

MULTIFUNCTION
ANALYZER



CONSUMPTION



RS-485

FEATURES

- The **Mult-K 05** 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 an LCD display) or remotely, using a 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)

INSTALLATION

- Panel's Background, 35 mm DIN Rail Fastening
- Technical support via e-mail, telephone, WhatsApp and YouTube videos

INTERFACES, READINGS & CONFIGURATIONS

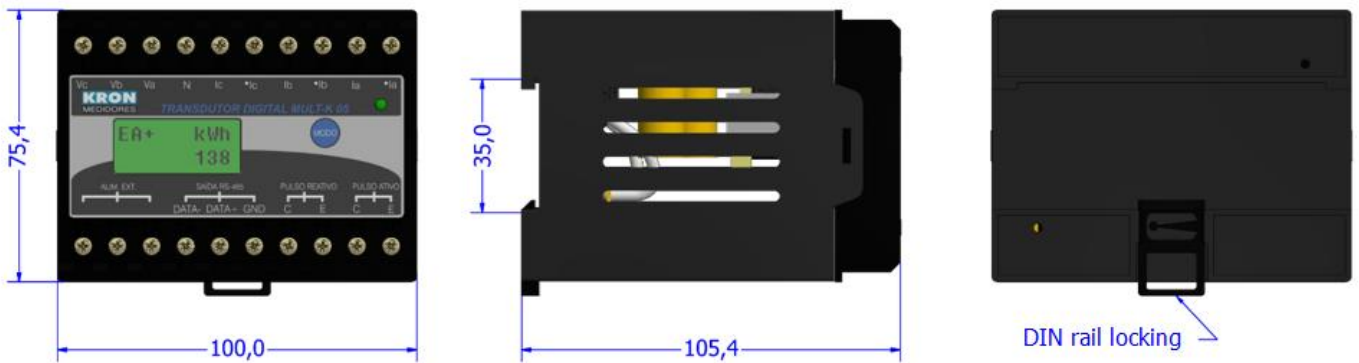
- Man Machine Interface (MMI) composed of an LCD display and a navigation key, allowing local reading and configuration checking
- RS-485 communication, may include up to two outputs per unit
- Software for reading and parameterization: RedeMB (RS-485)
- Modbus-RTU protocol (standard) or MetasysN2 (optional), 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.)

