



ELECTRONICS PRODUCTS > ENERGY MANAGEMENT PRODUCTS > ENERGY ANALYZERS

## ECRAS 411R

**Stock Keeping Unit (SKU):** 606504

*3Ø Electronic Multimeter*

### Commercial Information

Product Sales Code	<b>606504</b>
Package Unit	<b>1 pcs.</b>
Customs Tariff Number	<b>903032009011</b>

### Technical Information

General	
Lcd Screen	-
Language Support	<b>English</b>
Password Protection	+
Networks	<b>TT, TN, IT</b>
Signal Waveforms	-
Connection Type	<b>3P4W, 3P3W</b>
Battery	-
Real Time Clock	-
Demand Period	<b>1-60 min. adjustable.</b>
Packaging Quantity	<b>1</b>
Seven Segment Display	
Without Screen	

Minmax Data	+
Demand Data	+
Ghost Screen	+
Phasor Diagram Display	
Screen Refresh Period	<b>1sn</b>
Number Of Samples In The Period	

### Energy Measurement

3 Phase Energy Measurement	
Number Of Tariffs	
Number Of Sub Tariffs	
1 Energy Measurement	
Number Of Reactive Measurement Zones	

### Current Measurement Input

Measuring Range	<b>50mA-6A AC</b>
Overvoltage Category	<b>300 V Cat II</b>
Voltage Fluctuation Measurement	<b>&lt;2 kV</b>
Power Consumption	<b>&lt;0.2 VA</b>
Intermittent Overload	<b>100 A for 1 sec</b>
Sampling Frequency Between 45 65 Hz	

### Voltage Measurement Input

Overvoltage Category	<b>300 V Cat III</b>
Measuring Range L N	<b>10-300 Vrms</b>
Measuring Range L L	<b>17-500 Vrms</b>
Frequency Measuring Range	<b>45-65 Hz</b>
Power Consumption	<b>&lt;0.1 VA</b>
Sampling Frequency Between 45 65 Hz	

### Power Quality Measurements

Harmonic Measurement Current And Voltage	-
Thdi	+

Thdv	+
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### Measuring Accuracy Iec 61557 12

Total Active Power	<b>Class 1</b>
Total Reactive Power	<b>Class 1</b>
Total Reactive Energy	<b>Class 1</b>
Frequency	<b>Class 0.2</b>
Current	<b>Class 0.5</b>
Neutral Current	<b>Class 0.5</b>
Voltage	<b>Class 0.5</b>
Power Factor	<b>Class 0.2</b>
Thdv Thdi	<b>Class 1</b>
Total Apparent Power	<b>Class 1</b>
Total Active Energy	-

### Measuring Accuracy Iec 62053 22

Total Active Energy	-
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### Measuring Accuracy Iec 62053 23

Total Reactive Energy	-
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### Alarm Relay Outputs

Number Of Outputs	<b>2 pcs.</b>
Max Switching Current	<b>10 A</b>
Max Switching Voltage	<b>250 VA</b>
Max Switching Power	<b>1250 VA</b>

### Power Supply

Voltage	<b>85-300V AC - 85-300V DC</b>
Frequency	<b>45-65Hz</b>
Consumption	<b>&lt;3VA AC - &lt;2.5W DC</b>

### Mechanical Properties

Weight G	
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Protection Class	<b>IP54</b>
Mounting Type	<b>Panel Mount</b>

### Environmental Conditions

Operating Temperature	<b>-25°C +70°C</b>
Storage Temperature	<b>-30°C +80°C</b>
Relative Humidity Non Condensing	<b>Max. 95% (no condensation)</b>

### Communication

Protocol	<b>Modbus RTU</b>
Baud Rate	<b>1200-57600</b>
Parity	<b>Odd, Even, None</b>
Stop Bit	<b>1</b>
Slave Id	<b>1-247</b>
Isolation	<b>2750V RMS</b>

### Time Recorded Data Storage

Hourly Records	
Daily Records	
Monthly Records	
Demand	
Alarm Records	

### Digital Output

Isolation Level	
Number Of Outputs	
Voltage Switching Range	
Minimum Switching Frequency	

### Digital Input

Number Of Inputs	
Isolation Level	
Minimum Counting Frequency	

Input Type
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## Ethernet Interface

Protocol
Port
Gateway Feature
Performance

## Analog Output

Output Ranges 0.5 V, 0.10 V, 5.5 V, 10.10V, 0.20 Ma, 4.20 Ma
Isolation

## Other Measurements

Operating Time Counter
Open Time Counter
Power Failure Counter

## Basic Electrical Measurements

Current	+
Voltage	+
Frequency	+
Active Power	+
Reactive Power	+
Apparent Power	+
Power Factor	+
Cos	

## Cable Cross Sections Power Supply Voltage Relay

multi-core	<b>2.5mm<sup>2</sup> - 14AWG</b>
Single Core	<b>4mm<sup>2</sup> - 12AWG, 2x1.5mm<sup>2</sup> - 2x16AWG</b>

## Cable Cross Sections Current

multi-core	<b>4mm<sup>2</sup> - 12AWG, 2x1.5mm<sup>2</sup> - 2x16AWG</b>
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Single Core	<b>4mm<sup>2</sup> - 12AWG, 2x1.5mm<sup>2</sup> - 2x16AWG</b>
<b>Cable Cross Sections Digital Inputoutput Rs485 Analog Output</b>	
multi-core	<b>1.5mm<sup>2</sup> - 16AWG</b>
Single Core	<b>1.5 mm<sup>2</sup>-16 AWG, 2x0.75 mm<sup>2</sup>- 2x18 AWG</b>