

MOLDED CASE CIRCUIT BREAKERS

# SACE Tmax<sup>®</sup> XT

Break new ground

UL and CSA standards for the NEMA market



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**The SACE Tmax XT molded case circuit breaker (MCCB) range ensures extreme performance and protection features up to 1200 amps. Tmax XT MCCBs are designed to maximize ease of use, integration and connectivity, and built to deliver safety, reliability and quality.**

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# SACE Tmax XT

Break new ground

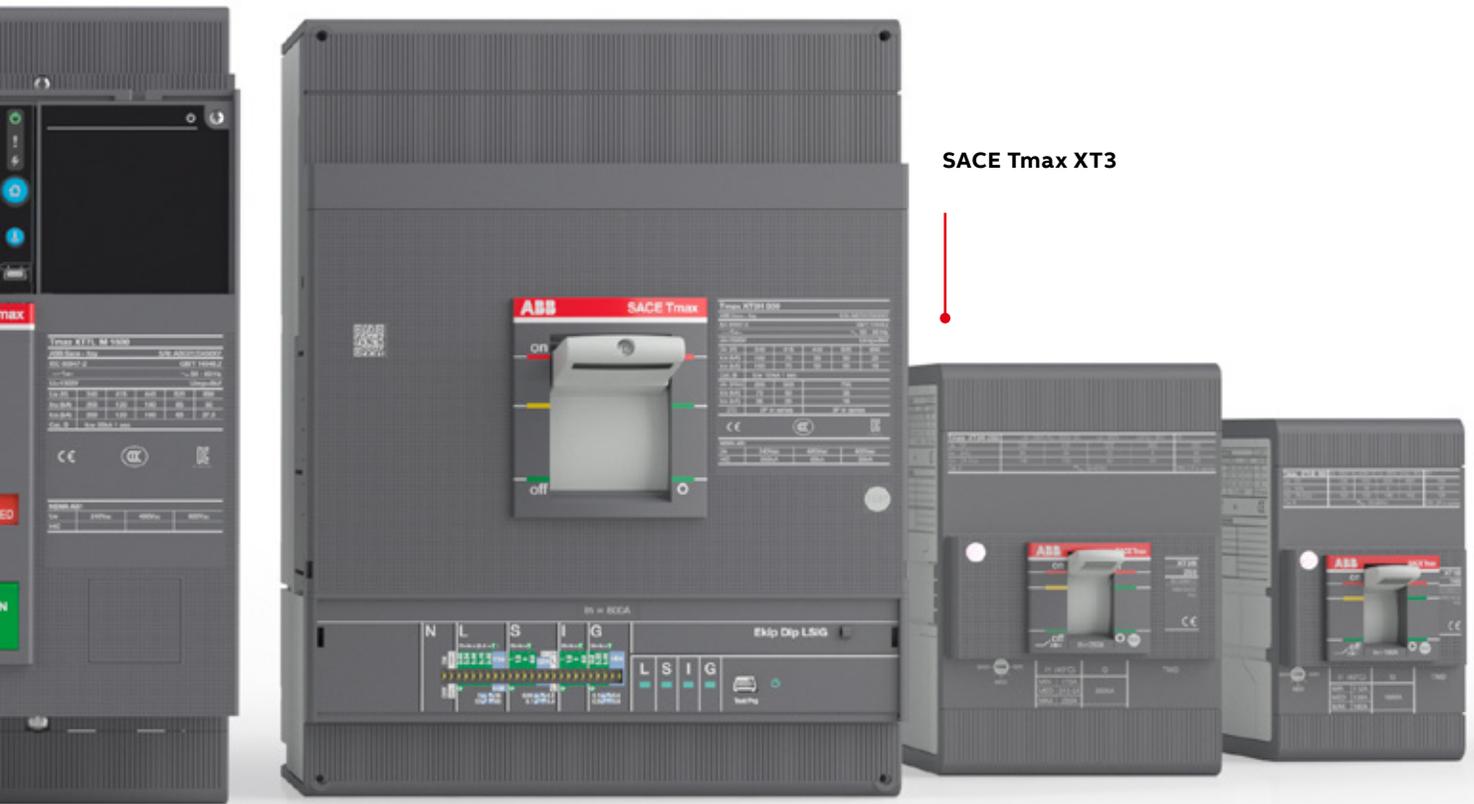
SACE Tmax XT4

SACE Tmax XT7



SACE Tmax XT2

SACE Tmax XT5



SACE Tmax XT3

SACE Tmax XT6

SACE Tmax XT1

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# Added value each step of the way

