



OPERATOR MANUAL

TEMPORARY POWER UNIT





 **WARNING**

**FAILURE TO FOLLOW OPERATING INSTRUCTIONS
COULD RESULT IN SERIOUS INJURY.**

READ THIS MANUAL IN FULL BEFORE ENERGIZING UNIT.

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PURPOSE

This user manual contains instructions for the setup and operation of the Temporary Power products. These products are ideal for construction jobsites and other applications that require temporary power to be provided in a reliable and safe manner. They are designed to be used repeatedly without requiring any significant maintenance and conform to UL 1640 standards.

Explanation of Abbreviations and Terms

CSA Z462	Canadian Standards Association: Workplace Electrical Safety Standard
LAHJ	Local Authority Having Jurisdiction
NEMA	National Electrical Manufacturers Association
NFPA 70E	National Fire Protection Association: Standard for Electrical Safety in the Workplace
NOM-029-STPS	Norma Oficial Mexicana: Maintenance of Electrical Installations in the Workplace
SCCR	Short Circuit Current Rating
UL 1640	Standard for Portable Power-Distribution Equipment

SAFETY PRECAUTIONS

NOTICE

THIS MANUAL IS INTENDED ONLY FOR THE QUALIFIED PERSONNEL THAT THE OWNER HAS SELECTED TO PERFORM INSTALLATION AND MAINTENANCE OF THIS EQUIPMENT. THIS IS A LIST OF GENERAL SAFETY MEASURES AND DOES NOT NECESSARILY ENCOMPASS ALL PRECAUTIONS AND SAFEGUARDS.

- Read and understand this manual before installing, operating, or maintaining this equipment.
- Do not use Temporary Power units for any purpose other than described in this manual.
- Utilize appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, CSA Z462, or NOM-029-STPS.
- Turn off all power supplying this equipment before working on or inside the equipment.
- Stop the use of this equipment if the electrical feeder, receptacles, plugs, or enclosures become damaged in any way.
- Always use a properly rated and calibrated voltage sensing device to confirm all power is off.
- Replace all devices, doors, and covers on electrical gear before energizing this equipment.
- If equipment must be lifted by mechanical means, strap and secure equipment to prevent damage to equipment and injury to personnel.
- This equipment is intended to be installed, serviced, and maintained only by qualified personnel.
- Temporary power products utilize receptacle outlets. Plugs are intended to fit into a receptacle in one way only. Do not attempt to modify the plug in any way.



WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DEATH, SEVERE INJURY, OR DAMAGE TO EQUIPMENT.

DO NOT MODIFY THE EXISTING POWER DISTRIBUTION SYSTEM OR SETTINGS. ANY CONSIDERED MODIFICATION OF THE SYSTEM REQUIRES WRITTEN APPROVAL FROM EXCELLERATE.

UNIT SPECIFICATIONS

POWER CARTS

	450	451	452
Size	54"W x 75"H x 24"D	54"W x 75"H x 24"D	54"W x 75"H x 24"D
Weight	1,075 LBS. *	1,015 LBS. *	1,015 LBS. *
Electrical Input	480V, 3Ø, 60Hz, 200A	480V, 3Ø, 60Hz, 100A	480V, 3Ø, 60Hz, 60A
Electrical Input Connection	Main breaker located in the primary breaker panel with supplied mechanical lug connection.	Insulated multitap connector located in wire trough above disconnect.	Insulated multitap connector located in wire trough above disconnect.
Electrical Output – Primary Panelboard	480/277V, 3Ø, 60Hz, 200A, Power available via 14 spare single-pole 277V breakers, space available for additional breakers.	N/A	N/A
Electrical Output – Secondary Panelboard	208/120V, 3Ø, 60Hz, 200A, Power available via GFCI receptacle outlets and pre-terminated conductor whips with connectors in trough enclosure.	208/120V, 3Ø, 60Hz, 200A, Power available via GFCI receptacle outlets and pre-terminated conductor whips with connectors in trough enclosure.	208/120V, 3Ø, 60Hz, 125A Power available via GFCI receptacle outlets and pre-terminated conductor whips with connectors in trough enclosure.
Short Circuit Current Rating	Primary Panelboard: 18KA, Secondary Panelboard: 25KA	Disconnect: 10KA w/H,K Fuse; 200KA w/R,J,L Fuse; Panelboard: 25KA	Disconnect: 10KA w/H,K Fuse; 200KA w/R,J,L Fuse; Panelboard: 25KA
Environmental Rating	NEMA 3R	NEMA 3R	NEMA 3R
Storage Temperature	-40°C to +50°C	-40°C to +50°C	-40°C to +50°C
Operating Temperature	-20°C to +50°C, no derating	-20°C to +50°C, no derating	-20°C to +50°C, no derating

