

CATALOG

# RELIAGEAR® NEXT UL 67 LOW-VOLTAGE DISTRIBUTION POWER PANELBOARDS

Power, simplified. Confidence, amplified.
ReliaGear® neXT delivers speed, safety,
and control you can feel.

ENGINEERED
TO OUTRUN

ReliaGear® neXT is more than a power panel — it's built-in peace of mind, profit, and progress. From data centers to hospitals, ReliaGear neXT delivers power, control, efficiency, and ABB's future-ready innovation.

# TABLE OF CONTENTS


**01. General characteristics** 4

**02. Panelboard details** 16

**03. Molded case circuit breakers** 34

**04. Panelboard selection guide/ numbering system** 56

# 01

General characteristics

# General characteristics




| General characteristics | |
|---|---|
| Features and benefits | 06 |
| Applications | 12 |
| Standards and certifications | 14 |

# INSTALL COMPONENTS IN SECONDS. INSTILL CONFIDENCE FOR A LIFETIME.



**EASY TO INSTALL**
**Modular, flexible, fast.**
The ReliaGear® neXT features a field-reversible bus stack that can be flipped 180 degrees to accommodate top or bottom feeds without extra parts. Ground and neutral locations are also field-swappable. These advantages plus plug-in, single-tool simplicity enable easy, fast component installation or replacement in the field. For even greater flexibility, circuit breakers can be installed anywhere on the bus stack.



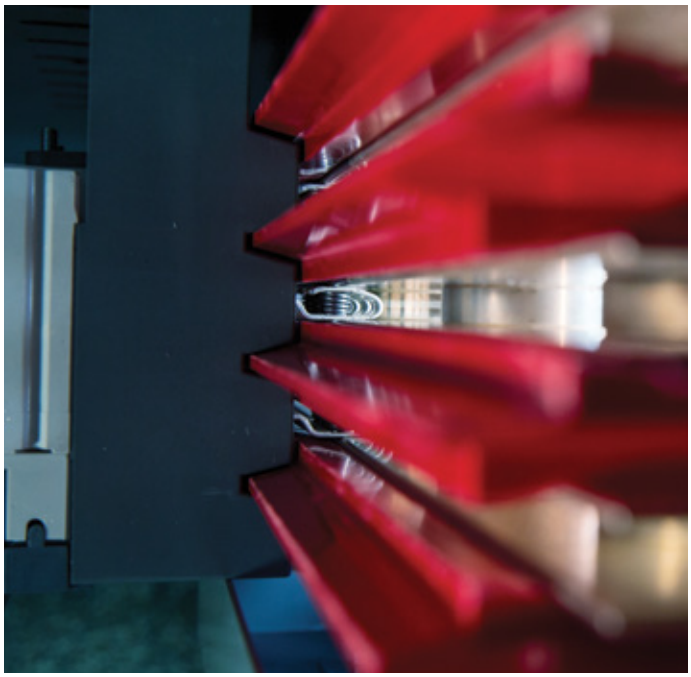

**OUTSTANDING RELIABILITY**
**Dependable connections.**
Spring-loaded circuit breaker plug-in connectors with increased plating thickness for durability withstand repeated insertion and removal. Levering features further reduce installation and removal force. This plug-in connector design uses the magnetic forces generated by a short circuit to help make the connection even tighter and more reliable. There are fewer bolted joints that can become loose or require torque checks.



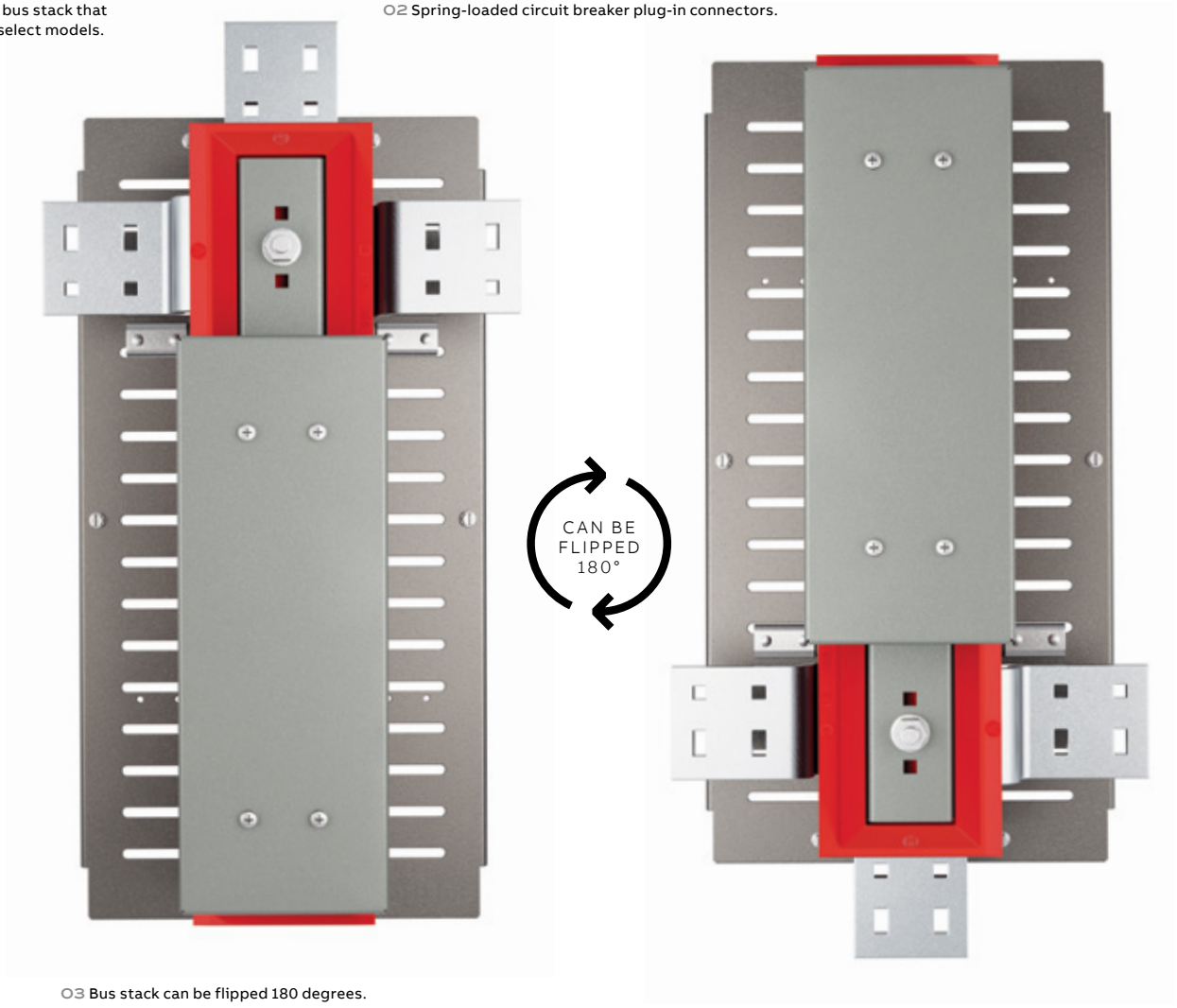
**ENHANCED SAFETY FEATURES**
**The next level of protection.**
ABB is passionate about safety. From the largest piece of arc-resistant switchgear down to the smallest arc fault and ground fault sensing circuit breaker, ABB is always designing ways to help keep personnel out of harm's way. ReliaGear neXT panelboard and switch-board designs come with an improved finger-safe bus stack that meets IP20 standards. Thanks to the breaker-integrated Bluetooth® technology, it is also possible to set parameters and check measurements directly from your smartphone from an arc-free zone.



01 Improved finger-safe bus stack that meets IP20 standards in select models.



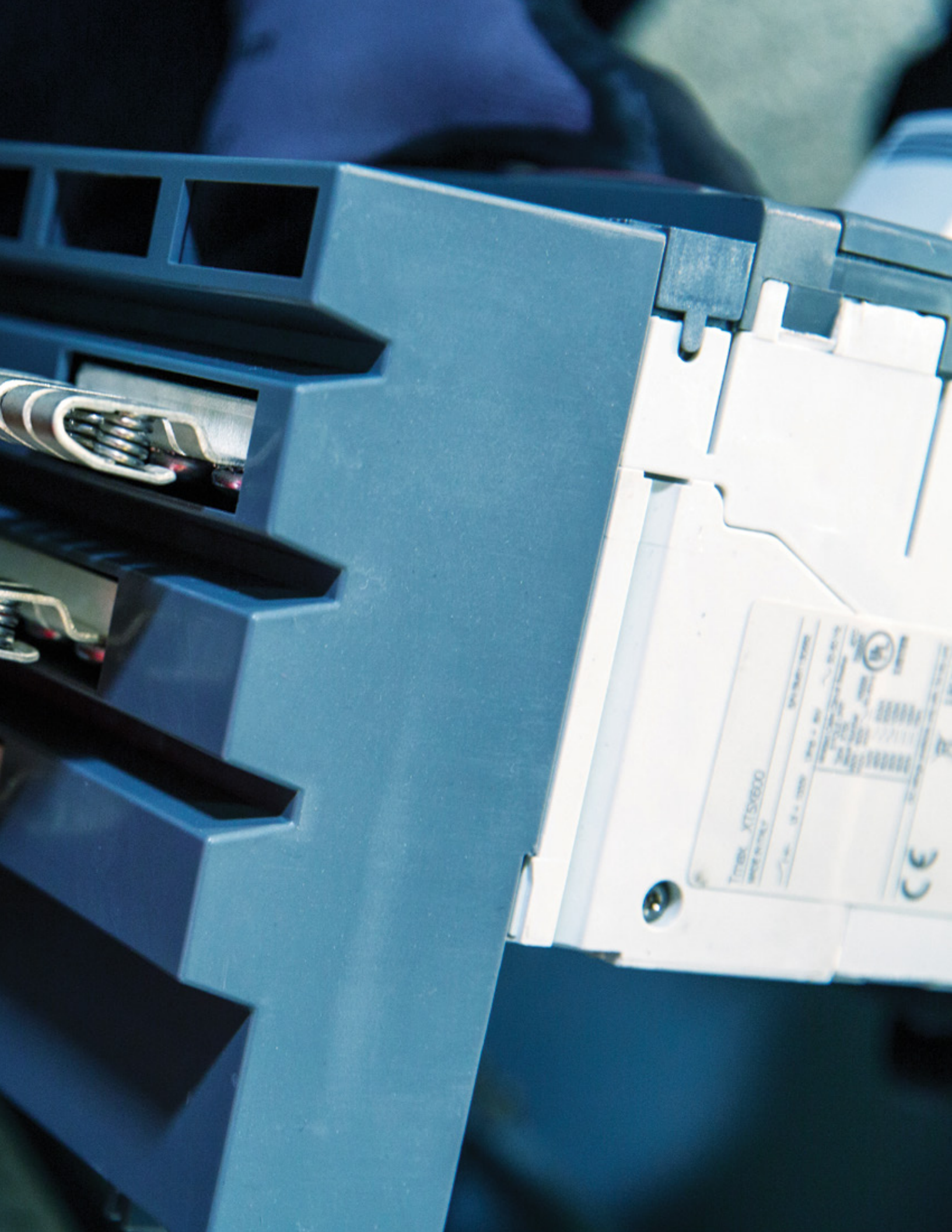
02 Spring-loaded circuit breaker plug-in connectors.




03 Bus stack can be flipped 180 degrees.



Tmax® XT XT plug-in circuit breakers feature spring-loaded primary disconnects, enabling fast installation, easy replacement, and reliable connection to maximize your uptime.



# EVEN MORE ADVANTAGES





**REDUCED COSTS**
**Speed up your project.**
Reducing labor and saving time is crucial for electrical contractors. In fact, an 8% savings in labor costs for a typical large project can mean 133% more profit for the contractor.* ReliaGear® neXT's intuitive single-person installation enables components to be installed in as few as 20 seconds, dramatically saving skilled-labor costs, reducing downtime and lowering the risk of mistakes.

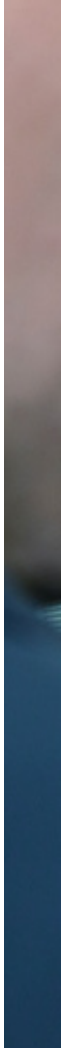
*From "How to Make a Good Estimate Even Better" by Don Kiper, EC&M, 2017.

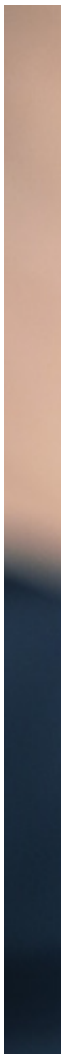


**ADVANCED CONNECTIVITY**
**Link to data analysis in real time.**
With ABB Ability® cloud connectivity, multiple communication options and built-in metering, the Tmax® XT circuit breakers of ReliaGear® neXT put facility managers in control. The extreme precision of the data measured means users have access to accurate information anywhere, anytime, making it easier to monitor resources and identify savings opportunities. The plug-in 24 V power supply module helps unlock this advanced functionality, eliminating the need for external wiring of control power.



**ORDERING AND LOGISTICS**
**Easy to stock.**
With ReliaGear neXT, you have a single catalog number for all circuit breaker installation kits, convenient ordering with the **empower** configurator tool and Merchandised SuperBox options for quick deliveries. Power panels are available unassembled or with factory-assembled interior.








**01** Components can be installed in as little as 20 seconds




**02** Remote access to accurate information anywhere, anytime

# TAKE YOUR PERFORMANCE TO THE NEXT LEVEL



**ReliaGear® neXT — a go-to power panel for professionals looking to gain the competitive edge**

**Contractors**
For contractors, time is money. And traditional bolt-on power panels that require highly skilled labor and take hours to install or modify in-field can cost you big. But now there's ReliaGear neXT. It works harder, so you don't have to.

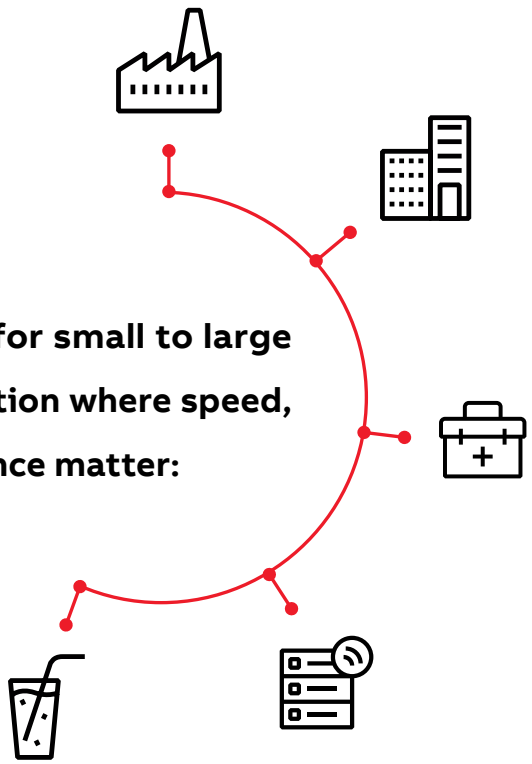
**Distributors**
Smart, optimized, simplified design helps distributors maximize stock inventory. The user-friendly and intuitive **empower** tool minimizes the configuration process time by providing product drawings, bills of materials and technical documentation.

**Consultants and engineers**
ReliaGear neXT adds value to any job, giving consultants the power to influence customer specifications, helping to make life easier, providing safety features for installers and significantly reducing downtime for end users. The broad offering allows ABB to provide the right product for the right application.

**OEMs and panel builders**
Versatility, easy installation and performance make ReliaGear neXT a perfect match for quality panels and any type of equipment.

**Facility managers**
ReliaGear neXT enables fast component installation or replacement, reducing downtime and cost. And its connectivity helps managers monitor resources and identify savings opportunities.

**ReliaGear neXT is ideal for small to large projects and any application where speed, reliability, and performance matter:**



- Industrial complexes
- Commercial buildings
- Residential developments
- Health care facilities
- Data centers
- Food and beverage facilities
- Infrastructure projects
- And more











# GENERAL CHARACTERISTICS



## Standard and certifications

The low-voltage power panelboards and protection devices in this specification are designed and manufactured according to the latest revision of the following standards (unless otherwise noted):

- ANSI/NEMA PB 1, panelboards
- ANSI/NFPA 70, National Electrical Code
- UL 489, molded case circuit breakers
- CSA 22.2 No. 5-13, molded case circuit breakers
- UL 50, enclosures for electrical equipment
- UL 67, panelboards
- UL 98, enclosed and dead front switches
- cUL listing low-voltage modular power panels
- Seismic certification according to ICC-ES AC156
- ABS product type approval certification: 23-2430464-PDA-DUP

## Notes

# 02

Panelboard details

# Panelboard details


| Panelboard details | |
|---|---|
| Introduction | 18 |
| Enclosures | 19 |
| Bus stack | 20 |
| Interior frame | 21 |
| Fronts, gutter doors, blanks and fillers | 22 |
| Door-in-door option | 23 |
| IP20 finger-safe offering | 24 |
| Panelboard configurations | 25 |
| Installation technical data | 26 |
| Accessories | 27–33 |

# PANELBOARD DETAILS

## Introduction



ReliaGear® neXT and its modular, tool-minimalist design cuts installation time and labor costs. IP20 finger-safe bus stacks and Bluetooth® enabled breakers boost safety and enable remote monitoring. Distributors benefit from easy stocking and fast configuration, and facility managers gain real-time analytics.

The ReliaGear neXT power panelboard can be equipped with circuit breakers from 15 A to 1200 A. The maximum short-circuit rating is equal to 200 kAIC at 240 V, 200 kAIC at 480 V or 100 kAIC at 600 V, or the lowest current interruption rating of any device installed, except as noted in the series rating listed with an integral or remote main breaker or fusible switch installed ahead of the power panel. DC ratings are also available. See pages 38 and 48 for more details.



