



Safety & Environment Contractor & Partner Handbook 2021 - 2023

Life Is On

Schneider
Electric

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Congratulations on being selected to work with Schneider Electric!

At Schneider Electric, our purpose is to empower all to make the most of our energy and resources, bridging progress and sustainability for all. At Schneider, we call this Life Is On. We have been a global leader in energy management and automation for decades, with a 175+ years of experience on the market.

At Schneider Electric, Safety is a value we will never compromise. Our goal is to have zero fatalities and zero life altering incidents.

Based on our experience our top five hazards are: driving, electrical, machines, power industrial trucks, and falls, and these always deserve particular attention and the implementation of the highest possible control measurements.

Meanwhile, we expect each contractor and partner, and you in particular, to perform work safely at all times when working on Schneider Electric's customer site projects or facilities.

We trust you will fully embrace this important belief we have as an organization: "Every injury is preventable".

We count on you to be *S.A.F.E. First and to perform a **Self Check** to ensure your eyes and mind are focused on the task, an **Activity Check** to assess the risks before starting the job, a **Facility Check** consider other contractors and added risks and **Environment Check** to ensure adequate lighting is available.

We are pleased to have your company work with us, and our commitment to you is to strive to provide a safe working environment for everyone.



Be
S.A.F.E. First!
Vlieghe

Nicolas Vlieghe
Chief Compliance Officer, Governance
Learn more about *S.A.F.E. First in the following pages.

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Vision



Schneider Electric strives to be recognized as a leader and a reference company in Occupational Health, Safety, Environment & Real Estate, and to continually improve performance by positively impacting people, our customers, our business, and the environment.



Safety Strategy

5

Life Is On | Schneider Electric

Our goals:

- ✓ Zero fatalities
- ✓ Zero serious incidents
- ✓ Achieve 50% MIR by 2025*

[Go to training materials](#)



*based on pre-COVID-19 target for 2020

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S. A.F.E. First is our personal reminder to pause and reflect on our own safety before beginning any task.

Self and **Activity** are checks that we always need to complete in order to be able to identify common Human Factors which have historically caused two-thirds of workplace injuries at Schneider Electric.



Human Factors: how humans interact with tools, equipment and the work environment. This relates to human characteristics that influence behavior in a way that can affect their personal health and ability to stay safe.



The checks for **Facility** and **Environment** represent **Workplace Factors** which contribute to the other one-third of injuries at Schneider Electric.

Workplace Factors: the interaction between an employee and the location where they perform work. Workplace factors can include workstation design, use of tools or equipment, presence and quality of procedures, company culture, etc.



Unsafe? We stop work!

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Self Check

To safely complete any task, my mental and physical state must be such that I can complete the task safely. Begin with Self Check questions:

- Am I able to **mentally focus**?
- Am I **physically capable**?
- Is the **work accessible**?
- Is this **ergonomically safe**?



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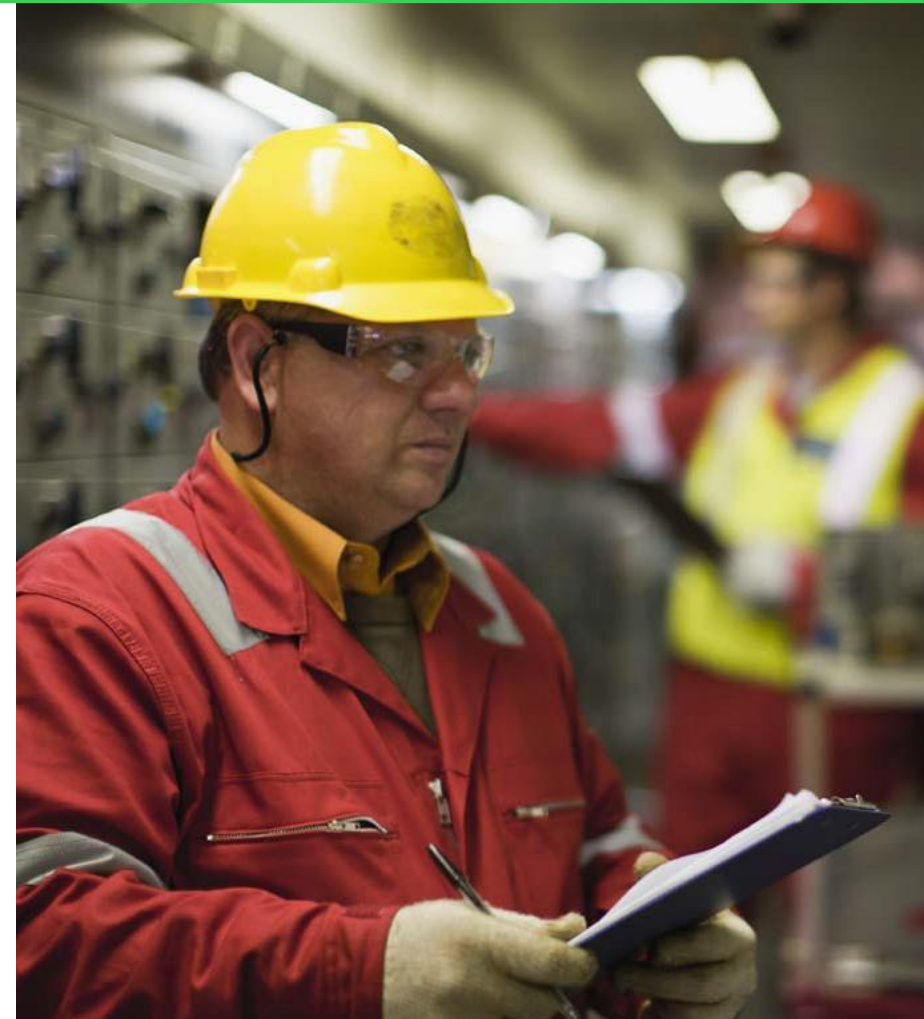
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Activity Check

