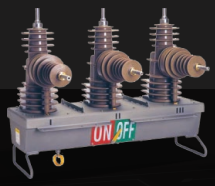
DRC-001

Smart Grid IoT Controller for Schneider Auto Recloser



ADVC





UNIQUE

Core Capabilities

- Remotely Trip/Close the ACR
- Receive Instant Alerts When Faults or Anomalies Occur
- Monitor Real-time Grid Data for Faster Decision-Making



What Challenges Have the DRC-001 Addressed on the Distribution Grid Network?



The DRC-001 is a flagship solution of VP.Start developed since 2014 to modernize Schneider Auto Circuit Recloser (ACR) on medium voltage distribution lines, including 22kV & 35kV networks. As part of VP.Start's SIMA Smart Grid Solutions, DRC-001 transformed the traditional ACR operation into a digitally connected, remotely managed, and data-driven grid solution without replacing the existing equipment.

Utilities benefit from greater insights such as remote-control capabilities, line fault detection alarm, real-time data monitoring, and other vital information that help to minimize outages and increase electric grid reliability. These data-driven insights are crucial for operators to reduce power outages, mitigate energy losses, and make the overall grid network more resilient and reliable while also delivering great return on investment for utilities.



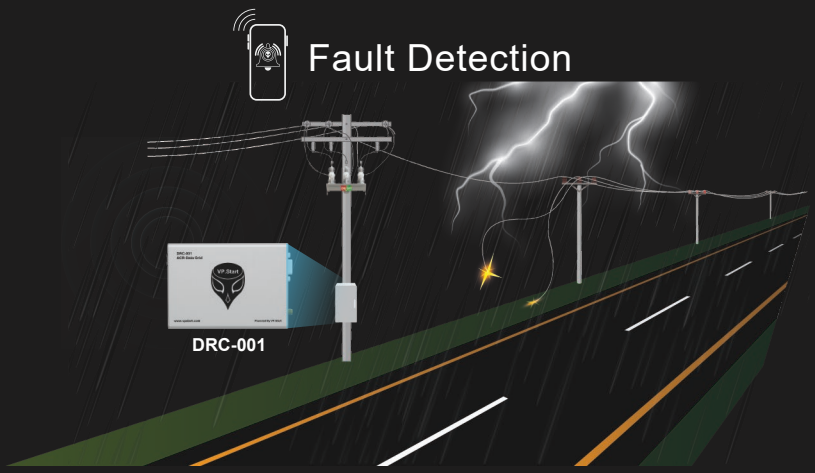
▲ DRC-001 Modeling & System Design



▲ DRC-001

PLUM APPLICATION





What Are the Key Features of DRC-001?

Real-time Data Grid Monitoring

The DRC-001 is capable of collecting a wide range of real-time data from the ACR, enabling utility operators to oversee the whole status of the powerlines. This approach is crucial for analyzing critical parameters to reduce energy losses, detect unbalancing phases and voltage drops, and generate a report for improved decision-making, leading to enhanced grid management more efficiently and sustainably.

Remote Control Capability

The DRC-001 also provides a seamless remote control to trip/close the switchgear of ACR instantly – merely using a smartphone or the RPM Grid System. This innovative feature reduces operational costs and boosts operator's safety.

Abnormal Detection

VP.Start developed an advanced abnormal detection feature into the DRC-001 to identify failures in the Recloser controller that is the critical concern for utilities. This feature instantly triggers alarm notifications upon detecting any abnormalities in the ADVC controller, including Door Open Alarm, Battery Low, MCB Switch Off, and Switchgear Maintenance.

Faults Detection

The DRC-001 instantly detects faults on the powerline in real time. This critical feature enables faster issue resolution, including Switchgear Off, MV Absence and Communication Maintenance.

DRC-001 Alarms Notification



Switchgear Off



MV Absence



Communication Maintenance



Door Open Alarm



Battery Low



MCB Switch off

Measurements

The Measurements function serves as a pivotal tool essential for actively monitoring and assessing the dynamic status of the electrical distribution network. It empowers operators with real-time insights into critical parameters including current, voltage, active power, reactive power, apparent power, power factor, and frequency.

