

# CFW300 - VARIABLE SPEED DRIVE

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



PE L1 L2 L3 4UD 4UD



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**weg** CFW300 VECTOR INVERTER

  
 WARNING  
 ATTENTION  
 ATENCIÓN  
 ATENÇÃO

REMOVE TERMINAL COVER ONLY 10 MIN. AFTER POWER HAS BEEN DISCONNECTED. READ THE INSTRUCTION MANUAL.  
 ATTENDRE AU MOINS 10 MINUTES APRÈS AVOIR COUPÉ L'ALIMENTATION ÉLECTRIQUE AVANT D'OUVRIR LE BOÎTIER DU TERMINAL. LIRE LE MANUEL D'UTILISATION.  
 SOLOAMENTE RETIRE LA TAPA FRONTAL LUEGO DE 10 MIN. DE DESENERGIZACIÓ EL EQUIPO. VER MANUAL DE INSTRUCCIONES.  
 SOMENTE REMOVA A TAMPÁ FRONTAL 10 MIN APÓS A DESENERGIZACIÓ. LER O MANUAL DE INSTRUÇÕES.

PE L1 L2



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# CFW300 - Variable Speed Drive

## Summary

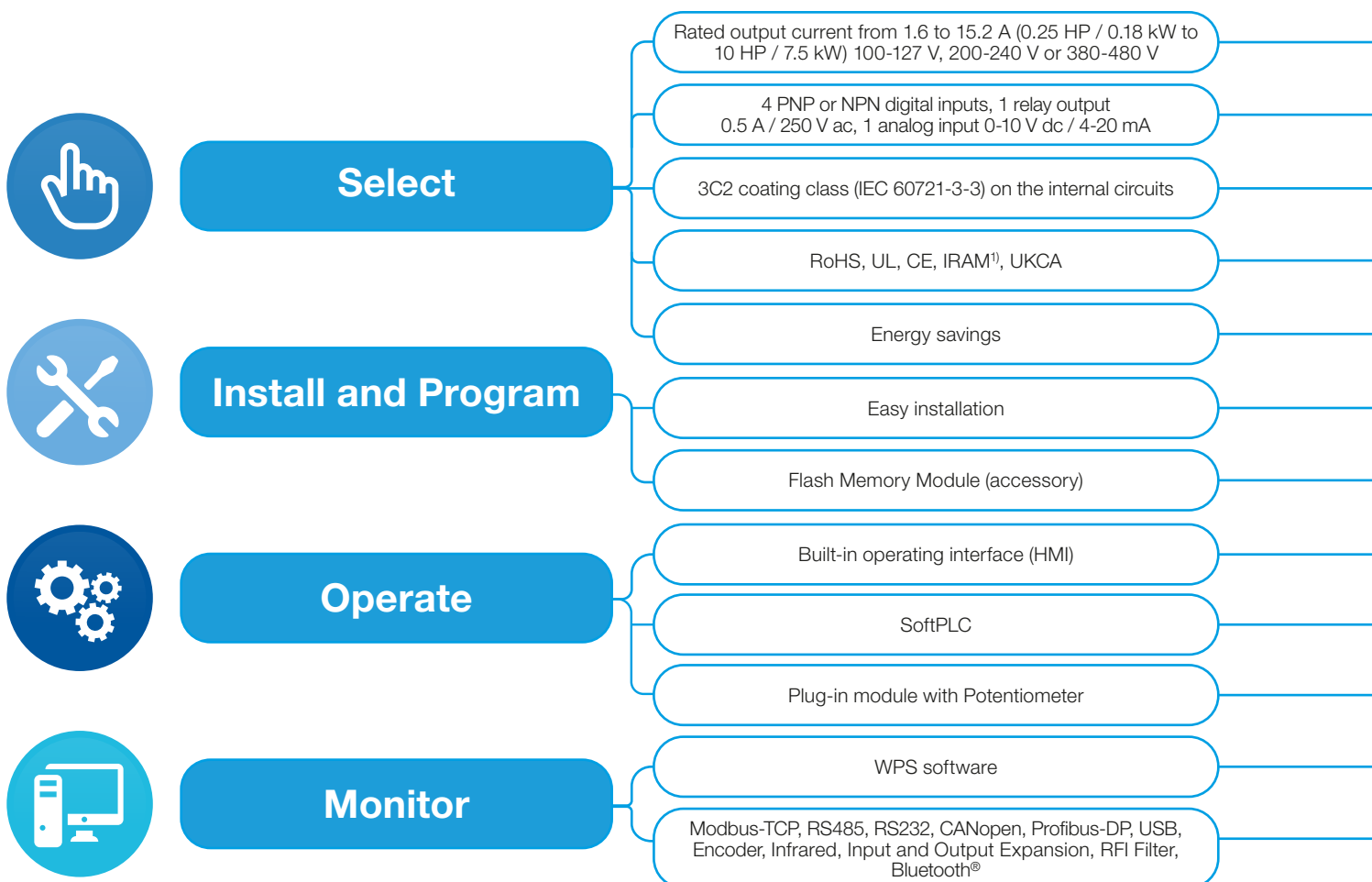
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# CFW300