## There's more to the SACE Tmax XT than circuit breaking

A new generation of innovative molded case circuit breakers, designed to save you both money and time

There's a lot more to the SACE Tmax XT than meets the eye, and the benefits for your business are significant. To start with, everything you need is self-contained within the breaker, requiring no external relays or other devices to purchase, install or wire. Second, the Tmax XT product range includes a wide array of options and accessories. An online configurator makes it easy to select and order exactly what you need and

skip what you don't. Then there's installation. Tmax XT MCCBs install in up to 40% less time than traditional circuit breakers, and you can update their electronic trip units in the field in 5 minutes. And finally, Tmax XT provides plug-and-play communication that allows you to connect to the cloud and access 30% more information. All these advantages add up to deliver substantial savings in time and money to your business.



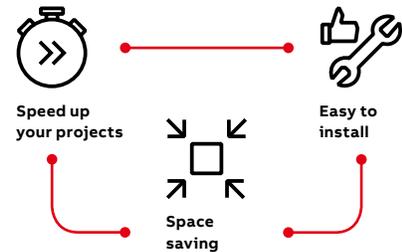
**All-in-one**

Everything you need is in the breaker. With Tmax XT, there are no external relays, gateways or other items to order, install or wire, saving significant time and money.



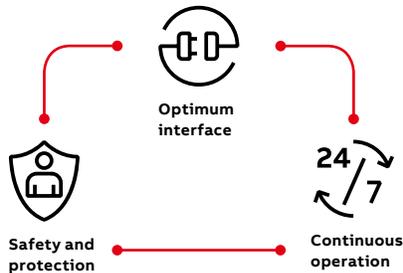
**Select what you want, pay for what you need**

With the ABB configurator and wide selection of products and accessories, it's easy to customize the breakers to exactly what you need without adding the complexity of features you don't want.



**Easy installation**

Tmax XT circuit breakers are easy to install and upgrade in the field. A complete installation takes up to 40% less time, and the electronic trip unit features can be updated in just 5 minutes.



**Easy interaction through connectivity**

Tmax XT offers plug-and-play communication to simplify installation and provide availability of 30% more information to the user. This is driven by the ability to connect to the cloud in only 10 minutes, via Bluetooth® technology, QR codes for easy access to breaker information and colored touch screens for simple, intuitive interaction.

Bluetooth is a registered trademark of Bluetooth SIG, Inc.



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EASE OF USE AND INSTALLATION

Tmax XT uses cutting-edge digital technology to set a new standard for electrical installations. Easy selection, harmonized accessories and intuitive design pave the way for smart manufacturing of panels and fast upgrades — even for the most critical projects.





# Break new ground

## Key features of an outstanding product

### Cloud-connected

Being connected is a key feature of today's technology, and SACE Tmax XT circuit breakers offer more than just standalone protection. Being considered key elements of an electrical distribution system, Tmax XT circuit breakers give you the ability to monitor and manage a wealth of information, easily, wherever you are. So even when on the road, anytime of the day or night, the power of full-access flexibility is in your hands.

Being able to monitor everything while being off-site provides a genuine feeling of being in control at all times.

### Tailor-made solutions

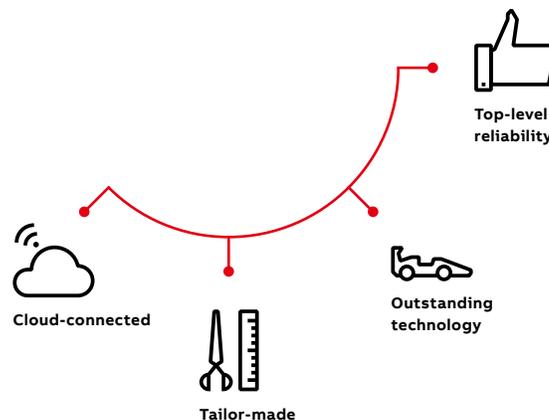
Just because your project is complex does not mean your circuit breaker setup has to be. All frames from XT1 to XT7 provide a common product experience that is backed up by a comprehensive range of accessories with intuitive interfaces and ergonomic design. With maximum flexibility for every application, SACE Tmax XT offers you tailor-made solutions — from XT1/XT3/XT6 with thermal-magnetic trip units for an affordable solution to basic operation, or XT2/XT4/XT5/XT7 with Ekip hi-touch electronic trip units for demanding communication applications — and sets the standards for electrical installations.

