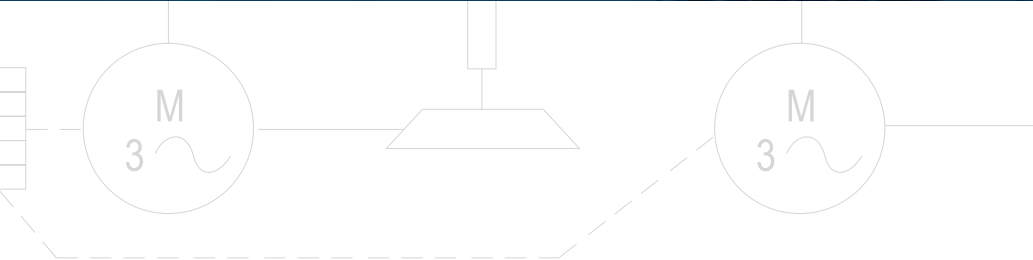
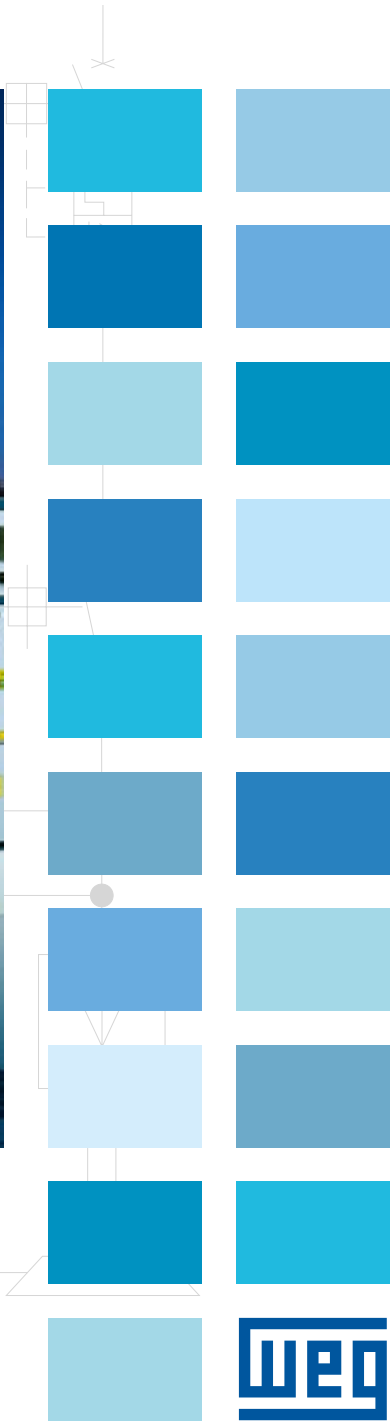


# Automation Product Line



## Motor Start and Protection

### CWB



Start with CWB contactor and MPW motor protective circuit breaker

### Contactors

- Compact solution up to 38 A and 45 mm wide
- Built-in auxiliary contacts 1NO + 1NC
- Low energy consumption DC coils allow direct drive of the contactors via PLCs, inverter outputs or soft-starters without requiring an interface relay
- More compact assemblies of motor starters
- Developed according to IEC 60947 and UL 508 international standards
- Wide range of accessories

### CWM



### Modular Contactors

- Complete line from 9 to 800 A (AC-3)
- 3-pole and 4-pole contactors
- Quick mounting on 35 mm DIN rail or screw mounting
- Contactors available in several command voltages and frequencies (AC or DC)
- Direct mounting of contactors on overload relays up to 105 A
- Wide range of accessories
- Easy connection busbars for star-delta or reversing starters interconnection, allowing fast mounting and reducing space

### CWC0



### Compact Contactors

- Complete line from 7 to 22 A (AC-3)
- Quick mounting on 35 mm DIN rail or screw mounting
- Built-in auxiliary contacts up to 16 A
- Low-consumption DC coils, allowing direct connection to PLCs
- Direct mounting on RW17 overload relays
- Same dimensions (AC or DC coil) for models up to 16 A

### RW



### Thermal Overload Relays

- Current setting range from 0.28 to 840 A
- Tripping class 10
- Versions allowing direct mounting to compact contactors/contactors, screw mounting or DIN rail mounting with accessory
- Adjustable multifunction key with HAND, AUTO, H or A functions
- Auxiliary contacts 1NO + 1NC

# Motor Start and Protection

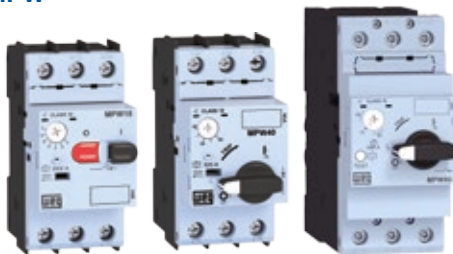
## RW\_E



### Electronic Overload Relays

- Three-pole electronic overload relay with selectable trip class: 10, 20 and 30
- Phase loss protection (time delay <5 seconds)
- Phase unbalance protection (>40% between phases)
- Temperature compensated
- Manual or automatic reset
- Direct mounting on CWB9...38 and CWM9...105 contactors
- Allows individual mounting with accessories
- Auxiliary contacts 1NO + 1NC

## MPW



### Motor-Protective Circuit Breakers

- Motor-protective circuit breakers with high short-circuit breaking capacity up to 100 A ( $U_e \leq 690$  V)
- Compact solution up to 40 A and 45 mm wide and up to 80 A 54 mm wide
- Motor start and protection up to 40 cv at 220 V and 75 cv at 380/440 V
- Adjustable thermal releases to protect the motor against overload
- Magnetic releases for short circuit protection fixed at 13xIn

## PDW



### Starters

- Three-phase contactors in thermoplastic enclosures up to 40 cv at 220 V and 75 cv at 380/440 V, and single-phase contactors
- Star-delta starters in thermoplastic enclosures up to 20 cv at 220 V and 40 cv at 380 V
- Star-delta, reduced-voltage and series-parallel starters in metallic enclosure starting from 15 cv

## RTW17, ERWT, RPW, ERMW, RNW AND RIEW17



### Electronic Relays

- LED status indicators
- Simple configuration and operation
- Adjustments via external selectors
- High-reliability contacts
- Excellent accuracy, repeatability and noise immunity
- Mounting on DIN rail or screw mounting
- Compact enclosure 22.5 mm and 17.5 mm wide
- Available models:
  - Timers: simple function and timing (RTW17), multi timing (RTW-MAT/MBT) or multifunction (ERWT)
  - RIEW digital impulse relay: control of automation systems in homes, hotels and commercial or residential buildings
  - Voltage monitoring relays: single monitoring (RPW) or multifunction (ERMW)
  - Level relays: filling and draining (RNW)

## Motor Start and Protection

### SRW01



### Smart Relay

- Reliability and accuracy in monitoring, operation and protection of low voltage electric motors
  - Supply voltage: 24 V ac / V dc or 110/240 V ac / V dc
  - Plug & Play Philosophy
  - Modular design
  - Communication networks: Modbus-RTU, Profibus-DP, DeviceNet or EtherNET<sup>1)</sup>
  - USB port
  - Free WLP programming software (WEG Ladder Programming)
- Optional Items:
- Operating interface (HMI) for cabinet door mounting: monitoring, parameterization and operation with copy function and serial communication
  - Current and voltage or current measuring units
    - Current Measuring Unit (CMU): current monitoring on the three motor phases
    - Current and Voltage Measuring Unit (CVMU): current monitoring on the three motor phases, voltage monitoring up to 690 V, phase sequence, power factor and other motor powers, allowing the management of electric energy consumption in kW/h

