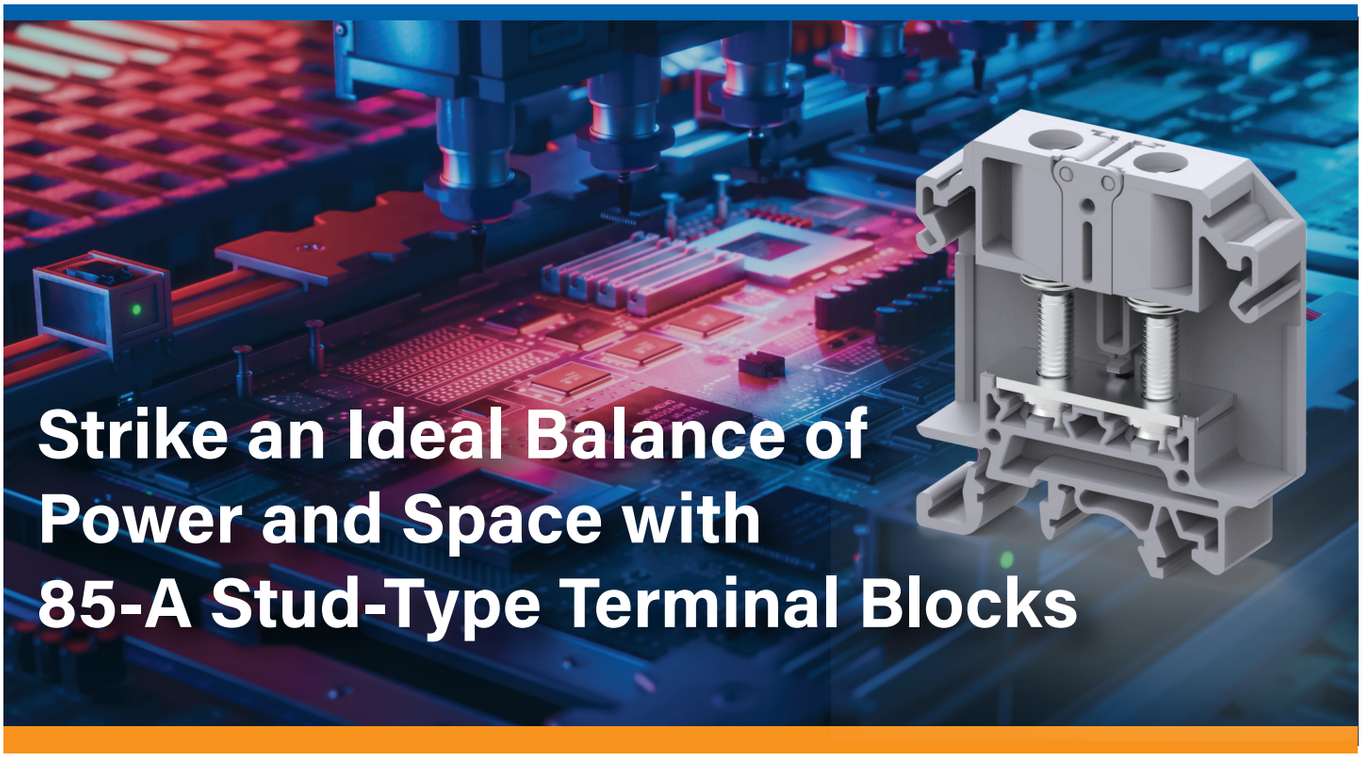
Altech Corp.®

Your Source for Automation & Control Components

APPLICATION NOTE



Strike an Ideal Balance of Power and Space with 85-A Stud-Type Terminal Blocks

Integrating a medium-sized, medium-power terminal block in industrial power distribution applications is often easier said than done. When a job calls for a medium-amperage DIN rail unit, the closest sizes are typically suitable for miniature circuit breakers but are often too small for mid-tier applications. In addition, 115-A-ratings are often too excessive, and the terminals can consume too much space to be practical for many applications. This is especially true when several terminal blocks are arranged together. The power-versus-size tradeoff stems from the lack of a true intermediate-range terminal block. A terminal block in this range, particularly one featuring a ring-lug/stud design, would be especially valuable in semiconductor, power and railway applications. Here's why:

- **Semiconductor**. Many subsystem circuits inside a fab tool exceed the capacity of standard clamp terminals yet do not require full busbar capacity. Given the high cost of wafers and the critical need to avoid line downtime, these circuits cannot tolerate vibration-induced loose connections, making a middle tier of stud-type terminal blocks an especially attractive option.

