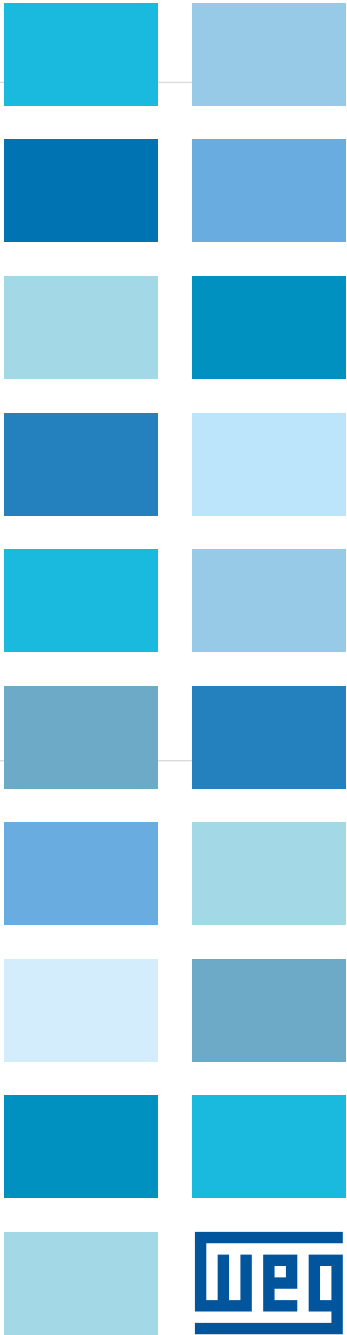
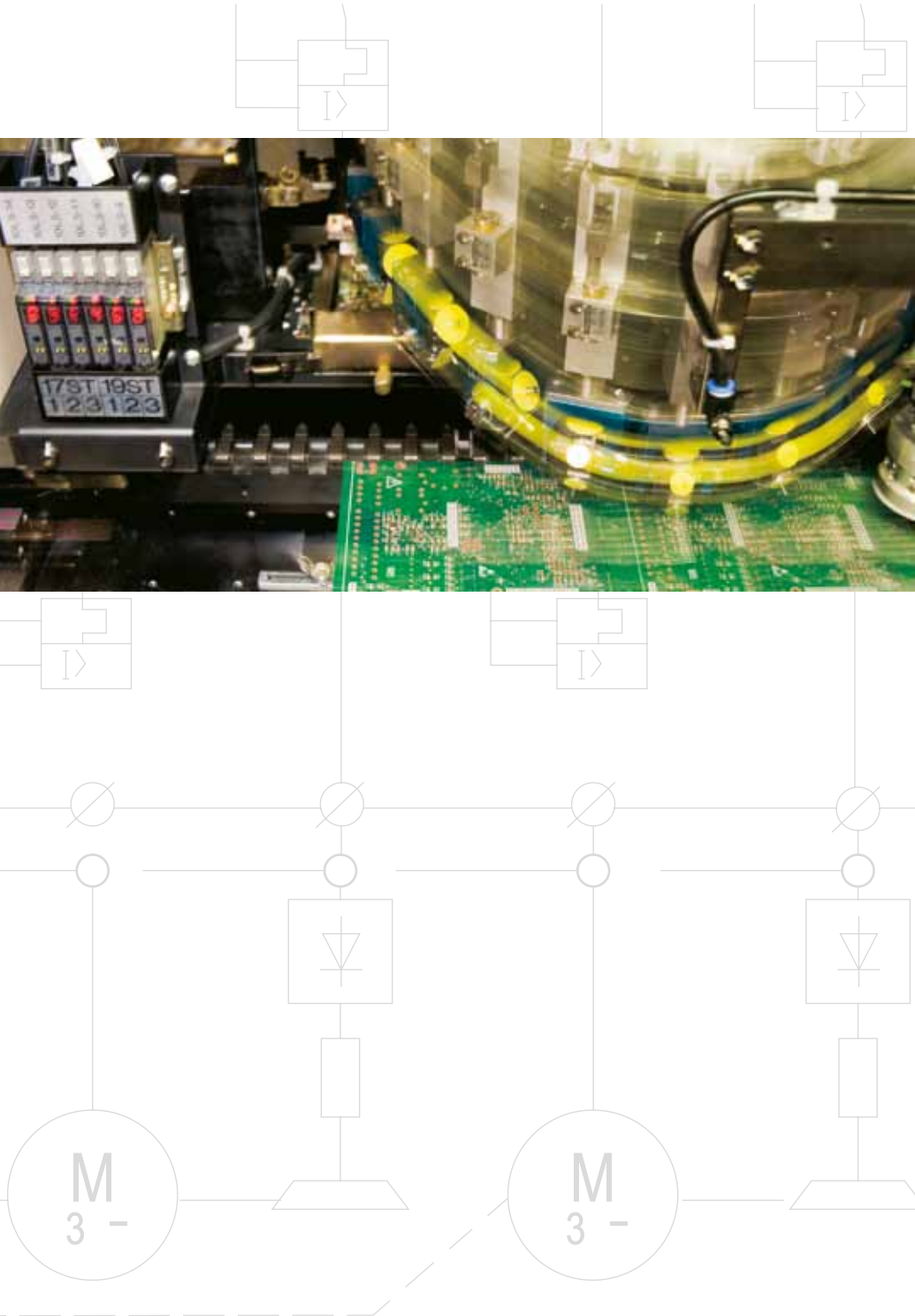


