
PROTECTION AND CONNECTION

ABB Ability™ in action

Upgrade your Switches and
Fusegear



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Connectivity, the future trend

New electrical grid architectures and system device connectivity are changing the energy flows.

The power-distribution grid architecture is continuously evolving from the traditional architecture to the next level approach. The centralized grid with top-down energy flow has been changing towards the distributed multisource configuration.

Power grids combine more and more big powerhouses, spread-out high voltage transmission lines and bulk load centres together with a constellation of distributed areas of local production and consumption at the distribution layer. Sections of the electrical network have bidirectional energy flows thanks to low voltage generation resources installed in buildings, factories and communities.

The penetration of renewables is promoted by technology cost and environmental pollution emission reductions in comparison with fuel fossil sources. The **Microgrid** concept is the answer to this market trend. Distributed energy resources and loads mainly in low voltage network defined by specific boundaries that can work together in a controlled and coordinated way, either connected to weak/ strong main grid or in “islanded” mode depending on the scenario. Speeding up the innovation, microgrids simplify the higher power distribution complexity ensuring lower cost, optimizing the resources and the services.

Today more than 1.5GW of low-voltage microgrids are installed worldwide and these will increase to more than 6GW by 2020.



In order to get as much as possible energy efficiency and meet consumption requirements, in parallel with new electrical layouts, communication networks and **Internet of Things** unlock the power of data to make people understand energy consumption and allocate resources. Indeed, connectivity has become in the last ten years a must to have in energy distribution.

Up to 33 billion of internet-connected devices will be used by 2020. That means, 4.3 devices for every person in the planet, both consumers and business world.

The digital transformation is coming to power. Switching devices, like circuit breakers or switch-disconnectors located at the different Microgrid electrical points, are naturally becoming leaders of the grid speed evolution.

In the last ten years, millions of switch-disconnectors and switch fuses, from different brands and without advanced features for monitoring or resource optimization, have been installed worldwide.

As almost more than 95% are conventional devices, there is a big potential for technology upgrade on existing facilities, without making big investments to replace each device.



ABB Ability™ Electrical Distribution Control System

Understanding power

ABB Ability™ Electrical Distribution Control System is the innovative cloud-computing platform designed to monitor, optimize, predict and control the electrical system.

ABB Ability™ Electrical Distribution Control System is built on a state-of-the-art cloud architecture for data collection, processing and storage. This cloud architecture has been developed together with Microsoft in order to enhance performance and guarantee the highest reliability and security.

Through a compelling web app interface, ABB Ability™ Electrical Distribution Control System assists anytime and anywhere via smartphone, tablet or personal computer so the user can:

Monitor

Discover plant performance, supervise the electrical system and allocate costs.

Optimize

Schedule and analyze automatic reports, improve the use of assets and take the right business decision.

Predict

Supervise the system health conditions and predict next maintenance actions.

Control

Set up alerts and notify key personnel, and remotely implement an effective power management strategy to achieve energy savings in a simple way.



ABB Ability Electrical Distribution Control System brings advantages to customers from the design to the operations stage.

The digital solution adds value to facilities, meeting customer demands and enabling them to comply with higher energy efficiency standards.

Real time analysis of valuable data from field devices enables customers to closely monitor the performance of multiple installations with a single supervision system.

Clear information about consumption and improvement opportunities makes cutting waste and improving energy efficiency simple. Customers also benefit from lower energy bills and reductions in unplanned downtime.

ABB's "plug and play" devices make installation quick and easy. Customers can make existing installations smart with no need to replace components. New and retrofitted solutions are up and running in no time, immediately starting to collect data.



Speed up your projects

- Increase the facility's value by 5%
- Reduce investment in supervision systems by 15%
- Achieve compliance or higher class of energy efficiency standards
- Faster payback



Easy to install

- Connect to the cloud in only 10 minutes
- Reduce cabling by 60% and connectivity components by 25%
- Upgrade in 1 day the existing installation
- Upgrade with zero component replacement and existing installation



Energy efficiency

- Save up to 20% on maintenance costs
- Save up to 20% on energy bill
- Get proactive alerts and guarantee operations in 1 minute
- Remove energy inefficiency by up to 10%



Global website for
ABB Ability™ EDCS



Ekip UP

Leveraging our digital innovations

The innovative digital unit upgrades low-voltage systems to the next generation of plants by monitoring, protecting and controlling.

ABB is making the digitization of power more accessible and user-friendly by developing a range of smart devices that turn systems data into productivity gains. Part of ABB Ability™ Protection and Connection solution, Ekip UP is the industry's first innovation that lets customers keep their existing power hardware – digitizing it with a simple software driven plug-in upgrade.

ABB's Ekip UP is a pain-free, cost-effective way to monitor power consumption and optimize operations, maximizing uptime for core processes. The multipurpose device enables the installed base to leverage the latest digital innovations, with minimum impact on the switchgear by using plug&play sensors. The Ekip UP product family covers many different applications in commercial buildings, industrial plants, marine and renewables with a single unit solution.

