

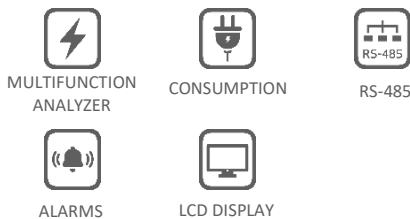


FEATURES

- The **Mult-K C** is an instrument conceived to measure electrical parameters in AC systems, such as energy consumption, current, voltage and others.
- Applicable either on low, mid or high voltage, mono-phase, two-phase or three-phase systems, since it is possible to program the potential and/or current transformer ratios and the connection diagrams.
- Measurement readings can be obtained locally (through a customizable LCD display) or remotely, using a RS-485 output for communication.
- Besides its metering functions, **Mult-K C** also acts as an electrical parameters supervisor (alarms) and as a counter for operation hours and for number of startups.

APPLICATIONS

- Submetering
- Energy Efficiency
- Supervision of electrical parameters (alarms)
- Monitoring of motor-generator group
- Energy Cogeneration systems (4-quadrant metering, delivered and received power)
- Automation systems
- Analysis of electrical circuits and equipment
- Analog Instrument Substitution
- Any application related to energy and electrical parameters measurements.



PRODUCT INFO

ELECTRICAL PARAMETERS - 101

- Includes current, voltage, frequency, energy consumption, energy demand, active, reactive and apparent powers, power factor and other parameters

CONNECTION DIAGRAMS

- Mono-Phase, Two-Phase or Three-Phase systems (configurable)

INSTALLATION

- Panel's Door
- Technical support via e-mail, telephone, WhatsApp and YouTube videos

ELECTRICAL PARAMETERS SUPERVISION (ALARMS)

- **Mult-K C** incorporates two relay outputs (NO/NC), activated when certain pre-defined alarm conditions are met, making the automation process easier. For alarm setting, up to twenty-one different supervision conditions are available, and twelve of them can be set for each output

INTERFACES, READINGS & CONFIGURATIONS

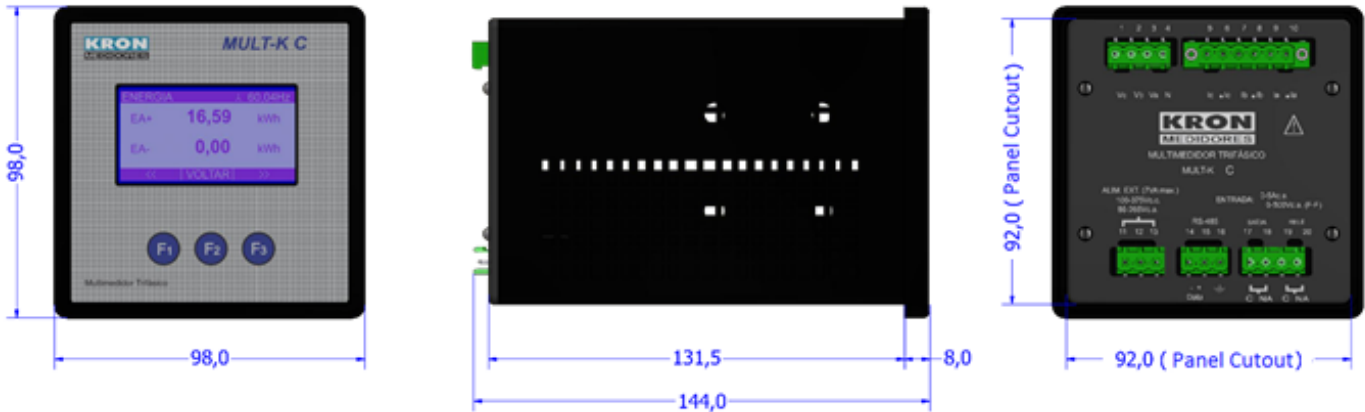
- Man Machine Interface (MMI) composed of a customizable LCD display and three navigation keys, allowing local reading and configuration. The user can personalize up to three screens, applying up to three different display patterns
- RS-485 communication
- Software for reading and parameterization: RedeMB (RS-485)
- Modbus-RTU protocol, allowing integration to PLCs, master MMIs, supervisory systems and data concentrators.

