

SOLUTIONS WITH THE HIGHEST TECHNOLOGY

KRON General Product Catalog



**The preferred brand of
professionals in the field**

KRON
MEDIDORES

Marca de qualidade.



Performance, quality, robustness,
practicality and innovation

Innovation since 1954

Kron has always prioritized the development and innovation of its products, presenting to its customers solutions with the highest technology. The result of this choice is demonstrated in the various awards won over these years. In this Catalog, we present an overview of our company, products, and services, so that our customers and suppliers have contact with the latest technologies existing in the electricity measurement sector.



Mission

Develop, produce and sell products and services, adding value to our customers, employees and shareholders while operating in the electrical and electronics industry through continuous development in a sustainable manner.



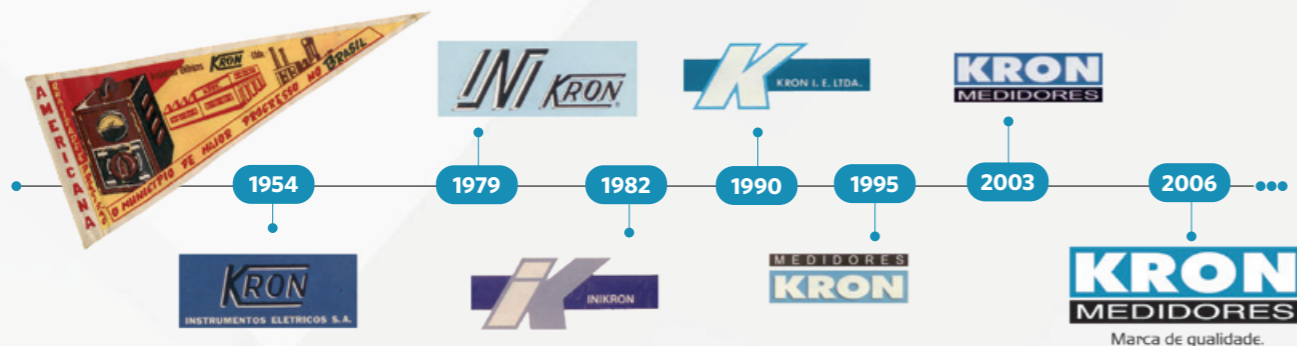
Vision

Become a benchmark for the global market as a solution-oriented company in power measurement.



Values

- Respect for the needs of our customers and employees
- Honesty in interpersonal relationships
- Social and environmental responsibility
- Excellence in all aspects



Empresa certificada NBR ISO 9001

Business Segments

Kron serves different market segments, with its main areas of operation being Electrical Panel Assemblers, Electric Power and Water Utilities, Industrial and Building Automation, Malls and Shopping Centers, Industry and Services.



Meters & IoT Solutions



Konec

- Direct current measurement up to 63A
- Connectivity via Wi-Fi, Ethernet, LoRa, RS-485, and Bluetooth
- MQTT, LoRaWan, Modbus-TCP, Modbus-RTU or BacNET Protocols
- Three digital inputs for integration with other meters (for example: water and gas)
- Two digital outputs for remote load control (On/Off Relay)
- One Pt100 input
- Two analog inputs
- Mass memory optional



Konec 120

- Direct current measurement up to 120A
- Connectivity via Wi-Fi, Ethernet, LoRa, RS-485, and Bluetooth
- MQTT, LoRaWan, Modbus-TCP or Modbus-RTU Protocols
- Two digital inputs and two digital outputs or three digital inputs and one digital output
- Mass memory optional



Konec RW

- Current measurement with an integrated Rogowski coil
- Connectivity via Wi-Fi, Ethernet, LoRa, RS-485, and Bluetooth
- MQTT, LoRaWan, Modbus-TCP or Modbus-RTU Protocols
- Two digital inputs and two digital outputs or three digital inputs and one digital output
- Mass memory optional



Konec 05

- Direct measurement of up to 5A
- Connectivity via Wi-Fi, LoRa, RS-485, and Bluetooth
- MQTT, LoRaWan, Modbus-TCP or Modbus-RTU Protocols
- Two digital inputs and two digital outputs or three digital inputs and one digital output
- Mass memory optional