Monitor

- Measurement capability of main energy parameters.
- Network analyzer to evaluate the power quality.
- Datalogger based on event triggers for fast fault diagnosis.
- Connectivity for system integration up to 8 field-bus protocols, plus a property bus for power automation applications that require advanced cyber-security.
- Embedded gateway that ensures power understanding by cloud-based energy management system.

Protect

- Distribution protection based on current and voltage measurement.
- Generator protection and interface protection systems.
- Adaptive threshold according to grid topology.
- Digital selectivity for resource coordination.
- Load shedding algorithms to prevent blackouts.
- Programmable logics to manage transfer-switching operations and maximize service continuity.
- Synchronization function of different power sources inside.

Control

- Power management systems to optimize plant resources and enable Demand Response applications.



Ekip UP makes every switchgear smart adding value for everyone.



UP-date basic switchgear

Ekip UP updates basic switchgear with new monitoring, protection and power control solutions.

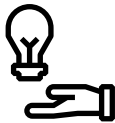
- Compatible with all switching devices.
- 100% applicable for every low voltage scenario.



UP-load your electrical system

Ekip UP uploads your system data to the cloud connected ABB Ability™ platform.

- Enabling full microgrid control.
- In less than 10 minutes.



UP-grade your facilities

Ekip UP is the unit that upgrades the electronics of old facilities making them digital.

- 30% operational cost saving via the energy management system.
- Cost effective solution compared with traditional retrofitting approach.



Maximize UP-time

Ekip UP maximize uptime for system integration as a plug & play unit with easy installation.

- 50 % time saving when retrofitting with reduced impact on switchboard design.
- Zero downtime during commissioning.

M2M

The measure of efficiency

From commercial buildings to industrial applications, M2M is a power meter for basic power quality analysis in main- and subdistribution switchboards.

Improvement of power quality and preventative maintenance of equipment are made simple through this easy-to-use power meter. M2M is a device that helps the user identifying opportunities to save energy and reduce costs. The M2M power meter has advanced analysis functions which allow effective measurement of the main single-phase or three-phase electrical parameters: voltage, current, frequency, power factor, active and reactive power, active and reactive energy. Fitted to low- and medium-voltage electrical panels, the device allows the measurement and analysis in real time of electrical parameters, also verifying the quality of the energy thanks to THD measurement.

Power and energy monitoring allow the user to highlight energy consumption trends, enhancing the awareness towards correct energy consumption and increasing energy efficiency in the common user behavior. Installed within commercial buildings, M2M apply specific measures to increase reliability of equipment and to avoid supplying unnecessary loads. Inefficient loads can be identified through basic electrical parameters measurement and basic power quality functionalities.

In industrial applications, M2M helps users to keep track of energy consumption of specific and critical processes and loads. This can help, foreseeing future electricity costs and avoiding penalties from the utility, e.g. for exceeding minimum power factor value and maximum reactive energy.



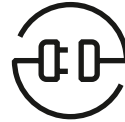
Global product
webpage for
modular measuring
instruments





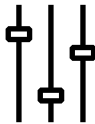
Easy to install

M2M is suitable for installation inside any panel thanks to its 57 mm depth, even when only reduced space is available. Reduced time for installation and simplified cabling with the removable terminals, while the screw fastenings for current measurement ensures reliability and precision. The fixing clips ensure that M2M is held reliably on the front-panel, not only upon installation but also during operations, when the unit is subject to vibrations and temperature fluctuations.



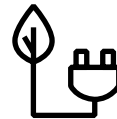
Easy to integrate

No limits in terms of communication and system integration thanks to the availability of different protocols for all types of network. Easy remote data reading and device configuration is carried out via Modbus RTU, Modbus TCP/IP or Profibus DP. Interaction within control and supervision systems is ensured by several I/O options, including digital I/O and programmable analogue outputs. Prompt alarming of unusual load conditions via digital output guarantees safety of the system.



Simple to use

Data reading is made easy under any lighting condition thanks to the multilingual backlit display, with scrolling text that guide and help the user during operations. The intuitive and easy-to-use front keypad simplifies the navigation of the screens and configuration of the device. No changes to the settings can be carried out by unauthorized personnel, as the device is protected with a safety user-defined password.



Energy efficiency

With M2M it is possible to carry out energy efficiency evaluations through a complete set of electrical parameters. Cost saving is ensured by monitoring the maximum power demand and thus avoiding penalties to electricity distributor companies and utilities. The device allows to improve the efficiency of plants and assets by keeping the quality of electrical parameters under control, with real effects on safety and operational costs.

SlimLine XR Switch Disconnecter Fuse

The perfect solution when installation time, space and cost are the key

The SlimLine XR fulfils all increasing demands in the industry for safe energy distribution. The installation of the SlimLine XR is even easier and more time saving than ever before. The increased space in the cable termination area will allow better access for installation.



Easy to install

The use of plug-in contacts at the distribution busbars, an integrated slide support and increased cable termination area makes the installation easier. SlimLine XR can be installed in horizontal or vertical direction. This design allows more outgoing feeders per switchboard saving cubicle, floor space and costs. SlimLine XR can even be removed and replaced in a switchboard with live busbars.