## 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 installation, selectable WEG vector control (VWV) 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



Note: 1) Check for availability.



Single-phase and three-phase power supply or via DC link

Built-in inputs and outputs in the standard version

Greater protection for aggressive environments

Lead-free, international certificates

High performance and efficiency

Power supply on top and output to the motor in the bottom

Used to copy the original setting of the CFW300 and download it to other devices, with the VSD off

Status information of the CFW300 is easily viewed on the screen

Built-in software resource, equivalent to a small PLC

Used to set speed reference

Online monitoring, programming and configuration of the CFW300

Extra functionality expansion accessories

Ideal for machine or small device applications

2 slots for function expansion via accessories

Standard, no extra cost

Green product, contributing to the environmental preservation

Ideal for pumps and fans

Easy and intuitive installation with less wiring inside the electrical panel

Less configuration time

Simple operation, configurable displays, remote operating interface (accessory)

It customizes and integrates the CFW300 to the application

Easiness to machine builders

Easy and intuitive environment, free software

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.

**2 Slots for Function Expansion with Accessories**  
Slot for network communication and potentiometer module  
Slots for input and output (I/O) expansion modules

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

**Easily Removable Fan**

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

**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®

The diagram illustrates the Bluetooth connectivity of the CFW300 drive. A smartphone on the left displays a monitoring application with a graph and data points: 219.4, 218.5, 220.2, and 219.6. In the center is the Bluetooth module, labeled 'ACTIVE' and 'STANDBY', with a Bluetooth symbol below it. On the right, a laptop displays a software interface with a similar graph and data.

# 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<sup>1)</sup>.

## Industry



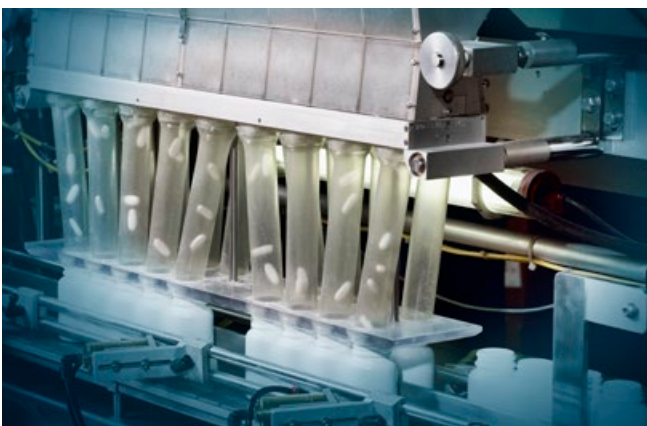
Fans, exhausters, centrifugal pumps, granulators, conveyor belts, palletizers, stirrers, mixers, process dosing pumps.

