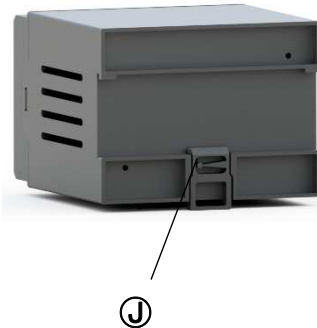
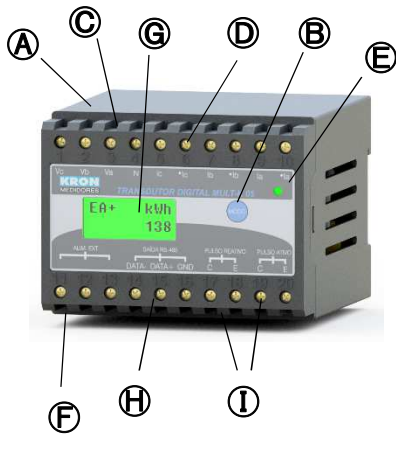


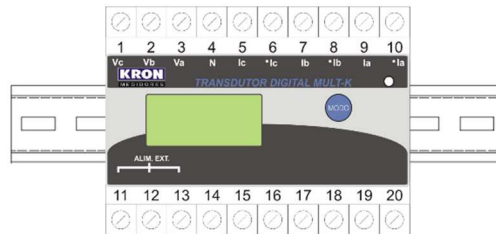
1 Knowing the Product



(A)	Mult-K 05	(F)	Power Supply Input
(B)	Navigation Key	(G)	LCD Display
(C)	Voltage Input	(H)	RS-485 Output
(D)	Current Input	(I)	Pulse Output
(E)	Indicative LED	(J)	DIN rail lock

2 Installing the Product

Mult-K 05 must be fastened on a 35mm DIN rail, which is supposed to be placed on panel's background. To complete the installing process, lock the meter by using (J).



3 Power Supply Connection

Power Supply signal must be applied to the (F) terminal block. Cabling must be connected in accordance to the power supply option present in the meter.

Selectable AC Voltage (220 or 120 Vac)	
Working Range: 80 to 120%	
220Vac	120Vac
<p>11 (Ph) 13 (Ph/N)</p>	<p>12 (Ph) 13 (N)</p>
Universal Power Supply	DC Power Supply
Working Range: 85 to 265Vac / 100 to 375Vdc	Working Range: 24, 48 Vdc: 80 to 120% 12Vdc: 90 to 120%
<p>11 13 (Without Polarity)</p>	<p>11 (+) 13 (-)</p>



ATTENTION

Pay extreme attention to the type of auxiliary power supply of your meter.

Incorrect cabling connection or applying a voltage signal above the specified limits can damage it severely.

4 Voltage Input Connections

Connect phases and neutral references to the **(C)** terminal block, using the order described below:

Terminal Description	Signal to be Connected
4 – N	Neutral
3 – Va	Phase 'R'
2 – Vb	Phase 'S'
1 – Vc	Phase 'T'
Measurement Range: 20 to 500Vac Ph-Ph 11,54 to 288,67 Vac Ph-N	

5 Current Input Connections

Connect phase references to the **(D)** terminal block, using the order described below:

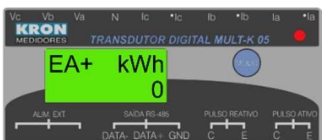
Terminal Description	Signal to be Connected
10 – °Ia	CT's S1 - Phase 'R'
9 – Ia	CT's S2 - Phase 'R'
8 – °Ib	CT's S1 - Phase 'S'
7 – Ib	CT's S2 - Phase 'S'
6 – °Ic	CT's S1 - Phase 'T'
5 – Ic	CT's S2 - Phase 'T'
Measurement Range: 20mA to 5Aac (Continuous Overload: up to 7.5Aac)	

6 Indicative LED



commonly known as 'R-S-T'.

Greenlit and flashing: Mult-K 05 is communicating with a Modbus/Metasy N2 master through its RS-485 output.



using negative phase sequence order.

Greenlit: The order used to connect the Voltage signals to the **(C)** terminal block matches the positive phase sequence,

Redlit: One or more voltage signals are **not** connected to the **(C)** terminal block or voltage signals are all connected, but

7 Accessing Operation Modes



Configuration changing is only possible via RS-485 communication.



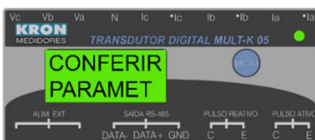
Instantaneous Measurements: Checking of **V, A, W, VAR, VA, PF, Hz** and **THD** values. To access this mode, hold the **(MODE)** key until the "MEDICAO INSTANT" message appears on the display. To navigate through the parameters, press **(MODE)** key.