Safety and protection

True position indication shows reliably if the contacts are closed or open. This feature can be lifesaving when performing maintenance to a distribution panel. Slimline XR switch disconnecter fuses are tested according to the IEC 60947-3 standard, with more stringent requirements for isolation, making, performance and safety.



Continuous operation

The Intelligent Tier Switch ITS2.1 and ITS2.D are the optimal solution for energy management systems to analyze, optimize and control the energy consumption in modern commercial and industrial buildings. ITS2 can alert facility managers if fuses blow or temperature or currents exceed the given limits.



Global product
webpage for
SlimLine XR





OT Switch-Disconnectors

High performance, compact solution

Manual and motor operated switch-disconnectors by ABB are suitable for a wide range of demanding applications in power distribution or motor control centers. Their smart and modular design and adaptable construction reduce installation time and make them perfect for even the most demanding operating environments



Easy to install

Flexible installation orientation

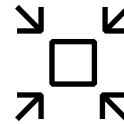
ABB's switch disconnectors are easy to install. These devices are extremely flexible regarding installation orientation. They work just as well installed horizontally or vertically, or even on the ceiling. Smart design eliminates the need for major customization such as when using devices optimized for e.g. the 140 mm switchgear busbar standard or 600 mm cubicle solution.



Reliable in extreme conditions

Heavy duty reliability

These ABB switch disconnectors are extremely well suited for heavy duty applications in e.g. distribution centers with full rated current. Relevant short circuit rating are available for IEC and UL versions alike. These devices are also equipped with extremely resistant insulation materials, which help reduce the risk of flash-over between phases in even the most severe circumstances and environments.



Space saving

Modular design

All our switches have been designed for easy and cost-efficient installation, maintenance and use. The modular design enables 2-, 3- and 4-pole installation with different position of the switching mechanism to suit your needs and special requirements. The devices can be optimized in relation to busbar and cable connections as well as handles and other accessories.



Global product
webpage for manual
operated switch
disconnectors



Global product
webpage for motor
operated switch
disconnectors

OS Switch fuses

World class performance in the most demanding applications

Manual and motor operated switch fuses by ABB have been designed to deliver world-class performance in even the most extreme conditions. Our extensive range of reliable switch fuses, both manual and motorized, is ensured to have your application needs covered.



Reliable in extreme conditions

Reliability and performance

OS switch fuses are the optimal solution for motor protection. They can be installed next to transformers in heavy industry. The contact design combined with the fuse link enables rapid fault clearance and maintains protection level even after a fault occurs. Our motorized switch fuses protect motors from overcurrent and can be operated both remotely and manually.



Speed up your products

Proven and practical

Test proven type 2 coordination tables for the OS switch fuses are available online 24/7. From there you can easily select the appropriate ABB components for motor starting and protection. These motor starting solutions also help minimize the time needed for sizing all the starter components and ensure reliable operation after a fault occurs.



Safety and protection

Safe maintenance and operation

OS switch fuses are designed for personal safety as well as for reliable process protection. When in the ON position, the interlocked fuse protection covers cannot be removed. When in the OFF position, the fuse link is fully isolated from both ends. Also, the handle is padlockable with three separate padlocks for ensured safety.