*Note: 1) EtherNET Modbus-TCP, available soon; please, wait!*



## Push Buttons and Pilot Lights

### CSW



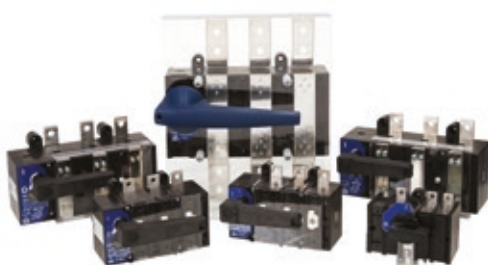
### Pushbuttons, Selector Switches and Pilot Lights

- Developed for different applications, harsh and industrial environments
- Degree of protection IP66
- Illumination blocks with integrated LED (high efficiency)
- Quick and easy mounting system
- High-reliability auxiliary contacts
- Wide range of accessories



## Switch-Disconnectors

### RIW



### Rotary Switch-Disconnecter

- Rated currents: 100 to 1,250 A
- Developed according to international standards IEC 60947-3 and IEC 60947-1
- Housing in self-extinguishing thermoplastic (flammability class V0)
- Auxiliary contact installed on the switch
- Complete accessory line
- Mounting in any position
- Safe operation
- Easy installation

## Switch-Disconnectors

### MSW



#### Compact Switch-Disconnectors

- Rated currents: 12 to 160 A
- Developed according to IEC 60947-3
- Compliance with the requirements of NR12 standard
- Modern and compact design for simple installation
- Complete line of accessories
- Terminals with degree of protection IP20
- Handle with degree of protection IP65
- Handles allow using up to 3 padlocks
- Handles allow door interlocking
- ON/OFF indication on the handle in Portuguese, as required by Brazilian NR12 standard
- Base mounting or top mounting

### RFW



#### Rotary Switch-Disconnectors

- Rated currents: 100 to 630 A
- Developed according to international standards IEC 60947-3 and IEC 60947-1
- Housing in self-extinguishing thermoplastic (flammability class V0)
- Total fuse isolation with the switch in the OFF position
- Auxiliary contact installed on the switch
- Complete line of accessories
- Mounting in any position
- Safe operation
- Easy installation

### FSW



#### Fuse-Switch-Disconnectors

- Rated currents: 100 to 630 A
- Developed according to international standards IEC 60947-3 and IEC 60947-1
- Transparent cover allows viewing the contacts
- Possibility of checking the fuse state through holes in the cover
- Auxiliary contact installed on the switch
- Fast fuse replacement
- Safe operation
- Easy installation

## Electrical Circuit Protection

### MMW



#### Multimeters of Electrical Quantities

- Direct voltage measurement up to 500 V ac
- Current measurement via CTs (0.05 to 5 A)
- Internal memory for data storage Network Communication via RS485 and Modbus-RTU

## Electrical Circuit Protection

### FU



### aR Ultra-Fast Fuses and gL/gG Circuit Protection

- Class gL/gG - for general electrical circuit protection
- Class aR - for semiconductor protection
- D-type gL/gG fuses with rated currents from 2 to 63 A
- NH-type gL/gG fuses with rated currents from 4 to 630 A
- NH-type aR fuses with nominal currents from 20 to 1,000 A in four sizes
- High breaking capacity (type D = 50 kA, type NH = 120 kA)
- Technical specification according to IEC 60269 standard
- High breaking capacity

### ABW



### Air Circuit Breaker

- Rated currents: 800 to 6,300 A
- Available in two versions: fixed and withdrawable
- Short-circuit breaking capacity up to 120 kA (380/415 V)
- Standard protection units with:
  - LSIG protection
- Protection units with option of:
  - Earth leakage protection
  - Network communication
- Compact model
- Wide range of accessories
- More built-in protections as default
- Network communication: Modbus and Profibus (optional)

### VBW



### Vacuum Circuit Breaker

- Rated currents: 630 to 2,000 A
- Voltage class: 17.5 kV
- Short-circuit breaking capacity: 25 kA
- Complete line of accessories
- Robust and compact structure
- Vacuum-insulated ceramic bottle

### ACW



### Molded-Case Circuit Breaker

- Rated currents: from 20 to 1,600 A
- Short-circuit breaking capacity up to 200 kA (200/240 V)
- Broad range of internal and external accessories
- Trigger options:
  - Adjustable thermal and fixed magnetic
  - Adjustable thermal and magnetic
  - Electronic
  - Magnetic only
- Technical specifications according to IEC/EN 60947-2

## Electrical Circuit Protection

### AGW



#### Molded-Case Circuit Breaker

- Designed in compliance with IEC 60947-2 standard
- Breaking capacity from 18 to 45 kA @ 380 V
- Available in 4 frames: currents from 15 to 800 A
- Complete range of accessories

### DWB/DWA - DWB/DWM - DWB/DWG - IWA



#### Molded-Case Circuit Breakers

- WEG line of circuit breakers:
  - DWB/DWA Line - electrical circuit protection
  - DWB/DWM Line - motor protection
  - DWB/DWG Line - generator protection
  - IWB and IWA Line - electrical circuit switch-disconnection
- Rated currents: 16 to 1,600 A
- Short-circuit breaking capacity up to 80 kA (380/415 V)
- Models with thermal and adjustable magnetic triggers
- Broad range of internal and external accessories
- Technical specifications according to IEC/EN 60947-2
- DWB1000 and DWB1600 with LSI electronic protection

### VBWK



#### Input Module in MV for Masonry Installations

- Installation in masonry cabinets
- Vacuum-arc extinguishing technology
- Robust and compact structure
- Protection relay homologated by the utility companies
- Maintenance-free equipment in the primary part
- Visual indication of the VBWK operating conditions
- Input and output connections prepared to receive cables or rods
- Easy installation
- Supplied assembled with all the equipment interconnected, tested and ready for energizing

### MDWH



#### Miniature Circuit Breakers 10 kA

- Curves B and C
- Rated currents: from 6 to 63 A
- 1, 2, 3 and 4 poles
- Breaking capacity:
  - 10 kA - NBR NM 60898 (residential purpose)
  - 10 kA - IEC/EN 60947 (industrial purpose)
- Side auxiliary contact block
- Possibility of padlock locking (optional)
- Undervoltage coil (optional)
- Side alarm contact block

# Electrical Circuit Protection

## DWP



### Molded-Case Circuit Breakers

- Protection against overload and short-circuit
- Rated currents: 100 to 225 A
- 3-pole
- Breaking capacity: 22 kA at 220/240 V (NBR IEC 60947-2)
- Cable gland (optional accessory)

## MDW



### Miniature Circuit Breakers 3 kA

- Curves B and C
- Rated currents: 2 a 125 A
- 1, 2, 3 and 4 poles
- High breaking capacity:
  - 3 kA - NBR NM 60898 (residential purpose)
  - 5 kA - IEC/EN 60947 (industrial purpose)
- Side auxiliary contact block (optional)
- Padlock (optional)

