V1
	2	6.0	<a href="#">CFW300A06P0S1NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$507</b>	V1
	<b>Input Power Supply: Single-Phase 200-240 Vac</b>								
	1/4 or 1/3	1.6	<a href="#">CFW300A01P6S2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$323</b>	V1
	3/4	2.6	<a href="#">CFW300A02P6S2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$348</b>	V1
	1	4.2	<a href="#">CFW300A04P2S2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$371</b>	V1
	2	6.0	<a href="#">CFW300A06P0S2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$461</b>	V1
	2	7.3	<a href="#">CFW300A07P3S2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$543</b>	V1
	3	10.0	<a href="#">CFW300B10P0B2DB20</a> <sup>3</sup>	Yes	B	8.1 x 2.8 x 6.3	3.0 (1.4)	<b>\$648</b>	V1
	<b>Input Power Supply: Three-Phase 200-240 Vac</b>								
	1/4 or 1/3	1.6	<a href="#">CFW300A01P6T2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$343</b>	V1
	3/4	2.6	<a href="#">CFW300A02P6T2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$376</b>	V1
	1	4.2	<a href="#">CFW300A04P2T2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$399</b>	V1
	2	6.0	<a href="#">CFW300A06P0T2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$484</b>	V1
	2	7.3	<a href="#">CFW300A07P3T2NB20</a>	No	A	6.3 x 2.8 x 5.9	2.0 (0.9)	<b>\$571</b>	V1
	3	10.0	<a href="#">CFW300B10P0B2DB20</a> <sup>3</sup>	Yes	B	8.1 x 2.8 x 6.3	3.0 (1.4)	<b>\$648</b>	V1
	5	15.2	<a href="#">CFW300B15P2T2DB20</a>	Yes	B	8.1 x 2.8 x 6.3	3.0 (1.4)	<b>\$792</b>	V1

**Notes:**

- 1) "HP" rating based on "average FLA values". Use as a guide only.
  - 2) Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of drive.
  - 3) CFW300B10P0B2DB20 is capable of Single-Phase input without derating.
- For other technical data please refer to WEG product manual.

### Options and Accessories

Type	CATALOG NUMBER	Description	Approx. Wt. (lbs.)	List Price	Multiplier Symbol
I/O <sup>1</sup>	<a href="#">CFW300-IOAR</a>	I/O Expansion Module; 1 AI, 1 AO, 3 DOR, +10vdc	0.2	<b>\$141</b>	V1
I/O <sup>1</sup>	<a href="#">CFW300-IODR</a>	I/O Expansion Module; 4 DI, 3 DOR	0.2	<b>\$108</b>	V1
I/O <sup>1</sup>	<a href="#">CFW300-IOAENC</a>	I/O and Encoder Module; 1 AI, 2 AO, +10vdc, 1 Incremental Encoder Input, +5vdc	0.2	<b>\$143</b>	V1
I/O <sup>1</sup>	<a href="#">CFW300-IOADR</a>	I/O Expansion Module; 1 NTC Sensor Input, 3 DOR	0.2	<b>\$207</b>	V1
RS485 Card	<a href="#">CFW300-CRS485</a>	RS-485 Module; 1 RS-485 Input (Modbus-RTU), 1 Mini USB for Remote Keypad	0.2	<b>\$82</b>	V1
USB Card	<a href="#">CFW300-CUSB</a>	USB Communication Module w/ 2-meter Cable; 1 Mini USB	0.2	<b>\$87</b>	V1
RS232 Card	<a href="#">CFW300-CRS232</a>	RS-232 Communication Module (Modbus-RTU); 1 RS232	0.2	<b>\$82</b>	V1
CANopen Card	<a href="#">CFW300-CCAN</a>	CANopen/DeviceNet Comm. Module; 1 CAN/DeviceNet, External 24vdc Power	0.2	<b>\$100</b>	V1
Profibus DP Card	<a href="#">CFW300-CPDP</a>	Profibus DP Communication Module; 1 Profibus DP 9-Pin Connector	0.2	<b>\$294</b>	V1
Remote Keypad	<a href="#">CFW300-KHMIR</a>	Remote Keypad; Includes CFW300-CRS485 and 3-meter Cable	0.4	<b>\$256</b>	V1
Flash Memory Module	<a href="#">CFW300-MMF</a>	Flash Memory Module for saving program and parameters to/from drive.	0.2	<b>\$210</b>	V1
RFI Filter Kit – Fr. A	<a href="#">CFW300-KFA</a>	CFW300 RFI Filter Kit – Frame Size A - SINGLE PHASE INPUT MODELS ONLY	0.3	<b>\$90</b>	V1
RFI Filter Kit – Fr. B	<a href="#">CFW300-KFB</a>	CFW300 RFI Filter Kit – Frame Size B - SINGLE PHASE INPUT MODELS ONLY	0.3	<b>\$105</b>	V1