Global product
webpage for
manual operated
switch fuses



Global product
webpage for
motor operated
switch fuses

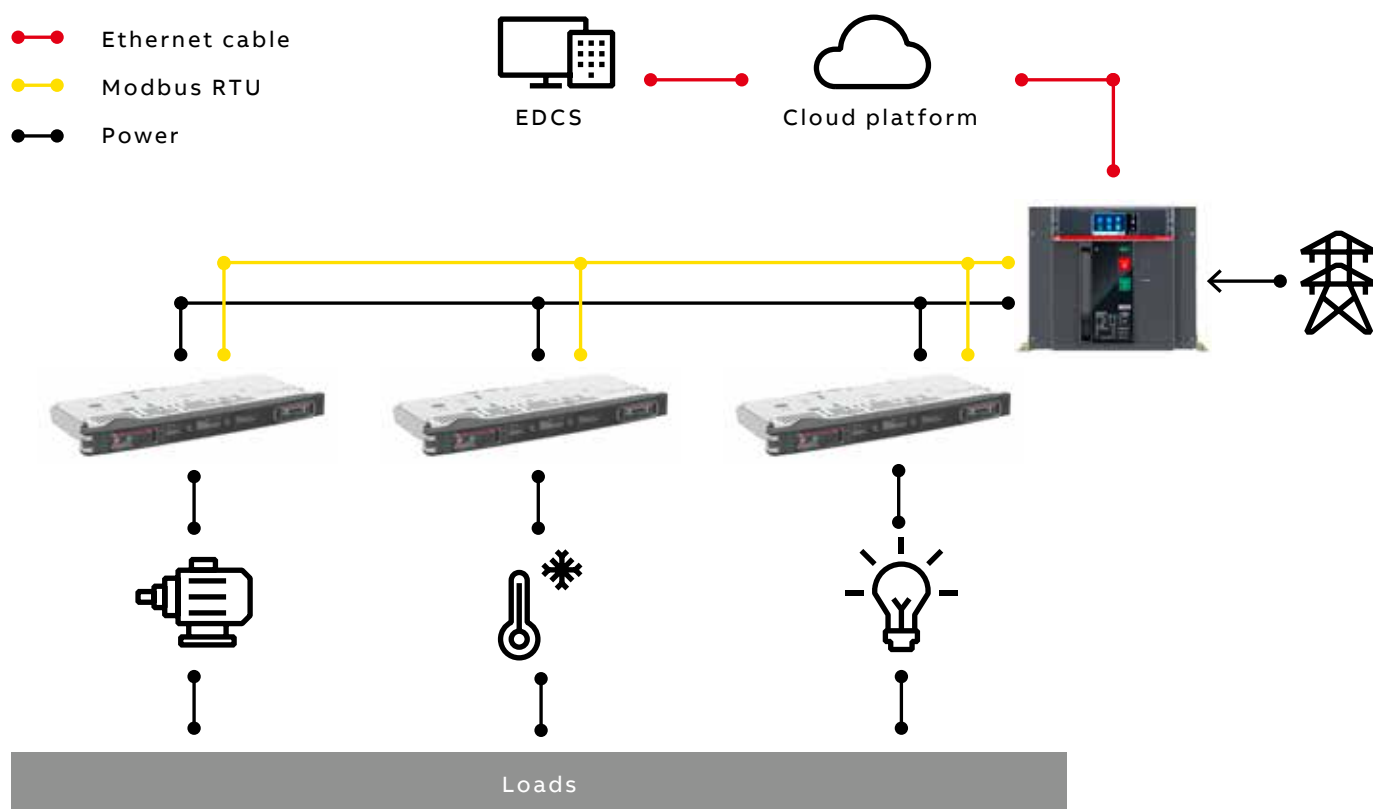
Power distribution

Applications

In electrical distribution, it is becoming more common to monitor and measure power consumption and to optimize the operation of the components in the whole distribution chain. Requirements of energy efficiency and self-consumption, in parallel with new electrical layouts, communication networks and Internet of Things unlock the power of data to make people understand energy consumption and allocate resources. Indeed, in the last ten years connectivity has become a must-have in energy distribution. ABB offers various solutions to optimize electrical distribution and enable cloud connectivity with ABB Ability™, even with switch-disconnectors in new or existing switchboards.



Application 1



There are various types of loads in electrical distribution, such as motor, heating or lighting. SlimLine XR offers a solution for short-circuit protection of these various loads. The unit ITS2.1, which is integrated to SlimLine XR, allows the user to monitor and measure basic parameters including current, voltage, power, temperature, fuse status indication and position of the switch. ITS2.1 communicates with the main incomer LV circuit breaker Emax 2 using Modbus RTU protocol. Emax 2 enables direct communication to ABB Ability™ Electrical Distribution Control System (EDCS) by using Ekip Com Hub cartridge module.

It is important to note that SlimLine XR must be equipped with ITS2.1 to enable cloud connection. If the SlimLine XR is equipped with the old ITS2, it is necessary to upgrade the unit to ITS2.1. It is not necessary to replace the whole SlimLine XR switch, exchanging only the ITS unit is enough.

Application 1

Shopping list

Shopping list

Emax 2

Main incomer LV circuit breaker with embedded fieldbus and cloud connectivity capabilities. Different sizes are available, from 630A to 6300A, especially for new plants.



Ekip Supply

For Emax 2, to enable the different Ekip modules with auxiliary power supply



Ekip Com Hub

For Emax 2, to enable Cloud connectivity to ABB Ability™ EDCS



Ekip Com RTU

For Emax 2, to enable communication with ITS2.1



SlimLine XR Switch Disconnecter Fuse

For short-circuit protection of different loads. SlimLine XR ITS2.1 or ITS2.D contains integrated current transformers, temperature sensor, fuse monitoring, auxiliary contacts and the communication protocol Modbus RTU is embedded to the ITS2.1 or ITS2.D.



Optional shopping list

To create cloud connectivity

Ekip UP Monitor

Ekip Up Monitor should be selected for SlimLine XR ITS2.1, if the main incoming unit is not Emax 2. Ekip UP Monitor is the perfect solution for comprehensive plant energy metering, full connectivity for integration in every supervision system, direct connectivity with MV relays, power grid hub for energy management platform to make every switchgear smart.

