

POWERING SAFETY: Electrical Awareness for Construction by Shereen Montero

88 Fatalities in 2023 · Construction remains Malaysia's deadliest sector ·
50% electrical accident fatality rate

Malaysian Legal Landscape (Update 2026)

Effective June 1, 2024, the OSHA (Amendment) Act 2022 and CDM 2024 Regulations set strict 'Safety by Design' duties. Non-compliance faces penalties up to RM500,000. All site power must comply with Electricity Regulations 1994 and standard 240V/415V supply protocols.



RM500K

MAXIMUM PENALTY (OSHR 2024)

The 'Silent Killers' on the Construction Site

OVERHEAD & UNDERGROUND

High-tension 11kV lines can 'arc' across 3 meters without direct contact. Underground cables present lethal risks during piling and excavation work.

WET CONDITIONS & EXPOSURE

Malaysia's tropical storms make puddles and wet concrete highly conductive. Exposed wiring in temporary DB panels leads to shock and arc flash burns.



Critical Standards & Fatal Industry Trends

30mA

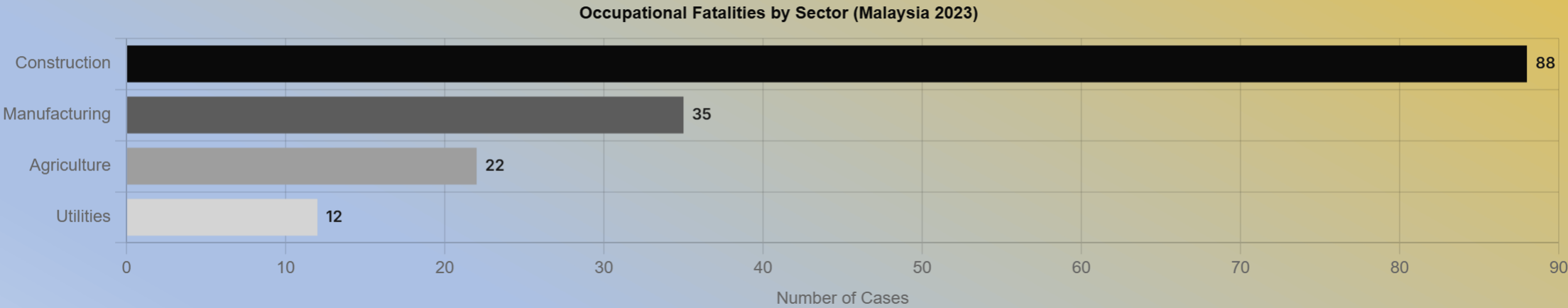
RCD SENSITIVITY LIMIT

240V

SINGLE-PHASE TOOLS

415V

THREE-PHASE MACHINERY



Step-by-Step Safe Work Procedures

1. INSPECTION: Daily visual checks on all cords and and tools. Ensure valid SIRIM/ST tags.
2. LOTO: Isolate power, apply personal lock, and affix 'Danger: Do Not Operate' tag.
3. VERIFICATION: 'Test Before Touch' using a calibrated voltage tester.
4. CLEARANCE: Maintain minimum 3m from overhead lines and 0.6m from exposed live parts.



Typical Site Hazards & Controls

Hazard Scenario	Associated Risk	Mandatory Control
Piling near power lines	Arcing / Electrocution	Maintain 3m+ distance; use spotter
Using power drill in rain	Electric Shock	Stop work; use cordless tools
Exposed DB wiring	Arc Flash / Burns	Install dead-front covers; lock panel
Faulty extension cord	Fire / Shock	Daily visual check; immediate tag-out

Emergency Response: Seconds Count!

1. ISOLATE POWER

DO NOT touch the victim. Switch off the main supply or use a non-conductive object (dry wood) to separate them from the source.

2. CALL & FIRST AID

Call 999 immediately. If the victim is unconscious, unconscious, perform CPR or use an AED if safe to do so. Watch for secondary shock symptoms.