PANELBOARD STANDS

	453	454	455	456
Size	24"W x 70"H x 36"D	24"W x 70"H x 36"D	24"W x 70"H x 36"D	24"W x 70"H x 36"D
Weight	200 LBS. *	200 LBS. *	200 LBS. *	200 LBS. *
Electrical Input	240/120V, 1Ø, 60Hz, 100A	208/120V, 3Ø, 60Hz, 100A	240/120V, 1Ø, 60Hz, 200A	208/120V, 3Ø, 60Hz, 200A
Electrical Input Connection	Insulated multitap connector located in wire trough below the panel.	Insulated multitap connector located in wire trough below the panel.	Insulated multitap connector located in wire trough below the panel.	Insulated multitap connector located in wire trough below the panel.
Electrical Output	240/120V, 1Ø, 60Hz, 100A. Power available via GFCI receptacle outlets and pre-terminated conductor whips with connectors in trough enclosure.	208/120V, 3Ø, 60Hz, 100A. Power available via GFCI receptacle outlets and pre-terminated conductor whips with connectors in trough enclosure.	240/120V, 1Ø, 60Hz, 100A. Power available via GFCI receptacle outlets and pre-terminated conductor whips with connectors in trough enclosure.	208/120V, 3Ø, 60Hz, 200A. Power available via GFCI receptacle outlets and pre-terminated conductor whips with connectors in trough enclosure.
Receptacle Outlet Quantity	6 duplex	6 duplex	6 duplex	8 duplex
Short Circuit Current Rating	Panelboard: 22KA	Panelboard: 22KA	Panelboard: 22KA	Panelboard: 25KA
Environmental Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
Storage Temperature	-40°C to +50°C	-40°C to +50°C	-40°C to +50°C	-40°C to +50°C
Operating Temperature	-20°C to +50°C, no derating	-20°C to +50°C, no derating	-20°C to +50°C, no derating	-20°C to +50°C, no derating

OUTLET BOARD

	457
Size	12"W x 20"H x 16"D
Weight	< 50 LBS. *
Electrical Input	120V, 1Ø, 60Hz, 2x20A circuits
Electrical Input Connection	Splicing connectors with operating levers, 10AWG max wire.
Electrical Output	120V, 1Ø, 60Hz, 2x20A. Power available via GFCI receptacle outlets.
Environment	NEMA 3R
Storage Temperature	-40°C to +50°C
Operating Temperature	-20°C to +50°C, no derating

*Estimated weight

INSTALLATION

This section provides instructions for the installation of Temporary Power products. Temporary Power products are turnkey solutions, requiring only electrical interconnection and proper grounding before use. Refer to local codes and Utility requirements as necessary to verify compliance with the requirements of the LAHJ.



DANGER

NEVER WIRE ENERGIZED ELECTRICAL COMPONENTS.



DANGER

RISK OF ELECTRIC SHOCK. THIS EQUIPMENT IS INTENDED TO BE INSTALLED, SERVICED, AND MAINTAINED BY QUALIFIED ELECTRICAL PERSONNEL ONLY.

PRODUCT ARRANGEMENT / PLACEMENT

The Excellerate Temporary Power solutions are built with flexibility that allows for various site arrangements.

KEEP THE FOLLOWING IN MIND DURING ARRANGEMENT AND PLACEMENT:

- Site preparations
- Wheeled units are meant to be pushed on smooth surfaces such as concrete or flat fine crushed stone.
- Excellerate Temporary Power units are designed to work together as a system.
- Excellerate Temporary Power units are rated NEMA 3R, and are suitable for indoor and outdoor use.
- All cable should be rated for the environment in which it is installed.

CONNECT ELECTRICAL SERVICE

The Excellerate Temporary Power units are designed for connection to an AC voltage electrical system. All electrical fieldwork must be done by a licensed electrician or other person approved by the LAHJ. All electrical work should be completed following equipment labeling, and federal, state, and local codes.

Note: A drip loop should be used for all cables entering the system. Refer to the figure on the right.