**Notes:**

- 1) Option card I/O is in addition the standard CFW300 I/O which includes: 4 DI, 1 AI, 1 DOR.

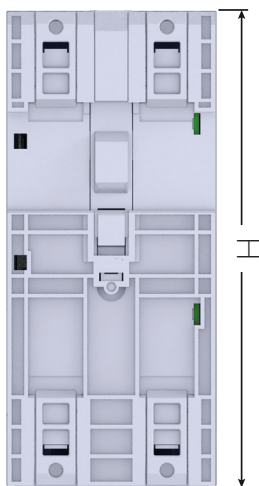
## CFW300

### Communications and I/O

CFW 300 Option Modules	Option Card and I/O Table												
	DI	AI	AO	DOR	NTC	USB	CAN	RS232	RS485	Profibus	Encoder	10vdc	24vdc
Standard I/O (incl.)	4	1		1									
CFW300-IOAR		1	1	3								1	
CFW300-IOADR	4			3									
CFW300-IOAENC		2	2								1	1	
CFW300-IOADR				3	1								
CFW300-CRS485						1			1				
CFW300-CUSB						1							
CFW300-CRS232								1					
CFW300-CCAN							1						Ext.
CFW300-CPDP										1			

### Dimensions

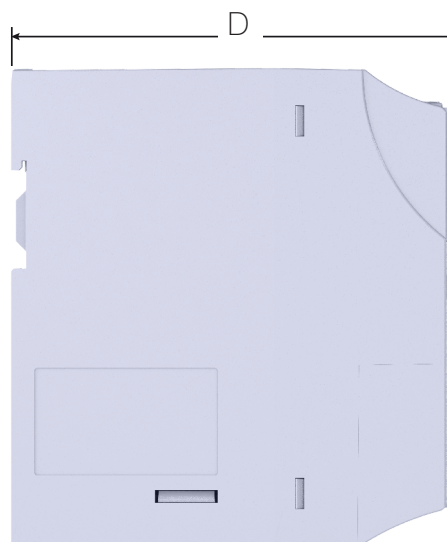
Rear view



Front view



Side View



Frame Size IP20	Height in. (mm)	Width in. (mm)	Depth in. (mm)	Weight Lbs. (kg)
A (w/o RFI)	6.3 (157.9)	2.8 (70.0)	5.9 (148.4)	2.0 (0.9)
A (w/RFI)	7.8 (196.0)	2.8 (70.0)	7.5 (190.1)	2.9 (1.3)
B (w/o RFI)	8.1 (198.9)	2.8 (70.0)	6.3 (158.4)	3.0 (1.4)
B (w/ RFI)	9.4 (237.0)	2.8 (70.0)	7.9 (200.1)	4.0 (1.8)

