❶ Knowing the Product

Ⓐ	Konect Grafic	Ⓖ	Current Input
Ⓑ	LCD Display	Ⓗ	Ethernet Output*
Ⓒ	Navigation Keys	Ⓙ	RS-485 Output
Ⓓ	Side locks	Ⓚ	Digital Inputs
Ⓔ	Power Supply Input	Ⓛ	Digital Outputs
Ⓕ	Voltage Input		

* LoRa meters do not have Ethernet output. Instead, there will be a connection for attaching the LoRa antenna.

## ❷ Installing the Product

Accomodate the meter on the panel cutout and fasten it using the side locks Ⓓ. Panel's cutout dimensions must be 92x92mm
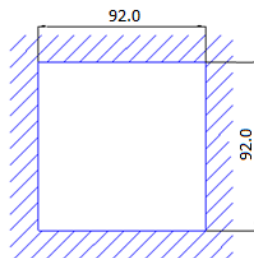
❸ Power Supply Connection

The auxiliary power supply should be connected to terminal Ⓔ. The operating range of this power supply is 85-265V AC / 100-350V DC.

Power Supply
Measurement Range: 85-265V AC. / 100-350V DC

19
21
(No polarity)
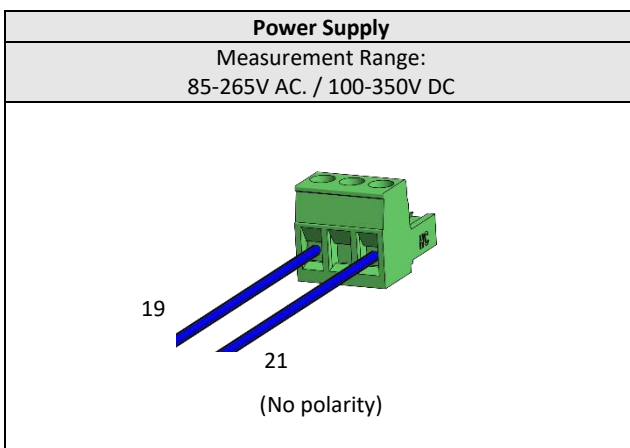
ATTENTION

One should pay attention to the voltage level that will be applied. Incorrect connection can damage the instrument.

❹ Voltage Input Connections

Connect the phases to terminal Ⓕ following the order.

Terminal Description	Signal to be Connected
1 – N	Neutral
2 – Va	Phase R
3 – Vb	Phase S
4 – Vc	Phase T
Measurement Range: 20 to 500V AC Ph-Ph	
11,54 to 288,67V AC Ph-N	

❺ Current Input Connections

Connect the phases to terminal Ⓖ following the order.

| Terminal Description	Signal to be Connected
5 – °Ia	CT's S1 - Phase 'R'
6 – Ia	CT's S2 - Phase 'R'
7 – °Ib	CT's S1 - Phase 'S'
8 – Ib	CT's S2 - Phase 'S'
9 – °Ic	CT's S1 - Phase 'T'
10 – Ic	CT's S2 - Phase 'T'
Measurement Range: 20mA to 5A AC	
(Continuous Overload: up to 7.5A AC)	

❻ Accessing Operation Modes
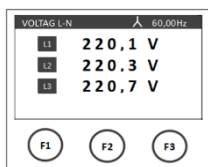
Konect Grafic Man-Machine Interface is composed of an LCD display and three navigations keys - **F1**, **F2** and **F3**. The navigation keys can assume diverse functions, which are always presented in the lower navigation bar. To access the intended function/command, the user must press the related key. The lower navigation bar will fade after ten seconds of no interaction with the analyzer.
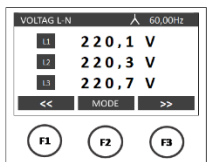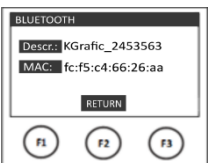
Instantaneous Measurements: For viewing **V, A, W, VAr, VA, FP, Hz** e **HORIMETRO**.

Through the home screen, use the keys `<<` and `>>` to navigate between the instantaneous parameters.
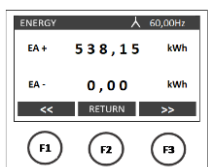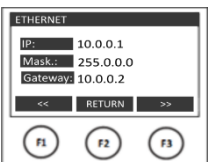
**Energy Measurements:** For viewing **kWh+, kWh- , kVArh+, kVArh-** e **kVAh**.
Access is done through the main mode by clicking `MODE` on until appears `ENERGY` on the right button of the bottom bar.

Bluetooth: For viewing the description and MAC Address of the Bluetooth, access is done through the main mode by clicking on `MODE` until appears `BTOOTH` on the right button.