I check what I plan to do in order to complete my task safely. This requires analysis of all planned activities prior to starting work by checking the following:

- Am I **qualified**?
- Am I exposed to **hazards**?
- Do I have the proper **tools and PPE**?
- Are the required **permits, and approval are in place**?



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Facility Check

The condition, layout and make up of the facility or field in which I work will directly affect my safety. To do so, I visually inspect the facility and my immediate work area for potential hazards and unsafe conditions.

- **Exposure to hazardous energy?**
- **Overhead hazards?**
- **Proper guarding?**
- **Trip hazards?**



Unsafe? We stop work

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Environment Check

I must always be aware of how an adverse environment may impact my safety. I must also be aware of how my work impacts the environment and the presence of others.

I do this by checking the following before entering a new work area to perform a task:

- Is there a presence of **excessive temperature, noise, poor lighting, hazardous gases or chemicals?**
- **Affected workers in the area?**
- **Presence of new hazards?**
- **Generation of hazardous materials?**



Unsafe? We stop work

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These principles reflect the values that exist throughout Schneider Electric that live on today, tomorrow and in the future.

Our five guiding principles fuel the empowerment of our employees to be active participants in their own safety and the safety of others.

Why are they important?

1. We are all empowered.
2. The way to achieve and sustain our goal of zero injuries.
3. Recognized by our customers as the benchmark for safety.



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Principle 1

We are qualified.

1. All workers are trained to complete the work safely.
2. Our workers receive training, tools and the equipment needed to perform the work safely.
3. Our workers know who to contact when assistance is required.

Related Actions

1. Contractors must have attended safety training and received the required qualification required by Country legislation and by the industry, to enable them to work safely.
2. Regular refresher training is required to ensure all workers are able to identify hazards and implement control measures to work safely.



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Principle 2

Unsafe? We stop work.

1. Our workers are empowered to identify unsafe conditions.
2. All workers have the authority to stop work until the unsafe condition has been mitigated.

Related Actions

1. Prepare a documented prevention plan, which includes a risk analysis before starting work.
2. Complete a Point of Work Risk Assessment and discuss with the work team before start of each shift each day.
3. Any changes to the planned work, require work to be stopped while the documentation is updated.



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Principle 3

We report opportunities.

1. We value our workers involvement in safety through proactive reporting (near miss, safety ideas, and safety opportunities). This can be documented and shared in numerous ways such as safety walks, audits, and direct report to the supervisor or project manager by any employee or contractor.

Related Actions

1. Implement a method for workers to report safety opportunities, near misses, accidents and environment events.
2. All accidents and environmental event will be **investigated and reported** within 24hrs to Schneider Electric.



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Principle 4

We resolve and share solutions.

1. Our workers are empowered to resolve issues on their own, and to request the assistance of others when needed.
2. All workers are empowered to share solutions with others to prevent reoccurrence elsewhere.

Related Actions

1. Implement a system of continuous improvement where solutions are shared to prevent accidents.



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Principle 5

We care for each other.

1. We watch out for ourselves and others because everyone is important at Schneider Electric.
2. Our colleagues, friends and loved ones are counting on us.
3. We value and expect the highest standards of safety from our employees and contractors while working on Schneider Electric premises, traveling on the roads, and working at a customer's site.

Related Actions

1. On construction sites, the success of the safety program is strongly connected to how contractors interact with other contractors and the client. Make sure you consider other workers when planning and executing your work activity.