# Automation

## Drives and Controls



### Contactors and Overload Relays

- Complete line (9 to 800A / AC-3)
- Quick mounting on 35mm DIN rail
- Direct mounting on overload relays
- Overload relays with phase failure sensitivity, according to IEC60947-4-1
- Standard, tripping class 10



### Accessories and Spare Parts

- Accessories for contactors from 9 to 800A (modular line)
- Four-terminal coils up to 40A
- Coils available in AC and DC voltage
- Spare parts for the whole line (Ex.: contact set)



### Mini-Contactor CWC

- AC-3 operation up to 22A
- Mini-contactor CWC07 to CWC016 AC and DC coil with the same dimensions
- Allows operation under the AC-4 duty
- Low-consumption DC coil
- Spring terminals CWC0S series



### Easy Connection

- Star-delta wiring kits up to 45kW @ 230/240V and 90kW at 400/415V
- Reversing wiring kits up to 22kW @ 230/240V and 45kW at 400/415V



### Timers and Electronic Monitoring Relays

- RTW timers up to 150 hours with 9 temporization functions
- RPW electronic monitoring relays for functions: phase loss, phase sequence, phase loss and sequence, undervoltage and overvoltage and temperature monitoring with PTC sensor
- RNW level relays – for filling or draining functions



### Pushbuttons and Pilot Lights

- Modern and easy to use
- Pilot Light blocks with integrated LED
- Designed according to IEC/EN60974-5-1
- Degree of protection IP66
- Contacts blocks and flanges with quick and easy mounting system



### Enclosed Starters

- Three-phase and single-phase DOL starters up to 450kW @ 400V / 50Hz and 600HP @ 480V / 60Hz
- Star-Delta starters up to 800kW @ 400V / 50Hz and 1250HP @ 480V / 60Hz
- Reverser starters up to 355kW @ 400V / 50Hz and 500HP @ 480V / 60Hz
- Thermoplastic and metallic enclosure
- IEC and UL versions



### Motor Protective Circuit-Breaker MPW

- Compact solution for electric circuit protection, motor starting/protection up to 45kW @ 400/415V
- Adjustable thermal tripping for motor overload protection with phase failure-sensitivity, according to IEC 60947-4-1, with tripping class 10
- Magnetic tripping (protection against short-circuit) fixed at 13xIn
- High short-circuit breaking capacity



### Terminal Blocks

#### Screw Connection - BTWP Line

- Complete line from 2.5 to 240mm<sup>2</sup>
- Cable inputs in the shape of a cone to facilitate insertion
- Built in protection against screw loosening
- Wide range of accessories



#### Spring Connection - BTWM Line

- 2.5 to 10mm<sup>2</sup> line
- Stainless steel spring
- Uniform contact pressure
- Wide range of accessories



### Smart Relay SRW01

- PLC mode
- USB communication
- Several protection, monitoring and operating modes
- Programmable via WLP software or HMI
- ProfiBus, ModBus or DeviceNet communication via exchangable communication modules
- 4 digital inputs and 4 digital outputs
- Digital expansion unit: 6 digital inputs and 4 digital outputs
- Current Measurement Units from 0.25 A up to 840 A
- Earth Leakage Sensor for earth leakage protection



### Air Circuit-Breakers ABW

Switching and protection for electrical circuits

- Complete solution for high power circuit protection
- Rated currents up to 6300A
- Available in fixed and withdrawable versions
- High short circuit breaking capacities
- Electronic type protection relays
- Complete line of accessories



## Variable Frequency Drives

WEG VFDS incorporate the most advanced world wide technology for speed variation.

