FEATURES

- The **Konect 120** is an instrument conceived to measure electrical parameters in AC systems, such as energy consumption, current, voltage and others.

- Applicable in direct measurements of circuits with loads up to 120A AC, without the use of external transformers. It can also be applied for measurements in medium or high voltage, through the programming of connection schemes and the ratios of Potential and Current Transformers.

- Also applicable in **IoT (Internet of Things) and Industry 4.0** systems, as it allows integration with various platforms such as Amazon AWS, Microsoft Azure, TagoIO, among others.

- Communication through **Wi-Fi (MQTT and Modbus TCP), Ethernet (MQTT and Modbus TCP), Bluetooth (Modbus RTU), LoRa (LoRaWAN) and RS-485 (Modbus RTU)** connections. Data can be made available locally or remotely through software, applications, cell phones, tablets, panels, supervisory systems or web platforms.

- Features a data concentrator function, gathering information from other devices such as water, gas, and oil meters. It includes a digital relay output for sending commands in control systems (ON/OFF).

- Equipped with mass memory for storing the history of up to twenty parameters, with a minimum interval of 1 minute.

APPLICATIONS

- IoT, Industry 4.0, and Automation Systems
- Energy Efficiency and Cost Allocation
- Energy Cogeneration Systems (measurement in all four quadrants, consumption, and supply)
- Analysis of Circuits and Electrical Equipment
- Any application involving measurement of electrical parameters

PRODUCT INFO

ELECTRICAL PARAMETERS (104 parameters)

- 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.

MEMORY

- Mass Memory for generating a history of the behavior of up to 20 parameters, with minimum intervals of 1 minute between recordings. Can be used with buffering capabilities

INTERFACES, READINGS & CONFIGURATIONS

- LCD Human Machine Interface (HMI) - for data visualization of the meter.
- Data outputs through Ethernet, RS-485, Bluetooth, Wi-Fi, and LoRa.
- Protocols include MODBUS-RTU, MODBUS-TCP/IP, and MQTT.
- Free software for reading and configuration: RedeMB (RS-485 and Bluetooth), RedeMB-TCP (Ethernet and Wi-Fi), Android app (MQTT and Bluetooth).
- Application in IoT and Industry 4.0 systems, connection to MQTT Broker. Integration with Dashboards, Apps, and other IoT tools.
- Integration with PLCs, external HMIs, supervisory systems, and concentrators (Modbus-RTU/Modbus-TCP).

WATER, GAS, OIL, TEMPERATURE, COMMANDS....

- Up to 3 digital inputs for external pulse concentration, generated by input meters (such as water, gas). Up to 2 digital relay outputs for sending commands (On/Off)).

