

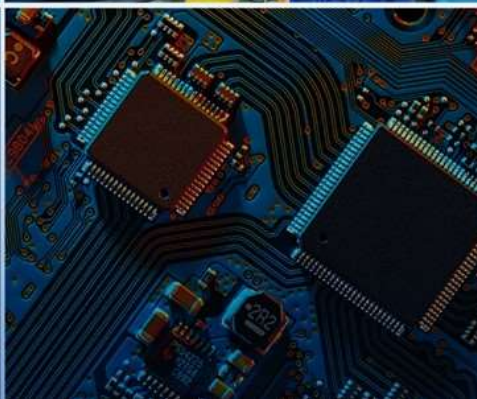
CFW500 Overview



Driving efficiency and sustainability



Class: CFW501
Version: 12.2024



Automation Training

FEATURES



CFW500 – MACHINERY DRIVES

- V/Hz, Vector Control modes (VVW), Sensorless and Closed loop with encoder and Permanent Magnet Motor Control (VVW PM)
- SoftPLC
- Integrated HMI
- PID built-in
- Optional Flash Memory (External memory module)
- Fieldbus: Modbus RTU, CANopen, DeviceNet, EtherNet/IP, Modbus-TCP, Profinet-IO and Profibus-DP
- USB communication
- Ambient temperature up to 50 °C (40 °C side by side)
- Flexible Interface Modules “Plug-In”
- Safety functions STO and SS1, classified as SIL3, cat. 4 / PLe
- Available in IP20, Nema type 1 (with kit), and IP66 / N4X
- IP66 / N4X version available with and without disconnect



POWER RANGES – IP20 VERSION



CFW500 – MACHINERY DRIVES

SIZE	VOLTAGE	HP	KW
A	220 Vac / 1F	0.25 - 2.0	0.18 - 1.5
	220 Vac / 3F	0.25 - 3.0	0.18 - 2.2
	440 Vac / 3F	0.5 - 4.0	0.37 - 3.0
B	220 Vac / 1F	2.0 - 3.0	1.5 - 2.2
	220 Vac / 3F	2.0 - 5.0	1.5 - 3.7
	440 Vac / 3F	1.5 - 6.0	1.1 - 4.5
C	220 Vac / 3F	7.5	5.5
	440 Vac / 3F	10 - 12.5	7.5 - 9.2
	575 Vac / 3F	1.0 - 10	0.75 - 7.5
D	220 Vac / 3F	10 - 15	7.5 - 11
	440 Vac / 3F	15 - 20	11 - 15
E	220 Vac / 3F	20	15
	440 Vac / 3F	30	22
F	220 Vac / 3F	25 - 30	18.5 - 22
	440 Vac / 3F	60 - 75	45 - 55
G	220 Vac / 3F	40 - 60	30 - 45
	440 Vac / 3F	75 - 150	55 - 110



POWER RANGES – IP66 VERSION



CFW500 – MACHINERY DRIVES



SIZE	VOLTAGE	HP	KW
A	220 Vac / 1F	0.25 - 3.0	0.18 - 2.2
	220 Vac / 3F	5.0	3.7
	440 Vac / 3F	0.5 - 6.0	0.37 - 4.5
B	220 Vac / 3F	7.5 - 12.5	5.5 - 9.2
	440 Vac / 3F	10 - 20	7.5 - 15
	575 Vac / 3F	1.0 - 10	0.75 - 7.5

