

Breaker integrated transformer (BIT) FAQs

Q: What are the features and benefits of the BIT?

A: Eaton's BIT helps reduce project costs by replacing the need for separate power distribution components with a fully enclosed molded-case circuit breaker (MCCB) integrated into Eaton's proven dry-type distribution transformer technology.

The integrated design of the BIT can save up to 30 percent of wall space compared to traditional, separately installed solutions to help end-users maximize available physical footprint.

This innovative design also eliminates the need for extra panels, equipment, floor space and associated installation labor. Because it arrives as a complete set, site costs associated with tracking and handling material are also reduced, while the potential to lose parts is eliminated. Additionally, labor and shipping risk is minimized with 4 inches of ground clearance and a low center of gravity for easy conveyance.

For simplified code compliance, a factory-installed ground bar is integral to the BIT design to help meet NEC® 410.10A. To ease installation, a large wiring compartment provides easy access to configure the conduit.

Q: How is Eaton's new BIT different from standard transformers and MCCB combinations found in the market today?

A: The BIT combines a dry-type distribution transformer with a primary, secondary or both disconnect breakers into a single enclosure to reduce installation time and arc-flash hazard and optimize available space.

Shipped as a full solution—factory tested and integrated—the MCCB is factory installed and specifically selected for the application. The wiring between the components is made at the factory, saving labor at the site and eliminating conduit and fittings installation—resulting in fewer inventory transactions and simplifying the installation.

Q: What ratings are available for the BIT?

A: The BIT is available in a wide variety of configurations and ratings, including:

- 45 kVA to 300 kVA, three-phase
- 80 °C, 115 °C and 150 °C winding temperature rise
- K-Factor rated transformers
- Any voltage combination below 600 V
- Harmonic mitigating
- 60/50 Hz

Q: What NEMA® ratings are available?

A: The BIT is available in NEMA Type 1 and 3R. Both options are available in 304- and 316-grade stainless steel.

Q: Is the BIT compliant with the new energy-efficiency regulations (DOE 2016)?

A: The BIT meets the most stringent government regulations ever—35 percent improvement over TP-1, issued by the Department of Energy on January 1, 2016 (DOE 2016).

You'll see an "Energy Verified" UL mark on our transformers. Even though it's not mandatory, Eaton asked UL to verify their efficiencies. Our nameplate shows it; customers can rely on Eaton transformers to meet their energy-efficiency requirements.

Q: Are additional options available for this new product?

A: Through Eaton's Transformer Flex Center, the BIT is available with a wide range of options, including:

- 35/65/100 kAIC breakers
- Shunt trips
- Electronic trip units
- Auxiliary switch/bell alarms
- Metering modules
- Painted or stainless steel enclosures
- Custom colors
- Breakers on the primary or secondary side
- Infrared windows

The BIT is also available with features such as surge protection devices, customized ground bars, terminal blocks, double neutrals, IR windows and custom impedances, as well as sound reduction and monitoring.

Q: Is the new BIT the same dimensions as the transformers I am used to purchasing?

A: The BIT is designed to have the same footprint as a dry-type distribution transformer. It includes the 2-inch minimum clearance from enclosure to walls to reduce the overall footprint.

Q: Can I customize the BIT for unique project and/or customer requirements?

A: The BIT is available with a wide range of customizations to help enhance power system safety, flexibility and reliability. For example, the BIT can easily be configured to end-users' specific application needs with a wide range of primary and secondary breaker choices.

Additionally, Eaton's Arcflash Reduction Maintenance System™ is available to improve safety by providing a simple and reliable method to reduce fault-clearing time for applications 400 A and above.

Eaton's Transformer Flex Center is available to meet nearly any customization need, including enclosure types, safety requirements, monitoring and more.

Q: Who can I contact if I am interested in special BIT customizations?

A: Eaton's Transformer Flex Center is designed specifically to help meet unique general-purpose and distribution transformer needs that cannot be met with standard offerings.

With the ability to engineer or modify transformers to meet nearly any application requirement, Eaton's expert team is a valuable resource for solving the most critical application challenges.

We're continuously expanding our portfolio of solutions to better serve the industries we support. If you do not see a solution that meets your needs, please contact our staff to develop one that's right for you. Visit Eaton.com/BIT for more information.

For more information, contact Eaton's transformer experts today. Call **915-401-8316** or email TransFlexSupp@eaton.com



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