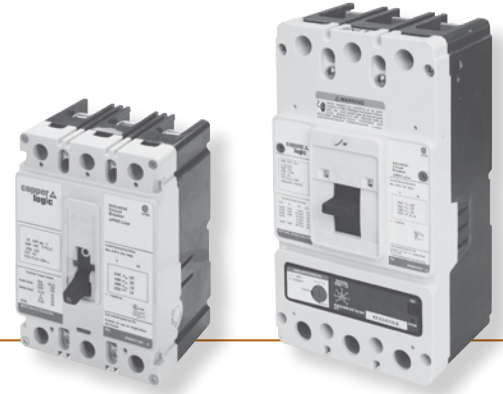


# cPRO molded case circuit breakers & switches

circuit and personnel protection



Circuit breakers continue to offer a safe and reusable alternative to fuses for superior short circuit protection. In addition to being a “greener” solution by producing less waste, most circuit breakers provide additional types of protection and features simply not found with fuses.

Circuit breakers also reduce downtime and increase safety. A simple flip of a switch can restore continuity, where fuses require additional time and can be dangerous to replace. Unlike fuses, which are “sacrificial overcurrent devices,” CopperLogic’s *cPRO* circuit breakers are designed with high current withstand capabilities and sophisticated arc quenching techniques for many years of reliable use.

CopperLogic’s Molded Case Circuit Breakers provide circuit protection for low voltage distribution systems. The *cPRO* series ranges from 15 – 400 amperes, and includes thermal-magnetic breakers, electronic trip breakers and molded case switches.

*cPRO* breakers offer protection of cable and exceed the requirements of the NEC for branch circuit protection and UL 1087 for use as a disconnecting means. Reverse loop contact design provides for current limiting performance and higher interrupting ratings within compact breaker sizes.

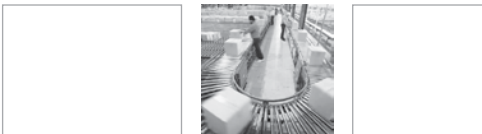
- > 15 to 400 amperes
- > Meets NEMA design standards
- > Multiple switching capacity options
- > Thermal-magnetic and electronic trip breakers available
- > Molded case switches available

## Quenches Arc Flashes

Arc flashes take only milliseconds to compromise expensive equipment and create an extremely dangerous environment to personnel. CopperLogic’s *cPRO* molded case breakers significantly outperform the calculations listed in IEEE Standard 1584-2002, Guide for Performing Arc Flash Hazard Calculations.

