SMART GRID SOLUTIONS

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

DRCs ...

DRC-002

VP-DOC-S.CTL-DRC-002.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-002

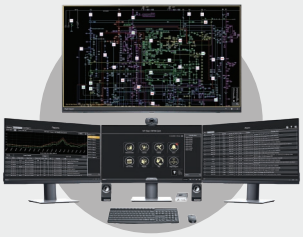
Smart Grid IoT Controller for Load Break Switch

During a power outage, linemen traditionally need to visit the site in person to manually operate the Load Break Switch (LBS) on a medium-voltage distribution line using a hot stick. Sometimes, outages occur during severe weather events, such as heavy rain and thunderstorms. This process is not only time-consuming but also poses various risks to the operators.

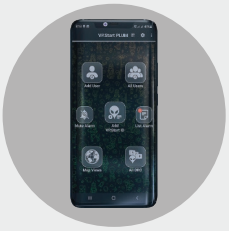
The DRC-002 is a Smart Grid IoT Controller designed to provide an advanced solution to these challenges. Utilities will receive real-time fault alarms from the power line—simply use a smartphone with the PLUM App or the RPM Grid System to remotely control the LBS switch without traveling to the site.

A key advantage of the DRC-002 is its compatibility with up to 11 different LBS models currently deployed on power lines, eliminating the need for infrastructure replacement. This robust technology helps utilities reduce operational costs, minimize outages, and deliver a greater return on investment.

▲ DRC-002 Tasting



RPM Grid System



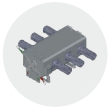
PLUM App

▲ DRC-002 Remote Control for Load Break Switch (LBS)

Load Break Switch (LBS)

SEL

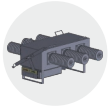
Precise (ORAP21-396-6MT)



SPG-24

ABB

Schneider RL-Series

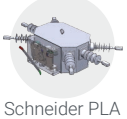


ENTEC KPS

S&S Korea

Precise (SLBS-24)

ZW32



Schneider PLA

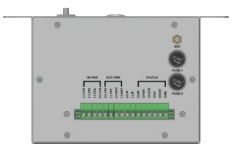
Precise (SREC-24)

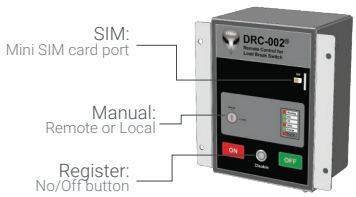
JK-SGS

Key Features

Remote Control Capability:	Electrical grid operators can remote control the LBS switchgear operation (ON/OFF) in real-time from their home or working office using either the PLUM mobile app or the RPM Grid System. The DRC-002 supports 11 different models of Load Break Switches. This modernization is very beneficial for utilities to manage and control their grid network, reducing operational costs while enhancing safety for field personnel.
Alarm:	In terms of faults, the DRC-002 will send an alarm notification quickly to the operators. Those events include a switch-off, source supply off, and the door of the DRC-002 controller is opened. This groundbreaking feature comprehensively alerts the operators to what is happening on the power lines, enabling them to take immediate action to reduce power disruption.
Abnormal Detection:	The DRC-002 proactively monitors Load Break Switches, instantly alerting operators to internal issues for rapid analysis and resolution. This critical feature helps prevent serious equipment failures while extending device lifespan through optimized maintenance—enhancing both system resilience and operational efficiency.
Real-time Data Monitoring:	With the DRC-002, utilities can oversee the power supply status anytime quickly. They can know the LBS switchgear position (On/Off) by using either our intuitive PLUM mobile application or with the RPM Grid System.
User Events:	User Events is the essential feature that provides operators with the history of their activities. This record is a crucial part of operational security, allowing identification of who operated or changed settings in case of any issues.
Reports:	When there is a power disruption, the DRC-002 will record that issue and keep it as a report. This vital feature will become a required document for analysis to improve the grid management.
Map:	Map function allows the operators to pinpoint the actual location of DRC-002 in Google Map. They also can identify the fault in the impacted area when any disruption happens.
Single Diagram:	With the Single Diagram feature, operators can easily view the location of DRC-002 in a simple schematic layout. This makes it quick and easy to spot the location of any faults.