ReliaGear neXT power panelboards can be used on the following system voltages:

- 220 V AC; 3-phase, 3-wire
- 230 V AC; 3-phase, 3-wire
- 240 V AC; 3-phase, 3-wire
- 380 V AC; 3-phase, 3-wire
- 400 V AC; 3-phase, 3-wire
- 415 V AC; 3-phase, 3-wire
- 480 V AC; 3-phase, 3-wire
- 600 V AC; 3-phase, 3-wire
- 208Y/120 V AC; 3-phase, 4-wire
- 220Y/127 V AC; 3-phase, 4-wire
- 230Y/133 V AC; 3-phase, 4-wire
- 380Y/220 V AC; 3-phase, 4-wire
- 400Y/231 V AC; 3-phase, 4-wire
- 415Y/240 V AC; 3-phase, 4-wire
- 480Y/277 V AC; 3-phase, 4-wire
- 600Y/347 V AC; 3-phase, 4-wire
- 240/120 V AC Delta hi-leg; 3-phase, 4-wire
- 110/220 V AC; 1-phase, 3-wire
- 115/230 V AC; 1-phase, 3-wire
- 120/240 V AC; 1-phase, 3-wire
- 125 V DC; 2-wire
- 250 V DC; 2-wire

# Panelboard details

## Enclosures

**Enclosures**

The ReliaGear® neXT panelboard is offered in 12 enclosure size configurations, with three different widths (30", 40", 45") and four different heights (60", 72", 84", 96"). These configurations simplify design and maximize stock inventory. All enclosures are available in surface-mounted design. Each enclosure is NEMA-compliant, code gauge steel. ANSI 61 finish is available for NEMA 1, NEMA 2 and NEMA 3R enclosures. Different enclosure types are available and compliant with the UL 50 standard:

**NEMA 1**

For indoor use to provide a degree of protection to personnel against access to hazardous parts and to provide a degree of protection against ingress of solid foreign objects (falling dirt). Optional drip hood is also available.

Note: NEMA 1 enclosures are unpainted by default. The option for ANSI 61 finish is also available.

**NEMA 2**

For indoor use to provide a degree of protection to personnel against access to hazardous parts, falling dirt and harmful effects on the equipment due to the ingress of water (dripping and light splashing). NEMA 2 enclosure is provided with drip hood and door-in-door.

**NEMA 3R**

For either indoor or outdoor use to provide a degree of protection to personnel against access to hazardous parts, falling dirt and harmful effects on the equipment due to the ingress of water (rain, sleet and snow); and that will be undamaged by the external formation of ice and snow with no damage to the external enclosure.

**NEMA 4/4X**

For either indoor or outdoor use to provide a degree of protection to personnel against access to hazardous parts, falling dirt and windblown dust, and effects on the equipment due to the ingress of water (rain, sleet, snow, splashing water and hose-directed water) and with no damage from the external formation of ice on the enclosure. NEMA 4X is 316 stainless steel and corrosion resistant.

**NEMA 12**

Without knockouts, for indoor use to provide a degree of protection to personnel against access to hazardous parts, falling dirt and circulating dust (lint, fibers and flyings) and to prevent harmful effects on the equipment due to the ingress of water (dripping and light splashing) and to provide a degree of protection against light splashing and consequent seepage of oil and non-corrosive coolants.

Note: For outdoor enclosures (NEMA 3R, NEMA 4/4X and NEMA 12), a padlock provision is provided on the handle of the enclosure. Padlock is not provided.





# Panelboard details

## Bus stack







The bus stack consists of a back pan, busbars assembled one on top of the other and an insulator to protect from live components. Some bus stack configurations are IP20[1] finger-safe, an industry-exclusive and patented feature.

It can be either bottom or top fed. Busbars can be copper or aluminum. Silver-plated copper busbars are available as heat- rated or density-rated (1000 A per square inch); aluminum busbars are available only as heat-rated. Tin-plated busbars also available for applications in harsh environments where hydrogen sulfide is present, such as water treatment facilities.

Both main lug only (MLO) and main circuit breaker (MCB) configurations are available. The main circuit breaker can be either vertically or horizontally mounted. For the main lugs option, an appropriate barrier post kit is needed.

Standard mechanical lugs are available from 250 kcmil up to 750 kcmil. Compression lugs are also offered from 1/0 to 750 kcmil.

Sub-feed (dual main) lug and feed-through lug options are also available to address instances where a panelboard requires more than one enclosure.

Six bus stack ampere ratings are available: 250 A, 400 A, 600 A, 800 A, 1000 A and 1200 A.

The bus stack dimensions are optimized to reach the highest power density and number of circuits. Four different dimensions are available: 16X, 24X, 32X and 40X.

We define X-space as the number of mounting positions available on each bus stack side. One X-space is equal to 1.385". Each circuit-breaker frame and bus-stack-mounted accessory has specific requirements for X-spaces. Each set of lug pads also requires four mounting spaces. Refer to the breaker section for more details.

ReliaGear® neXT features a field-reversible bus stack that can be flipped 180 degrees to accommodate top or bottom feeds without extra parts.

[1] Per IEC Standard 60529

### POSSIBLE COMBINATIONS OF BUS STACK AND ENCLOSURES

| Bus height | 16X | | 24X | | | 32X | | | 40X | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bus type** | **NN** | **BL** | **NN** | **BL** | **BF** | **NN** | **BL** | **BF** | **NN** | **BL** | **BF** |
| **Enclosure height (in.)** | | | | | | | | | | | |
| 60 | • | • | • | | | | | | | | |
| 72 | • | • | • | • | | • | | | | | |
| 84 | | • | • | • | • | • | • | | • | | |
| 96 | | | | • | • | • | • | • | • | • | |

NN: clean bus, no lug pads
BL: 1 set of lug pads
BF: feedthrough, 2 sets of lug pads

### POSSIBLE COMBINATIONS OF BUS STACK AND PLATING TYPE

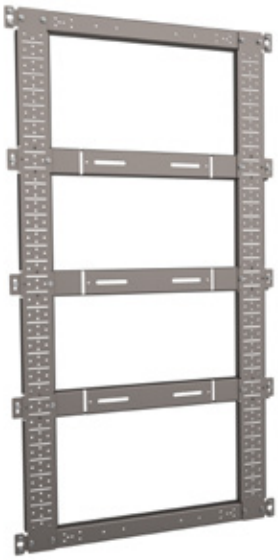
| Bus height | 16X | | | | 24X–32X–40X | | | |
|---|---|---|---|---|---|---|---|---|
| **Bus type** | **1P–Silver** | **1P–Tin** | **3P–Silver** | **3P–Tin** | **1P–Silver** | **1P–Tin** | **3P–Silver** | **3P–Tin** |
| **Bus amperage** | | | | | | | | |
| 250 A | | | • | • | • | • | • | • |
| 400 A | | | • | • | • | • | • | • |
| 600 A | | | • | • | • | • | • | • |
| 800 A | | | • | • | • | • | • | • |
| 1000 A | | | • | | • | | • | |
| 1200 A | | | • | • | • | • | • | • |

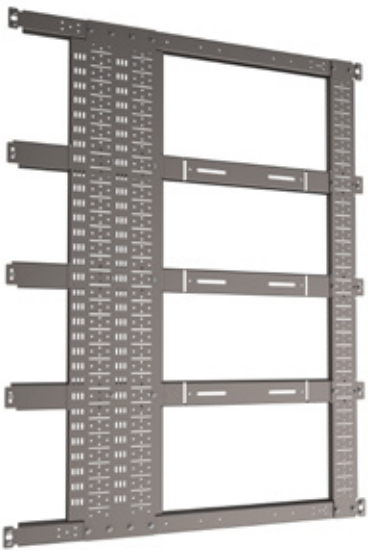
1P–Silver: Single-phase silver plating
1P–Tin: Single-phase tin plating
3P–Silver: Three-phase silver plating
3P–Tin: Three-phase tin plating

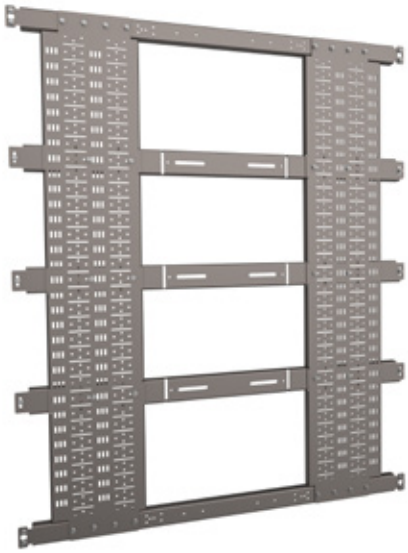
# Panelboard details

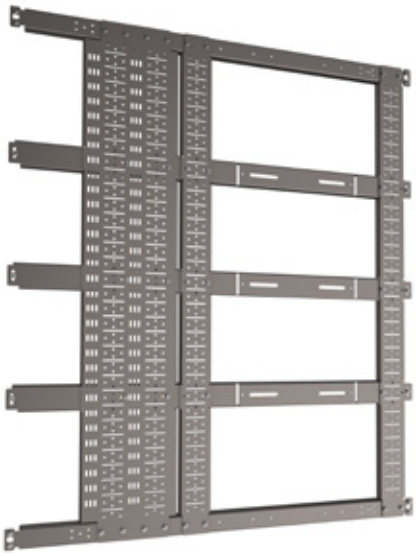
## Interior frame

To fit the bus stack into the enclosure, an interior frame is provided. For 30"-wide panels, the bus stack can be mounted only in the center of the enclosure. For 40"-wide panels, the bus stack must be offset, while on 45"-wide enclosures, the bus stack can be either center or offset mounted. These configurations help to achieve the highest ampacity and power density. The interior frame also allows breakers to be well-positioned and properly bolted.









## Panelboard details

Fronts, gutter doors, blanks, and fillers

Top and bottom fronts, together with hinged gutter doors, complete the NEMA 1 enclosure style. Those grant independent access to either the incoming section or the branch distribution section. Vented fronts are needed when a 100% rated breaker is required.

Standard gutter doors do not prevent access to the breaker handle and trip unit settings. Options for locking doors are available to prevent access to the breakers. Locking doors are not available with horizontally mounted XT7 breakers.

With certain breaker frames, a filler is needed to cover the gap between the gutter door and the breaker load side. If the bus stack is not completely full of breakers, sheet metal blanks are needed to ensure isolation from live parts.





# Panelboard details

## Door-in-door option

A door-in-door option is also available with the ReliaGear® neXT power panelboard.

This kit consists of two different doors, one within the other:

- The circuit breaker door, which provides access to the breaker operating levers with no risk of contact with live parts
- The deadfront door, which gives access to the entire panel interior

To complete the installation, a filler and a support are also needed.

The door-in-door is required with NEMA 2 enclosures.

The default option comes with an internal lock and key. Another option is for a 0.33" padlock provision. Padlock itself is not provided.







# Panelboard details

## IP20 finger-safe offering

In an installation, the degree of protection required for electrical equipment depends on the environmental characteristics. The degree of protection, ensured by the enclosure of equipment or by the cubicle containing the equipment, is expressed by the IP code, which indicates the level of protection against access to hazardous parts, the ingress of foreign bodies and/or the ingress of water, in compliance with IEC 60529, IEC 60947-1. Besides the IP symbol, the complete code has two figures followed (optionally) by two additional letters. For IP20-rated equipment, protection is provided against ingress of foreign bodies > 12.5 mm in diameter.

ReliaGear® neXT IP20 is compatible with the following panel types:
- Horizontally mounted main circuit breaker (MCB)
- Horizontally mounted MCB + feed-through lug
- Main lug only (MLO)
- Main lug + feed-through lug

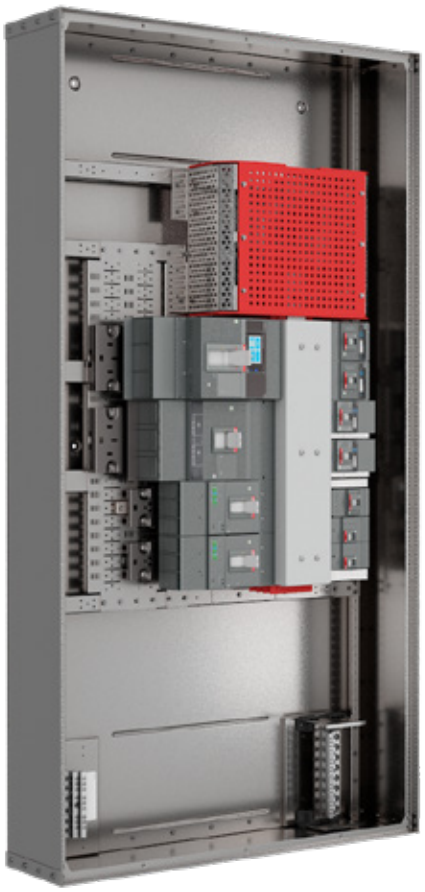
The ReliaGear neXT IP20 offering consists of the following finger-safe protected connections:
- **Plug-in breaker (line* side):** Protection provided by the ReliaGear neXT line side connector technology and the ReliaGear neXT finger-safe bus stack. Refer to the bus stack section for more details.
- **Plug-in breaker (load* side):** Protection provided by pre-installed service entrance/finger-safe lug barriers (not available in all breaker frames). Refer to the service entrance barrier section for more details.
- **Main lug / feed-through lug:** Protection provided by the main lug barrier kit, which covers the bus stack lug pads and mechanical lugs, if applicable. See the IP20 main lug barrier section for more details.

* For plug-in (horizontally mounted) MCBs, the line and load sides are reversed.

Other considerations:
- Neutrals and grounds will not be barriered off (not finger-safe)
- The IP20 main lug barrier kit, horizontal mounting rail and service entrance/finger-safe lug barriers can all be ordered separately to retrofit existing panels in the field, barring restrictions

IP20 is not available for the following panel configurations:
- Single-phase voltage
- DC voltages: 125 V DC and 250 V DC 2-wire
- Vertical main breakers
- Dual main lugs
- Compression lugs
- Dual main compression lugs
- FB or TEY breakers (service entrance/finger-safe lug barriers are not available)

For additional information on the ReliaGear neXT IP20 finger-safe offering, please refer to **1SQC900004N0201**.



# Panelboard details

## Panelboard configurations

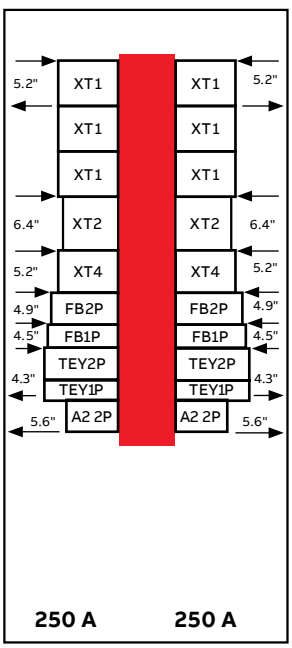
The ReliaGear® neXT panelboard is available with differently sized bus stack configurations. Once the main bus ampacity is determined, the height of the bus determines both the height of the panelboard and the maximum number of available outgoing branch Tmax® XT, Record Plus® FB, TEY and Formula A2 circuit breaker X-spaces. Different circuit-breaker frame sizes require different numbers of mounting positions on the bus stack. See page 43 for details. Main lugs and main circuit breaker options are both available up to 1200 A. The main circuit breaker can be either vertically or horizontally mounted. For vertical circuit-breaker mounting, XT5 or XT7 mounting kits are required.

All ReliaGear neXT panelboards are double sided, with branch breakers that can fit on both the left and right sides of the bus stack. The maximum ampacity of the breakers selected will determine the width of the panelboard needed. The bus stack can either be mounted in the center of the box or be offset to the right (default) or to the left. With an offset configuration, the maximum ampacity of the branch breakers mounted on the narrow and wide sides is different. This allows the panelboard to comply with the wire-bending space requirements per UL 67.