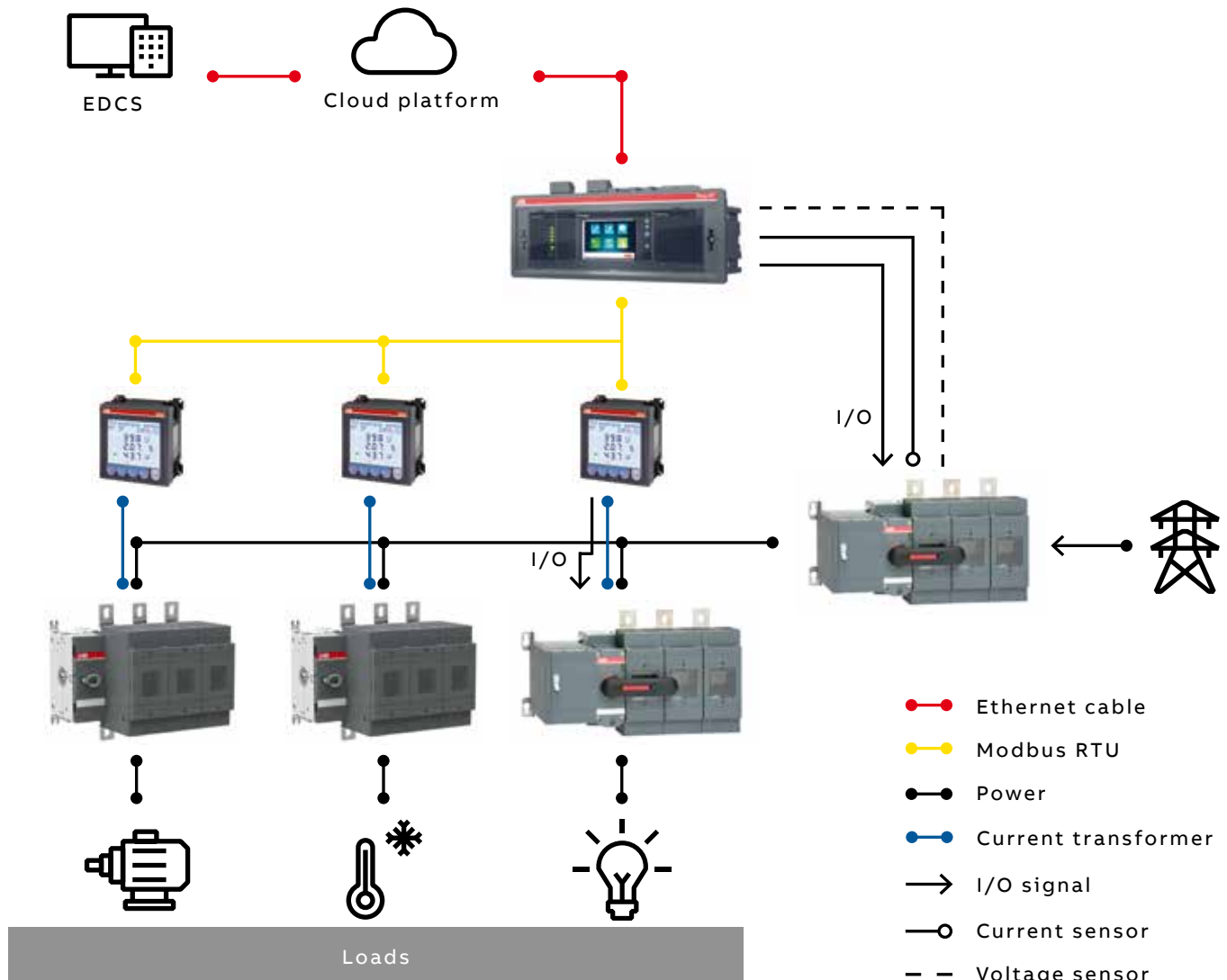


ITS2.1

For SlimLine XR cloud connectivity



Application 2



The main incoming low voltage switch can be a motorized disconnect switch (OTM) or a motorized switch fuse (OSM). With current transformers installed to the main incomer, Ekip UP is able to measure the current, voltage, power and power quality values as well as logging and analyzing faults. With integrated Ekip 4K Signalling module, Ekip UP is able to control the motor of the main incomer on/off with digital I/O –signal.

The M2M network analyzer has advanced analysis functions, which allow effective measurement of the main single-phase or three-phase electrical parameters: voltage, current, frequency, power factor, active and reactive power, active and reactive energy. M2M measures and monitors the load protected by OS switch fuses. If the OS switch fuses are

motorized and M2M is used, it is possible for instance, to set up the current thresholds. M2M will give a I/O -signal to the motor of the OS switch fuse to operate the switching device and disconnect the load when the current exceeds the limit, and a signal to connect the load when the current returns to the normal level. M2Ms communicate with Ekip UP via Modbus RTU or Modbus TCP/IP (depending on the type of the M2M). Ekip UP enables direct communication with ABB Ability™ EDCS by using the Ekip Com Hub cartridge module.

Application 2

Shopping list

Shopping list

Ekip UP Protect

Used together with a motorized LV main incoming switch when opening and closing command is needed. It enables protection based on current, voltage, frequency and power as a multifunctional protective relay for power feeders. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.



Type A/B/C current sensors

For the main incoming LV switch linked to Ekip UP. The current sensors are based on Rogowski technology:

- Type A closed sensors with junction copper (In max 4000 A)
- Type B closed sensors (In max 1600 A)
- Type C open sensors (In max 4000 A)



Type A



Type B



Type C

Ekip Supply

For Ekip UP to enable the different Ekip modules.



Ekip Com Hub

For Ekip UP, to enable cloud connectivity to ABB Ability™ EDCS



Ekip Com RTU

For Ekip UP to communicate with M2M Modbus RTU protocol



M2M

M2M Modbus (Modbus RTU)



Motorized Switch Disconnecter

Main incoming LV switch. Used together with certain Ekip UP types when opening and closing command is needed. The Ekip UP types that support the opening and closing command are Ekip UP Protect, Protect+, Control+.



