B&P Elektromotoren

CFW300 - VARIABLE SPEED DRIVE

Compact size, high performance, ideal for machines and industrial processes

weg

CFW300 - Variable Speed Drive

Summary

CFW300

VARIABLE SPEED DRIVE

The CFW300 *variable speed drive is a high-performance VSD* for three-phase induction motors, ideal for applications on machines or equipment that require *precise control and easy operation*.
It features compact size, contactor-style electrical instalation, selectable WEG vector control (VVW) or scalar control (V/F), built-in operating interface (HMI), SoftPLC, free WPS programming software and plug-in accessories that may be added to provide extended functionalities, making it a *flexible solution of excellent cost effectiveness.*

CONVENIENCE ALL THE TIME

Select

- Rated output current from 1.6 to 15.2 A (0.25 HP / 0.18 kW to 10 HP / 7.5 kW) 100-127 V, 200-240 V or 380-480 V
- 4 PNP or NPN digital inputs, 1 relay output 0.5 A / 250 V ac, 1 analog input 0-10 V dc / 4-20 mA
- 3C2 coating class (IEC 60721-3-3) on the internal circuits
- RoHS, UL, CE, IRAM[1], UKCA

Install and Program

- Energy savings
- Easy installation
- Flash Memory Module (accessory)

Operate

- Built-in operating interface (HMI)
- SoftPLC
- Plug-in module with Potentiometer

Monitor

- WPS software
- Modbus-TCP, RS485, RS232, CANopen, Profibus-DP, USB, Encoder, Infrared, Input and Output Expansion, RFI Filter, Bluetooth®

Note: 1) Check for availability.

Single-phase and three-phase power supply or via DC link	Ideal for machine or small device applications
Built-in inputs and outputs in the standard version	2 slots for function expansion via accessories
Greater protection for aggressive environments	Standard, no extra cost
Lead-free, international certificates	Green product, contributing to the environmental preservation
High performance and efficiency	Ideal for pumps and fans
Power supply on top and output to the motor in the bottom	Easy and intuitive installation with less wiring inside the electrical panel
Used to copy the original setting of the CFW300 and download it to other devices, with the VSD off	Less configuration time
Status information of the CFW300 is easily viewed on the screen	Simple operation, configurable displays, remote operating interface (accessory)
Built-in software resource, equivalent to a small PLC	It customizes and integrates the CFW300 to the application
Used to set speed reference	Easiness to machine builders
Online monitoring, programming and configuration of the CFW300	Easy and intuitive environment, free software
Extra functionality expansion accessories	Flexibility according to the application requirements

Flexibility

Flash Memory Module (MMF-uDrives Accessory)
Downloads the original parameter setting to several other CFW300 variable speed drives, even when they are turned off.

Slot for network communication and potentiometer module

2 Slots for Function Expansion with Accessories

Slots for input and output (I/O) expansion modules

Remote Operating Interface (HMI) (CFW300-KHMIR Accessory)

Easily Removable Fan

RFI Filter (CFW300-KFA / B / C Accessory)
Category C2 or C3 to reduce the electromagnetic interference level

Greater Protection for Aggressive Environments
Standard Class 3C2 coating on the internal circuits of all versions, according to IEC 60721-3-3, ensures greater protection for environments with corrosive chemicals

Connectivity

Bluetooth®

Applications

Machines and Equipment

Packaging machines, ice-cream machines, mixers, kneading machines, conveyor belts, wood processing, car wash.

Opening/Closing of Gates

Automatic condo or home garage gates, elevator doors, industry or condo vehicle barriers.

Single / Three or DC Power Supply

100-127 V, 200-240 V or 380-480 V, single or three-phase power supply to feed a 230 V or 380 V three-phase induction motor. Also available for DC current power supply[1].
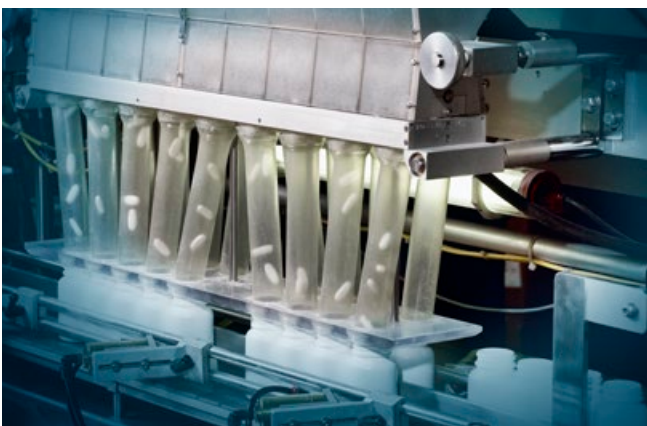
Industry

