

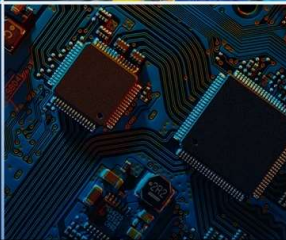
CFW100 Micro Drives



Driving efficiency and sustainability



Class: CFW101
Date: 01/2025



Automation Training

CFW100 – MICRO DRIVES



FEATURES

- Single-phase power - 100-127V / 200-240V
- Scalar Control (V/F), Vector Control (VVW)
- Features available on the standard version: SoftPLC, Flying Starting, Ride Through, Sleep Mode and PID
- HMI included in the standard version
- Flash memory (Module for copying parameters)
- Network communication protocols: Modbus RTU, CANopen
- USB communication
- Operating temperature up to 50 °C
- Plug-and-play expansion modules
- IP20 protection rating



The CFW100 Micro Drives, a versatile and powerful solution for your single-phase power needs, operating within a voltage range of 100-127V or 200-240V. This advanced drive offers both Scalar Control and Vector Control to ensure optimal performance for various applications.

The CFW100 Micro Drives comes packed with features such as SoftPLC, Flying Starting, Ride Through, Sleep Mode, and PID control, making it a comprehensive choice for your automation requirements. Additionally, the drive includes an HMI for easy interaction and control.

For added convenience, the CFW100 Micro Drives are equipped with flash memory modules, allowing for seamless copying of parameters. Network communication is made easy with support for Modbus RTU and CANopen protocols, ensuring smooth integration into your existing systems.

USB communication capabilities further enhance the drive's versatility, while its robust design allows for operation in temperatures up to 50°C. The plug-and-play expansion modules provide flexibility and scalability, and the IP20 protection rating ensures durability and safety in various environments.

Lets go over the CFW100 drive in more detail.

CFW100 – MICRO DRIVES



APPLICATIONS

Exhaust Fans



Kneaders



Centrifugal Pumps



Conveyor Belts



Stirrers/Mixers



Ovens



The CFW100 Micro Drives are designed to meet the demands of a wide range of industrial applications, ensuring optimal performance and reliability.

There are several key applications where the CFW100 Micro Drives excel. These include exhaust fans, which are essential for maintaining air quality and ventilation in industrial settings. Kneaders, which are crucial in the food and chemical industries for mixing and blending materials, also benefit from the precision and control provided by these drives.

Centrifugal pumps, widely used in water treatment and chemical processing, rely on the CFW100 Micro Drives for consistent and efficient operation. Conveyor belts, a staple in manufacturing and logistics, depend on these drives for smooth and reliable movement of goods.

Stirrers and mixers, used in various industries for homogenizing mixtures, achieve better performance with the CFW100 Micro Drives. Lastly, ovens, which are critical in food processing and other thermal applications, benefit from the precise temperature control and energy efficiency offered by these drives.

The CFW100 Micro Drives are a testament to innovation and engineering excellence, providing solutions that enhance productivity and efficiency across multiple industries.

POWER RANGE – IP20



CFW100 – MICRO DRIVES

FRAME	VOLTAGE	Motor HP	Drive Amps
A	Single Phase 120 Vac	1/4 - 1/3	1.6
	Single Phase 240 Vac	1/4 - 1/3	1.6
B	Single Phase 120 Vac	3/4	2.6
	Single Phase 240 Vac	3/4	2.6
C	Single Phase 240 Vac	1	4.2



The CFW100 is available for quarter horse to 1 horse motors, with either single phase 120 or 240 volt input.

EASY TO USE



CFW100 – MICRO DRIVES



1. Built-in HMI
2. Supply Terminals
3. For plug-in modules only
4. Digital inputs
5. Motor output terminals

The CFW100 has 5 key components. The built-in Human-Machine Interface ensures straightforward operation and monitoring. The supply terminals clearly marked to guarantee a reliable power connection.

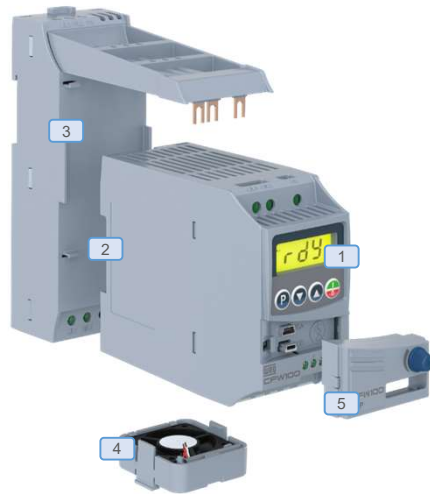
The port for plug-in modules enhance the drive's versatility and functionality. It is worth noting that well this looks like USB ports, they are not.

THE CFW100 has 4 built in digital inputs for seamless integration with the control systems and motor output terminals for direct motor connections.

