

## Multimeter Risk Assessment

Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

## THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THE PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

## CLIENT OR PRINCIPAL CONTRACTOR DETAILS

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date Risk Assessment supplied to Project Manager:	

RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	<b>Engineering</b> Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	<b>Administrative</b> Change	
								<b>PPE</b>	
<b>Risk Rating &amp; Required Action:</b>								<b>Notes on Hierarchy of Controls:</b>	
4A Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.								Remember to apply controls in the preferred order shown by the coloured pyramid:	
3H Review and approve additional controls before task starts. Senior supervisor sign-off needed.								1. <b>Eliminate</b>	
2M Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.								2. Substitute	
1L Proceed, following standard operating procedures. Monitor and keep records.								3. Isolate	
								4. Engineering	
								5. Administrative	
								6. PPE	
<b>Consequence Scale:</b>								Always document <b>why</b> a lower-order control is accepted if elimination or substitution is not reasonably practicable.	
Consequence	People (injury/illness)		Project / Assets		Compliance / Reputation				
Catastrophic	Fatality or permanent total disability		project shutdown		Significant regulator intervention; criminal prosecution				
Major	Serious injury/illness (hospital > 5 days)		critical delay		Improvement notice; major media coverage				
Moderate	Medical-treatment injury; lost-time > 1 day		moderate delay		Minor breach; adverse client comment				
Minor	First-aid only, no lost time		negligible delay		Isolated non-conformance				
Insignificant	No injury		no schedule impact		Deviation caught and corrected on site				
								<i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i>	

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Preparation	electrical shock, equipment not functioning	3H	<ul style="list-style-type: none"> <li>- Inspect multimeter for damage or wear before use.</li> <li>- Ensure calibration is current and verified.</li> <li>- Read the operation manual thoroughly.</li> <li>- Confirm multimeter settings before use.</li> <li>- Wear appropriate personal protective equipment (PPE) including gloves and safety glasses.</li> <li>- Ensure the work area is clean and dry.</li> <li>- Keep water and liquids away from the equipment.</li> <li>- Disconnect power supply during setup.</li> <li>- Communicate with team members about current tasks.</li> <li>- Ensure emergency contacts are accessible.</li> </ul>	2M
2. Testing Power Source	arc flash, incorrect voltage reading	4H	<ul style="list-style-type: none"> <li>- Test multimeter on a known power source to confirm function.</li> <li>- Set correct voltage setting before measuring.</li> <li>- Approach the power source cautiously.</li> <li>- Stand on an insulated platform if necessary.</li> <li>- Use insulated tools while testing.</li> <li>- Verify no exposed conductors are present.</li> <li>- Keep bystanders at a safe distance.</li> <li>- Use manual range mode if needed.</li> <li>- Turn off power source during setup adjustments.</li> <li>- Ensure all connections are secure.</li> </ul>	3H
3. Measuring Voltage	contact with live wires, overloading multimeter	4A	<ul style="list-style-type: none"> <li>- Select the correct AC/DC measurement mode.</li> <li>- Verify the range setting before connecting leads.</li> <li>- Use only the necessary amount of force when inserting probes.</li> <li>- Keep hands and body clear of live circuits.</li> <li>- Use appropriate PPE including insulated gloves.</li> <li>- Never leave the multimeter connected unattended.</li> <li>- Maintain a safe distance from suspected faulty wires.</li> <li>- Avoid simultaneous contact with metallic surfaces.</li> </ul>	3H

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			<ul style="list-style-type: none"> <li>- Test leads for integrity and wear.</li> <li>- Promptly document and communicate reading results.</li> </ul>	
4. Measuring Current	blown fuse in multimeter, contact with high current	4A	<ul style="list-style-type: none"> <li>- Verify fuse rating and condition before use.</li> <li>- Use proper current measurement technique (in series).</li> <li>- Wear appropriate PPE (gloves, eye protection).</li> <li>- Ensure circuit is de-energized before connecting leads.</li> <li>- Use insulated test leads.</li> <li>- Limit current to the rated capacity of the meter.</li> <li>- Avoid touching exposed conductive parts.</li> <li>- Use a fuse holder for added protection.</li> <li>- Verify the correct current range is selected.</li> <li>- Keep hands and tools dry.</li> <li>- Do not work on live circuits if unsure.</li> <li>- Use a clamp meter for high current circuits.</li> <li>- Document the measurement and any observations.</li> </ul>	3H
5. Measuring Resistance	equipment damage, inaccurate resistance reading	3H	<ul style="list-style-type: none"> <li>- Ensure the circuit is completely de-energized and discharged.</li> <li>- Verify the correct resistance range is selected.</li> <li>- Use proper resistance measurement technique (in parallel).</li> <li>- Wear appropriate PPE (gloves, eye protection).</li> <li>- Ensure test leads are clean and undamaged.</li> <li>- Avoid touching the test leads or the component being measured.</li> <li>- Use a four-wire measurement technique for low resistance.</li> <li>- Verify the component is isolated from the circuit.</li> <li>- Document the measurement and any observations.</li> </ul>	2M
6. Troubleshooting Equipment	electrical fault, misinterpretation of readings	3H	<ul style="list-style-type: none"> <li>- Follow a systematic troubleshooting process.</li> <li>- Verify the problem before starting.</li> <li>- Use a variety of diagnostic tools (multimeter, oscilloscope, etc.).</li> <li>- Document findings and actions taken.</li> <li>- Communicate with the team.</li> <li>- Use a safe work environment.</li> <li>- Wear appropriate PPE.</li> <li>- Avoid working on live circuits.</li> <li>- Use proper lockout/tagout procedures.</li> <li>- Verify the equipment is safe to work on.</li> <li>- Document the final diagnosis and repair.</li> </ul>	2M

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7. Equipment Shutdown	equipment reset failure, residual electrical charge	3H		2M
8. Maintenance and Storage	improper storage condition, degradation of test results	3H		1L
9. Calibration	incorrect calibration, calibration data loss	3H		1L

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10. Documentation and Reporting	data entry errors, failure to communicate results	3H		1L
11. Reviewing and Revising Procedures	failure to identify outdated procedure inadequate review depth	2M		1L
12. Training and Competence	insufficient training content, incompetence in procedure applications	3H		1L

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13. Emergency Response Planning	ineffective emergency protocols, slow emergency intervention	3H		1L
14. Incident Reporting and Investigation	missed incident reporting, incomplete investigation	3H		1L
15. Continuous Improvement	stagnation in safety improvements, failure to act on feedback	3H		1L

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SAMPLE



## EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

## LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES IF ANY STATE THAT ARE NOT APPLICABLE

### Queensland & Australian Capital Territory

Work Health and Safety Act 2011

Work Health and Safety Regulations 2011

Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>

Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>

Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>

Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

### Victoria

Occupational Health and Safety Act 2004

Occupational Health and Safety Regulations 2017

Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>

Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

### New South Wales

Work Health and Safety Act 2011

Work Health and Safety Regulations 2017

Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>

Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

### Western Australia

Work Health and Safety Act 2020

Work Health and Safety Regulations 2022

Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>

Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

### Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulations 2011

Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>

Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-practice>

### Safe Work Australia Links

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>

Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

### Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

### South Australia

Work Health and Safety Act 2012 (SA)

Work Health and Safety Regulations 2012 (SA)

Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>

Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

### Tasmania

Work Health and Safety Act 2012

Work Health and Safety (Transitional and Consequential Provisions) Act 2012

Work Health and Safety Regulations 2012

Work Health and Safety (Transitional) Regulations 2012

Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>

Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.