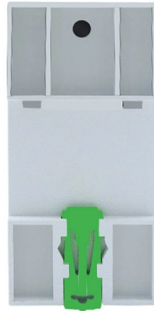


Wiring numbers for distribution cabinet



Overview

How to Identify Wire Numbers in a Distribution Cabinet YouTube Video Description:  
Confused about identifying wire numbers in your distribution cabinet?

I.

Key Takeaways

Wire numbers in a distribution cabinet are assigned based on circuit function, phase, and terminal connections, following standardized rules for clarity, safety, and maintenance. Main Circuit Wire Numbering

The main circuit carries high currents and connects devices like power supplies, circuit breakers, contactors, and motors. Standard conventions include:

- Three-phase live wires: L1, L2, L3 (or U, V, W) corresponding to the phase sequence.
- Neutral wire: N.
- Ground wire: PE or yellow-green color; numbering may not be marked but color is fixed.
- Motor circuits: Incoming motor terminals are labeled U1, V1, W1; outgoing terminals are U2, V2, W2. For example, the line from a contactor to a motor is marked U1, V1, W1 .

Control Circuit Wire Numbering

Control circuits manage the operation of the main circuit and follow systematic numbering, often based on the GB/T 4026-2016 standard:

- Single circuit: Sequential numbering starting from 1 along the current path (e.g., 1 → button → 2 → contactor coil → 3 → thermal relay → 0).
- Multi-circuit grouping: Continuous numbers for the same functional module (e.g., KM1 coil: 101 → 102; button SB1: 103 → 104).
- Functional grouping: Power supply circuits use odd numbers for phase wires (1, 3, 5) and even numbers for neutral (2, 4, 6). Contactor coils often use even numbers (102, 104), buttons use odd numbers (101, 103), and sensors/signals may use X1, X2

Labeling and Identification Techniques

- Wire sheath markings: Numbers or alphanumeric codes printed at intervals along the wire.
- Wire end labels: Tags, plastic pieces, or metal plates near terminal blocks.
- Component + pin identification: Example: KM1-3 indicates the wire connected to the third pin of contactor KM1.
- Location + function coding: Example: L-S1-M indicates a wire on the left side, related to the start function, connected to a motor .
- Color coding: Phase wires may be yellow (A), green (B), red (C); neutral is light blue; protective ground is yellow-green. Control circuits may use black or other designated colors .

Core Principles

Wire numbering should follow uniqueness, readability, continuity, and correspondence:

- Uniqueness: No repeated numbers within the same cabinet; use prefixes or partitions if needed.
- Readability: Clear fonts and contrasting colors; font size adjusted to wire thickness.
- Continuity: Numbers should follow the current path or functional sequence.
- Correspondence: Numbers must match wiring diagrams and terminal blocks for easy verification .

Safety and Verification

- Always power off before handling wires.
- Use voltage testers, multimeters, and clamp meters to verify circuits.
- Tag and document all wires for future maintenance.

- Certified electricians should wear insulating gloves, shoes, and goggles, and work in teams when possible . By following these conventions, wire identification in distribution cabinets becomes organized, safe, and easy to troubleshoot, ensuring reliable operation and maintenance.

Article Content

Electrical Numbering System (Standardised) – PAKTECHPOINT

For lighting and small power supplies that are taken from a distribution board, run in armored cable, and scheduled, the cable

AS/NZS 3000 for Commercial Projects: Design Guide

Applying AS/NZS 3000 on commercial projects: maximum demand, cable sizing, RCDs, MEN earthing and switchboards, explained

Contact Us

Continue your research online:

Website: <https://thegalleryselfcatering.co.za>

Technical inquiry: <https://thegalleryselfcatering.co.za/contact.html>

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