KS-3000

- Split-core Current sensors with a RJ-12 output, making the installation easier.
- Connectivity via Wi-Fi, LoRa, RS-485, and Bluetooth
- MQTT, LoRaWan, Modbus-TCP or Modbus-RTU Protocols
- Two digital inputs for integration with other meters (for example: water and gas)
- One digital output for remote load control (On/Off Relay)
- Mass memory optional

Meters & IoT Solutions



Konec Plus

- Direct measurement up to 5A (use with current transformer)
- Connectivity via Wi-Fi, Ethernet, LoRa, RS-485, and Bluetooth
- MQTT, LoRaWan, Modbus-TCP or Modbus-RTU Protocols
- Two digital inputs and two digital outputs or three digital inputs and one digital output
- Mass memory optional



Konec Grafic

- Direct measurement up to 5A (use with current transformer)
- Connectivity via Wi-Fi, Ethernet, LoRa, RS-485, and Bluetooth
- MQTT, LoRaWan, Modbus-TCP or Modbus-RTU Protocols
- Two digital inputs and two digital outputs or three digital inputs and one digital output
- Mass memory optional



Web Platform - Kron Kloud

- Online Platform (Computer, Mobile, Tablet, etc.)
- Generates graphics and reports
- Real-time measurement visualization
- Automation for energy cost and submetering
- Application for Industry 4.0 and IoT
- Energy, Water, and gas
- Energy Efficiency
- Loads and Installations checking



LoRa Gateway (under request)

K-GTWB

- Gateway for Utility's Meter Reading
- Conversion gateway for RS-485 meters (Modbus-RTU) to MQTT
- Outputs in Ethernet, Wi-Fi and GPRS
- Direct direction to the Kron Kloud
- Pulse Inputs

Energy Multimeters



iKron-03

- HMI Configuration
- RS-485 Output (MODBUS RTU) and Pulse
- Measurement of more than 30 parameters
- 4-digit LED display



Mult-K

- HMI Configuration
- RS-485 Output (MODBUS RTU)
- Pulse Output (optional)
- Measurement of more than 40 parameters
- 3-digit LED display



Mult-K Plus

- HMI Configuration
- RS-485 Output (MODBUS RTU)
- Mass memory
- Measurement of minimum and maximum voltages and currents
- Peak and Off-peak time divisions (optional)
- One output and three digital inputs (optional)



Mult-K Graphic

- HMI Configuration
- RS-485 Output (MODBUS RTU) or Ethernet (Modbus TCP/IP)
- Mass memory
- Measurement of minimum and maximum voltages and currents
- Screen customization



Mult-K C

- Screen customization
- HMI Configuration
- RS-485 Output (MODBUS RTU)
- Two relay outputs for quantity supervision, allows to configure up to 12 alarms per relay
- Starting and operating hours counter

Energy Multimeters



Mult-K 05

- RS-485 Output (MODBUS RTU)
- Pulse Output (optional)
- DIN Rail



Mult-K 120

- Direct measurement up to 120A or use with current transformer
- RS-485 Output (MODBUS RTU)
- Two digital inputs for quantity integration (for example: water and gas)
- One digital output for remote load command (On/Off Relay)



M-Box

- Direct measurement up to 120A
- Connectivity via Wi-Fi, Ethernet, LoRa, RS-485 and Bluetooth
- MQTT, LoRaWan, Modbus-TCP, Modbus-RTU or BacNET Protocols
- Mass memory for more than 200,000 records
- Anti-violation seal
- Three digital inputs for integration with other meters (for example: water and gas)
- Two digital outputs for remote load command (On/Off Relay)
- One Pt100 input
- Two analog inputs

Softwares

Rede MB and Rede MB TCP:

- The Software for reading instantaneous measurements in Modbus
- Meters operation settings
- Verification of accumulated energy values
- Transfer of mass memory records

Analyzer:

- Extension of RedeMB Software for reading encrypted files aimed at power quality measurements.
- Generation of Prodlist report

Rateio: Offline Software (RS-485) with the function of submetering allocation and energy consumption.