### Technical Data

<b>Power Supply</b>	Voltage	Single Phase	110-127 Vac (+10%, -15%)
		Single Phase or Three Phase	200-240 Vac (+10%, -15%)
	Frequency	50 / 60Hz +/- 2Hz	
<b>Output</b>	Voltage	0-230 Vac Three Phase	
	Frequency	0-400 Hz, 0.1Hz Resolution	
<b>Control</b>	Control Modes	Volts per Hertz (Scalar)	
		Sensorless Voltage Vector	
		Sinusoidal PWM (Space Vector Modulation)	
	Switching Frequency	2.5, 5, 10 or 15kHz	
	Frequency Range	0-400 Hz	
	Overload Capacity	150% for 60 seconds, repeatable every 10 min.	
<b>Control Inputs</b>	4 programmable isolated digital inputs, NPN or 24Vdc logic (PNP)		
	1 programmable differential analog input; programmable for current or voltage		
<b>Control Outputs</b>	1 programmable relay output: One NO/NC (Form C) 250 Vac / 0.5 A		
<b>Communication</b>	Field Bus	Optional modules for RS-485, RS-232, CANopen, DeviceNet, Profibus-DP, USB	
<b>Safety</b>	Protections	Motor over current	DC link over voltage
		Motor overload	DC link under voltage
		Output phase-to-phase short circuit	Drive over temperature
		Output phase-to-ground short circuit	External fault
		Programming error	
<b>Enclosure</b>	Degree of Protection	IP20	
	Mounting	Surface mounting with screws or DIN rail mounting	
<b>Ambient</b>	Temperature	14 - 122°F (50°C), up to 140°F (60°C) with 2% / 1.8°F (1°C) output current derating	
	Humidity	5-95% Non Condensing	
	Altitude	0-3300 ft (1000m) Up to 13,200 ft (4000m) with 1% / 330ft (100m) output current derating	
<b>Regulatory Conformance</b>	EMC Directive 89 / 336 / EEC	Electromagnetic compatibility – Industrial Environment EMC Emission and Immunity with optional filter	
	ENC61800-2, 3, 5-1 ENC61800-4-2, 3, 4, 5, 6		
	LVD 73/23/EEC	Low Voltage Directive	
	UL 508C, UL 840, UL 50	Electrical Equipment standards	
<b>Special Functions</b>	Linear and “S” ramp accel and decel, local/remote control, FWD/REV selection, DC braking, manual and auto torque boost, motor slip compensation, electronic pot, two skip frequencies, maximum and minimum adjustable frequency limits, adjustable output current		
<b>Keypad</b>	4 digit LCD display and 4 keys		
	Readouts for: output frequency (Hz), output current (A), output voltage (V), motor torque (%) in vector mode, DC bus voltage (V), value proportional to frequency (Ex.: RPM), fault and status messages		



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**Single and 3-Phase, 1/8 – 700HP**

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- Explosion Proof Motors
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- Pump Motors including JP/JM
- P-Base Pump Motors
- Oil Well Pumping Motors
- Pool & Spa Motors
- Brake Motors
- Compressor Duty Motors
- Farm Duty Motors
- Poultry Fan Motors
- Auger Drive Motors
- IEEE 841 Motors
- Stainless Steel Wash Down Motors
- Saw Arbor Motors
- Cooling Tower Motors
- Commercial HVAC Motors
- Pad Mounted Motors
- Vector Duty Motors

**Large Electric Motors**

- Low Voltage 3-phase motors up to 2,500HP
- Motors up to 70,000HP and 13,200V
- Wound Rotor Systems (including starters) up to 70,000HP and 13,200V
- Synchronous Motors up to 70,000HP and 13,200V
- Explosion proof motors (Ex-d) up to 1,500kW and 11kV
- Ex-n, Ex-e, Ex-p motors

**Variable Frequency Drives**

- Low Voltage 1/4 to 2500HP, 230V – 480V
- Medium Voltage 500-8000HP
- Multi-pump systems
- NEMA 4X
- Dynamic braking resistors
- Line and load reactors
- Plug and play technology
- Network communications: Profibus-DP, DeviceNet, Modbus-RTU
- PLC functions integrated
- Complete line of options and accessories

**Soft Starters**

- 3-1500HP
- Oriented start-up
- Built-in bypass contactor
- Universal source voltage (230-575V, 50/60Hz)
- Network communications: Profibus-DP, DeviceNet, Modbus-RTU
- Complete Line of options and accessories
- MV Soft-starter 3.3kV, 41.6kV: up to 3500HP, Withdrawable Power Stacks, & 8x PT100 Temperature monitoring

**Controls**

- Mini – Contactors
- IEC Contactors
- Thermal Overload Relays
- Manual Motor Protectors
- Molded Case Circuit Breakers
- Smart Relays
- Enclosed Starters: combination & non-combination,
- Pushbuttons & Pilot Lights
- Timing & Motor Protection Relays
- Terminal Blocks

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- NEMA 1, 12, 3R, 4 and 4X cabinets
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