

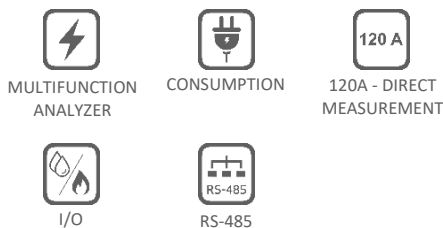


FEATURES

- The **Mult-K 120** 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. Also available in a configuration intended to directly measure currents up to 120Aac, which does not require external current transformers
- Besides its electrical measurement functions, can be used as a data concentrator, receiving signals generated by other resources's meters/sensors, like water, gas or oil meters. Incorporates two digital outputs (relay) for remote commands (ON/OFF)
- Measurement readings can be obtained locally (through an LCD display) or remotely, using RS-485 or pulse outputs for communication

APPLICATIONS

- Submetering
- Energy Efficiency
- Energy Cogeneration systems (4-quadrant metering, delivered and received power)
- Automation systems
- Analysis of electrical circuits and equipment
- Any application related to energy and electrical parameters measurements



PRODUCT INFO

ELECTRICAL PARAMETERS – 44

- 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)

DIRECT MEASUREMENT – 120 A

- Direct measurement of currents up to 120Aac, without requiring external current transformers

INSTALLATION

- Panel's Background, Side Screws Fastening
- Technical support via e-mail, telephone, WhatsApp and YouTube videos

INTERFACES, READINGS & CONFIGURATIONS

- Man Machine Interface (MMI) composed of an LCD display and a navigation key, allowing local reading and configuration checking
- Software for reading and parameterization: RedeMB (RS-485 communication)
- Modbus-RTU (standard), Metasys-N2 (optional) or BACnet MS/TP (optional – upon consultation) protocols, allowing integration to PLCs, master MMIs, supervisory systems and data concentrators
- It may include pulse output as an option for remote reading of active or reactive inductive energy, using wired connection to external device inputs (PLCs, mechanical counters, etc.)

WATER, GAS, OIL, COMMANDS...

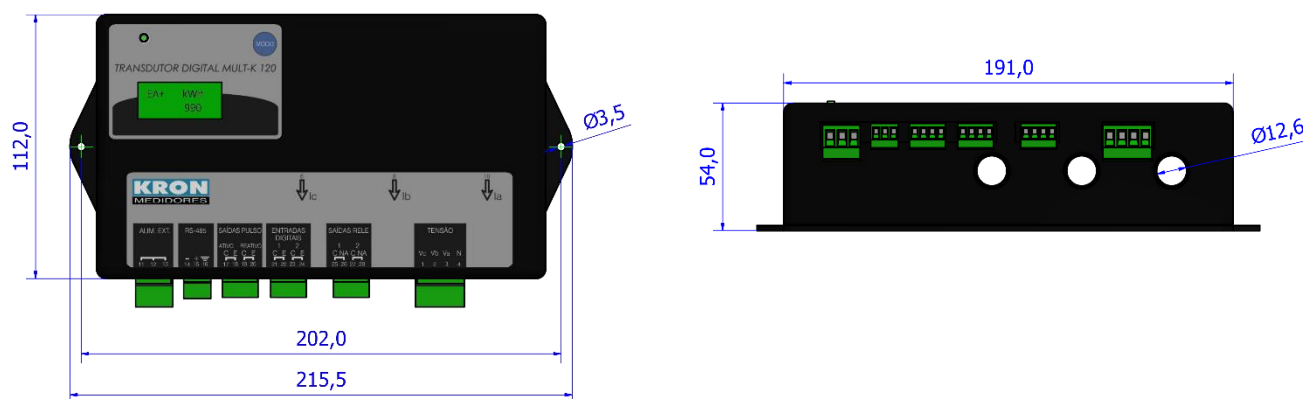
- Two digital inputs for concentration of external pulses, generated by other resources's meters (like water, gas and oil). Two digital outputs (relay) for remote commands (On/Off)

