PRODUCT PROFILE
AUTOMATION

MOTOR STARTING AND PROTECTION

CWC - MINIATURE CONTACTORS
- Switching operations in utilization category AC-3 up to 22 A
- Integrated auxiliary contacts up to 16 A
- Low-consumption DC coils, allowing direct connection to PLCs

CWB AND CWM - CONTACTORS
- Complete line from 9 to 800 A (AC-3)
- Several coil voltages available in AC and DC
- Complete accessory line

CWMC - CONTACTORS FOR CAPACITOR SWITCHING
- Available for switching capacitor banks of up to 61 kvar @ 400/415 V
- Directly mounted on DIN rail 35 mm or tightened with screws

RW AND RW. E - THERMAL AND ELECTRONIC OVERLOAD RELAYS
- Three-pole with selectable tripping class: 10, 20 and 30
- Protection against phase loss
- Manual or automatic reset
- Direct mounting on CMEB..38 and CWM5105P contactors
- Individual mounting is possible with accessories

MPW - MOTOR-PROTECTIVE CIRCUIT-BREAKERS
- Start and protection of motors up to 40 HP @ 220 V and 75 HP @ 380/440 V
- Adjustable thermal release to protect the motor against overloads up to 100 A

RTW, RPW AND RIEW - ELECTRONIC RELAYS
- Timers, voltage and level monitors, 17.5 mm and 22.5 mm wide
- Status indicator LEDs
- Simple configuration and operation
- Settings via external selectors
- Highly reliable contacts
- Excellent precision and repeatability
- Noise immunity

VARIABLE SPEED DRIVES

CFW100
- Single-phase supply voltage of 220 V
- Output rated current: 1.6 to 4.2 A
- Maximum applicable motor of 0.25 HP (0.18 kW) to 1 HP (0.75 kW)
- Vector (V/V) or scalar (V/F) control modes
- SoftPLC
- Free programming software SuperDrive

CFW700
- 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)

CFW11
- Single or three-phase supply voltage of 200...690 V
- Output rated current: 2.7 to 2,850 A (1.5 to 2,500 cv)
- Maximum applicable motor of 1.5 HP (1.1 kW) to 2,500 HP (2,200 kW)

MWV01 - MEDIUM VOLTAGE
- Input cubicle up to 36 kV
- Applicable to medium voltage induction motors of 2.3...6.9 kV
- Maximum applicable motor of 500 cv (400 kW) to 22,500 cv (2,200 kW)
- Air or water cooled options
- Power and control insulated by fiber optic

MWV500 - MOTOR DRIVE
- Three-phase supply voltage of 200...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)
- NEMA4x/IP66 protection
- Dockable on the W22 motor range or wall mountable
- Disconnectors (optional)

CFW501 - HVAC
- Supply voltage of 200...480 V
- Rated output current: 3.6 to 211 A, 0.33...25 HP (up to 7.5 HP @ 220 V)
- Low input harmonic distortion
- SoftPLC
- Operator interface (HMI) with specific units for HVAC applications
- BACnet, Metasys N2 and Modbus-RTU communication protocols
- Free SuperDrive G2 and WLP software applications

MW3000 - MEDIUM VOLTAGE
- Complete integrated MV VFD system in the same panel
- Applicable to medium or synchronous motors with voltages from 1.15 to 13.8 kV
- Maximum applicable motor of 75 to 9,000 HP (85 to 6,800 kW)
- Input rectifier from 18 to 72 pulses for harmonics compliance with IEEE 519
- Based on the reliable Cascaded H-Bridge topology

CFW701 - HVAC
- 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)
- Ideal for heating, ventilation, air-conditioning and refrigeration applications
- Filtri FFL
- Inductor on DC link
- BACnet MS/TP, Metasys N2 and Modbus-RTU communication protocols

SRW - SMART RELAYS
- USB port
- Communication networks: Modbus-RTU, Profinet-IP, DeviceNet, EtherNet/IP, PROFINET IO and Modbus-TCP
- Interchangeable in a single control unit
- Free parameter setting software
- Fast and precise fault and alarm diagnosis
- Fault record and statistics
- Backup of the original configuration
- Voltage reading unit

