

WIRELESS REMOTE RACKING SYSTEM

Frequently Asked Questions (FAQ)

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Q1. What is the maximum operating distance of the wireless remote?

The transmitter unit operates from up to 30 feet (approximately 9 metres), keeping operators well outside the arc flash danger zone (which extends up to 3 metres).

Q2. How many circuit breakers can one transmitter control?

A single transmitter can control up to 63 circuit breakers. Each receiver unit is assigned a unique Device ID, and the operator selects the target ID on the transmitter before issuing commands.

Q3. Is the system secure against accidental operation?

Yes. The transmitter-receiver pairing process requires a predefined sequential key entry. Without the correct entry, pairing is not possible, preventing accidental operation.

Q4. Can the system be retrofitted to existing switchgear?

Yes. The Wireless Motorised Racking System is designed for both new installations and retrofit applications on existing switchgear, including challenging environments such as confined spaces or contaminated areas.

Q5. Does the system require SCADA or DCS integration?

No. The system operates independently via the handheld transmitter and does not require an expensive SCADA system or control cable infrastructure. This enables fast, cost-effective implementation.

Q6. What happens if the transmitter battery is low?

The transmitter includes a built-in Battery Level Indicator that alerts the operator when the battery needs to be charged. The battery is rechargeable via the onboard charging port, eliminating the need for battery replacements.

Q7. What real-time feedback does the operator receive?

The transmitter provide real-time LED status indicators including: CB IN TEST, CB SERVICE, CB ON, CB OFF, PAIRED, PWR ON, BATTERY LEVEL, MTR-CUTOFF, and READY FOR OPERATION.

Q8. What is the MTR-CUT OFF function?

Both the transmitter and receiver units include a dedicated MTR-CUT OFF button. This allows the operator to immediately halt racking motor operations in case of an unexpected event or emergency situation.

Q9. Does this system comply with safety standards?

Yes. The system aligns electrical safety standards. By enabling remote operation from outside the arc flash zone, it directly supports compliance with arc flash hazard mitigation requirements.

Q10. What are the main arc flash risks it mitigates?

Arc flash hazards include temperatures up to 19,000 degrees C, pressure waves up to 1,100 km/h that can throw workers across rooms, projectile shrapnel, intense light causing vision loss, and up to 140 dB sound bursts causing hearing loss. Remote racking eliminates operator proximity to all these hazards.

Q11. How does motorized racking extend equipment life?

The motorised drive applies consistent, controlled force during every racking operation, preventing the misalignment, over-forcing, and excessive wear caused by human variability. This extends the life of the racking mechanism, interlocks, and CB components.

Q12. Who should consider adopting this system?

Any facility operating medium-voltage switchgear with manual CB racking - including industrial plants, utilities, data centres, hospitals, and commercial buildings - can benefit. It is especially recommended for sites with high racking frequency or documented arc flash risk.

Q13. What ABB contacts are available for enquiries in India?

ABB India has regional sales directors available across India for product enquiries, site assessments, and procurement support. Please contact ABB India Electrification Service division for further information.

Manual vs. Wireless Remote Racking - Summary Comparison

Parameter	Manual Racking	Wireless Remote Racking
Operator Safety	High exposure to arc flash zone	Operator stays 30 ft away - no exposure
Arc Flash Risk	Extreme - within inches of equipment	Eliminated - fully remote operation
Physical Strain	High - awkward postures, heavy loads	None - fully motorised
Alignment Accuracy	Variable - operator-dependent	Consistent - automated precision
Operational Speed	Slow - manual effort required	Fast - motorised and repeatable
Access in Confined Spaces	Difficult or impossible	Fully accessible remotely
Equipment Wear	High - inconsistent force	Minimised - controlled force
Implementation Cost	Low upfront, high injury/downtime cost	Cost-effective, no SCADA, no cables
PPE Requirement	Full arc-rated PPE mandatory	Significantly reduced or eliminated

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