



BRANCH CIRCUIT
PROTECTION

FUSED
COORDINATION
PANELBOARD



SELECTIVE COORDINATION WITH MERSEN'S FUSED COORDINATION PANELBOARD

Achieving selective coordination typically requires a costly short circuit current study. However, with the Mersen Fused Coordination Panelboard, coordination can easily be determined with upstream Mersen fuses. The MFCP utilizes Amp-Trap 2000® ATDR and AJT fuses for branch circuits. Simply maintain a 2:1 ratio with upstream Amp-Trap 2000 fuses and the system will coordinate. Many circuit breakers will coordinate easily with downstream fuses.

A system that is selectively coordinated will ensure that any fault condition is localized to the nearest overcurrent protective device. This increases system reliability and decreases downtime. Selective coordination is desired for all systems but is also mandatory per NEC for critical circuits:

- 620.62 – Elevator Circuits
- 700.27 – Emergency Systems
- 701.18 – Legally Required Standby Systems

By localizing a fault to the nearest overcurrent device, selective coordination prevents unnecessary disconnection from other circuits in the system. An electrical system that utilizes Mersen fuses can be selectively coordinated simply by meeting the minimum fuse rating ratios. By adhering to the minimum fuse ratios, engineers and installers can save time and money because no complex coordination study is required.

SURGE PROTECTION

In 2014, NEC added article 700.8 which requires that a surge protective device must be installed in or on all new emergency system panelboards. NEC defines emergency systems as legally required systems intended to automatically supply illumination, power and systems essential for safety to human life. The MFCP helps easily meet this requirement with the optional built-in Surge-Trap® pluggable SPD. Surge-Trap utilizes Mersen's patented fail-safe TPMOV® technology.



ORDERING DETAILS

The Mersen Fused Coordination Panelboard is a highly configurable panelboard with many options. Please contact Mersen Technical Services at 978-465-4853 or fusedpanelboards.EP@mersen.com for submittal and bid packages.



MERSEN'S FUSED COORDINATION PANELBOARD

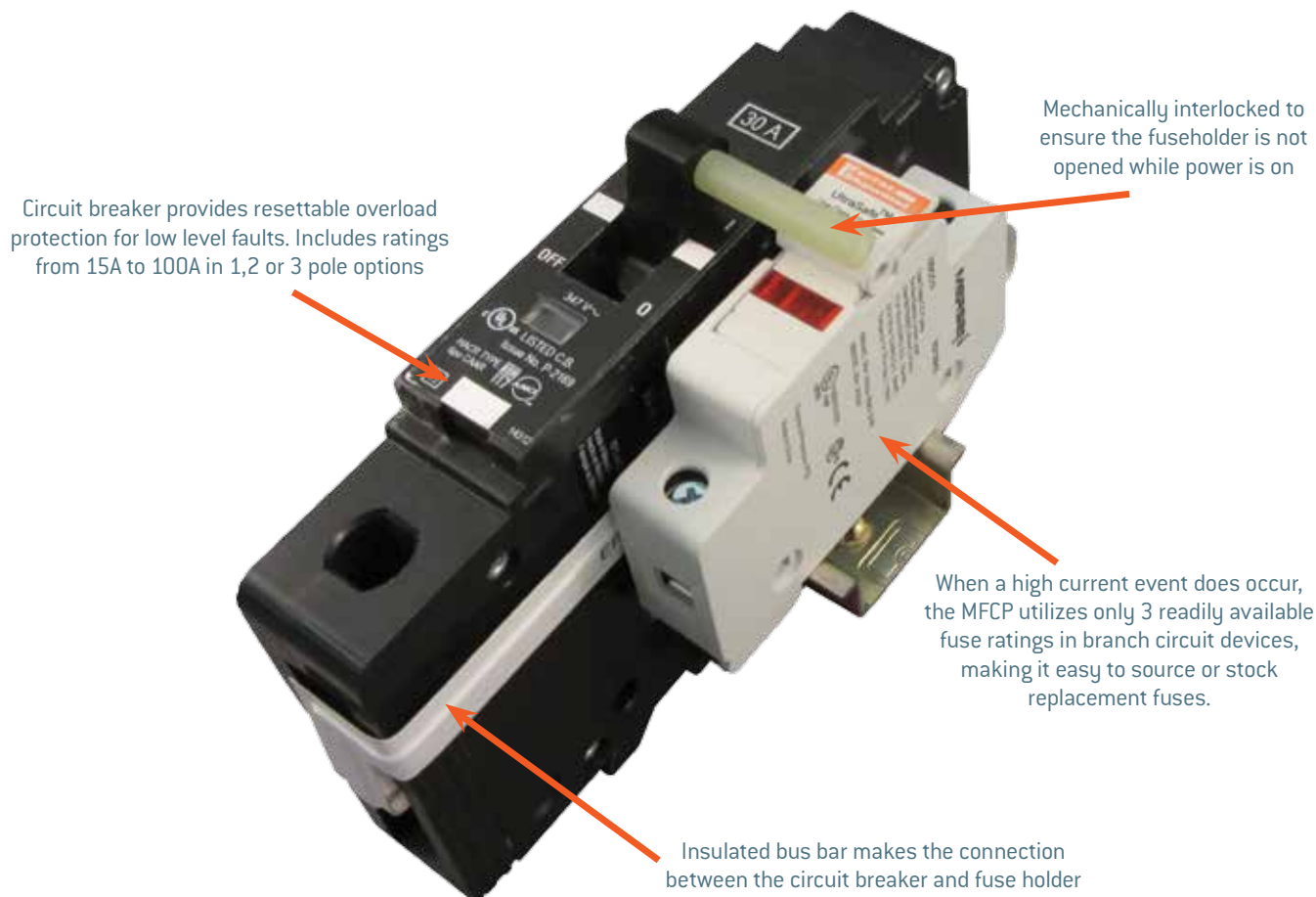
Selective Coordination is required in several locations as defined in the National Electrical Code® (NEC). Mersen's Fused Coordination Panelboard (MFCP) can simplify the process in achieving code compliance for designers. These panels are provided with a default short circuit current rating (SCCR) of 200kA and provide overcurrent protection through a combination of a circuit breaker and a fuse. The circuit breaker is designed to operate on overloads up to 2 times their rating and the fuse will operate for faults over that value, and up to 200kA.