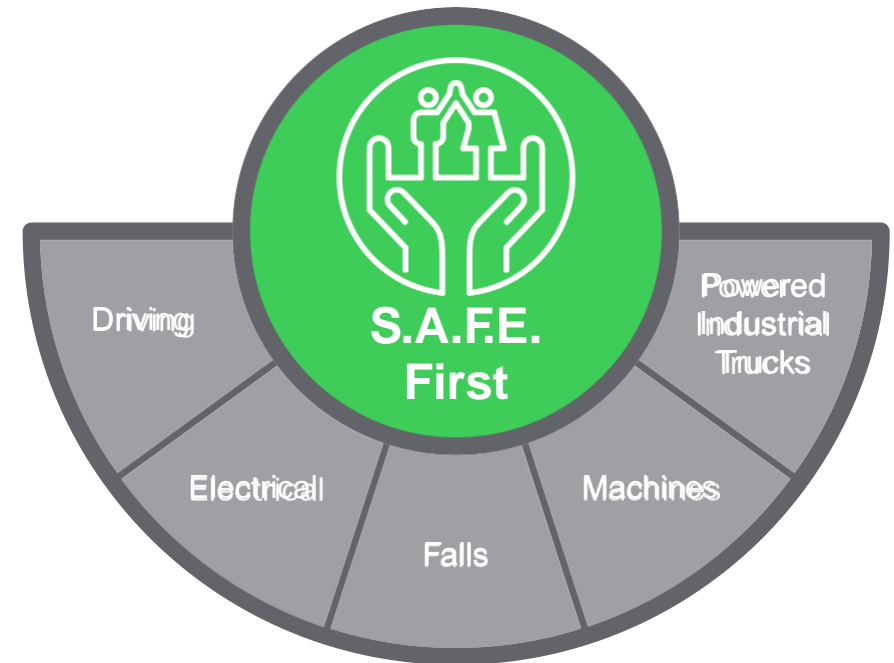


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Top 5 hazards

More than 90% of serious incidents at Schneider Electric are caused by:

1. Driving
2. Electrical
3. Falls
4. Machines
5. Powered Industrial Trucks



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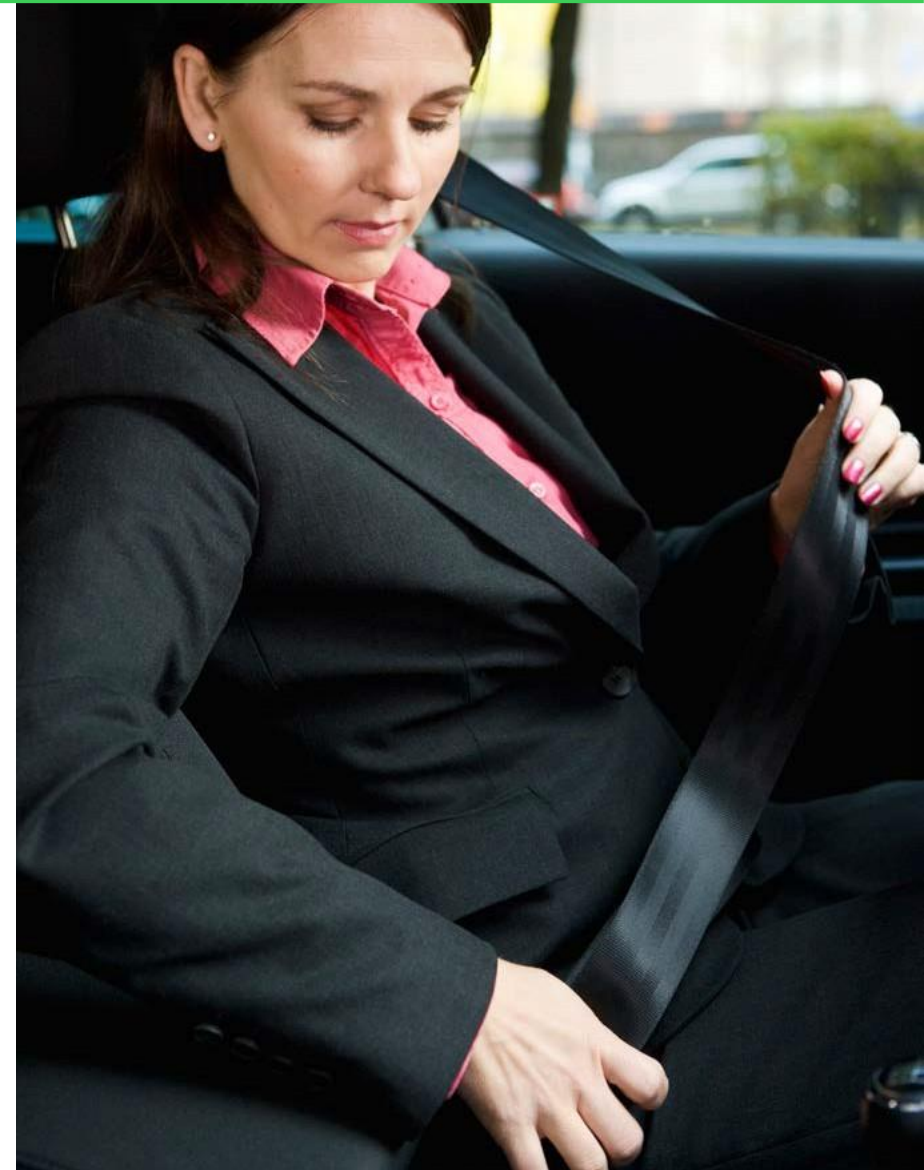
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Golden rules for driving safely

