PCR421

SINGLE PHASE – SMART ELECTRICITY METER

The PCR421 in a powerful single-phase Smart Electricity Meter built for residential applications. The meter combines advanced metering technology, state-of-the-art communications, and internal relay unit, all integrated and sealed in a single housing. The integrated solution allows Powercom to offer a real time AMI solution with two way communication. It enables reading, controlling and interfacing other sensors or meters. Using open protocols enables the PCR421 collect information from any 3rd party meter/sensor manufacturers. The meter supports renewable Energy sources (PV and Wind). The meter is approved according to IEC62052-11, IEC 62053-21 and ISO 9001.

FEATURES

- Fully featured IEC standard, Certified to IEC 62052-11, 62053-11, Class 1, for active energy
- Measures positive and reverse active energy, RMS voltage, RMS current, power factor
- TOU with 4 tariffs and 8 customer billing cycles
- Measures Demand Response every 15 minutes or any settable time
- Two step tariffs can be activated over a designated time (upon time or consumption)
- Integrated Load Switch (80A), operation as credit or pre-payment modes
- Load disconnection when configurable power thresholds are exceeded
- Automatic, periodic register meter reading: interval, hour, daily, and monthly freeze
- Event log with circular memory buffer
- Anti-tamper functions (terminal cover, case open detection and neutral line current measurement)
- Large-character LCD manual and auto-scrolling display, supports display and IR reading during power outage
- Hardware and software security protection
- Multi Utility meter with communication flexibility. Includes RS485, optical port, PLC (optional) and RF (optional). Each meter can serve as a master meter for 12 slave meters trough the RS485
- Digital Input and output for event reading and control functionality
- Remote Firmware upgrade through communication
- Supports both Prepayment and Credit modes by remote configuration.
- Suitable for renewable energy usage to measure import/export from PV, wind or any Energy source
- Multi current thresholds: Imax(Protects the utility circuit breakers), I critical(in power shortage will limit consumption), and Idebt (limit when the customer has existing debt)
- Long life time of 15 years

JnJ Powercom Systems Ltd.
Plot No: 41, Phase – III, Cherlapally IA, Hyderabad – 500 051
Tel: +91(40) 27268989
Fax: +91(40) 27268959

Yesterday's Maximum is Today's Minimum!

SPECIFICATIONS

Voltage Range	0.7 … 1.3Un
Nominal frequency	50Hz ±5%
Reference Voltage Un	230V +/-20%
Current Range	20(80)A
Meter Constant	800imp/kWh
Power Consumption	
• Voltage Circuit	<1.5W (10VA), <3W (12VA) including communication
• Current Circuit	<1.2VA
Accuracy	Active class 1 to IEC 62053-11
Real time clock	<0.5s/d with temperature compensation function
Temperature Range	
• Specified operate range	-40 ° to +70 °
• Limit range of operation	-40 ° to +70 °
• torage and transport	-40 ° to 70 °
Humidity	<= 95% RH
Voltage impulse strength	6kV with 1.2/50us to IEC62052-11
Insulation strength	4kV at 50Hz for 1 minute
EMC	To IEC 61000-4
Radio interference	To IEC/CISPR 11, Class A equipment
Protection class	IP 54 (IEC 529) Indoor use
Disconnect switch	80A, local and remote control
Display	Large LCD with backlight, display at outage
Output/Input interferences	
• Verification output	LED representing kWh, Pulse length: 80ms±20ms
• Alarm output	LED for light error alarm(low Battery, communication error, HW faults)
• Digital Input/ Output	Two digital isolated outputs and one input
Measurement function	
• Energy (kWh)	Active forward (+A), reverse (-B), combination of active value (A-B, A+|B|, etc.)
• Power quality	Phase voltage, current, neutral current, PF
Event Log	Records with date/time stamp
• Programming, RTC time synchronization, Outage, load switch on/off, terminal cover open, case cover open, Max. Current, Max.	Records 10 most recent logs of each event with a time stamps
• Power fail	Disconnecting the load in case the supply voltage drops under 70% or if the Current is less than 5% In
Firmware Upgrade	Remote firmware upgrade through communication
Renewal Energy special Tariff	Separate tariff setting (import and export) for energy metering when renewal energy is used
Credit or Prepayment meter	Supports prepayment and credit upon remote configuration
Terminal connection	LNNL or LLNN (Option R).Wiring diagram under the terminal cover.
Weight	Approx. 0.8 Kg
External Size Compliant with	160 (h) x 112 (w) x58 (d) mm
Meter Life Time	At least 15 years

JnJ Powercom Systems Ltd.
Plot No: 41, Phase – III, Cherlapally IA, Hyderabad – 500 051
Tel: +91(40) 27268989
Fax: +91(40) 27268959