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RAPIDUS 211R

Stock Keeping Unit (SKU): 606011

Power Factor Controller (1Ø - 12 level)

Commercial Information

| | |
|-------------------------------------|---------------------|
| Product Sales Code | 606011 |
| Package Unit | 1 pcs. |
| Customs Tariff Number | 903289000000 |
| Weight Per Unit Including Packaging | 663g kg. |

Technical Information

CONNECTION DATA

| | |
|-----------------|---|
| Connection Type | Single phase (L-L or L-N) voltage connection with 1 CT |
|-----------------|---|

General

| | |
|--------------------------------------|----------------------------------|
| Measurement System | 1Ø |
| Lcd Screen | + |
| Language Support | Turkish, English, Russian |
| Password Protection | + |
| Voltage Transformer Ratio Vtr | 1 - 5000 |
| Current Transformer Ratio Ctr | 1 - 5.000 |
| Number Of Measurements In One Period | 512 |
| Lcdscreen Refresh Rate | 1 sn. |
| Networks | TT, TN, IT |
| Signal Waveforms | |
| Battery | + |

| | |
|---------------------------|-----------------------------|
| Real Time Clock | + |
| Four Quadrant Measurement | 4 |
| Demand Period | 1-60 min. adjustable |
| Phase Diagram | Available |
| Minmaxdemand Values | + |

Compensation Modes

| | |
|----------------------------|---|
| Rapidus Smart Control Mode | + |
| Manual | + |
| Linear | + |
| Circular | + |
| Sequential | + |

Step Configurations

| | |
|-----------------------|--|
| Manual Definition | + |
| Predefined | 1-1-1-1, 1-1-2-2, 1-2-2-4, 1-2-3-3, 1-2-4-4, 1-1-2-4, 1-2-3-4, 1-2-4-8, 1-1-2-3 |
| Power Kvar | 0.00-1000 adjustable |
| Type | 3Ø capacitor, 3Ø shunt reactor adjustable |
| Dcm | + |
| Fixed Step Assignment | + |

Power Factor Settings

| | |
|-------------------------------------|--|
| Target 1 Cos | 0.8 cap. to 0.8 ind. adjustable |
| Target 2 Cos | 0.8 cap. to 0.8 ind. adjustable |
| Dual Cos Target | |
| 4 Quadrant Operation For Generators | |

Energy Measurement

| | |
|--|------------------|
| Multiple Sub Tariffs Peak On Peak And Off Peak | 1 |
| 1 Phase Energy Measurement | |
| 3 Phase Energy Measurement | Available |

Current Measurement Input

| | |
|-------------------------------------|------------------------|
| Measuring Range | 10mA-6A AC |
| Overvoltage Category | 300 V Cat III |
| Voltage Fluctuation Measurement | 2 kV |
| Power Consumption | <0.2 VA |
| Intermittent Overload | 100A for 1 sec. |
| Sampling Frequency Between 45 65 Hz | 25.6 kHz |

Voltage Measurement Input

| | |
|-------------------------------------|-------------------------|
| Overvoltage Category | 300 V Cat III |
| Measuring Range L N | 95-272 VAC ±10% |
| Measuring Range L L | 164-471 VAC ±10% |
| Frequency Measuring Range | 45-65 Hz |
| Power Consumption | <0.1 VA |
| Sampling Frequency Between 45 65 Hz | 25.6 kHz |

Power Quality Measurements

| | |
|--|-------------------|
| Thd Voltage As | + |
| Thd Current As | + |
| Harmonics For Current And Voltage Phases | Up to 51st |

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| | |
|-----------------------|-------------------|
| Total Active Power | Class 0.2 |
| Total Reactive Power | Class 1 |
| Total Reactive Energy | Class 2 |
| Frequency | Class 0.05 |
| Current | Class 0.2 |
| Neutral Current | Class 0.5 |
| Voltage | Class 0.2 |
| Power Factor | Class 0.5 |
| Thdv Thdi | Class 1 |
| Total Apparent Power | Class 0.2 |
| Total Active Energy | Class 0.5 |