1. I will be proactive, inspect my vehicle and plan my route before driving.
2. I will only drive when fully alert, sober, and take breaks to avoid fatigue.
3. I will wear my seat belt.
4. I will eliminate distractions during driving.
5. I will drive defensively and follow the 2 second rule.
6. I will drive at an appropriate speed for the conditions.



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Golden rules for electrical safety

1. I will perform a risk assessment for shock or arc flash prevention.
2. I will participate in a safety briefing.
3. I will de-energise using Lock Out/ Tag Out (LOTO).
4. When testing energised I will use PPE and create boundaries to protect others.



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Golden rules to prevent falls

1. I will use the safest means of access for working at heights and only use ladders as the last option. (Hierarchy of control).
2. I will ensure all elevated work has appropriate fall prevention in place.



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Golden rules for machine safety

1. I will only operate equipment that I have been trained to operate.
2. I will always inspect equipment before use.
3. I will always use safety features when operating equipment (guards, hand controls, etc.).
4. I will always wear PPE before operating equipment.
5. I will report equipment that is defective or functioning incorrectly and assure that it is fixed before operating.



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Golden rules to prevent PIT incidents

1. I must be certified to operate.
2. I will inspect my vehicle before driving.
3. I will never drive distracted (eating, cell phone, conversations).
4. I will always check my surroundings and follow the 1m/3m (3ft/10ft) rule. (Pedestrians must stay one meter away from PIT's when forks are lowered and 3m away when forks are raised)
5. I will always make eye contact and sound the horn.
6. I will wear a high visibility vest in shipping and receiving areas.



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Driving Safety Requirements



1. Employees shall abide by any applicable local regulation and the customer worksite applicable driving rules.
2. Drivers shall follow the indicated site speed limit.
3. Drivers shall not operate any vehicle when under the influence of alcohol or drugs. Prescription or over-the-counter medications which may impair the driver in any way are also prohibited.
4. Drivers shall maintain a current drivers license in accordance with the local legal requirements.
5. All vehicle occupants (passengers) shall wear available safety restraint devices (seat belt).
6. Drivers shall use voice activated hands free devices only when using mobile phones while the vehicle is moving. The number and duration of the calls placed and received shall be limited when the vehicle is in motion. Using mobile devices to text, instant message, chat, read emails, etc. is strictly prohibited.

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Electrical Safety Requirements



1. Repair and modification of energized equipment is **not permitted**.
2. The Job Safety Plan shall include a **shock and arc flash risk assessment** to determine the appropriate level of personal protective equipment (PPE) for both shock and arc flash protection.
3. Installation, repair, maintenance and modification of electrical equipment is permitted when electrical equipment has been placed and verified to be in a **zero-energy** state in accordance with an approved lockout procedure. (See appendix a for more details on LOTO process)
 - Prepare
 - Shut down the load
 - Disconnect the sources of energy
 - Lock
 - Verify
 - Ground
 - Protect adjacent conductors
4. Only tools appropriate to the voltage and current shall be used.
5. **Working alone** is not permitted for energized testing. (Remember, performing the LOTO process is considered energized testing until all the LOTO steps are complete).
6. Only non-conductive ladders permitted inside shock & arc flash boundaries.
7. Electrical workers shall receive the **training** required to be familiar with the construction and operation of the equipment, the hazards, safe work practice requirements, the assessment of shock and arc flash risk and the selection and use of PPE selection and use.

[Link to SE LOTO video on Youtube](#)

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Electrical risk with Battery Systems



The two electrical hazards with battery systems are shock and arc flash.

- **Electric Shock**

Electric shock is a concern when any battery system is greater than 50 VDC. If contact is made with positive terminal and a different body part contacts the negative terminal. On battery systems where the neutral is grounded contact with the positive terminal alone will cause a shock if the person is in contact with any conductive material connected to ground. Assess the shock risk before starting work.

- **Arc Flash**

When a conductive object (metal tool, ring on a workers finger, cable end, etc) makes conduct with two battery terminals with a voltage difference, an arc flash will occur. This can also occur when a cable is connected to the wrong terminal. Assess the arc flash risk before starting work.

- **Controls**

1. Cover the terminals to prevent both shock and arc flash risk.
2. Remove the safety links to reduce the voltage while work is taking place on batteries.
3. Check zero volts between 2 points before making final connections.
4. Cover cables with insulated sock before they are connected.
5. When installing battery links, insert both connecting bolts loosely before torquing to the correct level.

