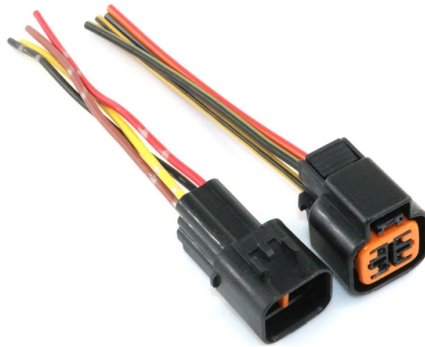


Specifications of grounding terminal blocks for distribution boxes



Overview

Ground Terminal Blocks | McMaster-CarrBuild your own distribution system for neutral and grounding applications by adding terminal blocks to these bars. SI.

Key Takeaways

Grounding terminal blocks provide a safe, low-resistance path for fault currents, connecting all panel components to a common earth ground via DIN rail mounting. Function and Importance

Grounding terminal blocks serve as the central hub for safely channeling fault currents away from equipment and personnel, ensuring system stability and protection. They connect all non-current-carrying metal parts, cable shields, and enclosures to a common ground, eliminating voltage differences and protecting sensitive signals from electrical noise .

Mounting and Construction

- DIN Rail Mounting: Most grounding terminal blocks attach to standard DIN rails using a conducting clamping foot or sliding contact, which allows the rail to function as a ground busbar .
- Housing: Typically molded in green-yellow for easy identification, complying with NEC 250.119 and NFPA 79 section 13.2 .

- End Stops: Some blocks can act as end stops to prevent lateral movement of other terminal blocks on the rail .

Electrical Specifications

- Wire Size Compatibility: Depending on the model, grounding blocks can accept wire sizes from 28 AWG up to 1/0 AWG, accommodating both small control wires and larger protective conductors .
- Current-Carrying Capacity: Designed to handle large fault currents, with short-circuit current ratings (SCCR) up to 10 kA for certain models .
- Connection Technology: Available in screw-type (vibration-resistant) or push-in/spring-clamp designs for faster installation and secure contact .
- Voltage and Safety Standards: UL recognized, compliant with IEC 60947-7-1 / UL 1059, with flame-retardant housing (V0) and IP20 protection .

Mechanical and Installation Features

- Low Impedance Path: Ensures minimal resistance from connected components to the main earth ground .
- Durability: Modern designs improve vibration resistance and reduce installation time by up to 70% compared to older screw-type terminals .
- Marking and Identification: Standard green/yellow housing allows for easy labeling and identification; compatible with marking tags .
- Parallel Connection: Modular design allows multiple blocks to be connected using jumper wires for power distribution .

Summary

Grounding terminal blocks are essential for personnel safety, equipment protection, and system stability in distribution boxes. Key specifications include DIN rail mounting, green-yellow housing, wire size range from 28 AWG to 1/0 AWG, SCCR up to 10 kA, screw or push-in connection, and compliance with UL and IEC standards. Proper selection ensures reliable grounding, reduces installation time, and maintains a safe electrical environment .

Article Content

GROUND GRID SPECIFICATIONS

The ground cable shall be supported as shown on this dwg. The grounded end of the ground switch of the Voltage Transformer shall

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

