

Article Overview

Bridging small distribution boxes can be efficiently achieved using modular bridge accessories or multi-layer terminal blocks, enabling secure, organized, and space-saving connections.

Methods for Bridging

1. **Modular Bridge Accessories:** Modular bridges are pre-fabricated links that connect multiple circuits on copper terminal blocks without manual daisy-chaining. They slide into the center or side slots of a terminal strip, ensuring low-resistance, secure connections. These bridges simplify maintenance, allow easy addition or removal of jumpers, and enhance safety with integrated insulation to prevent accidental contact with live parts ().

2. **Multi-Layer or Stepped Terminal Blocks:** Using multi-layer or stepped wiring terminal blocks, such as UKK splitter boxes, allows incoming heavy-gauge cables to transition into multiple smaller output lines. This tiered design reduces cable clutter, optimizes vertical space, and ensures clear visibility for inspection and maintenance ().

3. **Push-In Terminal Blocks:** Products like PTFIX or PTVFIX distribution blocks from Phoenix Contact provide ready-to-connect solutions with push-in technology. They support various cross-sections (1.5 mm² to 10 mm²) and multiple terminal points, enabling flexible and compact bridging in confined spaces. Lateral push-in connections allow flat, organized wiring without bending radii ().

Best Practices

- o **Space Optimization:** Use tiered or modular designs to minimize internal panel space consumption and avoid overlapping wires.
- o **Safety:** Ensure bridges and terminal blocks have integrated insulation and transparent covers for visual confirmation of connections.
- o **Standardization:** Match bridge pitch to terminal spacing to maintain low-resistance connections and compatibility across modular lines.
- o **Maintenance:** Choose systems that allow easy addition or removal of jumpers without disturbing primary wiring.
- o **High-Current Applications:** Use copper distribution blocks with modular bridging to handle high-current loads safely while maintaining a clean layout ().

Conclusion

Bridging small distribution boxes effectively involves selecting the right combination of modular bridges, multi-layer terminal blocks, and push-in distribution blocks. These solutions improve space efficiency, safety, and maintainability, making them ideal for compact control panels, industrial enclosures, and high-current applications ().

Bridging small distribution boxes

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