SIMPLIFIED INSTALLATION



CFW500 – MACHINERY DRIVES



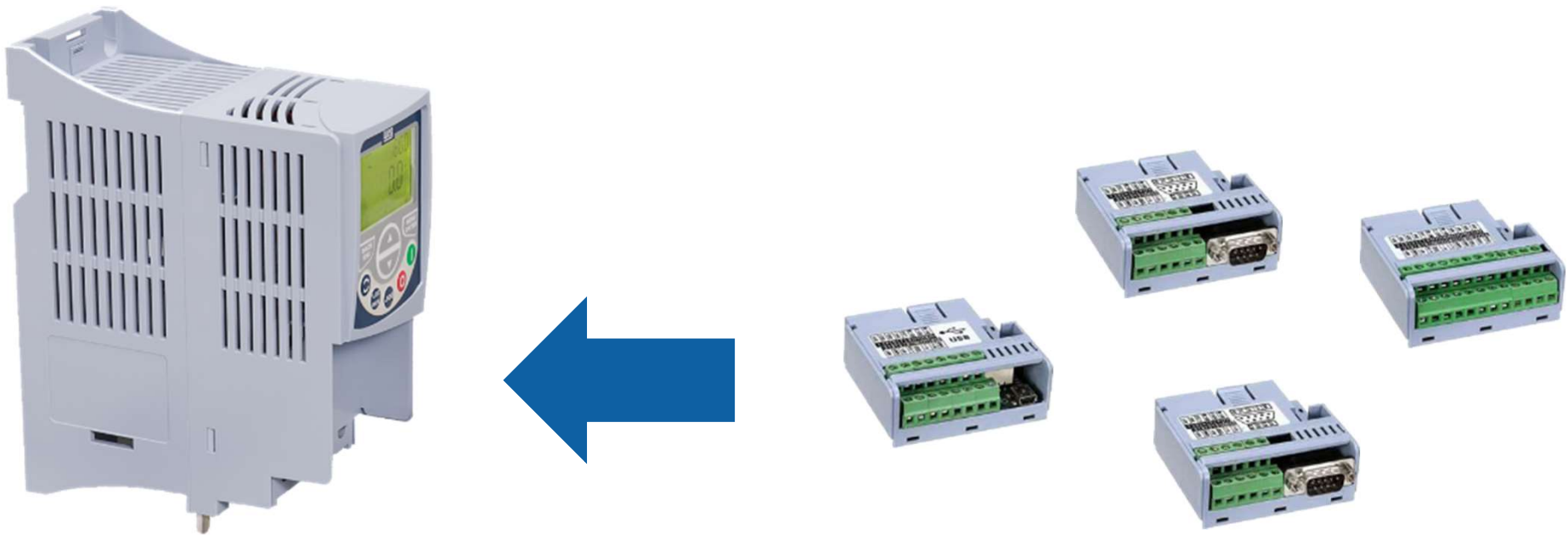
1. HMI Built-in
2. Surface Mounting
3. DIN rail Mounting
4. Detachable fans make it easier to maintain
5. Plug-in modules (product can be customized with accessories acquired separately)
6. Front cover

FLEXIBILITY



CFW500 – MACHINERY DRIVES

- The variety of Plug-in modules allows for flexibility to meet customer needs.
- Allowing for a more flexible and reduced cost of inventory.



PLUG-IN MODULES

CFW500 – MACHINERY DRIVES



Configuration of the Plug-In Modules¹⁾

Plug-in module	Functions																
	Inputs		Outputs			STO/SS1	USB port	Input for Encoder ²⁾	Fieldbus networks							Supply	
	Digital	Analog	Analog	Digital relay	Digital transistor				CANopen DeviceNet	RS232	RS485	Profibus-DP	EtherNet/IP	Modbus-TCP	PROFINET IO	10 V	24 V
CFW500-IOS	4	1	1	1	1	-	-	-	-	-	1	-	-	-	-	1	1
CFW500-IOD	8	1	1	1	4	-	-	-	-	-	1	-	-	-	-	1	1
CFW500-IOAD	6	3	2	1	3	-	-	-	-	-	1	-	-	-	-	1	1
CFW500-IOR-B	5 ²⁾	1	1	4	1	-	-	-	-	-	1	-	-	-	-	1	1
CFW500-ENC	5 ²⁾	1	1	4	1	-	-	1	-	-	1	-	-	-	-	1	1
CFW500-CUSB	4	1	1	1	1	-	1	-	-	-	1	-	-	-	-	1	1
CFW500-SFY2 ¹⁾	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
CFW500-CCAN	2	1	1	1	1	-	-	-	1	-	1	-	-	-	-	1	-
CFW500-CRS232	2	1	1	1	1	-	-	-	-	1	1	-	-	-	-	-	1
CFW500-CRS485-B	4	2	1	2	1	-	-	-	-	-	2	-	-	-	-	1	1
CFW500-CPDP	2	1	1	1	1	-	-	-	-	-	1	1	-	-	-	-	1
CFW500-CETH-IP	2	1	1	1	1	-	-	-	-	-	1	-	1	-	-	-	1
CFW500-CEMB-TCP	2	1	1	1	1	-	-	-	-	-	1	-	-	1	-	-	1
CFW500-CEPN-IO	2	1	1	1	1	-	-	-	-	-	1	-	-	-	1	-	1



