



SMART GRID SOLUTIONS

SIMA Grid, SIMA City, SIMA Home, SIMA Universe, SIMA Big Data

DRCs              ...

DRC-009



VP-DOC-S.CTL-DRC-009.EN-V2.1

Creating a one-stop eco-sustainability system to transform the entire conventional grids into digital smart grid systems that streamline electrical grid management, optimize efficiency, reduce operational costs, and increase cost efficiency, making the grid more reliable and sustainable.



DRC-009

Smart Grid IoT Controller for Ring Main Units (RMUs)

Designed to modernize multiple brands of Ring Main Units (RMUs) that are utilized in underground distribution networks, the DRC-009 is a smart grid IoT device solution that streamlines management processes and minimizes the needs for time-consuming on-site visits. Imagine the real challenges of power disruption with RMUs that takes a long time for manual operations, and impacts both consumers and operator safety.

The DRC-009 comes to solve these issues by providing advanced remote control capabilities, monitoring, and managing the systems in real time.

With its innovative features, the DRC-009 enhances grid reliability and optimizes energy usage, allowing for quick decision-making that can prevent outages before they happen. This means not only reduced operational costs but also significantly lowered maintenance risks, ensuring that your infrastructure remains resilient and efficient.



▲ DRC-009 Installation



RPM Grid System



PLUM App



▲ DRC-009 Remote Control for Ring Main Unit (RMU)



DRC-009

Ring Main Unit (Substation)



Schneider (RM6)



ABB



Schneider (SM6)



SIEMENS (8DJH)

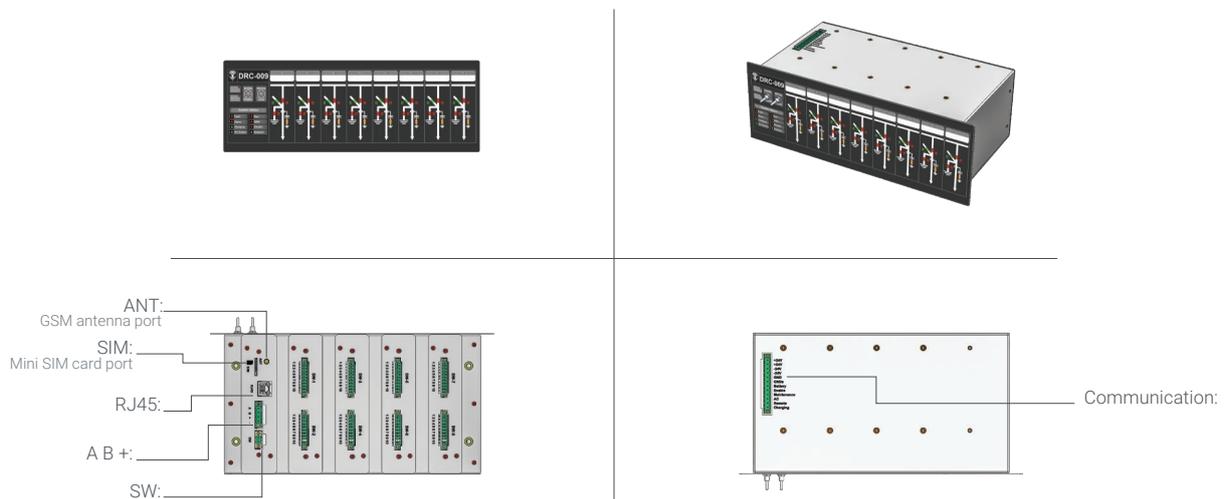


SIEMENS (8DJ20)