Energy Meter and Multifunction Analyzer

ELECTRICAL GREATNESSES	<i>Instantaneous</i>	Voltage (Ph-Ph, Ph-N and 3Ph), Current (Ph, N and 3Ph), Frequency, Active, Reactive and Apparent Power (Ph and 3Ph), Power Factor (Ph and 3Ph), THD-Voltage and Current (Ph until 31 ^a order)
	<i>Energy</i>	±Active Energy kWh (Consumption and Supply) ±Reactive Energy kVARh [Inductive (+) and Capacitive (-) Loads] Active and Apparent Demand (Last and Maximum)
	<i>Maximum and Minimum</i>	Voltage (Ph-Ph, Ph-N and 3Ph), Current (Ph, N and 3Ph), Frequency, Active, Reactive and Apparent Power (Ph and 3Ph), Power Factor (Ph and 3Ph) and THD
MEASUREMENTS AND INPUT INFO	<i>Connections Diagrams</i>	Three-Phase (Star or Delta), Two-phase and Single-Phase
	<i>Voltage – Working Range</i>	20 to 500Vac (Ph-Ph) [1.5 Vmax overload (1s)]
	<i>Current – Working Range</i>	20mA to 7,5Aac Split-Core 100A 200A 300Aac (minimum: 2% of nominal value)
	<i>Frequency – Working Range</i>	44 to 72 Hz
	<i>Connection</i>	Quick coupling terminal or Lug Terminal (IP-00)
	<i>Maximum Cable to be Used</i>	2,5mm ² for power supply, measurement inputs and relay outputs
POWER SUPPLY	<i>Internal Consumption</i>	< 0,5VA
	<i>Voltage</i>	85-265Vac/100-375Vdc 110/220Vac (80 to 120% of nominal value)
	<i>Internal Consumption</i>	< 10VA
ACCURACY at 25°C (77 °F), referred to the full scale	<i>Voltage, Current and Powers</i>	0.2%
	<i>Frequency</i>	0.1Hz
	<i>Power Factor and Energies</i>	0.5%
	<i>THD</i>	< 3%
COMMUNICATION	<i>Connection/Protocol</i>	RS-485 - Modbus RTU
	<i>RS-485 Cabling</i>	Shielded cables, with at least two twisted pairs (2x24 AWG), minimum section of 0.25mm ² and characteristic impedance of 120ohms
	<i>Transmission Speed</i>	9600, 19200, 38400 or 57600bps (configurable)
	<i>Data Format</i>	8N1, 8N2, 8E1 or 8O1 (configurable)
DISPLAY	<i>Addressing</i>	1 to 247 (configurable)
	<i>LCD (blue)</i>	128x64 pixels with backlight
ALARM RELAYS (NO/NC)	<i>Maximum Voltage</i>	250Vac/Vdc
	<i>Maximum Current</i>	3Aac/Adc
	<i>Configurable Supervision Conditions (Alarms)</i>	Overvoltage (Ph-Ph, Ph-N and 3Ph), Undervoltage (Ph-Ph, Ph-N and 3Ph), Overcurrent (Ph, N and 3Ph), Overfrequency, Underfrequency, Over demand (active and apparent, 3Ph), Minimum Power Factor (Ph and 3Ph), Maximum active power (Ph e 3Ph), Maximum apparent power (Ph and 3Ph), Maximum reactive power (Ph and 3Ph), Over THD - Voltage and Current (Ph, up to 31st order)
	<i>Relay Outputs</i>	2 NO/NC relays, with configurable operation modes. A total of 21 alarm conditions available, where 12 can be set for each output
CASE	<i>Material</i>	Thermoplastic
	<i>Mass</i>	0.5 Kg
	<i>Protection Degree</i>	IP-40 for front panel and IP-20 for enclosure
ENVIRONMENTAL CONDITIONS	<i>Temperature</i>	Operation: 0 to 60°C (32 to 140°F) Storage: -25 to 60°C (-13 to 140°F)
	<i>Relative Air Humidity</i>	Maximum of 90% (without condensation)
	<i>Temperature Coefficient</i>	50ppm/°C
STANDARDS	<i>Electrical Parameters</i>	IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-6 IEC 61000-4-8 IEC 61000-4-11 CISPR 11

- For further information, see User Manual

DIMENSIONS



How to Specify:

Z0591

Protection Degree:

- 1: Standard**
- 2: IP-54 (front panel) and IP-20 (enclosure)
- 3: IP-54 (front panel) and IP-20 (enclosure) + sealing rubber
- 4: IP-40 (front panel and enclosure)
- 5: IP-54 (front panel) and IP-40 (enclosure)
- 6: IP-54 (front panel) and IP-40 (enclosure) + sealing rubber

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Current Input:

- 1: 1Aac
- 5: 5Aac (Imax = 7,5Aac)**
- A: Split Core 100Aac
- B: Split Core 200Aac
- C: Split Core 300Aac

1

Frequency:

- 1: 60Hz**
- 2: 50Hz

0

Termination:

- 0: Standard**
- 1: Lug Terminal 1
- 1: Lug Terminal 3**

Power Supply:

- 1: 120/220Vac***
- 2: Universal Source: 85-265Vac/100-375Vdc

* Not applicable for models with lug terminals

** Only applicable for universal source power supply models.

The bold signaled items indicate the standard options, which have higher stock availability

Standard Model: (Example)

Z0591 1 5 5 2 1 1 0 0

Mult-K C {Protection Degree - Standard} {Current Input 5Aac} {Frequency 50Hz} {Power Supply 110/220Vac} {Termination - Standard}

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For correct utilization of the product, the User Manual must be consulted before its installation or operation.
Some items presented here may be optional, being necessary the correct product specification by their code.

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