



ELECTRONICS PRODUCTS > ENERGY MANAGEMENT PRODUCTS > ELECTRONIC MULTIMETERS

ECRAS 220

Stock Keeping Unit (SKU): 606213

Multimeter

Commercial Information

Product Sales Code	606213
Package Unit	1 pcs.
Customs Tariff Number	903032009011
Weight Per Unit Including Packaging	0.316 kg.

Technical Information

General	
Password Protection	+
Voltage Transformer Ratio Vtr	1 - 5000
Current Transformer Ratio Ctr	1 - 5000
Number Of Measurements In One Period	256
Lcdscreen Refresh Rate	1 sn.
Networks	TT, TN, IT
Connection Type	3F4T, 3F3T
Four Quadrant Measurement	4
Demand Period	1-60 min. adjustable
Minmaxdemand Values	+
Protection Class	Front IP40 / Rear IP20
Weight G	316
Packaging Quantity	1

Mounting Type	Panel Mount
Seven Segment Display	+

Energy Measurement

1 Phase Energy Measurement	+
3 Phase Energy Measurement	+
Number Of Tariffs	1

Current Measurement Input

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

Voltage Measurement Input

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

Power Quality Measurements

Thd Voltage As	+
Thd Current As	+
Harmonics For Current And Voltage Phases	Up to 31st

Measuring Accuracy Iec 61557 12

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

Measuring Accuracy Iec 62053 22

Total Active Energy	Class 0.5S
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Measuring Accuracy Iec 62053 23

Total Reactive Energy	Class 2
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Alarm Relay Outputs

Number Of Outputs	2
Type	NO (SPST)
Max Switching Current	10 A
Max Switching Voltage	250 VAC
Max Switching Power	1250 VA

Power Supply

Voltage	85-300V AC / 85-300V DC
Frequency	45-65Hz
Consumption	<6VA AC / <3W DC

Environmental Conditions

Operating Temperature	-20°C +70°C
Storage Temperature	-30°C +80°C
Relative Humidity Non Condensing	Maks. 95%

Emc Emi

300 Vac Cat II According To Iec 61010 1	+
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En 55011A1

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

Diagrams

Mains Connection

Digital I O And Alarm Output Connections

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

Communication

Protocol

Modbus RTU

Baud Rate

1200-57600 bps adjustable

Parity

Odd, Even, None

Stop Bit

1

Slave Id

1-247

Isolation

2750V RMS

Time Recorded Data Storage

Hourly Records

Daily Records

Monthly Records

Demand

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Cable Cross Sections Power Supply Voltage Current Relay Outputs

Loaded

2.5mm² - 14AWG

Unloaded

4mm² - 12AWG, 2x1.5mm² - 2x16AWG

Cable Cross Sections Digital Io Rs485 Analog Outputs

Loaded

1.5mm² - 16AWG

Unloaded

1.5mm² - 16AWG, 2x0.75mm² - 2x18AWG

Other Measurements

Operating Hours Operating Time Under Load

+

Open Time Open Time Without Load

+

Interruption Counter Number Of Power Interruptions

+