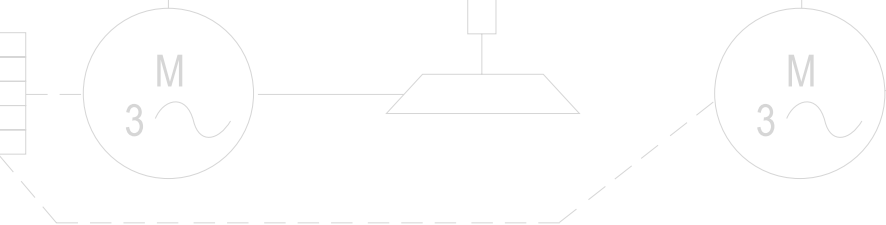
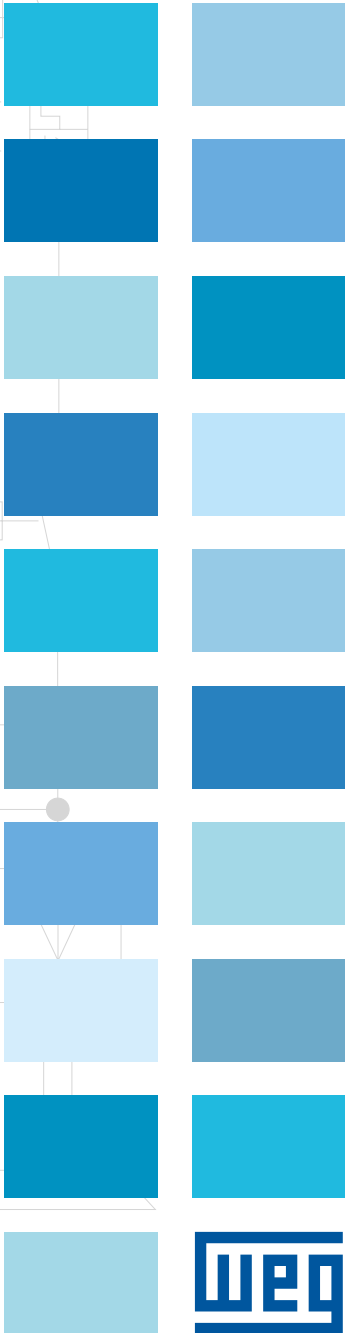


Automation Product Line





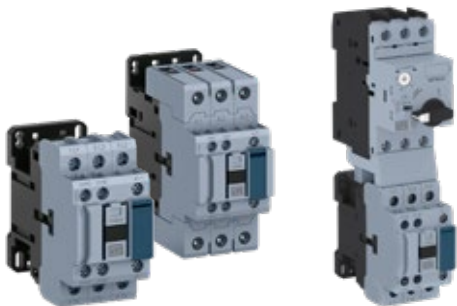


ELECTRIC AND ELECTRONIC SYSTEMS ENHANCING PRODUCTIVITY

Quality and competitive edge meet when it is possible to combine efficiency and speed in the processes. Learn about WEG solutions of the automation line and have the best results always within your reach.

Motor Start and Protection

CWB



Start with CWB contactor and MPW motor protective circuit breaker

Contactors

- Compact solution up to 80 A and up to 54 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 HP at 220 V and 75 HP 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 HP at 220 V and 75 HP at 380/440 V, and single-phase contactors
- Star-delta starters in thermoplastic enclosures up to 20 HP at 220 V and 40 HP at 380 V
- Star-delta, reduced-voltage and series-parallel starters in metallic enclosure starting from 15 HP

RTW17, RMW17, RIEW17, RNW, ERWT AND ERMW



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 17.5 mm and 22.5 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 (RMW17) 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
 - 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 kWh



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-Disconnecter

- 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-Disconnecter

- 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-Disconnecter

- 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
- aR fuse with thread connection type (flush end) and currents of 450 A to 2,000 A
- High breaking capacity (type D = 50 kA, type NH = 120 kA, thread connection type (flush end): 200 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 (220/240 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 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
- Compact size