DLW - ENCLOSED STARTERS
- Direct online starters for electric motors up to 55 kW (400/415 V)
- IP65 and IP66

MMW - MULTI-METERS
- Direct measurement of voltage up to 500 V ac
- Current measurement via CTS (0.05-5 A)
- Internal memory for data storage
- Network communication via RS485 and Modbus-RTU

RTW, RPW AND RIEW - ELECTRONIC RELAYS
- Timers, voltage and level monitors, 17.5 mm and 22.5 mm wide
- Status indicator LEDs
- Simple configuration and operation
- Settings via external selectors
- Highly reliable contacts
- Excellent precision and repeatability
- Noise immunity

CFW300
- Supply voltage: 110 V or 220 V
- Output rated current: 1.6 to 15.2 A
- Maximum applicable motor of 0.25 HP (0.18 kW) to 3 HP (2.7 kW)
- Easy installation
- Flash memory module (accessory)
- Vector (V/V) or scalar (V/F) control modes

CFW500
- Single or three-phase supply voltage of 200...480 V
- Rated output current of 1...31 A
- Maximum applicable motor of 0.25 HP (0.18 kW) to 30 HP (22 kW)
- Vector control (V/V) or Scalar (V/F)
- SoftPLC
- Multipump control
- Input and output expansion
- RFI filter
- Free SuperDrive programming software
**SOFT-STARTERS**

**SSW05**
- Supply voltage of 220…575 V
- Output rated current: 3 to 85 A
- Maximum applicable motor of 0.75 HP (0.55 kW) to 75 HP (55 kW)
- Built-in bypass
- Control with DSP
- Remote operating interface (HMI) (optional)

**SSW08**
- Supply voltage of 220…575 V
- Output rated current: 17 to 412 A
- Maximum applicable motor of 5 HP (3.7 kW) to 450 HP (330 kW)
- Built-in bypass
- Control of 2 phases
- Built-in motor protections

**SSW07**
- Supply voltage of 220 a 575 V
- Output rated current: 17 to 412 A
- Maximum applicable motor of 5 HP (3.7 kW) to 450 HP (330 kW)
- Built-in bypass up to 820 A
- It allows motor inside delta connection
- 6 cables only for the models 220 - 575 V or standard (3 cables)

**SSW900**
- Supply voltage of 220…575 V
- Rated currents: 10 to 412 A
- Maximum applicable motor of 3 HP (2.2 kW) to 450 HP (330 kW)
- Detachable graphic HMI
- Built-in USB port
- Monitoring of the variables in graphic mode and configurable initial screens

**CAPACITORS AND POWER FACTOR CORRECTION**

**UCW - SINGLE-PHASE CAPACITIVE UNIT**
- Power of up to 10 kvar in 335 V size (diameter) from 53 to 75 mm
- Capacitive units for mounting three-phase modules and banks

**UCWT - THREE-PHASE CAPACITIVE UNIT**
- Ideal for localized/individual motor correction:
  - 0.5 to 30 kvar @ 220 V
  - 0.5 to 50 kvar @ 380/440/480/535 V
- Built-in discharge resistors

**MCW - THREE-PHASE CAPACITIVE UNIT**
- Powers up to 60 kvar and 480 V
- Single-phase capacitive units delta connected
- Built-in discharge resistors

**DRW - DETUNING REACTOR**
- Power: 90…633.3 (kvar)
- Reduced voltage
- Insulation class H (180 °C)
- Insulation voltage of 1 kV

**BCW E BCWP - CAPACITOR BANKS**
- Power of up to 75 kvar and 480 V
- Capacitors connected in delta-star configuration
- General protection with “NH” fuses or circuit breakers
- Electronic timer relay that protects capacitors upon powering up

**PFW - AUTOMATIC POWER FACTOR CONTROLLERS**
- Models with single and three-phase measurement
- Outputs: 6 or 12 stages for controlling contactors for capacitor switching
- Power factor correction of the transformer with no load

