



Beyond connected

Safe, smart & sustainable solutions
for sub distribution



- Flexible and scalable solutions for commercial and industrial areas
- Retrofit existing installations within a day
- Connect the system to the cloud in only 10 minutes
- Lower operational costs and improved facility value by 5%
- Save up to 20% of energy and reduce CO2 emissions by 15%

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Digitalization is changing the world of energy distribution.

Thanks to ABB's connected, scalable solutions for commercial and industrial buildings it is possible to improve efficiency while saving time and costs. With solutions that go beyond connected.

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Beyond connected

Scalable and connected solutions

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Connected sub
distribution board
installed in an office

Digitalization is changing the world of energy distribution making it safer, smarter and more sustainable.

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02
Sub distribution
solutions architecture
scheme

A fundamental aspect of this is that technology is making it easier to collect useful data and to use it for analysis.

Connectivity based solutions increase awareness of resources and process behaviors: asset management can then be optimized through the control and monitoring of operations and costs.

It fosters a more conscious utilization of resources that improves energy efficiency and aligns with challenging sustainability targets.

ABB's solutions for sub distribution protect, monitor, measure and eventually make your installation smart and fully connected.

With our scalable solutions any size of public, commercial or industrial building can easily be connected to the cloud or data can be accessed via the web server.

Thanks to its flexibility, also existing installations can be easily revamped within a day and without replacing any existing components, reducing installation and configuration time nearly to zero, and in turn, minimizing operational downtime costs.

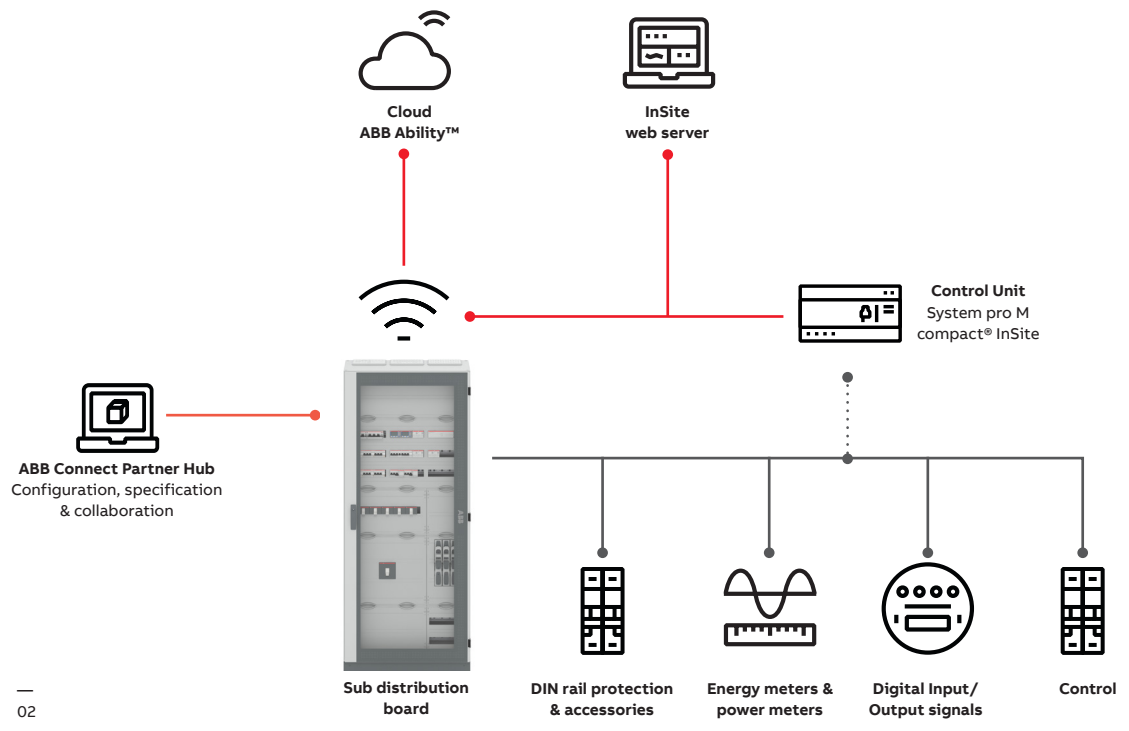
Once the system is installed and connected, the data collected on the intuitive web user interface can be used for a variety of needs, from reducing energy consumption to identifying potential risks for operational continuity.