DWB/DWA



Molded-Case Circuit Breakers

- WEG line of circuit breakers:
 - DWB/DWA Line - protection of distribution electrical circuits and generators
 - DWB/DWM Line - motor 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 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 60947-2 (industrial purpose)
- Installation of accessories, such as padlock, undervoltage release and auxiliary blocks, supplied as optional items

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

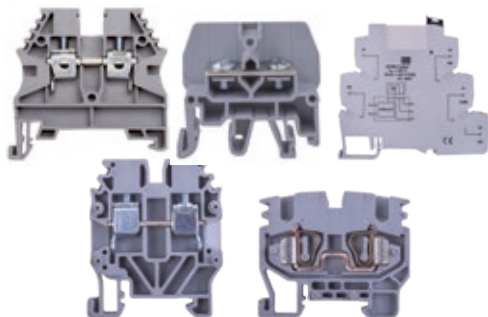


Flush and Surface-Mounting Plugs, Connectors and Sockets

- 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 mm²
- Cage clamp line: cables from 0.5 to 10 mm²
- Push-in line: cables 0.5 to 10 mm²
- Lug line: cables 0.5 to 10 mm²
- Relay line:
 - Reversible contact
 - Plug-in relay
- Mini Terminal Screw Line: cables 0.5 to 4 mm²
- Mini Terminal Cage Clamp Line cables: 0.5 to 2.5 mm²
- Wide range of accessories
- Many options of identifiers and markers

Plotter



Plotter

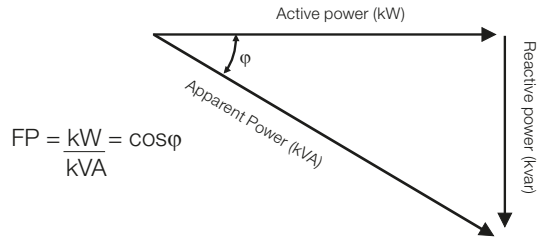
- A3 printing area (440 mm x 305 mm) and A4 (297 mm x 210 mm)
- Allows quick change of printing plates
- Able to print on elements up to 10.5 mm high
- Automatic calibration - prevents manual adjustments
- USB connection
- Complete line of accessories

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

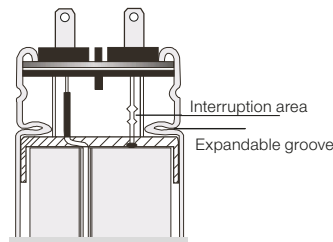


Fig. 1 Internal view of UCWs

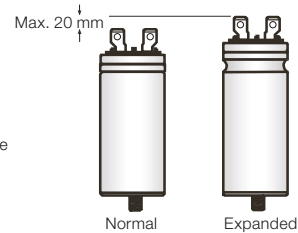


Fig. 2 UCW normal x UCW expanded

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

- Single-phase supply voltage of 220 V
- Rated currents: 1.6 A to 4.2 A
- Maximum applicable motor of 0.25 HP (0.18 kW) to 1 HP (0.75 kW)
- Vector control (VWV) 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)
- Output rated current: 1.6 to 15.2 A
- Maximum applicable motor of 0.25 HP (0.18 kW) to 5 HP (3.7 kW)
- 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: online monitoring, programming and configuration of CFW300
- Built-in operating interface (HMI)
- Scalar (V/F) or vector (VWV) 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 HP)
- 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

- Single or three-phase supply voltage of 200...480 V
- Rated output current of 1...56 A
- Maximum applicable motor of 0.25 HP (0.18 kW) to 30 HP (22 kW)
- 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 expansion¹⁾
- 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
- Output rated current: 2.6 to 16 A
- Maximum applicable motor of 1.5 HP (1.1 kW) to 10 HP (7.5 kW)
- 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

- Single or three-phase supply voltage of 200...600 V
- Rated output current of 3.6...211 A
- Maximum applicable motor of 1.5 HP (1.1 kW) to 175 HP (132 kW)
- VVW Voltage Vector WEG, vector with and without encoder (sensorless)
- Plug & 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 of 200...480 V
- Rated output current 1...31 A, 0.33...25 HP (up to 7.5 HP @ 220 V)
- 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)
- Single or three-phase supply voltage of 200...600 V
- Output rated current: 3.6 to 211 A
- Maximum applicable motor of 1.5 HP (1.1 kW) to 175 HP (132 kW)
- 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 online parameterization, command and monitoring

