



# Delving Research & Development Private Limited

## DelSmartIoT - DTMS

(Distribution Transformer Monitoring System)



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**DelSmart IoT based Online  
Monitoring and Control Systems**

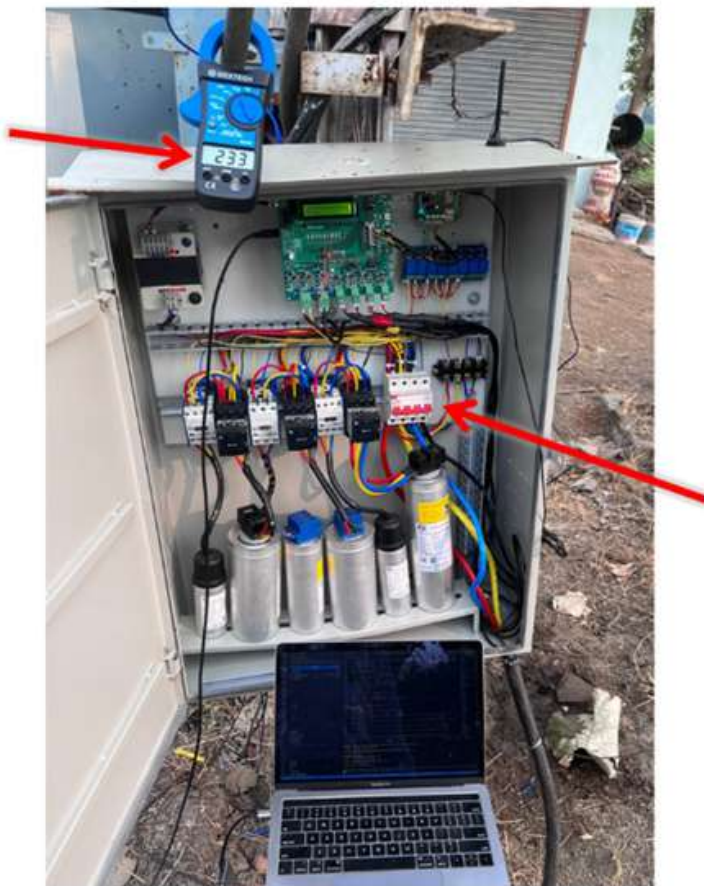
## DTMS ( Distribution Transformer Monitoring System)

DelSmartIoT: DRCU-DTMS is a Distribution Transformer Monitoring System with Dynamic Reactive Compensation. It is an intelligent IoT Smart Device that measures all 3-phase Electrical Parameters with 3 CT methods via a GSM module.

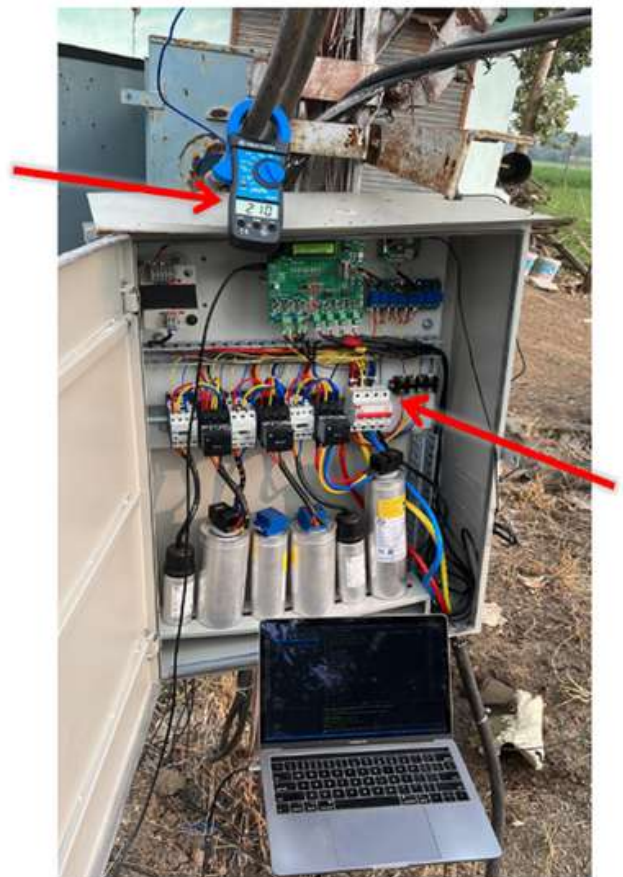
Even every minute data monitoring is possible and Monitored parameters are sent to the IoT cloud server for Analysis and Abnormality alarm and Trip Control.

It can also measure Ambient Temperature, Ambient Humidity, and Transformer Oil Temperature monitoring using additional sensors.

DelSmart-DTMS will be the backbone of any power distribution network with online monitoring and Control for a Smart and economical solution. Data analytics has been done for the optimization of low voltage distribution network and AT&C Loss Reduction.



**DelSmart-DRCU OFF - AMPS 233**



**DelSmart-DRCU ON - AMPS 210**

# OUR Analytics

- Load Survey Report – all the loads for every one hour
- Online Monitoring in Power & Distribution Transformer Parameters
- Prevent failure of distribution transformers
- Reduction of Reactive Power
- Improvement of Power Factor of DTRs
- Load profiling of DTRs
- Peak Load Management of DTRs by analyzing the consumption at the appliance level and identifying DSM opportunities
- Reduction of Overloading in DTRs
- Imbalance between phases in DTRs
- Voltage Profiling of DTRs
- Monitor transformer winding temperature and provide an alarm for higher transformer Oil/winding temperature
- Provide alarm on transformer phase failure
- Reduce distribution losses
- System PF reports on a day-to-day basis.
- Unused capacity availability report of DT.

## MANAGEMENT INFORMATION REPORTS

- Real-time Energy parameters via tabular and trend graphs
- Abnormal Events can be sent to corresponding persons via Email and SMS
- Abnormal Events Alarm
- Reports via email at set times
- Unused capacity availability report of DT
- Load Survey Report – all the loads for every one hour
- Capacitor Utilization Factor
- Line loss report



# IN SPECIFIC THE DelSmartIoT - DTMS WILL ENABLE THE FOLLOWING

DelSmart Hardware



DelSmart Software dashboard



- Asset Management and Condition Monitoring (AMCM)
- Preventive Maintenance Recognition
- Power Theft Identification
- Demand Response Assistance
- Voltage Optimization
- Outage Notification/Restoration Enhancement
- Distributed Generation Monitoring (i.e., bi-directional energy monitoring)
- Transformer Under/Over-loading Recognition
- Abnormal Transformer Voltage Characteristics
- Transformer life expectancy estimation Phase balance monitoring