Energy Measurements: Checking of **kWh+, kWh-, kVARh+, kVAR-, kW** and **kVA**. To access this mode, hold the **(MODE)** key until the "MEDICAO ENERGIA" message appears on the display. To navigate through the parameters, press **(MODE)** key.



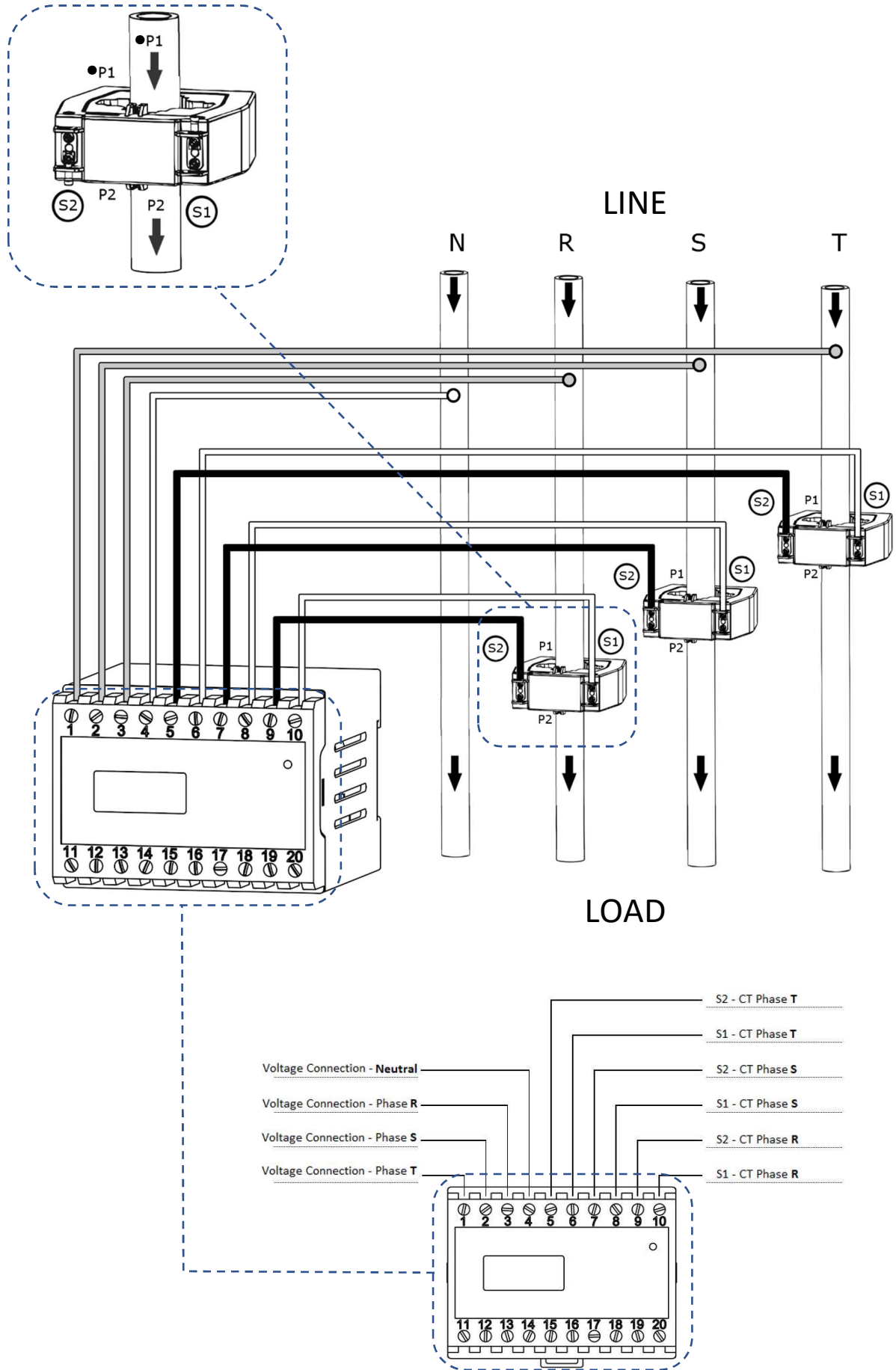
Partial Measurements: When entering Partial Measurements mode, the meter is going to start the counting of a partial energy value, **kWh+**. To access it, hold the **(MODE)** key until the "MEDICAO PARCIAL" message appears on the display. When this mode is active, pressing the **(MODE)** key restarts the partial counting and holding the same key gives access to another mode.



