

DATA SECURITY DOWN TO THE VERY LAST BRANCH

Working with any miniature circuit breaker (MCB) and ABB's SMISLINE TP bus-bar system, the Circuit Monitoring System (CMS) is the first measurement system that offers end-to-end encryption with SNMP version 3 (SNMPv3) for a data center's entire network of measurement data – down to the very last branch.



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Whereas great care is taken with client data in a data center, the importance and criticality of infrastructure data can sometimes be forgotten. Such data can be vulnerable to cyber-attack, the consequences of which could be very grave indeed – both for the data center operator and their clients.

Now, ABB's CMS protects installations such as data centers against cyber-attacks on infrastructure data by using the end-to-end encrypted SNMPv3 communication protocol (SNMP stands for Simple Network Management Protocol). SNMPv3 provides commercial-grade security authentication and privacy and is easy to configure. SNMPv3 improves on the two previous versions (SNMPv1 and SNMPv2c) in terms of security (authentication and privacy) and administration.

CMS is an ultra-compact and high-performance multichannel measurement system for AC and DC branch monitoring – ie, current measurement in electrical lines. Power measurements gathered by CMS are used to optimize energy usage and asset utilization and thus reduce costs.

CMS consists of a control unit – for example, the ABB CMS-700 – and sensors with different measurement ranges, up to 160A →01. In mission-critical applications like data centers, CMS typically runs alongside ABB's modular busbar SMISLINE TP system, whose touchproof character allows hazard-free maintenance work during operation

without any power interruption. The CMS sensors are mounted directly on the SMISLINE miniature circuit breakers and there is no need for conventional expensive and cumbersome cabling thanks to the internal Modbus.

ABB's new range of open-core sensors helps to add branch monitoring into existing installations – without the need to power off the system. The ability to simply plug devices into any MCB, as is possible with the universal CMS adapters, saves time and money. Compared to other power distribution and monitoring systems, CMS and SMISLINE TP can achieve up to 50 percent space savings.

As data is transmitted using the end-to-end encrypted SNMPv3 communication protocol – usually to the data center infrastructure management system (DCIM) – data integrity and cyber-security are assured.

CMS, combined with SMISLINE and exploiting the power of SNMPv3, delivers an infrastructure data collection method that is not only secure but that also allows optimization of energy usage and the best possible utilization of assets in the data center. A flexible architecture and ease of installation and maintenance round off the advantages of these products that ensure data center operators get the best performance from their capital investments and that resilience and availability are maintained. •

01 The ABB CMS-700 control unit, which aggregates current readings from the CMS and power quality values to create consumption data and generate any required alarms. Shown with associated sensors to the right.