RISK OF ELECTRIC SHOCK. VERIFY THAT ALL CABLES ARE IN GOOD CONDITION BEFORE ANY CONNECTIONS ARE MADE. VERIFY CABLES ARE NOT FRAYED AND THAT THERE ARE NO CUTS IN THE INSULATION THAT RESULT IN EXPOSED CONDUCTORS.

FEEDER WIRE & EQUIPMENT SIZES

The current rating (in amperes) of the Temporary Power unit can be found on the electrical distribution panel. Size and install feeder conductors and raceways from the on-site power distribution system to Excellerate Temporary Power units in accordance with the NEC and voltage drop considerations.

Note: Follow torque per ANSI C119.0, and anti-oxidant compound is recommended for aluminum conductors.



INSTALLATION OF THE ELECTRICAL FEEDER CAN CAUSE EXPOSURE TO LIVE ELECTRICAL CIRCUITS. EXPOSURE TO LIVE ELECTRICAL CIRCUITS OR IMPROPER GROUNDING OF THE SYSTEM MAY RESULT IN A SEVERE SHOCK OR POSSIBLE ELECTROCUTION. A QUALIFIED INSTALLER MUST MAKE THE ELECTRICAL CONNECTIONS.

FEEDER CONNECTIONS

Double-check torques on all connections to verify bolts did not loosen during shipping. See specification chart above for connection method.

GROUNDING

- All electrical equipment and exposed metal surfaces are bonded together ahead of time to create a safe and reliable system. The grounding lug on the base of the power cart frame shall be utilized to create a grounding path to earth. Utilize appropriate tools to ensure proper torque requirements are satisfied.
- It is the customer's responsibility to ensure that proper grounding and bonding is accomplished in accordance with equipment labeling and all federal, state, and local codes.



FAILURE TO PROPERLY BOND AND GROUND THE TEMPORARY POWER PRODUCTS MAY RESULT IN SEVERE SHOCK, POSSIBLE ELECTROCUTION, AND DAMAGE TO EQUIPMENT.

STARTUP FOR PANELBOARDS AND POWER CARTS

Follow these steps to verify feeder voltage and energize the Temporary Power unit:

Step 1: Take safety precautions before testing the voltage. Wear appropriate PPE.

Step 2: Locate the *main power disconnect* for the Temporary Power Unit. This will either be a disconnect switch or the MAIN breaker in a panelboard.

Step 3: Switch OFF the *main power disconnect* to stop the flow of electricity to the rest of the unit.

Step 4: Locate the feeder conductors that feed the *main power disconnect*.

Step 5: Set the dial on a multimeter electrical tester to the appropriate voltage range, and test the voltage coming into the Temporary Power unit. Switch ON the *main power disconnect*.

Step 6: Use the multimeter electrical tester to record the voltage. Verify that the voltage measurement is close to the expected reading, without too much fluctuation. If the voltage reading seems out of the ordinary, additional troubleshooting may be required before proceeding to the next step. Contact qualified personnel to investigate the abnormal voltage readings and resolve the issue before energizing the unit.

Step 7: After successfully verifying that the voltage reading is within the expected range, turn OFF the *main power disconnect*, and replace all enclosure doors or covers.

Step 8: Turn ON the *main power disconnect* once it is time to energize and utilize the Temporary Power Unit.

GENERAL OPERATING INSTRUCTIONS

BEFORE FIRST USE

- Remove all packing materials and ensure there is no damage to the unit.
- Ensure that all installation directions have been followed correctly.
- Double-check torques on all readily accessible connections to verify bolts did not loosen during shipping.

CARE & STORAGE

- Regular inspection of Temporary Power units should be conducted to confirm enclosure and sub-components are clean and conductors are secure. This will help ensure the products function safely and as intended. Conduct inspection every 6 months.
- Verify torque values and complete visual inspection for physical damage.
- All GFCIs should be tested at initial installation and monthly, at a minimum, thereafter, to ensure they function properly.

PLACEMENT

- Lift or push products into place manually.
- If equipment must be lifted by mechanical means, strap and secure to prevent damage or injury.

CLEANING

- Clean panelboard surfaces in compliance with the following recommendations:
 - De-energize unit prior to performing any cleaning.
 - Use a clean, damp, nonabrasive cotton cloth and mild liquid detergent or household cleaner.
 - Rinse with clean water using a clean, nonabrasive cotton cloth.
 - Dry panels with a soft, clean nonabrasive cotton cloth.
 - Do not use cleaners containing acid, alkali, or sodium hypochlorite.