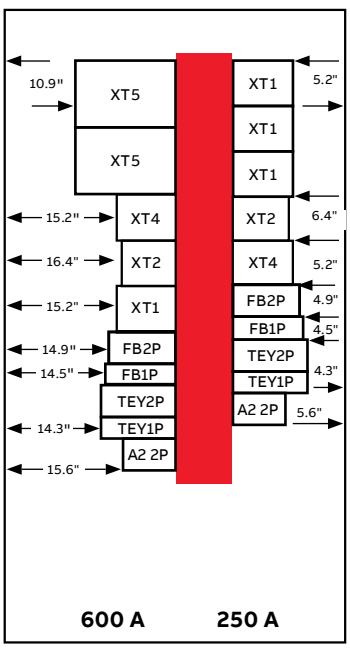
### AVAILABLE CONFIGURATIONS

| Panelboard width (in.) | Bus stack position inside the box | Max. branch breaker ampacity on wide side (A) | Max. branch breaker ampacity on narrow side (A) |
|---|---|---|---|
| 30 | Center | 250 (XT4) | 250 (XT4) |
| 40 | Offset | 600 (XT5) | 250 (XT4) |
| 45 | Center | 600 (XT5) | 600 (XT5) |
| 45 | Offset | 1200 (XT7) | 250 (XT4) |

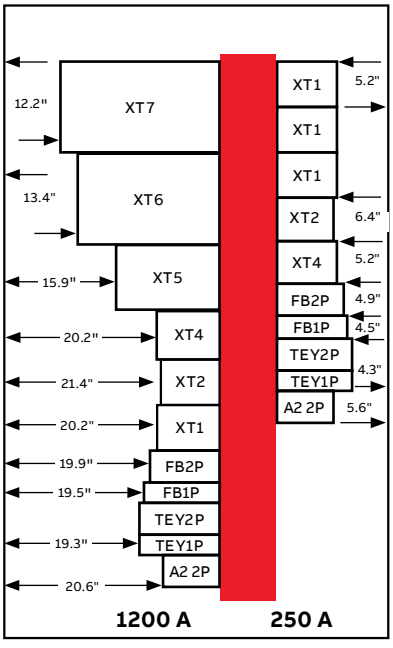
Note:
- Horizontally mounted XT5 with 750 kcmil lugs can fit only in 45" offset box
- 250 A for XT4 available on the narrow side only with 350 kcmil internal lugs (breaker digit 12 = "8")



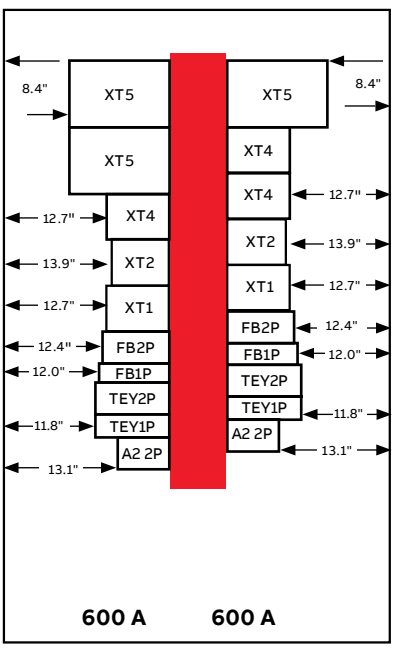

30" center box




40" offset box




45" offset box




45" center box

4 configurations

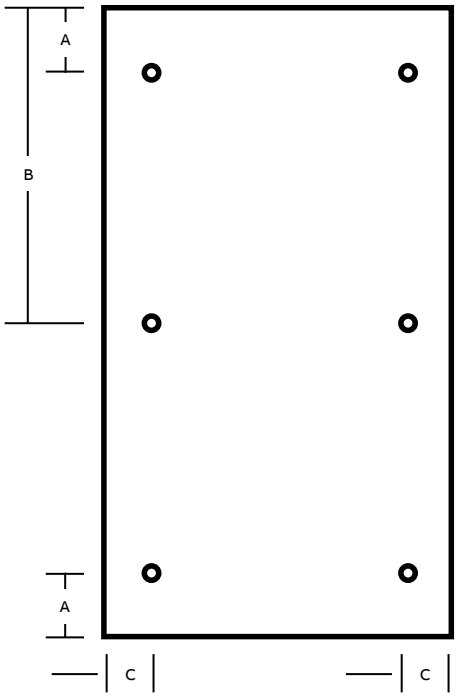
Note:
- Configurations and dimensions above are based on default lug option for each breaker frame. Allowable configurations may be limited based on wire size selected.
- For XT5 and XT6 breakers with 750 kcmil lugs, WBS shown above is reduced by 0.8" and 1.2" respectively.

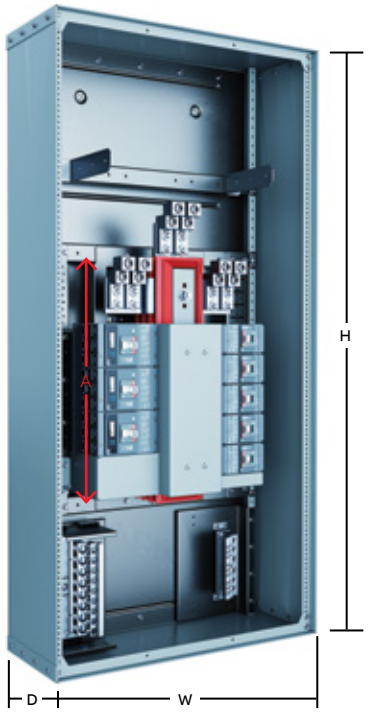
# Panelboard details

## Assembly details

### TORQUE VALUES FOR PANELBOARD HARDWARE

| Screw size | Location | Torque (in.-lb.) |
|---|---|---|
| ¼–20 steel-thread forming | Fronts to enclosure (sides) | 85–95 |
| | Interior frame to enclosure | |
| | Neutral and ground to enclosure | |
| | Fillers to gutter covers | |
| | Vertical main mounting kit for enclosure | |
| | Fronts to enclosure (top/bottom) | 50–58 |
| | Branch breakers to interior frame | |
| | Panelboard interior to interior frame | |
| | Vertical main insert/filler(s) to panels | |
| | Blanks to interior frame | |




01 The enclosure depth is 10.8" for NEMA 1 and 14.5" for all other NEMA types. Refer to the drawing at right for mounting hole locations.

### NEMA 1 ENCLOSURE MOUNTING HOLES

Plate hole distance from edges

| Height | Holes | A | B | C |
|---|---|---|---|---|
| 60" | 4 | 5" | – | 8" |
| 72" | 4 | 5" | – | 8" |
| 84" | 6 | 5" | 42" | 8" |
| 96" | 6 | 5" | 48" | 8" |

### PANELBOARD DIMENSIONS

| | | | | |
|---|---|---|---|---|
| H | 60" | 72" | 84" | 96" |
| A | 16X | 24X | 32X | 40X |
| W | | 30" | 40" | 45" |
| D | | | | 11" NEMA 1<br>14.5" NEMA 1 + DiD<br>14.5" NEMA 2/3R*<br>14.8" NEMA 4/4X/12* |

*Depth for NEMA 3R/4/4X/12 does not include 0.9" of hanger bracket.

Refer to instruction sheet 1SQC900008M0201 for conduit space and detailed enclosure dimensions. Enclosure dimensions can also be found on empower drawing. Dimensions above are general.

# Panelboard details
## Accessories





### Neutrals
Neutral with lug sizes ranging from 1/0 to 750 kcmil. Aluminum neutrals accept both aluminum and copper wires; copper neutrals accept only copper wires. Neutrals are all isolated, and bonding kit is included. 200% neutrals are available.

Ground fault neutrals with ground fault CTs are also available for main breaker and feeder breakers. Main and feeder breaker ground fault protection are compatible together.
- Available in 40" and 45" wide enclosures
- Ground fault protection not available in single phase applications

| Breaker frame | Ground fault on main | Ground fault on feeder |
|---|---|---|
| XT2 | | • |
| XT4 | • | • |
| XT5 | • | • |
| XT7 | • | |

* Maximum number of ground fault feeders is 6



### Grounds
Grounding kits are available in both isolated and bonded versions. They can accommodate 10, 47 or 49 wires, depending on the size and material selected. Aluminum grounds accept both aluminum and copper wires; copper grounds accept only copper wires.

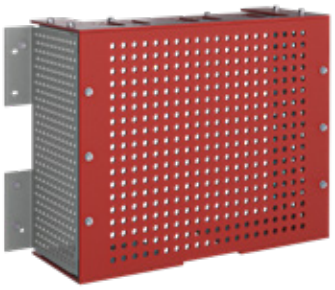


### Service entrance / finger-safe barriers
Service entrance kits can be installed on the load side lugs of the below breaker frames to make breaker IP20[1] finger-safe. Service entrance kits are available for the following breakers:

| Breaker frame | Service entrance wire range |
|---|---|
| XT1 | (1) No. 10–2/0 AWG |
| XT2 | (1) No. 10–2/0 AWG |
| A2 | (1) 1 AWG–250 kcmil (Cu) or (1) 2/0 AWG–300 kcmil (Al) |
| XT4 | (1) 4 AWG–350 kcmil |
| XT4 | (1) 3/0 AWG–350 kcmil |
| XT5 | (2) 2/0 AWG–500 kcmil |
| XT5 | (2) 500 kcmil–750 kcmil |
| XT6 | (3) 2/0 AWG–400 kcmil |
| XT6 | (2) 500 kcmil–750 kcmil |
| XT7 | (4) 4/0 AWG–500 kcmil |
| XT7 | (3) 500 kcmil–750 kcmil |

[1] Per IEC standard 60529.

# Panelboard details
## Accessories



**IP20 main lug barrier**
The IP20 main lug barrier kit mounts over the lug pads of the bus stack, creating a finger-safe connection between incoming cables and lugs. It consists of a set of insulator barriers (top / bottom / front) and a pair of sheet metal support brackets. The kit ships in a flat pack, to be assembled at a customer site. It requires (1) additional horizontal mounting rail to be installed in the enclosure.

Panel main wires should be brought into the enclosure before the top and front barriers are installed. The top barrier is selected based on the number of cables. For more detailed information, please refer to:

Installation instructions — **1SQC900024M0201**



**Surge protection devices: RGPP series**
The SPD module is a plug-in accessory to be installed on either side of the bus stack.

For connection to the bus stack, a separate plug-in disconnect (ReliaGear® Tmax® XT circuit breaker) is required. For more information, see **1SQC900945D0201**.

Installation instructions - **1SQC900006M0201**

AVAILABLE IN DIFFERENT CONFIGURATIONS ACCORDING TO SYSTEM VOLTAGE, IMPULSE CURRENT AND TYPE:

| | |
|---|---|
| System voltage | 120 V AC Wye, 240 V AC Wye, 277 V AC Wye,347 V AC Wye, 480 V AC Delta |
| Impulse current | 80 kA, 150 kA, 225 kA, 300 kA |
| SPD type (according to NEC) | Type 1, Type 2 |



**Surge protection devices: SP series (legacy offering)**
The SPD module is a plug-in accessory to be installed on the bus stack. This accessory can fit into panels 40" or 45" wide.

AVAILABLE IN DIFFERENT CONFIGURATIONS ACCORDING TO SYSTEM VOLTAGE, IMPULSE CURRENT AND TYPE:

| | |
|---|---|
| System voltage | 120 V AC Wye, 277 V AC Wye, 347 V AC Wye, 480 V AC Delta |
| Impulse current | 65 kA, 80 kA, 125 kA, 150 kA, 200 kA, 300 kA |
| SPD type (according to NEC) | Type 1: Surge arrester<br>Type 2: TVSS |

Note: For more details please refer to **1SQC900022M0201**.

# Panelboard details
## Accessories





**RELT module**
When activated, the RELT (reduced energy let-through) module helps to mitigate arc flash hazard, limiting the duration of fault current through the use of a user-selectable and settable secondary instantaneous pickup setting. This is a plug-in accessory to be installed on the bus stack, compatible with XT5 and XT7 breakers with Ekip Touch trip units and can fit into panels 40" or 45" wide.

An additional wiring kit is needed to connect the module to the main circuit breaker, which must be equipped with an Ekip Signaling module.

Three different versions are available to cover all system voltages:
- 240 V–208/120 V
- 480 V–480/277 V
- 600 V–600/347 V



**Power supply module (PSM)**
The power supply module (PSM) provides 24 V DC control power for ReliaGear® Tmax® XT circuit breakers with Ekip Touch/Hi-Touch trip units and communication modules. This is a plug-in accessory to be installed on the bus stack and can fit into panels 40" or 45" wide, consuming 3X of mounting space.

The PSM can supply control power to up to (10) Ekip Touch trip units. For panels with more than (10) COM-enabled circuit breakers, a second PSM may be required.

For factory-assembled interiors, the connections between the PSM and circuit breakers will come pre-wired. For bulk pack and retrofit applications, the connections will need to be wired by the customer.

Two different versions are available, depending on system voltage:
- 240 V– 208/120 V
- 480 V–480/277 V

PSM ELECTRICAL SPECIFICATIONS:

| | |
|---|---|
| Max output power | 120 W |
| Max output current | 5 A |
| Output voltage | 24 V DC |

Installation instructions — **1SQC900027M0201**



**Drip hood**
The drip hood prevents droplets from falling into the enclosure. A drip hood is supplied standard with NEMA 2 enclosures, and is optional for NEMA 1 enclosures.

# Panelboard details
## Accessories







**Upgraded single-point metering unit: RGM40**
The RGM40 meter is a compact energy and power quality meter that provides multifunction measurement of all electrical parameters and makes the data available in multiple formats via display and communication systems. Offering ANSI C12.20 0.2% accuracy, the RGM40 is revenue-grade and features:
- Multifunction measurement including voltage, amperage, power, frequency, energy, etc.
- LED display
- Data logging (V2 and V6 versions)
- Extensive memory for storing load profiles, system events and limits/ alarms
- Communication via Modbus RTU, TCP or BACnet
- Power quality features include waveform recording at 512 samples/cycle and harmonic analysis
- System events log and passwords for security
- UL 67 approval

The RGM40 module is a plug-in accessory to be installed on the bus stack. This accessory can fit into panels 40" or 45" wide.

A set of current transformers must be selected according to the ampacity needed for metering, together with a mounting kit for proper installation.

For more detailed information on the RGM40 singe-point metering unit, please refer to:
Brochure — **1SQC173001B0201**
Quick start guide — **1SQC173001M0201**
User manual — **1SQC173002M0201**







**Single-point metering unit: AMP1 (legacy offering)**
The AMP1 power and energy meter provides an integrated solution for power monitoring and single-point metering. With exceptional performance, the AMP1 monitors key electrical parameters of the main power coming into the panelboard. This information can then be transmitted to a building automation system (BAS), or similar system, to analyze usage and identify potential cost-saving measures. Offering ANSI 12.20 0.5% accuracy, the AMP1 is revenue-grade and features:
- Voltage, amperage, power and energy monitoring
- Backlit LCD display
- Data logging option to ensure data is still preserved locally
- Communication via Modbus RTU or BACnet – Versatile and widely used protocols
- User-enabled password protection
- UL 67 approval

The AMP1 module is a plug-in accessory to be installed on the bus stack. This accessory can fit into panels 40" or 45" wide.

A set of current transformers must be selected according to the ampacity needed for metering, together with a mounting kit for proper installation.

# Panelboard details
## Accessories



**Legacy IF-series frame retrofit kit (optional)**
This retrofit kit can be used in cases where a ReliaGear® Tmax® XT breaker with a new-style mounting bracket is being installed on a legacy IF-series interior frame. It consists of a metal bracket which mounts to the IF-series interior frame and provides additional leverage points for installation and removal of branch devices. This retrofit kit is compatible with XT5, XT6 and XT7 breaker frames ONLY.

This retrofit kit is not required for breaker installation; it is an optional accessory that is intended to reduce the amount of effort required on behalf of the operator. It is available under catalog number RGRPIFRK and contains brackets and hardware for (5) branch devices.

Installation instructions — **1SQC900029M0201**

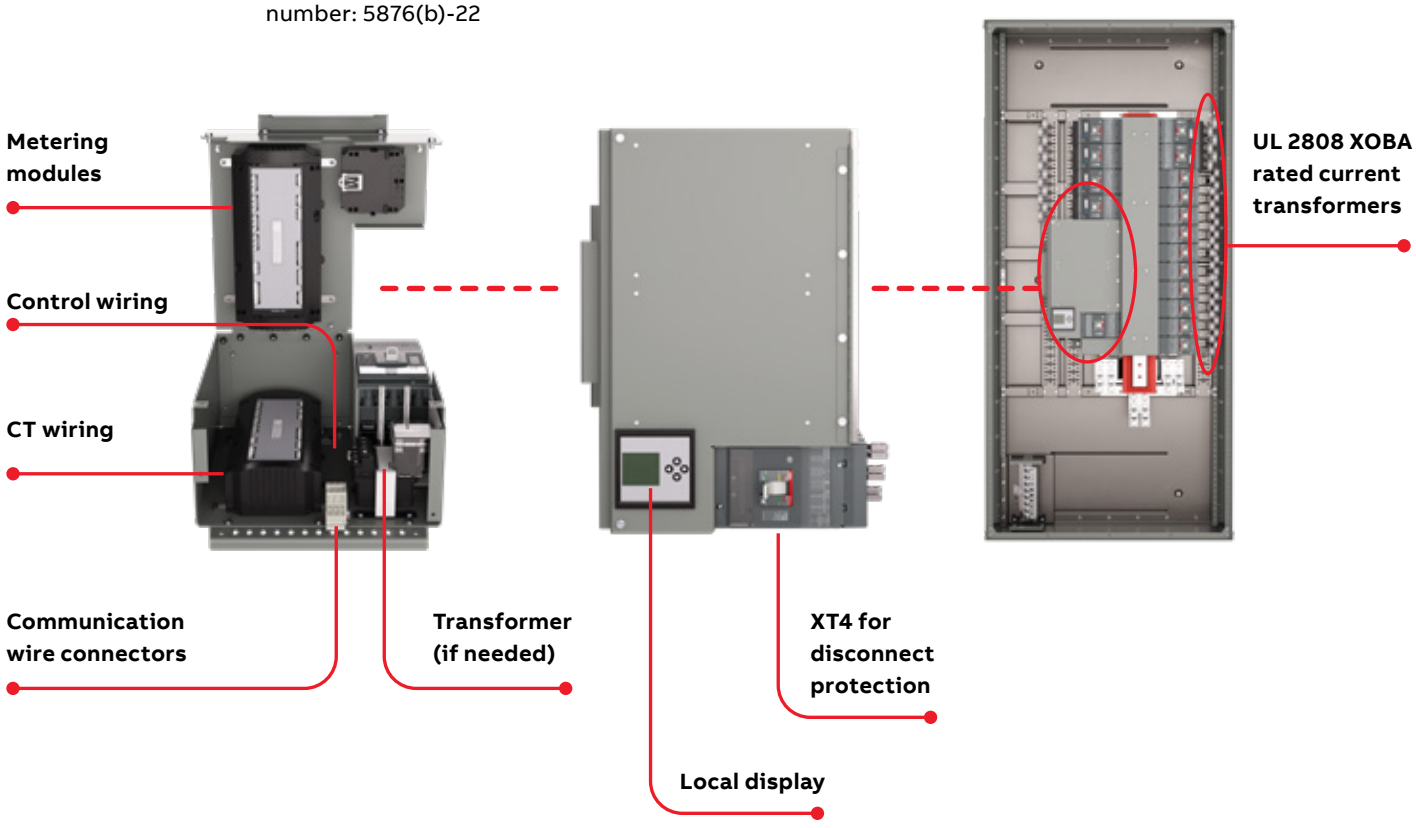
# Panelboard details
## Accessories

**Revenue grade submetering unit**
The ReliaGear® neXT submetering plug-in module combines the meters, current transformers, communications and overload protection into a single module that mounts inside a UL Listed factory-assembled panel. This solution can reliably allocate energy usage for commercial, industrial, institutional and residential applications. Accurate energy usage allocation allows facility managers to sub-bill tenants and manage, understand and reduce operational costs while also incentivizing tenants to conserve energy and lower their monthly bill.