Fans, exhausters, centrifugal pumps, granulators, conveyor belts, palletizers, stirrers, mixers, process dosing pumps.
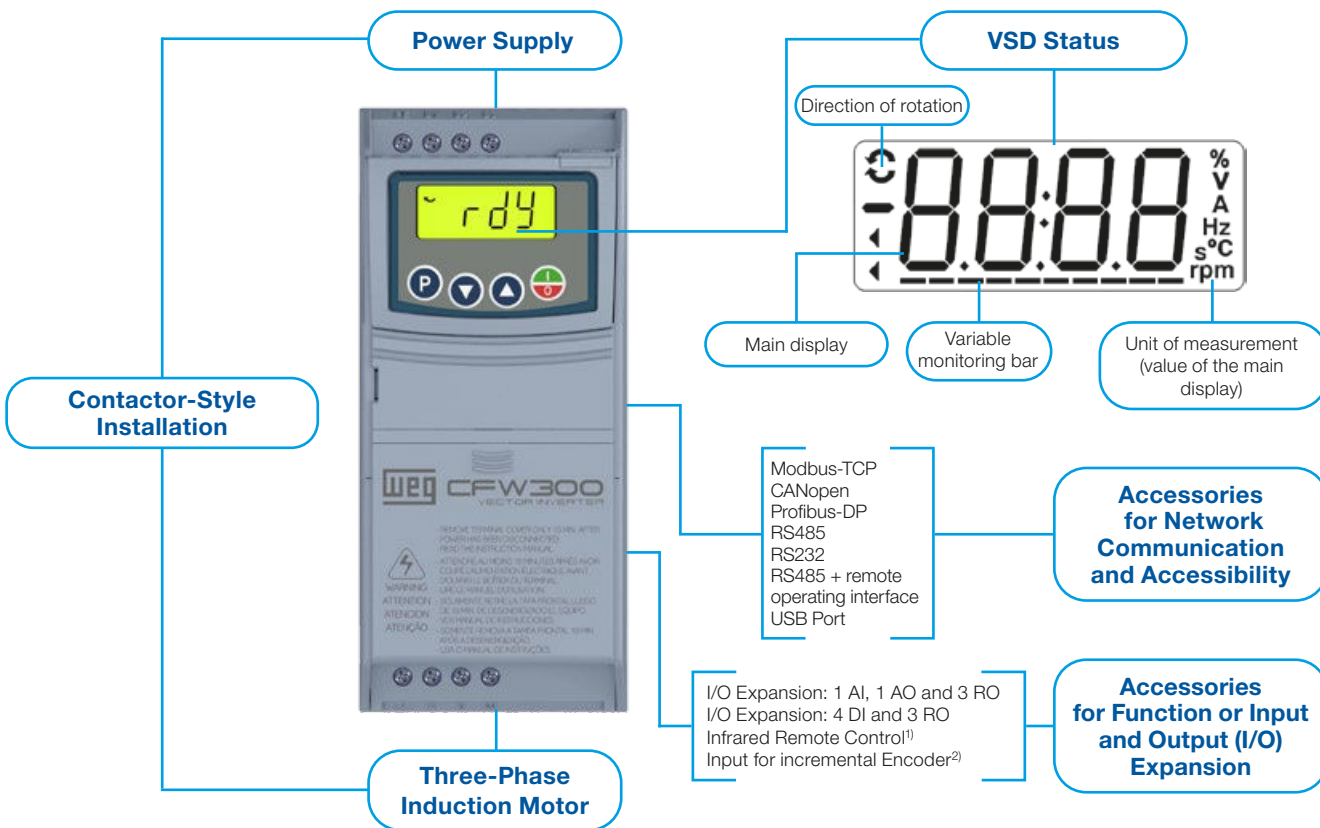
Stores or Homes

Swimming pool or whirlpool bathtub pumps.