## SIW



### Switch-Disconnectors

- They disconnect electric circuits with rated currents up to 100 A
- 2, 3 and 4 poles
- According to standard IEC 60947-3
- Possibility of padlock locking (optional)
- Auxiliary contact block (optional)

## RDW



### Residual Current Circuit Breakers

- Current leakage protection
- 30 mA sensitivity (life protection) or 300 mA (installation protection)
- 2 and 4 poles
- Rated currents: 25 to 100 A
- Padlock (optional)

## SPW



### Surge Suppressors

- Protection of equipment and installations
- Class I (direct discharges) and II (indirect discharges):
  - 12, 20, 45 and 60 kA (class II)
  - 12.5 kA (class II / I)
- Mechanical status indicator on the front of the device
- Plug-in connection
- Remote indication contact (SPWC)

## QDW



### Distribution Boards

- Installation of 4, 8, 12, 18, 24 and 36 circuit breaker modules
- Wall and flush models
- Smoked and white cover finish
- Connection and distribution busbars (optional)
- Neutral and ground busbars (optional)
- Complete line of accessories



## Electrical Circuit Protection

### TTW01-QD



#### Distribution Boards

- Simplified installation and operations
- Robust and compact structure
- In accordance with the applicable safety standards
- Metal boards in a single set, allowing faster assembly and greater robustness in handling and maintenance
- Wide range of mounting kits, offering a great variety of arrangements

## Shielded Busbars

### BWW



#### Shielded Busbars

- Fast and safe installation
- Flexibility in the relocation of electric energy consumption points
- Low maintenance
- Reduced installation space in relation to the conventional cable method
- Product manufactured and tested according to NBR IEC 60439-2 and IEC 61439-6, ensuring performance and safety of operation
- Fire protection barriers
- Aluminum enclosures, eliminating excessive heating and increasing current capacity

## Industrial Plugs and Sockets

### PIW

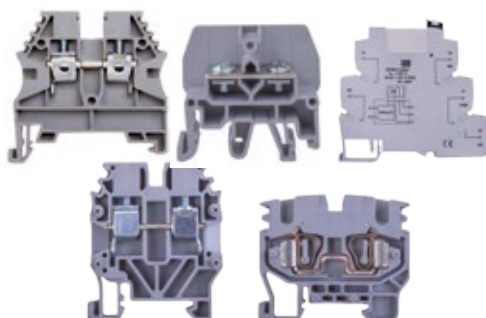


#### Flush and Surface-Mounting Plugs, Connectors and Sockets

- Interchangeable with other products developed according to IEC 60309
- Resistant to impacts and corrosion
- Protection against indirect contact
- Housing in self-extinguishing thermoplastic PA6 (flammability class V0)
- Rated operating voltage:
  - 100/130 V ac - yellow
  - 220/240 V ac - blue
  - 380/440 V ac - red
- Insulation voltage: 600 V ac
- Rated currents: 16 A, 32 A, 63 A and 125 A
- Number of poles: 3 (2P+G), 4 (3P+G) and 5 (3P+G+N)
- Frequency: 50 / 60 Hz

## Electrical Connectors

### BTW



#### Terminal Blocks

- Screw line: cables from 0.5 to 240 mm<sup>2</sup>
- Cage clamp line: cables from 0.5 to 10 mm<sup>2</sup>
- Push-in line: cables 0.5 to 10 mm<sup>2</sup>
- Lug line: cables 0.5 to 10 mm<sup>2</sup>
- Relay line
  - Reversible contact
  - Plug-in relay
- Mini Terminal Screw Line: cables 0.5 to 4 mm<sup>2</sup>
- Mini Terminal Cage Clamp Line cables: 0.5 to 2.5 mm<sup>2</sup>
- Wide range of accessories
- Many options of identifiers and markers

### Plotter



#### Plotter

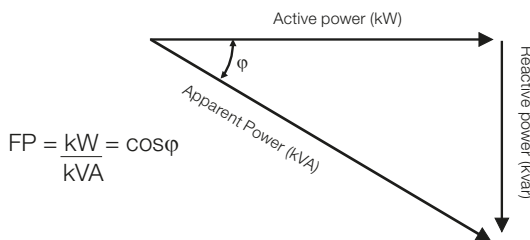
- A3 printing area (440 mm x 305 mm) and A4 (297 mm x 210 mm)
- Allows quick change of printing plates
- Able to print on elements up to 10.5 mm high
- Automatic calibration - prevents manual adjustments
- USB connection
- Complete line of accessories

# Power Factor Correction



In a three-phase power line, three quantities represents the electrical installation:

- Active power: kW (generates work)
- Reactive power: kvar (creates magnetic field)
- Apparent power: kVA (total power consumed)



$$FP = \frac{kW}{kVA} = \cos\phi$$

(The more kvar circulates through the line and the transformer/generator, the higher the kVA consumed and the lower the power factor.)

## Power Factor Correction Capacitors

- Coils produced with self-healing, dry dielectric, metalized polypropylene film
- Built-in discharge resistors in three-phase units, modules and banks
- Dielectric losses smaller than 0.4 W/kvar
- Manufactured in 50 and 60 Hz, in accordance with NBR IEC 60831
- Self-healing
- Explosion protection device

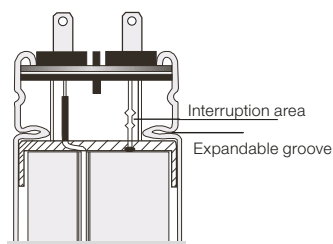


Fig. 1 Internal view of UCWs

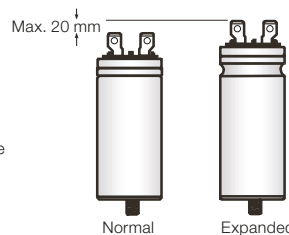


Fig. 2 UCW normal x UCW expanded

### UCW



#### Single-Phase Capacitive Units

- Power up to 10 kvar, diameters from 40 to 75 mm and 535 V ac
- Capacitive units for mounting of modules and three-phase banks
- Replacement of expanded cells in the modules and banks
- Separate discharge resistors

### UCWT



#### Three-Phase Capacitive Units

- Ideal for localized/individual motor correction:
  - 0.5 to 20 kvar at 220 V
  - 0.5 to 35 kvar at 380/440/480 V
  - 40 to 50 kvar at 380/440/480/535 V
- Built-in discharge resistors
- Protecting cover for connections
- Philips and box terminals

### MCW



#### Three-Phase Capacitor Modules

- Power: up to 60 kvar and 480 V ac
- Single-phase capacitive units connected in delta
- Built-in discharge resistors
- You can associate up to 4 modules through interconnection busbars, reaching the equivalent powers to the banks (best cost-benefit)

# Power Factor Correction

## CWMC



### Contactors for Switching Capacitors

- Available for switching capacitor banks of up to 61 kvar at 400/415 V
- Direct mounting on DIN rail 35 mm or screw mounting
- Developed with pre-charge resistors to reduce high in-rush currents

## BCW and BCWP



### Three-Phase Capacitor Banks

- Power: up to 75 kvar and 480 V ac
- Capacitors connected in delta
- General protection with “NH” fuses or circuit breakers
- Electronic timing relay that protects the capacitors in the reenergizing

## PFW01



### Automatic Power Factor Controllers

- Single-phase and three-phase measurement models
- 6 and 12-stage outputs to control contactors to switch capacitors
- Unloaded transformer power factor correction
- Harmonic distortion filter control through output 1 of PFW01
- Measurements of current, voltage, power and harmonic distortion
- Alarms for minimum and maximum voltage, current and power factor, and total voltage harmonic distortion
- Modbus-RTU communication (optional)