- **Power**. Like semiconductor equipment, a wide range of power equipment entails subsystem circuits that carry higher currents that also require a more space-efficient terminal block to fit dense enclosures.

- **Railway equipment**. Auxiliary and branch power circuits aboard railcars typically experience repetitive and continuous vibrations as well as mechanical shock. Stud-type terminal blocks are more secure than screw-clamp or spring-cage blocks.

Despite the glaring need in these and other industries, it has been almost impossible to find a medium-tier terminal block that delivers the secure connections that these applications demand. A newly introduced stud-type DIN rail terminal block, however, strikes a unique balance of medium-range current capacity with effective protection against connection failure, giving designers both space savings and peace of mind.

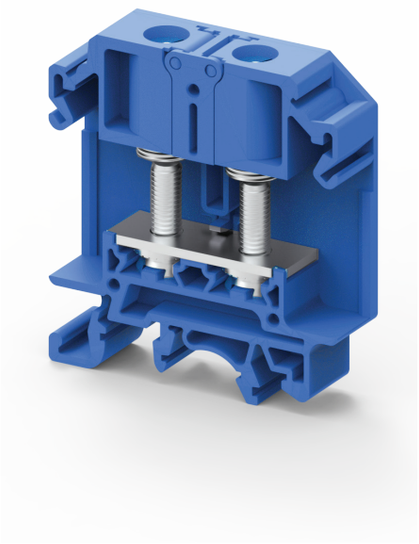
A Medium-Tier Stud-Type DIN Rail Terminal Block Ends the Power and Space Tradeoffs

You'll find many suppliers offering 50A terminal blocks. These units are typically compact—only 11 millimeters wide—and well-suited for panel-type miniature circuit breaker installations. However, an engineer who needs 75 or 85A must step up to a 115A terminal block measuring 18 millimeters wide. The 7-millimeter size difference really adds up in a crowded panel, even if the installation calls for only 10 terminal blocks. Recently, Altech Corp. introduced an 85-A, 13-millimeter hinged ring-lug DIN rail terminal block that satisfies an important need for stud-type terminal blocks without overspecifying the current rating and the associated size requirement. In addition to filling the longtime void in terms of mid-tier power and size, the STH5 Series also provides the following advantages:

- **Secure design**. The STH5's captive nut is housed inside a plastic enclosure with a hinge. The ring lugs are bolted to the terminal block's flat current bar, providing a high clamping force for secure connections, even under high vibration conditions.
- **Reliable**. The STH5's fork-type bolted rings cannot accidentally fall out of the hinged housing. And, the fork-type rings offer a large contact area to minimize resistance and heat.
- **Easy and safe access**. The touch-proof terminals include a flip-to-open plastic hinged cover that makes installation, inspection, and maintenance fast and easy. When flipped open, the IP20 hinge shrouds the conductive parts for safety.

Additional features and benefits include:

- Bolt feed through terminals.
- Two-, three-four-pole fork-type and ring-lug jumpers
- Supports two-lug connectivity.
- Polyamide 66 insulation.



The STH5 hinge-type DIN rail terminal block is designed for 22-4 AWG wires, carries 85A of current and has a 600-V rating. The family now comes in four sizes and is part of a comprehensive lineup of UL-approved terminal blocks that includes stud and ring-lug terminals as well as screw clamp, spring clamp and push-in terminals plus accessories.

A Stud-Type Terminal Block for Medium-Tier Applications

When it comes to standard terminal blocks for medium-duty applications, many suppliers lack options that deliver the higher amperage ratings and space efficiency required by industrial applications. Altech's STH5 85-A stud-type DIN rail terminal block fills the void while ensuring secure, safe and reliable connections plus easy access.

For more information, please visit altechcorp.com.