**MOTOR RUN AND LAMP METALIZED POLYPYROPYLENE CAPACITOR**
- Rated voltages: 250 V / 420 V and 440 V
- Rated frequency: 50/60 Hz
- Capacitance tolerance ±5%
- Expected service life 10,000h
- Protection safety class: A

**ELECTRICAL PANELS**

**LOW VOLTAGE MOTOR CONTROL CENTER - LV MCC**
- Fully tested according to IEC 61439-1
- Internal-arc resistant option
- Fast and easy maintenance, withdrawable and interchangeable units
- Worldwide standardized Ethernet, Profinet-IP (non-proprietary network), DeviceNet or Modbus network
- Rated current up to 5,000 A
- Short-circuit current up to 80 kA

**LOW VOLTAGE DISTRIBUTION PANEL**
- Fully tested according to IEC 61439-1
- Internal-arc resistant option
- Fast and easy maintenance
- Modular system with easy expansion

**E-HOUSE**
- Reduction of the lead time to assemble the substation
- Flexibility for the installations and possibility of relocation without adding major costs
- Convenience for installation in the field (reduced civil work)
- Engineering consolidated in a single machine
- Easy customization to meet all customer’s needs

**TTW - ELECTRIC PANELS**
- Panels tested according to NBR IEC 60439
- Supply through accredited panel builders, ensuring quality and speed in the manufacture
**ELECTRICAL CIRCUIT PROTECTION**

**DWB E DWA - MOLDED-CASE CIRCUIT-BREAKERS**
- Rated currents from 16 to 1,600 A
- Short-circuit breaking capacity of up to 80 kA (380/415 V)
- Models with fixed, adjustable and electronic thermal and magnetic releases

**ACW - HIGH CAPACITY MOLDED-CASE CIRCUIT-BREAKERS**
- Complete accessory line
- Rated currents from 20 to 1,600 A
- Short-circuit breaking capacity of up to 200 kA (220/340 V)
- Models with adjustable electronic and thermomagnetic releases
- Protection of electrical circuits and motor circuits

**FNH / FDW - HIGH SPEED FUSES AND TIME-DELAY FUSES**
- Manufactured according to IEC 60269 in currents from 2 to 2,000 A
- 36 class, NH and flush-end type: protection against short-circuit in semiconductors/electronic equipment up to 690 V ac
- qL/qG, class NH and D types: protection against short-circuit and overloads for general appliances up to 500 V ac

**MDW E MDWH - MINIATURE CIRCUIT BREAKERS 3…10 KA 230/400 V AC**
- Rated currents from 2 to 125 A
- One, Two, Three and Four Poles
- Breaking capacity: 1.5 kA, 10 kA (230/400 V ac)
- NBR NM 60898
- 3 kA, 10 kA (230/400 V ac)
- NBR IEC 60947-2

**DWP - MOLDED-CASE CIRCUIT-BREAKERS FOR BUILDING APPLICATIONS**
- Rated currents of 100…225 A
- Fixed thermal and magnetic releases
- Protection of electrical installations against overloads

**ABW - AIR CIRCUIT-BREAKERS**
- Rated currents up to 6,300 A
- Short-circuit breaking capacity of up to 120 kA (380/415 V)
- Standard trigger unit with LSIG protection
- Fixed and withdrawable versions
- Complete range of accessories

**MSW - SWITCH-DISCONNECTORS**
- Rated currents from 12 up to 160 A
- Mounting option: top and base
- Compliance with the requirements of NF12 and IEC 60947-3 standards
- Compact and easy installation
- Complete range of accessories
- Terminals with IP20 protection degree
- Handle with IP65 protection degree

**RIW AND RFW - ROTATING SWITCH-DISCONNECTORS**
- According to IEC 60947-3 and IEC 60947-1 standards
- Body in self-extinguishing thermoplastic material (flammability class V0)
- Auxiliary contact installed on the switch
- Complete range of accessories
- Mounting in any position

**QDW - DISTRIBUTION BOARDS**
- Installation of 4, 6, 8, 12, 18, 24 and 36 circuit breaker modules
- Surface-mount and embedded models
- Front cover in smoked and white colors
- Stickers for circuit identification included