CRS232,
CRS485 and
CPDP



CUSB



IOD, IOR,
IOAD and ENC



IOS



CETH, CEMB
and CEPN

ETHERNET DUAL-PORT



CFW500 – MACHINERY DRIVES

- Module will be compatible with Ethernet IP and Modbus TCP protocols.
- Supports topologies: Star with external switch, Daisy chain.
- With LED Status Indicators.
- Compatible: CFW500 G2 drive must have FM V3.9X or above.



Memory Card- MMF



CFW500 – MACHINERY DRIVES



- Allows for download of drive parameters and PLC code (SoftPLC).
- Power supplied by internal batteries (3xAAA) with autonomy for 5000 procedures (minimum).
- There is no need to power up the VFD to use it.
- Dip Switch selection to download/upload parameters and user program from/to the MMF to/from the drive.
- Password to access user program written in the Soft PLC
- Compatible with all plug-in modules.
- It stores two different user programs.

SAFETY FUNCTION MODULE – SFY2



CFW500 – MACHINERY DRIVES



- Provides machine builders with a cost-effective solution.
- Reduce the risk of unexpected and hazardous movement in industrial machines and processes.
- Less components, no need for additional wiring, saving space and installation costs.
- Easier installation, commissioning and maintenance
- No electromechanical components, meaning faster responses, and a higher degree of productivity.
- STO/SS1 Safety Functions fulfills requirements for safety performance SIL 3 / PL e.



SECURITY FUNCTION MODULE – SFY2



CFW500 – MACHINERY DRIVES

IP20 protection degree with safety functions STO and SS1



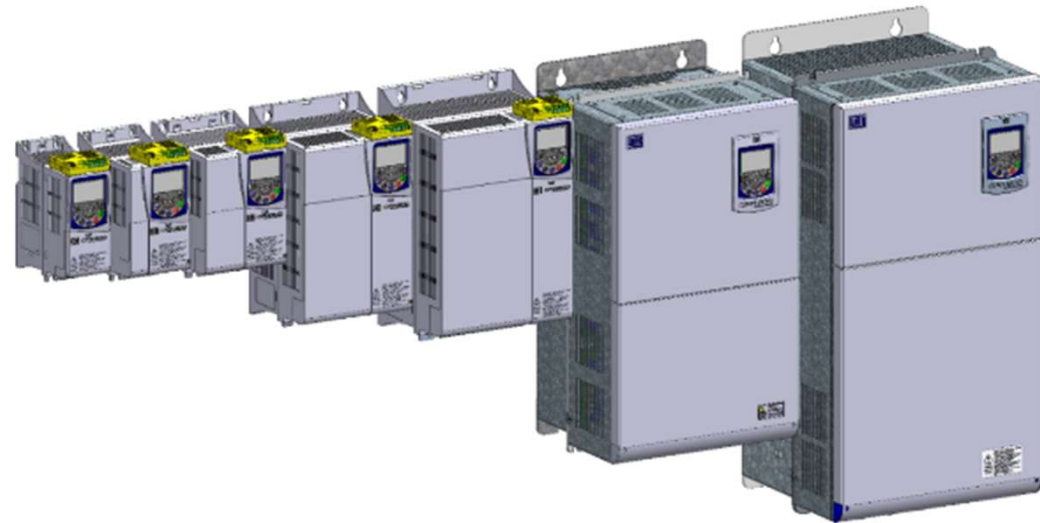
On top in frames A to E



Inside in frames F and G



Inside in IP66 / N4X versions



Built-in HMI



CFW500 – MACHINERY DRIVES

User-friendly Programming

- Oriented Startup: step-by-step programming
- Soft keys: shortcut to parameters
- Parameter Groups: direct access to parameters



REMOTE HMI



CFW500 – MACHINERY DRIVES

- Intuitive and easy-to-use keypad
- Reading of three variables at the same time.
- Indication of engineering units and VFD Status.
- 5 Digits resolution with 126 segments.