Receiving customized alerts and configuring automatic actions are just some of the functionalities to optimize the management of energy and assets. Constant diagnostics and real time notifications ensure total transparency over how the electrical system is performing.

Compliance with highest energy efficiency standards and complete control over the total facility consumptions to save up to 20% of energy and reduce CO2 emissions by 15%. All that is guaranteed with ABB's safe, smart and sustainable solutions for sub distribution that go beyond connectivity.



01



02

Beyond connected

System overview

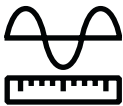


InSite web server



Cloud ABB Ability™

Easily access real time data on the InSite web server or via the cloud using ABB Ability™ Energy Manager cloud solution. Monitor and analyze data gathered from the electrical system in the applications or even on multiple sites. Control your sub distribution remotely, for instance by creating automated actions.



Energy & power meters

To perform full energy management in the electrical distribution, knowing the energy flow in the system is key. ABB's extensive portfolio of energy efficiency devices, including energy meters & network analyzers, is designed for every type of residential, commercial and industrial application. All the data can be gathered by System pro M compact InSite® automatically, connecting it to their embedded communication protocols.

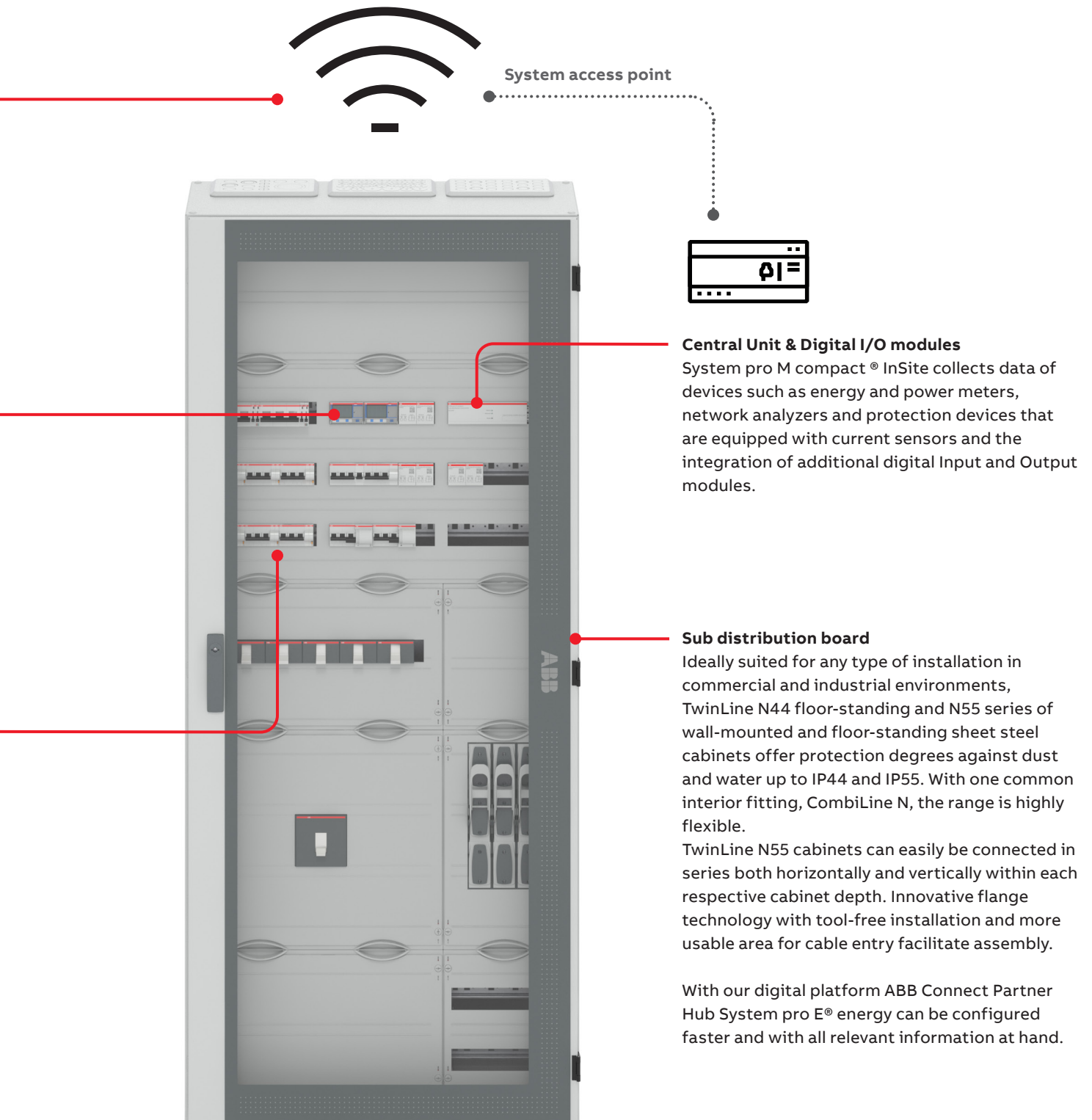


DIN rail protection devices & accessories

Complete protection can be achieved by the comprehensive ABB DIN rail protection portfolio including MCBs, RCDs, SPDs, AFDDs.

The offer is completed with a wide range of accessories: auxiliary and signal contacts, shunt trips, motor operating devices, and many more.

All the information coming from protection devices can be gathered in System Pro M compact® InSite through the digital input module, while through the digital output module it is possible to control the devices on the field manually or through automated logics