## DRW



### Detuning Reactor

- Voltage: 220, 380 and 440 (V)
- Power: 9.0...63.3 (kvar)
- Reduced vibration
- Reduced noise
- Insulation class H (180 °C)
- Insulation voltage of 1 kV
- Use of spacers between winding layers: it aids in thermal dissipation by reducing the operating temperature
- Special silicon steel plate: excellent magnetic properties in all directions, reduced losses and low operating temperature

## Drives

### CFW100



#### Frequency Inverter

- Supply voltage: 200-240 V (single-phase)
- Rated currents: 1.6 A to 4.2 A (0.25 to 1 cv)
- Vector control (VVW) or scalar control (V/F)
- Plug & Play accessories
- Built-in operating (HMI) interface
- Surface or DIN rail mounting
- Protection degree IP20
- Removable fan
- Alarm or fault diagnosis
- Electronic protection against motor overload
- Remote operating (HMI) interface (accessory)
- Flash memory module (accessory)
- Communication RS485 (accessory)
- USB communication (accessory)
- Free programming software: SuperDrive G2 and WLP
- SoftPLC Function
- RFI footprint filter (accessory)

### CFW300



#### Frequency Inverter

- Supply voltage: 110 V or 220 V (single-phase or three-phase)
- Rated currents: from 1.6 to 15.2 A
- 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 internal circuits)
- RoHS: lead free
- Electric energy savings: ideal for applications on pumps and fans
- Easy installation
- Flash memory module (accessory)
- Accessories for functionality expansion: RS485, RS232, CANopen, DeviceNet, Profibus-DP, USB, encoder, infrared remote control and sensor, input and output expansion
- WPS Software: on-line monitoring, programming and configuration of CFW300
- Built-in operating interface (HMI)
- Scalar (V/F) or vector (VVW) control modes
- SoftPLC: built-in software resource, equivalent to a small PLC
- Footprint RFI filter (accessory)

### CFW10



#### Frequency Inverter

- Supply voltage: 110-240 V
- Rated currents: 1.6 to 15 A (0.25 to 5 cv)
- Linear V/F or adjustable quadratic control
- Compact dimensions
- 4 isolated digital inputs
- 1 programmable relay output
- 1 isolated analog input
- Degree of protection IP20
- EMC filter
- Diagnostic functions
- Operating interface (HMI) with 3-digit LED display
- Linear ramp or S-Type, slip compensation, electronic potentiometer, PID, up to 8 fixed preset speeds, JOG, DC breaking
- IGBT module (dynamic breaking)
- Cold plate version for mounting on a dissipating surface

## Drives

### CFW500



#### Frequency Inverter

- Supply voltage: 200-480 V - single-phase or three-phase
- Rated currents: 1 to 56 A (0.25 to 30 cv)
- Controls: vector (VVW), scalar (V/F), vector sensorless or with encoder and energy saving mode (EOC)
- Built-in SoftPLC function
- Multipump applications
- Operating interface (HMI)
- RS485 port (built-in in any model of plug-in module)
- Plug-in cards for resource expansion<sup>1)</sup>
- Free programming software: WLP and SuperDrive G2
- Optional items:
  - RFI filter
  - USB communication port
  - Memory card: allows data transfer (parameters and SoftPLC) between inverters, without the necessity to energize them
  - Network communication: CANopen, DeviceNet, Profibus-DP, RS232, RS485, EtherNET-IP, Modbus-TCP and Profinet-IO

Note: 1) Select the plug-in module + CFW500 without plug-in module.

### MW500



#### Motor Drive

- Three-phase supply voltage: 220-480 V
- Rated currents: 4.3 to 10.0 A (1.5 to 6 cv)
- 4x/IP66 NEMA protection
- Adaptable to WEG W22 motor line or wall mounting
- Switch-disconnector
- LED operation indicators
- Compatible with the main accessories of the CFW500

### CFW700



#### Frequency Inverter

- Supply voltage: 200-600 V
- Rated currents: 2.9 to 211 A (2.0 to 175 cv)
- VVW Voltage Vector WEG, vector with and without encoder (sensorless)
- Plug and Play Philosophy
- Built-in SoftPLC function - adds the functionalities of a PLC to the CFW700
- Smart thermal management
- Degree of protection IP20, IP21, NEMA1 and IP55
- Incorporated DC link inductor
- Incorporated input for incremental encoder and RS485 communication port (Modbus)
- LCD operating interface (HMI) with backlight and USB port
- RFI filter according to EN 61800-3 (optional)
- Communication: CANopen, DeviceNet and Profibus-DP (optional)
- Safe Torque OFF Module (STO) for safety stop:
  - Category 3 PL e/SIL CL 2 certified by TÜV Rheinland® according to EN ISO 13849-1, IEC 61800-5-2, IEC 62061 and IEC 61508 standards
- Flash memory module (optional)
- Free WLP and SuperDrive G2 programming softwares

## Drives

### CFW501 HVAC



#### Frequency Inverter

- Supply voltage: 200-480 V
- Rated currents: 1.0 to 31 A (0.33 to 20 cv)
- Control types: scalar (V/F), vector (VVW) and energy saving (EOC)
- Harmonic Mitigation Technology (HMT) - reduces the quantity of harmonics emitted to the power line (with no need of an input reactance)
- Special functions:
  - Energy saving
  - Dry pump and broken belt to identify load anomalies
  - Short cycle protection to increase the service life of compressor applications
  - Bypass - allows the motor to be directly started from the power supply
  - Fire mode - ideal for applications with smoke exhausters and heating system exhaust fans
  - Sleep mode - optimizes the use of the motor
  - SoftPLC: adds the functionalities of a PLC to the CFW501 HVAC
  - Advanced PID
- Built-in accessories:
  - RFI filter
  - Operating interface (HMI) with specific units for HVAC applications
  - BACnet, Metasys N2 and ModBus-RTU communication protocols
  - SuperDrive G2 and WLP free software

### CFW701 HVAC



#### Frequency Inverter

- Dedicated to HVAC applications (heating, ventilation, air conditioning and refrigeration)
- Supply voltage: 200-480 V ac
- Rated currents: 3.6 to 211 A (2.0 to 150 cv)
- Degree of protection: IP20, IP21, NEMA1 and IP55
- Accessories:
  - RFI filter
  - Inductor on the DC link
  - Operating interface (HMI) with specific units for HVAC applications and USB communication port
  - BACnet, Metasys N2 and ModBus-RTU communication protocols
  - Flash memory module
  - Module with relay outputs
- Special functions:
  - Energy saving
  - Dry pump and broken belt to identify load anomalies
  - Short cycle protection to increase the service life of compressors
  - Bypass - allows the motor to be directly started from the power supply
  - Fire mode - ideal for applications with smoke exhausters and heating system exhaust fans
  - Sleep mode - optimizes the use of the motor
  - SoftPLC: adds the functionalities of a PLC to the CFW701 HVAC
- Optional:
  - Switch-disconnector incorporated to the product
- Free programming software:
  - WLP - for SoftPLC programming
  - SuperDrive G2 - for on-line parameterization, command and monitoring