## Stores or Homes

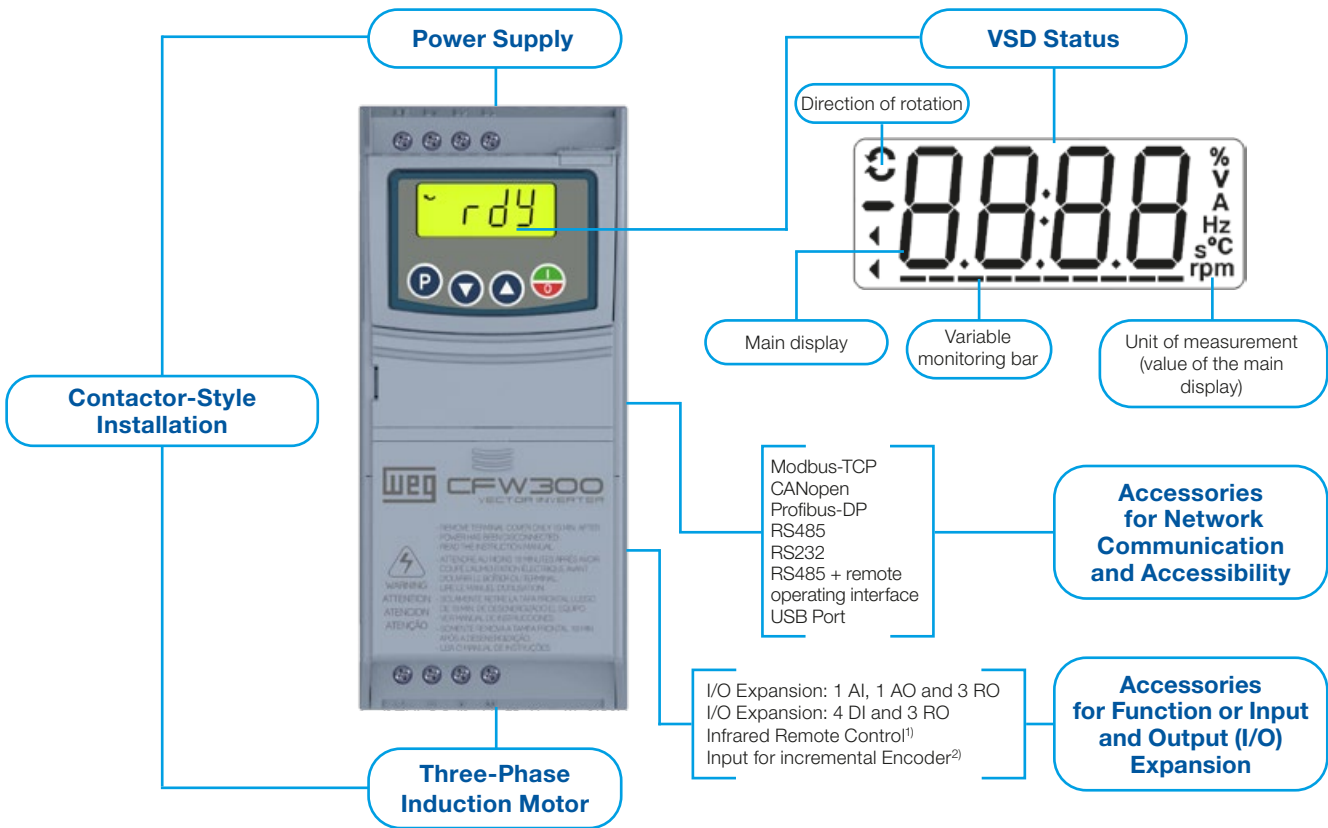


Swimming pool or whirlpool bathtub pumps.

