

PRODUCT UPDATE

MP Series 87 Enhanced: Advancing High Amp DC Circuit Protection

Now rated to 56VDC — the highest maximum voltage in its class.



MP Series 87 switchable circuit breaker family — available 25–250A, rated up to 56VDC.

Overview

The MP Series 87 is a heavy-duty, marine-rated switchable circuit breaker designed for high-amp DC power systems. It is a single-pole, thermal-type breaker with manual reset and on-off switch function, built for the demanding conditions of marine, commercial vehicle, RV, and related DC applications.

Mechanical Products has enhanced the Series 87 with an updated maximum voltage rating — a change that directly addresses the evolving demands of modern DC power architectures and positions the Series 87 as the highest-voltage-rated circuit breaker of its type available from any manufacturer worldwide.

MP is the only manufacturer in the world that makes this style circuit breaker rated up to 56VDC.

The Key Enhancement: 56VDC Maximum Voltage

The Series 87 has been upgraded from a 48VDC maximum to 56VDC maximum for Type III ratings from 25A through 200A. For ratings above 200A (225A and 250A), the maximum voltage remains 48VDC.

Amp Rating	MP Series 87 Max VDC	Traditional Competitive Max VDC
25A - 200A	56VDC	48VDC
>200A (225A, 250A)	48VDC	Not available

This increase directly benefits systems operating at nominal 48V bus voltages, where charging transients and system tolerances can push operating voltage above the 48VDC ceiling of traditional designs. With 56VDC headroom, the Series 87 provides a reliable margin of protection without requiring a design compromise or product substitution.

Ready for Modern 48V and 51.2V Power Architectures

As lithium battery technology continues to expand across marine, RV, mobile equipment, telecommunications, and renewable energy systems, electrical architectures are increasingly centered around nominal 48V platforms. In practice, many lithium battery systems operate above 48V nominal when fully charged.

With ratings up to 56VDC and 200A, the enhanced Series 87 provides engineers and system designers with additional margin and flexibility for protecting modern battery-powered systems, including:

- Energy storage systems (ESS)
- Solar battery banks
- Off-grid power systems
- Telecommunications power systems
- Marine lithium battery installations
- 48VDC marine power systems
- RV and overlanding electrical systems
- Mobile power equipment
- Industrial DC distribution systems

The Series 87 Platform

Beyond the voltage enhancement, the Series 87 offers a comprehensive set of design advantages that distinguish it from traditional competitive designs such as the Bussmann Series 187 and Blue Sea Systems Series 187.

Amperage Range: 25–250A

The Series 87 is available across 18 standard ratings from 25A to 250A. Competitive products in this category typically top out at 200A, requiring a different product entirely for higher-current main circuit applications.

Thermoplastic Body

The Series 87 housing is thermoplastic — a recyclable material that supports end-of-life environmental responsibility. Traditional competitive designs in this class use thermoset housings, which are not recyclable.

Stud Position and Termination Hardware

Stud position and terminal hardware are often overlooked in circuit breaker selection, yet they have a direct impact on installation efficiency and connection integrity.

BUSSMANN 187 Series**MP Series 87**

Rear view: Bussmann and Blue Sea Systems Series 187 (left) with offset studs and special nut hardware vs. MP Series 87 (right) with center-positioned studs and standard Sems nut (inset).

- **Stud position:** Series 87 studs are centered on the breaker body. Competitive products position studs offset from center.
- **Stud size options:** 3/8"-16 or 5/16"-18 threaded studs are available. Competitive products offer 5/16" only.
- **Terminal hardware:** 304 SS Sems Nuts — 9/16" nut driver for 3/8" studs, 1/2" nut driver for 5/16" studs. These are standard sizes. Competitive designs use a special, larger/narrower 304 SS nut with separate lock washer that requires a non-standard driver.

IP67 Weatherproof

The Series 87 is rated IP67, providing protection against temporary submersion in up to 1 meter of water. This exceeds the IP66 rating of competitive designs, which covers high-pressure water jets but not immersion — a meaningful difference in below-deck marine or wet-environment vehicle installations.