Offering ANSI 12.20 0.5% accuracy, the submetering module is revenue-grade and features:
- Voltage, amperage, power and energy monitoring
- Local LCD display
- Data Logging
- Communications via Modbus RTU - Versatile and widely used protocol
- Modular units that can serve up to 48 circuits to be metered
- UL 2808 XOBA rated current transformers
- California weights and measures certified certificate number: 5876(b)-22

The submetering module is a plug-in accessory to be installed on the bus stack. This accessory can fit into 40" or 45" wide.

Refer to submetering brochure **1SQC900005B0201** for more detailed information on the offering.



## Notes

# 03

Molded case circuit breakers

# Molded case circuit breakers


| Molded case circuit breakers | |
|---|---|
| Tmax® XT range — AC ratings | 36–37 |
| Tmax XT range — DC ratings | 38–39 |
| Tmax XT range — 100% rated breakers | 40 |
| Tmax XT range — trip units | 41–46 |
| Record Plus® FB, TEY and Formula A2 — AC ratings | 47 |
| Record Plus FB, TEY and Formula A2 — DC ratings | 48 |
| Mounting space requirements | 49 |
| Line-side connectors and lugs | 50 |
| Breaker accessories | 51–52 |
| Installation manuals | 53 |
| Connectivity | 54 |

# TMAX® XT RANGE

## ReliaGear® molded case circuit breakers for alternating current (AC) distribution



The SACE® Tmax XT range offers higher performance, better protection and more precise metering than equivalent units and can handle from 15 A up to 1200 A.

Combined with precise electronic trip units in small frames, the new range delivers significant time savings and enhances installation quality. Reliability is further increased, and speed of installation reduced, thanks to Bluetooth and Ekip connectivity for mobile devices. Tmax XT circuit breakers and their accessories are constructed in compliance with UL 489 and CSA C22.2 standards.

The molded case circuit breakers for ReliaGear neXT power panelboards can also be used in ReliaGear SB switchboards. The same mounting hardware, fillers, blanks and rails are also applicable for ReliaGear SB.

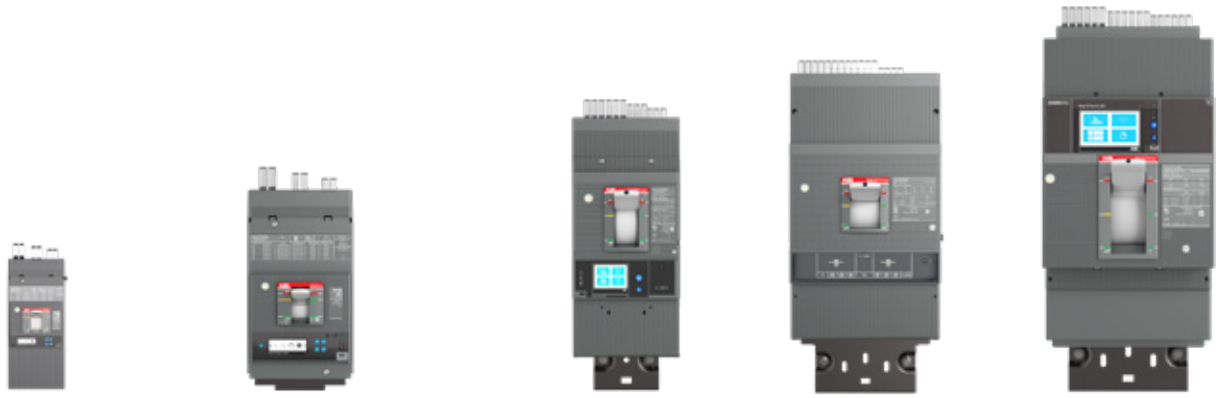
Note: Tmax XT MCCBs for ReliaGear neXT power panelboards and ReliaGear SB switchboards come with filler plates when ordered separately, except XT1 where the XT1 group-mount rail kits need to be ordered separately. Refer to fillers and blanks in the numbering system chapter.



### MOLDED CASE CIRCUIT BREAKERS (MCCB)

| | | | | | XT1 |
|---|---|---|---|---|---|
| **Frame size** | | **[A]** | | | **125** |
| Poles | | [No.] | | | 3 |
| Rated voltage | (AC) 50–60 Hz | [V] | | | 480 V Δ (2) |
| Versions | | | | | Fixed |
| Interrupting ratings | | | N | S | H |
| | 240 V (AC) | [kA] | 50 | 65 | 100 |
| | 480 V (AC) | [kA] | 25 | 35 | 65 |
| | 600Y/347 V (AC) | [kA] | 18 | 22 | 25 |
| | 600 V (AC) | [kA] | – | – | – |
| Mechanical life | | [No. operations] | | | 25000 |
| | | [No. hourly operations] | | | 240 |
| Dimensions – fixed (width x depth x height) | 3 poles | [mm]/[in] | | | [77 x 184 x 274] / [3.0 x 7.2 x 10.8] |
| Weight | Fixed 3 poles | [kg]/[lb] | | | [1.9] / [4.2] |
| **Trip units for power distribution** | | | | | |
| TMF | | | | | • |
| TMA | | | | | |
| Ekip DIP | | | | | |
| Ekip Touch | | | | | |

(1) Current-limiting circuit breaker in 480 V AC and 600 V AC
(2) 600Y/347



| | XT2 | | | | | | XT4 | | | | | | XT5 | | | | | | XT6 | | | XT7 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 125 | | | | | | 250 | | | | | | 400–600 | | | | | | 800 | | | 800–1000–1200 | | |
| Poles | 3 | | | | | | 3 | | | | | | 3 | | | | | | 3 | | | 3 | | |
| Rated uninterrupted current (A) @ 40 °C | 600 | | | | | | 600 | | | | | | 600 | | | | | | 600 | | | 600 | | |
| Mounting | Fixed | | | | | | Fixed | | | | | | Fixed | | | | | | Fixed | | | Fixed | | |
| Version | N | S | H [1] | L [1] | V [1] | X | N | S | H [1] | L [1] | V [1] | X | N | S | H [1] | L [1] | V [1] | X | N | S | H | S | H | L |
| Rated ultimate short-circuit breaking capacity (kA) @ 240 V AC 50/60 Hz | 65 | 100 | 150 | 200 | 200 | 200 | 65 | 100 | 150 | 200 | 200 | 200 | 65 | 100 | 150 | 200 | 200 | 200 | 65 | 100 | 200 | 65 | 100 | 200 |
| Rated ultimate short-circuit breaking capacity (kA) @ 480 Y/277 V AC 50/60 Hz | 25 | 35 | 65 | 100 | 150 | 200 | 25 | 35 | 65 | 100 | 150 | 200 | 35 | 50 | 65 | 100 | 150 | 200 | 35 | 50 | 65 | 50 | 65 | 100 |
| Rated ultimate short-circuit breaking capacity (kA) @ 600 Y/347 V AC 50/60 Hz | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Rated service short-circuit breaking capacity (kA) @ 240 V AC 50/60 Hz | 18 | 22 | 25 | 35 | 42 | 42 | 18 | 22 | 25 | 50 | 65 | 100 | 18 | 25 | 35 | 65 | 100 | 100 | 20 | 25 | 35 | 25 | 50 | 65 |
| Rated short-time withstand current (kA) @ 0.5 s | | | | | | 25000 | | | | | | 25000 | | | | | | 20000 | | | 20000 | | | 10000 |
| Rated short-time withstand current (kA) @ 1 s | | | | | | 240 | | | | | | 240 | | | | | | 240 | | | 240 | | | 240 |
| Dimensions (mm) [in] W x D x H | | | | | | [105 x 198 x 267] / [4.1 x 7.8 x 10.5] | | | | | | [105 x 198 x 264] / [4.2 x 7.8 x 10.4] | | | | | | [141 x 206 x 419] / [5.6 x 8.1 x 16.5] | | | [210 x 211 x 528] / [8.3 x 8.3 x 20.8] | | | [211 x 277 x 526] / [8.3 x 10.9 x 20.7] |
| Weight (kg) [lb] | | | | | | [2.8] / [6.1] | | | | | | [3.2] / [7.0] | | | | | | [7.0] / [15.4] | | | [12.0] / [26.5] | | | [17.2] / [37.9] |
| Thermal magnetic trip | • | | | | | | • | | | | | | | | | | | | | | | | | |
| Electronic trip | • | | | | | | | | | | | | • | | | | | | • | | | | | |
| Ground fault protection | • | | | | | | • | | | | | | • | | | | | | • | | | • | | |
| Arc flash protection | • | | | | | | • | | | | | | • | | | | | | | | | • | | |

# TMAX® XT RANGE

## ReliaGear® molded case circuit breakers for direct current (DC) distribution



The SACE® Tmax XT range in ReliaGear neXT power panels are qualified for DC ratings for 125 V DC 2-wire and 250 V DC 2-wire applications with breakers offered from 15 A up to 800 A.

DC applications in ReliaGear neXT will take advantage of the single-phase bus stacks using phase A and C connections.

Tmax XT in ReliaGear neXT for DC applications feature 2-pole line-side connectors, and trip units are limited to thermal magnetic only.



### MOLDED CASE CIRCUIT BREAKERS (MCCB)

| | | | | | |
|---|---|---|---|---|---|
| | | | | | **XT1** |
| **Frame size** | | **[A]** | | | **125** |
| Poles | | [No.] | | | 2 |
| Rated voltage (DC) | | [V] | | | 250 |
| Versions | | | | | Fixed |
| Interrupting ratings | | | N | S | H |
| | 250 V (DC) 2 poles in series | [kA] | 35 | 42 | 50 |
| Mechanical life | | [No. operations] | | | 25000 |
| | | [No. hourly operations] | | | 240 |
| Dimensions — fixed (width x depth x height) | 3 poles | [mm]/[in] | | | [77 x 184 x 274] / [3.0 x 7.2 x 10.8] |
| Weight | 3 poles | [kg]/[lb] | | | [1.9] / [4.2] |
| **Trip units for power distribution** | | | | | |
| TMF | | | | | ● |
| TMA | | | | | |






| | XT2 | | | XT4 | XT5 | XT6 |
|---|---|---|---|---|---|---|
| | **125** | | | **250** | **400–600** | **800** |
| | 2 | | | 2 | 2 | 2 |
| | 250 | | | 250 | 250 | 250 |
| | Fixed | | | Fixed | Fixed | Fixed |
| N | S | N | S | H | N S | N S |
| 35 | 50 | 35 | 42 | 50 | 35 50 | 35 50 |
| | 25000 | | | 25000 | 20000 | 20000 |
| | 240 | | | 240 | 240 | 240 |
| | [105 x 198 x 267] / [4.1 x 7.8 x 10.5] | | | [105 x 198 x 264] / [4.2 x 7.8 x 10.4] | [141 x 206 x 419] / [5.6 x 8.1 x 16.5] | [210 x 211 x 528] / [8.3 x 8.3 x 20.8] |
| | [2.8] / [6.1] | | | [3.2] / [7.0] | [7.0] / [15.4] | [12.0] / [26.5] |
| | | | | | | |
| | ● | | | ● | | |
| | ● | | | | ● | ● |

## Tmax® XT range
100% rated breakers

All Tmax XT circuit breakers are available both as standard versions and as 100% rated versions. Because of the additional heat generated at 100% of continuous current rating, the use of specific 90°C rated wires sized per 75°C ampacity may be required.

| Frame | Max. ampacity (A) | Wires |
|---|---|---|
| XT4 | 200 | 75°C |
| XT5 | 400 | 75°C |
| XT7 | 800 | 75°C |
| XT7 | 1000/1200 | 90°C |



## Tmax® XT range
Trip units

SACE Tmax XT trip units represent a new benchmark for molded case circuit breakers, being able to satisfy any performance requirement.

The Tmax XT trip units are designed to be used in a wide range of applications. These complete, flexible protection trip units can be adapted to the actual level of protection required, independently of the complexity of the system.

The range is available for three levels of performance to meet any requirement, from simple to advanced applications:
- TM thermal-magnetic trip unit
- Ekip DIP electronic trip unit
- Ekip Touch/Hi-Touch electronic trip units

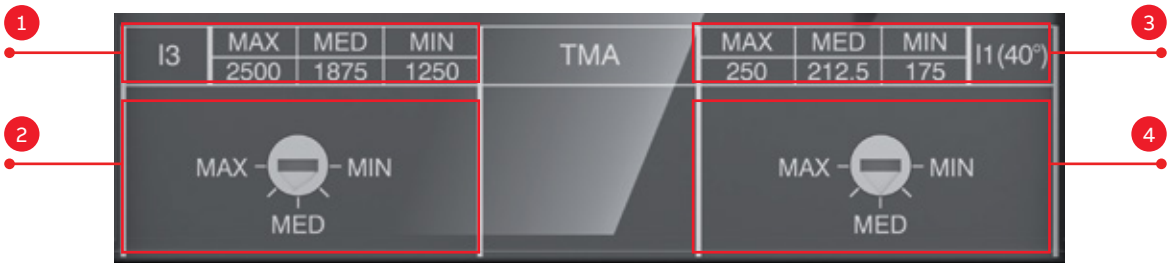
For the single-phase offering, the following trip units are available:
- XT1, XT2, XT4, XT5, XT6:
  - TM thermal-magnetic trip unit
- XT7:
  - Ekip DIP electronic trip unit
  - Ekip Touch/Hi-Touch electronic trip units

For the DC offering, the following trip units are available:
- XT1, XT2, XT4, XT5, XT6:
  - TM thermal-magnetic trip unit

## Tmax XT range
Thermal-magnetic trip unit

The thermal-magnetic trip unit is an easy solution for protection against overloads and short circuits. Overload protection is ensured by the ABB thermal device, based on a temperature-dependent bimetal heated by current. Protection against short-circuit is realized with a magnetic device.

Key:
1. Current threshold for short-circuit protection.
2. Rotary switch for short-circuit protection.
3. Current threshold for overload protection.
4. Rotary switch for overload threshold setting.




**Rotary switch**
Depending on the version, it is possible to set the desired thresholds for protection by turning the front rotary switch.

# Tmax® XT range

## Thermal-magnetic trip unit

| | | L – overload protection | | I – short-circuit protection | |
|---|---|---|---|---|---|
| **Field of application** | **Trip unit** | **Current threshold** | **Trip time** | **Current threshold** | **Trip time** |
| Power distribution protection | TMF | Fixed | Fixed | Fixed | Fixed instantaneous |
| | TMA | Adjustable | Fixed | Adjustable | Fixed instantaneous |

### TMF

| In [A] | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 125 | 150 | 175 | 200 | 225 | 250 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XT1 | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | | | | |
| XT2 | • | • | • | • | • | • | | • | • | • | | | | | | | | | | |
| XT4 | | | • | • | • | • | | • | • | • | • | • | • | • | • | • | • | • | • | • |

### TMA

| In [A] | 80 | 90 | 100 | 110 | 125 | 150 | 175 | 200 | 225 | 250 | 300 | 400 | 500 | 600 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XT2 | • | • | • | • | • | | | | | | | | | | |
| XT5 | | | | | | | | | | | • | • | • | • | |
| XT6 | | | | | | | | | | | | | | • | • |

# Tmax® XT range
## Ekip DIP



The first level of electronic trip units, Ekip DIP trip units, are based on microprocessor technologies and guarantee high reliability, protection adjustability and coordination.

They provide protection against overloads, selective short circuits, short circuits and ground faults. The power required for their operation is provided directly from the current sensors.




Key:
1. DIP switches for overload-protection setting.
2. DIP switches for short-circuit and time-delayed short-circuit.
3. Slot for lead seal.
4. Test connector.
5. Power-on LED.

**DIP switches**
The DIP switches on the front of the trip unit allow manual settings when the trip unit is off.

**LEDs**
The LEDs on the front indicate the status of the release (on/off) and provide information about the protection tripped when the Ekip TT accessory is connected.

**Front connector**
The connector on the front of the unit allows the connection of:
- Ekip TT for trip testing, LED-test and signaling of the most recent trip.
- Ekip T&P for connection to a laptop with the Ekip Connect program (thus measurement reading, as well as trip and protection function tests, are made available to the user).

**Characteristics of electronic Ekip DIP trip units**

| | |
|---|---|
| Operating temperature | -25 °C to +70 °C |
| Relative humidity | 98% |
| Self-supplied | 0.2xIn (single phase)* |
| Auxiliary supply (where applicable) | 24 V DC ± 20% |
| Operating frequency | 45 to 66 Hz |
| Electromagnetic compatibility | IEC 60947-2 Annex F |

*For 10 A: 0.4 in

**Thermal memory**
All the Ekip DIP trip units include a thermal memory function. The trip unit records the trips that have occurred in the last few minutes. Since the trip causes overheating, to protect the cables and let them cool down, the trip unit imposes a shorter delay-tripping time in case of a fault. Thus, the system is protected against damage due to cumulative overheating. This can be disabled if needed by using the Ekip T&P.