Meters and energy Multimeters



iKron 03-D / iKron 01-D

- iKron-03D: Three-Phase (for star connection) Multimeter. Measurement up to 80A - 230V/400Vac.
- iKron-01D: Single-Phase Multimeter. Direct measurement up to 100A - 220V
- RS-485 Output (Modbus-RTU)
- Display for Reading



Mult-K 30Wh

- Energy Consumption Meter
- Direct measurement up to 120A or use with current transformer
- For three-phase, two-phase or single-phase systems
- RS-485 Output (MODBUS RTU) or Pulse output



Kompact

- Energy Consumption Meter
- DRT-301D: Three-Phase. Direct measurement up to 100A - 220V or 380V (P-P)
- DRS-230D: Single-Phase. Direct measurement up to 100A - 220V
- DRS-201D: Single-Phase. Direct measurement up to 45A - 100V or 220V
- Pulse output

Digital Indicators



KDG-48 and KDG-96

- Measurement mAd.c., mVd.c. and Vd.c.
- Measurement Aa.c., Va.c.. or Hz
- Indications in A, V, FP, W, Var, VA, Hz, rpm, °C, among others
- **Optional output in RS-485**
- Sizes in 48x96mm or 96x96mm

RS-485/USB Converter

- R5-485 to USB physical standard converter
- Used for reading meters and configuration with RedeMB and Rateio Softwares



Direct Current Network Measurement Solutions (d.c.)

Multimeters



Konect DC

- Multimeter in direct current
- With inputs for Shunts with outputs of 60 mV; 150 mV; 300 mV
- With inputs for current Hall Sensors of 50Ad.c., 100A d.c., 300 A d.c. and 600 A d.c.
- Connectivity via Wi-Fi, Ethernet, LoRa, R5-485 and Bluetooth
- MQTT, LoRaWan, Modbus-TCP or Modbus-RTU protocols
- Two digital inputs and two digital outputs or three digital inputs and one digital output
- Measures current up to 3 circuits and 1 voltage
- Mass memory optional



DC-96 Plus

- Multimeter (Voltage, Current and Power)
- Relay Output
- Display with 4 digits
- RS-485 Output

Indicator



DC-96 (Double Indicator with Relay output)

- Direct Current Meter
- Indication of d.c. voltage
- Indication of d.c. current
- Relay Output
- Display with 4 digits



Power Quality and Network Analyzers



Mult-K NG

- Direct measurement up to 5A or through the use of Current Transformer
- Panel door meter
- RS-485 Output (MODBUS RTU) / Ethernet (Modbus TCP/IP)
- Class S
- Prodist Module 8



MPK NG

- Portable Instrument
- Flexible current sensors up to 3000A
- Alligator type voltage connectors
- Weatherproof case
- USB Output (Modbus-RTU)
- Class S
- Prodist Module 8



AQE 01 & AQE 02

- (AQE 02) Voltage and Current analysis up to 0.6 kV
- (AQE 01) Voltage analysis up to 0.6 kV
- Portable Instrument for pole and outdoor use (IP65)
- Flexible current sensors up to 3000A (AQE 02)
- Alligator type voltage connectors
- USB output (Modbus-RTU)
- Class S
- Prodist Module 8



AQE-03

- Voltage and Current Analysis up to 24kV (P-P)
- Hot line installation for analysis at distribution network points
- Portable Instrument for pole and outdoor use (IP65)
- Open core sensors (easy installation)
- Ethernet output (Modbus TCP/IP or DNP)

Power factor controllers



KPFI 06L

- Used for measurement and compensation of reactive power in electrical installations
- 6 stages for capacitor bank control output
- Output for alarms
- Panel Door



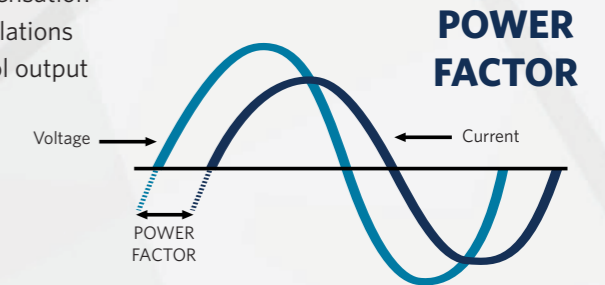
KPFI 08

- Used for measurement and compensation of reactive power in electrical installations
- 8 stages for capacitor bank control output
- Output for alarms
- RS-485 output
- Panel Door