Safe and reliable energy distribution

Find the perfect fit for every application

ABB's safe, smart and sustainable solutions for sub distribution are designed to improve energy and facility management in all types and sizes of commercial and industrial buildings.

Thanks to their scalability, our flexible and connected solutions can be tailored to businesses' specific requirements.

- **Small commercial buildings**

Existing installations of small shops, hotels, offices and restaurants with few panels can be easily upgraded with plug and play assembly.

Total transparency over the complete energy distribution system and utility consumption like gas and water improves energy management and reduces operational costs significantly.

- **Large commercial buildings**

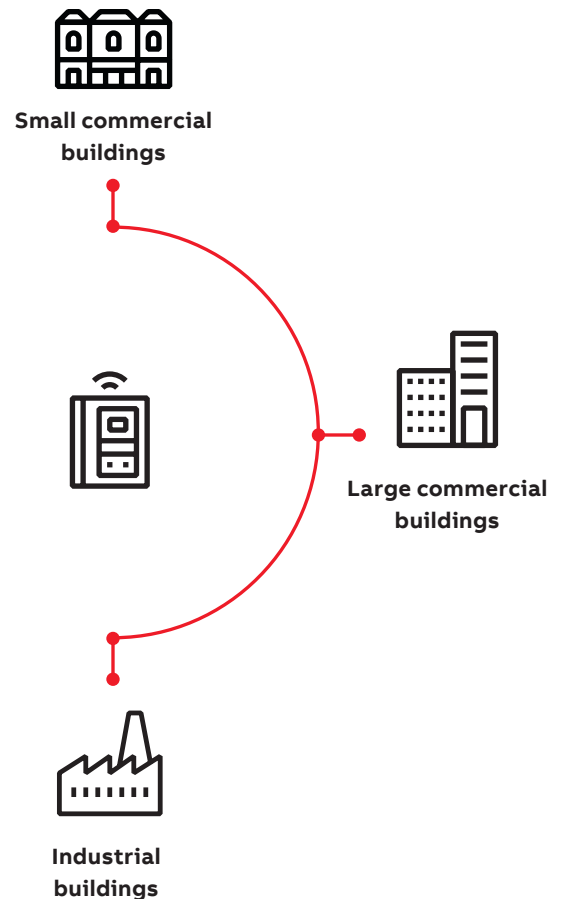
Office towers, mixed use commercial buildings, airports, shopping malls, hospitals or large hotels can be managed more efficiently.

Sub-metering and energy costs allocation of different occupiers, for instance single stores in a shopping mall, can be integrated with the collected sub distribution data into the local webserver or cloud platform that manages the overall site.

- **Industrial Buildings**

Our scalable solutions ensure service continuity and predictive maintenance for forecasts developments, particularly in industrial areas where it is important to reduce or prevent unplanned outages and related costs, for example in food and beverage production lines.

Supervision systems or more complex installations that are already in place such as SCADA or BMS can easily be complemented.





Beyond connected, no matter the project stage

Whether you're retrofitting an old building, adding a new installation or any stage in between – we offer flexible and scalable solutions to save time in all stages of the design process.

Meet your needs for improving energy impact, reducing supervision costs and adding value to the structure.

Using safe, smart and sustainable solutions for sub distribution that go beyond connectivity.