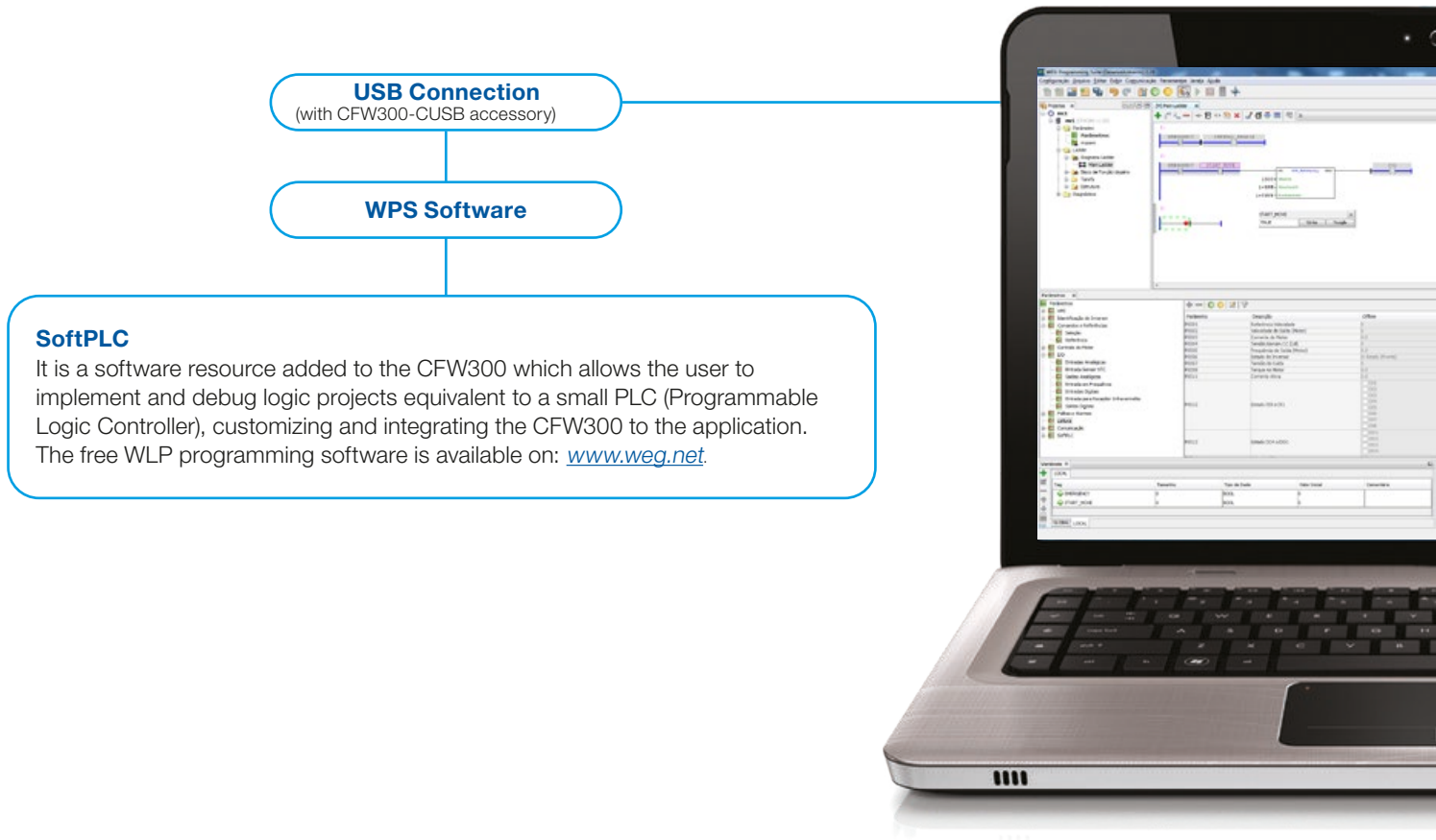*Note: 1) Check the models at page 8.*

Easy to Use

Power Supply

VSD Status

Direction of rotation

Contactor-Style Installation

Main display

Variable monitoring bar

Unit of measurement (value of the main display)

Modbus-TCP
CANopen
Profibus-DP
RS485
RS232
RS485 + remote operating interface
USB Port

Accessories for Network Communication and Accessibility

I/O Expansion: 1 AI, 1 AO and 3 RO
I/O Expansion: 4 DI and 3 RO
Infrared Remote Control[1]
Input for incremental Encoder[2]

Accessories for Function or Input and Output (I/O) Expansion

Three-Phase Induction Motor

Notes: I/O = Inputs and Outputs; AI = Analog Input, AO = Analog Output, RO = Relay Output, DI = Digital Input.
   1) Included in the CFW300-IOADR accessory.
   2) Included in the CFW300-IOAENC accessory.

USB Connection
(with CFW300-CUSB accessory)

WPS Software

SoftPLC
It is a software resource added to the CFW300 which allows the user to implement and debug logic projects equivalent to a small PLC (Programmable Logic Controller), customizing and integrating the CFW300 to the application. The free WLP programming software is available on: *www.weg.net*.

Main Resources

- V/F, quadratic V/F or VVW vector control
- Password to protect the settings
- Engineering units (V, A, Hz, rpm, s, °C, %, etc.)
- Backup of all parameters (via software WPS, memory card or internal memory of the CFW300)
- Switching frequency selecting according to the application requirements
- Speed reference via electronic potentiometer (EP)
- Speed reference by frequency input signal
- Multispeed with up to eight programmable speeds
- Slip compensation
- Manual or automatic torque boost (V/F scalar mode) or self-tuning (VVW vector mode)
- 2 acceleration/deceleration ramps and emergency deceleration
- "S" type ramp
- DC braking

- Internal dynamic braking (frame sizes B and C)
- Infrared control (via CFW300-IOADR accessory)
- PID controller to control processes in closed loop (via software WPS)
- Flying start / ride through
- Skip frequency or frequency ranges
- Overload and overtemperature protection on the motor and on the IGBTs
- Overcurrent protection
- DC link voltage supervision
- Self-diagnosis alarm
- Fault log
- SoftPLC programming via free WLP software
- Fan control
- Energy saving function
- Fire mode
- Modbus master function

## Much more advantages

Much+

The CFW300 replaces direct online starters or star-delta starters:
- Electric energy savings
- Precise speed control
- Protection and improved lifetime for the electric motor
- Diagnosis and fault log
- Easy to use and install
- Flexible, allowing the installation of accessories for the application (Plug & Play)

Easy and intuitive environment

Free at www.weg.net
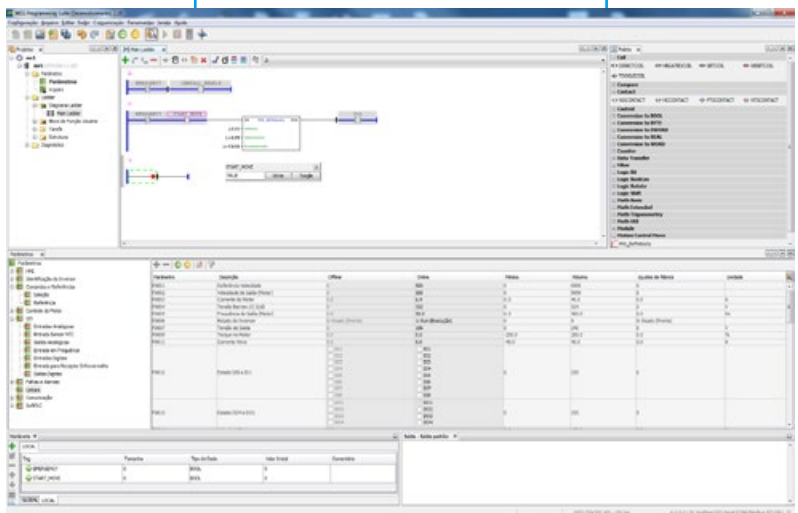
Coding[1]

