Type VR Manual Ground and Test Device
(For Lower Connectors Only)

For Use with Masterclad™ Switchgear
4.76–15 kV, 1200/2000 and 3000 A
Up to 50 kA Short-Circuit Current Rating

Class 6055

Instruction Bulletin

6055-64
07/2014

Retain for future use.
Hazard Categories and Special Symbols

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

<table>
<thead>
<tr>
<th>DANGER</th>
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<tr>
<td><strong>DANGER</strong> indicates a hazardous situation which, if not avoided, <strong>will result in</strong> death or serious injury.</td>
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<td><strong>CAUTION</strong> indicates a hazardous situation which, if not avoided, <strong>could result in</strong> minor or moderate injury.</td>
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<tr>
<td><strong>NOTICE</strong> is used to address practices not related to physical injury. The safety alert symbol is not used with this signal word.</td>
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**NOTE:** Provides additional information to clarify or simplify a procedure.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.
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Section 1—Introduction

This bulletin contains receiving, handling, storage, installation, operation, and maintenance instructions for Type VR 1200/2000 A or 3000 A Manual Ground and Test (G&T) devices manufactured by Schneider Electric.

These devices are auxiliary devices for use with a lower connector-only design of 4.76–15.0 kV Masterclad™ switchgear during initial installation and maintenance. The devices provide a convenient means for grounding the load (cable). They can be used to measure resistance and to perform phasing operations. Also, the devices can apply power from an external source for a high potential test or for fault location.

The G&T devices can be used with switchgear assemblies with a symmetrical short-circuit current rating up to 50 kA. They have been designed and tested per ANSI/IEEE C37.20.6, “Standard for Medium-Voltage Ground and Test Devices Used in Enclosures.”

The following components (Figure 1) are included with the G&T devices:

- the basic G&T device
- temporary ground cables equipped with eyebolts for use with a hook stick
- hook stick
- primary grounding bars
- interlock key for the access door and circuit breaker compartment interlocks
- spare interlock key

**Figure 1 – Manual G&T Device and Components**
Product Overview

This section contains a basic overview of the workings of a manual G&T device and the identification of certain components. The primary contacts are designed to fit either the 1200/2000 A or 3000 A circuit breaker compartment.

Interlocks

A glass polyester door permits access to the circuit breaker compartment of the G&T device; it slides into an isolated center compartment when opened. A hasp on the door permits padlocking.

Key interlocks for the access door and circuit breaker compartment provide proper operation. Figure 2 shows the location of the interlocks.

**NOTE:** If the interlock plate necessary for proper operation is not present, DO NOT use the device. Contact your local Schneider Electric representative.

Refer to:
- “Interlock Scheme” (page 7)
- “Interlock Plate” (page 7)
- “Typical Interlock Statuses” (page 8)

**Figure 2 – Interlock Locations**

The circuit breaker compartment is suitable for G&T device use, and allows the option to test, then ground, either the line or load side. A code plate is used between the circuit breaker compartment and the G&T device to stop the insertion of a 1200/2000 A device into a 3000 A circuit breaker compartment or a 3000 A device into a 1200/2000 A circuit breaker compartment.
Interlock Scheme

The device is interlocked (Figure 2 on page 6) so that only the door covering the intended grounded connection may be opened. Load connections are normally the bottom terminals for lower circuit breaker compartments and the top terminals for upper circuit breaker compartments. Both interlock keys need to be inserted into and lock open (LO) the compartment key interlock to install the device into the circuit breaker compartment. The keys cannot be removed from the compartment key interlock without locking the device in place.

To open an access door, the correct interlock key is needed to lock the device in position and then remove the key to lock open (LO) the corresponding access door for access. This interlock system prohibits the opening of both access doors when device is connected without the removal of the interlock plate.

NOTE: Keep spare interlock keys in a secure, remote location.

Interlock Plate

The interlock plate is designed to block accidental access to the bus side of the equipment. It is attached to the interlock pan located on the floor of the circuit breaker compartment and can be rotated or removed to gain access to the bus side for grounding or phasing.
Typical Interlock Statuses

See Figure 2 on page 6 for interlock locations.