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Fall Protection Requirements



If elevated work cannot be “designed out” of the job, the hierarchy of control shall be used to select the safest means of access. (See guide in Appendix B) All elevated work* shall have a means to prevent employees from falling, and/or to protect employees in case of a fall. Means to prevent a fall (fall protection) include, but are not limited to guardrails, handrails, toe boards, walls, hole covers, and distance setbacks. Means to protect personnel in case of a fall (fall protection/arrest) include anchor points, body harnesses, shock-absorbing lanyards, self-retracting lanyards, etc.

Mobile Elevated Work Platforms (MEWP’s) (Scissor Lifts, Man Lifts, or booms) are used to perform elevated work the following requirements shall be maintained:

- Operator(s) **MUST** wear required PPE (hard hat, fall restraint and safety glasses). Additional PPE maybe required as identified in the risk assessment.
- Fall restraint Lanyards must be connected to the designated anchor point before operating the unit.
- Operator(s) **MUST** lower to “zero” position prior to traveling greater than 1m (3ft).
- The ground below the work area must have a visible barrier such as (cones, rope, caution tape or an observer) to protect others from falling objects.
- Employees shall always stand firmly on the floor of the aerial lift, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position

*Note: As used in this directive, the term “elevated work,” means physical presence of personnel at or above any surface that is 2 meters (6 feet) high or greater. If local requirements indicate a lower threshold, that level shall be implemented.

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Fall Protection Requirements



A ladder safety program shall include:

- Ladders are always to be the last option when performing work at heights and will only be used for short duration non repetitive tasks.
- If ladders are used, safer alternatives include: Podium Ladder and Platform Step ladder are used.
- Wooden ladders and multi-hinged collapsible ladders are not permitted by Schneider Electric.
- The top 2 steps of a step ladder are not to be used.
- Never use any type of conductive ladders (step or platform) when performing work around “live” exposed circuits or conductors.
- Ladders must be inspected prior to being used.
- When extension ladders are used to access a higher work surface (landing platform), the ladder shall extend >1m above the higher work surface.
- An exclusion zone will be created below any elevated work to protect from falling objects.
- An opening in a floor will be protected with barriers & signage.
- Workers required to utilize fall protection equipment shall be trained in all aspects of its use, care, and handling and shall inspect it prior to each use.

Accessing a roof or any elevated surface (>2m) is prohibited, unless the following is present:

- If a qualified person has determined that there is a means to prevent anyone from falling off the edge, into a skylight or any weak surface areas not designed for walking or working (ie handrails, toe-boards, dedicated walkway).
- When a means to prevent a fall is unknown or does not exist, person(s) must be qualified (Including the use of PPE) before accessing a roof or any elevated surface.

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Machine Safety Requirements



Safeguards shall be required at all in-running nip points, chains and sprockets, gear drives, belt drives, shearing operations, etc. These safeguards shall prevent access to and entry into any hazard zone by protecting all potential hazards on the front, back, sides, top and bottom of the machine.

Ensure machines shall be equipped with emergency stops when required.
Gloves are not used around rotating shafts.

Powered Equipment & Tools

- Inspect equipment before use checking for damage to power cables, pneumatic lines, etc.
- If working in wet or damp conditions, ensure electrical equipment low voltage (Less than 50v).

Nail/Staple Guns are only permissible if all other alternatives have been considered and must be equipped with the following:

- Full sequential trigger – requires the nose of the gun be depressed before the trigger is pulled
- Single shot trigger – shoots one nail or staple at a time
- Regulated pressure, not to exceed the manufacturers recommendation for safe use

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Fork Lift Trucks (FLT) & Powered Industrial Trucks (PIT's) Requirements



- When Power Industrial Trucks (PIT's) are used in **restricted areas**, a "Spotter or Banksman" will act as an extra pair of eyes for the driver.
- PIT drivers will attend **appropriate driver training** and have the required certification to demonstrate competency.
- **High-visibility** vests or clothing shall be worn by workers in the vicinity of a PIT.
- The PIT driver shall not **extend any part** of the body outside of the equipment safety zone.
- **Safety belts** shall be worn at all times when the PIT is in motion if the PIT is equipped with this safety device.
- Take special care lifting top heavy loads or loads with an **offset center of gravity**.
- Prior to operation of a PIT, it shall be **inspected** using a documented checklist.