KPFI 12

- Used for measurement and compensation of reactive power in electrical installations
- 12 stages for capacitor bank control output
- Output for alarms
- RS-485 output
- Panel Door



Electric Vehicles Charger



KRV-Wallbox

- Single and Three Phase
- Easy Installation
- Voltage 220/380V
- IP54
- 11kW (22 kW upon request)
- Type 2 Connector
- Communication: Modbus RTU
- Option with energy meter
- Safe and efficient

* outros tipos de conectores, sob consulta



Water Management Solutions

Solutions for Agribusiness, Water Management (sanitation) and Electricity monitoring

How does it work?



W-KBox

- Connectivity Options: LoRa, 4G, R5-485 (MODBUS RTU) / Ethernet (MODBUS TCP/IP) WiFi/Bluetooth
- Mass memory for more than 200,000 records
- Three digital inputs, two analog inputs (4-20mA.c.c. or 0-10V.c.c.)
- Two digital outputs for remote load command (Relay On/Off)
- One Pt100 input (optional)
- 4G Modem + Sim Card* (*optional)

METERING AND AUTOMATION FOR IRRIGATION PIVOTS

TEMPERATURE

ENERGY MEASUREMENT

RESERVOIR LEVEL

KRON MEDIDORES
Marca de qualidade.

VINASSE RESERVOIR LEVEL

SOIL MOISTURE MEASUREMENT

RAIN GAUGES

TEMPERATURE AND HUMIDITY OF SILOS

Rogowski Coils and Integrators



The KTSFN Rogowski coils are flexible, split-core sensors for current measurement, in low voltage (up to 0.6kV).

They are used in conjunction with the WIK line integrators with an output signal of 1Aa.c.. or 4-20mA.d.c..

Rogowski Sensors

- Window size of 100mm (**KTSF-100**) or 200mm (**KTSFN-200**)
- Nominal current from 100 to 10,000A
- Maximum current 100kA
- High Linearity
- No high voltage risks in open secondary
- No risk of equipment burnout with high currents
- Lightweight, small, non-invasive, and flexible.
- Electromagnetic shielding
- Easy installation in tight or difficult to assemble locations
- No need to disconnect or section the primary circuit for coil installation



Rogowski Integrators

- WIK-4.20 (1 input / 1 output 4-20mA)
- WIK-T4.20 (3 inputs / 3 outputs 4-20mA)
- WIK1A (1 input / 1 output 1Aac)
- WIK-T1A (3 inputs / 3 outputs 1Aac)



Current Transformer (LV)



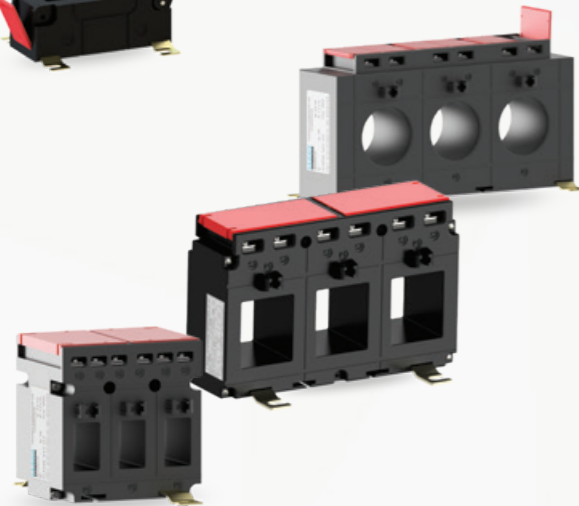
Thermoplastic casing

- Primary currents from 50 to 3,200A
- Secondary currents from 1 to 5A (others upon request)
- Classes from 3.0 to 0.3%
- Loads from 2.5 to 12.5VA
- Mounting on DIN rail, busbar, or bracket



Open Core Thermoplastic casing for Measurement

- Primary currents from 200 to 5,000A
- Secondary currents from 1 to 5A (others upon request)
- Classes from 1.2 to 0.5%
- Loads from 2.0 to 30VA
- Mounting on busbar or bracket



