

# KLEA 110P

**Klemsan**

606180

Energy Analyzer



Category: Energy Management Products

Type: Energy Analyzers

Group: Electronics Products

## Commercial Information

Package Unit	1 pcs.
Customs Tariff Number	903032009011
Weight Per Unit Including Packaging	0,378

## Technical Information

GENERAL	
LCD Screen	+
Language Support	Turkish
Password Protection	+
Voltage Transformer Ratio (VTR)	1 - 5000
Current Transformer Ratio (CTR)	1 - 5000

Number of Measurements in One Period	256
LCD/Screen Refresh Rate	1
Networks	TT, TN, IT
Signal Waveforms	-
Connection Type	3F4T, 3F3T, Aron
Battery	
Real Time Clock	-
Four Quadrant Measurement	+
Demand Period	1-60 min. adjustable
Phase Diagram	-
Min./Max./Demand Values	+
Protection Class	Front IP40 / Rear IP20
Weight (g)	323
Mounting Type	Panel Mount
Seven Segment Display	+
<b>ENERGY MEASUREMENT</b>	
Multiple Sub Tariffs (Peak, On-Peak and Off-Peak)	-
1Ø Phase Energy Measurement	+
3Ø Phase Energy Measurement	+
4 Quadrant Reactive Energy Measurement	-
Number of Tariffs	2
<b>CURRENT MEASUREMENT INPUT</b>	

Measuring Range	10mA - 6A AC
Overvoltage Category	300 V Cat II
Voltage Fluctuation Measurement	2 kV
Power Consumption	<0.2 VA
Intermittent Overload	100 A for 1 sec
Sampling Frequency Between 45-65 Hz	12.8 kHz
<b>VOLTAGE MEASUREMENT INPUT</b>	
Overvoltage Category	300 V Cat III
Measuring Range L-N	1-300 Vrms
Measuring Range L-L	2-500 Vrms
Frequency Measuring Range	45-65 Hz
Power Consumption	<0.1 VA
Sampling Frequency Between 45-65 Hz	12.8 kHz
<b>POWER QUALITY MEASUREMENTS</b>	
THD - Voltage (as %)	+
THD - Current (as %)	+
Harmonics for Current and Voltage Phases	Up to 31st
<b>MEASURING ACCURACY - IEC 61557-12</b>	
Total Active Power	Class 0.5
Total Reactive Power	Class 1
Total Reactive Energy	Class 2
Frequency	Class 0.1
Current	Class 0.5

Neutral Current	Class 0.5
Voltage	Class 0.2
Power Factor	Class 0.5
THDV, THDI	Class 1
Total Apparent Power	Class 0.5
Total Active Energy	Class 0.5
<b>MEASURING ACCURACY - IEC 62053-22</b>	
Total Active Energy	Class 0.5S
<b>MEASURING ACCURACY - IEC 62053-23</b>	
Total Reactive Energy	Class 2
<b>ALARM RELAY OUTPUTS</b>	
Number of Outputs	2
Type	NO (SPST)
Max. Switching Current	10 A
Max. Switching Voltage	250 VAC
Max. Switching Power	1250 VA
<b>POWER SUPPLY</b>	
Voltage	85-300V AC / 85-300V DC
Frequency	45-65Hz
Consumption	<6VA AC / <3W DC
<b>ENVIRONMENTAL CONDITIONS</b>	
Operating Temperature	-20 to +70°C
Storage Temperature	-30°C +80°C

Relative Humidity (Non-condensing)	Maks. 95%
<b>EMC-EMI</b>	
300 VAC CAT II according to IEC 61010-1	+
EN 55011/A1:2010, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN61000-4-11	+
<b>DIAGRAMS</b>	
3 Wires with 3CT	-
4 Wires with 3CT	-
3 Wires with 2CT. NOTE: CTs can be connected to any phase. In the figure, they are connected to Phase-1 and Phase-3.	-
Single Phase with 1CT. NOTE: CT and VT can be connected to any phase. In the figure, they are connected to Phase-1.	-
Digital Output Connection	-
Digital Input Connection	-
Alarm Output Connection	-
Analog Output Connection	-
Digital I - O and Alarm Output Connections	-
Mains Connection	-
<b>COMMUNICATION</b>	
Protocol	Modbus RTU
Baud Rate	1200-57600 bps adjustable
Parity	Odd, Even, None
Stop Bit	1

Slave ID	1-247
Isolation	2750V RMS
<b>TIME RECORDED DATA STORAGE</b>	
Hourly Records	--
Daily Records	--
Monthly Records	--
Demand	--
Alarm Records	--
<b>DIGITAL OUTPUT</b>	
Isolation Level	5000 Vrms
Number of Outputs	2
Type	Transistor
Voltage Switching Range	5-30 VDC
Minimum Switching Frequency	20 Hz, 50 ms
<b>DIGITAL INPUT</b>	
Minimum Counting Frequency	100 Hz, 10 ms
Input Type	Dry Contact
Number of Inputs	1
Isolation Level	5000 Vrms
<b>ANALOG OUTPUT</b>	
Number of Outputs	--
Output Ranges 0-5 V, 0-10 V, -5-5 V, -10-10V, 0-20 mA, 4-20 mA	--

Isolation	--
<b>CABLE CROSS-SECTIONS POWER SUPPLY, VOLTAGE, CURRENT, RELAY OUTPUTS</b>	
Loaded	2.5mm <sup>2</sup> - 14AWG
Unloaded	4mm <sup>2</sup> - 12AWG, 2x1.5mm <sup>2</sup> - 2x16AWG
<b>CABLE CROSS-SECTIONS DIGITAL I/O, RS485, ANALOG OUTPUTS</b>	
Loaded	1.5mm <sup>2</sup> - 16AWG
Unloaded	1.5mm <sup>2</sup> - 16AWG, 2x0.75mm <sup>2</sup> - 2x18AWG
<b>OTHER MEASUREMENTS</b>	
Operating Hours (Operating Time Under Load)	+
Open Time (Open Time Without Load)	+
Interruption Counter (Number of Power Interruptions)	+