## Applications

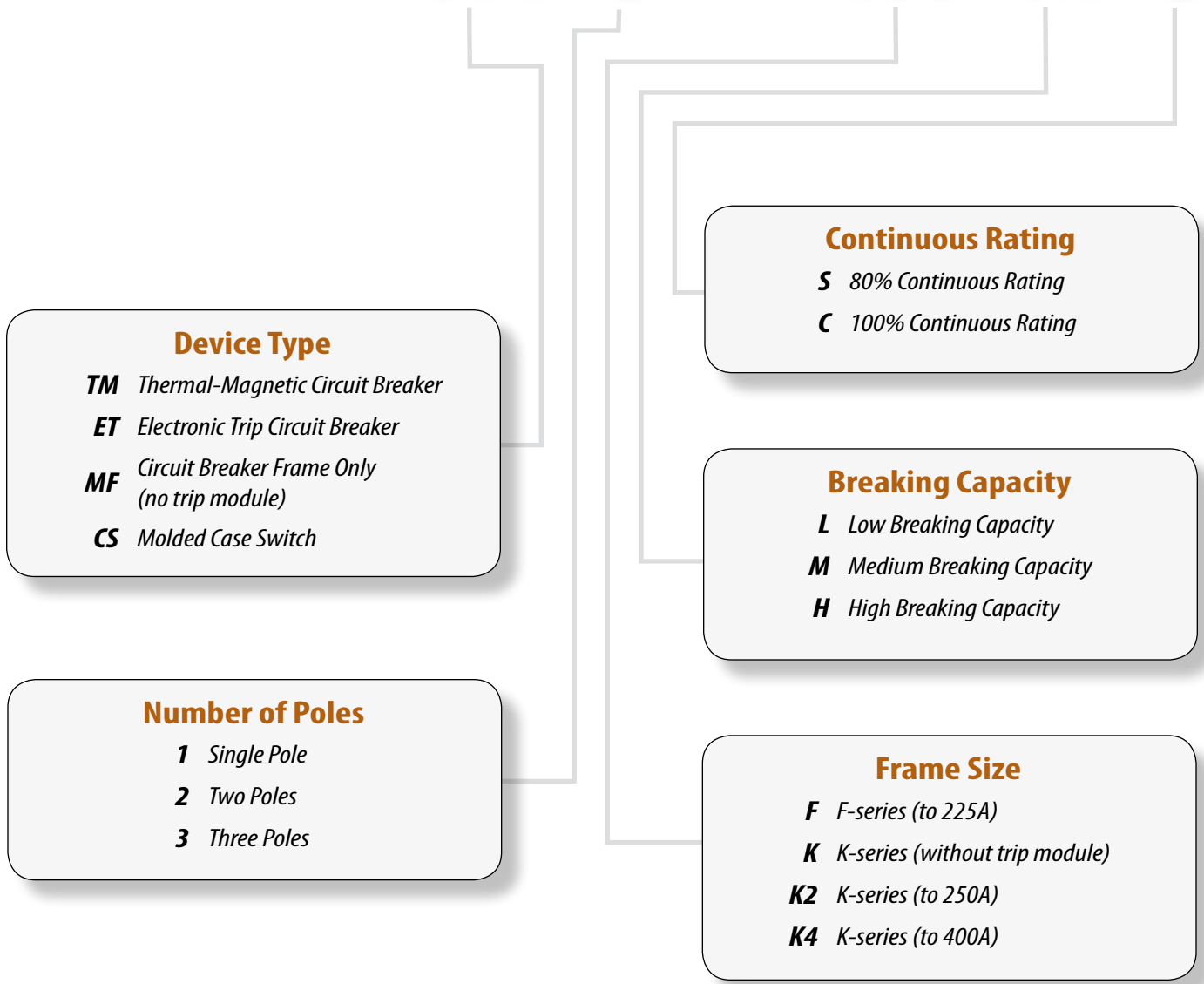
- Machine Tool Control Panels and Motor Control Centers
- Panelboards - as both main and branch circuit protection devices
- Feeder Pillars - in distribution systems to provide main and branch circuit protection
- Switchgear - in distribution systems to provide circuit protection up to 400 amperes
- Enclosed Circuit Breaker Disconnects - completely assembled in enclosures to meet specific customer requirements



CopperLogic's catalog numbering system for molded case circuit breakers and other devices follows a logical system. Device attributes can be determined by the following nomenclature.

Dashes (–) are used to separate device attributes and should always be included when ordering.

# TM 3 – K4 M S



### Device Type

- TM** Thermal-Magnetic Circuit Breaker
- ET** Electronic Trip Circuit Breaker
- MF** Circuit Breaker Frame Only (no trip module)
- CS** Molded Case Switch

### Number of Poles

- 1** Single Pole
- 2** Two Poles
- 3** Three Poles

### Continuous Rating

- S** 80% Continuous Rating
- C** 100% Continuous Rating

### Breaking Capacity

- L** Low Breaking Capacity
- M** Medium Breaking Capacity
- H** High Breaking Capacity

### Frame Size

- F** F-series (to 225A)
- K** K-series (without trip module)
- K2** K-series (to 250A)
- K4** K-series (to 400A)

This page for reference only.  
Please turn to the appropriate pages to determine the exact device and/or accessories required for your application.

# - 200 B - L S

## Trip/Frame Rating

**15**  
↓  
**400**     *Maximum Continuous Amp Rating*

## Frame Window Option

**S**     *VISA-window option for viewing main power contacts*  
*(blank)*     *Without window*

## Trip Module Type

- A**     *Fixed Thermal, Fixed Magnetic*
- B**     *Fixed Thermal, Adjustable Magnetic*
- E**     *Electronic Trip,  $I^2_t$  response*
- F**     *Electronic Trip, flat response*
- G**     *Electronic Trip,  $I^2_t$  with ground fault*
- H**     *Electronic Trip, flat with ground fault*
- (blank)*     *No trip module (for Frame Only and Molded Case Switches)*

## Terminals

**L**     *Line and Load side Terminals ship as standard with assembled breakers. Other options available; contact your CopperLogic representative.*  
*(blank)*     *Without terminals (for Frame Only and K-series Molded Case Switches)*