# Tmax® XT range
## Ekip DIP

| | | | L – overload protection | | S – selective short-circuit protection | | I – short-circuit protection | |
|---|---|---|---|---|---|---|---|---|
| **Field of application** | **Trip unit** | | **Current threshold** | **Trip time** | **Current threshold** | **Trip time** | **Current threshold** | **Trip time** |
| Power distribution protection | Ekip DIP | LSI | Adjustable | Adjustable | Adjustable | Adjustable | Adjustable | Fixed |



| **In [A]** | **10** | **25** | **40** | **60** | **100** | **125** | **150** | **250** | **400** | **600** | **800** | **1000** | **1200** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XT2 | | • | | • | | • | | | | | | | |
| XT4 | | | • | • | • | | • | • | | | | | |
| XT5 | | | | | | | | • | • | • | | | |
| XT6 | | | | | | | | | | | • | | |
| XT7 | | | | | | | | | | • | • | • | • |

| **Breaker frame** | **Sensor** | **Minimum trip amps** |
|---|---|---|
| XT2–125 A | 25 A | 10 A |
| | 60 A | 30 A |
| | 125 A | 70 A |
| XT4–250 A | 40 A | 15 A |
| | 60 A | 25 A |
| | 100 A | 40 A |
| | 150 A | 60 A |
| | 250 A | 100 A |
| XT5–400 A | 250 A | 100 A |
| | 400 A | 175 A |
| XT5–600 A | 600 A | 250 A |
| XT6–800 A | 800 A | 350 A |
| XT7–800 A | 600 A | 250 A |
| | 800 A | 350 A |
| XT7–1000 A | 1000 A | 400 A |
| XT7–1200 A | 1200 A | 500 A |

# Tmax® XT range
## Ekip Touch/Hi-Touch

Ekip Touch/Hi-Touch trip units provide a wide series of protections and high accuracy measurements of all electrical parameters. They are intended to integrate perfectly with most common automation and supervision systems.




Key:
1. Power-on LED; pre-alarm LED; alarm LED.
2. Test and programming connector.
3. Display.
4. Home pushbutton to return to homepage.
5. Pushbutton for testing and tripping information.

**Communication and connectivity**

The Ekip Touch/Hi-Touch trip units integrate perfectly into most common automation and energy management systems to improve productivity and energy consumption and for remote control. The circuit breakers can be equipped with communication modules for Modbus, Profibus and DeviceNet™ protocols, as well as Modbus TCP, Profinet and Ethernet/IP. The modules can be easily installed even at a later date.

Furthermore, the IEC 61850 communication module enables connection to automation systems widely used in medium-voltage power distribution to create intelligent networks (smart grids). In addition, with an easy connection thanks to the Ekip Com hub module, the circuit breakers allow the system to be monitored via ABB Ability EDCS.

The integrated display makes interaction with the Ekip Touch/Hi-Touch an easy and intuitive experience for the user, and the embedded Bluetooth functionality allows fast interaction via EPiC (electrification products intuitive configurator), the new mobile application to configure and check the status of ABB low-voltage circuit breakers.

# Tmax® XT range

## Ekip Touch/Hi-Touch

| Trip unit | Current measurement and protection | Voltage, power, energy measurements | Voltage, power, energy protections | Embedded functions* |
|---|---|---|---|---|
| Ekip Touch LSI | ● | ○ | ○ | ○ |
| Ekip Touch LSIG | ● | ○ | ○ | ○ |
| Ekip Touch Measuring LSI | ● | ● | ○ | ○ |
| Ekip Touch Measuring LSIG | ● | ● | ○ | ○ |
| Ekip Hi-Touch LSI | ● | ● | ● | ● |
| Ekip Hi-Touch LSIG | ● | ● | ● | ● |

● Default available
○ Additional features
* Please refer to the Tmax XT catalog 1SXU210248C0201 for more details.
LSIG trip units not available for single phase applications

| In [A] | 40 | 60 | 100 | 125 | 150 | 250 | 400 | 600 | 800 | 1000 | 1200 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| XT2 | ● | | ● | ● | | | | | | | |
| XT4 | | | ● | | ● | ● | | | | | |
| XT5 | | | | | | ● | ● | ● | | | |
| XT7 | | | | | | | | ● | ● | ● | ● |

| Breaker frame | Sensor | Minimum trip amps |
|---|---|---|
| XT2-125 A | 40 A | 15 A |
| | 100 A | 45 A |
| | 125 A | 110 A |
| XT4-250 A | 100 A | 40 A |
| | 150 A | 60 A |
| | 250 A | 100 A |
| XT5-400 A | 250 A | 100 A |
| | 400 A | 175 A |
| XT5-600 A | 600 A | 250 A |
| XT7-800 A | 600 A | 250 A |
| | 800 A | 350 A |
| XT7-1000 A | 1000 A | 400 A |
| XT7-1200 A | 1200 A | 500 A |

# RECORD PLUS® FB, TEY AND FORMULA A2

## ReliaGear® molded case circuit breakers for alternating current (AC) distribution



Record Plus FB, TEY and Formula A2 circuit breakers complete the breakers offering for the ReliaGear neXT panelboard.

The Record Plus FB line features true one- and two-pole construction, has a double-break contact system for fast response and current limitation to help with arc flash and coordination. This non-adjustable thermal-magnetic circuit breaker up to 100 A offers four interrupt tiers — through 100 kA at 480 V AC and 35 kA at 600/347 V AC.

TEY also offers true one-pole construction up to 70 A and two-pole construction up to 125 A. This line offers non-adjustable thermal-magnetic trip units with three interrupt tiers — through 100 kA at 240 V and 65 kA at 480/277 V AC.

The Formula A2 line features true two-pole breaker construction from 125A to 250A. This line offers fixed (non-adjustable) thermal-magnetic trip units with two interrupt tiers - 10 kA and 25 kA at 240 V.

Note: FB, TEY and A2 MCCBs for ReliaGear neXT power panelboards and ReliaGear SB switchboards come with filler plates when ordered separately.

### RECORD PLUS FB

| | |
|---|---|
| Poles | 1, 2 |
| Amperes | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100 |
| Trip unit | Fixed thermal-magnetic |

### INTERRUPTING RATINGS

| Ampere rating | Type | Poles | UL listed interrupting rating rms symmetrical kA AC voltage 240 V | 277 V | 347 V | 480 V | 600 V |
|---|---|---|---|---|---|---|---|
| 15–100 | FBV | 1 | 35 | 35 | 22 | – | – |
| | | 2 | 65 | – | – | 35 | 22 |
| | FBN | 1 | 65 | 65 | 25 | – | – |
| | | 2 | 150 | – | – | 65 | 25 |
| | FBH | 1 | 100 | 100 | 35 | – | – |
| | | 2 | 200 | – | – | 100 | 35 |
| | FBL | 1 | 100 | 150 | 42 | – | – |
| | | 2 | 200 | – | – | 150 | 42 |

### TEY

| | |
|---|---|
| Poles | 1, 2 |
| Amperes | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110, 125 |
| Trip unit | Fixed thermal-magnetic |

### INTERRUPTING RATINGS

| Ampere rating | Type | Poles | UL listed interrupting rating rms symmetrical kA AC voltage 120/240 V | 480/277 V |
|---|---|---|---|---|
| 15–70 (1-pole) | TEYD | 1–2 | 65 | 25 |
| 15–125 (2-pole) | TEYH | 1–2 | 65 | 35 |
| | TEYL | 1–2 | 100 | 65 |

### FORMULA A2

| Ampere rating | Type | Poles | UL listed interrupting rating rms symmetrical kA AC voltage 240 V |
|---|---|---|---|
| 125–250 | A2A | 2 | 10 |
| | A2N | 2 | 25 |



01 1-pole FB



02 2-pole FB



03 1-pole TEY



04 2-pole TEY



05 Formula A2

# RECORD PLUS® FB, TEY AND FORMULA A2

## ReliaGear® molded case circuit breakers for direct current (DC) distribution



Record Plus FB, TEY and Formula A2 circuit breakers also offer DC ratings within ReliaGear neXT panelboards.

DC ratings are available in ReliaGear neXT for the Record Plus FB and Formula A2 line for the 2-pole construction only.

TEY offers both 1- and 2-pole.

### RECORD PLUS FB

| | |
|---|---|
| Poles | 1, 2 |
| Amperes | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100 |
| Trip unit | Fixed thermal-magnetic |

### TEY

| | |
|---|---|
| Poles | 1, 2 |
| Amperes | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110, 125 |
| Trip unit | Fixed thermal-magnetic |

### INTERRUPTING RATINGS

| Ampere rating | Type | Poles | UL listed interrupting rating kA DC voltage 125 V DC, 2-wire | 250 V DC, 2-wire |
|---|---|---|---|---|
| 15–100 | FBV | 2 | 25 | 25 |
| | FBN | 2 | 30 | 30 |
| | FBH | 2 | 42 | 42 |
| | FBL | 2 | 50 | 50 |

### INTERRUPTING RATINGS

| Ampere rating | Type | Poles | UL listed interrupting rating kA DC voltage 125 V DC, 2-wire | 250 V DC, 2-wire |
|---|---|---|---|---|
| 15–70 (1-pole) | TEYL | 1 | 14 | – |
| 15–125 (2-pole) | TEYL | 2 | 42 | 18 |

### FORMULA A2

| Ampere rating | Type | Poles | UL listed interrupting rating kA DC voltage 250 V DC, 2W |
|---|---|---|---|
| 125–250 | A2A | 2 | 10 |
| | A2N | 2 | 25 |



01 1-pole FB



02 2-pole FB



03 1-pole TEY



04 2-pole TEY



05 Formula A2

# Mounting space requirements

## For molded case circuit breakers

Each circuit breaker frame has specific requirements for the number of mounting positions (X-spaces). Thanks to the optimized dimensions of the XT1, the mounting positions required are lower when two or five breakers are mounted close to one another.

SPD, metering and RELT also require X-space, since they are plug-in modules. Refer to the table below. In main lugs configuration, each set of lug pads occupies 4 X-spaces. A set of lug pads is needed also with a vertical main breaker.

| Frame | Max. ampacity (A) | Poles | X-spaces |
|---|---|---|---|
| Single XT1 | 125 | 3 | 3 |
| Two XT1 | 125 | 3 | 5 |
| Five XT1 | 125 | 3 | 11 |
| XT2[1] | 125 | 3 | 3 |
| XT4[2] | 250 | 3 | 3 |
| XT5[3] | 600 | 3 | 4 |
| XT6 | 800 | 3 | 6 |
| XT7 | 1200 | 3 | 6 |
| FB | 100 | 1 | 1 |
| FB | 100 | 2 | 2 |
| TEY | 70 | 1 | 1 |
| TEY | 125 | 2 | 2 |
| A2 | 250 | 2 | 2 |
| SPD (RGPP series)[4] | – | – | 6 |
| SPD (legacy SP series) | – | – | 10 |
| RELT | – | – | 3 |
| PSM | – | – | 3 |
| Main metering | – | – | 4 |
| Submetering | – | – | 9–14 |

[1]Tmax® XT2 with electrical accessories requires 1 (one) additional X-space.
[2]Tmax XT4 with electrical accessories requires 2 (two) additional X-spaces.
[3]Tmax XT5 with electrical accessories requires 1 (one) additional X-space.
[4]RGPP series SPD with MCB disconnect requires 3 (three) additional X-spaces.




01 Single XT1




02 Two XT1
16% space saving




03 Five XT1
26% space saving

Note: Installation of Tmax XT1 circuit breakers requires a rail for ReliaGear® neXT power panelboards and ReliaGear SB switchboards. Refer to Fillers and blanks in the numbering system chapter.

For replacement breakers or additional breakers being added to the panel, use the below table to select the required fillers and blanks to fill in leftover X space.

| Space to be filled | 30" center | 40" offset left | 40" offset right | 45" center | 45" offset left | 45" offset right |
|---|---|---|---|---|---|---|
| 1X | SR01BB | SR01BF | SR01BB | SR01BF | SR01BF | SR01BB |
| 2X | SR02BB | SR02BF | SR02BB | SR02BF | SR02BF | SR02BB |
| 3X | SR03BB | SR03BF | SR03BB | SR03BF | SR03BF | SR03BB |

# Line-side connectors and lugs

## For molded case circuit breakers



**Line-side connectors**

Each breaker horizontally mounted on the bus stack is provided with a line-side connector (LSC) and a mounting bracket. The LSC is designed to ensure an easy and accurate connection between the breakers and the conductive busbars. A patented clip design with a loaded spring ensures full contact in any circumstance. Each breaker frame has a specific LSC with the right number of clips to ensure the highest performance.

**Breaker lugs offering**

All ReliaGear® neXT breakers are provided with a set of lugs on the load side. All lugs accept either copper or aluminum wires.

### BREAKER LUGS

| Frame | Ampacity (A) | Wire size (AWG or kcmil) Cu or Al | Number of cables per lug | Installation |
|---|---|---|---|---|
| XT1 | 125 | #10–2/0 | 1 | Horizontal |
| XT2 | 25 | #14–1/0 (Cu) | 1 | Horizontal |
| XT2 | 125 | #10–2/0 | 1 | Horizontal |
| XT4 | 25–70 | #14–1/0 | 1 | Horizontal |
| XT4 | 80–225 | #4–300 | 1 | Horizontal |
| XT4 | 250 | 3/0–350 | 1 | Horizontal |
| XT5 | 600 | 2/0–500 | 2 | Horizontal/vertical |
| XT5 | 600 | 500-750* | 2 | Horizontal/vertical |
| XT6 | 800 | 500–750 | 2 | Horizontal |
| XT6 | 800 | 2/0–400 | 3 | Horizontal |
| XT7 | 1200 | 4/0–500 | 4 | Horizontal/vertical |
| XT7 | 1200 | 500–750 | 2**/3 | Horizontal***/vertical |
| FB/TEY | 15–20 | #14–#10 | 1 | Horizontal |
| FB/TEY | 25–60 | #10–#4 | 1 | Horizontal |
| FB | 70–100 | #1–1/0 | 1 | Horizontal |
| TEY | 70–100 | #4–1/0 | 1 | Horizontal |
| TEY | 110–125 | #1–3/0 (Al)<br>#3–3/0 (Cu) | 1 | Horizontal |
| A2 | 125–250 | #1–250, 2/0–300 | 1 | Horizontal |
| A2 | 250 | 350 (Al) | 1 | Horizontal |

* XT5 with 750 kcmil lugs must go in 45" offset

** For horizontal installations at or below 800 A, lug offering is (3) 500–600 kcmil OR (2) 500–750 kcmil due to WBS limitation

*** For horizontal installations above 800 A, lug offering is (3) 500–600 kcmil due to WBS limitation

# Accessories

## For molded case circuit breakers

**Internal accessories**

Common internal accessories (shunt trips, undervoltage releases, auxiliary switches, etc.) are available in common voltage ratings and are UL listed for field assembly.

**Auxiliary contacts — AUX**

The SACE® Tmax® XT, Record Plus® FB, TEY and Formula A2 circuit breakers can be equipped with auxiliary contacts that signal the status of the breaker and can be routed outside the circuit breaker itself. Options are one or two AUX on XT1, XT2, XT4, XT5 and XT6, four AUX on XT7, one AUX on 2-pole FB, TEY and two AUX on A2. The following information is available:
Open/closed (Q): indication of the status of the circuit-breaker power contacts Trip (SY): signals that the circuit breaker is opening due to the intervention of the trip unit, or to the opening of undervoltage/shunt opening releases, or to the use of the test button

**Shunt opening release — SOR/YO**

This allows the circuit breaker to open by means of a non-permanent electrical control. Release operation is guaranteed for voltage between 70% and 110% of the rated power supply voltage (Un), in both alternating and direct current. The SOR is equipped with a built-in limit contact to shut off the power supply in the open position with the trip unit tripped. A remote-controlled emergency opening command can be generated by connecting an opening button to the SOR.

| Frame | | | Voltage |
|---|---|---|---|
| XT1– XT2–XT4–XT5 –XT6 | 24–30 V AC/DC | 110–127 V AC/ 110–125 V DC | 220–240 V AC/ 220–250 V DC |
| XT7 | 24 V AC/DC | 110–120 V AC | 220–240 V AC |
| FB (2-pole only) | 24 V AC/DC | 110–130 V AC 110–125 V DC | 220–240 V AC/ 250 V DC |
| TEY (2-pole only) | 24 V AC/DC | 120 V AC | 240 V AC |
| A2 | | 110-127 V AC/ 110-125 V DC | |

**Undervoltage release — UVR/YU**

This allows the circuit breaker to open when the release is subject either to a power failure or a voltage drop. As prescribed in the standards, opening is guaranteed when the voltage is between 70% to 35% Un. After tripping, the circuit breaker can be closed again if the voltage exceeds 85% of Un.

When the undervoltage release is not energized, neither the circuit breaker nor the main contacts can be closed. A remote-controlled emergency opening command can be generated by connecting an opening button to the UVR.

| Frame | | | Voltage |
|---|---|---|---|
| XT1–XT2 –XT4–XT5–XT6 | 24–30 V AC/DC | 110–127 V AC/ 110–125 V DC | 220–240 V AC/ 220–250 V DC |
| XT7 | 24 V AC/DC | 110-120 V AC | 220–240 V AC |
| FB (2-pole only) | 24 V AC/DC | 110–130 V AC/ 110–125 V DC | 220–240 V AC/ 250 V DC |

**Padlocks and key locks**

Padlocks or key locks prevent the circuit breaker from being closed and/or opened. Maximum number of padlocks (PLL) and maximum stem dimensions are the following:

| Frame | Padlocks* | Stem min.–max. |
|---|---|---|
| XT1–XT2–XT4 | 3 | Ø 0.24–0.275" / Ø 6–7 mm |
| XT5–XT7 | 3 | Ø 0.24–0.315" / Ø 6–8 mm |
| XT6 | 3 | Ø 0.2–0.31"/ Ø 5–8 mm |
| FB / TEY | 1 | Ø 0.25" / Ø 6.35 mm |
| A2 | 3 | Ø 0.24–0.275" / Ø 6–7 mm |

*Padlocks are not included in the kits.

Multiple models of keylock provisions are offered: Kirk KCAM00010 / KCAM00010S (XT5-XT7), Ronis 1228 (XT1-XT2-XT4-XT5-XT7) and Castell (XT7). Kirk and Castell locks are at customer expense and not provided in the kit. Two options are available for Ronis: same keys (type A) and different keys. This allows the customer to create interlocking logics.