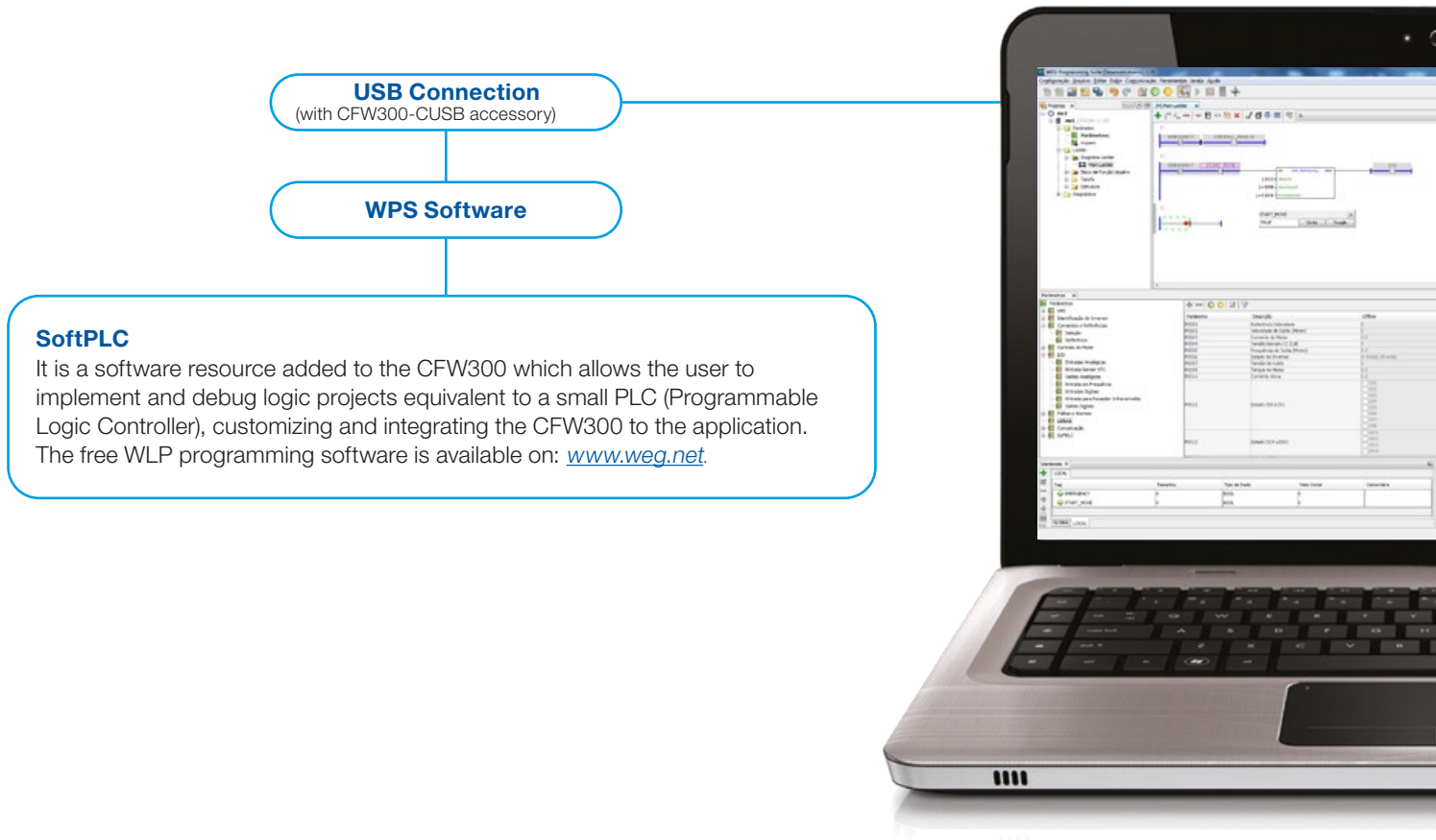
Note: 1) Check the models at page 8.



## Easy to Use




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.





## 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

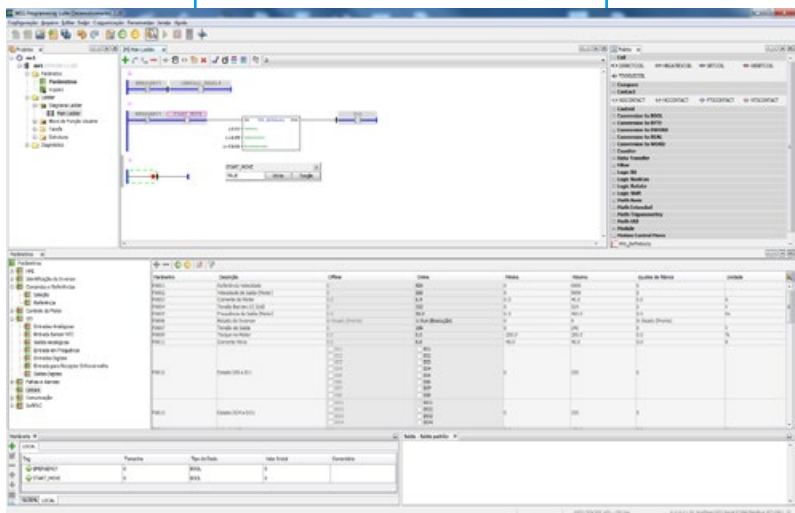
The CFW300 replaces direct online starters or star-delta starters:

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



## Coding<sup>1)</sup>

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						
	02P6 = 2.6 A						
	04P2 = 4.2 A						
	06P0 = 6.0 A						
	07P3 = 7.3 A	T = three-phase power supply	2 = 200-240 V ac				
	01P6 = 1.6 A						
	02P6 = 2.6 A						
	04P2 = 4.2 A						
	06P0 = 6.0 A						
	07P3 = 7.3 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	T = three-phase or DC power supply	4 = 380-480 V ac or 513-650 V dc		DB		
	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
	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	T = three-phase or DC power supply	4 = 380-480 V ac or 513-650 V dc	DB			
	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 <sup>2)</sup>				Maximum applicable motor <sup>1)</sup>						
	Power supply (V)	Frame size	IGBT braking	Rated output current (A)	Power supply (V)	HP	kW				
CFW300A01P6S1NB20	110-127	Single-phase	A	Not available	220	0.25	0.18				
CFW300A02P6S1NB20						0.5	0.37				
CFW300A04P2S1NB20						1	0.75				
CFW300A06P0S1NB20						1.5	1.1				
CFW300A01P6S2NB20	200-240	Single-phase	A	Not available		0.25	0.18				
CFW300A02P6S2NB20						0.5	0.37				
CFW300A04P2S2NB20						1	0.75				
CFW300A06P0S2NB20						1.5	1.1				
CFW300A07P3S2NB20						2	1.5				
CFW300B10P0B2DB20						3	2.2				
CFW300A01P6T2NB20						380	Single-phase or Three-phase	A	Not available	0.25	0.18
CFW300A02P6T2NB20										0.5	0.37
CFW300A04P2T2NB20	1	0.75									
CFW300A06P0T2NB20	1.5	1.1									
CFW300A07P3T2NB20	2	1.5									
CFW300B10P0B2DB20	3	2.2									
CFW300B15P2T2DB20	5	3.7									
CFW300A01P1T4NB20	380-415	Three-phase	A	Not available	0.5					0.37	
CFW300A01P8T4NB20					1	0.75					
CFW300A02P6T4NB20					1.5	1.1					
CFW300A03P5T4NB20					2	1.5					
CFW300A04P8T4NB20					3	2.2					
CFW300B06P5T4NB20					4	3					
CFW300B08P2T4NB20					5	3.7					
CFW300C10P0T4NB20					6	4.5					
CFW300C12P0T4NB20					7.5	5.5					
CFW300C15P0T4NB20					10	7.5					
CFW300B01P1T4DB20					B	Built-in	0.5	0.37			
CFW300B01P8T4DB20							1	0.75			
CFW300B02P6T4DB20			1.5	1.1							
CFW300B03P5T4DB20			2	1.5							
CFW300B04P8T4DB20			3	2.2							
CFW300B06P5T4DB20			4	3							
CFW300B08P2T4DB20			5	3.7							
CFW300C10P0T4DB20			6	4.5							
CFW300C12P0T4DB20			7.5	5.5							
CFW300C15P0T4DB20			10	7.5							
CFW300A01P1T4NB20			440-480	Three-phase			A	Not available	440	0.5	0.37
CFW300A01P8T4NB20										1	0.75
CFW300A02P6T4NB20					1.5	1.1					
CFW300A03P5T4NB20					2	1.5					
CFW300A04P8T4NB20	3	2.2									
CFW300B06P5T4NB20	4	3									
CFW300B08P2T4NB20	5	3.7									
CFW300C10P0T4NB20	6	4.5									
CFW300C12P0T4NB20	7.5	5.5									
CFW300C15P0T4NB20	10	7.5									
CFW300B01P1T4DB20	B	Built-in			0.5	0.37					
CFW300B01P8T4DB20					1	0.75					
CFW300B02P6T4DB20					1.5	1.1					
CFW300B03P5T4DB20					2	1.5					
CFW300B04P8T4DB20					3	2.2					
CFW300B06P5T4DB20					4	3					
CFW300B08P2T4DB20					5	3.7					
CFW300C10P0T4DB20					6	4.5					
CFW300C12P0T4DB20					7.5	5.5					
CFW300C15P0T4DB20					10	7.5					
CFW300C10P0T4DB20					C	Built-in	8.3	4.5			
CFW300C12P0T4DB20							11	5.5			
CFW300C15P0T4DB20	14	7.5									
CFW300C15P0T4DB20	14	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 <sup>2)</sup>				Maximum applicable motor <sup>1)</sup>				
	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	Not available	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		Not available	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	Not available	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		Not available	8.3	6	4.5
CFW300C12P0T4DB20							22	7.5	5.5
CFW300C15P0T4DB20							14	10	7.5