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| | |
|---------------------|-------------------|
| Total Active Energy | Class 0.2S |
|---------------------|-------------------|

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| | |
|-----------------------|----------------|
| Total Reactive Energy | Class 2 |
|-----------------------|----------------|

Compensation Relay Outputs

| | |
|-----------------------------------|---|
| Number Of Outputs | 12 |
| Type | NO (SPST) |
| Max Switching Current | 2A |
| Max Switching Voltage | 250VAC |
| Max Switching Power | 1250VA |
| Mechanical Operating Life | = 10.0000000 operations |
| Electrical Operating Life No Side | 5×104(5A@250VAC) 1×105(5A@30VDC) |

Alarm Relay Outputs

| | |
|-----------------------------------|---|
| Number Of Outputs | 2 |
| Type | NO (SPST) |
| Max Switching Current | 4A |
| Max Switching Voltage | 250 VAC |
| Max Switching Power | 1250 VA |
| Mechanical Operating Life | = 10.0000000 operations |
| Electrical Operating Life No Side | 5×104(5A@250VAC) 1×105(5A@30VDC) |

Generator Day Night Input

| | |
|------------------|------------------|
| Number Of Inputs | 1 |
| Frequency | 45-65Hz |
| Input | 95-240VAC |

Inputs And Outputs

| | |
|-----------------|-----------|
| Digital Outputs | -- |
| Analog Outputs | -- |

Power Supply

| | |
|---------------------|--|
| Backup Supply Input | -- |
| Voltage | La-Lb den $\pm 10\%$ 95-410VAC |
| Frequency | 45-65Hz |
| Consumption | < 10VA |

Mechanical Properties

| | |
|--------------------|-------------------------------|
| Weight G | 663 |
| Protection Class | Front IP40 / Rear IP20 |
| Mounting Type | Panel Mount |
| Packaging Quantity | 1 |

Cable Cross Sections

| | |
|---|---|
| Voltage Current All Relay Outputs Generator Input | 2.5mm² - 14AWG with ferrule - 4mm² - 12AWG without ferrule, 2x1.5mm² - 2x16AWG |
| Rs485 | 1.5mm² - 16AWG with ferrule - 1.5mm² - 16AWG without ferrule, 2x0.75mm² - 2x18AWG |

Environmental Conditions

| | |
|----------------------------------|--------------------|
| Operating Temperature | -20°C +55°C |
| Storage Temperature | -30°C +80°C |
| Relative Humidity Non Condensing | Max. 95% |

Emc Emi

| | |
|--------------------|-------------|
| En 61000 6 1 | 2011 |
| En 61000 6 3 A1 Ac | 2013 |

Diagrams

| | |
|-------------------------|--|
| Mains Connection | |
| Step Output Connections | |

Communication

| | |
|-----------|-----------------------------------|
| Protocol | Modbus RTU |
| Baud Rate | 2400-115200 bps adjustable |
| Parity | --- |

| | |
|-----------|------------------|
| Stop Bit | 1 |
| Slave Id | 1-247 |
| Isolation | 2000V RMS |

Control Process And Functions

| | |
|------------------------|--|
| Phase Switching Angle | ±45 degree adjustable |
| Average Time | Off, 5 sec, 10 sec, 20 sec, 30 sec, 40 sec, 50 sec, 60 sec adjustable |
| Step Deactivation Time | 1-600 sec. adjustable |
| Step Discharge Time | 3-1000 sec. adjustable |
| Step Activation Time | 1-600 sec. adjustable |

Time Recorded Data Storage

| | |
|-----------------|---|
| Hourly Records | 1920 Hours x 68 Different Paramaters |
| Daily Records | 240 Days x 68 Different Paramaters |
| Monthly Records | 36 Months x 68 Different Paramaters |
| Demand | 4 Months x 16 Different Parameters |
| Alarm Records | 50 |