### B1 Key Interlock Status:

Access Door Interlock = Locked Open (LO)

Circuit Breaker Compartment Key Interlock = Locked Closed (LC)

**Interlock Barrel:**

Circuit Breaker Compartment Interlock Barrel = Extended

Before installing the Manual G&T, the access door can be locked open (LO) to gain access to the circuit breaker compartment to remove the primary grounding bars and the temporary ground cables.

### B1 Key Interlock Status:

Access Door Interlock = Locked Closed (LC)

Circuit Breaker Compartment Key Interlock = Locked Closed (LC)

**Interlock Barrel:**

Circuit Breaker Compartment Interlock Barrel = Extended

With the access door locked closed (LC), the interlock key can be removed from the access door interlock and inserted into the circuit breaker compartment key interlock (LC).

### B1 Key Interlock Status:

Access Door Interlock = Locked Closed (LC)

Circuit Breaker Compartment Key Interlock = Locked Open (LO)

**Interlock Barrel:**

Circuit Breaker Compartment Interlock Barrel = Retracted

Compartment key interlock is locked open (LO) to retract interlock barrel, allowing the device to be racked into the circuit breaker compartment. Key cannot be removed from key interlock when locked open (LO).
**B1 Key Interlock Status:**

Access Door Interlock = Locked Open (LO)

Circuit Breaker Compartment Key Interlock = Locked Closed (LC)

**Interlock Barrel:**

Circuit Breaker Compartment Interlock Barrel = Extended

Device is racked into the circuit breaker compartment and the circuit breaker compartment key interlock is locked closed (LC) to lock device into the connected position. Interlock key can now be removed from the circuit breaker compartment key interlock and used to lock open (LO) the access door interlock.

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**B1 Key Interlock Status:**

Access Door Interlock = Locked Closed (LC)

Circuit Breaker Compartment Key Interlock = Locked Closed (LC)

**Interlock Barrel:**

Circuit Breaker Compartment Interlock Barrel = Extended

Device is racked into the circuit breaker compartment and the circuit breaker compartment key interlock is locked closed (LC) to lock device into the connected position. Interlock key can now be removed from the circuit breaker compartment key interlock and used to lock open (LO) the access door interlock to access the load (cable) side.
Manual G&T Component Identification

Figures 3, 4, and 5 show the location of the G&T device components.

**Figure 3 – G&T Device Front View**

- Access door
- Ground rod (3/4 in. dia.)
- Ground shoe
- Release handle
- Access door key interlock
- Padlock provision
- Circuit breaker compartment key interlock
- Interlock barrel
- Device frame

**Figure 4 – G&T Device Sectional Side View, 1200/2000 A**

- Primary contacts
- Primary extension bar
- Main ground bus
- Access door
- Ground rod (3/4 in. dia.)
- Device frame
Figure 5 – G&T Device Sectional Side View, 3000 A

- Primary contacts
- Primary extension bar
- Main ground bus
- Access door
- Ground rod (¾ in. dia.)
- Device frame

Main ground bus

Access door

Ground rod (¾ in. dia.)

Device frame

3 ¾ in.
Section 2—Safety Precautions

⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- Make sure all equipment installation, testing, operation, and maintenance is performed only by qualified electrical personnel.
- Perform such work only after reading and understanding all of the instructions contained in this bulletin.
- Turn off all power supplying this equipment before working on or inside equipment. Assume all circuits are live until they are completely de-energized, tested, and tagged. Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of back feeding.
- Always use a properly rated voltage sensing device to confirm power is off.
- Handle this equipment carefully and install, test, operate, and maintain it correctly. Neglecting fundamental installation and maintenance requirements may lead to personal injury, as well as damage to electrical equipment or other property.
- Do not make any modifications to the equipment or operate the system with the interlocks removed. Contact your local Schneider Electric representative for additional instructions if the equipment does not function as described in this bulletin.
- Carefully inspect your work area and remove any tools and objects left inside the equipment.
- Replace all devices, doors, and covers before turning on power to the equipment.
- All instructions in this bulletin are written with the assumption that the customer has followed these precautions.