**FSW - FUSE-SWITCH-DISCONNECTORS**
- According to IEC 60947-3 and IEC 60947-1 standards
- Transparent cover
- Arc chute
- Auxiliary contact installed on the switch
- Fast fuse replacement
- Safe operation

**RDW - RESIDUAL CURRENT DEVICES**
- Protection against leakage current
- Sensitivity of 30 mA (life protection) or 300 mA (installation protection)
- Two and four poles
- Rated currents from 25 to 100 A

**SPW**
- Protection of equipment and installations, classes I and II (for direct and indirect discharges), 12.5 kA for class I and 12, 20, 45 and 60 kA for class II, plug-in connection and auxiliary contact (optional)

**QDW**
- Available in currents of 100 A…1,250 A.
- RFW available in the currents of 100 A…630 A.

**AGW - MOLDED-CASE CIRCUIT BREAKERS**
- Developed according to IEC 60947-2
- Breaking capacity of 18 kA at 45 V to 500 V ac
- Available in four frames: currents from 15 to 800 A
- Complete accessory line

**CMD AND CEW**
- Pushbuttons, selector switches and pilot lights
- IP66 protection degree
- Quick and easy assembly system
- High reliability auxiliary contacts
- Lighting block with integrated LED

**COMMAND AND SIGNALING**

**SAFE NIGHT**
- Safety light curtains
- Zero effort electronic switches
- Safety relays
- Safety handle for presses
- Bi-manual commands
- Electronic activation module
- Magnetic sensors with safety functions
- Interlocking switches
- Emergency safety switch activated by cable
- Contactors for safety systems
- Bi-directional tilt sensor

**SENSORS**
- Inductive
- Capacitive
- Optical
- Magnetic
- Electrostatic detectors for broken wires
- Resistive magnets (hall effect)
- Magnetic - pick-up type

**POWER SUPPLIES**
- Power for sensors
- Power supplies for equipment in electrical panels

**INDUSTRIAL SENSORS AND POWER SUPPLIES**

**ELECTRICAL CONNECTIONS**

**Fuses and Fuses-Linking**
- Connection options: screw, spring, push-in and eyed types
- Housing in polyamide PA66 with excellent dielectric properties and high mechanical strength
- EX certification
- Intelligent software for configuration of terminal strips and their accessories
- Complete line of accessories and terminal and cable markers
- Printing and engraving system of markers and tags

**MDW E MDWH - MINIATURE CIRCUIT BREAKERS 3…10 KA 230/400 V AC**
- Rated currents from 2 to 125 A
- One, Two, Three and Four Poles
- Breaking capacity: 1.5 kA, 10 kA (230/400 V ac)
- NBR NM 60898
- 3 kA, 10 kA (230/400 V ac)
- NBR IEC 60947-2

**Panel Mounting Three-Phase**
- From 53 to 75 mm
- Built-in motor protections
- Built-in bypass
- Remote operating interface (HMI) (optional)

**CAPACITORS AND POWER FACTOR CORRECTION**
- Built-in discharge resistors
- Individual motor correction: 380/440/480/535 V
- Maximum applicable motor from 4 kW to 5 HP
- Applicable to medium voltage induction motors of 2.3...6.9 kV
- Supply voltage of 220...690 V
- Monitoring of the variables in graphic
- Built-in USB port

**REACTOR**
- One, Two, Three and Four Poles
- Capacity of up to 80 kA
- Short-circuit breaking capacity
- 1,600 A
- Fully tested according to NBR IEC 60439

**Machine Safety Solutions**

**Machine Safety Solutions**

**SAFETY LINE**
- Safety light curtains
- Zero effort electronic switches
- Safety relays
- Safety handle for presses
- Bi-manual commands
- Electronic activation module
- Magnetic sensors with safety functions
- Interlocking switches
- Emergency safety switch activated by cable
- Contactors for safety systems
- Bi-directional tilt sensor

**SENSORS**
- Inductive
- Capacitive
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**POWER SUPPLIES**
- Power for sensors
- Power supplies for equipment in electrical panels

