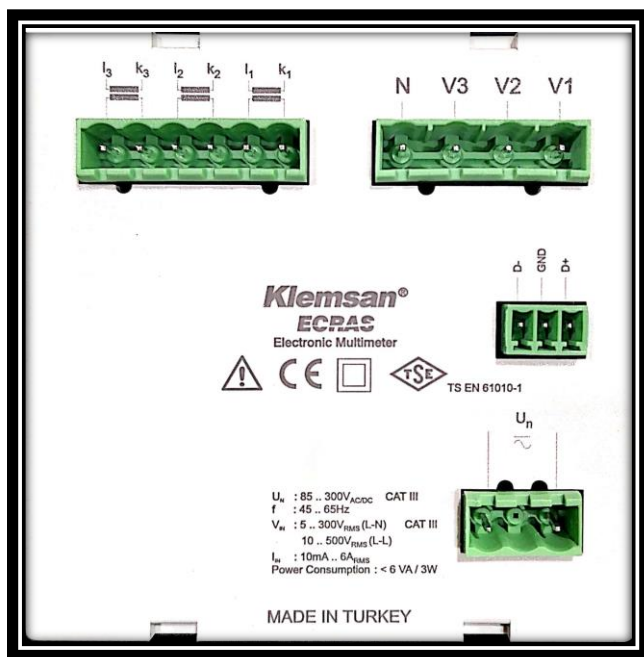


KLEMSAN'S ECRAS-200

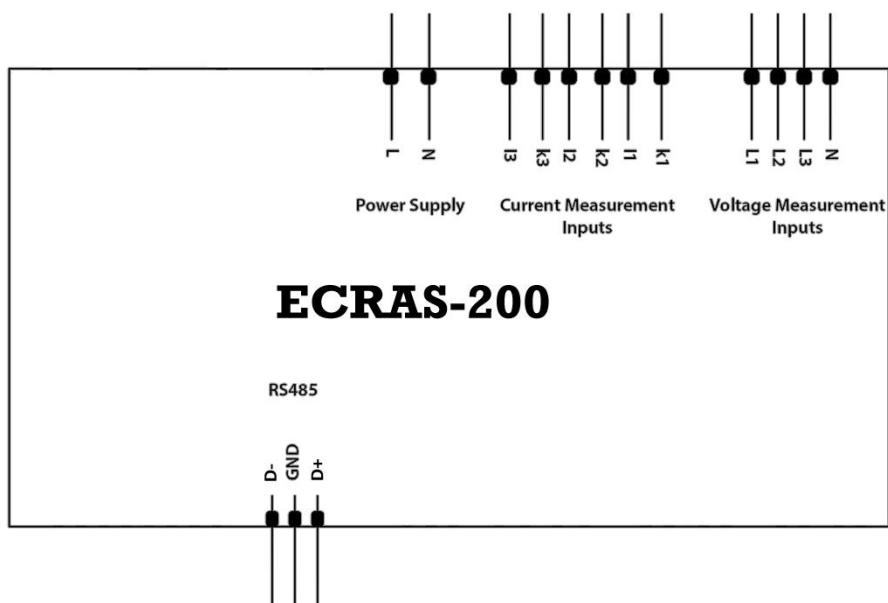
Front



Back



Connections:

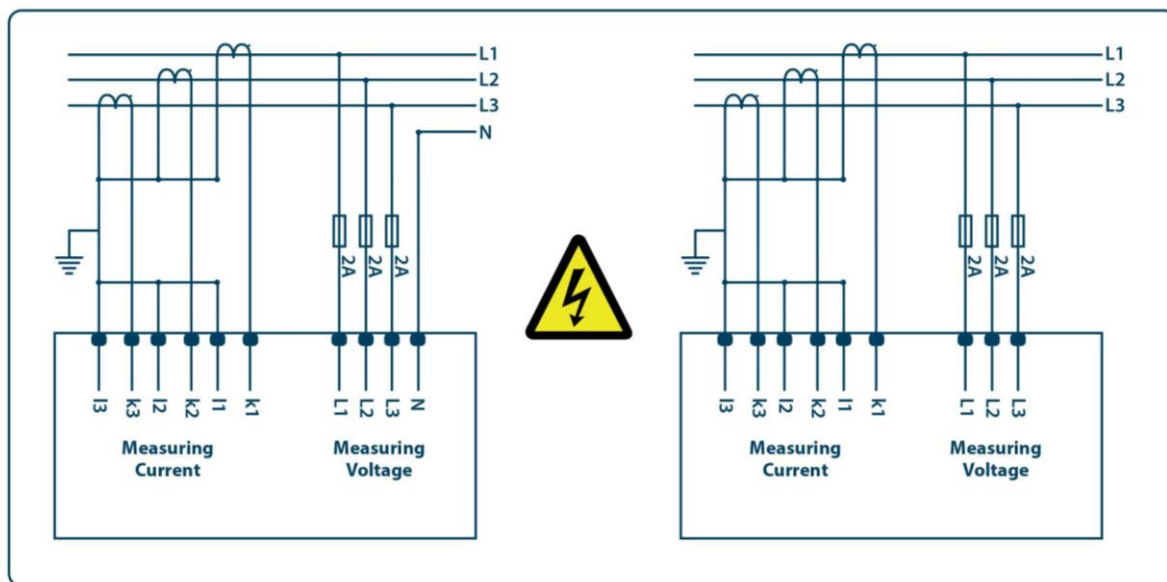


(Connection)

Connection Diagrams:

Star Connection (with neutral)

Delta Connection (no neutral)



For ECRAS, KLEA and POWYS 3111;

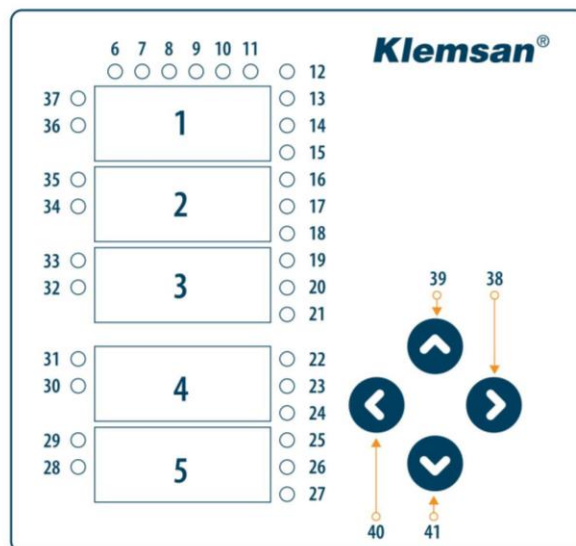
L1, L2, L3 LEDs blink simultaneously and very slowly (per second) → phase sequence (voltage) error.

Any/All of L1, L2, L3 LED(s) blink(s) slowly (per 0.5 second) → voltage connection(s) of the related phase(s) is/are missing.

Any/All of L1, L2, L3 LED(s) blink(s) quickly (per 0.2 second) → current connection(s) of the related phase(s) is/are missing.



Front Panel:



- 1, 2, 3, 4, 5 → Indicators (7 segment displays).
- 6, 7, 8 → Phase on/off LEDs. (L1, L2, L3)
- 9 → Alarm LED (ALM). Lights in case of an alarm. *(available for Ecras 120 and Ecras 220)*
- 10, 11 → Relay LEDs (OUT 1, OUT 2). Lights when the relay is engaged. *(available for Ecras 120 and Ecras 220)*
- 12 → VL-N LED (V). Lights when displaying the phase to neutral currents.
- 13 → VLL LED (VLL). Lights when displaying the phase to phase currents.
- 14 → Current LED (I). Lights when displaying the currents for the phases.
- 15 → CosØ LED (Cos Ø). Lights when displaying the cosØ for the phases.
- 16 → Power Factor LED (PF). Lights when displaying the PFs for the phases.
- 17 → Active power LED (P). Lights when displaying the active powers for the phases.
- 18 → Reactive power LED (Q). Lights when displaying the reactive powers for the phases.
- 19 → Apparent power LED (S). Lights when displaying the apparent powers for the phases.
- 20 → Total Harmonic Distortion LED (THD). Lights when displaying THDs for the phases.
- 21 → Demand LED (Dem). Lights when displaying the demand values.
- 22 → 1. Phase QCap. LED (¹⇨). Lights when the load for the first phase is capacitive.
- 23 → 2. Phase QCap. LED (²⇨). Lights when the load for the second phase is capacitive.
- 24 → 3. Phase QCap. LED (³⇨). Lights when the load for the third phase is capacitive.
- 25 → System QCap. LED (^T⇨). Lights when the total system load is capacitive.
- 26 → Maximum LED (Hi). Lights when displaying the maximum values.
- 27 → Minimum LED (Lo). Lights when displaying the minimum values.
- 28, 30, ..., 36 → Mega LED (M). Lights when the indicated value is in MEGA units.
- 29, 31, ..., 37 → Kilo LED (k). Lights when the indicated value is in KILO units.
- 38 → Right arrow key. Use this key to switch between the menus, enter submenus and move through the indicator digits.
- 39 → Up arrow key. Use this key to switch between the menus and change the numerical values.
- 40 → Left arrow key. Use this key to switch between the menus, return to the upper menu level and confirm the selected value.
- 41 → Down arrow key. Use this key to switch between the menus and change the numerical values.