### CFW08

- Power rating: 0.25 to 20HP (0.18 to 15kW)
- Power supply: 200...240V and 380...480V
- V/Hz (scalar) or sensorless vector control
- Sinusoidal PWM modulation
- Space Vector Modulation
- EMC filters (built-in)
- Modbus RTU communication (built-in), CANopen, DeviceNet and Profibus-DP (optional)
- PID regulator
- DSP control
- Remote Human Machine Interface (HMI)
- IP66 version (wash duty)



CFW08

CFW08 Wash NEMA4X (IP56)

### CFW09

- Power rating: 1.5 to 500HP (1.1 to 355kW)
- Power supply: 200...240V, 380...480V and 500...600/690V
- V/Hz (Scalar), sensorless vector or closed loop vector control
- Optimal braking
- Dynamic brake (optional)
- Regenerative converter (optional)
- EMC filters (optional)
- Fieldbus communication: Profibus-DP (optional), DeviceNet (optional), Device Net Drive Profile (optional), METASYS N2 Johnson Controls (optional) and Modbus RTU (built-in)
- IP20 enclosure up to 500HP (315kW)
- PLC and positioning control functions board
- Optimal flux function - a unique solution providing rated torque at low speeds without forced ventilation or motor oversizing.



CFW09

### CFW10

- Power rating: 0.25 to 5HP (0.18 to 3.7kW)
- Power supply: 110...127V and 200...240V
- Rated output voltage: 200...240V
- Single and three phase power supply
- Sinusoidal PWM modulation - Space Vector Modulation
- EMC filters (built-in)
- Latest generation IGBT modules and electronic circuits with SMD components
- DSP control
- Compact dimensions, simplified installation and operation
- Speed adjustment via potentiometer is available



Potentiometer version

CFW10

### Certification



## Variable Frequency Drives

### CFW11

- Power rating: 1 to 600HP (0.75 to 450kW)
- Power supply: 200-240V and 380-480V
- Human-machine interface (HMI) with backlight, graphic display and soft-keys, and real time clock
- Plug-and-play philosophy
- USB connection
- Memory Card built-in
- Great variety of control accessories:  
I/O expansion boards (digital and analog)  
Incremental encoder interface and communication
- PLC and Positioning function board
- Communication:  
Profibus, DeviceNet, CANopen, EtherNet / IP, Modbus RTU (optional) and Profinet
- Intelligent thermal management
- Protections with failure and alarm warnings
- Normal duty and heavy duty ratings to adapt optimally to all kinds of load
- IP20 enclosure
- IP21 (NEMA1) and IP54 (option)



CFW11

### CFW700

- Power rating: 1.5 to 150HP (0.75 to 132kW)
- Power Supply: 200-240V and 380-480V
- LCD Display with backlight and soft-keys
- Plug and Play accessories
- Memory card (Optional)
- Encoder Interface built-in (Incremental type required)
- RS-485 port available through terminals (MODBUS ready)
- Communication modules Profibus DP-01 and CANopen
- Soft PLC function allows for ladder programming development
- Smart motor and drive thermal management
- Normal and Heavy Duty ratings (ND/HD)
- DC choke built-in (no requirement for minimum power supply impedance)



CFW700

### Certification





## Soft-Starters

WEG soft-starters, microprocessor controlled and fully digital, have been designed to provide high performance in starting and stopping electric motors. The keypad offers a friendly interface for parameter adjustment making the operation much easier.

### SSW05

- Power rating: 0.75 to 75 HP (0.55 to 55kW)
- Power supply: 220...575V and 575...690V
- Built-in by-pass
- DSP control
- Remote keypad (optional)
- Built-in motor protections
- PID regulator
- DSP control
- Ambient Temperature up to 55°C (131°F)



### SSW06

- Power rating: 30 to 2650 HP (22 to 1950kW)
- Power supply: 220...575V and 575...690V
- Built-in by-pass
- Removable HMI with LED and LCD display
- Kick-Start function for loads with high inertia
- Pump control for intelligent pumping system control
- Full digital / 32 bits RISC microcontroller
- Electronic motor protection
- Ambient temperature up to 55°C (131°F)



### SSW07 and SSW08

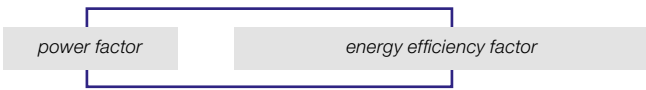
- Power ratings: 6 to 450 HP (4.5 to 315kW)
- Voltage: 220...575V
- Built-in Bypass
- Built-in EMC filter
- SSW07 applied for Heavy load starts
- SSW08 applied for Light and moderate load starts
- Three-phase controlled
- Integral motor and starter protections
- Programmable KICK-START function to start high break-away torque loads
- Remote HMI
- Very compact product
- It is able to operate in 55°C without derating



### Certification

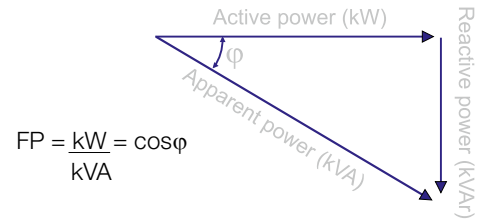


## Power Factor Correction



In a three-phase network, three measurements summarize the electrical installation, in a simplified way:

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

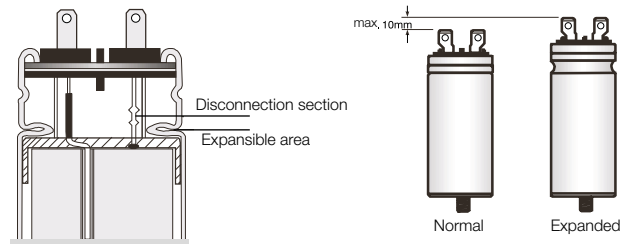


$$FP = \frac{kW}{kVA} = \cos\phi$$

The more kvar that circulates through the network and transformer/generator, the greater the consumed kVA value and the lower the power factor.

## WEG Capacitors for Power Factor Correction

- Self-healing metalized polypropylene film
- Internal over pressure security device
- Maximum allowed fault current of 10kA
- Dielectric losses smaller than 0.4W/kVAr
- Internal discharge resistors in three-phase units, modules and banks
- Designed in accordance with standards IEC 60831-1/2 and UL810





## Power Factor Correction



### UCW (Single-phase Capacitors)

- Rated power up to 6.67 kVAR in 380/440/480Vac
- Capacitive units for mounting of capacitors banks



### Contactors for Capacitor Switching

- Available for the switching of capacitors up to 50kVAR/400/415V
- Same accessories used with CWM contactors line
- Integrated pre-charge resistors with early-make contacts block



### MCW (Three-phase capacitors module)

- Rated power up to 15 kVAR in 380/440/480Vac
- Up to 60 kVAR with 4 modules in parallel
- Single-phase capacitors UCW connected in delta
- Equipped with discharge resistors (30s, 1/10Un)



### BCW and BCWP (Three-phase capacitors bank)

- Rated power up to 75 kVAR in 380/440/480Vac
- Three-phase capacitors bank BCW composed by capacitive cells assembled in metallic enclosure with degree of protection IP32 and used for power factor correction of duty loads.
- Equipped with discharge resistors (30s, 1/10 Un) and terminal blocks for power source.
- BCW-P is composed basically by capacitors UCW, CWM contactors for switching capacitive loads, electronic timer relay RTW-RE to avoid resetting of capacitors on load and moulded case circuit breaker or fuse delay for short circuit protection.



### UCWT (Three-phase capacitive unit)

- Ideal for local/individual motor correction:
  - 0.5 a 15 kVAR at 220Vac
  - 0.5 a 25 kVAR at 380/440/480Vac
- Internally built-in discharge resistors
- Protection cover for connections
- Fast-on and Philips type terminals



### AC Film Capacitors Motor Run and Lighting Applications

- CMRW line for motor run applications(IEC 60252-1)
- CILW and CLAW for lighting applications (IEC 61048)
- High confiability
- Self-Healing properties
- Low dissipation factor
- Reduced sized



## Automation Systems



### Servo drives SCA05

- Rated current: 4, 8, 24 and 30A
- Torque / speed / positioning mode
- Encoder simulator: 1 to 4096 pulses per revolution
- Speed Analog Reference (14 bits)
- Built-in CANopen, Modbus and Devicenet networks
- Profibus DP (optional)
- High performance RISC 32 bit microcontroller
- Built-in RS 232 Serial Communication or optional RS 485
- Automatic cycle with 10 positioning programmed via parameter
- Optional remote interface

### Servomotors

- Torque: 1.6 up to 50 Nm
- IP 65 protection degree
- Brushless
- Resolver feedback
- Low inertia
- Low maintenance
- Low level of noise and vibration

### Softwares for product specifications

SDW – special tool to help on WEG softstarters specifications main features and advantages:

- SDW uses the WEG motors data bank to help the filling of the forms
- SDW has the basic thechnick characteristics of the main applications (curve, datas, etc)
- SDW allows the specification of softstarters considering several starting conditions and presenting the results with softstarter model and parameter list to its start up

### Certification



# Automation Systems

*Pushbuttons and Pilot Lights*



*Low Voltage VFDs from 0.18 to 1100 kW*



*Capacitors for Power Factor Correction*



*Soft-Starters from 0.5 to 1950 kW*



*Contactors and Overload Relays*



*AC Servomotors and Servodrives 1.6 to 50 Nm*



*Motor Protective Circuit Breaker*



*Modular Drive from 315 to 2500 kW*



*Timers and Electronic Monitoring Relays*



*LV Distribution Panels*



*DOL Starters*



*MV Frequency Drives from 400 up to 3312 kW*



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