**Internal modules**

Available with several different communication protocols, the Ekip Com internal module is installed directly inside the circuit breaker. It allows the circuit breaker to be integrated in a communication network for supervision and control. Ekip Com internal modules can be used for XT2, XT4 and XT5. They can be connected to the trip unit when Ekip Touch is used. Ekip Com modules require 24 V isolated power supply to power communications. Protocols supported include:

- Modbus RTU
- Modbus TCP/IP
- Profinet
- Ethernet/IP
- IEC 61850

# Accessories

## For molded case circuit breakers

**Cartridge modules**
Cartridge Ekip Com modules, along with the internal modules, allow integration in any communication network. They can be used only on the XT7 circuit breaker equipped with an Ekip Touch/Hi-Touch trip unit, mounted directly on the terminal box. Ekip Com modules require 24 V isolated power supply to power communications. Several modules can be used simultaneously, enabling systems with different protocols. Modbus RTU, Profibus-DP and DeviceNet modules contain a terminating resistor and two dip switches for optional activation to terminate the serial network or bus. The Profibus-DP module also contains a polarization resistor and two DIP switches for its activation.

- Modbus RTU
- Modbus TCP/IP
- Profinet
- Profibus
- EthernNet/IP
- DeviceNet
- IEC 61850

**Ekip Com hub**
The Ekip Com hub is the new communication module for cloud connectivity. A circuit breaker equipped with the Ekip Com hub can establish a connection with the ABB Ability Electrical Distribution Control System (EDCS) for the low-voltage power distribution panel. This dedicated module is available for the XT7 breaker even when other modules are present. For further information on ABB Ability EDCS, please see page 48.

**Signaling modules**
The Ekip 2K signaling cartridge modules, available for XT7, supply two input and two output contacts for control and remote signaling of alarms and circuit breaker trips.

The Ekip 1K signaling module, available for the XT5, supplies one input contact and one output contact for control and remote signaling. It is installed inside the circuit breaker in the housing provided on the left down side of the circuit breaker and can be used when an Ekip Touch/Hi-Touch trip unit is present.

Ekip signaling modules can be programmed from the trip unit display or via the Ekip Connect software and app. When using Ekip Connect, combinations of events can be freely configured.

**Ekip power supply**
The Ekip power supply module supplies all Ekip trip units and modules present on the XT7 with several auxiliary power sources (in AC or DC). The cartridge module permits the installation of other advanced modules. It can be field installed at any time. Two versions are available according to the control voltage:

- Ekip supply 110–240 V AC/DC
- Ekip supply 24–48 V DC

This module is always needed with any Ekip Com module or the signaling 2K module.

If the 24 V Power Supply Module (PSM) panelboard accessory is being used to provide auxiliary power to the Ekip trip unit, the 24–48 V DC Ekip supply should be selected.

# Accessories
## Installation manuals

Additional technical information, instructions and installation manuals can be found in the following documents:

### INSTALLATION MANUALS

| Power panelboard | |
|---|---|
| 1SQC900003M0201 | Low-voltage power panel installation manual – Bulk pack |
| 1SQC900004M0201 | Low-voltage power panel installation manual – Assembled interior |
| 1SQC900014M0201 | Low-voltage power panel installation manual — Merchandise Superbox |
| 1SQC900028M0201 | Low-voltage power panel installation manual — Breaker installation and removal |

| Accessories | |
|---|---|
| 1SQC900001M0201 | AMP1 main circuit breaker meter |
| 1SQC900002M0201 | Door-in-door front |
| 1SQC900005M0201 | RELT unit |
| 1SQC900027M0201 | PSM unit |
| 1SQC900006M0201 | SPD unit |
| 1SQC900007M0201 | Solid neutral and ground fault neutral |
| 1SQC900008M0201 | Enclosures (NEMA 1, 3R, 4/4X, 12) |
| 1SQC900009M0201 | Dual main lug |
| 1SQC900010M0201 | Service entrance kit |
| 1SQC900013M0201 | Drip hood installation |
| 1SQC900015M0201 | Replacement part kits |
| 1SQC900016M0201 | Submetering |
| 1SQC900017M0201 | Lifting bar instructions |
| 1SQC900020M0201 | Neutral types and lug termination details |
| 1SQC900021M0201 | RGM40 main meter |
| 1SQC900024M0201 | IP20 main lug barrier |
| 1SQC900029M0201 | IF-series frame retrofit kit |

## Connectivity

Scalable solution for energy and asset management

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

Part of the ABB Ability offering, 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 an intuitive 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 to improve productivity and efficiency.
- **Optimize**
  Schedule and analyze automatic reports, improve the use of assets and make the right business decision.
- **Predict**
  Suggest the best maintenance date and reliability curve of installed assets based on real conditions to ensure OpEx savings.
- **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 enables the collection of electrical information from the ABB devices installed in the low-voltage power distribution panels. This innovative solution also provides access on a multi-site level, simultaneously monitoring and comparing the performance of different facilities. In addition, it can provide personal user profiles depending on the level of access they require.

**ReliaGear® neXT with Ekip Com hub**

The SACE® Tmax® XT equipped with the new Ekip Com hub establishes the cloud connection for the entire panel. This dedicated cartridge-type communication module just needs to be inserted into the terminal box and connected to the Internet. For more information, please visit http://new.abb.com/low-voltage/launches/abb-ability-edcs.





# 04

Panelboard selection guide/
numbering system

# Panelboard selection guide/numbering system




| Panelboard selection guide/numbering system | |
|---|---|
| XT breakers | 58–59 |
| TEY breakers | 60–61 |
| A2 breakers | 60 |
| FB breakers | 62 |
| Enclosure | 62 |
| Bus stack | 63 |
| Interior frame | 63–64 |
| Main lugs — Mechanical | 65 |
| Main lugs — Compression | 65 |
| Main lugs — Dual | 66 |
| Gutter covers | 66 |
| Fronts | 67 |
| Fillers and blanks | 67 |
| Barrier post | 68 |
| Vertical main kits | 68 |
| Vertical main rail kits | 69 |
| Door-in-door | 69 |
| Door-in-door filler | 70 |
| Door-in-door filler support | 70 |
| Grounds | 71 |
| Neutrals | 71 |
| Ground fault on feeder neutrals | 72 |
| Ground fault on feeder neutral current sensor kits | 72 |
| Neutral compression lugs | 73 |
| Service entrance/finger-safe barriers | 73 |
| IP20 main lug barrier | 74 |
| Horizontal mounting rail | 74 |
| Surge protection device (SPD) — RGPP series | 75 |
| Surge protection device (SPD) — SP series (legacy offering) | 75 |
| RELT | 76 |
| Wire connector kit for RELT module | 76 |
| Power supply module | 77 |
| Single-point metering — RGM40 | 77 |
| Single-point metering — AMP1 | 78 |
| Meter current transformer kit | 78 |
| Meter CTs mounting kit | 79 |
| Drip hood | 79 |
| Submetering modules | 80 |
| Submetering CTs | 80 |
| Replacement parts | 81 |

# Catalog number scheme

## XT breakers



### PART IDENTIFIER

| Code | |
|---|---|
| XT | Breaker family |

### INTERRUPTING RATING

| Code | |
|---|---|
| N | N |
| S | S |
| H | H |
| L | L |
| V | V |
| X | X |

kAIC rating depending on voltage level; refer to performance table.

### POLES

| Code | |
|---|---|
| 3 | 3 poles |

XT 1 N U 3 015

### FRAME

| Code | |
|---|---|
| 1 | XT1 |
| 2 | XT2 |
| 4 | XT4 |
| 5 | XT5 |
| 6 | XT6 |
| 7 | XT7 |

### STANDARD

| Code | |
|---|---|
| U | UL 80% rated |
| Q | UL 100% rated |

### FRAME AMPS

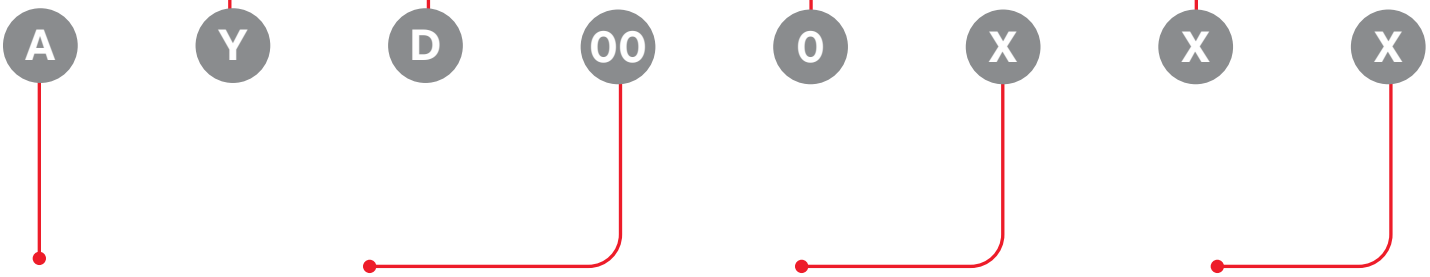
| Code | |
|---|---|
| 015 | 15 A |
| 020 | 20 A |
| 025 | 25 A |
| 030 | 30 A |
| 035 | 35 A |
| 040 | 40 A |
| 045 | 45 A |
| 050 | 50 A |
| 060 | 60 A |
| 070 | 70 A |
| 080 | 80 A |

| Code | |
|---|---|
| 090 | 90 A |
| 100 | 100 A |
| 110 | 110 A |
| 125 | 125 A |
| 150 | 150 A |
| 175 | 175 A |
| 200 | 200 A |
| 225 | 225 A |
| 250 | 250A (XT4) |
| 25A | 250 A (XT5) |
| 30A | 300 A |

| Code | |
|---|---|
| 40A | 400 A |
| 50B | 500 A |
| 60B | 600 A (XT5) |
| 600 | 600 A (XT6) |
| 800 | 800 A (XT6) |
| 60C | 600 A (XT7) |
| 80C | 800 A (XT7) |
| 10D | 1000 A |
| 12E | 1200 A |

Note: Tmax® XT MCCBs for ReliaGear® neXT power panelboards and ReliaGear SB switchboards come with filler plates when ordered separately, except XT1. Tmax XT1 circuit breakers require a rail for installation in ReliaGear neXT power panelboards and ReliaGear SB switchboards if not already installed in your existing ReliaGear neXT or SB equipment. See table below for details on which XT1 group-mount rail kit is required.

| | 30" center | 40" offset left | 40" offset right | 45" center | 45" offset left | 45" offset right |
|---|---|---|---|---|---|---|
| Single XT1 | SR1XBR | SR1XBF | SR1XBR | SR1XBF | SR1XBF | SR1XBR |
| Two XT1 group-mount | SR2XBR | SR2XBF | SR2XBR | SR2XBF | SR2XBF | SR2XBR |
| Five XT1 group-mount | SR5XBR | SR5XBF | SR5XBR | SR5XBF | SR5XBF | SR5XBR |




### LINE-SIDE TERMINALS (TOP)

| Code | |
|---|---|
| Y | Line-side connectors |

### LOAD-SIDE TERMINAL (BOTTOM)

| Code | | Code | |
|---|---|---|---|
| A | XT2 14–1/0 AWG Cu only | S | XT5 2x500–750 kcmil |
| D | XT1/XT2 10–2/0 AWG | 0 | XT6 2x500–750 kcmil |
| G | XT4 14–1/0 AWG, 100 A | U | XT6 3x2/0 AWG–400 kcmil |
| J | XT4 4 AWG–300 kcmil, 225 A | W | XT7 4x4/0 AWG–500 kcmil |
| 8 | XT4 3/0 AWG–350 kcmil, 250 A | X | XT7 3x500–750 kcmil |
| N | XT5 2x2/0 AWG–500 kcmil | | |

### FRONT ACCESSORIES

| Code | |
|---|---|
| 0 | None |
| G | Padlock |

### ADVANCED FUNCTIONALITIES

| Code | |
|---|---|
| X | None |

### TRIP UNIT

| Code | |
|---|---|
| A | TMF |
| B | TMA |
| C | Ekip DIP LIG |
| D | Molded case switch |
| E | Ekip DIP LS/I |
| F | Ekip DIP LSI |
| G | Ekip DIP LSIG |
| P | Ekip Touch LSI |
| Q | Ekip Touch LSIG |
| R | Ekip Touch Measuring LSI |
| S | Ekip Touch Measuring LSIG |
| T | Ekip Hi-Touch LSI |
| U | Ekip Hi-Touch LSIG |
| 1 | XT2 / XT4 Ekip DIP LSI |

### ACCESSORIES COMBINATION

| Code | |
|---|---|
| 00 | None |
| | Aux. |
| | Bell alarm |
| | Shunt opening release |
| | Undervoltage release |
| | Communication modules |
| | ... |

Please refer to Tmax® XT technical catalog for more information

### KEY LOCKS

| Code | |
|---|---|
| X | None |
| A | Ronis key lock – A type key |
| E | Ronis key lock – Different keys |
| G | Kirk key lock XT5–XT7 |
| K | Castell key lock XT5–XT7 |
| L | neXT service entrance |
| M | neXT service entrance + Ronis key lock – A type key |
| N | neXT service entrance + Ronis key lock – Different keys |
| P | neXT service entrance + Kirk key lock XT5–XT7 |
| Q | neXT service entrance + Castell key lock XT5–XT7 |

### ADDITIONAL CERTIFICATIONS

| Code | |
|---|---|
| X | None |

# Catalog number scheme

## TEY breakers



Note: TEY MCCBs for ReliaGear® neXT power panelboards and ReliaGear SB switchboards come with filler plates when ordered separately.

**PART IDENTIFIER**

| Code | |
|---|---|
| TEYA | neXT TEY breakers |

**POLES**

| Code | |
|---|---|
| E | 1 pole |
| F | 2 pole |

**PHASE**

| Code | | Code | |
|---|---|---|---|
| 0A | A phase (1p) | AB | AB phase (2p) |
| 0B | B phase (1p) | AC | AC phase (2p) |
| 0C | C phase (1p) | BC | CB phase (2p) |

TEYA D E C 0A A

**INTERRUPTING RATING**

| Code | |
|---|---|
| D | D |
| H | H |
| L | L |

kAIC rating depending on voltage level; refer to performance table.

**FRAME AMPS**

| Code | | Code | | Code | | Code | |
|---|---|---|---|---|---|---|---|
| C | 015 | G | 035 | L | 060 | Q | 100 |
| D | 020 | H | 040 | M | 070 | R | 110 |
| E | 025 | J | 045 | N | 080 | S | 125 |
| F | 030 | K | 050 | P | 090 | | |

## A2 breakers



Note: A2 MCCBs for ReliaGear neXT power panelboards and ReliaGear SB switchboards come with filler plates when ordered separately.

**PART IDENTIFIER**

| Code | |
|---|---|
| A2 | neXT A2 breakers |

**POLES**

| Code | |
|---|---|
| 2 | 2 pole |

**PHASES**

| Code | |
|---|---|
| AB | AB |
| BC | BC |
| AC | AC |

A2 A 2 125 AB D

**INTERRUPTING RATING**

| Code | |
|---|---|
| A | 10 ka |
| N | 25 ka |

**FRAME AMPS**

| Code | | Code | |
|---|---|---|---|
| 125 | 125 A | 200 | 200 A |
| 150 | 150 A | 225 | 225 A |
| 175 | 175 A | 250 | 250 A |

**LUG SIZE**

| Code | |
|---|---|
| D | 300 kcmil |
| L | 350 kcmil (250 A only) |

### LOAD LUG

| Code | |
|---|---|
| A | (1) #14–10. 15–20 A |
| B | (1) #10–4. 25–60 A |
| D | (1) #4–1/0, 70–100 A<br>(1) #1–3/0 Al, 110–125 A<br>(1) #3–3/0 Cu, 110–125 A |

### AUXILIARY CONTACTS

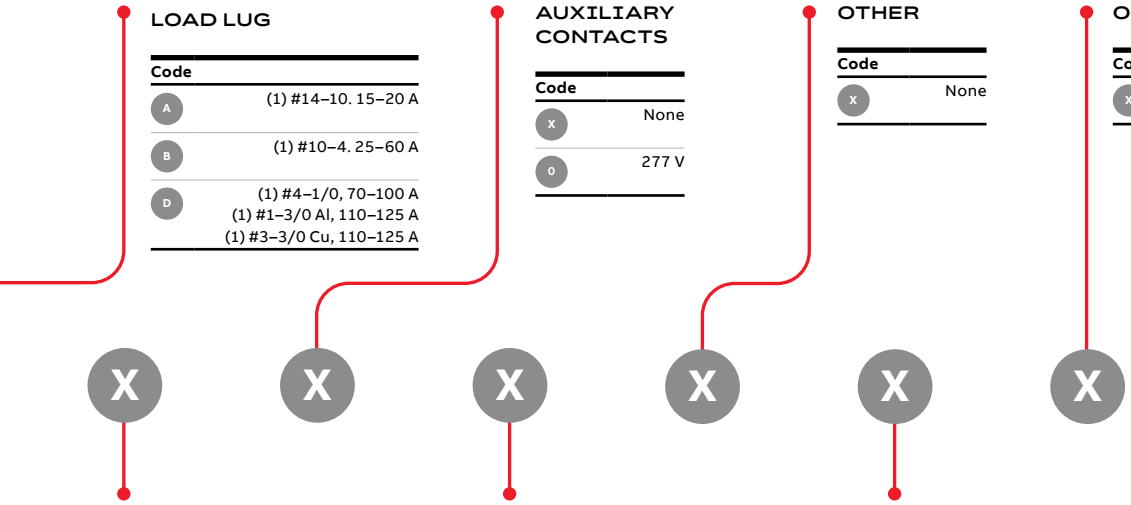
| Code | |
|---|---|
| X | None |
| 0 | 277 V |

### OTHER

| Code | |
|---|---|
| X | None |

### OTHER

| Code | |
|---|---|
| X | None |




### SHUNT TRIP

| Code | |
|---|---|
| X | None |
| K | 24 V |
| M | 120 V |
| N | 240 V |

### BELL ALARM

| Code | |
|---|---|
| X | None |
| A | Bell alarm |

### PADLOCK

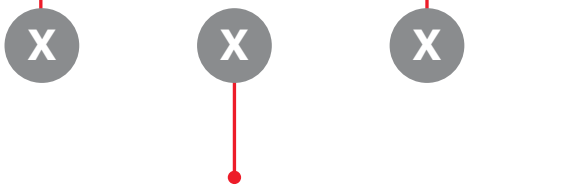
| Code | |
|---|---|
| X | None |
| C | Padlock |

### PADLOCK

| Code | |
|---|---|
| X | None |
| P | Padlock |

### AUX/BELL ALARM

| Code | |
|---|---|
| X | None |
| A | Aux/bell alarm |




### SHUNT TRIP

| Code | |
|---|---|
| X | None |
| N | Shunt trip |

### SERVICE ENTRANCE

| Code | |
|---|---|
| X | None |
| E | Service Entrance Barriers |

# Catalog number scheme

## FB breakers



Note: FB MCCBs for ReliaGear® neXT power panelboards and ReliaGear SB switchboards come with filler plates when ordered separately.