SIMPLE INSTALLATION



CFW100 – MICRO DRIVES



1. Built-in HMI
2. DIN rail mounting
3. Radio frequency filter
4. Easily removable fan
5. Plug-in modules that allow customizing the application

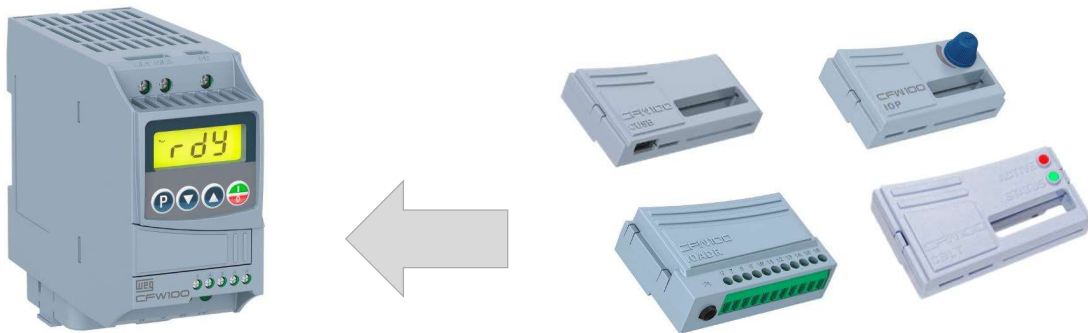
The CFW100 is designed for effortless installation, featuring a built-in HMI that facilitates quick setup. It is mounted on a DIN rail, ensuring swift and secure attachment to the panel. To guarantee reliable performance, a radio frequency filter kit is available, minimizing electromagnetic interference. One of the CFW100's standout features is its easily removable fan, which simplifies maintenance and extends the device's lifespan. Additionally, the plug-in modules offer rapid customization, making the CFW100 a versatile and user-friendly choice.

FLEXIBILITY



CFW100 – MICRO DRIVES

- The wide range of plug-in modules allows you to meet the requirements of any application!
- This allows inventory optimization!



The CFW100 series offers a wide range of plug-in modules, providing unparalleled flexibility and adaptability.

This allows for optimal inventory management and you can limit the amount of part numbers you stock.

PLUG-IN MODULES



CFW100 – MICRO DRIVES

Configuration of the Plug-In Modules

Reference	Inputs		Output		Function				
	Analog	Digital ⁽¹⁾	Analog	Relay digital	USB	Potentiometer	Infrared	Network communication	
CFW100-CRS485	-	-	-	-	-	-	-	1	-
CFW100-CCAN	-	-	-	-	-	-	-	-	1
CFW100-IOP	-	-	-	-	-	1	-	-	-
CFW100-CUSB	-	-	-	-	1	-	-	-	-
CFW100-IOA	1	-	1	-	-	-	-	-	-
CFW100-IOADR	1	-	-	3	-	-	1	-	-
CFW100-IOAR	1	-	-	1	-	-	-	-	-
CFW100-IOD ⁽²⁾	-	4	-	-	-	-	-	-	-



1 Remove the cover



2 Insert the selected plug-in module



Simple!



CRS485



CUSB



IOPDR



CCAN



IOP

The different plug-in modules available for the CFW100 include inputs and outputs, such as analog and digital inputs, relay digital outputs, USB connectivity, potentiometer control, infrared communication, and network communication via RS485 and CANopen.

Built-in HMI

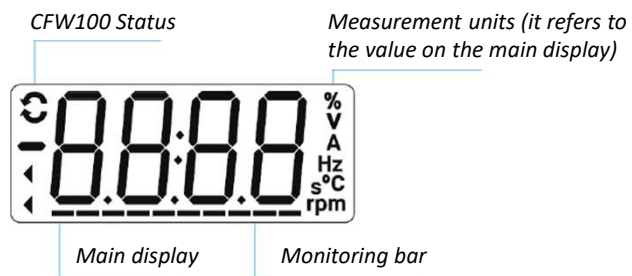


CFW100 – MICRO DRIVES

The
smallest
VFD with 2
parameters



- Friendly programming.
- Display of two parameters at the same time.
- Operation diagnostics, status, alarms, and faults.



The built-in HMI offers friendly programming.

The HMI provides comprehensive operation diagnostics, status updates, alarms, and fault notifications, ensuring optimal performance and reliability.

FLASH MEMORY MODULE - MMF



CFW100 – MICRO DRIVES



- It allows copying parameters and programming in ladder using the SoftPLC.
- Internal battery with back up time for at least 5,000 procedures.
- No need to power up the VFD to copy parameters.
- Buttons to copy/download parameters between the MMF module and the inverter.
- Password to access the user program written on the SoftPLC.

The Flash Memory Module (MMF) for CFW100 Micro Drives. This module allows users to effortlessly copy parameters and program in ladder using the SoftPLC, ensuring a seamless and efficient workflow.

Equipped with an internal battery, the MMF offers a remarkable backup time for at least 5,000 procedures, providing reliability and peace of mind.

The MMF module is user-friendly, featuring intuitive buttons that facilitate the copying and downloading of parameters between the module and the inverter. Additionally, it includes a password protection feature to access the user program written on the SoftPLC, ensuring your plc program remains secure.