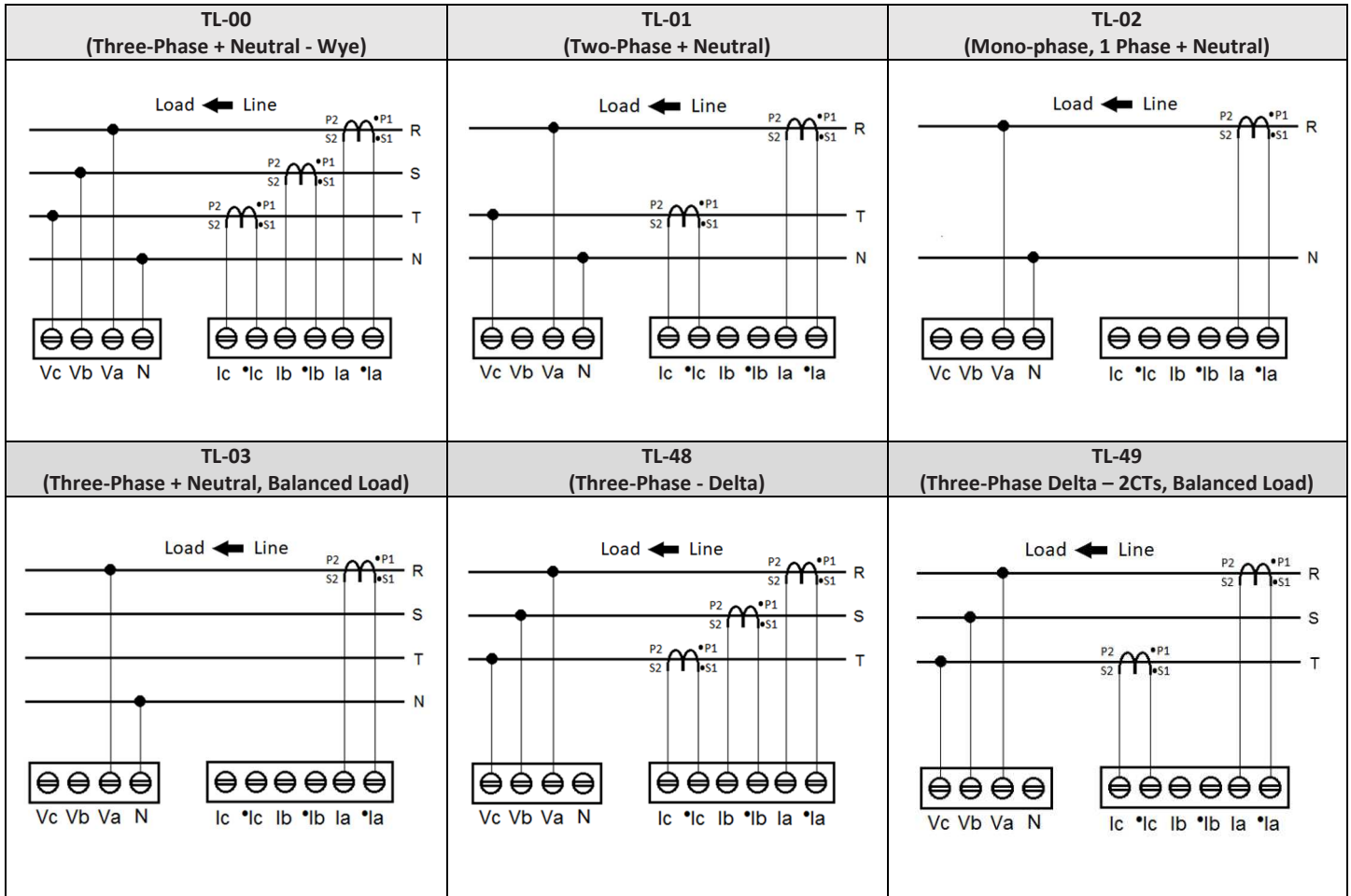
Parameter Checking: Checking of active configurations, such as PT and CT ratios, connection diagram, integration time (demand), and communication parameters.

To access this mode, hold the **(MODE)** key until the "CONFERIR PARAMET" message appears on the display. To navigate through the parameters, press **(MODE)** key. **Configuration changing is only possible via RS-485 communication.**

Connection Diagram Example: CD-00



Connection Diagrams (CD - TL configuration)



FAQ – Frequently Asked Questions

a. Meter doesn't turn on

Check if the connection to the terminal block (F) was made as stated in step 3 and if the voltage magnitude applied is within the working range for meter's power supply.

b. Measurement values seem incorrect

Check if voltage and current connections are corresponding to each other, i.e., each meter's channel with the same reference indication - Example: (Va, Ia* - Ia) - must receive signals from the same phase, as stated in steps 4 and 5. Also check if the polarity of CTs is correct (Correct Installing, Primary side: (LINE) P1 → P2 (LOAD) | Secondary side, S1 connected to Ix* → S2 connected to Ix).

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.

THIS IS A QUICK USER GUIDE, WITH ESSENTIAL INFO FOR CONFIGURING AND INITIAL OPERATION OF THE METER. FURTHER DETAILS CAN BE CHECKED IN THE PRODUCT'S USER MANUAL, ALSO AVAILABLE IN KRON'S WEBSITE: www.kron.com.br.