Energy Meter and Multifunction Analyzer

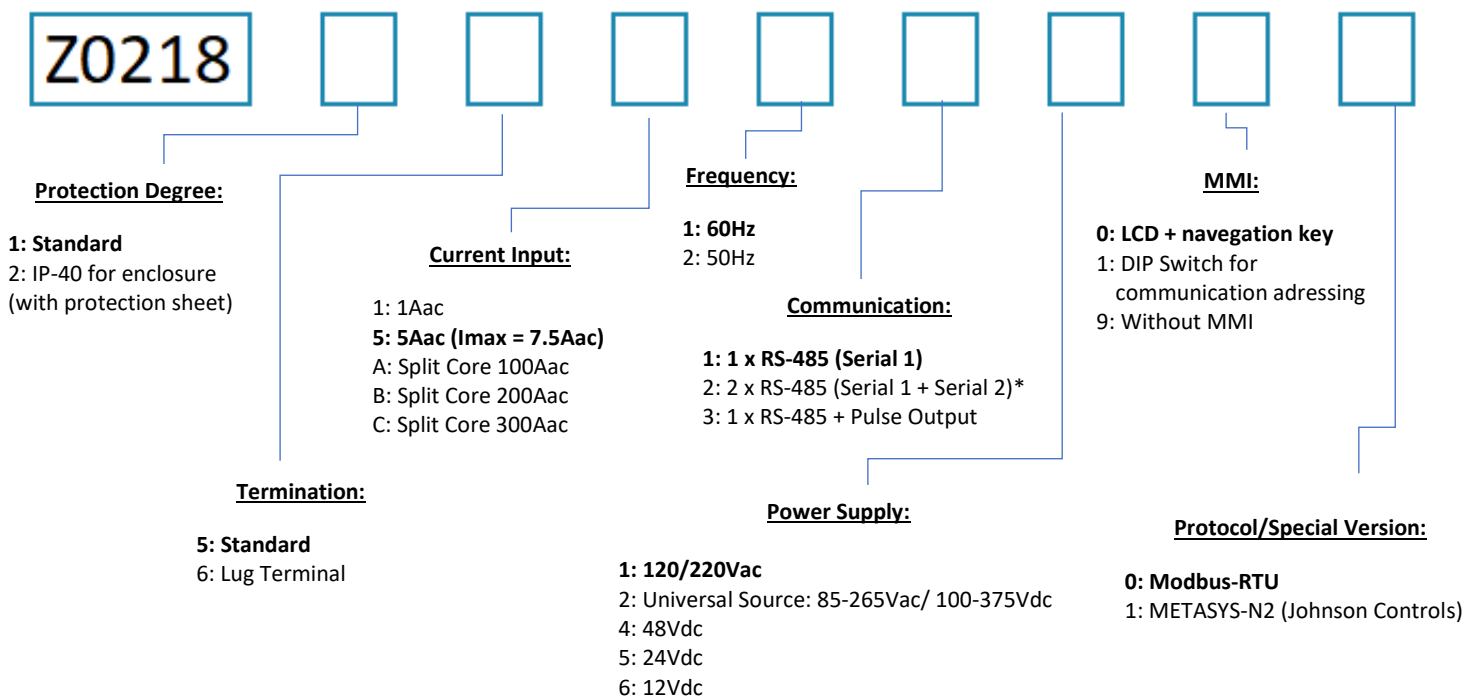
ELECTRICAL GREATNESSES	<i>Instantaneous</i>	Voltage (Ph-Ph, Ph-N and 3Ph), Current (Ph and 3Ph), Frequency, Active, Reactive and Apparent Power (Ph and 3Ph), Power Factor (Ph and 3Ph), THD-Voltage and Current (Ph until 31 st order)
	<i>Energy</i>	±Active Energy kWh (Consumption and Supply) ±Reactive Energy kVARh [Inductive(+) and Capacitive (-) Loads] Active and Apparent Demand (Average and Maximum)
MEASUREMENTS AND INPUT INFO	<i>Maximum and Minimum</i>	Voltage and Current (3Ph)
	<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>	7.5Aac (min 20mAac) 1Aac (min 20mAac) Split-Core: 100A 200A 300Aac (min 2%)
	<i>Frequency – Working Range</i>	44 ~ 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 and measurement inputs 1.5mm ² for pulses output
	<i>Internal Consumption</i>	<0.5VA
POWER SUPPLY	<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>
<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>		1 x RS-485, Modbus-RTU: 9600, 19200, 38400 or 57600bps (configurable) 2 x RS-485, Modbus-RTU: 9600, 19200 or 38400bps (configurable) 1 x RS-485, MetasysN2: 9600bps
<i>Data Format</i>		Modbus-RTU: 8N1, 8N2, 8E1 or 8O1 (configurable) MetasysN2: 8N1
DISPLAY	<i>Addressing</i>	1 to 247 (configurable)
	<i>LCD (green)</i>	8 columns x 2 lines, with backlight
PULSE OUTPUT	<i>Parameters</i>	Positive Active Energy and Positive Reactive Energy (inductive load)
	<i>Type</i>	Open Collector Voltage required (external source): 12 to 24 Vdc Pulse width: 200ms Maximum Current: 1mA Maximum Frequency: 1Hz
CASE	<i>Material</i>	Thermoplastic
	<i>Mass</i>	0.5Kg
	<i>Protection Degree</i>	IP-20
ENVIRONMENTAL CONDITIONS	<i>Operation Temperature</i>	0 to 60°C (32 to 140°F)
	<i>Storage Temperature</i>	-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:



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

Standard Model: (Example)

Z0218 1 5 5 2 1 1 0 0

Mult-K 05 {Protection Degree - Standard} {Termination - Standard} {Current Input 5Aac} {Frequency 50Hz} {1 x RS-485 (Serial 1)} {Power Supply 110/220Vac} {MMI - LCD + navigation key} {Modbus-RTU Protocol}

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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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