Inverter / smart code	Model identification				Internal dynamic braking (IGBT)	Protection degree	Hardware version	Software version
	Size	Rated output current	Number of phases	Rated voltage				
CFW300	A	01P6	S	2	NB	20		
	See availability in the following table							
	NB = without dynamic braking (IGBT)							
	DB = with dynamic braking (IGBT)							
	20 = IP20							
	Hx = special hardware							
	Sx = special software							

Note: for versions with special hardware (Hx) and software (Sx), contact WEG Automation sales department or your sales representative.

Available Options

Frame size	Rated output current	Number of phases	Power supply voltage	Internal dynamic braking (IGBT)
A	01P6 = 1.6 A	S = single-phase power supply	1 = 110-127 V ac	NB
	02P6 = 2.6 A			
	04P2 = 4.2 A			
	06P0 = 6.0 A			
	01P6 = 1.6 A		2 = 200-240 V ac	
	02P6 = 2.6 A			
	04P2 = 4.2 A			
	06P0 = 6.0 A			
	07P3 = 7.3 A			
	01P6 = 1.6 A	T = three-phase power supply		
	02P6 = 2.6 A			
	04P2 = 4.2 A			
	06P0 = 6.0 A			
	07P3 = 7.3 A			
	01P6 = 1.6 A	D = DC power supply	3 = 280-340 V dc	
	02P6 = 2.6 A			
	04P2 = 4.2 A			
	06P0 = 6.0 A			
	07P3 = 7.3 A			
B	10P0 = 10.0 A	B = single-phase, three-phase or DC power supply	2 = 200-240 V ac or 280-340 V dc	DB
	15P2 = 15.2 A	T = three-phase or DC power supply		
A	01P1 = 1.1 A	T = three-phase power supply	4 = 380-480 V ac	NB
	02P6 = 2.6 A			
	03P5 = 3.5 A			
	04P8 = 4.8 A			
B	06P5 = 6.5 A			
	08P2 = 8.2 A			
C	10P0 = 10.0 A			
	12P0 = 12.0 A			
	15P0 = 15.0 A			
B	01P1 = 1.1 A	T = three-phase or DC power supply	4 = 380-480 V ac or 513-650 V dc	DB
	01P8 = 1.8 A			
	02P6 = 2.6 A			
	03P5 = 3.5 A			
	04P8 = 4.8 A			
	06P5 = 6.5 A			
	08P2 = 8.2 A			
C	10P0 = 10.0 A			
	12P0 = 12.0 A			
	15P0 = 15.0 A			

Note: 1) Other configurations available upon request.

Specification

AC Current Power Supply

Reference	Variable speed drive CFW300[2]				Maximum applicable motor[1]		
	Power supply (V)		Frame size	IGBT braking	Rated output current (A)	Power supply (V)	HP	kW
CFW300A01P6S1NB20	110-127	Single-phase	A		1.6		0.25	0.18
CFW300A02P6S1NB20					2.6		0.5	0.37
CFW300A04P2S1NB20					4.2		1	0.75
CFW300A06P0S1NB20					6		1.5	1.1
CFW300A01P6S2NB20	200-240	Single-phase	A	Not available	1.6	220	0.25	0.18
CFW300A02P6S2NB20					2.6		0.5	0.37
CFW300A04P2S2NB20					4.2		1	0.75
CFW300A06P0S2NB20					6		1.5	1.1
CFW300A07P3S2NB20					7.3		2	1.5
CFW300B10P0B2DB20		Single-phase ou Three-phase	B	Built-in	10		3	2.2
CFW300A01P6T2NB20			A	Not available	1.6		0.25	0.18
CFW300A02P6T2NB20					2.6		0.5	0.37
CFW300A04P2T2NB20					4.2		1	0.75
CFW300A06P0T2NB20					6		1.5	1.1
CFW300A07P3T2NB20					7.3		2	1.5
CFW300B10P0B2DB20			B	Built-in	10		3	2.2
CFW300B15P2T2DB20					15.2		5	3.7
CFW300A01P1T4NB20	380-415	Three-phase	A	Not available	1.1	380	0.5	0.37
CFW300A01P8T4NB20					1.8		1	0.75
CFW300A02P6T4NB20					2.6		1.5	1.1
CFW300A03P5T4NB20					3.5		2	1.5
CFW300A04P8T4NB20					4.8		3	2.2
CFW300B06P5T4NB20			B		6.5		4	3
CFW300B08P2T4NB20					8.2		5	3.7
CFW300C10P0T4NB20			C		10		6	4.5
CFW300C12P0T4NB20					12		7.5	5.5
CFW300C15P0T4NB20					15		10	7.5
CFW300B01P1T4DB20			B	Built-in	1.1		0.5	0.37
CFW300B01P8T4DB20					1.8		1	0.75
CFW300B02P6T4DB20					2.6		1.5	1.1
CFW300B03P5T4DB20					3.5		2	1.5
CFW300B04P8T4DB20					4.8		3	2.2
CFW300B06P5T4DB20					6.5		4	3
CFW300B08P2T4DB20					8.2		5	3.7
CFW300C10P0T4DB20			C		10		6	4.5
CFW300C12P0T4DB20					12		7.5	5.5
CFW300C15P0T4DB20					15		10	7.5
CFW300A01P1T4NB20	440-480		A	Not available	1.1	440	0.5	0.37
CFW300A01P8T4NB20					1.8		1	0.75
CFW300A02P6T4NB20					2.6		1.5	1.1
CFW300A03P5T4NB20					3.5		2	1.5
CFW300A04P8T4NB20					4.8		3	2.2
CFW300B06P5T4NB20			B		5.6		4	3
CFW300B08P2T4NB20					7.6		5	3.7
CFW300C10P0T4NB20			C		8.3		6	4.5
CFW300C12P0T4NB20					11		7.5	5.5
CFW300C15P0T4NB20					14		10	7.5
CFW300B01P1T4DB20			B	Built-in	1.1		0.5	0.37
CFW300B01P8T4DB20					1.8		1	0.75
CFW300B02P6T4DB20					2.6		1.5	1.1
CFW300B03P5T4DB20					3.5		2	1.5
CFW300B04P8T4DB20					4.8		3	2.2
CFW300B06P5T4DB20					5.6		4	3
CFW300B08P2T4DB20					7.6		5	3.7
CFW300C10P0T4DB20			C		8.3		6	4.5
CFW300C12P0T4DB20					11		7.5	5.5
CFW300C15P0T4DB20					14		10	7.5