Drives

CFW11



Frequency Inverter

- Single or three-phase supply voltage of 200...690 V
- Output rated current: 2.7 to 2,850 A¹⁾
- Maximum applicable motor of 1.5 HP (1.1 kW) to 2,500 HP (2,200 kW)
- Vectrue Technology® - 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® - WEG inverter breaking technology
- Optimal Flow® - 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®, 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 HP (55 kW) to 600 HP (450 kW)
- 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



Complete Drive with Frequency Inverter

- Mounting on panel with degree of protection IP42
- Supply voltage: 380 to 480 V - 50/60 Hz
- Rated currents: 3.6 to 1,141 A
- Maximum applicable motor: 2 HP (1.5 kW) to 970 HP (700 kW)
- 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 HP (315 kW) to 2,500 HP (2,000 kW)
- Same optional items and accessories of the CFW11

MVW01



Medium Voltage Frequency Inverter

- Motor voltages: 2.3 kV up to 6.9 kV
- Maximum applicable motor of 500 HP (400 kW) to 22,500 HP (2,200 kW) (16,875 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

MVW3000



Medium Voltage Frequency Inverter

- Motor voltage: 2.3 kV to 13.8 kV
- Motor current: up to 340 A¹⁾
- Input voltage: 2.3 kV...13.8 kV
- High-efficiency air cooling
- Compliance with the harmonic limits of IEEE 519
- Fully integrated solution, reducing the system commissioning and start-up time
- High power factor (>0.95)
- Optimized input harmonics; no filters required
- The sinusoidal output voltage and current reduce the motor losses, vibration, torque pulsation and motor overheating

Note: 1) For higher currents, please contact WEG.

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

- Output rated current: 3 to 85 A
- Maximum applicable motor of 0.75 HP (0.55 kW) to 75 HP (55 kW)
- Supply voltage of 220...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

- Supply voltage of 220...690 V
- Maximum applicable motor of 3 HP (2.2 kW) to 1,700 HP (1,250 kW)
- Output rated current: 10 to 1,400 A
- 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

- Output rated current: 17 to 412 A
- Maximum applicable motor of 5 HP (3.7 kW) to 450 HP (330 kW)
- Supply voltage of 220 a 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

- Output rated current: 17 to 412 A
- Maximum applicable motor of 5 HP (3.7 kW) to 450 HP (330 kW)
- Supply voltage of 220...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
- Maximum applicable motor of 3 HP (2.2 kW) to 450 HP (330 kW)
- 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 HP to 7,500 HP (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
- 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, PROFINET-IO, RS485 and RS232

Programmable Logic Controllers - PLC

Clic02 3rd



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)¹⁾ 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

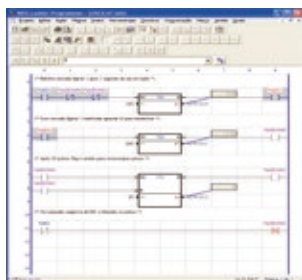


Solar Inverter

- 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



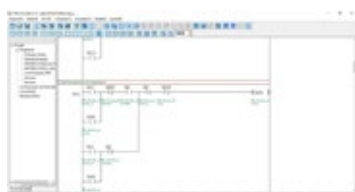
SuperDrive G2

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



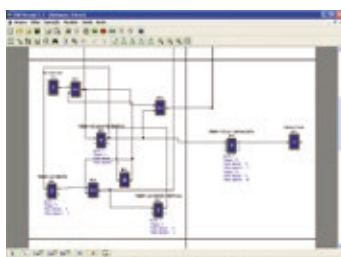
Trace Function

- 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 3rd
- Ladder or FBD language in Portuguese
- On-line editing and monitoring

Available on website: 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



Electrical Panels

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 61439-1)
- Internal arc resistant
- Rated currents:
 - Main busbar up to 6,000 A
 - Vertical busbar up to 4,000 A
- Constructive form: 3b and 4b

Electrical Panels

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
- Communication networks: Profibus, DeviceNet, Modbus, EtherNet-TCP, EtherNet-IP and PROFINET
- 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

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BOTEK

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