| FEATURE | BENEFIT |
|---|--|
| UL 67 Listed panelboard with a default short-circuit current rating of 200kA | Easily comply with NEC 110.10 as most systems will be below 200kA |
| Combination rated circuit breaker and fuse for branch circuit protection | Fuses will open only on short-circuits—Circuit Breaker can easily be reset on common overloads |
| Class CC and Class J fuses for Branch short-circuit protection | Standard fuse classes that are commonly stocked by distributors |
| Maximum of 3 fuse sizes | Typically already in inventory |
| Selective Coordination with upstream fuses when ratios are maintained | Simple selective coordination without short-circuit current study—Meets requirements of NEC |
| Finger-safe fuse holders | No exposed live components for increased safety |
| Interlocked branch circuit fuseholder and circuit breaker | Ensures that the fuse is disconnected before removal |
| Standard 20 inch wide panel | Meets existing space requirements of other commercially available panelboards |
| <ul style="list-style-type: none">• Surface & flush mount• Up to 42 branch circuits• NEMA 1, 12 and 3R• Feed-Through lugs• Surge Protection• MLO, Main Switch (with or without fuses)• Service entrance rated | Increased flexible options to meet specific application requirements |
| Visible blades on main disconnect without removing covers | Visual verification of disconnect operation |
| Cover interlocked with main disconnect | Ensures that power is disconnected before cover can be removed |
| UL listed up to 600VAC | Meets most common North American voltages |
| Main lug only, non-fused main disconnect or fused main disconnect up to 400A | Provides designers with options |
| Standard open fuse indication | Easy identification of open branch fuses |
| Optional integral surge protection | Easily provide surge protection for critical branch circuits |



BRANCH CIRCUIT PROTECTION

Overloads are the most common overcurrent condition and the MFCP's innovative combination branch circuit protection provides resettable overload protection up to 2 times the circuit rating while still providing true class CC and J protection for your critical loads on high current faults. MFCP branch circuit protection devices can be ordered to replace or add new branch circuits within a panel.