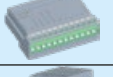




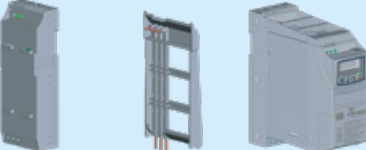
Notes: 1) The power values for the maximum applicable motor shown in the table above are reference values and valid for WEG three-phase, four-pole induction motors with power supply of 220 V, 380 V or 440 V. The proper sizing of the CFW300 must be determined as a function of the rated current of the 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
<b>Upper slot - network communication and accessibility</b>		
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	
<b>Lower slot - input and output (I/O) expansion</b>		
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	
<b>Remote operating interface (HMI)</b>		
CFW300-KHMIR	Kit with remote HMI (CFW300-CRS485 + 3 m cable included)	
<b>Flash memory</b>		
MMF-uDrives	Flash memory module (1 m cable included)	
<b>Filtro RFI</b>		
CFW300-KFA-S1-S2	RFI filter kit CFW300 frame A single-phase (200 V Line) <sup>1)</sup>	
CFW300-KFB-S2	RFI filter kit CFW300 frame B single-phase (200 V Line) <sup>1)</sup>	
CFW300-KFA-T2	RFI filter kit CFW300 frame size A three-phase (200 V Line) <sup>1)</sup>	
CFW300-KFB-T2	RFI filter kit CFW300 frame size B three-phase (200 V Line) <sup>1)</sup>	
CFW300-KFA-T4	RFI filter kit CFW300 frame A three-phase (400 V Line) <sup>2)</sup>	
CFW300-KFB-T4	RFI filter kit CFW300 frame B three-phase (400 V Line) <sup>2)</sup>	
CFW300-KFC-T4	RFI filter kit CFW300 frame C three-phase (400 V Line) <sup>2)</sup>	

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<sup>6)</sup>

Reference	Slots <sup>5)</sup>	Inputs			Outputs			Potentiometer	USB <sup>4)</sup>	Infrared sensors and NTC <sup>3)</sup>	Bluetooth®	Encoder <sup>2)</sup>	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 <sup>1)</sup>		-	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.

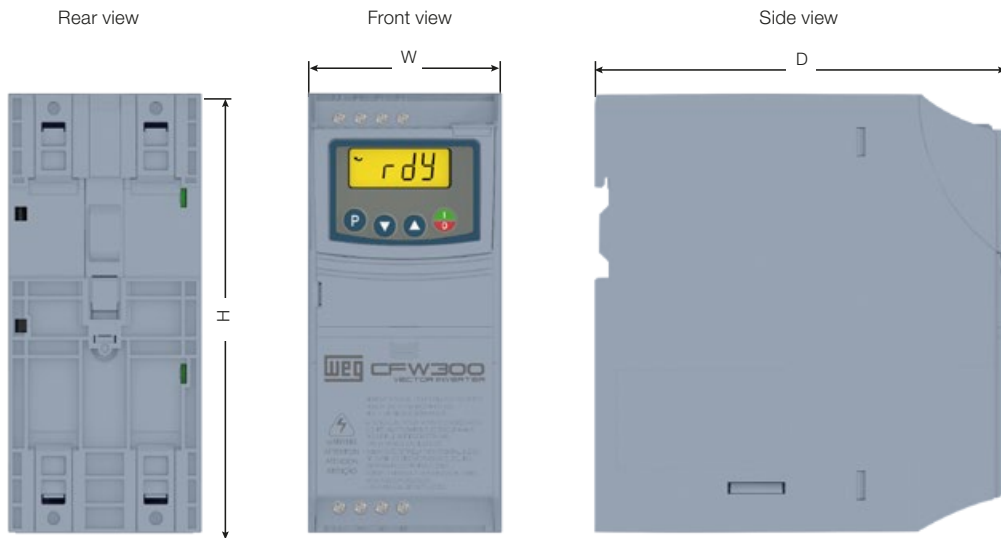
3) Remote control and battery included.

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.