REMOTE HMI – ADVANCED TEXT



CFW500 – MACHINERY DRIVES



- Graphic display with backlight;
- Soft Keys for easy operation
- Real-time clock (RTC).
- Parameters in the form of menus
- Language selection: English, Spanish and Portuguese

OPTIONS AND ACCESSORIES



CFW500 – MACHINERY DRIVES



Braking IGBT

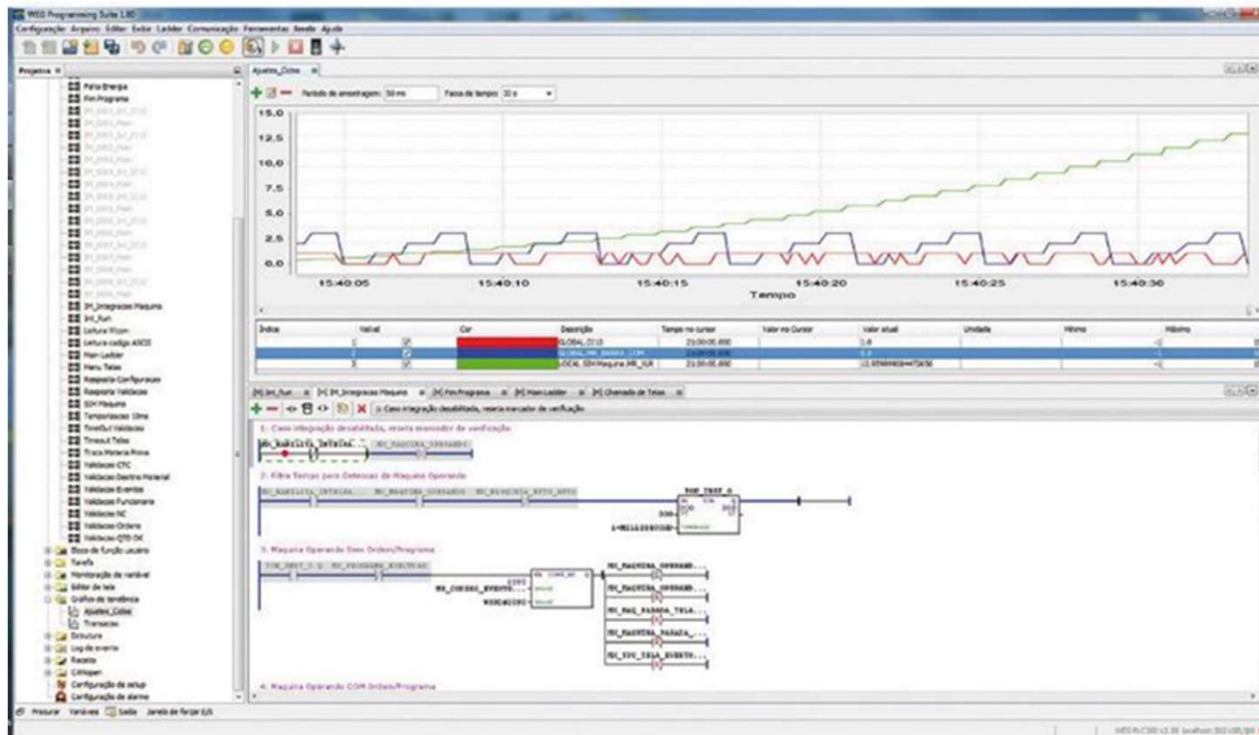
Available for all frame sizes, except for frame A of IP20 version.
The drive presents DB on the part number

NEMA1 Kit

The enclosure complies with North American standards.