| MFCP BRANCH PROTECTION PART NUMBERS | | | | |
|-------------------------------------|---------------------|-------|----------------|-----------------|
| PART NUMBER* | | POLES | CURRENT RATING | FUSE (INCLUDED) |
| LEFT SIDE OF PANEL | RIGHT SIDE OF PANEL | | | |
| MFCP-15-1-L | MFCP-15-1-R | 1 | 15A | ATDR30 |
| MFCP-15-2-L | MFCP-15-2-R | 2 | | |
| MFCP-15-3-L | MFCP-15-3-R | 3 | | |
| MFCP-20-1-L | MFCP-20-1-R | 1 | 20A | |
| MFCP-20-2-L | MFCP-20-2-R | 2 | | |
| MFCP-20-3-L | MFCP-20-3-R | 3 | | |
| MFCP-25-1-L | MFCP-25-1-R | 1 | 25A | |
| MFCP-25-2-L | MFCP-25-2-R | 2 | | |
| MFCP-25-3-L | MFCP-25-3-R | 3 | | |
| MFCP-30-1-L | MFCP-30-1-R | 1 | 30A | |
| MFCP-30-2-L | MFCP-30-2-R | 2 | | |
| MFCP-30-3-L | MFCP-30-3-R | 3 | | |

| MFCP BRANCH PROTECTION PART NUMBERS | | | | |
|-------------------------------------|---------------------|-------|----------------|-----------------|
| PART NUMBER* | | POLES | CURRENT RATING | FUSE (INCLUDED) |
| LEFT SIDE OF PANEL | RIGHT SIDE OF PANEL | | | |
| MFCP-35-1-L | MFCP-35-1-R | 1 | 35A | AJT60 |
| MFCP-35-2-L | MFCP-35-2-R | 2 | | |
| MFCP-35-3-L | MFCP-35-3-R | 3 | | |
| MFCP-40-1-L | MFCP-40-1-R | 1 | 40A | |
| MFCP-40-2-L | MFCP-40-2-R | 2 | | |
| MFCP-40-3-L | MFCP-40-3-R | 3 | | |
| MFCP-50-1-L | MFCP-50-1-R | 1 | 50A | |
| MFCP-50-2-L | MFCP-50-2-R | 2 | | |
| MFCP-50-3-L | MFCP-50-3-R | 3 | | |
| MFCP-60-1-L | MFCP-60-1-R | 1 | 60A | |
| MFCP-60-2-L | MFCP-60-2-R | 2 | | |
| MFCP-60-3-L | MFCP-60-3-R | 3 | | |

* MFCP branch protection devices are built to be installed on one side of the panel or the other

Please contact factory for 100A branch circuits.

HIGHLIGHTS AND DIMENSIONS

STANDARD PANEL HIGHLIGHTS

- Easy selectivity ratios with upstream fuses
- Voltage: 120/208, 120/240, 277/480, 347/600
- Main Bus: 250A or 400A
- Main Disconnect: MLO, Fused Main or Non-Fused Main
- SCCR: 200kA
- Surge Protection (SPD) optional
- Up to 42 branch circuits per panel
- Standard 20" wide
- Feed through lugs optional
- Surface mount
- Uses commonly available class CC & J fuses

MAIN

- Up to 400A Fused Main Disconnect
- Allows for panel isolation
- Lockout provision
- Visible contacts
- Interlocked with cover

AJT AMP-TRAP 2000® FUSES MAIN FUSE

- Time Delay
- 2:1 coordination ratio
- 600VAC interrupting rating 200kA

BRANCH CIRCUITS

- Circuit breaker opens overloads up to 2 times circuit rating
- ATDR, AJT fuses open short circuit currents
- Fuseholder interlocked to prevent opening while energized
- Circuits up through 100A 1, 2 & 3 pole
- True Class J and CC protection

DIMENSIONS (STANDARD NEMA 1 ENCLOSURES)

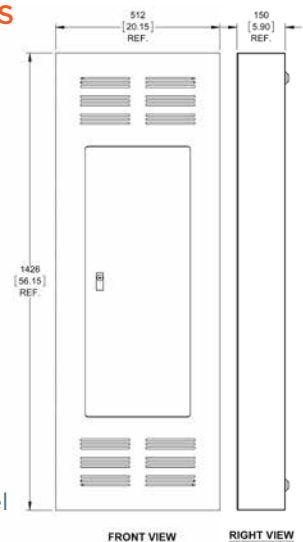
For standard panels:

Width = 20 inches Depth = 6 inches

Height varies depending on number of circuits and main options.