### Outstanding technology

Flexibility is nothing without performance, and SACE Tmax XT is able to deal with the most extreme breaking capacities, regardless of operating voltage, application and environmental conditions. This, combined with the most precise electronic trip units in the smallest of frames, ensures continuity of service and equipment protection at all times.

### Top-level quality

Almost a century of research and experience results in highly reliable, top-level products that are ready to face all future challenges. Products like SACE Tmax XT set standards for edge technologies. Safety, product quality and reliability under pressure are fundamental to all ABB products, and SACE Tmax XT is no different.



# Choosing the right circuit breaker has never been so easy

From basic to critical, you choose what you need.

The world of circuit breakers is a complex one, yet choosing the right device for your individual needs has never been simpler, thanks to SACE Tmax XT. Maybe you're looking for a basic protection device for a standard distribution plant. Or perhaps you need something more complex, such as a device that integrates protection, automation, measuring and communication into a cloud-based supervision system. Whatever you're looking for, SACE Tmax XT MCCBs' wealth of customization possibilities and range of possible solutions puts the power of circuit breaking firmly in your hands.

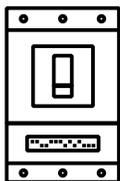
### SACE Tmax XT1, XT3 and XT6 — Basic functionality for commercial and light industrial applications

For basic circuit breaker protection, choose the Tmax XT1, XT3 and XT6. The XT1 and XT3 support applications of up to 480 V AC, 225 A, while the XT6 extends to 600 V AC, 800 A. These models come with a thermal-magnetic trip — with a basic electronic trip unit also available on the XT6 unit — and provide the perfect protection for commercial and light industrial applications.

### SACE Tmax XT2, XT4, XT5 and XT7 — Advanced functionality for heavy-duty industrial applications

Designed for applications such as data centers, the Tmax XT2, XT4, XT5 and XT7 offer you a choice of thermal-magnetic or electronic trip units. Tmax XT electronic trip units come in a full range of user interfaces from a standard DIP switch to an Ekip hi-touch full-color touch screen. These trip units can be connected to the cloud for remote monitoring by smartphone or tablet using ABB Ability® electrical distribution control software, whenever and wherever you like.

## Possible combinations within the range



|                             |  |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | Tmax XT1                                                                            | Tmax XT2                                                                            | Tmax XT3                                                                            | Tmax XT4                                                                              | Tmax XT5                                                                              | Tmax XT6                                                                              | Tmax XT7                                                                              |
| Heavy-duty                  |                                                                                     | •                                                                                   |                                                                                     | •                                                                                     | •                                                                                     |                                                                                       | •                                                                                     |
| Basic functionality         | •                                                                                   | •                                                                                   | •                                                                                   | •                                                                                     | •                                                                                     | •                                                                                     | •                                                                                     |
| Thermal-magnetic trip units | •                                                                                   | •                                                                                   | •                                                                                   | •                                                                                     | •                                                                                     | •                                                                                     |                                                                                       |
| Electronic trip units       |                                                                                     | •                                                                                   |                                                                                     | •                                                                                     | •                                                                                     | •                                                                                     | •                                                                                     |