Product Look and Dimension





DRC-002 Alarms Notification

MV Absence

Switchgear Off

Switchgear Off

MV Absence

Switchgear Maintenance

Product Specification

Remote Control Unit

Voltage Supply Range	• 12 - 24 Vdc
Power Supply Supply for Controller	• Solar Cell, 20W
Operating Frequency Bandwidth	• GSM/Internet/Call Control 900/1800 MHz
Ambient Temperature Range	• 0 to 45°C/32 to 113°F
Humidity	• ≥ 95%

Remote Control Functions

Control Functions:	
Trip or Close Switchgear	• Yes
Check Signal (GSM), Power Supply Status	• Yes
View User Event Logs	• Yes
Alarm notifications: door open, Power Supply Loss, Source OFF, Trip/Close, Switchgear OFF etc.	• Yes
Track Controller & LBS Location Via Google Maps (Tracking Abilities Function)	• Yes

Remote Control System Software

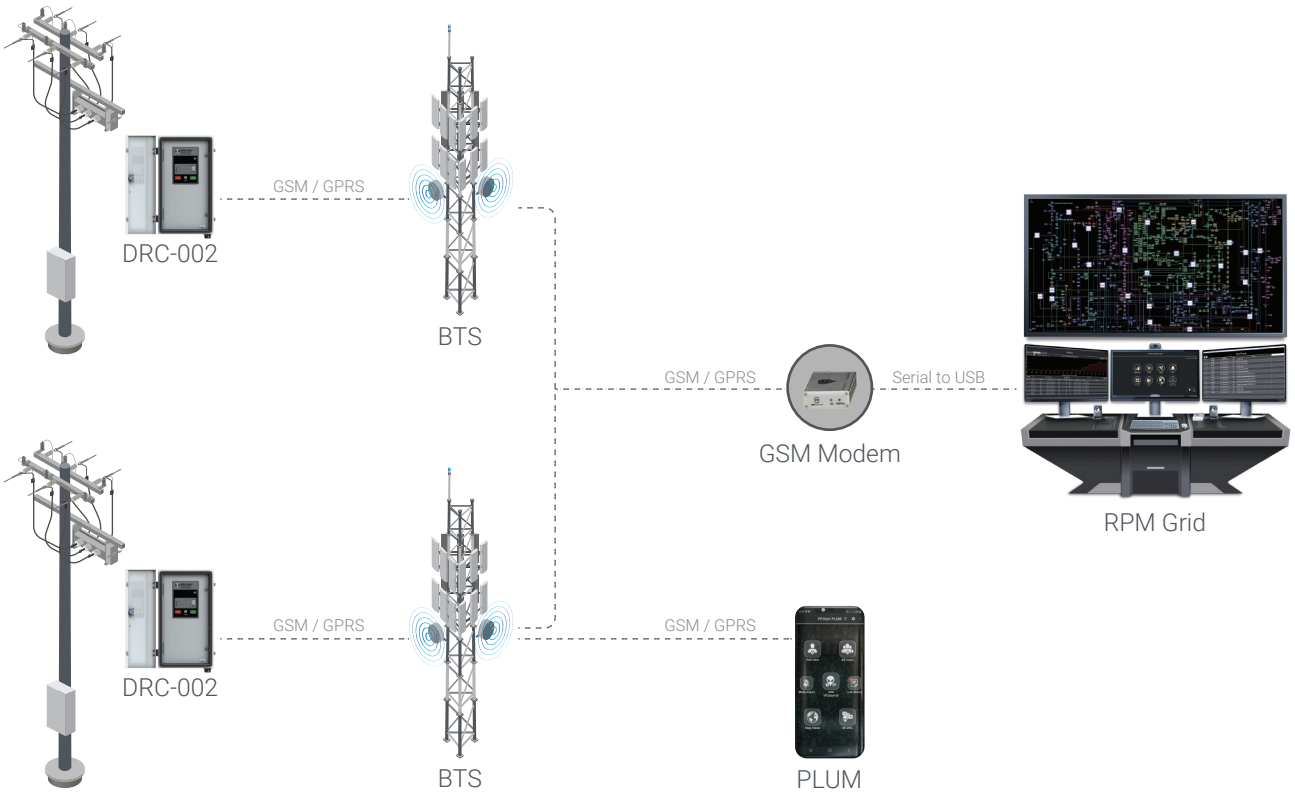
Smartphone app (Android)	• Yes
RPM-Grid Software (PC)	• Yes

Call Control

SMS/Call-Control Commands:	
Read Switchgear State (Trip/Close)	• Yes
Control Switchgear (Trip/Close)	• Yes

▲ DRC-002 Tasting With LBS

System Architecture



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