NEFB V 1 6 TE 015 R2A

### PART IDENTIFIER

| Code | |
|---|---|
| NEFB | neXT FB breakers |

### POLES

| Code | |
|---|---|
| 1 | 1 pole |
| 2 | 2 pole |

### TRIP UNIT

| Code | |
|---|---|
| TE | Fixed thermal magnetic |

### RATED CURRENT

| Code | |
|---|---|
| 015 | 15 A |
| 020 | 20 A |
| 025 | 25 A |
| 030 | 30 A |
| 035 | 35 A |
| 040 | 40 A |
| 045 | 45 A |
| 050 | 50 A |
| 060 | 60 A |
| 070 | 70 A |
| 080 | 80 A |
| 090 | 90 A |
| 100 | 100 A |

### INTERRUPTING RATING

| Code | |
|---|---|
| V | V |
| N | N |
| H | H |
| L | L |

kAIC rating depending on voltage level; refer to performance table.

### VOLTAGE RATING

| Code | |
|---|---|
| 6 | 600/347 V |

### PHASE

| Code | |
|---|---|
| R2A | A phase (1p) |
| R2B | B phase (1p) |
| R2C | C phase (1p) |
| R2AB | AB phases (2p) |
| R2AC | AC phases (2p) |
| R2BC | BC phases (2p) |

## Enclosure



ER 60 30 B

### PART IDENTIFIER

| Code | |
|---|---|
| ER | Enclosure |

### NEMA TYPE

| Code | |
|---|---|
| B | NEMA 1 unpainted |
| A | NEMA 1 painted |
| H | NEMA 2 |
| R | NEMA 3R |
| C | NEMA 4 |
| S | NEMA 4X (316 stainless steel) |
| D | NEMA 12 |

### HEIGHT

| Code | |
|---|---|
| 60 | 60" |
| 72 | 72" |
| 84 | 84" |
| 96" | 96" |

### WIDTH

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

# Catalog number scheme

## Bus stack



IN 16 02 BL 3 H1

### PART IDENTIFIER

| Code | |
|---|---|
| IN | Interior |

### X HEIGHT

| Code | |
|---|---|
| 16 | 16X |
| 24 | 24X |
| 32 | 32X |
| 40 | 40X |

### BUS MATERIAL

| Code | |
|---|---|
| B3 | 1000 PSI rated copper |
| B4 | Tin density-rated copper |
| H1 | Heat-rated aluminum |
| H2 | Heat-rated copper |
| H3 | Tin heat-rated aluminum |
| H4 | Tin heat-rated copper |

### AMPACITIES

| Code | |
|---|---|
| 02 | 250 A |
| 04 | 400 A |
| 06 | 600 A |
| 08 | 800 A |
| 10 | 1000 A |
| 12 | 1200 A |

### TYPE

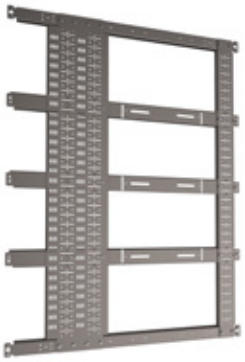
| Code | |
|---|---|
| BL | Bolted lug pad |
| BF | Bolted feed-through |
| NN | Clean bus |

### NUMBER OF PHASES

| Code | |
|---|---|
| 1 | 1 |
| 3 | 3 |

## Catalog number scheme

### Interior frame



EIF 16 30 C

**PART IDENTIFIER**

| Code | |
|---|---|
| EIF | Interior frame |

**ORIENTATION**

| Code | |
|---|---|
| C | Center |
| F | Offset |

**X-SPACES**

| Code | |
|---|---|
| 16 | 16X |
| 24 | 24X |
| 32 | 32X |
| 40 | 40X |

**WIDTH**

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

### Interior frame (legacy IF-series)



IF 16 30 C

**PART IDENTIFIER**

| Code | |
|---|---|
| IF | Interior frame |

**ORIENTATION**

| Code | |
|---|---|
| C | Center |
| F | Offset |

**X-SPACES**

| Code | |
|---|---|
| 16 | 16X |
| 24 | 24X |
| 32 | 32X |
| 40 | 40X |

**WIDTH**

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

## Catalog number scheme

### Main lugs — Mechanical



Note: Each catalog contains a single lug. The quantity should be multiplied by the number of phases (2X for single phase, 3X for 3 phase, and the quantity is doubled if feedthrough is needed). Also, this total quantity should be multiplied by 2 if there are 2 lugs needed per phase.

LG ML2 75 A

**PART IDENTIFIER**

| Code | |
|---|---|
| LG | Main lug |

**WIRE SIZE**

| Code | |
|---|---|
| 60 | 2 AWG–600 kcmil |
| 75 | 3/0 AWG–750 kcmil |

**LUG TYPE AND NUMBER OF WIRES**

| Code | |
|---|---|
| ML2 | Standard mechanical 2-wire lug |

**MATERIAL**

| Code | |
|---|---|
| A | Aluminum |
| C | Copper |

### Main lugs — Compression



Note: Each catalog generally contains the lugs for a single phase. The quantity should be multiplied by the number of phases (2X for single phase, 3X for 3 phase, and the quantity is doubled if feedthrough is needed).

LG CL 2 75 A

**PART IDENTIFIER**

| Code | |
|---|---|
| LG | Main lug |

**NUMBER OF WIRES**

| Code | |
|---|---|
| 1 | 1-wire lug |
| 2 | 2-wire lug |
| 4 | 4-wire lug |

**MATERIAL**

| Code | |
|---|---|
| A | Aluminum |

**LUG TYPE**

| Code | |
|---|---|
| CL | Compression standard |

**WIRE SIZE**

| Code | |
|---|---|
| 01 | 1/0 |
| 02 | 2/0 |
| 03 | 3/0 |
| 04 | 4/0 |
| 25 | 250 kcmil |

| Code | |
|---|---|
| 30 | 350 kcmil |
| 40 | 400 kcmil |
| 50 | 500 kcmil |
| 60 | 600 kcmil |
| 75 | 750 kcmil |

# Catalog number scheme

## Main lugs — Dual



Note: Each catalog contains all lugs/ components needed for Dual Main lugs. Quantity should always be 1.

LG M D 4 75 A

### PART IDENTIFIER

| Code | |
|---|---|
| LG | Main lug |

### CONFIGURATION

| Code | |
|---|---|
| D | Dual main, 3 phase, silver plated |
| P | Dual main, 1 phase, silver plated |
| T | Dual main , 3 phase, tin plated |
| S | Dual Main, 1 Phase, tin plated |

### WIRE SIZE

| Code | |
|---|---|
| 25 | 250 kcmil |
| 30 | 350 kcmil |
| 40 | 400 kcmil |
| 50 | 500 kcmil |
| 60 | 600 kcmil |
| 75 | 750 kcmil |

### LUG TYPE

| Code | |
|---|---|
| M | Mechanical |
| C | Compression |

### NUMBER OF WIRES

| Code | |
|---|---|
| 4 | 4 wire lug |

### MATERIAL

| Code | |
|---|---|
| A | Aluminum |
| C | Copper |

## Gutter covers



GC 30C 16 BL A

### PART IDENTIFIER

| Code | |
|---|---|
| GC | Gutter cover |

### TYPE

| Code | |
|---|---|
| BL | Bolted lug pad |
| BF | Bolted feed-through |
| NN | Clean bus |

### WIDTH AND ORIENTATION

| Code | |
|---|---|
| 30C | 30" center |
| 40F | 40" offset |
| 45C | 45" center |
| 45F | 45" offset |

### X HEIGHT

| Code | |
|---|---|
| 16 | 16X |
| 24 | 24X |
| 32 | 32X |
| 40 | 40X |

### NEMA TYPE

| Code | |
|---|---|
| A | NEMA 1 with no locking covers |
| S | NEMA 1 with locking covers, standard lock |
| L | NEMA 1 with locking covers, Corbin lock (TEU-1 key) |

# Catalog number scheme

## Fronts



Note: Vented fronts to be used with 100% rated breakers.

FT 30 S0 0 0 7 5

### PART IDENTIFIER

| Code | |
|---|---|
| FT | Front |

### TYPE

| Code | |
|---|---|
| 0 | Standard front |
| V | Vented front |

### WIDTH

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

### CATEGORY

| Code | |
|---|---|
| S0 | Standard |
| VM | Vertical main |
| VF | Vertical filler |

### HEIGHT

Last three digits in inches with a decimal before last digit, i.e. 155 is 15.5 inches tall.

## Fillers and blanks



SR 01BF

### PART IDENTIFIER

| Code | |
|---|---|
| SR | Spacer |

### X-HEIGHT AND FILLER

| Code | |
|---|---|
| 01AF | 1X Accessory blank and filler XT4 |
| 01AB | 1X Accessory blank XT4 |
| 01BF | 1X Blank and filler |
| 01BB | 1X Blank only |
| 01CF | 1X Accessory blank and filler XT2 |
| 01CB | 1X Accessory blank XT2 |
| 01EF | 1X Filler only |
| 02BF | 2X Blank and filler |
| 02BB | 2X Blank only |
| 02EF | 2X Filler only |
| 03BF | 3X Blank and filler |
| 03BB | 3X Blank only |
| 03EF | 3X Filler only |
| 04EF | 4X Filler only |
| 06RF | 3X RELT filler |
| 06RF | 3X PSM filler |
| 06EF | 6X Filler only |

| Code | |
|---|---|
| 09MF | 9X Submetering filler |
| 06SF | 6X SPD filler (RGPP series) |
| 10SF | 10X SPD filler (legacy SP series) |
| 14MF | 14X Submetering filler |
| T1BB | XT1 Blank only |
| 1XBB | Single XT1 blank only |
| 1XBF | Single XT1 blank, rail and filler |
| 1XBR | Single XT1 blank and rail |
| 1XEF | Single XT1 filler only |
| 2XBB | Two XT1 blank only |
| 2XBF | Two XT1 blank, rail and filler |
| 2XBR | Two XT1 blank and rail |
| 2XEF | Two XT1 filler only |
| 5XBF | Five XT1 blank, rail and filler |
| 5XBR | Five XT1 blank and rail |
| 5XEF | Five XT1 filler only |

Note: Blank = A spacer to fill the area occupied by a circuit breaker when plugged into the interior bus stack.

Filler = A spacer to fill the area between a plugged-in circuit breaker and the gutter.

| Breaker frame/ accessory | Filler needed |
|---|---|
| TEY 1 Pole | SR01EF |
| FB 1 Pole | SR01EF |
| TEY 2 Pole | SR02EF |
| FB 2 Pole | SR02EF |
| Single XT1 | SR1XEF |
| Two XT1 group mount | SR2XEF |
| Five XT1 group mount | SR5XEF |
| XT2/XT4 | SR03EF |
| XT5 | SR04EF |

| Breaker frame/ accessory | Filler needed |
|---|---|
| XT6 | SR06EF |
| XT7 | N/A |
| RELT | SR06RF |
| PSM | SR06RF |
| SPD (RGPP series) | SR06SF |
| SPD (legacy SP series) | SR10SF |
| Metering | SR04EF |
| Submetering 9X | SR09MF |
| Submetering 14X | SR14MF |

Note: Tmax® XT MCCBs for ReliaGear® neXT power panelboards and ReliaGear SB switchboards come with filler plates when ordered separately, except XT1. Tmax XT1 circuit breakers require a rail to mount in ReliaGear neXT power panelboards and ReliaGear SB switchboards. This rail and associated hardware comes standard with the different spacer options. See table below for details on which XT1 group-mount rail kit is required.

| | 30" center | 40" offset left | 40" offset right | 45" center | 45" offset left | 45" offset right |
|---|---|---|---|---|---|---|
| Single XT1 | SR1XBR | SR1XBF | SR1XBR | SR1XBF | SR1XBF | SR1XBR |
| Two XT1 group-mount | SR2XBR | SR2XBF | SR2XBR | SR2XBF | SR2XBF | SR2XBR |
| Five XT1 group-mount | SR5XBR | SR5XBF | SR5XBR | SR5XBF | SR5XBF | SR5XBR |

## Catalog number scheme

### Barrier post



**PART IDENTIFIER**

| Code | |
|---|---|
| BP | Barrier post |

**ORIENTATION**

| Code | |
|---|---|
| C | Center |
| F | Offset |

BP 30 C

**WIDTH**

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

### Vertical main kits



**PART IDENTIFIER**

| Code | |
|---|---|
| VM | Vertical main kit |

**POLES**

| Code | |
|---|---|
| 3P | 3 phase |
| 2P | 1 phase |

VM XT7 3P S

**FRAME**

| Code | |
|---|---|
| XT5 | XT5 |
| XT7 | XT7 |

**PLATING**

| Code | |
|---|---|
| S | Silver |
| T | Tin |

—
Note: If you need full kit, you should order both the vertical main kit and the vertical main rail kit.

## Catalog number scheme

### Vertical main rail kits



VMR 45 F

**PART IDENTIFIER**

| Code | |
|---|---|
| VMR | Vertical main rail kit |

**ORIENTATION**

| Code | |
|---|---|
| C | Center |
| F | Offset |

**WIDTH**

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

### Door-in-door



DD 30 60 AH C S

**PART IDENTIFIER**

| Code | |
|---|---|
| DD | Door in door |

**ENCLOSURE WIDTH**

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

**LOCK TYPE**

| Code | |
|---|---|
| S | Standard |
| P | Padlock provision 0.33" |

**ENCLOSURE HEIGHT**

| Code | |
|---|---|
| 60 | 60" |
| 72 | 72" |
| 84 | 84" |
| 96 | 96" |

**TYPE**

| Code | |
|---|---|
| AH | NEMA 1 hinged cover |

**ORIENTATION**

| Code | |
|---|---|
| C | Center |
| F | Offset |

# Catalog number scheme

## Door-in-door filler



DD FIL 30 XX 03 SC

### PART IDENTIFIER

| Code | |
|---|---|
| DD | Door in door |
| FIL | Filler |

### MAIN/ ORIENTATION

| Code | |
|---|---|
| SC | Standard center |
| SF | Standard offset |
| VC | Vertical center |
| VF | Vertical offset |

### WIDTH

| Code | |
|---|---|
| 30 XX | 30" center |
| 40 XX | 40" offset with vertical main breaker |
| 45 XX | 45" center |
| 40 45 | 40" or 45" offset |

### HEIGHT

| Code | |
|---|---|
| 03 | 3" |
| 09 | 9" |
| 15 | 15" |
| 21 | 21" |

| Code | |
|---|---|
| 27 | 27" |
| 33 | 33" |
| 39 | 39" |

## Door-in-door filler support



DD SUP 08

### PART IDENTIFIER

| Code | |
|---|---|
| DD | Door in door |

### X LENGTH

| Code | |
|---|---|
| 08 | 8" |
| 12 | 12" |
| 16 | 16" |
| 20 | 20" |
| 24 | 24" |
| 32 | 32" |
| 36 | 36" |
| 40 | 40" |

### SUPPORT PREFIX

| Code | |
|---|---|
| SUP | Support |

# Catalog number scheme

## Grounds



Note 1: Aluminum grounds accept both aluminum and copper wires; copper grounds accept only copper wires.

GD BG 49 A7

### PART IDENTIFIER

| Code | |
|---|---|
| GD | Ground |

### GROUND MATERIAL

| Code | |
|---|---|
| A7 | Aluminum (750 MCM max.) |
| AL | Aluminum |
| CU | Copper |

### BONDED OR ISOLATED

| Code | |
|---|---|
| BG | Bonded |
| IG | Isolated |

### NUMBER OF WIRES

| Code | |
|---|---|
| 10 | 10 |
| 47 | 47 |
| 49 | 49 |

## Neutrals



Note 1: All neutrals include a bonding kit.
Note 2: Compression lugs must be ordered separately when compression lug neutral is ordered (COMP and DCOM type).
Note 3: Expanded wire range and terminations available (A7 suffix). See **1SQC900020M0201** for more information.
Note 4: Aluminum neutrals accept both aluminum and copper wires; copper neutrals accept only copper wires.