## Drives

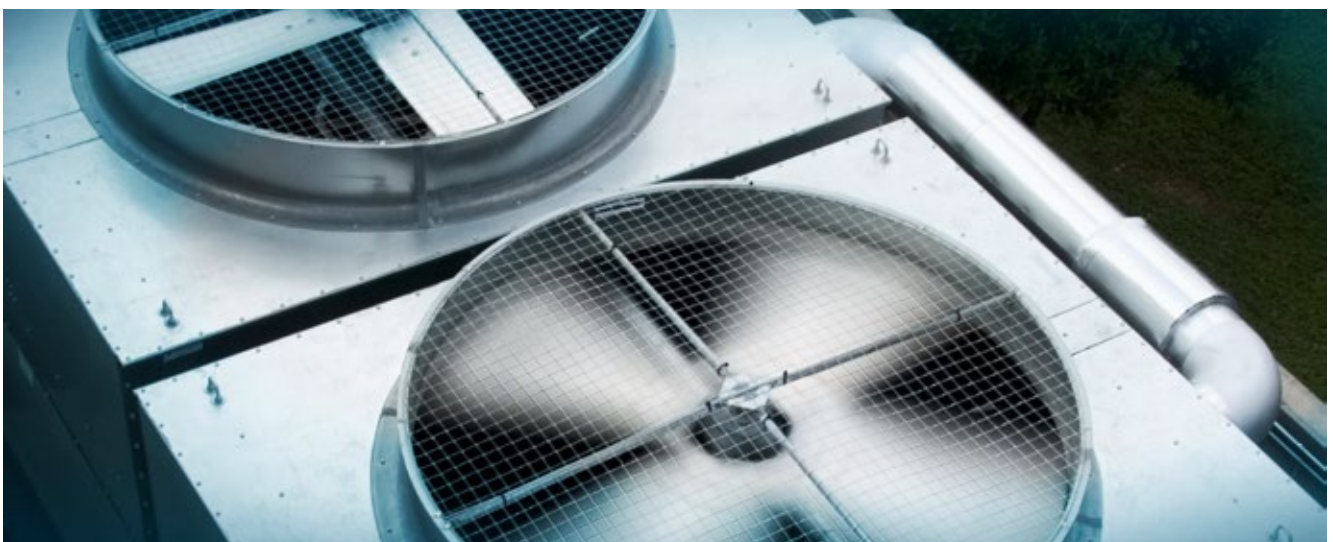
### CFW11



### Frequency Inverter

- Supply voltage: 200-690 V
- Rated currents: 3.6-2,500 A (2 to 2,800 cv)<sup>1)</sup>
- Vectrue Technology<sup>®</sup> - linear and adjustable V/F scalar control, VVW (Voltage Vector WEG), vector sensorless (without encoder) and with encoder, vector WMagnet sensorless (without encoder) and with encoder
- Optimal Breaking<sup>®</sup> - WEG inverter breaking technology
- Optimal Flow<sup>®</sup> - for use in constant torque loads
- Smart thermal management
- Degree of protection: IP20, IP21, NEMA1 and IP55
- Built-in inductor on the DC link
- Single DC busbar
- Plug & Play Philosophy
- USB port
- Real time clock
- Built-in SoftPLC function - adds the functionalities of a PLC to the CFW11
- Operating interface (HMI) with graphic display and backlight
- Optional accessories:
  - Expansion boards of digital and analog inputs and outputs
  - Incremental Encoder Module
  - Safe Torque OFF Module (STO) for safety stop: category 3 PL and SIL CL 2 certified by TÜV Rheinland<sup>®</sup>, according to EN ISO 13849-1, IEC 61800-5-2, IEC 62061 and IEC 61508 standards
  - Communication modules: DeviceNet, EtherNET-IP, Profibus-DP, RS232, RS485, Modbus-TCP and Profinet-IO
- RFI suppressor filter (optional, except for sizes E, F and G, which already have built-in RFI filter)
- Also available in modular versions with air-cooled heatsink (AFW11M) or water-cooled heatsink (AFW11W), complete drive (AFW11) and self-supporting (APW11), all with a wide range of rated currents and small size
- Free SuperDrive G2 Software, for inverter parameterization, command and monitoring with USB connection

*Note: 1) Models above 1,141 A/850 HP are mounted on modular complete drive panels (AFW11M / W).*



## Drives

### APW11



#### Self-Supporting Frequency Inverter

- Streamlining of space and flexibility
- Standard electrical panel with degree of protection IP20/IP21 or assembly kits
- Easy installation and operation
- Supply voltage: 380-480 V
- Rated currents: 105 to 720 A
- Power: 75 to 550 cv
- Inductor on DC link (of the CFW11)
- Low noise level, with RFI Filter (of the CFW11)
- Free SuperDrive G2 programming software
- Ease of use

### AFW11/AFW11C



#### Complete Drive with Frequency Inverter

- Mounting on panel with degree of protection IP42
- Supply voltage: 380 to 480 V - 50/60 Hz
- Rated currents: 70.5 to 720 A - standard/70.5 to 370 A - compact
- Maximum applicable motor: 40 to 600 cv - standard/40 to 250 cv - compact
- Command voltage: 220 V ac - 50/60 Hz
- Optional accessories
- Assembly warranty
- Ease of use

### AFW11M/AFW11W



#### Modular Frequency Inverter

- Ideal solution to drive high-power motors
- Configuration through power modules (books)
- Modular structure - more compact
- Air-cooled (AFW11M) or water-cooled (AFW11W) heatsink
- Input rectifier in 6 pulses, 12 pulses or regenerative
- Supply voltage 380-690 V
- Rated currents: 340 to 2,850 A
- Power: 400 to 2,500 cv
- Same optional items and accessories of the CFW11



### MVW01



#### Medium Voltage Frequency Inverter

- Motor voltages: 2.3 kV up to 6.9 kV
- Power: 500 to 22,500 HP (400 to 16,000 kW)
- Power and control insulated by fiber optic
- Withdrawable power arms for quick and easy replacement
- Easy-to-use graphic operating interface (HMI)
- Compact model with standard 18-pulse rectifier
- Network communication: DeviceNet, Modbus, Profibus-DP and EtherNET
- Dry-type plastic film power capacitors with high reliability and long life
- Imposed voltage
- Air-cooling
- High efficiency (>99%)
- High power factor (>95%)
- Low noise level (<75 dB)
- Low heat dissipation





## Drives

### CVW300



#### Electric Traction Inverter

- Frequency inverter for electric traction applications
- Rated currents: 100, 200 and 400 A peak for 2 minutes
- Supply voltage by battery system of 24 to 72 V dc
- Vector control with encoder
- Connection of the control signals via automobile plug-in connectors
- Coldplate mounting base with options of mounting in systems with air cooling (forced ventilation), water cooling or heatsink
- SoftPLC to implement functions
- Free WLP Software for SoftPLC programming
- Degree of protection IP66
- RS485 interface with Modbus-RTU protocol
- CAN interface with configurable protocol
- Programming via external operating interface (HMI), RS485 or USB (available only on the external HMI)

### CVW900



#### Traction Frequency Inverter

- Supply rated voltage: 650 V dc
- Rated output current: 450 Arms
- 1 minute overload current: 750 Arms
- Rated Switching frequency: 5 kHz
- Water-cooling
- Weight: 65 kg
- High compactness and power density
- Algorithm for control of three-phase permanent magnet motors
- Scalar (V/F), VVW or vector control programmable on the same product
- Vector control with encoder allows high degree of precision in the drive, throughout the speed range (even motor stopped)
- Built-in regenerative braking function
- Integrated PLC11-01 programmable logic controller
- Degree of protection IP66
- Main applications: electric buses, hybrid buses, fuel cell buses, induction and trolleybuses, electric trucks, Bus Rapid Transit (BRT), Light Rail Vehicles vector (LRV) and heavy electric vehicles in general