Three phase thermoplastic casing transformers (for circuit breaker output)

- Primary currents from 100 to 630A
- Secondary currents of 5A
- Classes from 3.0 to 0.5%
- Loads from 2.5 to 3.75VA
- Mounting on DIN rail, busbar, or bracket



Epoxy transformers for measurement

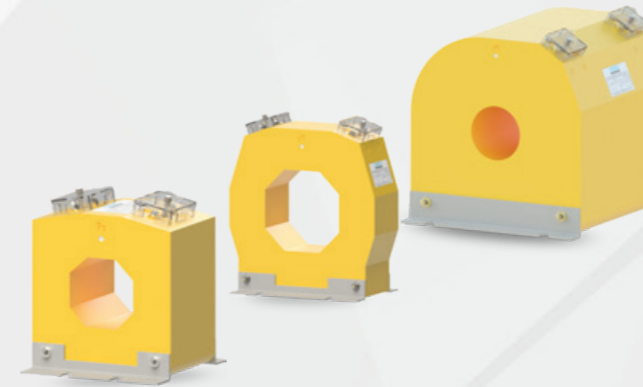
- Primary currents from 50 to 10,000A
- Secondary currents from 1 to 5A (others upon request)
- Classes from 3.0 to 0.3%
- Loads from 2.5 to 50VA
- Mounting on busbar or bracket

Current Transformer (LV)



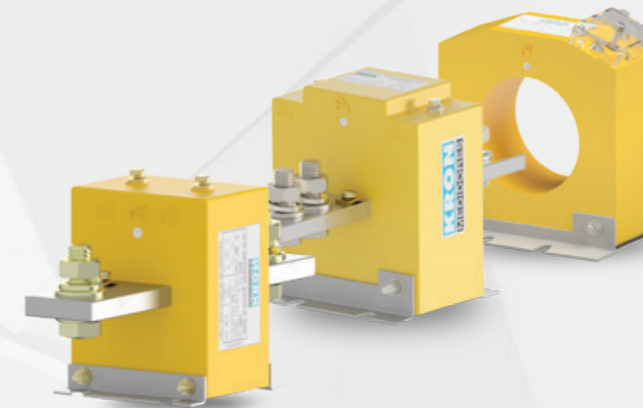
Epoxy transformers for Protection

- Primary currents from 50 to 10,000A
- Secondary currents from 1 to 5A (others upon request)
- Classes from 5P5 to 10P20
- Loads from 2.5 to 100VA
- Mounting on busbar or bracket



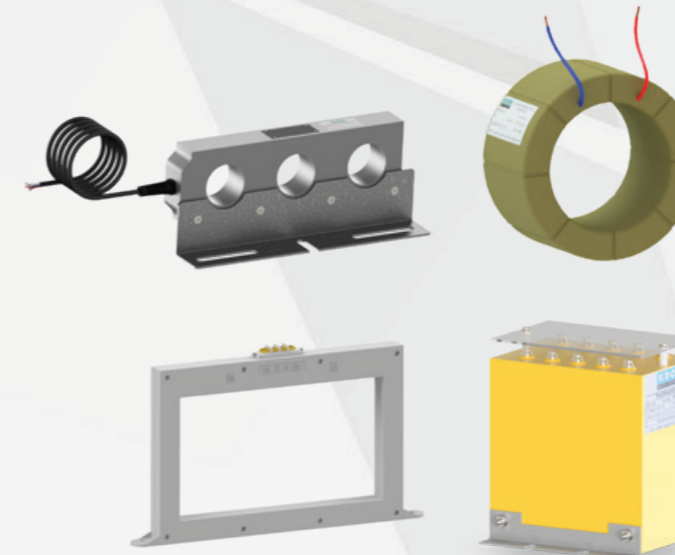
Epoxy transformers for Measurement + Protection

- Primary currents from 50 to 10,000A
- Secondary currents from 1 to 5A (others upon request)
- Measurement secondary classes from 3.0 to 0.3%
- Measurement secondary loads from 2.5 to 50VA
- Protection secondary classes from 5P5 to 10P20
- Protection secondary loads from 2.5 to 100VA
- Secundário de Proteção cargas de 2,5 a 100VA



Epoxy transformers for Measurement (for utilities)