Switch Fuse

LV switch-disconnector with fuses for short-circuit protection.



Motorized Switch Fuse

LV switch-disconnector with fuses for short-circuit protection. M2M enables controlling the motor with I/O signaling.



External Current Transformers

For OS switch fuses and M2M

- Primary current from 1A up to 10kA
- Secondary current 5A or 1A
- A typical current transformer used with M2M is CT PRO XT or CT MAX



Application 2

Optional shopping list

Optional shopping list

You can replace Ekip UP, M2M and main incoming switch with these products

Ekip UP Protect+

Ekip UP Protect+ has, in addition to Ekip UP Protect generator protections, adaptive and overcurrent directional ones for power distribution grids. Using Ekip Protect+ is possible to get digital selectivity with Ekip Link proprietary bus or IEC61850 protocol, plus distinguish restricted/unrestricted earth fault. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.



Ekip UP Control+

Ekip UP Control+ is the top version of the Ekip UP family. It completes the Ekip Protect+ with control features, making it a true Micro grid controller. Ekip UP Control+ is ready for "all-in-one" software platform to achieve every target in power distribution and automation, for example controlling switch disconnectors for peak shaving or fast load shedding. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks to ensure protections or other programmable logics.



M2M

M2M Ethernet (Modbus TCP/IP)



Ekip Com Modbus TCP/IP

For Ekip Up, it enables communication with M2M Ethernet



Ekip Signaling 3T

For Ekip UP temperature monitoring module to enable logic programming. Analogic input is available for other metering info.



Ethernet Switch

For Modbus TCP/IP (Ethernet networks) to connect the M2M Ethernet devices to Ekip UP