## Dimensions



### Dimensions 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).

### Dimensions 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)

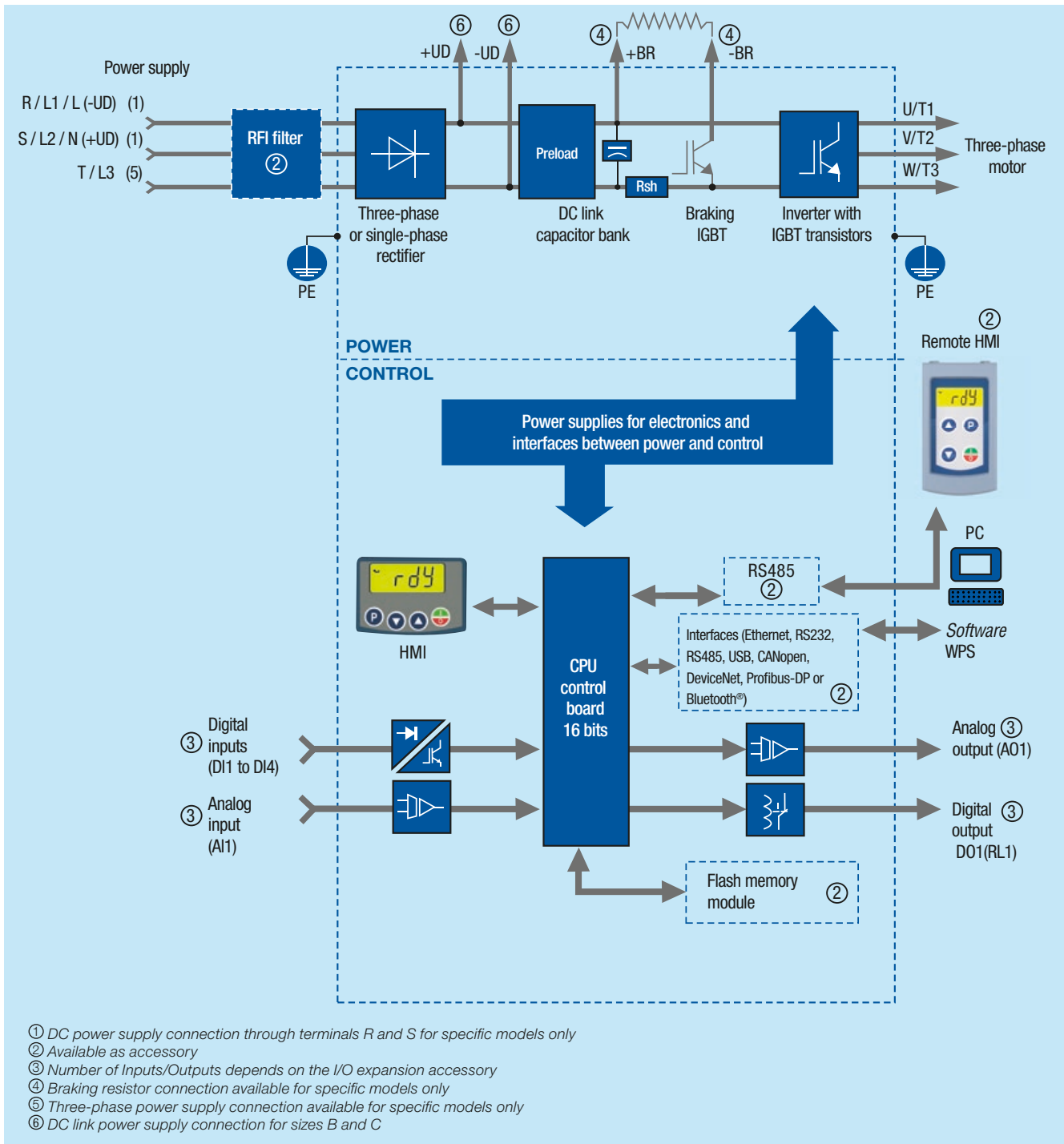
Note: tolerance: +/-1.0 mm (+/-0.039 in).

