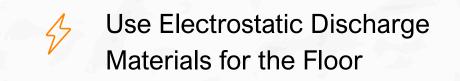


## **1** Know Your Working Environment

Understanding the Landscape

- Use an Enclosed Indoor Facility
- Ensure an Ambient Temperature
  Between 0 to 45°C
- Control Humidity Levels Between 5% to 95% RHa
- Ensure Clean Air, Free from Dust, Flammables, Explosives and Corrosive Gasses



- Operate Within an Altitude
  Range of -60 to 3,000 Meters
- Enable Ambient Lighting and Avoid Direct Sunlight
- Use Halogen/Mercury
  Lights below 10,000 lux
- Use Fluorescent Lamps below 6,000 lux



### What's Beneath: Facility Floor

Floor Foundations for Success

- Make Sure the Facility Floor is Flat and Even
- Ensure a Smooth Surface
- Assess and Enhance Surface
- □□ Recommended Gap
  10 mm gap for optimal operation
- Saw Cuts
  Fill all saw cuts for joint protection
- Fill joints within 12 months with Shore A hardness 40
  For older joints fill with Shore A hardness 60-70
- Resealing
  Reseal only if joints show signs of deterioration within 6 months of construction.

Facility Floor

Construction Joints

**Enable Obstacle-free** 

- Fill joints within 12 months with Shore A hardness 40
  For older joints fill with Shore A hardness 60-80
- Resealing Construction Joints
  Reseal only if joints show signs of arris deterioration within 6 months of construction.
- Old Joints

  Seal with joint sealant of Shore
  A hardness 60-80 if over 12 months
  and >10 mm.
- Warehouse Roof and Walls
  Shield against liquid spillage and dust.
- Safeguard against rodents and birds.
- Establish a dedicated monitoring and service room for the GreyOrange team.

# BER0B0T

Preparing Your Site for Robotic Automation

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#### 1. Lan Wiring Insights

- Role
- Connects servers to Ranger™
  equipment (Auto-Charging Station, PPS,
  Wi-Fi access points).
- Hardware Recommendation:
   Cat 6 UTP wires with RJ45 plugs for reliable and fast communication.
- Length Restriction:60 m (196.85 ft) for 10/100 Ethernet port.
- 60 m (196.85 ft) for 10/100 Ethernet port.

  > 60 m: Install a field rack near the Ranger™

  area to connect to the server room.



#### 2. Internet Access Necessities

- Role
- System monitoring
  Off-site server access (WWW or VPN)
  Troubleshooting
  Code deployments
  Secure Shell (SSH) Protocols



- Function: Cryptographic network protocol for secure remote login and network services.
- **Usage:** Allows GreyOrange to access customer servers securely for maintenance and updates.
- Cable Gap: Maintain a minimum 300 mm (11.81 in) gap between power and network cables to prevent electrical noise interference.



#### 3. Improving Wi-Fi Network

- Optimal Channel Usage:
- Use more channels to allow for greater distance between coverage areas.
- Enhances signal strength, reduces interference and improves signal-to-noise ratio for higher data rates.
- Minimizing Interference:
- Arrange and configure access points strategically.
- Mitigate interference by optimizing access point placement and settings.
- Prioritize minimizing interference from other
   Wi-Fi signals over general radio frequency disruptions.