Category	Parameter	Value
ELECTRICAL GREATNESSES	*Instantaneous*	Voltage (Ph-Ph, Ph-N, and 3Ph), Current (Ph, N, and 3Ph), Frequency, Active Power (Ph and 3Ph), Apparent Power (Ph and 3Ph), Reactive Power (Ph and 3Ph), Power Factor (Ph and 3Ph).
	Energy	±Active Energy kWh (Consumption and Supply) ±Reactive Energy Varh (Inductive and Capacitive Loads) Active and Apparent Demand (Average and Maximum)
MEASUREMENTS AND INPUT INFO	*Maximum and Minimum*	Voltage, Current, Powers, Power Factor(Ph and 3F)
	Connections Diagrams	Three-Phase (Star and Delta), Two-phase and Single-Phase
	Voltage – Working Range	20 to 500Vac (Ph-Ph) (1.5 Vmax overload (1s))
	Current – Working Range	120Ac.a. (min 200mAc.a.) Split-Core 600A: 0,3…..600A 5A: 0,05…..5A Split-Core 1000A: 1,5…..1000A Split-Core 300A: 0,3…..300A Split-Core 2000A: 1,5…..2000A
	Frequency – Working Range	45~65Hz
	Connection	Terminal Blocks: Quick coupling terminal (IP-00)
	Maximum Cable to be Used	Current for direct measurement: 13mm diameter through hole – cable up to 35mm² Current for indirect measurement: 9mm diameter through hole – cable up to 16 mm² Power Supply, Voltage and Split Core connections: 2,5mm²
POWER SUPPLY	*Internal Consumption*	< 0,5VA
	Voltage	85-265Vac./70-300Vdc
	Internal Consumption	< 10VA
ACCURACY at 25°C (77 °F), referred to the full scale	*Voltage and Frequency*	0,5%
	Current, Powers, Power Factor and Energies	0.5% for measurement on closed/inner core CTs 1% for measurement on Split Core and Bi-party CTs
COMMUNICATION	*Connection/Protocol*	Wi-Fi: Modbus-TCP & MQTT RS-485 ,Bluetooth: Modbus RTU LoRa: LoRaWan (LA915-928A)
	RS-485 Cabling	Shielded cables, with at least two twisted pairs (2x24 AWG), minimum section of 0.25mm² and characteristic impedance of 120ohms.
	Transmission Speed	RS-485: 9600, 19200 (configurable) Ethernet: 10/100 Mbits/s
	Addressing/ Data Format	1 to 247 | 8N1, 8N2, 8E1 ou 8O1 (configurable)
IoT DATA PUBLISHING AND MASS MEMORY	*Data storage and publication interval*	Minimum 1 minute (resolution only in minutes)
	Quantity	Up to 20 variables**
	Memory capacity	16MB
I/O	*Up to 3 Digital Inputs*	Type: Open Collector |Voltage required: 12~24Vdc Maximum Frequency: 2Hz | Admittable pulse width: 200ms
	Up to 2 Digital Outputs	Relay Output, 250V – 2A (Ac or Dc)
DISPLAY	*LCD*	2 lines x 10 characters
CASE	*Material*	Thermoplastic
	Mass	0,325 Kg
	Protection Degree	IP-40
ENVIRONMENTAL CONDITIONS	*Operation Temperature*	Operation: -10 a 60 °C (14 to 140°F) | Storage : -25 a 60 °C (-13 to 140°F)
	Relative Air Humidity	Maximum of 85% (without condensation)
STANDARDS	*Electrical Parameters*	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
	Wi-Fi	IEE 802.11 b, g, n | Anatel Certification - 00038-18-10990

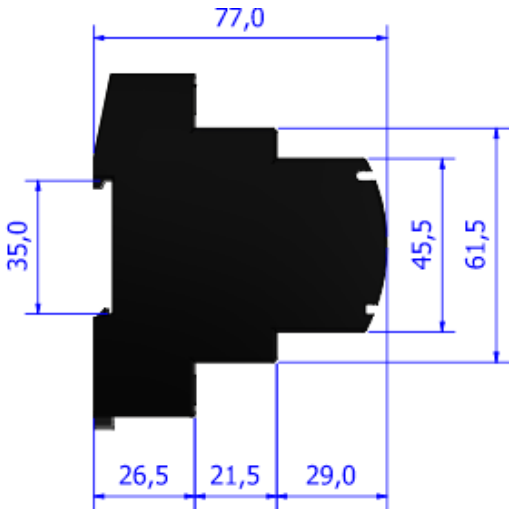** Wi-Fi: Up to 20 parameters | Lora: Up to 10 parameters.

- *For further information, see User Manual*
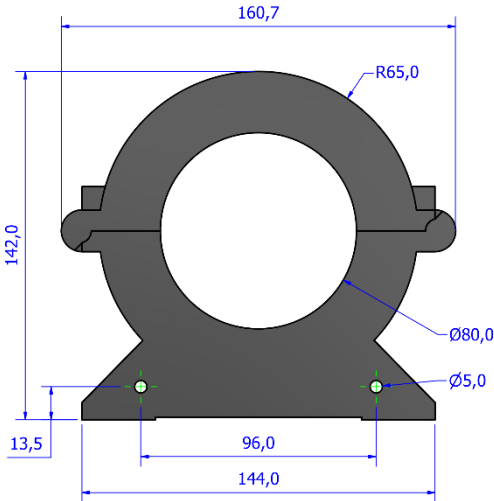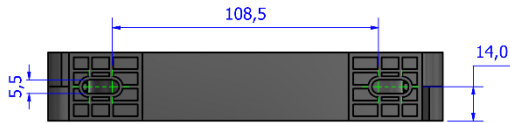
DIMENSIONS