Failure to follow these instructions will result in death or serious injury.
Section 3—Receiving, Handling, and Storage

Receiving

Upon receipt, check the packing list against the equipment received to make sure the order and shipment are complete. Claims for shortages or errors must be made in writing to Schneider Electric within 60 days after delivery. Failure to give such notice will constitute unqualified acceptance and a waiver of all such claims by the purchaser.

Immediately inspect the equipment for any damage which may have occurred in transit. If damage is found or suspected, file a claim with the carrier immediately and notify Schneider Electric. Delivery of equipment to a carrier at any of the Schneider Electric plants or other shipping points constitutes delivery to the purchaser regardless of freight payment and title. All risk of loss or damage pass to purchaser at that time.

For details concerning claims for equipment shortages and other errors, refer to the Schneider Electric “Terms and Conditions of Sale.”

Handling

The G&T device may be damaged by rough handling. Handle the equipment with care.

Storage

Keep equipment in a clean, dry, corrosion-free area protected from damage.
Section 4—Using the G&T Device for Grounding the Load (Cable) Side

Preparing the Circuit Breaker Compartment for Installation

⚠️ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- Use extreme care when using the manually operated G&T device, as it provides access to high voltage conductors.
- Make sure all equipment installation, testing, operation, and maintenance is performed only by qualified electrical personnel.
- Remove all tools and objects left on the G&T device before installing it into the circuit breaker compartment.

Failure to follow these instructions will result in death or serious injury.

The interlock plate is attached to the interlock pan, which is located on the floor of the circuit breaker compartment (Figure 6). The interlock plate is part of an interlock system which blocks accidental access to the bus side of the equipment. Follow steps 1–3 to make sure the interlock plate is in the correct position.

Interlock Plate Status

NOTE: If the interlock plate necessary for proper operation is not present, DO NOT use the device. Contact your local Schneider Electric representative.

Figure 6 – Circuit Breaker Compartment Floor Showing Interlock Plate Location and Typical Status

Circuit Breaker Compartment Floor
The interlock plate is accessed through the door of the G&T device.
Section 4—Using the G&T Device for Grounding the Load (Cable) Side

Type VR Manual Ground and Test Device (For Lower

1. Check your customer order drawings and familiarize yourself with the interlock system, paying special attention to the location of the bus and load (cable) circuits.

2. Make sure the interlock plate is in the correct position. The interlock plate should block the extension of the interlock barrel that is interlocked with the access door of the bus side of the equipment. If the interlock plate is in the incorrect position or has been removed, reattach it correctly.

3. Make sure the interlock plate is securely attached.

**NOTE:** The interlock plate must be in the correct position for proper grounding operation. **DO NOT** use the device if the interlock plate is missing. Contact your local Schneider Electric representative.

**Preparing the G&T Device for Installation**

**Pre-Installation Inspection and Maintenance**

Follow steps 1–7 to make sure the G&T device is in satisfactory working condition.

1. To perform inspection, the access door must be open. If necessary, lock open (LO) the access door interlock (Figure 7) and open the door.

2. Make sure all primary and grounded connections are tight.

3. Clean any dust and contaminates from insulated parts.

4. Remove all tools and miscellaneous items left on the G&T device before installing it into the circuit breaker compartment.

5. Make sure the grounding bar and temporary grounding cables are not connected to the G&T device (Figure 8). If they are, follow steps a and b.
   a. Disconnect and remove the primary ground bar.
   b. Disconnect and remove all temporary ground cables.

6. Close the access door.

7. Lock closed (LC) the access door.

---

**DANGER**

**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

The interlock plate is attached to the interlock pan, which is located on the floor of the circuit breaker compartment. The interlock plate is part of an interlock system which blocks accidental access to the bus side of the equipment. Make sure the interlock plate is securely attached in the correct position.

**Failure to follow these instructions will result in death or serious injury.**

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[Diagram: Interlock Status (Step 1)]

[Diagram: Primary Grounding Bar and Temporary Ground Cables]
Hi-Pot (Dielectric) Test

**NOTE:** Do not use the G&T device if the hi-pot tests give unacceptable results. Contact Schneider Electric for technical assistance.