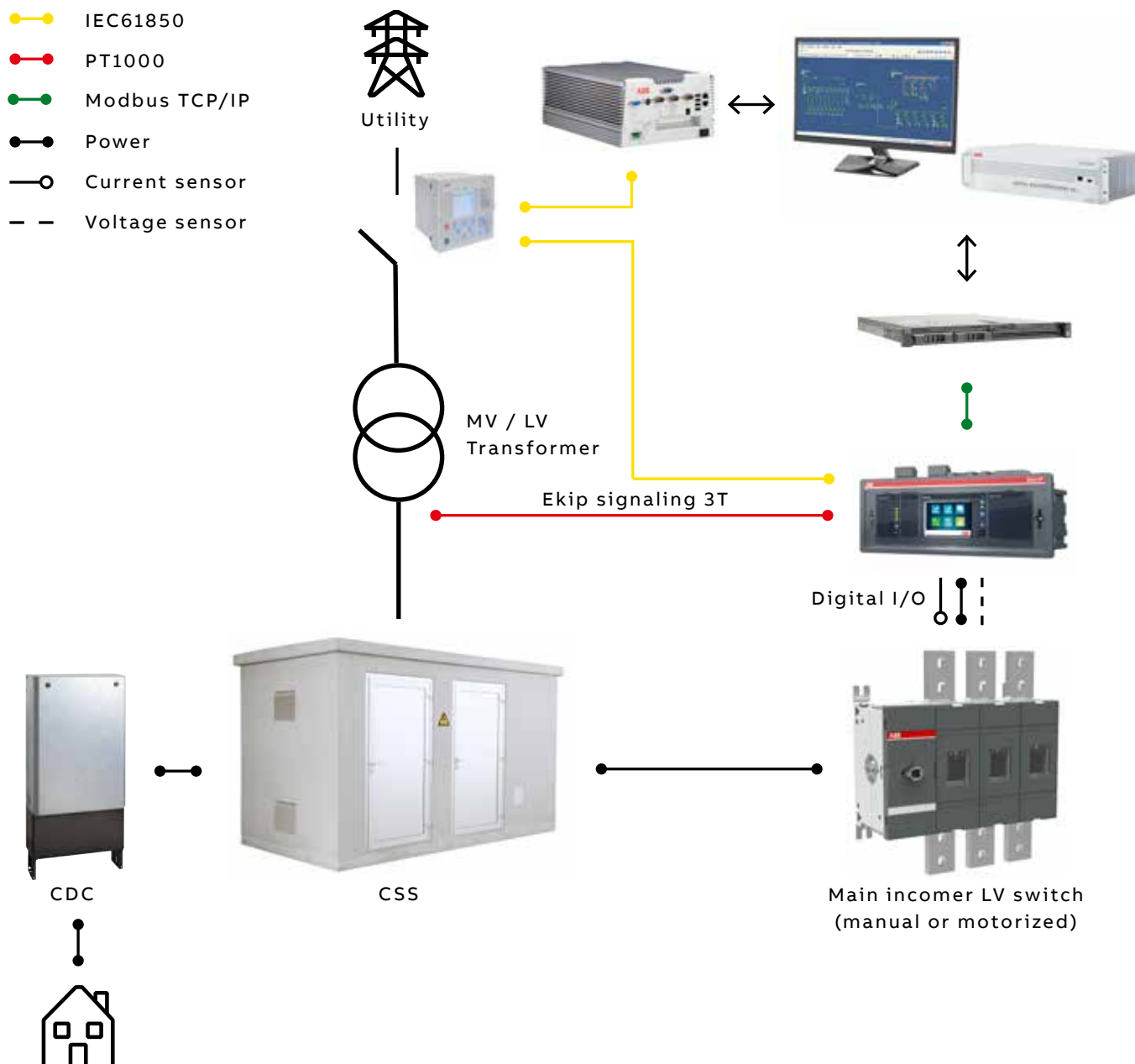


Compact secondary substation

Applications

A compact secondary substation (CSS) contains medium voltage (MV) switchgear, distribution transformers, low voltage (LV) switchboards, connections and auxiliary equipment to supply low voltage energy from medium voltage systems. These substations are typically installed in locations accessible to the public, ensuring protection for all people according to specified service conditions. This section focuses on control of energy consumption and monitoring of the main incomer switch inside the CSS.





A CSS contains a main incomer switch, which can be an OT switch-disconnector. If the main incoming switch-disconnector is equipped with a motor, the Ekip UP 4K Signaling module and a digital I/O signal can be used to control the motor in case a fault occurs. With current transformers installed to the main incomer, Ekip UP is able to measure the current, voltage, power and power quality values as well as logging and analyzing faults.

With the help of Ekip Signaling 3T, cartridge temperatures and external sensor information can be managed in a SCADA system for performance and energy efficiency monitoring.

A wireless controller ARC600 or a remote terminal unit RTU520 are the usual devices in the medium voltage side that connects the Ekip UP to SCADA system. A secure connection is typically established via M2M Gateway unit. By using the Modbus TCP/IP communication protocol you can exchange data between Ekip UP,- and the Wireless controller to communicate with the SCADA -server at high data speeds such as 100 Mbit/s. Additionally, the Ekip Com IEC61850 module enables Ekip UP to communicate easily with a MV relay, for example REF615. The MV relay REF615 is connected to substation automation and data management unit COM600, that functions as a gateway to SCADA.

Shopping list

Ekip UP Monitor

Ekip UP Monitor is the perfect solution for comprehensive plant energy metering, full connectivity for integration in every supervision system, direct connectivity with MV relays, power grid hub for energy management platform to make every switchgear smart.

**Type A/B/C current sensors**

For the main incoming LV switch linked to Ekip UP. The current sensors based on Rogowski technology:

- Type A closed sensors with junction copper (In max 4000 A)
- Type B closed sensors (In max 1600 A)
- Type C open sensors (In max 4000 A)



Type A



Type B



Type C

Ekip Supply

For Ekip Up to enable the different Ekip modules.

**Ekip Com Modbus TCP/IP**

For Ekip Up to enable communication with SCADA-server.

**Ekip Signaling 3T**

Temperature monitoring module to enable logic programming. Analogic input is available for other metering info.

**Manual switch disconnecter / switch fuse**

Main incoming LV switch. Used when there is no need to command the LV main incoming switch to open or close.



Optional shopping list

You can replace Ekip UP and main incoming switch with these products

Ekip UP Protect

Used together with a motorized LV main incoming switch, when opening and closing command is needed. Enables protection based on current, voltage, frequency and power as a basic protective relay for power feeders. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.

**Ekip UP Protect+**

Used together with a motorized LV main incoming switch, when opening and closing command is needed. Ekip UP Protect+ has in addition to Ekip UP Protect generator protections, adaptive and over-current directional ones for power distribution grids. Using Ekip Protect+ is possible to get digital selectivity with proprietary bus, plus distinguish restricted/unrestricted earth fault. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.

**Ekip UP Control+**

Used together with motorized LV main incoming switch, when opening and closing command is needed. Ekip UP Control+ is the top version of the Ekip UP family. It completes the Ekip Protect+ with control features, making it a true Micro grid controller. Ekip UP Control+ is ready for "all-in-one" software platform so to achieve every target in power distribution and automation. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.