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Cranes & Hoists Safety Requirements



- **Lifting of personnel** with lifting equipment not designed, purchased and qualified for this purpose is strictly prohibited.
- All devices used in lifting, including support beams, structures and “**below the hook**” attachments (such as shackles, slings, chains, ropes, etc.), shall be properly labeled as to their lifting capacity (nominal load).
- Slings and chains shall be rated according to the following rules:
- The sling, chain, rope shall be purchased with a **conformity certificate** that guarantees it has been designed according to the national regulation, or other regulation.
- The nominal weight **labeled on the sling**, chain, etc. shall never be exceeded.
- Cranes and hoist installations shall meet or exceed the local countries regulations for machine safety design.
- Load testing shall follow regulatory and general consensus standards as well as manufactures requirements.
- “**Critical lifts**” are considered a subcategory of lifting and must meet additional requirements (All crane lifts are classified as critical lists). Critical lifts include any lift where an incident could have serious Safety, Environmental, Process, or Economic consequences. There shall be written lifting plan for all critical lift.

Schneider Electric Customer Worksites



All work at a Schneider Electric customer's site requires a documented **Job Safety Plan** completed by a qualified worker and a pre-job safety meeting held with all affected workers, prior to performing work.

The Job Safety Plan shall include:

- A description of the job (i.e. scope of work) and the individual tasks
- Site specific emergency response protocol
- Identification of the electrical hazards and other hazardous energies or workplace exposures associated with each task using SAFE First Check (Explained in this handbook).
- A Point Of Work Risk Assessment (POWRA) will be completed before starting work at the start of each shift.
- Risk control selected from the hierarchy of risk control methods.
 - Eliminate the hazard.
 - Substitute a lesser hazard or different process.
 - Utilize engineering controls.
 - Utilize administrative controls.
 - Utilize PPE for protection.
- Work procedures, and special precautions.
- A shock risk assessment for tasks involving a shock hazard.
- An arc flash risk assessment for tasks involving an arc flash hazard.
- A qualified supervisor shall be identified in writing.

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Confined Space Requirements



A confined space is any space that is not designed for permanent human activity and meets all three criteria: A space that is large enough to bodily enter and perform work, has a limited means of entry or exit, workers only enter to perform work, inspection or repair activities.

- Entry into any confined space shall only occur via a well-controlled process (e.g., permit or checklist).

Confined Space Permits are required if any of the following conditions are met:

- Potential for a hazardous atmosphere exist.
- Potential for engulfment exist.
- Potential for entrapment exist.
- Other hazards exist that can result in serious harm or death (Fire, Mechanical, Electrical, etc.)

At a minimum, the **entry permit/checklist** shall include:

- Rescue preparation (including rescue plan, and notification of an approved and trained rescue team, if applicable)
- Atmospheric testing
- Entry preparation & precautions
- Authorized entrants (Those authorized to perform work as defined by the entry permit and signed by the S&E department).
- Authorized entry duration
- Notification of all affected personnel
- Process for returning the space to service.

Every confined space entry shall have a **rescue plan**.

- This plan shall include acceptable times for response by a rescue team. based on the potential hazards of the space.
- For atmospheric hazards, response time shall be 4 minutes or less.

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Sub-Contractors Requirements



Sometime a Schneider electric contractor will need to engage a sub-contractor to perform work. This can only be done after **written approval from Schneider Electric** is received. The contractor is responsible for assuring that the work being performed by the sub contractor is in compliance to this directive and local regulatory requirements.

Every sub-contractor employed by a Schneider Electric contractor shall:

- Be evaluated prior to selection;
- Receive appropriate training and orientation;
- Participate in, and follow a safe work planning process; and be evaluated for Safety & Environmental (S&E) compliance.
- Sub-contractor employees shall not only understand, but shall also conduct themselves in accordance with Schneider Electric's commitment to the safety of all workers (Schneider Electric & contractor), our customers, other contractors and the environment.

Emergency Planning Requirements



All contractors will create an **emergency plan** for each worksite, taking into account the principal contractor or client worksite emergency plan.

The plan must consider:

- Shut down of equipment in event of emergency.
- Safe evacuation and assembly in event of emergency.
- The ability to account for workers in the event of an emergency.
- The provision of trained first aid workers and the knowledge of the location and use of an AED when available.
- Prevention and control of fire.
- Documented the address (including post codes) of the worksite location and the best way for emergency services to get to the work location.
- The contact numbers of the emergency services.

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Ergonomics & Material Handling Requirements



- All contractors will ensure that the hazard of manual handling is **risk assessed** and included in the job safety plan.
- All workers shall receive annual ergonomics and material handling **training**.
- Use **mechanical equipment** to minimize the need for manual material handling.
- When **handling top heavy loads** document in a work instruction the method to secure, stabilize and move the load in a manner that will prevent the load from inadvertently tipping over.

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Fire Protection & Hot Work Requirements



Fire is prevented by **planning**

- Workplace cleanliness, no waste accumulation.
- Never use damaged extension cords or overload electrical equipment
- Flammable material (cleaners, solvents etc.) must be stored appropriately.
- NO smoking in the site except in designated smoking area.

Fire Extinguishers

- Check that the appropriate fully serviced fire extinguisher is available before starting work
- Do not use water based extinguisher on electrical fires.
- Only use an extinguisher if you have been trained and it is safe to do so. Do not take risks.