Follow steps 1–5 to perform hi-pot tests.

1. Make sure all personnel are at least 6 ft. (2 m) away from the G&T device being tested.
2. Perform a phase-to-ground hi-pot test on each pole.
   a. Gradually increase the voltage to the levels indicated in Table 1.
   b. Verify the G&T device sustains the specified voltage without flashover for one minute.
3. Discharge the primary terminals to ground.
4. Perform a phase-to-phase hi-pot test.
   a. Gradually increase the voltage to the levels indicated in Table 1.
   b. Verify the G&T device sustains the specified voltage without flashover for one minute.
5. Discharge the primary terminals to ground.

### Table 1 – Hi-Pot Test Voltages

<table>
<thead>
<tr>
<th>Equipment Rating</th>
<th>Field Test Voltage</th>
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<tbody>
<tr>
<td></td>
<td>AC</td>
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<tr>
<td>5 kV</td>
<td>14 kV</td>
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<tr>
<td>15 kV</td>
<td>27 kV</td>
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Retracting the Interlock Barrel

The interlock barrel must be in the retracted position before the G&T device can be installed into the circuit breaker compartment.

**NOTICE**

**INCORRECT OPERATION**

Attempting to install the device with the interlock barrel extended could damage the barrel and disable an important interlock feature.

Failure to follow these instructions can result in equipment damage.

Follow steps 1–5 to retract the interlock barrel.

1. Close the access door (if necessary).
2. Lock closed the access door to release the interlock key.
3. Remove the interlock key from the access door interlock.
4. Insert the interlock key into the circuit breaker compartment key interlock located at the base of the G&T device (Figure 9).

**Figure 9 – Circuit Breaker Compartment Key Interlock with Access Door Closed (Interlock Barrel Extended)**

5. Lock open (LO) the circuit breaker compartment key interlock to retract the interlock barrel (Figure 10).

**Figure 10 – Interlock Status (Step 5)**
Installing the G&T Device into the TEST/DISCONNECT Position

### WARNING

**DROP HAZARD**

Use only a Masterclad lift truck manufactured by Schneider Electric to install a G&T device into switchgear on a raised pad.

**Failure to follow these instructions can result in death or serious injury.**

### NOTICE

**INCORRECT OPERATION**

Check the customer order drawings and nameplates on the circuit breaker compartment to verify the G&T device is installed into the proper compartment.

**Failure to follow these instructions can result in equipment damage.**

Follow steps 1–5 to install the G&T device into the TEST/DISCONNECT position.

**NOTE:** If inserting the G&T device into switchgear mounted on a raised pad, use a Masterclad lift truck manufactured by Schneider Electric. For instructions on using a Masterclad lift truck, refer to Schneider Electric instruction bulletin number 6055-54.

1. Check the customer order drawings and the nameplates on the circuit breaker compartment to verify the G&T device is installed into the proper compartment.
2. Verify the racking position indicator (Figure 11) reads TEST/DISCONNECT.
3. Open the circuit breaker compartment door.
4. Align the G&T device rollers with the positioning rails (Figure 11) mounted on the side walls of the circuit breaker compartment.

**Figure 11 – Masterclad Switchgear Circuit Breaker Compartment**
5. Push the G&T device into the circuit breaker compartment until the front of the device aligns with the test position arrows (Figure 12) located on the bottom of the circuit breaker compartment. When the device is in the TEST/DISCONNECT position, the release handle should engage.

**NOTE:** If the G&T device does not easily roll into the circuit breaker compartment, remove the device. If necessary, pull the release handle to release the device from the TEST/DISCONNECT position. Repeat steps 4 and 5. If satisfactory results are not achieved, contact your local Schneider Electric representative.

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**DANGER**

**HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

Never force the G&T device into the circuit breaker compartment. If a mechanism is not operating easily, inspect the equipment and the interlock status.

**Failure to follow these instructions will result in death or serious injury.**
Racking the G&T Device Into the CONNECTED Position

<table>
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Follow steps 1–5 to rack the G&T device into the CONNECTED position.