**Motorized Switch Disconnecter**

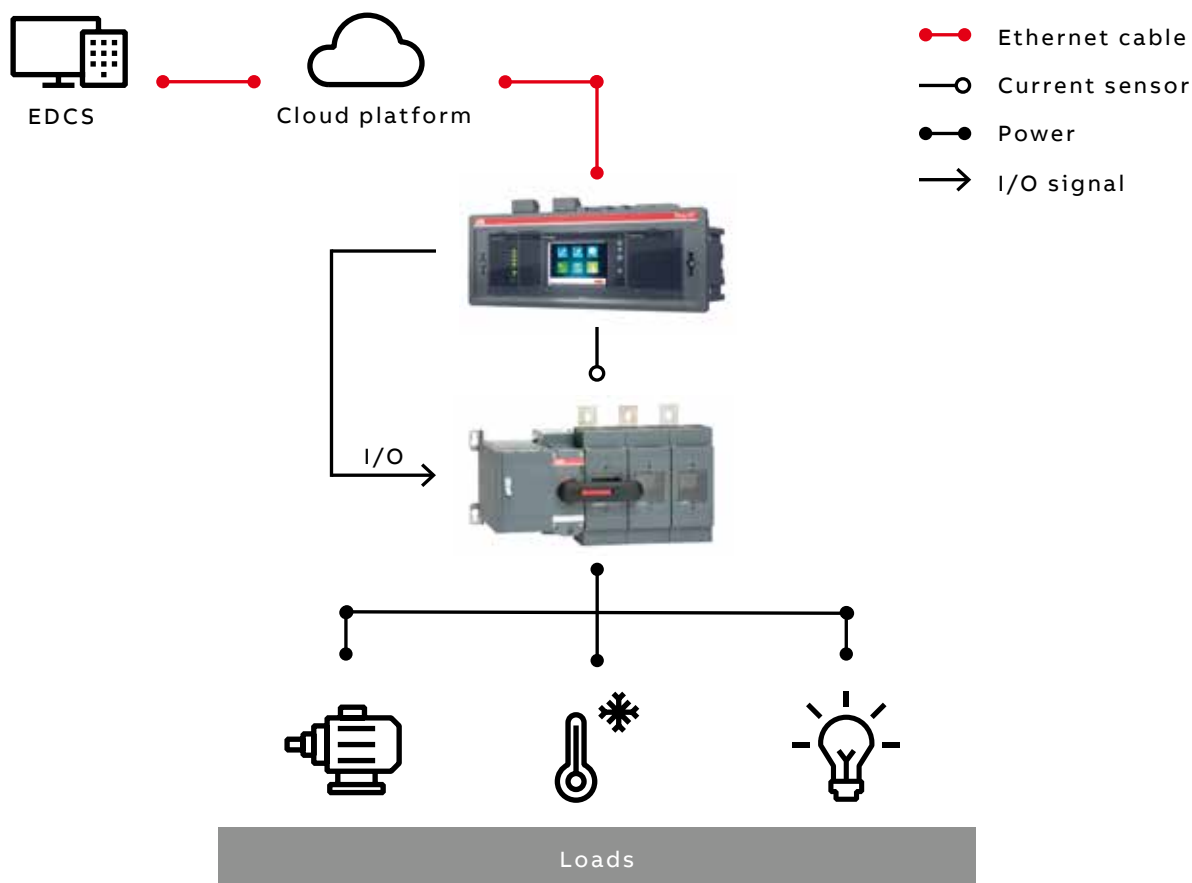
Main incoming LV switch. Used with certain Ekip UP types, when opening and closing command is needed. Ekip UP types that support the opening and closing command are Ekip UP Protect, Protect+, Control+.



Fuse saver

Applications

A motorized OS switch fuse (OSM) can be used as a “fuse saver” thanks to Ekip UP, which is able to control the motor of the OSM on/off with Ekip 4K Signaling module with digital I/O –signal. In overcurrent conditions Ekip UP sends a signal to the motor, to operate switching device and disconnect the load. In this way, Ekip UP is also able to safeguard the fuse that protects against overloads. This feature is especially crucial and beneficial in applications where “Ultra rapid” semiconductor fuses are used, which tend to be costly. In order to achieve the cloud connectivity Ekip UP uses Ekip Com Hub cartridge module to enable the direct communication to ABB Ability™ EDCS.



Shopping list

Ekip UP Protect

Together with a motorized LV main incoming switch, it can be used for opening and closing command. Enables protection based on current, voltage, frequency and power as a basic protective relay for power feeders. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.

**Type A/B/C current sensors**

For the main incoming LV switch linked to Ekip UP. The current sensors are based on Rogowski technology:

- Type A closed sensors with junction copper (In max 4000 A)
- Type B closed sensors (In max 1600 A)
- Type C open sensors (In max 4000 A)



Type A



Type B



Type C

Ekip Supply

For Ekip Up to enable the different Ekip modules

**Ekip Com Hub**

For Ekip Up, to enable cloud connectivity to ABB Ability™ EDCS

**Motorized Switch Disconnecter Fuse (OSM)**

LV switch for short-circuit protection. Used with certain Ekip UP types, when opening and closing command is needed. Ekip UP types that support the opening and closing command are Ekip UP Protect, Protect+, Control+.



Optional shopping list

You can replace Ekip UP with these products

Ekip UP Protect+

Together with motorized LV main incoming switch can be used for opening and closing command. Ekip UP Protect+ has in addition to Ekip UP Protect generator protections, adaptive and overcurrent directional ones for power distribution grids. By using Ekip Protect+ it is possible to get digital selectivity with proprietary bus, plus distinguish restricted/unrestricted earth fault. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.

**Ekip UP Control+**

Together with motorized LV main incoming switch can be used for opening and closing command. Ekip UP Control+ is the top version of the Ekip UP family. It completes the Ekip Protect+ with control features, making it really a Micro grid controller. Ekip UP Control+ is ready for "all-in-one" software platform to achieve every target in power distribution and automation. The I/O contacts enable opening and closing commands of switching devices as well as status feedbacks.



Product catalogues



Emax 2
1SDC200023D0208



Ekip UP
1SDC001051D0201



M2M
9AKK107046A0430



SlimLine XR
1SEC311001D0201



OT switch disconnectors
1SCC301020C0201



OS switch fuses
1SCC311013C0201



For your notes

Additional information

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ABB

Protection and connection

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ABB Ability™ 18-07, 1SCC011013C0201