Back Panel I1-k1, I2-k2, I3-k3 : Current measurement inputs

V1, V2, V3, N : Voltage measurement inputs

D+, GND, D- : RS 485 *(available for Ecras 200 and Ecras 220)*

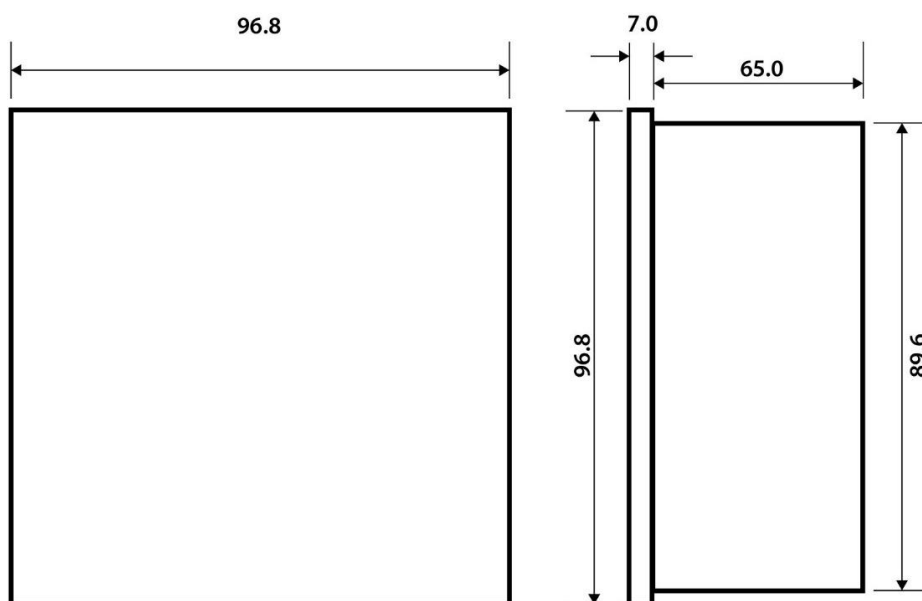
out1, out2 : Alarm relay outputs *(available for Ecras 120 and Ecras 220)*

Un : Power supply

Important Notes:

- Use **2-Core Shielded** cable for the connection of **RS-485**.
- **Short circuit** the k-l terminals of the CTs in another location before disconnecting the CTs. Failing to do so will cause dangerous high voltages in the secondary terminals of the CTs.
- It is advisable to connect a **circuit breaker** or automatic **fuse** between the current input of the device and the main electricity source. (2 Amps)

Dimensions (mm):





E-LINKS PAKISTAN

Comparison with equivalent models:

	ECRAS 100	ECRAS 120	ECRAS 200	ECRAS 220	KLEA 110P	POWYS 3100	POWYS 3101	POWYS 3111
Type of device enclosure	panel	panel	panel	panel	panel	rail	rail	rail
Basic measurements (V, VLL, I, IN, F, Cos ϕ , PF, P, Q, S, THD)	●	●	●	●	●	●	●	●
1-31 Harmonics	-	●	-	●	●	●	●	●
Max-Min Value	●	●	●	●	●	●	●	●
Demand Values (I, P, Q, S)	●	●	●	●	●	●	●	●
On hour, Run Hour, Int Counter	●	●	●	●	●	●	●	●
Energy Meters	1 tariff	1 tariff	1 tariff	1 tariff	2 tariffs	1 tariffs	2 tariffs	2 tariffs
Assigning alarm to the parameters	-	●	-	●	●	-	●	●
Alarm Relay	-	2 pcs.	-	2 pcs.	2 pcs.	-	2 pcs.	2 pcs.
RS485	-	-	●	●	●	●	●	●
Digital Input	-	-	-	-	1 pc.	-	2 pcs.	2 pcs.
Digital Output	-	-	-	-	2 pcs.	-	2 pcs.	2 pcs.
Indicators and leds	●	●	●	●	●	-	-	●
Order no	606210	606211	606212	606213	606180	606300	606303	606304