Hot work shall only take place in pre-approved areas or under the control of a permit/checklist, except as noted below. The permit/checklist shall include at a minimum:

- Inspection of the work area and removal or protection of combustible and flammable materials within 35 feet (10 meters) of the work to be performed,
- Pre-use inspection of the equipment to be used,
- Availability of adequate and appropriate firefighting equipment based on the work to be conducted.
- Determination of the need for a trained fire watch-person, including the need to remain on the job site for a period after the work has been completed.
- Notification and protection of surrounding personnel and equipment,
- Evaluation of the potential for flammable/combustible gases in the area
- Evaluation of the potential for creating an oxygen-deficient atmosphere

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Lock Out Tag Out Requirements



Lockout/ Tagout (LOTO), also called Prevention of Unexpected Start Up, is a process used to protect personnel while performing “work” such as maintenance, repair or installation on equipment or systems, where potential for unexpected release of energy exists. **All sources of energy** and release of hazardous substances must be considered.

- Before the work begins, all equipment must be shut down, **relieved of any stored energy**, secured by positive means (lock), verified safe and tagged accordingly.
- Every lock shall be accompanied by a tag listing the name of the user, the date of the lockout, and a warning such as Do Not Start or Do Not Operate.
- Every worker performing work on any **equipment shall use their individual lock**.
- These locks must be individually keyed and have only one key per lock and be in the possession of the individual worker.
- These locks will be placed on each individual control point per established written procedure. (The use of lock boxes, or similar multi-lock securing devices is permitted.)
- Specific requirements for LOTO of electrical equipment are detailed in electrical requirements.

Personal Protective Equipment (PPE) Requirements

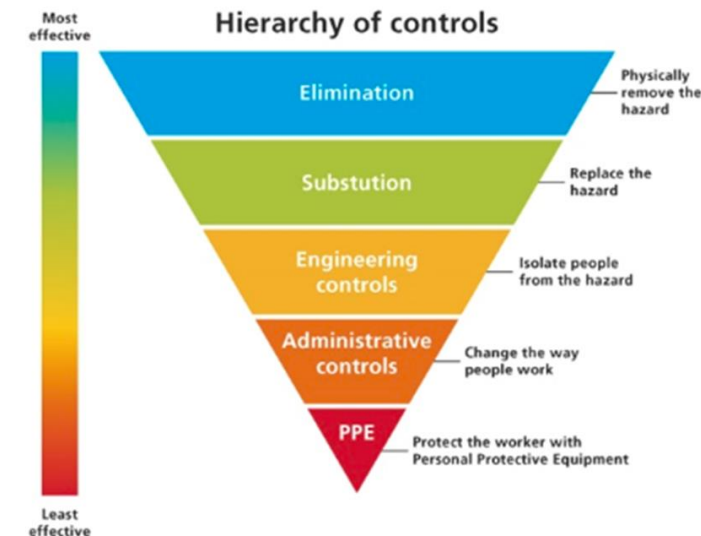


Though Personal Protective Equipment (PPE) is considered the last line of defense in protecting workers from recognized hazards, hence I will always collective protection measures when possible. The “hierarchy of controls” will be used to select the most robust method to control the hazard.

The documented safe work plan shall identify the PPE required to do the job safely.
PPE shall be inspected prior to use.

Most worksite will require the following mandatory PPE:

- Safety footwear
- Head protection
- Safety glasses
- Hand protection
- Hi vis clothing

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Waste – Hazardous and non-hazardous

Hazardous waste

- Comply to handling and storage rules especially for liquid waste, and during transportation
- Dispose of waste according to **local regulation** (check with country environment contact)
- In case of storage on site, **have the appropriate permits**
- Have the spill kits operational and test them regularly
- Put in closed and watertight containers / store on site with secondary containment
- Send to permitted suppliers, use and follow-up waste tracking documents
- Comply to local regulation for storage
- Examples: batteries, electronic components, oil and chemicals, oil or chemical impregnated clothes, carboarding or packaging, asbestos parts, SF6 or refrigerant gases, sprays or pressure containers

Non dangerous waste

- Differentiate as much as possible in order to increase **recycling rate**, especially metal waste
- Select the waste treatment following the priorities re-use/recycle/energy recovery, and avoid landfill

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Sulphur Hexafluoride (SF6) and other refrigeration gases

SF6 is a green house gas (Kyoto Protocol). **1 kg of SF6** released into the atmosphere **=23,500 kg of CO2** in terms of Global Warming Power (GWP).