**INDUSTRIAL SENSORS AND POWER SUPPLIES**

**Electrical Connections**

**CIRCUIT BREAKERS**
- Fixed thermal and magnetic releases
- Protection of electrical installations against overloads
- Rated currents from 12 up to 160 A
- Mounting option: top and base
- Compliance with the requirements of NF12 and IEC 60947-3 standards
- Compact and easy installation
- Complete range of accessories
- Terminals with IP20 protection degree
- Handle with IP65 protection degree

**CIRCUIT BREAKERS**
- Rated currents of 100…225 A
- Fixed thermal and magnetic releases
- Protection of electrical installations against overloads
- Rated currents from 2 to 125 A
- One, Two, Three and Four Poles
- Breaking capacity: 1.5 kA, 10 kA (230/400 V ac)
- NBR NM 60898
- 3 kA, 10 kA (230/400 V ac)
- NBR IEC 60947-2

**COMMAND AND SIGNALING**

**CSW AND CEW**
- Pushbuttons, selector switches and pilot lights
- IP66 protection degree
- Quick and easy assembly system
- High reliability auxiliary contacts
- Lighting block with integrated LED

**BTW - TERMINALS AND SIZING SOFTWARE**
- Complete line of terminals, mini terminals and relay terminals
- Connection options: screw, spring, push-in and eyed types
- Housing in polyamide PA66 with excellent dielectric properties and high mechanical strength
- EX certification
- Intelligent software for configuration of terminal strips and their accessories
- Complete line of accessories and terminal and cable markers
- Printing and engraving system of markers and tags
SOLAR CONTAINER

ESW
- Operating voltage: 13.8 kV, 24 kV, 34.5 kV
- Modular and compact design
- Pre-commissioned product
- Supply integrated at the factory
- Standard sizes for transportation

SOLAR INVERTER

SIW600
- Used in three-phase systems at 380 or 440 V ac
- Direct connection to the line (transformerless)
- 2 MPPTs for maximum efficiency
- Degree of protection IP65 for outdoor installation
- Plug-in connections that can be accessed from outside

PLCS - PROGRAMMABLE LOGIC CONTROLLERS

PLC300 - VERSION H2
- Power supply voltage: 24 Vdc
- 10 digital inputs
- 9 digital outputs
- 1 isolated input for encoder
- 1 analog input 0-10 V dc / 4-20 mA
- Up to 2 expansion modules with digital and analog I/O
- Real time clock
- Operation interface (HMI)
- 5 inbuilt ports: USB, RS232, RS485, CANopen e Ethernet

TPW04
- Supply voltage of 100/240 V ac
- Flexible basic units 10, 20, 30, 40 and 60 I/O points
- I/O expansion capacity
- Real time clock
- Incorporated Modbus communication
- Free programming software TPWPClink

CLIC02 3RD
- Power supply voltage: 12 V dc, 24 V dc or 110-220 V ac (50/60 Hz)
- Basic units 10, 12 or 20 digital inputs and outputs or 4 analog inputs (0-10 V dc / 12 bits)
- Real time clock
- Two quick 1 kHz inputs
- Two PWM outputs and 1 kHz pulse train
- Free programming software Cic02 edit V3

HUMAN MACHINE INTERFACES (HMI)

MT LINE
- 4.3 to 15 inch screen
- Real time clock
- USB port
- Ethernet communication
- Free edition software

INDUSTRIAL PLUGS AND SOCKETS

- Resistant to impacts and corrosion
- Protection against indirect contact
- Rated currents: 16 A, 32 A, 63 A and 125 A
- Number of poles: 3 (3P+T), 4 (3P+T) and 5 (3P+T+N)
- Rated voltages: 110 V ac, 220 V ac e 380 V ac
- Degree of protection IP44 and IP67

CRITICAL POWER

LOW POWER SINGLE-PHASE UPS

HIGH POWER THREE-PHASE UPS (SINGLE AND MODULAR VERSIONS)

VOLTAGE STABILIZER

RECTIFIERS AND INVERTERS

NOBREAK GARAGE

MEDICAL IT SYSTEM

BATTERIES