Notes: 1) The power values for the maximum applicable motor shown in the table above are reference values and valid for WEG three-phase, four-pole induction motors with power supply of 220 V, 380 V or 440 V. The proper sizing of the CFW300 must be determined as a function of the rated current of the used motor.
2) Designed for exclusive industrial or professional use.

Specification

DC Current Power Supply

Reference	Variable speed drive CFW300[2]				Maximum applicable motor[1]		
	Power supply (V)	Frame size	IGBT braking	Rated output current (A)	Power supply (V)	HP	kW
CFW300A01P6D3NB20	DC link (280-340 V dc)	A	Not available	1.6	220	0.25	0.18
CFW300A02P6D3NB20				2.6		0.5	0.37
CFW300A04P2D3NB20				4.2		1	0.75
CFW300A06P0D3NB20				6		1.5	1.1
CFW300A07P3D3NB20				7.3		2	1.5
CFW300B10P0B2DB20		B	Built-in	10		3	2.2
CFW300B15P2T2DB20				15.2		5	3.7
CFW300B06P5T4NB20	DC link (513-560 V dc)	B	Not available	6.5	380	4	3
CFW300B08P2T4NB20				8.2		5	3.7
CFW300C10P0T4NB20		C		10		6	4.5
CFW300C12P0T4NB20				12		7.5	5.5
CFW300C15P0T4NB20				15		10	7.5
CFW300B01P1T4DB20		B	Built-in	1.1		0.5	0.37
CFW300B01P8T4DB20				1.8		1	0.75
CFW300B02P6T4DB20				2.6		1.5	1.1
CFW300B03P5T4DB20				3.5		2	1.5
CFW300B04P8T4DB20				4.8		3	2.2
CFW300B06P5T4DB20				6.5		4	3
CFW300B08P2T4DB20				8.2		5	3.7
CFW300C10P0T4DB20		C		10		6	4.5
CFW300C12P0T4DB20				12		7.5	5.5
CFW300C15P0T4DB20				15		10	7.5
CFW300B06P5T4NB20	DC link (594-650 V dc)	B	Not available	5.6	440	4	3
CFW300B08P2T4NB20				7.6		5	3.7
CFW300C10P0T4NB20		C		8.3		6	4.5
CFW300C12P0T4NB20				11		7.5	5.5
CFW300C15P0T4NB20				14		10	7.5
CFW300B01P1T4DB20		B	Built-in	1.1		0.5	0.37
CFW300B01P8T4DB20				1.8		1	0.75
CFW300B02P6T4DB20				2.6		1.5	1.1
CFW300B03P5T4DB20				3.5		2	1.5
CFW300B04P8T4DB20				4.8		3	2.2
CFW300B06P5T4DB20				5.6		4	3
CFW300B08P2T4DB20				7.6		5	3.7
CFW300C10P0T4DB20		C		8.3		6	4.5
CFW300C12P0T4DB20				22		7.5	5.5
CFW300C15P0T4DB20				14		10	7.5
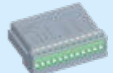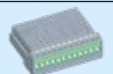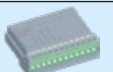
Notes: 1) The power values for the maximum applicable motor shown in the table above are reference values and valid for WEG three-phase, four-pole induction motors with power supply of 220 V, 380 V or 440 V. The proper sizing of the CFW300 must be determined as a function of the rated current of the used motor.
2) Designed for exclusive industrial or professional use.