Energy Meter and Multifunction Analyzer

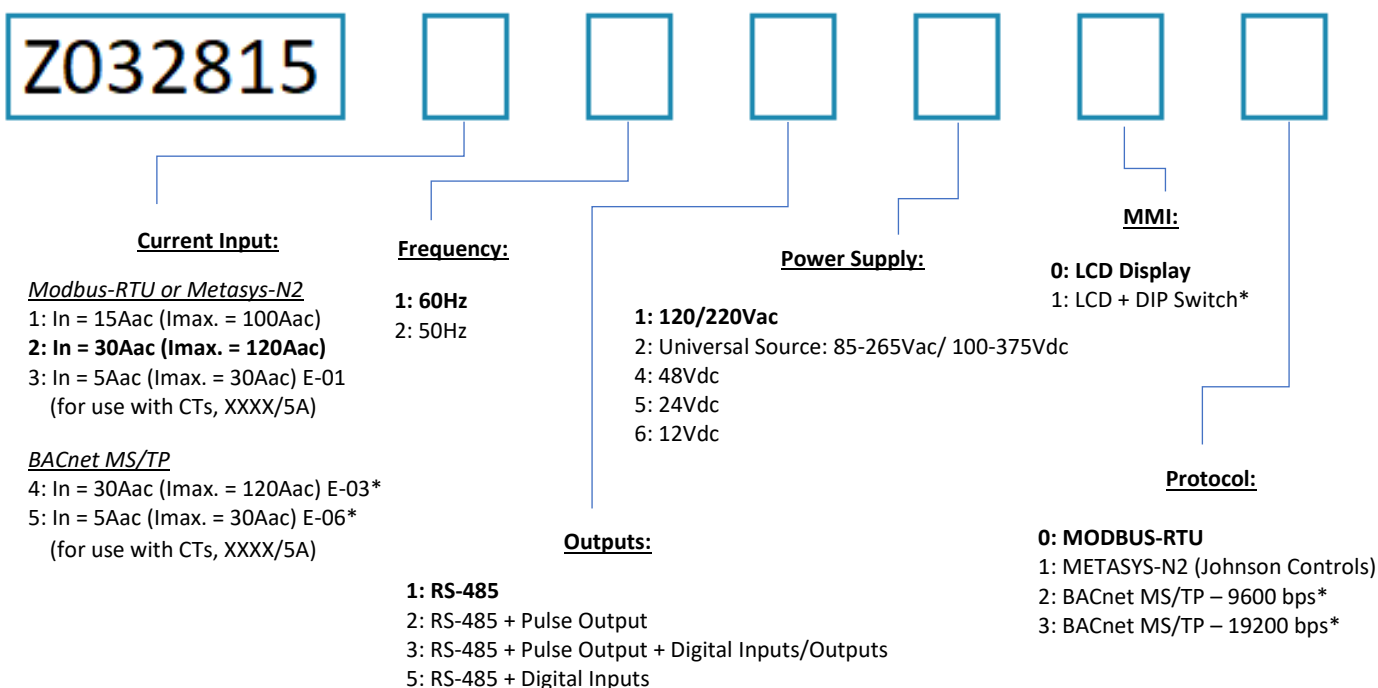
ELECTRICAL GREATNESSES	<i>Instantaneous</i>	Voltage (Ph-Ph, Ph-N and 3Ph), Current (Ph and 3Ph), Frequency, Active, Reactive and Apparent Power (Ph and 3Ph), Power Factor (Ph and 3Ph), THD-Voltage and Current (Ph until 31 st order)
	<i>Energy</i>	±Active Energy kWh (Consumption and Supply) ±Reactive Energy kVARh [Inductive (+) and Capacitive (-) Loads] Active and Apparent Demand (Last and Maximum)
	<i>Maximum and Minimum</i>	Voltage and Current (3Ph)
	<i>Connections Diagrams</i>	Three-Phase (Star or Delta), Two-phase and Single-Phase
MEASUREMENTS AND INPUT INFO	<i>Voltage – Working Range</i>	20 to 500Vac (Ph-Ph) [1.5 Vmax overload (1s)]
	<i>Current – Working Range</i>	In 30Aac: 1.5 ~ 120Aac In 5Aac: 50mA ~ 30Aac (recommended for use with external CTs, XXXX/5A) In 15Aac: 750mA ~ 100Aac
	<i>Frequency - Working Range</i>	44 ~ 72 Hz
	<i>Connection</i>	Terminal Blocks: Quick coupling terminal (IP-00)
POWER SUPPLY	<i>Maximum Cable to be Used</i>	Current: Orifice for cable passage, maximum cable diameter of 12.6 mm Terminal Blocks (Power Supply, Voltage and I/O connections): 2.5mm ²
	<i>Internal Consumption</i>	< 0.5VA
	<i>Voltage</i>	85 ~ 265Vac/100 ~ 375Vdc 110/220Vac (80 to 120% of nominal value) 12Vdc (90 to 120% of nominal value) 24Vdc (80 to 120% of nominal value) 48Vdc (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 Metasys-N2 BACnet MS/TP
	<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>	Modbus-RTU: 9600, 19200, 38400 or 57600bps (configurable) Metasys-N2: 9600 bps BACnet MS/TP: 9600 or 19200bps
	<i>Data Format</i>	Modbus-RTU: 8N1, 8N2, 8E1, 8O1 (configurable) Metasys-N2 BACnet MS/TP: 8N1
DISPLAY	<i>Addressing</i>	1 to 247 (configurable) Models with Dip-Switch can be addressed by activation/deactivation of the Keys (1 to 31)
	<i>LCD (green)</i>	8 columns x 2 lines, with backlight
	<i>I/O</i>	Type: Open Collector Voltage required: 12~24Vdc Maximum Frequency: 2Hz Admittable pulse width: 200ms
	<i>2 Digital Inputs</i>	
PULSE OUTPUT	<i>2 Digital Outputs</i>	Relay Output, 250V – 2A (Ac or Dc)
	<i>Parameters</i>	Positive Active Energy (consumption) and Positive Reactive Energy (inductive load)
	<i>Type</i>	Open Collector Voltage required (external source): 12 to 24 Vdc Pulse width: 200ms Max Current: 1mA Max Frequency: 1Hz
	<i>Material</i>	Thermoplastic
CASE	<i>Mass</i>	0.75Kg
	<i>Protection Degree</i>	IP-40
	<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)
ENVIRONMENTAL CONDITIONS	<i>Temperature Coefficient</i>	50ppm/°C
	<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
STANDARDS		

• For further information, see User Manual

DIMENSIONS



How to Specify:



* Ordering upon consultation, please contact technical support

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

Standard Model: (Example)

Z032815 2 2 1 1 0 0

Mult-K 120 {In = 30A (Imax = 120Aac)} {Frequency 50Hz} {RS-485} {Power Supply 110/220Vac} {LCD Display} {Modbus-RTU protocol}

©2021 Kron Instrumentos Ltda - The information contained in this technical sheet is subject to changes without previous notice.
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.

Kron Instrumentos Elétricos Ltda.

Rua Alexandre de Gusmão, 278 - São Paulo, SP | Brasil

Phone: 55 (11) 5525-2000 | www.kron.com.br | suporte@kron.com.br | vendas@kron.com.br