Panel Mounting Flexibility

The Series 87 supports both front and rear panel mounting with a standard round cutout, as well as surface mounting. A rounded-rectangle cutout option is also available for rear panel mounting, providing a direct fit in installations previously using competitive panel cutouts.



Series 87 panel-mounted configurations: standard round cutout (200A, left) and rounded-rectangle cutout (100A, right).

Regulatory Compliance

The Series 87 meets the key standards that matter to marine and vehicle circuit protection specifiers:

- Interrupt Capacity: SAE J553, ABYC E-11, UL1077*
- Ignition Protection: SAE J1171
- Endurance: SAE J553

*Tested per UL1077 methods.

Series 87 Specifications at a Glance

Parameter	Series 87
Amperage Range	25-250A (18 standard ratings)
Maximum Voltage	56VDC (Type III, 25-200A) / 48VDC (>200A)
Interrupt Capacity	5,000A @ 14VDC / 3,000A @ 28VDC / 1,500A @ 56VDC (25-200A)

Parameter	Series 87
Dielectric Strength	1,500VAC minimum
Cycle Endurance	2,000 switching cycles at rated current and voltage
Operating Temperature	-40°C / -40°F to +85°C / +185°F
Body Material	Thermoplastic (recyclable)
Ingress Protection	IP67 (submersion rated)
Terminal Options	3/8"-16 or 5/16"-18 threaded studs, center position
Terminal Hardware	304 SS Sems Nuts (9/16" driver for 3/8" stud / 1/2" driver for 5/16" stud)
Mounting	Panel (front or rear) and Surface Mount; #10 or M5 screw
Ignition Protection	SAE J1171
Regulatory Compliance	Interrupt Capacity: SAE J553, ABYC-E11, UL1077* Ignition: SAE J1171 Endurance: SAE J553

Series 87 vs. Traditional Competitive Designs

The table below compares the Series 87 against the traditional competitive design standard in this category. MP Series 87 advantages are shown in bold.

Specification	MP Series 87	Traditional Competitive Design
Amperage Range	25-250A	25-200A
Maximum Voltage	56VDC (25-200A) / 48VDC (>200A)	48VDC max
Body Material	Thermoplastic (recyclable)	Thermoset
Stud Size	3/8"-16 or 5/16"-18	5/16"-18 only
Stud Position	Center	Offset
Terminal Hardware	304 SS Sems Nuts - std. nut drivers	Special 304 SS nut + lock washer - non-standard driver required
Interrupt Capacity	5,000A @ 14VDC (25-200A)	5,000A @ 14VDC

Specification	MP Series 87	Traditional Competitive Design
Operating Temperature	-40°C to +85°C	-40°C to +85°C
Ingress Protection	IP67	IP66
Ignition Protected	SAE J1171	SAE J1171
ABYC Compliance	ABYC E-11	ABYC E-11
SAE J553 Endurance	Yes	Not published
UL1077 Dielectric	Yes*	Not published
Origin	Made in USA	Not specified

**Tested per UL1077 methods. "Not published" reflects the absence of available specification data, not a confirmed absence of the feature.*

Typical Applications

The Series 87 is used in 48VDC and 56VDC applications where reliable, switchable overcurrent protection is required.

- Marine electrical systems, including main battery protection, branch circuits, bilge areas, and weather-deck installations.
- Truck and bus electrical systems, including main power distribution, accessory circuits, and liftgate protection.
- RV electrical systems, including house battery disconnect applications and on-off switch functionality.
- Specialty vehicle DC power systems requiring switchable high-amp circuit protection.
- Battery-powered systems that need reliable overcurrent protection up to 56VDC.

Conclusion

The Series 87 enhancement delivers a significant upgrade for high-amp DC circuit protection. With a maximum voltage rating of 56VDC, a full 25–250A amperage range, thermoplastic construction, centered stud design, standard hardware, and IP67 sealing, the Series 87 is built for demanding 48VDC and 56VDC applications where reliable switchable circuit protection matters most.

The Series 87 is available now across the full 25–250A range. For complete specifications, part number configuration, and supporting documentation, visit the Series 87 product page and resources section at mechprod.com.

**Questions? Contact Mechanical Products Company at
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