Key Features

Remote Control Capability:	Operating the Open/Close switchgears of Ring Main Units on the medium voltage underground distribution line is quite a challenge and risk. VP.Start developed the DRC-009 to tackle these issues, enabling the operators to Open/Close up to 8 switches of RMU switchgear through RPM Grid, or the PLUM App. This advanced feature transforms from manual to digital operation, reducing long outage time and increasing network reliability.
Instant Alarm Notifications:	DRC-009 quickly detects faults and sends the fault information to the utilities' smartphone using the PLUM App or the RPM Grid system. The alarm clearly identifies the types of faults, including switchgear off, CB Trip, phase fault or ground fault, and door open. This advanced feature delivers secure, reliable RMU management.
Abnormal Detection:	Normally, every electrical equipment always encounters some errors. Sometimes it was caused by a hardware error or the system didn't work. When the electrical equipment is broken, it affects the whole operation of the electricity distribution, causing long outages, high cost on maintenance and so forth. VP.Start designed the groundbreaking feature called Abnormal to oversee and track the condition of the RMUs, ensuring that the RMUs' health is completely checked and provided instant alert if the errors occur. This process is very important for utilities to prevent big issues efficiently.
Real-time Data Monitoring:	The DRC-009 enables operators to oversee the whole status of the RMUs in real-time through their smartphone (used with PLUM app) or through the RPM Grid System. This extensive data is very crucial to use for analysis and improve decision-making.
Event Logs:	This essential feature automatically records faults on the power lines and creates reports for analysis to improve grid management. It also tracks the operator's activities to ensure the system operations are secured.
Map view:	The Map function is a user-friendly tool that allows operators to view the location of DRC-009 instantly using Google Maps. This advanced feature enables quick identification of fault locations and enhances operational efficiency.
Single Diagram:	Single Diagram is another effective feature that provides operators with a clear and effective way to manage the DRC-009 with RMUs via a schematic layout. This innovative feature increases the capabilities of RMUs management and enhances the process of spotting faults.

Product Look and Dimension



DRC-009 Alarms Notification



Switchgear Off



Ground Faults



Phase Fault



Door Open



MCB Trip

Product Specification

Remote Control Unit

Applicable with RMU Brands	<ul style="list-style-type: none"> • ABB, Siemens, Schneider (RM6)
Voltage Supply Range	<ul style="list-style-type: none"> • (190-230) ± 10 VAC
Ambient Temperature Range	<ul style="list-style-type: none"> • 0 to 65 °C
Operating Humidity	<ul style="list-style-type: none"> • < 95%
Battery Voltage	<ul style="list-style-type: none"> • 24 VDC
Battery Charger Accessory	<ul style="list-style-type: none"> • Yes
Real-Time Remote Control System Software can be Operated Via Smartphone or PC.	<ul style="list-style-type: none"> • Yes
Operating Frequency Bandwidth	<ul style="list-style-type: none"> • GSM/GPRS, 900/1800 MHz
The Remote Control Unit is Capable of Operations Via Smartphone (GSM) and RPM Grid.	<ul style="list-style-type: none"> • Yes
DRC-009 Function	<ul style="list-style-type: none"> • Yes

Alarm Notifications

Switch "Open"	<ul style="list-style-type: none"> • Yes
CB "Open"	<ul style="list-style-type: none"> • Yes
Fuse "Break-Out"	<ul style="list-style-type: none"> • Yes
MV Voltage Loss	<ul style="list-style-type: none"> • Yes
Low Battery	<ul style="list-style-type: none"> • Yes
User Event Log Record Via Smartphone or RPM Grid	<ul style="list-style-type: none"> • Yes
Maximum Control Switch	<ul style="list-style-type: none"> • Up to 8 Switches

Call Control Features

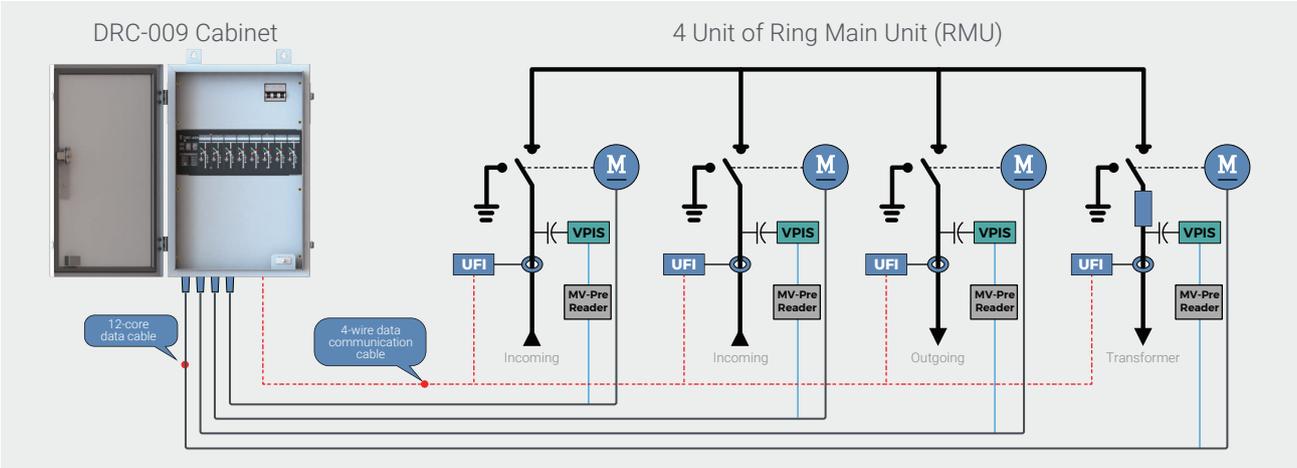
Control "Open/Close"	<ul style="list-style-type: none"> • Yes
Check Position Switch "Open/Close"	<ul style="list-style-type: none"> • Yes
Read Measurement Current (Optional for Fault Detection Function).	<ul style="list-style-type: none"> • Optional
Check Condition of Line "Normal/Under Fault" (Optional for Fault Detection Function).	<ul style="list-style-type: none"> • Yes