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## Accessories

# Expand the capabilities of the SACE Tmax XT range

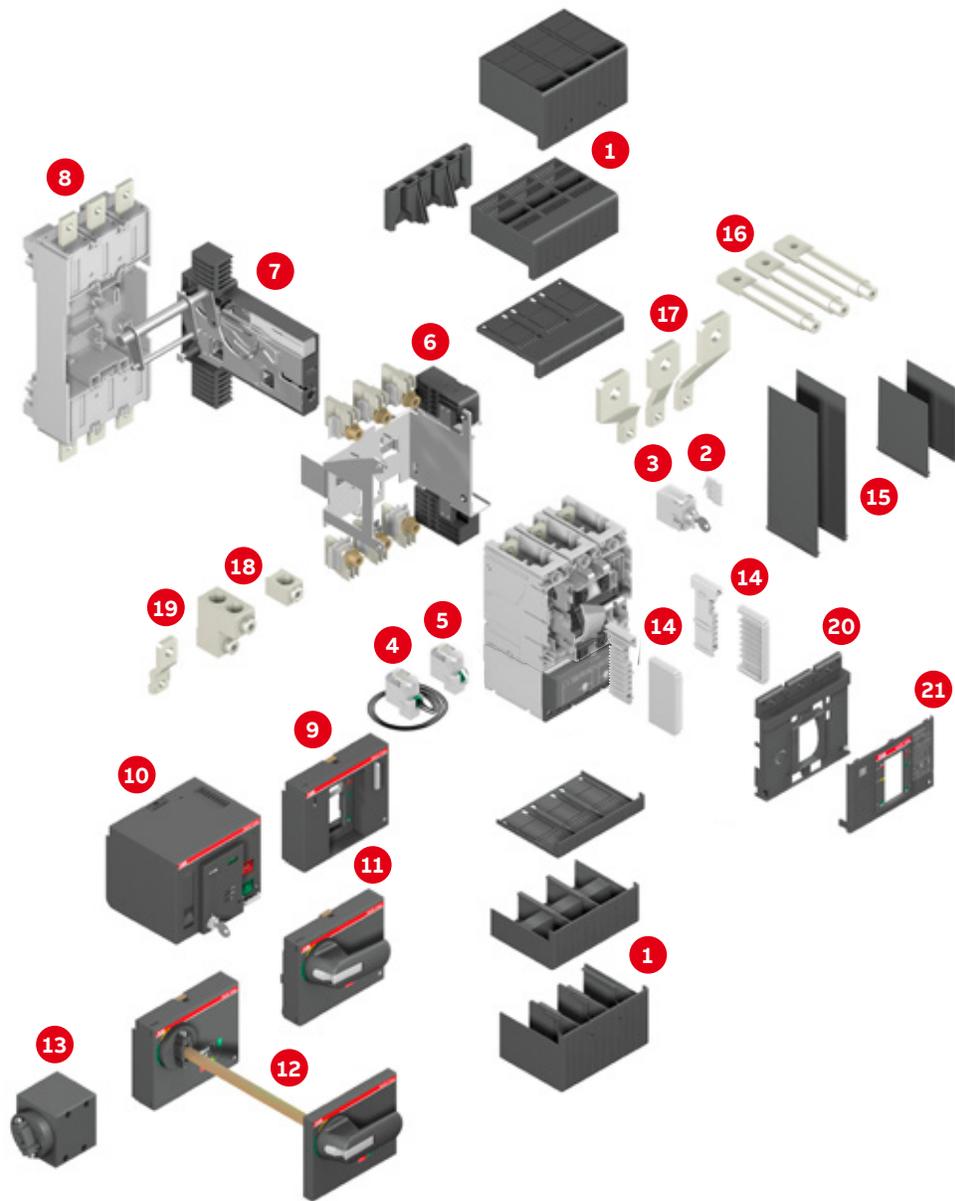
Integrating circuit breakers into any installation requires different levels of optimization. Whether physical, electrical, operational or safety-focused, accessories take SACE Tmax XT to the next level.

### Accessories

A wide range of connections are available to match the most common distribution systems. Auxiliary contacts can provide precise information regarding breaker status and plant conditions, maximizing operator awareness and the overall accuracy of a supervision system. In addition, different types of coils and motor operator versions, designed

to operate with the most common voltage sources and reduced power consumption, enable the possibility to control all installations remotely. A maintenance module, double-insulated and positive operation design are just a few examples of the care taken to safeguard equipment and operators alike.





**Various accessories are also available:**

- |                                                         |                                                   |
|---------------------------------------------------------|---------------------------------------------------|
| 1. Terminal covers                                      | 11. Direct rotary handle – RHD                    |
| 2. Auxiliary contacts                                   | 12. Extended rotary handle – RHE                  |
| 3. Key lock                                             | 13. Conversion kit RHE > RHS                      |
| 4. Service releases                                     | 14. Cable rack                                    |
| 5. Communication module                                 | 15. Phase separators                              |
| 6. Conversion kit for plug-in/<br>withdrawable versions | 16. Rear-oriented terminals – R                   |
| 7. Guide of fixed part in the<br>withdrawable version   | 17. Front extended spread terminals – ES          |
| 8. Fixed part – FP                                      | 18. Front terminals for copper-aluminum – FC CuAl |
| 9. Front for lever operating mechanism – FLD            | 19. Front extended terminals – EF                 |
| 10. Stored energy motor operator – MOE                  | 20. Front                                         |
|                                                         | 21. Polish plate                                  |

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PERFORMANCE AND PROTECTION

Continuity of service and equipment protection – SACE Tmax XT sets a new standard in extreme breaking capacity. Sharing the same logic, interfaces and features regardless of operating voltage and environmental conditions. Embedding the most advanced protection into the smallest of frames.





