



Delving R & D

DelSmartIoT - DRCU Online APFC



About us

Delving Research and Development Private Limited commenced in October 2015, with the vision to create and provide a research ecosystem and develop products and processes that will help transform society.

Delving has provided nothing less than the best to its customers in terms of quality products and sophisticated services with a dedicated team with a strong foundation in software products and IoT-based hardware products for industries and electrical utilities. This diversified experience helps us understand our customer's needs to build the best improvement to our products

Our Services

-  DelSmartIoT - Dynamic Reactive Compensation Unit (DRCU)
-  DelSmartIoT - Online Textile Machine Monitoring (DelTex)
-  DelSmartIoT - Distribution Transformer Monitoring System
-  DelSmartIoT - Online Monitoring and MD Controller
-  DelSmartIoT - Three phase Energy Monitoring System
-  DelSmartIoT - Energy Monitoring System



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Product Comparison

Delving DelSmartIoT - DRCU and APFC Available in the Market

Features Comparison	DRCU	APFC
Automatic Power Factor Correction - Improves the Power Factor above 0.95		
Current Reduction		
Dedicated Software for Online Monitoring		
Fault detection (Overcompensation, Under compensation, Over voltage, Over current, Under voltage) will be monitored.		
It sends monitored data to a dedicated software package through a cloud server using a GSM / WiFi module for Energy Auditing.		
Capacitor Fault Deduction and Capacitor Degradation through artificial Intelligence and Machine Learning		
Analyze Capacitor Required Value to improve the PF and Display the same in LCD Display and in software		
Capacitor ON/OFF log details can be viewed in the software.		
Maximum Demand Notifications & SMS Alerts		
Abnormality Alerts & Abnormality Log Reports		
ToD Reports (Every-minute data monitoring is also possible and monitoring duration can be configured remotely).		



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Benefits in DelSmartIoT



Dedicated Online Software



Online Monitoring and Controls



**Consistency in Power Factor
under fluctuating load conditions**



Improved Power Quality



**Elimination of Power Factor Penalty &
Prevention from Leading Power Factor**



**Improves Energy Efficiency and
Reduce Losses**



**Maximum Demand Notifications &
SMS Alerts**



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DelSmartIoT

DRCU (Dynamic Reactive Compensation Unit)

Online APFC

Dynamic Reactive Compensation Unit (DRCU) is a DelSmartIoT Device that measures 3-phase Electrical parameters and dynamically includes capacitors for Power Factor improvements. Measured data are pushed to a dedicated software package through the GSM/WiFi Module.

DRCU can be used as single/two steps for individual machine monitoring and 3 to 12 steps for Industries, Electrical utilities, and commercial buildings.



DelSmartIoT - DRCU Hardwares Single Step and Multi Step



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DelSmartIoT - DRCU Features

1. The following details will be shown in the LCD Display:
 - 3-Phase (Voltage, Current (3 CT method), and Power Factor
 - 3-Phase (kWh, kVAh, kVArh)
 - Maximum Demand value exceeding Alert via SMS and Notification
 - Time of Day (ToD) of kWh, kVAh, kVArh
 - Required Capacitor Value (To improve PF above 0.95)
 - Capacitors ON/OFF status
2. Communication Module (GSM 2G&4G/WiFi Module for indoor purposes)
3. Abnormal values (Over and Under Voltage Limits, Over Current limit) settings are Remotely Configurable in software
4. Abnormality-based SMS/e-Mail alert will be sent to concerned persons:
 - Over Current/ Overloading alert
 - Over and Under Voltage alert
 - Low PF alert
 - Phase loss/Cut alert
 - Unbalance Voltage alert
 - Unbalance load alert

The Dedicated Software package will show the following details:

- Voltage and Current Chart of the selected day
- PF Chart of the selected day
- Required Capacitor Value Chart of the selected day
- Time of Day unit consumption Chart of the selected day
- Injected kVAh Analysis Chart of the selected day
- Total Unit Consumption of the selected day
- Total Injected kVAh Value of the selected day
- Individual Capacitor Active and Inactive Time in a Day
- Energy Report of all electrical parameters with corresponding capacitor ON/OFF details
- Individual Capacitor ON/OFF Log details
- Abnormality Log



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