CONFIGURATION VIA SOFTWARE

CFW500 – MACHINERY DRIVES



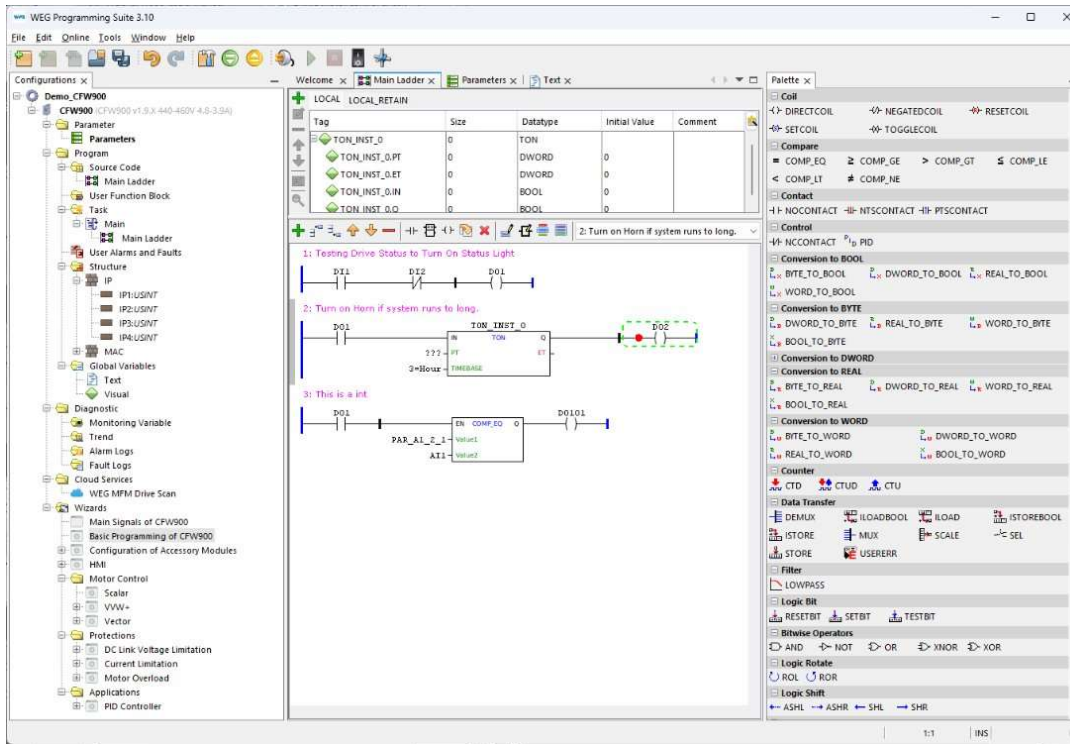
Connect, Configure,
Program, and Monitor using
WEG WPS Software

Free software! Download at: www.weg.net



SOFTPLC FUNCTION

CFW500 – MACHINERY DRIVES



Free software! Download at: www.weg.net

- PLC functions in the VFD.
- Programmable through WLS software.
- Memory Capacity: 8k bytes (user program), 7788 bytes for the PLC code, and 404 bytes for parameters.
- Online user program transferring and monitoring via plug-in module RS232, RS485, or USB.
- Ladder language programming.
- 50 configurable user parameters.
- Access to all CFW500 parameters, I/Os, and keypad.