Accessories

The CFW300 has inputs and outputs in the standard version and allows installing Plug & Play accessories, which makes flexible and increases its capacity to adapt to the requirements of different applications.
In the front part there are two slots: the upper slot, can be used to connect with network communication or accessibility, and the lower slot, which can be used for input and output (I/O) expansion, incremental encoder input or infrared remote control kit.

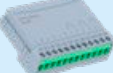| Reference	Description	Illustrative images
Upper slot - network communication and accessibility		
CFW300-CRS485	RS485 communication module	
CFW300-CUSB	USB communication module (2 m cable included)	
CFW300-CRS232	RS232 communication module	
CFW300-CCAN	CANopen or DeviceNet communication module	
CFW300-CPDP	Profibus-DP communication module	
CFW300-IOP	Potentiometer reference module	
CFW300-CETH	Ethernet communication module	
CFW300 - CBLT	Bluetooth® communication module	
Lower slot - input and output (I/O) expansion		
CFW300-IOAR	1 analog input, 1 analog output and 3 relay outputs	
CFW300-IODR	4 digital inputs and 3 relay outputs	
CFW300-IOAENC	1 analog input, 2 analog outputs and input for incremental Encoder	
CFW300-IOADR	1 NTC input, 3 relay outputs and 1 input for infrared sensor (infrared sensor, NTC and remote control with battery included)	
CFW300-IODF	3 frequency digital inputs, 3 frequency digital outputs, for multipump application	
Remote operating interface (HMI)		
CFW300-KHMIR	Kit with remote HMI (CFW300-CRS485 + 3 m cable included)	
Flash memory		
MMF-uDrives	Flash memory module (1 m cable included)	
Filtro RFI		
CFW300-KFA-S1-S2	RFI filter kit CFW300 frame A single-phase (200 V Line)[1]	
CFW300-KFB-S2	RFI filter kit CFW300 frame B single-phase (200 V Line)[1]	
CFW300-KFA-T2	RFI filter kit CFW300 frame size A three-phase (200 V Line)[1]	
CFW300-KFB-T2	RFI filter kit CFW300 frame size B three-phase (200 V Line)[1]	
CFW300-KFA-T4	RFI filter kit CFW300 frame A three-phase (400 V Line)[2]	
CFW300-KFB-T4	RFI filter kit CFW300 frame B three-phase (400 V Line)[2]	
CFW300-KFC-T4	RFI filter kit CFW300 frame C three-phase (400 V Line)[2]	

Notes: 1) The filter kit is provided with the following parts: RFI Filter and connecting bars.
2) The filter kit is provided with the following parts: RFI Filter, connecting bars and common mode choke.

Specification

Configuration of the Plug-In Modules[6)

Reference	Slots[5)	Inputs			Outputs			Potentiometer	USB[4)	Infrared sensors and NTC[3)	Bluetooth®	Encoder[2)	Network communication		
		Analog	Digital	Frequency	Analog	Digital / relay	Frequency						RS485	RS232	Other
CFW300-CRS485	Upper slot	-	-	-	-	-	-	-	-	-	-	-	1	-	-
CFW300-CRS232		-	-	-	-	-	-	-	-	-	-	-	-	1	-
CFW300-CCAN		-	-	-	-	-	-	-	-	-	-	-	-	-	CANopen or DeviceNet
CFW300-CPDP		-	-	-	-	-	-	-	-	-	-	-	-	-	Profibus-DP
CFW300-CUSB		-	-	-	-	-	-	-	1	-	-	-	-	-	-
CFW300-IOP		-	-	-	-	-	-	1	-	-	-	-	-	-	-
CFW300-CETH		-	-	-	-	-	-	-	-	-	-	-	-	-	Modbus-TCP
CFW300-CBLT		-	-	-	-	-	-	-	-	-	1	-	-	-	-
CFW300-IOAR	Lower slot	1	-	-	1	3	-	-	-	-	-	-	-	-	-
CFW300-IODR[1)		-	4	-	-	3	-	-	-	-	-	-	-	-	-
CFW300-IOAENC		1	-	-	2	-	-	-	-	-	-	1	-	-	-
CFW300-IOADR		1	-	-	-	3	-	-	-	1	-	-	-	-	-
CFW300-IOADR-D		-	-	-	-	3	-	-	-	1	-	-	-	-	-
CFW300-IODF		-	-	3	-	-	3	-	-	-	-	-	-	-	-

Notes: 1) Configurable isolated digital inputs (NPN or PNP).
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) Allows 1 plug-in module on the upper slot (network communication or accessibility) and 1 plug-in module on the lower slot (input/output expansion).
6) The standard version of the CFW300 already features 4 PNP or NPN digital inputs (configurable), 1 analog input 0-10 V dc / 4-20 mA and 1 relay output 0.5 A / 250 V ac.