## Technical Specifications

<b>Power data</b>	Power supply	<p>Voltage tolerance: -15% to +10% of nominal voltage</p> <p>Frequency: 50/60 Hz (48 Hz to 62 Hz)</p> <p>Phase unbalance: <math>\leq 3\%</math> of the rated phase-phase input voltage</p> <p>Overtages according to category III (EN 61010/UL 508C)</p> <p>Transient voltages according to category III</p> <p>Maximum of 10 connections per hour (1 every 6 minutes)</p> <p>Typical efficiency: <math>\geq 97\%</math></p> <p>Classification of chemically active substances: 3C2 level</p> <p>Classification of mechanical conditions (vibration): 3M4 level</p> <p>Audible noise level: <math>&lt; 60</math> dB</p>
<b>Installation and connection</b>	Environment conditions	<p>Surrounding temperature: 0 °C to 50 °C (200 V line) and 0 °C to 40 °C (400 V line)</p> <p>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</p> <p>Air relative humidity: 5% to 95% non-condensing</p> <p>Maximum altitude: up to 1,000 m - rated conditions</p> <p>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</p> <p>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</p> <p>Pollution degree: 2 (according to EN 50178 and UL 508C), with non-conductive pollution. Condensation must not cause conduction of the accumulated residues</p>
<b>Control</b>	Method	<ul style="list-style-type: none"> <li>- V/F (scalar)</li> <li>- V/F (quadratic)</li> <li>- VVV: voltage vector control</li> <li>- PWM SVM (Space Vector Modulation)</li> </ul>
	Output frequency	0 to 400 Hz, resolution of 0.1 Hz
<b>Performance</b>	V/F Control	<p>Speed regulation: 1% of the rated speed (with sleep compensation)</p> <p>Speed variation range: 1:20</p>
	Vector control (VVV)	<p>Speed regulation: 1% of the rated speed</p> <p>Speed variation range: 1:30</p>
<b>Inputs<sup>1)</sup></b>	Analog	<p>1 isolated input: 0 to 10 V or 0 to 20 mA or 4 to 20 mA</p> <p>Linearity error <math>\leq 0.25\%</math></p> <p>Impedance: 100 k<math>\Omega</math> for voltage input, 500 <math>\Omega</math> for current input</p> <p>Programmable functions</p> <p>Maximum in the inputs: 30 V dc</p>
	Digital	<p>4 isolated inputs.</p> <p>Programmable functions:</p> <ul style="list-style-type: none"> <li>- Active high (PNP): maximum low level of 10 V dc minimum high level of 20 V dc</li> <li>- Active low (NPN): maximum low level of 5 V dc minimum high level of 10 V dc</li> </ul> <p>Maximum input voltage of 30 V dc</p> <p>Input current: 11 mA</p> <p>Maximum input current: 20 mA</p>
<b>Outputs<sup>1)</sup></b>	Relay	<p>1 relay with NO/NC contact</p> <p>Maximum voltage: 250 V ac</p> <p>Maximum current of 0.5 A</p> <p>Programmable functions</p>
	Power supply	10 V dc power supply maximum capacity: 50 mA
<b>Safety</b>	Protection	<p>Overcurrent/phase-phase short circuit</p> <p>Under/overvoltage at the power supply</p> <p>Motor overload</p> <p>Overtemperature on the power module (IGBTs)</p> <p>External fault/alarm</p> <p>Programming error</p>
<b>Operating interface (HMI)</b>	Built-in	<p>4 keys: run/stop, increment, decrement and LCD Display setting</p> <p>Accuracy:</p> <ul style="list-style-type: none"> <li>- Current: 10% of the rated current</li> <li>- Speed resolution: 0.1 Hz</li> </ul>
<b>Communication</b>	Fieldbus communication	Modbus-TCP, RS485, RS232, CANopen, DeviceNet, Profibus-DP or USB Port, Bluetooth® (via plug-in modules)
<b>Protection degree</b>	IP20	Frame sizes A, B and C

Notes: 1) Available in the standard version.

# Block Diagram









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## Global Presence

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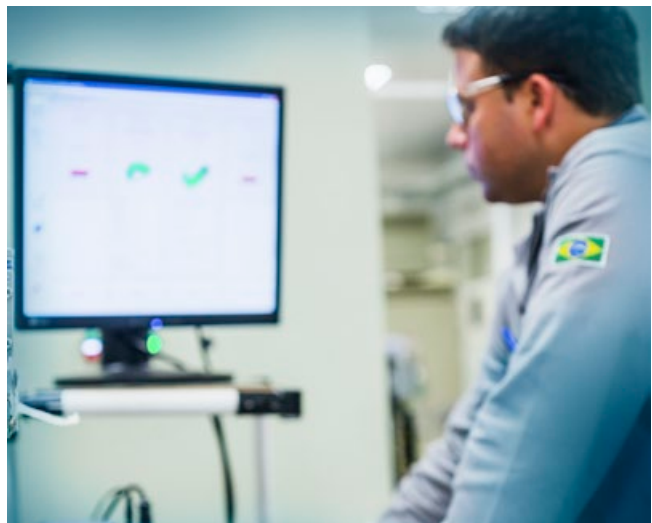
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The values shown are subject to change without prior notice.  
The information contained is reference values.