- All workers handling SF6 (refilling / recovering gas) need to be certified according to Re 517/2014 (EU) or trained by a certified trainer (out of EU)
- All people working on equipment containing refrigerant gases must be certified according to Re 303/2008
- Releasing gas is strictly forbidden.
- Containers shall to be closely closed to prevent leakage.
- Containers will be secured during transportation or when in use, if there is a possibility they can fall.
- Used equipment containing SF6 or refrigerant gas is to be treated as a hazardous waste by an certified company
- These gas are tasteless, colorless,
- New SF6 is non toxic, non-flammable and heavy (do not enter or stay in a underground location in case of leak)
- Operation on used SF6 is to be done with PPE (some by products are corrosive)

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Steps (details in appendix):

1. Prepare
2. Shut down the load
3. Disconnect the sources of energy
4. Lock
5. Verify
6. Ground
7. Protect adjacent conductors



[Link to SE LOTO video on Youtube](#)



Performing Work in an Electrical Safe Condition

Follow the Lock Out Tag Out Process

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To protect ourselves we must fully understand and follow all the steps of the LOTO process



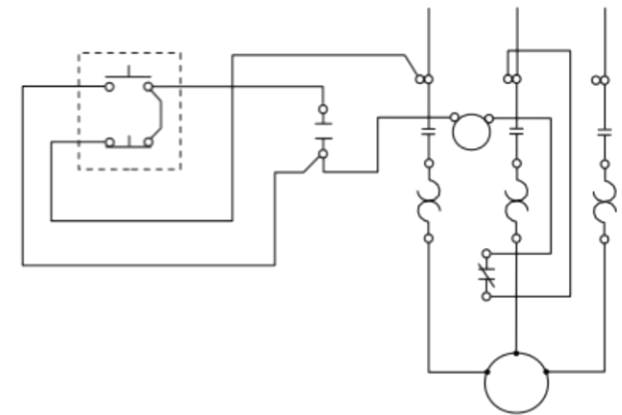
The seven steps of Lock Out Tag Out safety



Overview of the LOTO 7 step process

- Prepare
- Shut down the load
- Disconnect the sources of energy
- Lock
- Verify
- Ground
- Protect adjacent conductors

Electrical wiring diagrams draw the single lines from each device exactly as it would be wired.



Single line diagram example.

Step 1 – Preparation

- Involvement with the customer
- Point of work risk assessment
- Single Line diagrams
- Equipment & PPE
- SF6 gas
- Emergencies
- Protect other with barriers



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Step 2 – Remove the load

- Shut down the load in the normal way
- Local/remote control disconnected



Step 3 - Isolate the energy

- All phases of energized conductors disconnected
- Consider remote re-energization, fuses removed
- Feedback from other source: Ring circuits, generators
- UPS, batteries, dual fed systems, mesh network, etc
- When the isolation point is the utility, is a SE worker present to witness isolation & place their lock on the isolation point. Has the Utility grounded the lines



Step 4 - Securing Isolation (locking in open position)

- Padlocks fitted on all isolation devices (Each worker must place their own lock on each device after step 6 is complete. Group Lock Box can be used)
- Tag fitted on each device



Step 5 - Verification of absence of voltage (VAV)

- Voltage tester rated at correct voltage, with calibration mark.
- Voltage tester verified before use
- Verification of absence of voltage on all conductors in each cabinet opened
- Voltage tester tested after use
- Customer's person in charge present



Step 6 - Earthing (Grounding) and short-circuiting

- (Not mandatory below 1000v)
- Earth cables connected to earth before short-circuiting
- Earth conductors (Must be able to carry maximum fault current)
- Capacitors discharged
- If feedback from other sources possible, at any voltage, earth cables connected before & after work area



Step 7 - Protect adjacent energized circuits

- Prevent access to adjacent energized circuits (That cannot be de-energized) with voltage rated sheeting
- Identify cubicles that will remain energized



A photograph of two men in industrial settings. The man on the left wears a red hard hat and a dark blue shirt with yellow reflective stripes. The man on the right wears a white hard hat and a blue shirt. They are both looking at a tablet held by the man in the red hat. The background is a clear blue sky.

Final sign off and approval

Schneider Electric person in charge sign off that steps 1-7 are complete.

The customer representative signs to confirm all steps are complete.

The work team (every Schneider Electric employee and contractor who will work on the equipment) will sign “On” to the LOTO check sheet.

Release of LOTO










- Handover to next shift
- Electrical Testing
- Temporary release of LOTO
- Delayed Energizing
- Energizing



Appendix B – Fall Protection - Hierarchy of Control

Select the safest access equipment

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0	Multi hinge ladders		Not permitted
1	Utilizing fixed access platforms – i.e. existing walkways, mezzanine floors etc.		Low Risk
2	Use of fixed scaffolding (erected by competed scaffolds)		Low Risk
3	Use of Mobile Elevated Working Platform (MEWP)		Low Risk
4	Use of Mobile Tower Scaffold		Medium Risk
5	Use of Podiums		Medium Risk
6	Use of Platform Steps		Medium Risk
7	Use of Step Ladders		High Risk
8	Use of Leaning Ladders		High Risk

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