- **Scalable, fully connected solutions** that can be implemented across all project stages
- **Increased efficiency** of electrical systems and compliance to highest energy efficiency standards to save up to 20% of energy and to cut CO2 emissions by 15%
- **Replicable and easy configuration** to save time comparing product features and select the right solution
- **Updated and secured system** thanks to FW update to ensure data security guaranteed by encrypted SNMP V3 and SSL certificate





Category	Value 1	Value 2	Value 3	Value 4
Item 1	93,2	651	108	0
Item 2				
Item 3				
Item 4				
Item 5				
Item 6				
Item 7				
Item 8				
Item 9				
Item 10				

Beyond connected, with simple and intuitive commissioning

Flexible assembly of sub distribution boards, optimized wiring and smooth coupling of devices to speed up the installation process.

Whether you're installing new systems, integrating electrical plants, or revamping pre-existing electrical systems - we offer scalable solutions that improve installation efficiency and save on time and costs without impacting the existing design configuration.

Discover how easy and effortless installation can be with ABB's safe, smart and sustainable solutions for sub distribution that go beyond connectivity.



- **Retrofit existing installations within one day** with zero component replacement
- **Quick assembly** and easy installation
- **Fast and error-free configuration** thanks automatic recognition of installed devices , directly communicated to the system access pointc
- **Connect** the system **to the cloud** in only 10 minutes
- **Configurations** of similar systems **can be transferred** between one another



Beyond connected, always one step ahead of maintenance

Easily access data from wherever you are and effectively manage the consumption of your facility.

Whether it's an old building, a new building or at any stage in between – we offer simple solutions to save on time and costs through configurable automatic control to optimize facility and energy management.

Improve energy efficiency and increase the value of the facility by up to 5% while lowering maintenance and operational costs with ABB's safe, smart and sustainable solutions for sub distribution that go beyond connectivity.



- **Monitor and check real-time** or historical data from both protection and measurement devices online
- **Customized alerts**, automatic actions and **easy access to data** enabling early detection of potential issues and allowing fast reactions
- Guarantee **continuous operations** by proactively planning maintenance interventions to avoid unexpected downtime costs and improve the facility value by up to 5%
- **Configure and program automatic actions** to promptly react to selected events with no need of manual interventions and hence, optimize facility management
- **Manage the consumption** of the facility to **reduce operational costs** save up to 20% of energy





ABB Connect Partner Hub

Far more than a conventional website, with ABB Connect Partner Hub you can interact with ABB, improve your knowledge and collaborate with other professionals.

It helps to find product information, connects you directly to an online network of expert contacts and a range of digital services such as online training, project and plant management.



Create, design and collaborate in real time

Build a project to bring your designs to life with your partners and clients. Share documents with fellow collaborators, import BOM, view activities in real time and fast track your plans to implementation.



Share your feedback and ideas with us

We are curious to know your ideas. Leave your feedback and suggestions and help us improve our products and solutions.



Design and develop your solution, in one place

Create your own applications for the platform by making the development process simpler, produce tailored apps for each customer and integrate new features and provide added value for your clients.



→ [HTTPS://PARTNERHUB.CONNECT.ABB.COM/](https://partnerhub.connect.abb.com/)

InSite web server

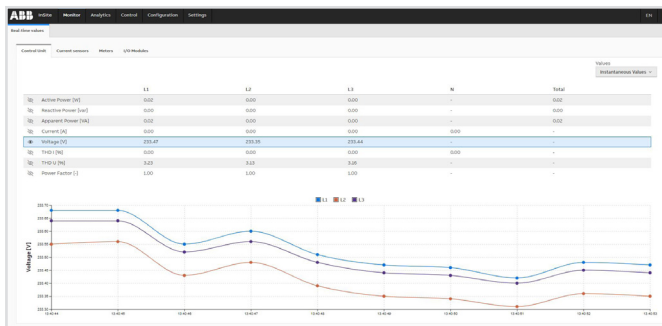
Once you made your sub distribution board smart by installing System pro M compact® InSite you can connect it to the local network so data gathered by its control unit, digital I/O modules and current sensors can be accessed via the web server. Access to several pre-configured pages is provided automatically.

These allow you to monitor, compare and structure your real-time and historical data. Also, automatic actions can be set to react promptly to selected events.