Dimmensions

Rear view   Front view   Side view
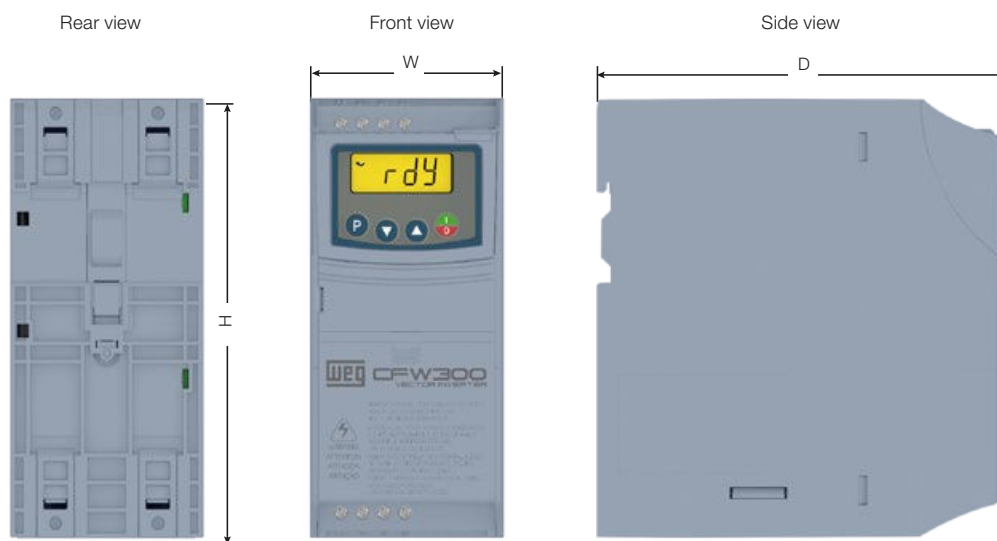
Dimmensions without RFI Filter

Frame size	H mm (in)	L mm (in)	P mm (in)	Weight 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)
C	214.0 (8.43)	89.0 (3.50)	164.0 (6.45)	1.50 (3.30)

Note: tolerance: +/-1.0 mm (+/-0.039 in).

Dimmensions with RFI Filter

Frame size	H mm (in)	L mm (in)	P mm (in)	Weight kg (lb)
A	196.0 (7.72)	70.0 (2.76)	190.1 (7.48)	1.30 (2.86)
B	237.0 (9.33)	70.0 (2.76)	200.1 (7.88)	1.80 (3.96)
C	252.3 (9.93)	89.0 (3.50)	207.5 (8.17)	1.96 (4.31)

Note: tolerance: +/-1.0 mm (+/-0.039 in).