- Primary currents from 100 to 10,000A
- Secondary currents of 5A
- Classes from 1.2 to 0.3%
- Loads from 2.5 to 12.5VA
- Mounting by bracket
- Continuous overload of 1.5 to 2 x In



Special Transformers

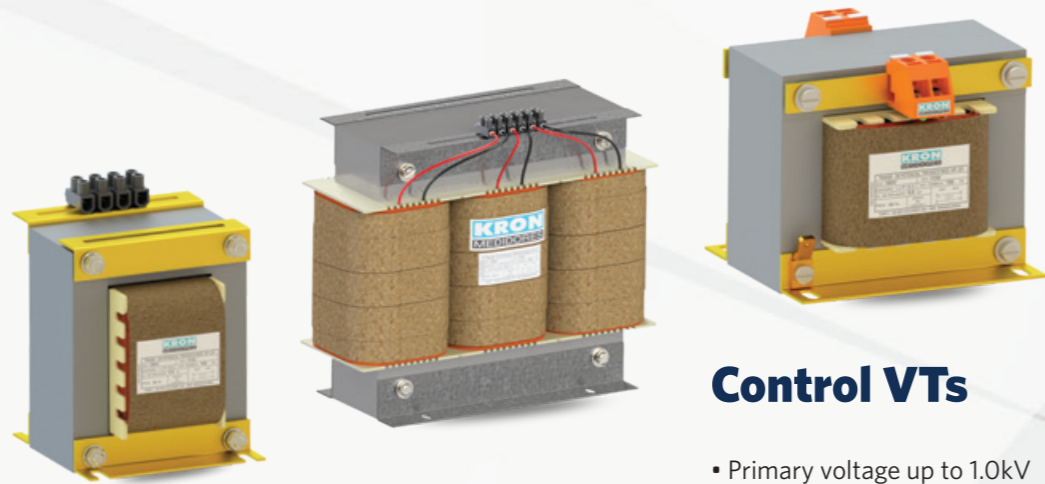
- Hall effect sensors
- Cotton band insulated transformers
- Projects on demand
- Summation CT

Voltage Transformer (LV)



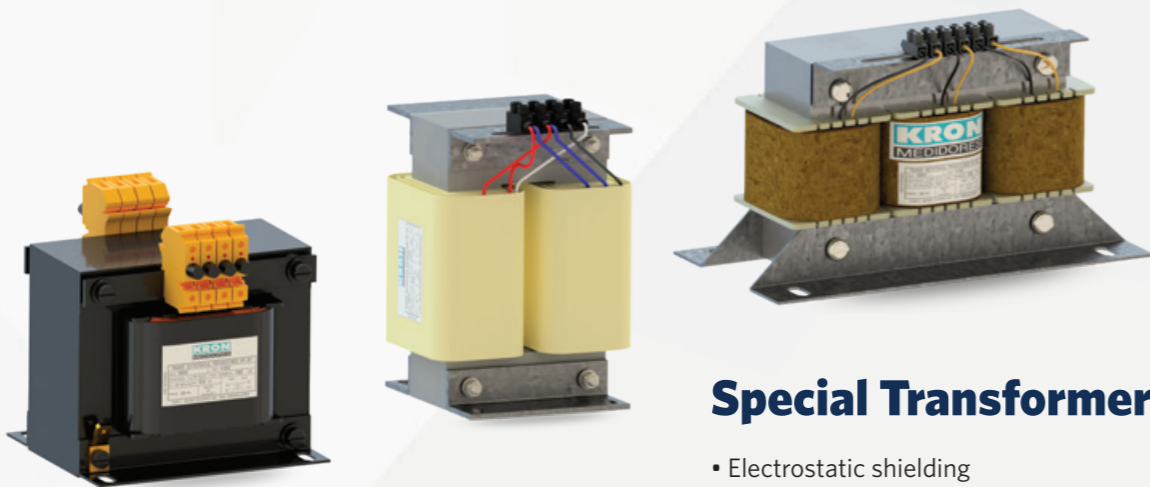
Measurement VTs

- Primary voltage up to 1.0kV
- Secondary voltage up to 1.0kV
- Classes from 1.2 to 0.6%
- Loads from 2.5 to 12.5VA
- Thermal power up to 500VA
- Mounting by bracket



Control VTs

- Primary voltage up to 1.0kV
- Secondary voltage up to 1.0kV
- Winding with derivation
- Isolating transformers and autotransformers
- Option with rectified output in 12 and 24Vd.c.