# The SACE Tmax XT range at a glance

The world of breaking capability in your hands. According to UL 489 and CSA C22.2 Standards

SACE Tmax XT takes circuit breaking to the next level. Designed to perform at extremely high levels, simple to install and able to provide higher levels of safety, there's a frame to meet each of your requirements. From a basic solution for commercial and light industrial applications to advanced, heavy-duty applications with cloud connectivity, SACE Tmax XT has you covered: securely, professionally and reliably.



**SACE Tmax XT1**  
"The Founder"

Small, reliable, versatile. Your dependable partner for all standard applications.

**At a glance:**

- 125 A frame available up to 480 V Delta UL
- Thermal-magnetic, MCS and MCP trip units
- Max. interrupt rating of 65 kA at 480 V
- Offers savings versus 600 V-rated systems in most distribution applications



**SACE Tmax XT2**  
"The Aspirer"

Compact yet powerful. Capable of the most complex tasks and assignments

**At a glance:**

- 125 A frame available up to 600 V UL
- Thermal-magnetic, MCS, MCP, basic and advanced electronic trip units
- Max. interrupt rating of 200 kA at 480 V, 42 kA at 600 V
- Electronic trip units, high interrupt ratings, communications and embedded logic



**SACE Tmax XT3**  
“The Workhorse”

Small and experienced. For standard applications that require reliability.

**At a glance:**

- 225 A frame available up to 480 V Delta UL
- Thermal-magnetic, MCS and MCP trip units
- Max. interrupt rating of 35 kA at 480 V
- Reliably covers 480 V applications
- Rated for 25,000 mechanical operations



**SACE Tmax XT4**  
“The Entrepreneur”

Capable of supporting both simple and extremely complex operations.

**At a glance:**

- 250 A frame available up to 600 V UL
- Thermal-magnetic, MCS, MCP, basic and advanced electronic trip units
- Max. interrupt rating of 200 kA at 480 V, 100 kA at 600 V
- Advanced electronic trip units offer embedded Bluetooth communication for interaction without direct contact

## The SACE Tmax XT range at a glance

The world of breaking capability in your hands. According to UL 489 and CSA C22.2 Standards



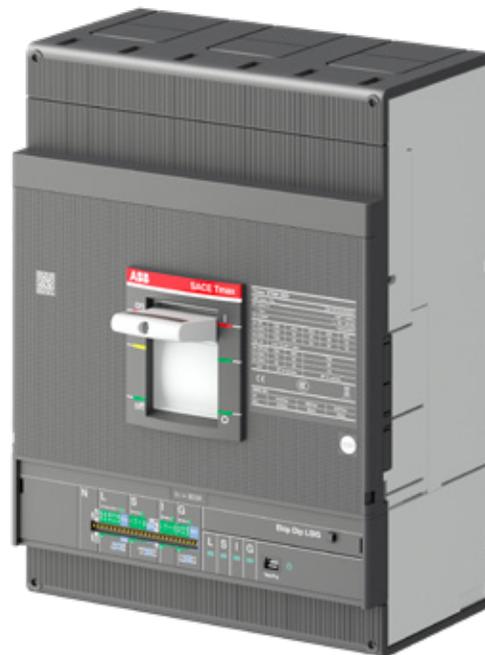
### SACE Tmax XT5

“The Gamechanger”

Compact, powerful and flexible. Shows the world what a circuit breaker of the future can do.

#### At a glance:

- 600 A frame available up to 600 V UL
- Thermal-magnetic, MCS, MCP, basic and advanced electronic trip units
- Max. interrupt rating of 200 kA at 480 V, 100 kA at 600 V
- Advanced electronic trip units are future-ready with the ability to download additional measurements and logic in the field from the ABB Marketplace™



### SACE Tmax XT6

“The Carpenter”

Built to last. Completes all entrusted assignments in an efficient manner.

#### At a glance:

- 800 A frame available up to 600 V UL
- Thermal-magnetic, MCS, MCP and basic electronic trip units
- Max. interrupt rating of 65 kA at 480 V, 35 kA at 600 V
- Ideal for covering simple distribution economically
- Snap-in accessories make field modifications easy



**SACE Tmax XT7**  
“The Superhero”

The ultimate choice. Deals with heavy-duty demands effortlessly.