Ethernet: For viewing Ethernet communication parameters such as IP address, Subnet Mask, Gateway, DNS, DHCP (ON/OFF), and MAC Address, access is done through the main mode by clicking `MODE` until appears `ETH` on the right button.
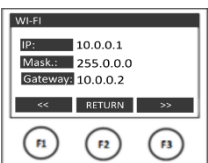
Wi-Fi: For viewing Wi-Fi communication parameters such as IP address, Subnet Mask, Gateway, DNS, DHCP (ON/OFF), MAC Address, and SSID, access is done through the main mode by clicking `MODE` on until appears `WI-FI` on the right button.
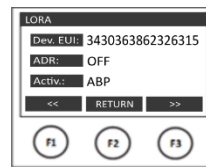
LoRa: For viewing the LoRa communication parameters of the meter, such as Device EUI, ADR (ON/OFF), Activation (ABP or OTAA), Class (A or C), and RSSI. Access is done through the main mode by clicking `MODE` on until appears `LORA` on the right button.
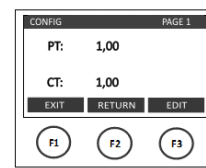
Configurations: For changing TP and TC ratios, connection type, integration time, communication parameters, current direction, and reset, access is done through the main mode by clicking `MODE` on until appears `CONFIG` on the right button.

❼ Configurations mode

The following commands will be available when Configurations mode is accessed:

`EDIT` : Editing of the currently selected parameter.

`NEXT` : Navigates through the pages of the configurations mode.

`CHANGE` : Confirms the changing of the highlighted parameter.

`RETURN` : Sends the analyzer back to the prior screen.

`DEC` : Decrements the active digit.

`INC` : Increments the active digit.

`>>` : Navigates through the available options of a selected menu.

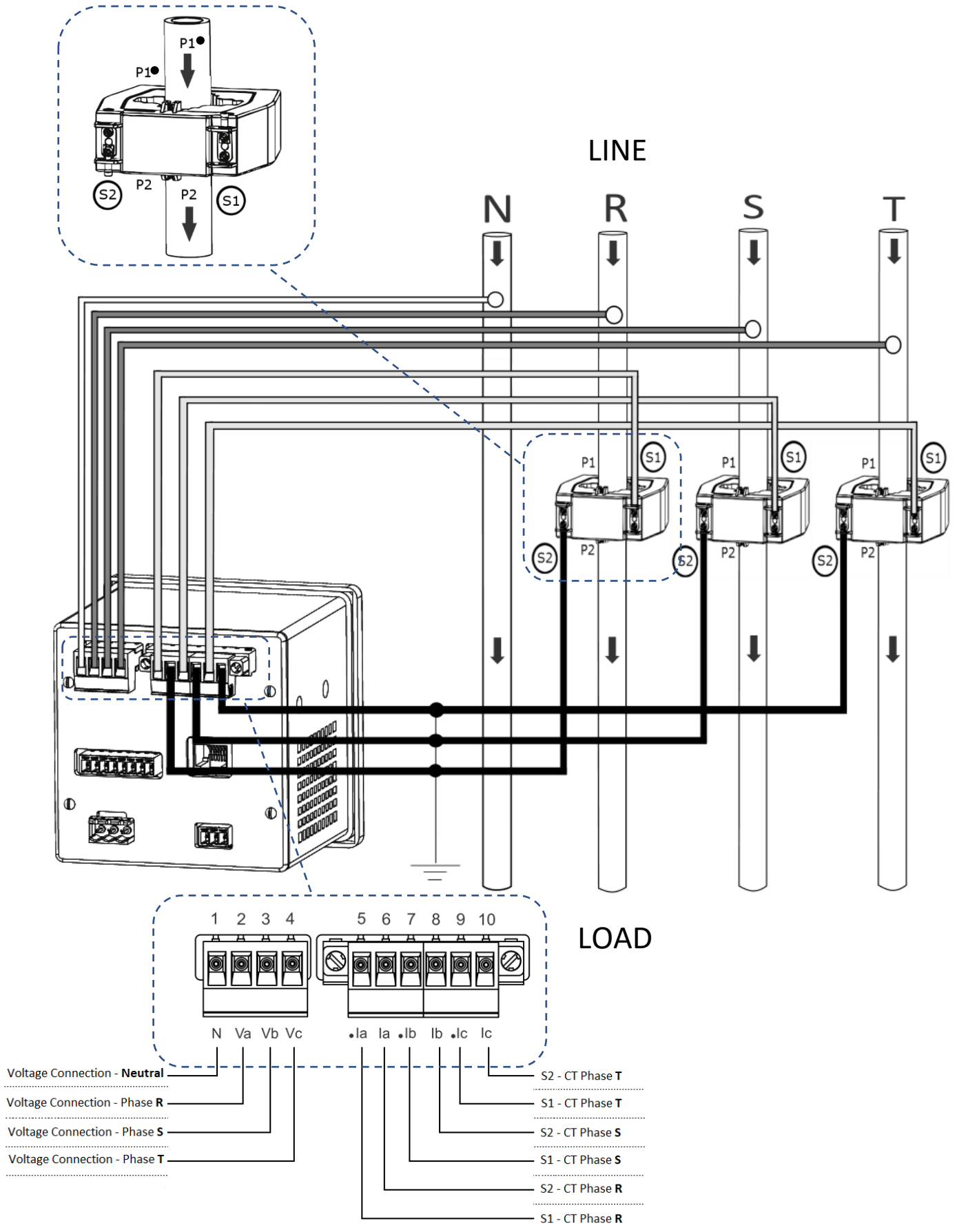`EXIT` : Returns to the main mode, leaving the configurations mode