Settings

The Settings function enables the operator to modify the parameters of electrical equipment, such as Hosting, Trip Lockout, and so on. Operators no longer need to manually adjust the settings of the Auto Recloser ADVC on-site any more.

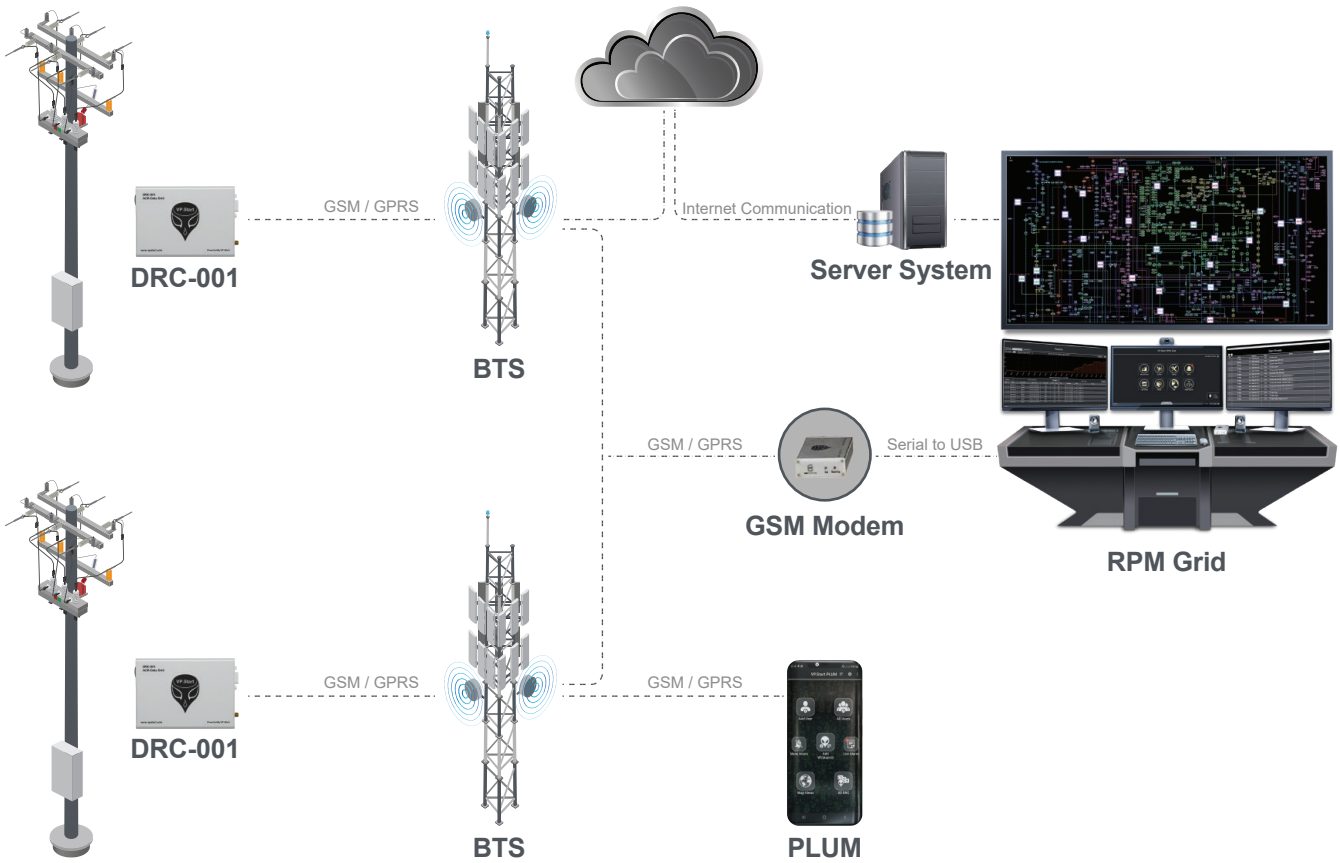
Single Diagram

Single Diagram function enables operators to display all the electrical equipment in schematic diagram form. This function assists operators in easily identifying the fault section.

Google Map View

Map view function allows the operator to pinpoint the actual location of DRC-001 in Google Map. They can especially identify the impacted area easily when any interruption happens.

System Architecture





▲ Installation is quick and easy