**At a glance:**

- 1200 A frame available up to 600 V UL
- MCS, MCP, basic and advanced electronic trip units
- Max. interrupt rating of 100 kA at 480 V, 65 kA at 600 V
- A powerful package capable of monitoring and controlling distribution



**SACE Tmax XT7 M**  
“The Motorized Superhero”

The ultimate choice with stored energy mechanism and optional motor. Deals with heavy-duty demands effortlessly.

**At a glance:**

- 1200 A frame available up to 600 V UL
- MCS, MCP, basic and advanced electronic trip units
- Max. interrupt rating of 100 kA at 480 V, 65 kA at 600 V
- Integrated stored energy mechanism for easier operation
- Optional spring-charging motor allows for effortless power control

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DATA AND CONNECTIVITY

Plant management of the future —  
SACE Tmax XT sets a new standard in modern  
plant and energy management. Access,  
monitor and control information remotely,  
anywhere, at any time. Improving efficiency  
and saving energy.





# Electronic trip units

## Ekip Dip and Ekip Touch

### The network under control

When it comes to accurate protection of the network, you can't go wrong with Ekip Dip and Touch technology.

#### Trip unit range

The protection units available for the SACE Tmax XT range are organized in three layers, characterized by increasing performance, user interface, information sets and integration functions.

Each layer includes several trip unit versions, designed to match specific application needs, such as distribution, generator protection and motor protection.

|       | Applications |    |       |           | Advanced functionalities |          |               |                          |
|-------|--------------|----|-------|-----------|--------------------------|----------|---------------|--------------------------|
|       | Distribution |    | Motor | Generator | Zone selectivity         | Metering | Communication | ABB Ability Marketplace™ |
|       | DC           | AC |       |           |                          |          |               |                          |
| Touch |              | •  | •     | •         | •                        | •        | •             | •                        |
| Dip   |              | •  | •     | •         |                          |          |               |                          |
| TM    | •            | •  | •     | •         |                          |          |               |                          |

01 All the tools needed to set up a competent and effective energy management strategy. 30% more information about a running system to empower ABB Ability.

#### Thermal-magnetic trip units (TM)

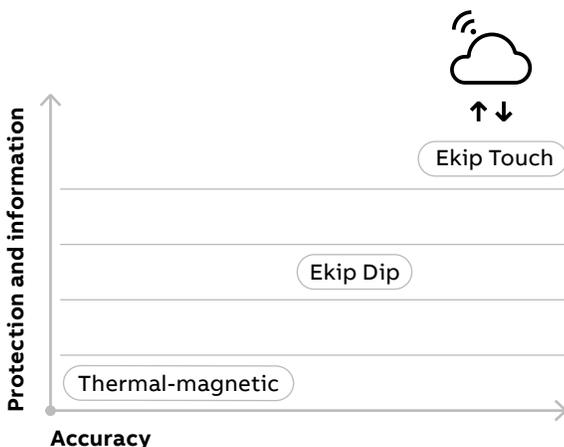
Thermal-magnetic trip units are intended for the protection of AC and DC networks. They are a solution for basic protection such as overloads and short circuits.

#### Ekip Touch trip units

Ekip Touch trip units offer state-of-the-art technology for AC network protection. These trip units integrate a high number of protection and automation functionalities, performed with best-in-class accuracy. Measurement and supervision data can be transmitted both on the local communication network (the most popular communication protocols are available) or directly over the internet. Configuration of the trip unit is extremely user-friendly, particularly on the models for which a color touch-screen display is available. And as operational requirements evolve, customers can download new functions from the ABB MarketPlace, choosing among more than 50 different protection, metering and automation functionalities.

#### Ekip Dip trip units

Ekip Dip trip units represent the first level of electronic trip unit and are used to protect AC networks. Compared to thermal-magnetic trip units, they can provide increased accuracy, a wider regulation range, delayed short circuit protection, individual trip information and test capability.





**Metering** ⌵

Q OPEN - SACE Tmax R15K 630

Overview

|                                    |                                     |
|------------------------------------|-------------------------------------|
| Current RMS<br><b>630 A</b>        | Voltage<br><b>415 V</b>             |
| Active Powers<br><b>445 KW</b>     | Reactive Powers<br><b>-2.1 KVAR</b> |
| Apparent Powers<br><b>-1.3 KVA</b> | Power Factor<br><b>0.9</b>          |

Measures



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