**NOTE:** If inserting the G&T device into switchgear mounted on a raised pad, use a Masterclad lift truck manufactured by Schneider Electric. For instructions on using a Masterclad lift truck, refer to Schneider Electric instruction bulletin number 6055-54.

1. Close the circuit breaker compartment door.
2. Insert the racking handle into the racking port and engage the handle onto the racking shaft (Figure 13).
3. Rotate the racking handle clockwise.
4. When the G&T device is being transported to or from the CONNECTED position, the racking position indicator will read TRANSPORT.
   **NOTE:** If the G&T device does not easily rack into the circuit breaker compartment, remove the G&T device and repeat steps 1-4. If satisfactory results are not achieved, contact your local Schneider Electric representative.
5. Continue rotating the racking handle clockwise until the racking position indicator reads CONNECTED.
   **NOTE:** When the racking position indicator reads CONNECTED, the G&T device is fully racked into the circuit breaker compartment and the primary contacts are connected.

Figure 13 – Racking Handle Engaged onto Racking Shaft with Circuit Breaker in the TEST/DISCONNECT Position

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TRANSPORT

CONNECTED
Opening the G&T Device Access Door

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- Make sure all equipment installation, testing, operation, and maintenance is performed only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment. Assume all circuits are live until they are completely de-energized, tested, and tagged. Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of back feeding.
- Always use a properly rated voltage sensing device to confirm power is off.

Failure to follow these instructions will result in death or serious injury.

Follow steps 1–5 to open the G&T device access door.

1. Open the circuit breaker compartment door.

2. Lock closed (LC) the circuit breaker compartment key interlock to extend the interlock barrel and release the interlock key (Figure 14).

Figure 14 – Interlock Status (Step 2)

3. Remove the interlock key from the circuit breaker compartment key interlock.

4. Insert the interlock key into the access door interlock and turn the key clockwise to lock open (LO) the access door interlock (Figure 15).

Figure 15 – Interlock Status (Step 4)

5. Open the access door.
Grounding the Load (Cable) Side

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- Make sure all equipment installation, testing, operation, and maintenance is performed only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment. Assume all circuits are live until they are completely de-energized, tested, and tagged. Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of back feeding.
- Always use a properly rated voltage sensing device to confirm power is off.

**Failure to follow these instructions will result in death or serious injury.**

Follow steps 1–4 to ground the load (cable) side of the equipment.

1. Check each ground bail (Figure 16) with a properly rated voltage sensing device to make sure power is off. If any voltage is detected, DO NOT ground the circuit under any circumstance.

   **NOTE:** If voltage is detected, remove the source of the voltage before proceeding. Pay particular attention to the design of the power system. Consider all sources of power, including the possibility of back feeding.

2. Using a hook stick, install the three temporary ground cables. Connect the cable end to the ground rod and then connect the other end to the ground bail at the primary extension terminals (Figure 16).

   **NOTE:** The device does not have a full short-circuit rating with only the temporary cables in place.

**Figure 16 – Temporary Ground Cables Installed**
3. Install the primary grounding bars to the main ground bus (Figure 17) and then to the primary extension terminals. Torque all bolts to 35 lb-ft (26 N•m).

Figure 17 – Primary Grounding Bars Installed

4. Remove the temporary ground cables (Figure 18).

Figure 18 – Temporary Ground Cables Removed

The load side of the G&T device is now properly grounded. To remove the G&T device after grounding, following the steps for removal in “Preparing the G&T Device to be Racked Out of the CONNECTED Position After Grounding” on page 24.
Preparing the G&T Device to be Racked Out of the CONNECTED Position After Grounding

Complete steps 1–6 to prepare the G&T device for racking out of the CONNECTED position after grounding the load (cable) side.

1. Connect the temporary ground cables to the ground bails and ground rod.
2. Disconnect the primary grounding bars.
3. Disconnect the temporary ground cables using a hook stick.
4. Close the access door.
5. Lock closed (LC) the door interlock with the interlock key and remove the key.
6. Insert the interlock key into the circuit breaker compartment interlock and lock open (LO) the interlock to retract the interlock barrel for racking (Figure 19).

