

**Smart Connector is the most innovative solution to prevent critical problems and blackouts in the substations**

**This new concept of intelligent connector is aligned with the trends of digital substations and predictive maintenance.**

## SMARTCONNECTORS FOR SMARTGRIDS

### Advantages of SmartConnector

- ✓ Collect data from the high-voltage substation in real-time.
- ✓ Ease predictive maintenance.
- ✓ Identify weak connections and poor electrical connections.
- ✓ Alarm in advance in case of premature degradation.
- ✓ Optimize the efficiency of the substation.
- ✓ Determine the expected lifetime of the electrical component in real time.
- ✓ Parameters measured include temperature, current, vibration and contact resistance.
- ✓ Improve reliability
- ✓ Minimize unscheduled power outages

*SBI CONNECTORS in collaboration with the UPC University (Polytechnic University of Catalonia) has developed the Smart Connector which is based in the incorporation of **sensors on High Voltage connectors for substation that allow getting specific data** like temperature, vibration or current in real time using an energy harvesting system to be transferred through Bluetooth or other communication systems to the control center of the substation.*

**SBI CONNECTORS**  
by SICAME GROUP



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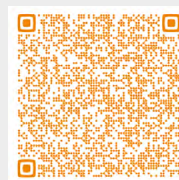
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**SBI CONNECTORS**  
by SICAME GROUP



**NEW**

**SMART CONNECTOR**

IoT solutions  
for Smartgrids and digital substations

YOUR SPECIALIST IN ELECTRICAL CONNECTIONS



## TECHNOLOGIES INVOLVED

- ✓ Bluetooth Low Energy (BLE or Bluetooth 5) and LTE or 5G
- ✓ Cloud Computing
- ✓ Big Data
- ✓ Energy Harvesting
- ✓ Power Management
- ✓ Low powered small sized electronics

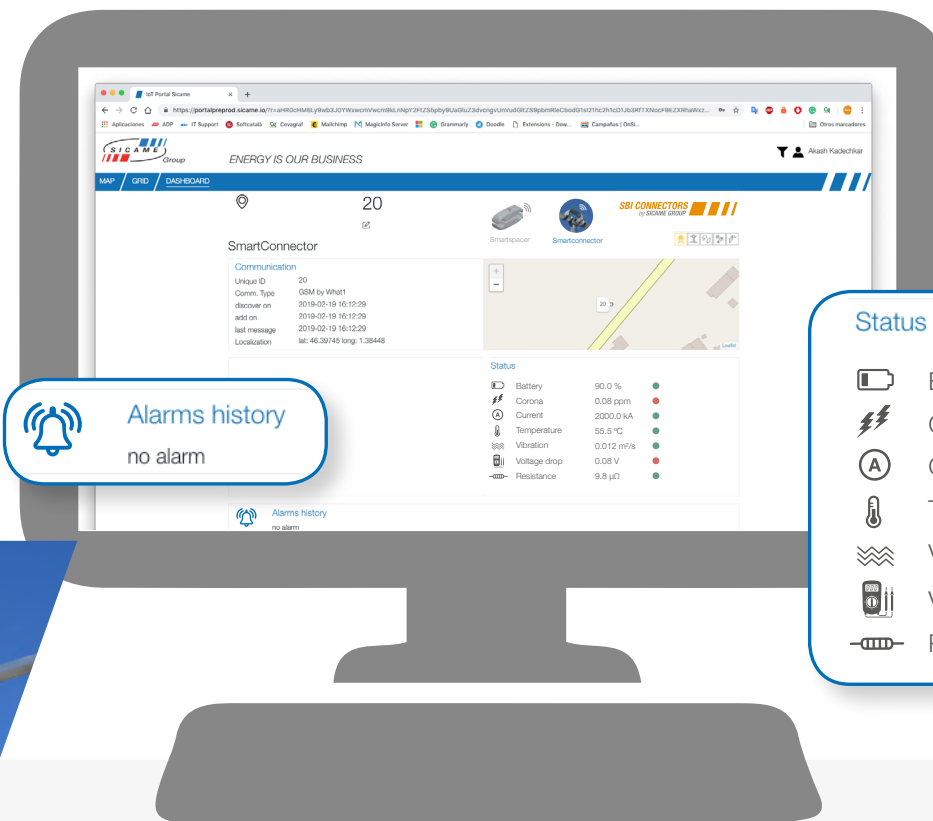
# SMART CONNECTOR

Intended for next generation substation like  
Smart Substation and Digital Substation.

**PREDICTIVE  
MAINTANANCE**

Through the IoT platform, control parameters such as current, vibration, temperature or voltage can be monitored.

If the parameters are out of established values, warning alarms can be set and inform about incorrect functioning or the need of maintenance to avoid further blackouts.



### Status

Battery	90.0 %	●
Corona	0.08 ppm	●
Current	2000.0 kA	●
Temperature	55.5 °C	●
Vibration	0.012 m <sup>2</sup> /s	●
Voltage drop	0.08 V	●
Resistance	9.8 μΩ	●



SMART CONNECTOR



ANTENA  
LOCAL

TRANSMISIÓN  
WIRELESS



EXISTING  
NETWORK OF  
ANTENNAS



SIGFOX /  
LORA  
SERVIDOR

DATA CABLE  
(INTERNET)



TREATMENT  
OF DATA