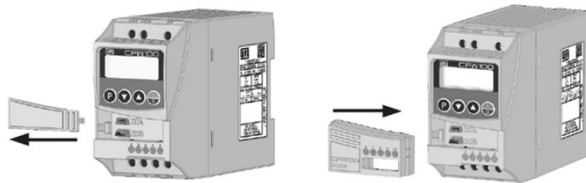
REMOTE HMI



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- Intuitive and easy-to-use HMI.
- Display of up to two variables at the same time on the home screen.
- Indication of engineering units and VFD status.
- Connection through the CFW100-CRS485.
- Easy connection via USB cable.
- When the remote HMI (CFW100-HMIR) is in use, the local HMI remains inactive.



The Remote HMI for CFW100 is a user-friendly and intuitive interface designed to enhance your control experience. This advanced HMI allows you to display up to two variables simultaneously on the home screen, providing clear and immediate insights into your system's performance. It also indicates engineering units and VFD status, ensuring you have all the critical information at your fingertips.

Connecting the Remote HMI is straightforward, utilizing the CFW100-CRS485 for seamless integration. Additionally, the easy connection via USB cable simplifies the setup process, making it accessible for users of all technical levels. When the remote HMI is in use, the local HMI remains inactive, ensuring there is no conflict between interfaces.

INFRARED REMOTE CONTROL



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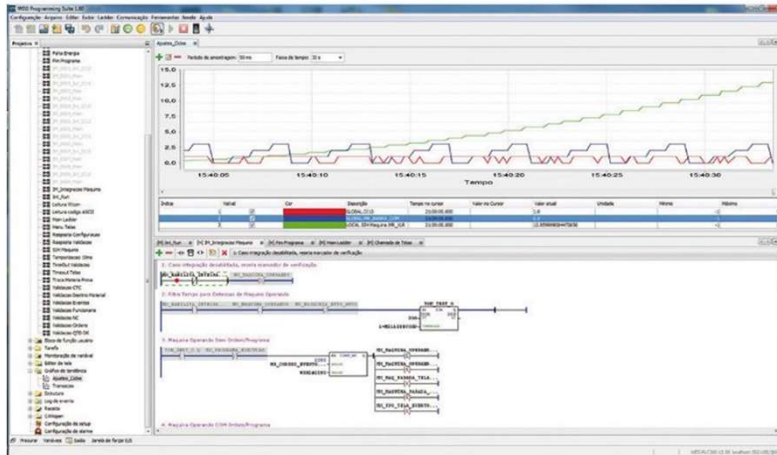


The CFW100 has the ability to have infra-red remote control system. The CFW100-IOADR module features an infrared remote control and a thermistor input, providing precise temperature monitoring and control.

WEG Programming Software

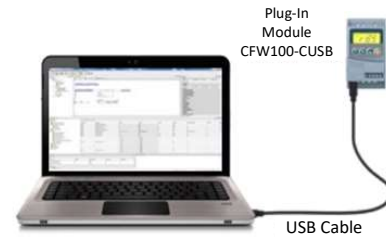


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Connect, Configure,
Program, and Monitor
using WEG WPS
Software

Free software! Access:
www.weg.net

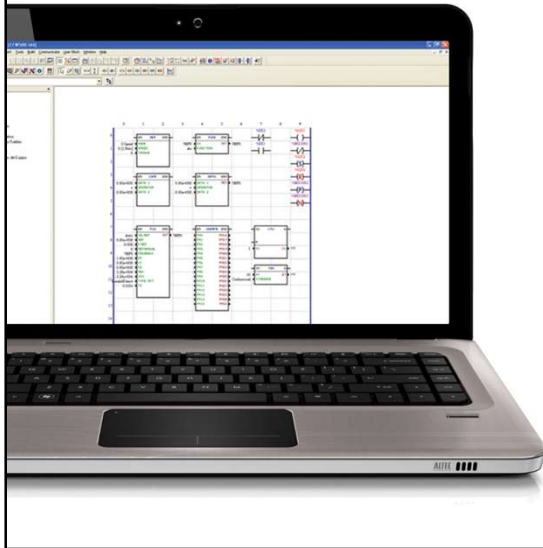


The CFW100 can be configured, programmed, and monitored using WPS software, which is available for free at WEG.net.

SOFTPLC FUNCTION



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- PLC function in the VFD itself.
- Internal memory capacity: 4k bytes (user program) and 408 bytes for parameters.
- Programming window similar to the CFW500 and CFW11.
- Online programming transfer and monitoring via plug-in module: RS485 or USB.
- Ladder programming language.
- 50 configurable user parameters.
- Access to all parameters of the CFW100, I/O, and HMI.

Free software! Access: www.weg.net

The WPS software is also used to setup the soft PLC program that is supported by the CFW100. This soft program is programmed using ladder logic programming. It allowed up to 50 configurable user parameters and you have access to all the CFW100 parameters, IO, and HMI.



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Thank you for your
time and attention.



Transforming energy in solutions. www.weg.net



Thank you for taking time to learn about the CFW100. Make sure you take the test before continuing.