The Konect Grafic leaves the factory with the following configurations:

Pág.	Parameter	Description	Standard
1	PT	Potential Transformer Ratio Example: PT -- 440/220V, PT ratio = 0002.00	0001,00
	CT	Current Transformer Ratio Example: CT -- 1000/5A, CT ratio = 0200.00	0001,00
2	CD	Connection Type Constants defining the type of connection followed by the meter (star, delta, single-phase, two-phase, etc.).	0 (star 3F+N)
3	IT	Integration time for demand calculation	15
4	Address	MODBUS Address	254
	Baudrate	Transmission speed (baud rate)	9600bps
	Format	Data Format (parity and stop bits)	8N2
5	Language	Instrument HMI language	Port.
	LCD Color	Sets the display color (normal or reverse)	Normal
	Contrast	Display contrast	40%
6	Clock	Adjusts the instrument's internal clock	Brasil
	Display	Changes the display's operating mode: normal (always on) or economical (goes off after a period of inactivity)	Normal
7	Reset	Zero energy and demands	
	Password	Enable/disable password to access settings	Disabled
	Ed. Password	Edit the password to access the settings	00021
8	Threshold	Current value for hour meter counting	0002,00
	A Direction	Configures the current direction (normal or reverse)	Normal
	Restore	Restores communication parameters to factory default.	
9*	Bluetooth	Enable/disable Bluetooth connection	ON
	Ethernet	Enable/disable Ethernet connection	ON
	Wi-fi	Enable/disable Wi-Fi connection	ON
	Link Check**	Checks the device's LoRa connection to the network ** Function present only for LoRa meters	
10***	AP Mode	Activate Access Point Function intended for configuring the meter for the user's Wi-Fi network.	

*Bluetooth, Ethernet and WI-FI parameters will not be available on LoRa meters
***Access Point mode only available for meters with Wi-Fi.

Connection Diagram Example – TL-00

LINE

N   R   S   T

LOAD

1	2	3	4	5	6	7	8	9	10
N	Va	Vb	Vc	•Ia	Ia	•Ib	Ib	•Ic	Ic

Voltage Connection - **Neutral**
Voltage Connection - Phase **R**
Voltage Connection - Phase **S**
Voltage Connection - Phase **T**

S2 - CT Phase **T**
S1 - CT Phase **T**
S2 - CT Phase **S**
S1 - CT Phase **S**
S2 - CT Phase **R**
S1 - CT Phase **R**

KRON
MEDIDORES

Connection Diagrams (TL configuration)

TL-00 (Trifásico Estrela)	TL-01 (Bifásico)	TL-02 (Monofásico)