Front View

Side View

Split Core
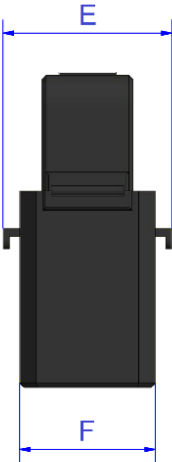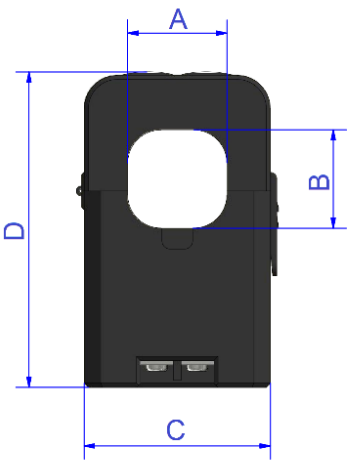
	A	B	C	D	E	F
Modelo						
100A	16	16	29,5	55	31	31
200, 300A	24	24	45	74,5	34	34
600A	36,0	36,0	56,7	92,6	48,4	39,8

Dimensões em milímetros

1000A, 2000A

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MEDIDORES

How to Specify:

Z315815 ☐ ☐ ☐ ☐ 0 0

Current Input:

1: 120A (Ø 13mm)
2: 5A (Ø 9mm)
5: Split Core 300A
D: Split Core 600A
H: Split Core 1000A
I: Split Core 2000A

Frequency:

1: 60Hz
2: 50Hz

Communication:

1 - RS-485
2 - RS-485 + Ethernet + Wi-Fi + Bluetooth
A - RS-485 + LoRa
B - RS-485 + LoRa (Extension)

Digital Outputs and Inputs:

0 - No digital inputs or outputs
1 - 2 Inputs and 2 Outputs
2 - 3 Inputs and 1 Output
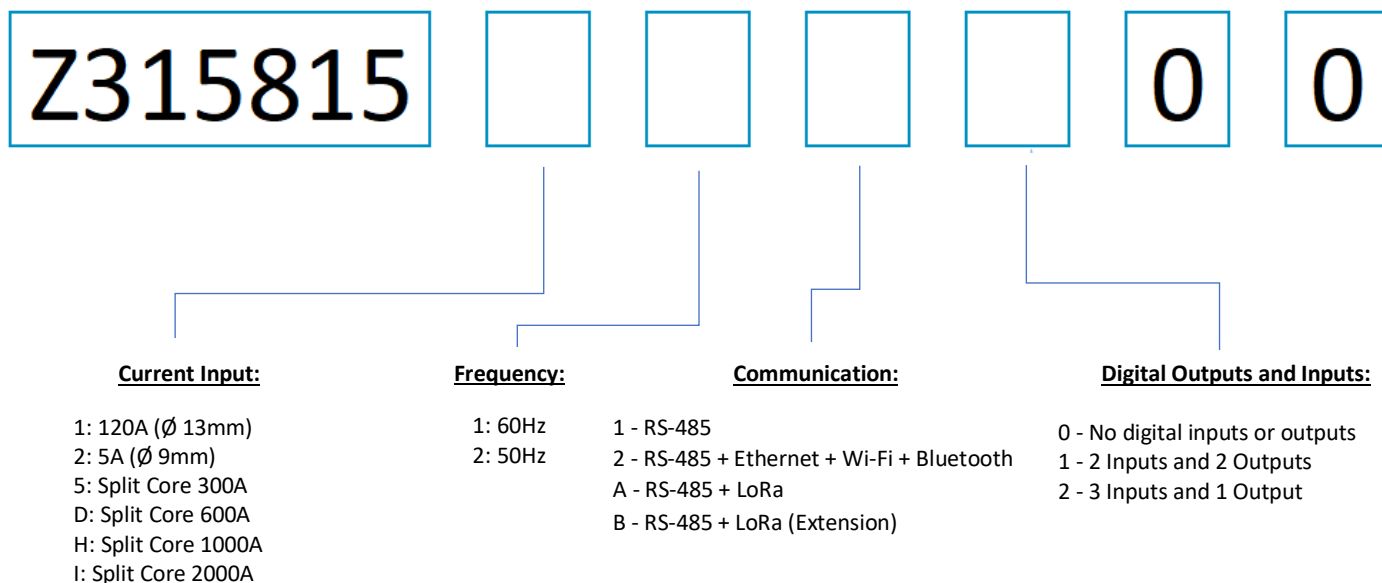
Standard Model: (Example)

Z315815 **1 1 2 1** 0 0

Konect 120 {120Aac -Direct Measurement } { Frequency 60Hz} {Communication RS-485 + Ethernet + Wi-Fi + Bluetooth} {2 Digital Inputs and 2 Digital Outputs}

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