## Drives

### SSW05



#### Soft-Starter

- Rated currents: 3 to 85 A
- Power: 0.75 to 75 cv
- Voltage: 220 to 575 V
- Incorporated Bypass
- Control with DSP
- Remote operating interface (HMI) (optional)
- Built-in motor protections
- Operation in environments up to 55 °C

### SSW06



#### Soft-Starter

- Currents: 10 to 1,400 A (200-575 V) and 45 to 1,400 A (575-690 V)
- Power: 3 to 2,500 cv
- Incorporated bypass up to 820 A
- Allows motor inside delta connection (6 cables only for 220-575 V models) or standard connection (3 cables)
- Removable operating interface (HMI) with double display (LED/LCD)
- Kick-start function (torque pulse at starting)
- Pump control function for smart control of pumping systems
- Multimotor function
- Built-in motor protections
- Operation in environments up to 55 °C
- Torque control
- Built-in SoftPLC function - adds the functionalities of a PLC to the SSW06
- Input and output expansion module
- Modbus-RTU communication via RS232 (incorporated), Profibus-DP, DeviceNet, EtherNET/IP and Modbus/TCP, RS458 or USB (optional)
- Free SuperDrive G2 programming software

### SSW07



#### Soft-Starter

- Rated currents: 17 to 412 A
- Power: 6 to 450 cv
- Voltage: 220 to 575 V
- Incorporated bypass
- High starting duty
- Total control on the three phases
- Built-in motor protections
- Kick-start function (torque pulse at starting)
- Local or remote operating interface (HMI) (optional)
- Operation in environments up to 55 °C (without current derating for all models)
- Interconnection with Fieldbus communication networks: Modbus-RTU, DeviceNet and Profibus-DP (optional)
- Free SuperDrive G2 programming software

## Drives

### SSW08



#### Soft-Starter

- Rated currents: 17 to 412 A
- Power: 6 to 450 cv
- Voltage: 220 to 575 V
- Incorporated bypass
- High performance
- 2-phase control
- Built-in motor protections
- Kick-start function (torque pulse at starting)
- Local or remote operating interface (HMI) (optional)
- Operation in environments up to 55 °C (without current derating for all models)
- Interconnection with Fieldbus communication networks: Modbus-RTU, DeviceNet and Profibus-DP (optional)
- Free SuperDrive G2 programming software

### SSW900



#### Soft-Starter

- Rated currents: 10 to 412 A
- Removable graphic HMI allows copying and downloading parameters from one SSW900 to another
- HMI with incorporated USB port for communication with the PC
- Monitoring of the variables in graphic mode and configurable initial screens
- Real time clock
- Four selectable languages
- Fault and alarm log saved with time and date, exportable to .csv file
- Supply voltage of 220 to 575 V
- Oriented start-up
- Standard connection (3 cables) or motor inside delta connection (6 cables)
- Control methods: voltage ramp, current limit, current ramp, pump control and torque control
- Pump control function for smart control of pumping systems that avoids hydraulic hammer and pressure overshoots on hydraulic piping
- Integral motor thermal protection
- Increased motor and equipment service life
- Limitation of voltage drops at the start
- Incorporated bypass, providing size reduction and energy savings
- Fire mode (emergency start)
- Operation in ambient temperature up to 55 °C without current derating
- Input for thermistor (PTC)
- Communication accessories: RS485, DeviceNet, Profibus-DP, EtherNET-IP, Modbus-TCP and Profinet-IO



## Drives

### SSW7000



#### Medium Voltage Soft-Starter

- Supply currents: 2.3 kV, 4.16 kV or 6.9 kV
- Power: 600 cv to 7,500 cv (other values on request)
- Rated currents: 125 A, 180 A, 250 A, 300 A, 360 A, 500 A and 600 A
- Degree of protection: IP41, NEMA12
- Operating interface (HMI) with graphic LCD
- Real time clock
- Main and bypass vacuum contactors
- Medium voltage fuses
- Input switch-disconnector
- Power and control insulated by fiber optic
- Flash memory module (optional)
- SoftPLC function
- Free WLP and SuperDrive programming software
- USB connection to PC
- Motor thermal protection - Pt-100 (optional)
- 5 starting modes
- Boards for network communication: DeviceNet, Profibus-DP, EtherNET and Modbus, RS232 or RS485 interfaces (optional)

### ECW500



#### Automatic Voltage Regulator

- Drive of synchronous machines with brushless excitation
- HMI with 2.5" display
- Supply voltage:
  - 85/242 V ac (50/60 Hz)
  - 85/150 V dc
- Field current: 20 A
- Five control modes:
  - MTVC - Voltage control
  - MECC - Current control
  - MTVC\_DROOP - Voltage control mode with reactive droop
  - MPFC - Power factor control
  - MRPC - Reactive power control
- RS485/422 communication

### SCA06



#### Servo Drive

- High-performance servoconverter for speed, torque and servomotor position control
- Supply voltage 220 or 380 V ac
- Precision of movement control
- Operation in closed loop
- Position feedback by resolver
- Independent control and power supply
- Flexibility and integration to drive
- HMI with six-digit LED display
- USB port
- CANopen / DeviceNet in the standard version
- 64-kbyte internal PLC with ladder programming language
- RFI filter (optional)
- Available communication networks: Modbus-RTU, Profibus, EtherCAT, EtherNET-IP and EtherNET-TCP-IP
- Safe Torque OFF Module (STO) of safety stop - Category 4, PLe / SIL CL3



## Drives

### SWA



#### Servomotors

- Supply voltage: 220 V ac or 380 V ac
- Torque: 0.8 to 40 Nm
- Servomotor option with electromagnetic brake at 24 V dc
- Degree of protection IP65
- Internal thermal Protector (PTC) 55°
- Rare earths magnets (neodymium, iron, boron)

### CTW900



#### AC/DC Converter

- Drive and control of direct current (DC) motors
- Rated currents: 20 to 2,000 A<sup>1)</sup>
- Speed or torque control
- Simplified connections to power and control
- Internal supply for the field bridge
- Operating interface (HMI) with LCD display
- USB port for serial communication and software update
- SoftPLC function on the standard CTW900 to create specific programs
- Free programming and monitoring software
- Memory card for backup of parameters and software applications
- 3 options of speed feedback: incremental encoder, DC tachogenerator or counter-electromotive force (CEMF)
- Network communication: DeviceNet, Profibus-DP, EtherNET-IP, Modbus-TCP, Profinet0-IO, RS485 and RS232

*Note: 1) Output currents 1,500 to 2,000 A available soon. Please wait!*

## Programmable Logic Controllers - PLC

### Clic02 3<sup>rd</sup>



#### Programmable Logic Controller

- Maximum configuration of 55 I/O points, using up to 3 expansions
- Power supply in 12 V dc, 24 V dc or 110/220 V ac - 50/60 Hz
- Real time clock
- On-line message visualization and parameter change
- Fast inputs up to 1 kHz
- Pulse train and PWM output
- Modbus communication
- LCD Display (4 lines x 12 characters)
- Arithmetic functions (Addition/sub. Mul/Div)
- PID Control Function
- Free Clic Edit programming software
- Programming in ladder or block diagram of the function