NEMA 1 ENCLOSURE SPECIFICATIONS

- Tub: Galvanized unpainted steel. One endwall is provided with knockouts, and the other endwall is blank.
- Door: Equipped directory card, flush mount lock
- Trim and Door Finish: ANSI 49 grey baked enamel electrodeposited over cleaned, phosphatized steel



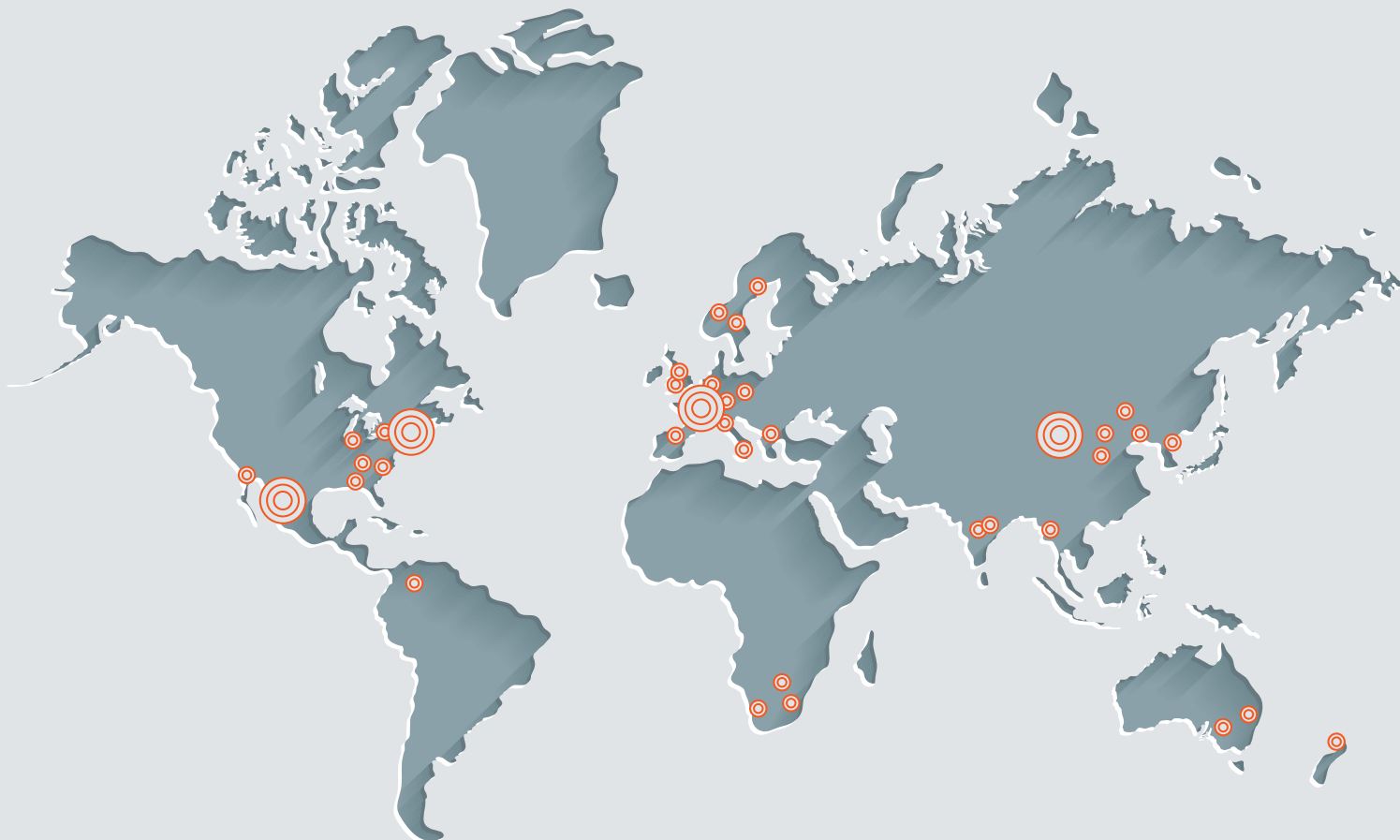
HIGHER RATED PANELS AND BRANCHES

For panels with circuits requiring ratings greater than 100A, Mersen offers a 38" wide panel with fusible switches for over-current protection. These panels can house up to two 20-circuit MFCP panels within it, in addition to fusible switches of up to 600A in various combinations.

- Main Bus Ratings: 600A, 800A, 1200A
- Main Device Ratings: MLO, Fused main disconnect of 600A, or 800A
- Fusible Branch Device Ratings*: 200A, 400A, 600A

*Branch ratings can be fused at standard fuse size increments in between these ratings and meet 2:1 coordination ratios.





MERSEN IS A GLOBAL EXPERT
IN ELECTRICAL POWER AND
ADVANCED MATERIALS

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