In the InSite web server you will find the following structure:

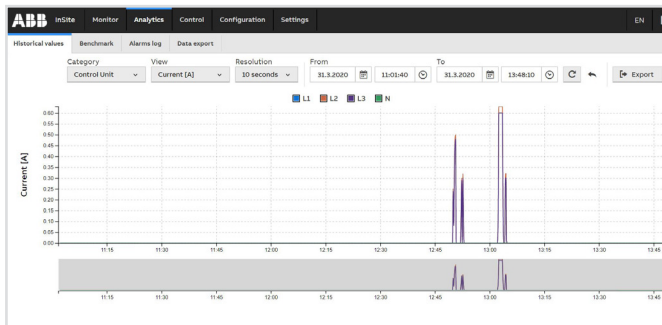
Monitor

Access real-time data of all the devices available in the system (Control Unit, I/O modules, meters, etc.)



Analytics

Analyze data, access historical values, access alarms, export data of selected periods and compare products.



Control

Rename channels or switch them on or off remotely.

The screenshot shows the 'Control' page with a table of channel configurations. The table has columns for ID, Channel tag name, Channel type, Device type, Status, and Action. There are four rows of data for Module 2 Port 1 through 4.

ID	Channel tag name	Channel type	Device type	Status	Action
08.1	Module 2 Port 1			Open	<input type="checkbox"/>
08.2	Module 2 Port 2			Open	<input type="checkbox"/>
08.3	Module 2 Port 3			Open	<input type="checkbox"/>
08.4	Module 2 Port 4			Open	<input type="checkbox"/>

Configuration

Change the hierarchy of the devices, set alarms, create automated actions using if-then logics and thresholds.

The screenshot shows the 'Configuration' page with a dialog box for 'Add selected automation'. The dialog has several sections:

- IF:**
 - Reason: Avoid current peak
 - Category: Control unit
 - Device: L3
 - Type: Cross up
 - Measure: I
 - Threshold (A): 800
 - Time delay (s): 0
 - Send status: Enable
- THEN:**
 - Device: Output module 1
 - Channel: Start trip SOC A2
 - Action: Open

 Buttons for 'Cancel' and 'Add automation' are at the bottom.

ABB Energy Management

ABB Ability™ Energy Manager

ABB Ability™ Energy and Asset Manager is the state-of-the-art cloud solution for monitoring, supervising and analyzing site equipment, as well as the site’s electrical distribution system, resulting in improved performance, efficiency and safety. Through its scalable and flexible approach, ABB Ability™ Energy and Asset Manager ensures full-range integration of main electrical low- and medium-voltage equipment installed in the distribution and sub-distribution switchboards. With a single easy-to-use interface, ABB Ability™ Energy and Asset Manager assists the user by means of a cloud computing or hybrid platform, enabling analysis of relevant data and optimization of installation.

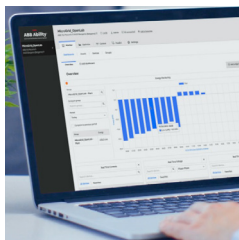
A new approach to energy and asset management

With an intuitive web app interface accessible via smartphone, tablet or PC, ABB Ability™ Energy and Asset Manager makes it simple to:

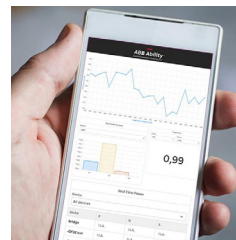


ABB Ability™ Energy and Asset Manager also provides access on a multi-site level, allowing you to monitor and compare the performance of different facilities at the same time. It allows profiling of users according to the level of access they require.

In addition, upgrades and changes can be organized at any time via the ABB Ability™ Marketplace. With just a click, the customer can customize their solution according to their needs anytime, anywhere.



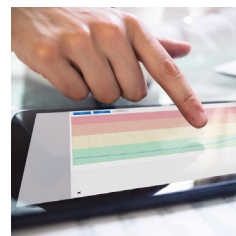
Monitor
Oversee site performance, supervise the electrical system and allocate costs.



Explore
Visualize the system structure, verify assets health and get actionable insights following predictions and prescriptions.



Analyze
Schedule and analyze automatic data exports, improve the use of assets and make the right business decision.



Act
Set up alerts to notify key personnel while remotely implementing an effective efficiency strategy, managing maintenance activities and scheduling next actions.



→ NEW.ABB.COM/LOW-VOLTAGE/LAUNCHES/ABB-ABILITY-EDCS

Additional information

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ABB Ltd.

ABB Electrification
Smart Buildings Division

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