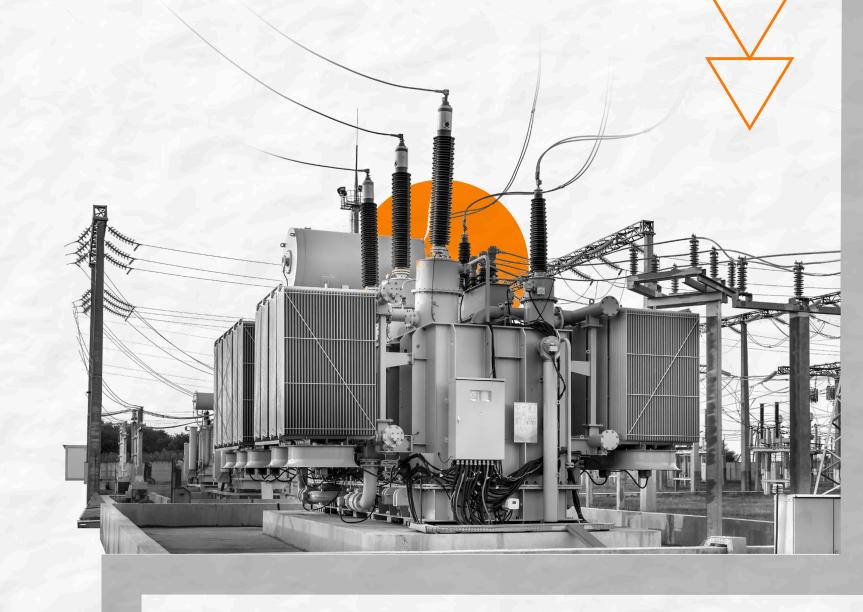
# Power Supply Specifications Single Phase: 230/110V AC, 50/60Hz Three Phase: 200-400/415/480V AC, 50/60Hz

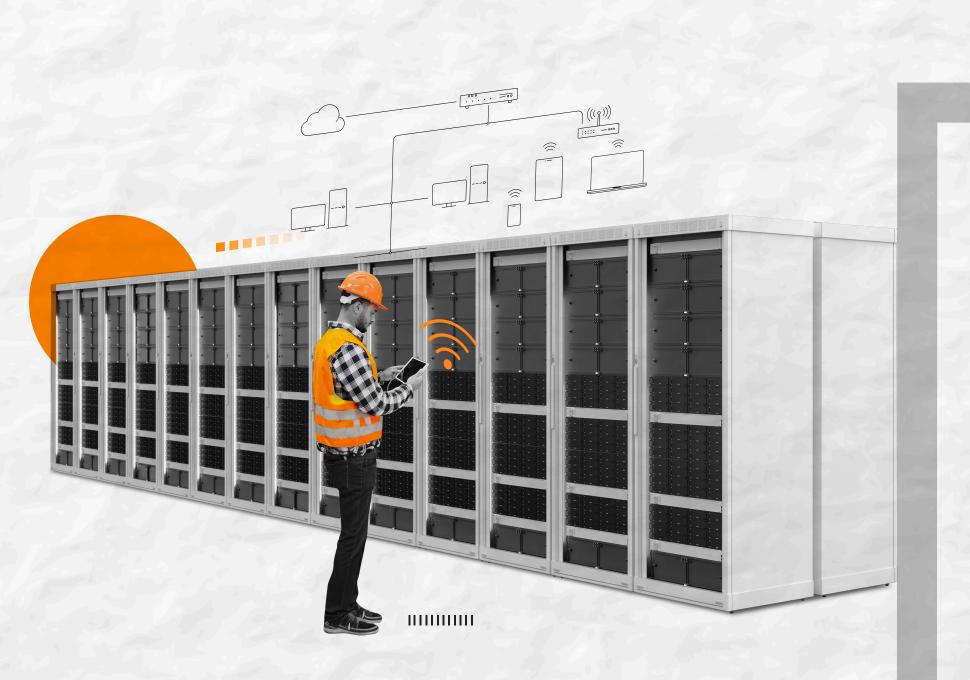
**3** Electrical Infrastructure Setup

- Distribution Channel
  Single Phase: UPS
  Three Phase: Central Distribution
  Panel to MCB with Industrial Socket
- Raw Power Path
  Single Phase: UPS to Distribution
  Board to Power Sockets
  Three Phase: Directly to MCB
  with Industrial Socket

#### Location of Power Sockets Single Phase: Near

- Single Phase: Near
  Pick-Put Station (PPS)
  Three Phase: Near Ranger
  Bot Chargers
- Importance of UPS
- Single Phase: Prevents operational malfunctions during power outages
  Three Phase: Not required due to system redundancy for power outage management
- Customer Responsibility
  Facilitate drop points for UPS
  and raw power supply





Transform your facility into a hub of innovation with automation using the insights above.

Once you have prepared your site for AMRs, we can help you unlock unique advantages and set new benchmarks that resonate with your specific needs and goals.

TALK TO US