SPARE & REPLACEMENT PARTS

No spare parts are recommended for this unit, but in the event that you need replacement parts please contact Excellerate manufacturing at 1-888-313-5554 or orders@excelleratemfg.com.

TROUBLESHOOTING

For technical support, contact the Excellerate at 1-888-313-5554 or support@excelleratemfg.com. Please have serial number and date of purchase information ready.

No Power at Outlet

- Reference drawings provided with equipment.
- Reset the GFCI trip button(s).
- If there continues to be no power at receptacle(s), check circuit breaker position(s) to confirm whether circuit breaker(s) is in the on, tripped, or off position(s).
- If circuit breaker(s) is in the off position, reset circuit breaker(s) to be in the on position.
- If circuit breaker(s) is in the tripped position, qualified personnel should verify cabling to the panelboard.



WARNING

DO NOT MODIFY THE EXISTING POWER DISTRIBUTION SYSTEM OR SETTINGS. ANY CONSIDERED MODIFICATION OF THE SYSTEM REQUIRES WRITTEN APPROVAL FROM EXCELLERATE.

OPTIONS

The following accessories can be purchased for use with Excellerate Manufacturing Temporary Power systems. Please contact Excellerate manufacturing at 1-888-313-5554 or orders@excelleratemfg.com for more information.

POWER CARTS

Ranging in size from 45 – 75kVA, we offer complete solutions that are safe, rugged, reusable, and are shipped to your job site ready to deploy.

PRODUCT FEATURES

- Mobile
- All panels are NEMA 3R
- All metal construction
- Panels have 8 duplex GFCI outlets
- Highly visible
- Integrated transformer
- 42 Circuit Configuration



TEMP POWER PANELBOARDS

Available in sizes ranging from 100amp – 200amp with NEMA 3R enclosures, Excellerate mobile power stands are a safer and more rugged solution for your temporary power needs. They ship in convenient nesting packages and are easy to deploy.

PRODUCT FEATURES

- All panels are NEMA 3R
- All metal construction
- Panels have 6 – 8 duplex GFCI outlets
- Highly visible
- 40 Circuit Configuration



TEMP POWER OUTLET BOARD

Excellerate mobile Temp Power Outlet Boards are made with NEMA 3R receptacles, are easy to handle, and are rapidly deployed.

PRODUCT FEATURES

- NEMA 3R Rated
- 4 duplex GFCI outlets
- Can be wired with 1-4 circuits
- Highly visible

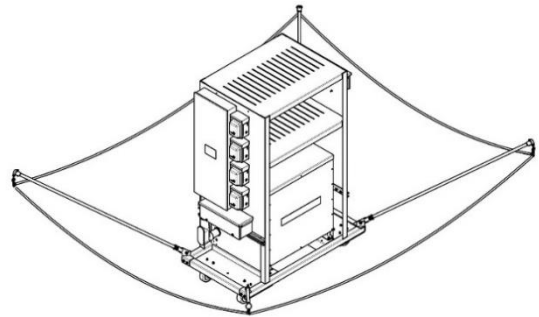


TEMPORARY POWER BARRICADE SYSTEM (PATENT PENDING)

The barricade system is designed to attach to any of the power carts or panelboard stands.

PRODUCT FEATURES

- Aids in maintaining a clear working space around electrical equipment as enforced by government agencies such as OSHA. Complies with NEC (National Electrical Code) requirements for a minimum of 36" clearance on all sides of equipment.
- In the deployed position, the system is secured by gravity and not by mechanical means. This allows the arms to lift out of the way in the case of obstruction by personnel or vehicle. Once the obstruction is removed, gravity pulls the arms back into place.
- Arms are designed with common parts to enable personnel to make repairs in the field, reducing system downtime.



INSTALLATION

System is comprised of lightweight material that is easy to handle and easily attaches to any of the power carts and panelboard stands.

- Attach arm mounts to each of the 4 corners utilizing 2 x 3/8" screws into each corner.
- Attach the included plastic chain between the arms.

CORD TREE

The cord tree is designed to attach to any of our power carts or panelboard stands. It is designed to allow for a safer and easier cable routing, by keeping cables overhead to prevent damage.