Technical Specifications

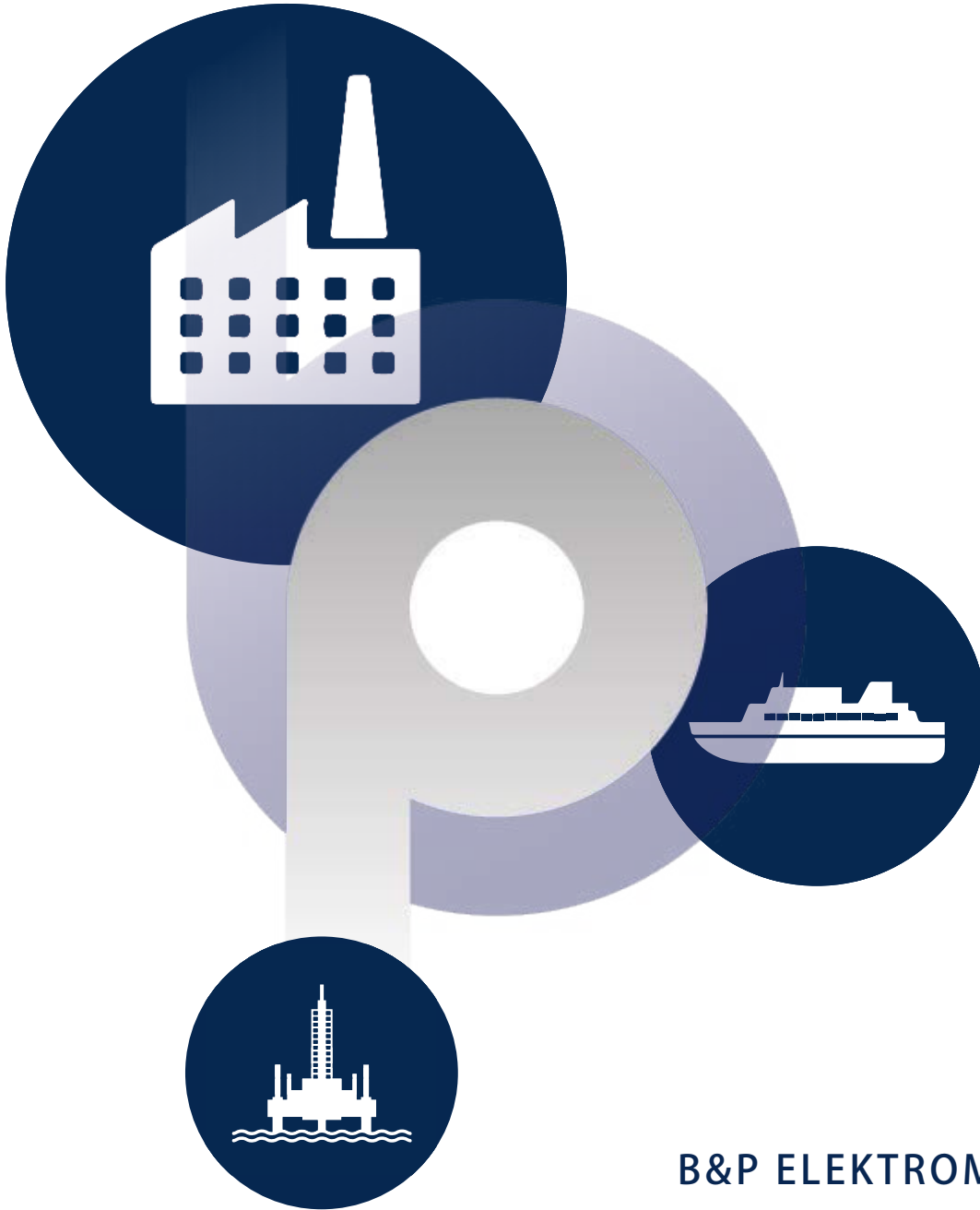|		
Power data	Power supply	Voltage tolerance: -15% to +10% of nominal voltage Frequency: 50/60 Hz (48 Hz to 62 Hz) Phase unbalance: ≤3% of the rated phase-phase input voltage Overvoltages according to category III (EN 61010/UL 508C) Transient voltages according to category III Maximum of 10 connections per hour (1 every 6 minutes) Typical efficiency: ≥97% Classification of chemically active substances: 3C2 level Classification of mechanical conditions (vibration): 3M4 level Audible noise level: <60 dB
Installation and connection	Environment conditions	Surrounding temperature: 0 °C to 50 °C (200 V line) and 0 °C to 40 °C (400 V line) For higher temperatures than the specifications above, it is necessary to apply 2% of current derating for each Celcius degree, limited to an increase of 10 °C Air relative humidity: 5% to 95% non-condensing Maximum altitude: up to 1,000 m - rated conditions From 1,000 m to 4,000 m - 1% of current derating for each 100 m (330 ft) above 1,000 m (3,300 ft) of altitude From 2,000 m to 4,000 m above sea level – maximum voltage derating (127 V / 240 V / 480 V, according to the model) of 1.1% for each 100 m above 2,000 m Pollution degree: 2 (according to EN 50178 and UL 508C), with non-conductive pollution. Condensation must not cause conduction of the accumulated residues
Control	Method	- V/F (scalar) - V/F (quadratic) - VVW: voltage vector control - PWM SVM (Space Vector Modulation)
	Output frequency	0 to 400 Hz, resolution of 0.1 Hz
Performance	V/F Control	Speed regulation: 1% of the rated speed (with sleep compensation) Speed variation range: 1:20
	Vector control (VVW)	Speed regulation: 1% of the rated speed Speed variation range: 1:30
Inputs[1]	Analog	1 isolated input: 0 to 10 V or 0 to 20 mA or 4 to 20 mA Linearity error ≤0.25% Impedance: 100 kΩ for voltage input, 500 Ω for current input Programmable functions Maximum in the inputs: 30 V dc
	Digital	4 isolated inputs. Programmable functions: - Active high (PNP): maximum low level of 10 V dc / minimum high level of 20 V dc - Active low (NPN): maximum low level of 5 V dc / minimum high level of 10 V dc Maximum input voltage of 30 V dc Input current: 11 mA Maximum input current: 20 mA
Outputs[1]	Relay	1 relay with NO/NC contact Maximum voltage: 250 V ac Maximum current of 0.5 A Programmable functions
	Power supply	10 V dc power supply maximum capacity: 50 mA
Safety	Protection	Overcurrent/phase-phase short circuit Under/overvoltage at the power supply Motor overload Overtemperature on the power module (IGBTs) External fault/alarm Programming error
Operating interface (HMI)	Built-in	4 keys: run/stop, increment, decrement and LCD Display setting Accuracy: - Current: 10% of the rated current - Speed resolution: 0.1 Hz
Communication	Fieldbus communication	Modbus-TCP, RS485, RS232, CANopen, DeviceNet, Profibus-DP or USB Port, Bluetooth® (via plug-in modules)
Protection degree	IP20	Frame sizes A, B and C

Notes: 1) Available in the standard version.

Block Diagram

Power supply

R / L1 / L (-UD) (1)
S / L2 / N (+UD) (1)
T / L3 (5)

RFI filter ②

+UD ⑥ -UD ⑥ +BR ④ -BR ④

Three-phase or single-phase rectifier

Preload

DC link capacitor bank

Rsh

Braking IGBT

Inverter with IGBT transistors

U/T1
V/T2
W/T3

Three-phase motor

PE

PE

POWER
CONTROL

Power supplies for electronics and interfaces between power and control

Remote HMI ②

rdY

PC

Software WPS

HMI

rdY

CPU control board 16 bits

RS485 ②

Interfaces (Ethernet, RS232, RS485, USB, CANopen, DeviceNet, Profibus-DP or Bluetooth®) ②

Digital ③ inputs (DI1 to DI4)

Analog ③ input (AI1)

Analog ③ output (AO1)

Digital ③ output DO1(RL1)

Flash memory module ②

① DC power supply connection through terminals R and S for specific models only
② Available as accessory
③ Number of Inputs/Outputs depends on the I/O expansion accessory
④ Braking resistor connection available for specific models only
⑤ Three-phase power supply connection available for specific models only
⑥ DC link power supply connection for sizes B and C

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