Special Transformers

- Electrostatic shielding
- For outdoor use
- Insulators
- Phase angle compensation

Analog Transducers



- Current transducer (Aa.c. and Ad.c.), Voltage (Va.c. and Vd.c.), Power (W, Var and VA), Frequency (Hz), Temperature (°C), Resistance (Ω).
- Output signals: mAd.c. and Vd.c.

Shunts



- Low temperature coefficient
- Inputs from 1- 10,000A
- Standard outputs for 60, 150 and 300mV
- 0.5% precision
- Projects on demand

Analogue Indicators



- Moving iron for a.c.
- Moving coil for d.c.
- Current (A), Voltage (V), and Frequency (Hz)
- Active power (W), Reactive (Var), and Cos
- Maximum demand
- Phase sequence
- Generator group synchronization
- Selector switches

Earth Leakage Relays



RFT-1E



RFT-7

Panel Door

- 1 or 2 relay outputs
- HMI Programming



RFT-3C



RFT-3AN



RFT-61-10

DIN Rail

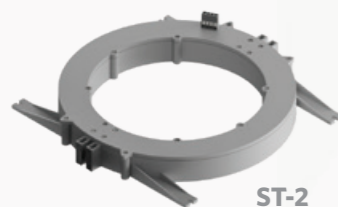
- 1 or 2 relay outputs
- HMI Programming
- Minimum current 25mA to 250A



RFTC-1

Relay with Integrated Sensor

- Back of Panel
- 1 relay output
- HMI Programming



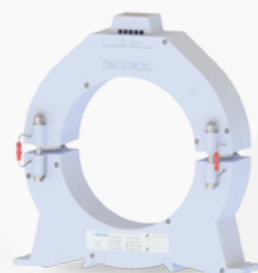
ST-2



ST-1

Closed Core Sensors

- Current sensor for use with Earth Leakage Relay
- Minimum current: 10mA.c. and 25mA.c. or 500mA.c. (depending on the model)
- Maximum current: 1,000A.c.

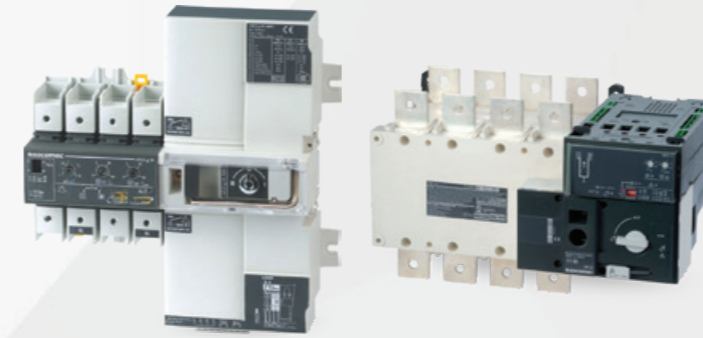


STA-1

Open Core Sensors

- Open core current sensor
- Use with models from the RFT family of Earth Leakage Relays
- Minimum current: 500mA.c.
- Maximum current: 1,000A.c.

Socomec Switches



Motorized and Automatic Changeover Switches

- Motorized switching under load (AC22 and AC23).
- Motor power supply 230Vac (208 - 277Vac), 50/60Hz
- 2,3 & 4 poles



Manual Switch and Changeover Switches

- 3,4,6 & 8 poles
- Category AC22/AC23
- IEC 60947-3, EN 60947-3 standards



Fuse Switches

- Double cut per phase
- 2,3 & 4 poles
- Overcurrent protection (gG, aM, UR, BS | 100 ka e.f)
- IP20 protection with terminal protector



Photovoltaic Switch

- 2,4, & 8 poles
- 20A to 3,200A
- Category AC22/AC23
- IEC 60947-3, EN 60947-3 standards

The preferred brand of professionals in the field

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KRON Instrumentos Elétricos Ltda.

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