- > For three pole applications to 225A @600V
- > Protection for three-phase motors, transformers and branch circuits
- > Factory installed options allows for quicker installation time
- > HACR rated allows for use with refrigerant motor compressors
- > Factory sealed and approved for reverse feed use with back-fed mains



**Thermal-Magnetic Three Pole Circuit Breakers with Non-Interchangeable Fixed Thermal, Fixed Magnetic Trip Module 1 2 3**

Step 1: Select Main Breaker								
Continuous Amp Rating @ 40° C (104° F)	Maximum Operating Voltage		Low Breaking Capacity 18 kAIC @ 600 V AC 35 kAIC @ 480 V AC 65 kAIC @ 240 V AC 10 kAIC @ 250 V DC 4		Medium Breaking Capacity 25 kAIC @ 600 V AC 65 kAIC @ 480 V AC 100 kAIC @ 240 V AC 22 kAIC @ 250 V DC 4		High Breaking Capacity 35 kAIC @ 600 V AC 100 kAIC @ 480 V AC 200 kAIC @ 240 V AC 22 kAIC @ 250 V DC 4	
	AC	DC	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
15	600	250	TM3-FLS-15A-L	816	TM3-FMS-15A-L	1557	TM3-FHS-15A-L	2102
20	600	250	TM3-FLS-20A-L	816	TM3-FMS-20A-L	1557	TM3-FHS-20A-L	2102
25	600	250	TM3-FLS-25A-L	816	TM3-FMS-25A-L	1557	TM3-FHS-25A-L	2102
30	600	250	TM3-FLS-30A-L	816	TM3-FMS-30A-L	1557	TM3-FHS-30A-L	2102
35	600	250	TM3-FLS-35A-L	816	TM3-FMS-35A-L	1557	TM3-FHS-35A-L	2102
40	600	250	TM3-FLS-40A-L	816	TM3-FMS-40A-L	1557	TM3-FHS-40A-L	2102
45	600	250	TM3-FLS-45A-L	816	TM3-FMS-45A-L	1557	TM3-FHS-45A-L	2102
50	600	250	TM3-FLS-50A-L	816	TM3-FMS-50A-L	1557	TM3-FHS-50A-L	2102
60	600	250	TM3-FLS-60A-L	816	TM3-FMS-60A-L	1557	TM3-FHS-60A-L	2102
70	600	250	TM3-FLS-70A-L	816	TM3-FMS-70A-L	1692	TM3-FHS-70A-L	2272
80	600	250	TM3-FLS-80A-L	816	TM3-FMS-80A-L	1692	TM3-FHS-80A-L	2272
90	600	250	TM3-FLS-90A-L	816	TM3-FMS-90A-L	1899	TM3-FHS-90A-L	2863
100	600	250	TM3-FLS-100A-L	816	TM3-FMS-100A-L	2142	TM3-FHS-100A-L	2863
110	600	250	TM3-FLS-110A-L	1785	TM3-FMS-110A-L	3132	TM3-FHS-110A-L	4475
125	600	250	TM3-FLS-125A-L	1785	TM3-FMS-125A-L	3132	TM3-FHS-125A-L	4475
150	600	250	TM3-FLS-150A-L	1785	TM3-FMS-150A-L	3262	TM3-FHS-150A-L	5173
175	600	250	TM3-FLS-175A-L	1785	TM3-FMS-175A-L	4092	TM3-FHS-175A-L	5173
200	600	250	TM3-FLS-200A-L	1785	TM3-FMS-200A-L	5000	TM3-FHS-200A-L	6091
225	600	250	TM3-FLS-225A-L	1785	TM3-FMS-225A-L	5444	TM3-FHS-225A-L	6712

See next page for Step 2.

**Ordering Instructions**

- 1 Locate the desired main circuit breaker.
- 2 Choose an optional left pole accessory on next page.
- 3 Choose an optional right pole accessory on page 15.
- 4 Order field-installable accessories separately on pages 22 – 27.

- 1 Line and Load side terminals ship with breaker as standard. Other options are available; contact your CopperLogic representative.
- 2 A VISA-window to view main power contacts is available. If desired, add "S" to end of main breaker catalog number, and add \$950 to price. For toggle style operators only.
- 3 Mounting hardware not included. Order base mounting hardware separately on page 27.
- 4 DC ratings apply to substantially non-inductive circuits. Time constant is 3ms minimum at 10kA and 8ms minimum at 22kA.