## Programmable Logic Controllers - PLC

### TPW04



#### Programmable Logic Controller

- Supply voltage: 100-240 V ac
- Flexible basic units with 14, 20, 30, 40 and 60 I/O points
- Configurable up to 256 digital points and 64 analog I/O points
- Real time clock
- Fast inputs up to 100 kHz
- Pulse train and PWM output
- Free TPW PC Link programming software
- Built-in Modbus communication (master and slave)
- Communication modules: EtherNET, Profibus-DP and DeviceNet (optional)

## Programmable Logic Controllers - PLC

### PLC300



#### Programmable Logic Controller

- PLC with incorporated HMI, complete and expandable
- 10 digital inputs and 1 analog input
- 9 digital outputs (1 fast) and 1 analog output
- Battery voltage monitoring, informing the replacement moment without losing the application
- PWM ramp function
- Internal flash memory that enables the automatic recovery of the resource in case of battery fault
- 5 incorporated ports: EtherNET, CANopen, RS232, RS485 and USB
- Expansion of digital and analog inputs and outputs via CANopen or CFW11 modules
- SD memory card (Secure Device)<sup>1)</sup> for data, program and event log storage
- Programming in ladder language via WPS software (WEG Programming suite), according to IEC 61131-3
- Built-in encoder input (100 kHz)
- RUW01: 14 - DI and 10 - DO, PNP/NPN at 24 V dc
- RUW01-CN13DI: 13 - DI, PNP/NPN at 24 V dc
- RUW02: 7 - analog inputs 0 to 10 V dc or 4 to 20 mA 24 bits
- RUW04: 7 - J/K type thermocouple inputs 24 bits
- RUW06: 2 analog inputs for load cell
- RUW03-CN8AO: 8 analog outputs of 0 to 10 V dc or 4 to 20 mA
- RUW05-CN4RTD: 4 Pt-100 or Pt-1000 inputs

Note: 1) SD card not included.

## Operating Interface

MT



### Graphic Operating Interfaces (HMIs)

- Color graphic HMIs with touchscreen, available in 4, 3, 7, 10 or 15" models
- Modern visual with flexible and versatile programming software
- Application simulator software
- Degree of protection IP65
- USB, EtherNET, RS232, RS485 and RS422 communication ports

## Solutions for Solar Energy

SIW600

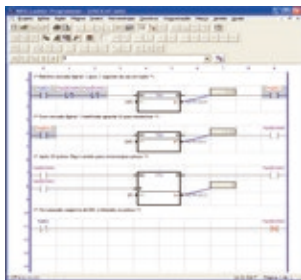


### Solar Inverter

- Application to three-phase system at 380 or 440 V ac
- Direct connection to the line (transformerless)
- Maximum efficiency >98%
- 2 MPPTs for maximum efficiency
- Degree of protection IP65 for external installation
- Externally accessible plug-in connections
- Touch-sensitive keys and alphanumeric LCD display
- Modbus-RTU, EtherNET and USB communication



## Free Software



### WLP - WEG Ladder Programmer

- Development of software applications
- Function programming
- SoftPLC
- Ladder language
- Control mathematical PLC blocks
- On-line monitoring and help
- USB connection



### SuperDrive G2

- USB connection to inverter, servoconverter and soft-starters
- Parameterization, command and signaling
- Recording of software application (via SoftPLC)
- On-line monitoring and help



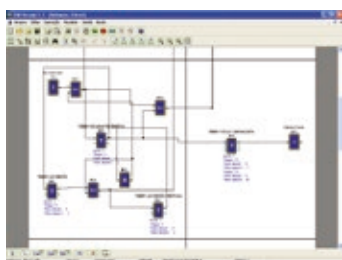
### Trace Function

- Customizable tool that monitors and stores variable registers in the inverter memory, activated by the occurrence of an event (e.g., overload)
- Registration and graphic view of inverter variables
- Excellent tool for fault diagnosis in remote locations
- Simulates an oscilloscope
- Included in SuperDrive G2 software



### TPW - PC Link

- Software to program the TPW controllers
- Programming in ladder language
- On-line monitoring and via graphs
- Hot download (PLC in RUN mode)



### Clic Edit V3

- Programming of the Clic02 3<sup>rd</sup>
- Ladder or FBD language in Portuguese
- On-line editing and monitoring

Available on website: [www.weg.net](http://www.weg.net)





## Free Software



### ADP - HMI Programming

- Easy editing of screens and recipes
- Several incorporated communication protocols
- Alarm editing



### Dimensioning

- Soft-starters (SDW) and servo drives (DSW)
- Help with sizing and specifications
- Various application options
- Different starting conditions
- List of basic starting parameters



### WPS Programming Software

- Ladder programming according to IEC 61131-3
- Integrated tool, same software, enabling screen edition of the HMI, PLC and configuration of the CANopen network
- On-line logic monitoring and charts, recipe edition, SD card file handling



### WEG Equivalent

- On-line tool, available on WEG website which allows users to find equivalent product models and easily replace them with WEG products



### Return On Investment with Frequency Inverters

- Easy to use
- Pumps and fan applications
- Easy visualization of electrical energy savings
- Estimated return on investment

Available on website: [www.weg.net](http://www.weg.net)



## Distribution and Command Electric Systems

### MTW



#### Medium Voltage Switchgear

- Voltage class: 7.2 to 36 kV
- Short-circuit current: 25 / 31.5 / 40 / 50 kA
- Substation of utility companies
- Main disconnection and protection of manufacturing plants and industrial installations
- Pumping stations
- Railroad systems
- Thermal and hydroelectric plants for power generation
- Start of medium-voltage motors
- Unitary substations
- Load switch board panels
- Motor control center
- Internal arc resistant - Classification IAC BFALR/AFLR

### CCW



#### Compact Medium Voltage Switching and Protection Set Up to 20 kA / 24 kV

- Compactness, operating safety and modularity are outstanding characteristics of the Medium Voltage Controlgear and Switchgear of the CCW series
- These arc proof and air insulated switchgear comply with NBR IEC 62271-200 and the requirements of NR10
- Its standardized columns provide versatility so as to economically fulfill a great variety of configurations, topologies and requirements of utility companies
- Modules with circuit breakers: rated current of 630 A
- Modules with switch-disconnectors: rated current of 630 A
- Internal arc resistant - Classification AFL/AFLR

### LCW



#### Low Voltage Panels

- Lower risk of accidents with operators
- Fast and easy maintenance
- Modular system enables easy expansion
- Easy rear access to the electric cable terminals
- Greater reliability on the protection system
- Direct protection: through the tripping devices incorporated to the circuit breakers
- Secondary protection: through the secondary protection relays and CTs (IECs), which can be connected to network (Modbus, DeviceNet, Profibus, IEC 61850)
- Totally tested - TTA/PTTA (according to IEC 60439-1)
- Internal arc resistant
- Rated currents:
  - Main busbar up to 6,000 A
  - Vertical busbar up to 4,000 A
- Constructive form: 3b and 4b