NL 04 I 0 N ST12 A7

### PART IDENTIFIER

| Code | |
|---|---|
| NL | Neutral |

### ISOLATION

| Code | |
|---|---|
| I | Isolated neutral with grounding kit |

### MAIN GF

| Code | |
|---|---|
| N | No ground fault |
| G | With ground fault |

### NEUTRAL MATERIAL

| Code | |
|---|---|
| A7 | Aluminum (750 MCM max.) |
| AL | Aluminum |
| CU | Copper |

### AMPACITY

| Code | |
|---|---|
| 02 | 250 A |
| 04 | 400 A |
| 06 | 600 A |

| Code | |
|---|---|
| 08 | 800 A |
| 10 | 1000 A |
| 12 | 1200 A |

### NUMBER OF GF FEEDERS

| Code | |
|---|---|
| 0 | 0 |

### MAIN TYPE

| Code | |
|---|---|
| ST12 | Standard neutral, 12" lug |
| ST15 | Standard neutral, 15" lug |
| ST21 | Standard neutral, 21" lug |
| STND | Standard neutral (copper) |
| 7X7X | 750 MCM lugs, no GF |
| COMP | Comp main lugs |
| DCOM | Dual comp lugs |
| D5X7 | Dual mech lugs, 500 MCM |
| D7X7 | Dual mech lugs, 750 MCM |
| XT4T/B | XT4 main (GF) top/bottom |

| Code | |
|---|---|
| XT5T/B | XT5 main (GF) top/bottom |
| 5X7T/B | XT7 main, 500 MCM (GF) top/bottom |
| 7X7T/B | XT7 main, 750 MCM (GF) top/bottom |
| V4TT/B | Vert. main, 750 MCM (no GF) top/bottom |
| D240 | 200% dual main lugs, 40" wide panel |
| D245 | 200% dual main lugs, 45" wide panel |
| M240 | 200% main lugs, 40" wide panel |
| M245 | 200% main lugs, 45" wide panel |

# Catalog number scheme

## Ground fault on feeder neutrals



NL 04 I 0 N DH40 A7

### PART IDENTIFIER

| Code | |
|---|---|
| NL | Neutral |

### ISOLATION

| Code | |
|---|---|
| I | Isolated neutral with grounding kit |

### MAIN GF

| Code | |
|---|---|
| N | No ground fault |
| G | With ground fault |

### NEUTRAL MATERIAL

| Code | |
|---|---|
| A7 | Aluminum (750 MCM max.) |
| AL | Aluminum |

### AMPACITY

| Code | | Code | |
|---|---|---|---|
| 02 | 250 A | 08 | 800 A |
| 04 | 400 A | 10 | 1000 A |
| 06 | 600 A | 12 | 1200 A |

### NUMBER OF GF FEEDERS

| Code | |
|---|---|
| 0 | 0 |
| 4 | 4 |
| 6 | 6 |

### MAIN TYPE

| Code | | Code | |
|---|---|---|---|
| DH40 | Dual mech main/ horizontal main breaker, 40"W | 5540 | XT5 main, 500 MCM (GF), 40"W |
| MH40 | Main lug/horizontal main breaker, 40"W | 5545 | XT5 main, 500 MCM (GF), 45"W |
| DH45 | Dual mech main/ horizontal main breaker, 45"W | 7540 | XT5 main, 750 MCM (GF), 40"W |
| MH45 | Main lug/horizontal main breaker, 45"W | 7545 | XT5 main, 750 MCM (GF), 45"W |
| X440 | XT4 main (GF), 40"W | 5745 | XT7 main, 500 MCM (GF), 45"W |
| X445 | XT4 main (GF), 45"W | 7745 | XT7 main, 750 MCM (GF), 45"W |

Note 1: These ground fault neutrals are not orderable as loose units, only factory assembled.
Note 2: Expanded wire range and terminations available (A7 suffix).
See **1SQC900020M0201** for more information.

## Ground fault on feeder neutral current sensor kits



NL CT XT2 60

### PART IDENTIFIER

| Code | |
|---|---|
| NL | Neutral |

### WIRE SIZE/ AMPACITY

| Code | |
|---|---|
| 60 | XT2 ≤ 60 A sensor |
| 100 | XT2 ≥ 100 A sensor |
| 350 | XT4 350 kcmil |
| 500 | XT5 500 kcmil |
| 750 | XT5 750 kcmil |

### CURRENT SENSOR

| Code | |
|---|---|
| CT | Current sensor |

### BREAKER FRAME

| Code | |
|---|---|
| XT2 | XT2 |
| XT4 | XT4 |
| XT5 | XT5 |

Note: See **1SQC900025M0201** for neutral CT replacement instructions.

## Catalog number scheme

### Neutral compression lugs



LGN 750

**PART IDENTIFIER**

| Code | |
|---|---|
| LGN | Neutral compression lug |

**WIRE SIZE**

| Code | |
|---|---|
| 010 | 1/0 |
| 020 | 2/0 |
| 030 | 3/0 |
| 040 | 4/0 |
| 250 | 250 kcmil |
| 300 | 300 kcmil |
| 350 | 350 kcmil |
| 400 | 400 kcmil |
| 500 | 500 kcmil |
| 600 | 600 kcmil |
| 750 | 750 kcmil |

### Service entrance/finger-safe barriers



SB X1 W35 P3

**PART IDENTIFIER**

| Code | |
|---|---|
| SB | Service entrance barrier |

**NUMBER OF POLES**

| Code | |
|---|---|
| P3 | 3 |
| P2 | 2 |

**BREAKER FRAME**

| Code | |
|---|---|
| X1 | XT1 |
| X2 | XT2 |
| X4 | XT4 |
| X5 | XT5 |
| X6 | XT6 |
| X7 | XT7 |
| A2 | A2 |

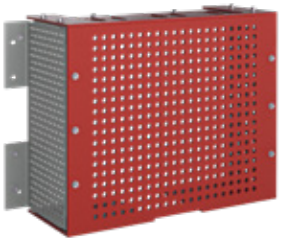
**WIRE SIZE**

| Code | |
|---|---|
| W02 | 2/0 AWG |
| WT2 | 2/0 AWG XT2 thermo mag |
| WE2 | 2/0 AWG XT2 electronic |
| W30 | 300 kcmil |

| Code | |
|---|---|
| W35 | 350 kcmil |
| W40 | 400 kcmil |
| W50 | 500 kcmil |
| W75 | 750 kcmil |

# Catalog number scheme

## IP20 main lug barrier



**PART IDENTIFIER**

| Code | |
|---|---|
| IP20B | IP20 barrier |

**TYPE**

| Code | |
|---|---|
| ML | Main lug |

IP20B ML

Note 1: When ordering the IP20 barrier separately, (1) additional horizontal mounting rail is required to be mounted in the enclosure.

Note 2: The IP20 barrier comes with (4) top barriers. Select the appropriate one according to the number of cables. See **1SQC900024M0201** for more information.

## Horizontal mounting rail



**PART IDENTIFIER**

| Code | |
|---|---|
| HMR | Horizontal mounting rail |

**ORIENTATION**

| Code | |
|---|---|
| C | Center |
| F | Offset |

HMR 30 C

**WIDTH**

| Code | |
|---|---|
| 30 | 30" |
| 40 | 40" |
| 45 | 45" |

## Catalog number scheme

### Surge protection device (SPD) — RGPP series



Notes: For connection to the bus stack, a separate plug-in disconnect (ReliaGear® Tmax® XT circuit breaker) is required. See **1SQC900945D0201** for more information.

SPDs come with filler plate when ordered separately.

RGPP SP 120 Y 08 T1

**PART IDENTIFIER**

| Code | |
|---|---|
| RGPP SP | ReliaGear neXT SPD |

**SPD TYPE**

| Code | |
|---|---|
| T1 | Type 1 |
| T2 | Type 2 |

**VOLTAGE TYPE**

| Code | |
|---|---|
| 120 Y | 120 V AC Wye |
| 240 Y | 240 V AC Wye |

| Code | |
|---|---|
| 277 Y | 277 V AC Wye |
| 347 Y | 347 V AC Wye |
| 480 D | 480 V AC Delta |

**IMPULSE CURRENT**

| Code | |
|---|---|
| 08 | 80 kA |
| 15 | 150 kA |

| Code | |
|---|---|
| 22 | 225 kA |
| 30 | 300 kA |

### Surge protection device (SPD) — SP series (legacy offering)



Note: SPDs come with filler plate when ordered separately.

SP 120 Y 06 X4 01

**PART IDENTIFIER**

| Code | |
|---|---|
| SP | SPD |

**DISCONNECT DEVICE**

| Code | |
|---|---|
| XT4 | XT4 |

**SPD TYPE**

| Code | |
|---|---|
| 01 | Type 1 |
| 02 | Type 2 |

**VOLTAGE TYPE**

| Code | |
|---|---|
| 120 Y | 120 V AC Wye |
| 277 Y | 277 V AC Wye |
| 347 Y | 347 V AC Wye |
| 480 D | 480 V AC Delta |

**IMPULSE CURRENT**

| Code | |
|---|---|
| 06 | 65 kA |
| 08 | 80 kA |
| 12 | 125 kA |

| Code | |
|---|---|
| 15 | 150 kA |
| 20 | 200 kA |
| 30 | 300 kA |

# Catalog number scheme

## RELT



—

Notes: RELT is available for the 40"W and 45"W enclosures only. When RELT is ordered separately:
- For XT7, Ekip supply and Ekip signaling 2k are also needed — see wire connector kits for RELT module.
- For XT5, Ekip signaling 1k is also needed — see wire connector kits for RELT module.
- RELT comes with filler plate.

When RELT is ordered with configured panel:
- For XT7, Ekip supply and Ekip signaling 2k are supplied in a CN series wire connector kit.
- For XT5, Ekip signaling 1k is supplied in a CN series wire connector kit.

**RT 04 A**

### PART IDENTIFIER

| Code | |
|---|---|
| RT | RELT |

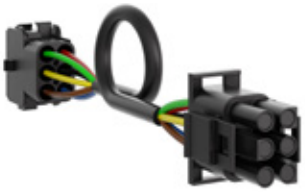
### VOLTAGE

| Code | |
|---|---|
| A | 120/240 V, 208/120 V and 240 V Delta |
| B | 480 V, 480 V Delta and 480/277 |
| C | 600 V, 600 V Delta and 600/347 |

### ENCLOSURE WIDTH

| Code | |
|---|---|
| 04 | 40"–45" |

## Wire connector kit for RELT module



—

Notes: For replacement wire connector kits, an exact replacement must be used (i.e., a 2k-1 kit must be used to replace an existing 2k-1 kit). Failure to do so may result in incorrect RELT functionality or require the breaker to be re-programmed. Refer to 9AKK107991A2520 and 1SQC900005M0201 for more information.

CN001 is a cable extension for use with XT5 and XT7 vertical mains.

CN002 includes Ekip signaling 1k and wire connectors.

CN003 includes Ekip 2k-1 signaling and Ekip supply.

CN004 includes Ekip 2k-3 signaling and Ekip supply. CN002 and CN004 are ONLY compatible with firmware version 3.10.00 or higher. Refer to 9AKK107991A2520 to validate firmware version.

When XT5 vertical main is used, you must order CN001 and CN002.

When XT7 vertical main is used, you must order either CN001 and CN003 OR CN001 and CN004, depending on firmware version.

**CN 001**

### PART IDENTIFIER

| Code | |
|---|---|
| CN | Wire connector kit |

### FOR USE WITH

| Code | |
|---|---|
| 001 | Connector extension kit (vertical main) |
| 002 | XT5 – 1k kit |
| 003 | XT7 – 2k-1 kit |
| 004 | XT7 – 2k-3 kit |

# Catalog number scheme

## Power supply module



Notes: PSM is available for the 40"W and 45"W enclosures only.

PSM comes with a filler plate.

PSM 04 A

### PART IDENTIFIER

| Code | |
|---|---|
| PSM | Power supply module |

### VOLTAGE

| Code | |
|---|---|
| A | 120/240 V, 208/120 V and 240 V Delta |
| B | 480 V, 480 V Delta and 480/277 |

### ENCLOSURE WIDTH

| Code | |
|---|---|
| 04 | 40"–45" |

## Single-point metering — RGM40



Note: Please also select a current transformer kit and a mounting kit. Single-point meters come with filler plate when ordered separately.

RGM40 V1 M X

### PART IDENTIFIER

| Code | |
|---|---|
| RGM40 | Main meter |

### COMMUNICATION PROTOCOL

| Code | |
|---|---|
| M | Modbus RTU |
| T | Modbus TCP |
| B | BACnet |

### FUNCTIONS

| Code | |
|---|---|
| V1 | Standard |
| V2 | Standard + basic datalog |
| V6 | Advanced: datalog, PQ, waveform |

### VOLTAGE

| Code | |
|---|---|
| X | No transformer 120/240 V single phase, 120/240 V Delta high-leg, 208/120 V Wye, 480/277 V Wye |
| T | With transformer 240, 480, 600 V Delta, 600/347 V Wye |

Advanced: data logging, harmonics analysis, 512 samples per cycle waveform recorder.

## Catalog number scheme

### Single-point metering — AMP1 (legacy offering)



—

Notes: Please also select a current transformer kit and a mounting kit. Single-point meters come with filler plate when ordered separately.

MT 04 AP

**PART IDENTIFIER**

| Code | |
|---|---|
| MT | Single-point metering – AMP1 |

**METER OPTIONS**

| Code | |
|---|---|
| AP | Pulse |
| AM | AMP1, Modbus |
| AD | AMP1, Modbus data log |
| AB | AMP1, BACnet |

**ENCLOSURE WIDTH**

| Code | |
|---|---|
| 04 | 40"–45" |

### Meter current transformer kit



—

Note: Previously used with the AMP1 main meter, which has since been phased out and replaced with the RGM40.

MT A 03 02 CT

**PART IDENTIFIER**

| Code | |
|---|---|
| MT | Meter current transformer kit |

**METER USED**

| Code | |
|---|---|
| A | RGM40 |

**PHASE**

| Code | |
|---|---|
| 03 | 3-phase |

**CT DESIGNATION**

| Code | |
|---|---|
| CT | For CTs only |

**AMPACITY**

| Code | |
|---|---|
| 02 | 250 A |
| 04 | 400 A |
| 06 | 600 A |
| 08 | 800 A |
| 10 | 1000 A |
| 12 | 1200 A |

## Catalog number scheme

### Meter CTs mounting kit



**PART IDENTIFIER**

| Code | |
|---|---|
| MT | Meter CTs mounting kit |

**DESIGNATION**

| Code | |
|---|---|
| MK | Mounting kit only |

MT 40F M MK

**ENCLOSURE WIDTH AND ORIENTATION**

| Code | |
|---|---|
| 40F | 40" offset |
| 45C | 45" center |
| 45F | 45" offset |

**METER TYPE**

| Code | |
|---|---|
| M | Main |

### Drip hood



**PART IDENTIFIER**

| Code | |
|---|---|
| DHS | Drip hood (14.5" deep) |
| DH0 | Drip hood (10.5" deep) |

**WIDTH**

| Code | |
|---|---|
| 30 | 30" wide |
| 40 | 40" wide |
| 45 | 45" wide |

DHS 30

# Catalog number scheme

## Submetering modules



—
Note: Qbrick 6 can only be used on 240V and lower circuits.

RGM 4500Q 1X6DU X

### TYPE

| Code | |
|---|---|
| RGM | RGM |

### MODEL

| Code | |
|---|---|
| 4500Q | 4500 Qbrick |

### VOLTAGE

| Code | |
|---|---|
| X | Without transformer(<=240V) |
| T | With current transformer (>240V) |

### CIRCUITS

| Code | |
|---|---|
| 1X6DU | One Qbrick 6* with display unit |
| 2X6DU | Two Qbrick 6* with display unit |
| 3X6DU | Three Qbrick 6* with display unit |
| 4X6DU | Four Qbrick 6* with display unit |
| 1X4DU | One Qbrick 4 with display unit |
| 2X4DU | Two Qbrick 4 with display unit |
| 3X4DU | Three Qbrick 4 with display unit |
| 4X4DU | Four Qbrick 4 with display unit |

## Submetering CTs

RGMSCT 0050 C1 SO

### TYPE

| Code | |
|---|---|
| RGMSCT | RGMSCT |

### BREAKER AMPS SERVED (MAX)

| Code | |
|---|---|
| 0050 | 0-50Amps |
| 0100 | 51-100Amps |
| 0200 | 101-200Amps |

| Code | |
|---|---|
| 0400 | 201-400Amps |
| 0800 | 401-800Amps |
| 1200 | 801-1200Amps |

### ACCURACY

| Code | |
|---|---|
| C1 | 0.1% Accuracy Class |
| S2 | 0.2% Accuracy Class |

### CORE TYPE

| Code | |
|---|---|
| SO | Solid core |

—
Note: These submetering components are not orderable as loose units, only available through factory assembled option, no Bulk Pack.

# Catalog number scheme

## Replacement parts

### TYPE

| Code | |
|---|---|
| RGRP | ReliaGear replacement parts |

RGRP RGRS

### REPLACEMENT PART TYPE

| Code | |
|---|---|
| RGRS | Rheolube 368 50ml – clip grease – 1pc<br>Grease used to apply on breaker clips to plug into bus stack |
| DPIN | Door hinge pins – 6pcs<br>Door hinge pins used to secure gutter doors and standard locking doors to enclosure |
| TSCR | 1/4-20 Thread-forming screws – 20pcs<br>Standard panel screws that come in two lengths, qty 10 of 3/8", qty 10 of 1.25" |
| SKEY | Standard C135 key – DID & SLD – 1pc<br>Standard key for door within door and standard locking doors |
| CKEY | TEU-1 Key (Corbin) – 1pc<br>Corbin key for standard locking doors |
| CLCK | Corbin lock – 1pc<br>Corbin lock for standard locking doors |
| YLCK | Yale padlock #47 – 1pc |
| SLCK | Standard Southco lock – 1pc |
| PLCK | Padlockable lock – 1pc<br>Lock for door within door that accepts a padlock |
| CDKP | Circuit directory kit, plastic – 1pc<br>Kit containing a circuit directory card, plastic holder and circuit numbering strips |
| CDKM | Circuit directory kit, metal – 1pc<br>Kit containing a circuit directory card, metal holder and circuit numbering strips |
| IFRK | IF-series frame retrofit kit – 5pc<br>Kit containing a metal bracket and hardware to provide additional leverage points on legacy IF-series interior frames |

Note: For additional information, please refer to the replacement parts instruction sheet **1SQC900015M0201**.

## Notes

**US**
ABB Inc.
305 Gregson Drive
Cary, NC 27511

**new.abb.com/low-voltage/launches/reliagear-next**

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB Inc does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB Inc. © Copyright 2026 ABB. All rights reserved. Specifications subject to change without notice.

1SQC900001C0201 rev N PDF (5.2026)