Pump Genius



CFW500 – MACHINERY DRIVES

PUMP GENIUS

simplex

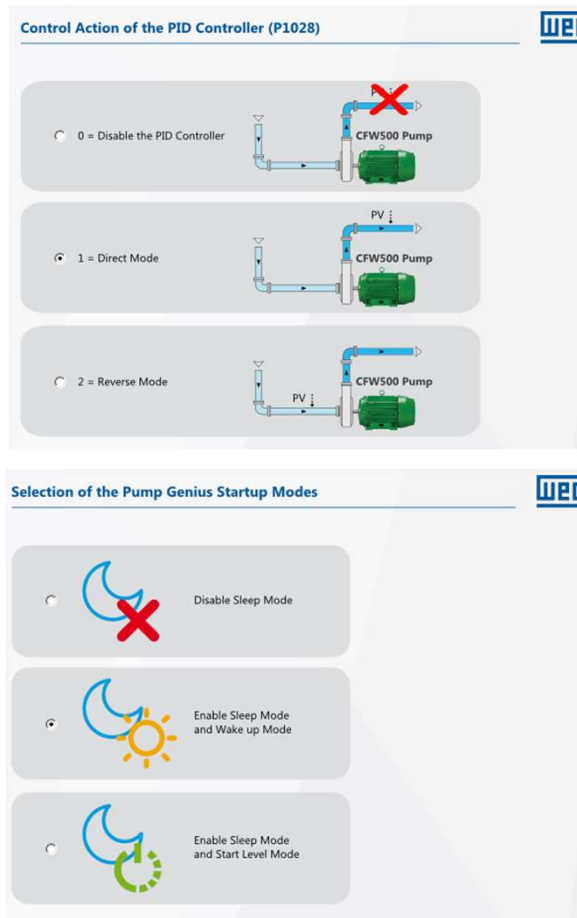
The Simplex software adds ideal features to the VSD for a single pump control.

multipump

Multipump allows driving two or more pumps with only one VSD.

multiplex

With Multiplex the VSDs control, monitor, and manage the entire system on their own.



- Dedicated functions for pumping applications, pre-programmed on the drive.
- Simple and friendly interface through WLP software to adjust the application parameters

Free software!

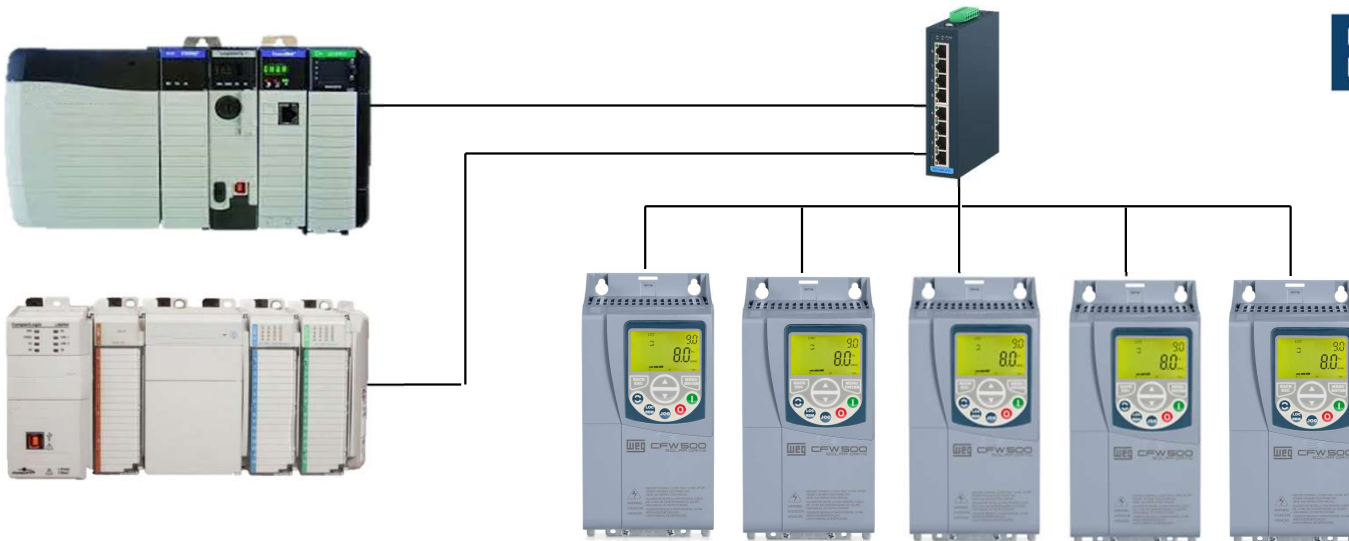
Download at: www.weg.net

CFW500 AOI



Requirements

- ControlLogix or CompactLogix PLC controller running ver. 20+ firmware
- 10 mb or faster ethernet network with IP connectivity
- IP addresses for both the PLC and CFW500



EtherNet/IP™

CERTIFICATIONS



CFW500 – MACHINERY DRIVES





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Thank you for your
time and attention.



Transforming energy in solutions. www.weg.net