## Distribution and Command Electric Systems

### TTW01



#### Totally Tested Panels

- In accordance with the requirements of NBR IEC 60439-1: 2003
- Operating safety
- Performance reliability
- Fast manufacture and delivery
- Panel assembled by panel builders with the guarantee of WEG quality
- Modularity - allows expansion without requiring electrical/mechanical intervention on the existing panel
- Rated current: main bus up to 3,150 A
- Short-circuit current: 65 kA/11
- Constructive form: 1 and 2b

### MCC



#### Low Voltage Motor Control Centers

- User safety during operation, supervision and maintenance
- Installation in centralized locations to simplify operation and maintenance
- Versatility to command and protect a great number of motors
- Extremely compact design that enables maximum use of space
- Fast and easy maintenance, especially because of the extraction of the drawers and their interchangeability
- Modular system enables easy expansion
- High safety, because it allows the execution of maintenance and other services in a certain device without de-energizing other equipment
- Worldwide standardized Profibus-DP (non-proprietary network) or DeviceNet network
- Communication with other PLCs in open protocol network
- Electric arc resistant: on request
- Short-circuit current: 50/65/80 kA
- Rated current:
- Main busbar up to 5,000 A (other on request)
- Vertical busbar: 630, 800, 1,000 and 1,200 A
- Constructive form: 2, 3 and 4b

### Electrical houses



#### E-Houses

- Reduction of the lead time to assemble the substation
- Greater control on the equipment testing process at the plant and single responsibility/guarantee on the process with a single supplier
- Flexibility for the installations and possibility of relocation without adding major costs
- Convenience for installation in the field (reduced civil works)
- Engineering consolidated in a single machine
- Easy customization to meet all customer needs

# WEG Worldwide Operations

## ARGENTINA

San Francisco - Cordoba  
Phone: +54 3564 421484  
[info-ar@weg.net](mailto:info-ar@weg.net)

Cordoba - Cordoba  
Phone: +54 351 4641366  
[weg-morbe@weg.com.ar](mailto:weg-morbe@weg.com.ar)

Buenos Aires  
Phone: +54 11 42998000  
[ventas@pulverlux.com.ar](mailto:ventas@pulverlux.com.ar)

## AUSTRALIA

Scoresby - Victoria  
Phone: +61 3 97654600  
[info-au@weg.net](mailto:info-au@weg.net)

## AUSTRIA

Markt Piesting - Wiener  
Neustadt-Land  
Phone: +43 2633 4040  
[watt@wattdrive.com](mailto:watt@wattdrive.com)

## BELGIUM

Nivelles - Belgium  
Phone: +32 67 888420  
[info-be@weg.net](mailto:info-be@weg.net)

## BRAZIL

Jaraguá do Sul - Santa Catarina  
Phone: +55 47 32764000  
[info-br@weg.net](mailto:info-br@weg.net)

## CHILE

La Reina - Santiago  
Phone: +56 2 27848900  
[info-cl@weg.net](mailto:info-cl@weg.net)

## CHINA

Nantong - Jiangsu  
Phone: +86 513 85989333  
[info-cn@weg.net](mailto:info-cn@weg.net)

Changzhou - Jiangsu  
Phone: +86 519 88067692  
[info-cn@weg.net](mailto:info-cn@weg.net)

## COLOMBIA

San Cayetano - Bogota  
Phone: +57 1 4160166  
[info-co@weg.net](mailto:info-co@weg.net)

## ECUADOR

El Batan - Quito  
Phone: +593 2 5144339  
[ceccato@weg.net](mailto:ceccato@weg.net)

## FRANCE

Saint-Quentin-Fallavier - Isère  
Phone: +33 4 74991135  
[info-fr@weg.net](mailto:info-fr@weg.net)

## GERMANY

Türnich - Kerpen  
Phone: +49 2237 92910  
[info-de@weg.net](mailto:info-de@weg.net)

Balingen - Baden-Württemberg  
Phone: +49 7433 90410  
[info@weg-antriebe.de](mailto:info@weg-antriebe.de)

Homburg (Efze) - Hesse  
Phone: +49 5681 99520  
[info@akh-antriebstechnik.de](mailto:info@akh-antriebstechnik.de)

## GHANA

Accra  
Phone: +233 30 2766490  
[info@zestghana.com.gh](mailto:info@zestghana.com.gh)

## INDIA

Bangalore - Karnataka  
Phone: +91 80 41282007  
[info-in@weg.net](mailto:info-in@weg.net)

Hosur - Tamil Nadu  
Phone: +91 4344 301577  
[info-in@weg.net](mailto:info-in@weg.net)

## ITALY

Cinisello Balsamo - Milano  
Phone: +39 2 61293535  
[info-it@weg.net](mailto:info-it@weg.net)

## JAPAN

Yokohama - Kanagawa  
Phone: +81 45 5503030  
[info-jp@weg.net](mailto:info-jp@weg.net)

## MALAYSIA

Shah Alam - Selangor  
Phone: +60 3 78591626  
[info@wattdrive.com.my](mailto:info@wattdrive.com.my)

## MEXICO

Huehuetoca - Mexico  
Phone: +52 55 53214275  
[info-mx@weg.net](mailto:info-mx@weg.net)

Tizayuca - Hidalgo  
Phone: +52 77 97963790

## NETHERLANDS

Oldenzaal - Overijssel  
Phone: +31 541 571080  
[info-nl@weg.net](mailto:info-nl@weg.net)

## PERU

La Victoria - Lima  
Phone: +51 1 2097600  
[info-pe@weg.net](mailto:info-pe@weg.net)

## PORTUGAL

Maia - Porto  
Phone: +351 22 9477700  
[info-pt@weg.net](mailto:info-pt@weg.net)

## RUSSIA and CIS

Saint Petersburg  
Phone: +7 812 363 2172  
[sales-wes@weg.net](mailto:sales-wes@weg.net)

## SOUTH AFRICA

Johannesburg  
Phone: +27 11 7236000  
[info@zest.co.za](mailto:info@zest.co.za)

## SPAIN

Coslada - Madrid  
Phone: +34 91 6553008  
[wegiberia@wegiberia.es](mailto:wegiberia@wegiberia.es)

## SINGAPORE

Singapore  
Phone: +65 68589081  
[info-sg@weg.net](mailto:info-sg@weg.net)

Singapore  
Phone: +65 68622220  
[watteuro@watteuro.com.sg](mailto:watteuro@watteuro.com.sg)

## SCANDINAVIA

Mölnlycke - Sweden  
Phone: +46 31 888000  
[info-se@weg.net](mailto:info-se@weg.net)

## UK

Redditch - Worcestershire  
Phone: +44 1527 513800  
[info-uk@weg.net](mailto:info-uk@weg.net)

## UNITED ARAB EMIRATES

Jebel Ali - Dubai  
Phone: +971 4 8130800  
[info-ae@weg.net](mailto:info-ae@weg.net)

## USA

Duluth - Georgia  
Phone: +1 678 2492000  
[info-us@weg.net](mailto:info-us@weg.net)

Minneapolis - Minnesota  
Phone: +1 612 3788000

## VENEZUELA

Valencia - Carabobo  
Phone: +58 241 8210582  
[info-ve@weg.net](mailto:info-ve@weg.net)

For those countries where there is not a WEG own operation, find our local distributor at [www.weg.net](http://www.weg.net).



WEG Group - Automation Business Unit  
Jaraguá do Sul - SC - Brazil  
Phone: +55 47 3276 4000  
[automacao@weg.net](mailto:automacao@weg.net)  
[www.weg.net](http://www.weg.net)