TL-03 (Trifásico Equilibrado)	TL-17 (Trifásico Delta – 2TC's)	TL-48 (Trifásico Delta)
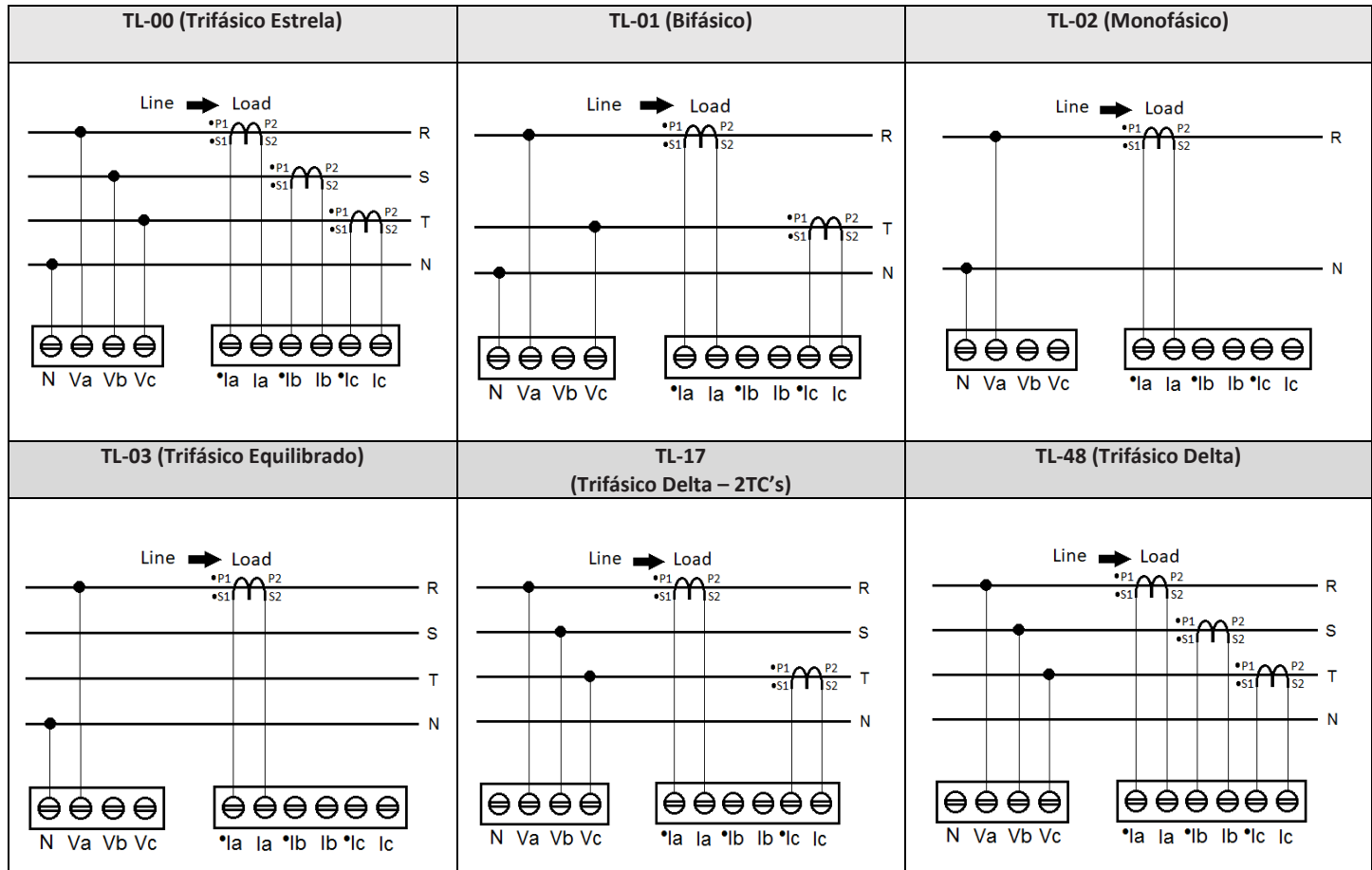
FAQ – Frequently Asked Questions

a. My meter won't turn on

Check that the connection to terminal Ⓔ was made as per step ❸ and that the applied voltage level is within the working range of the meter supply.

b. My meter is not measuring correctly

Check the matching between the voltage and current inputs according to steps ❹ and ❺. Also check that the CTs are installed with the correct polarity (Primary from P1 to P2 and secondary from S1 to S2). Check that the TP, TC and TL settings are in accordance with your installation.

c. Which parameter should be read to check energy consumption?

To read energy consumption info, the user must verify the Positive Active Energy parameter (EA). This parameter is the first that appears when "MEDICAO ENERGIA" mode is accessed. "EA" is a cumulative value, so, to obtain the energy consumption during a period of time, a prior reading must be subtracted from the current value.

d. Wi-Fi communication is slow, intermittent or it is not possible to integrate yhe meter into the Wi-Fi network, as well as read it locally or via the cloud

- Check if the network settings were made correctly and if the meter is connected to the Wi-Fi network of interest.
- It is recommended that a minimum download rate of 10MB/s be available for cloud communication.
- Local Reading: Check with the IT team/network administrator to see if port 502 is blocked. If so, request unlocking.
- Reading via the Internet – MQTT: Check with the IT team/network administrator to see if port 1883 is blocked. If so, request unlocking.

IT IS A QUICK GUIDE TO SETTING UP AND OPERATING THE KONECT GRAFIC. FURTHER DETAILS CAN BE OBTAINED IN THE COMPLETE PRODUCT MANUAL, ALSO AVAILABLE ON OUR WEBSITE: www.kron.com.br.

KRON MEDIDORES