Fault Indicator Detection Functions

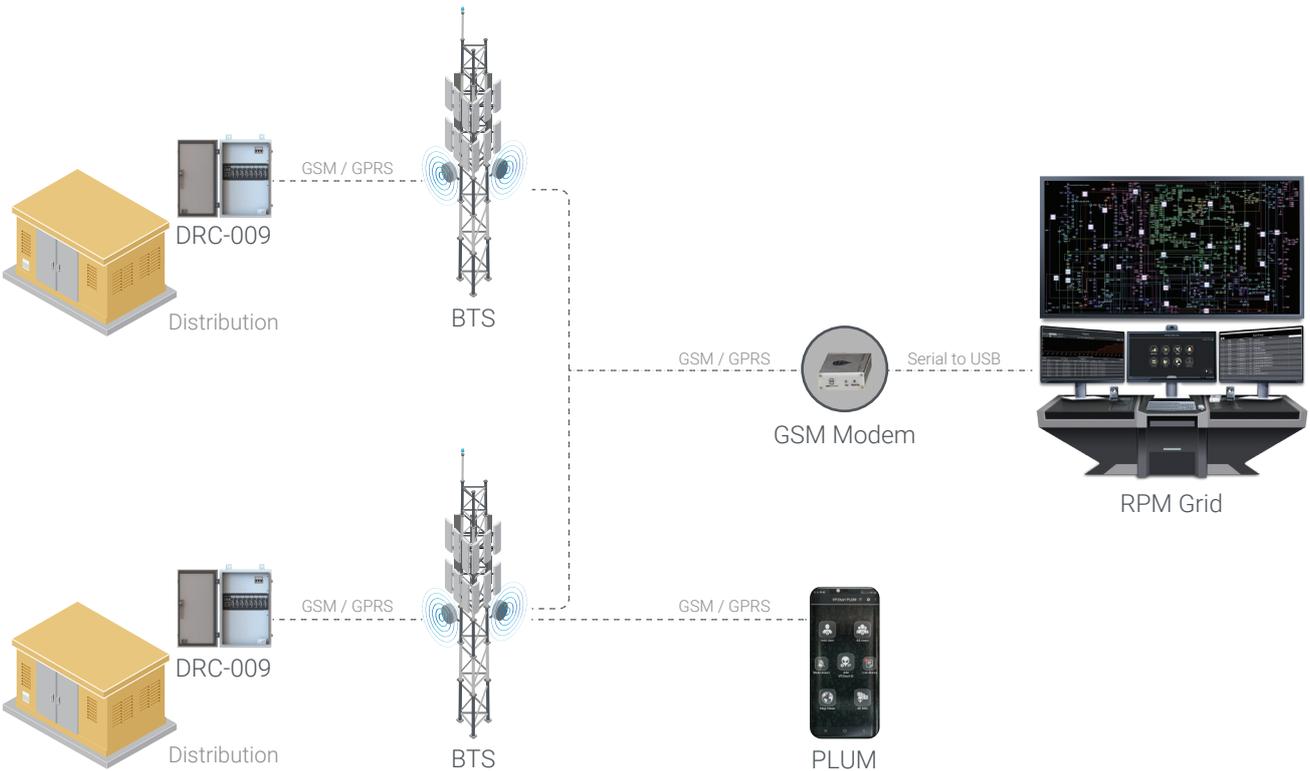
This Function is Available at the	<input type="checkbox"/> at Installation Stage
Installation Stage or Later	<input type="checkbox"/> at Later Stage

Optional Alarm Notification Settings

Phase Overload, Setting Current/Time	• Optional
Earth Overcurrent, Setting Current/Time	• Optional



System Architecture





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