Racking the G&T Device Out of the CONNECTED Position

The G&T device can be racked out of the CONNECTED position using a racking mechanism located on the floor of the circuit breaker compartment. Follow steps 1–5 to rack the G&T device out of the CONNECTED position.

DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
Always keep the circuit breaker compartment door closed when racking the G&T device from one position to another when switchgear is energized.

Failure to follow these instructions will result in death or serious injury.

1. Close the circuit breaker compartment door.
2. Insert the racking handle into the racking port and engage handle onto the racking shaft.
3. Rotate the racking handle counterclockwise.

4. When the G&T device is being transported to or from the CONNECTED position, the racking position indicator will read “TRANSPORT.”

   **NOTE:** If the G&T device does not easily rack out of the circuit breaker compartment, check the interlock status. If satisfactory results are not achieved, contact your local Schneider Electric representative.

5. Continue rotating the racking handle counterclockwise until the racking position indicator reads “TEST/DISCONNECT.”

   **NOTE:** When the racking position indicator reads “TEST/DISCONNECT,” the G&T device’s primary contacts are disconnected.

### Removing the G&T Device from the Circuit Breaker Compartment

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Never force the G&T device into the circuit breaker compartment. If a mechanism is not operating easily, inspect the equipment and the interlock status.

Failure to follow these instructions will result in death or serious injury.

3. Rotate the racking handle counterclockwise.

4. When the G&T device is being transported to or from the CONNECTED position, the racking position indicator will read “TRANSPORT.”

   **NOTE:** If the G&T device does not easily rack out of the circuit breaker compartment, check the interlock status. If satisfactory results are not achieved, contact your local Schneider Electric representative.

5. Continue rotating the racking handle counterclockwise until the racking position indicator reads “TEST/DISCONNECT.”

   **NOTE:** When the racking position indicator reads “TEST/DISCONNECT,” the G&T device’s primary contacts are disconnected.

**WARNING**

DROP HAZARD

Use only a Masterclad lift truck manufactured by Schneider Electric to remove a G&T device from switchgear on a raised pad.

Failure to follow these instructions can result in in death or serious injury.

Follow steps 1–5 to remove the G&T device from the circuit breaker compartment.

1. Open the circuit breaker compartment door.

2. Pull the G&T device’s release handle to release the device from the TEST/DISCONNECT position.

3. Pull the G&T device out of the circuit breaker compartment.

   **NOTE:** If removing the G&T device from switchgear on a raised pad, use a Masterclad lift truck manufactured by Schneider Electric. For instructions on using a Masterclad lift truck, refer to Schneider Electric instruction bulletin number 6055-54.

4. Close the circuit breaker compartment door.

5. If storing equipment, store accessories or spare parts with the device. Close all doors and cover the equipment to protect it from dust and debris.
Section 5—Maintenance

Proper maintenance of the G&T device is necessary for satisfactory operation. Each time the device will be used, first perform the following checks:

1. Visually inspect the entire G&T device for loose parts or connections.
2. Lightly coat the contact surfaces and primary contact fingers with grease (red Mobilgrease® 28 or approved equivalent).
3. Use a clean, dry cloth to remove dust and contaminants from the insulation.
4. Inspect insulated parts if the device has been stored for a prolonged period or exposed to high humidity. Make sure the insulation is intact. A standard 60 cycle, high potential test at 27 kV RMS will indicate whether the device is satisfactory for service. Apply the voltage to each phase individually for one minute with the other two phases and the frame grounded to earth.
5. Verify the G&T device sustains the specified voltage without flashover for one minute. If it does not, inspect the insulators for leakage paths. If necessary, clean the surface of each insulator and repeat steps 1–3.
6. Discharge the primary terminals to ground after each test.

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Before performing any maintenance or repair work, always remove the G&T device completely from the circuit breaker compartment.

Failure to follow these instructions will result in death or serious injury.
# Installation and Maintenance Log

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California Proposition 65 Warning—Nickel Compounds and Bisphenol A (BPA)

Advertencia de la Proposición 65 de California—compuestos de níquel y Bisfenol A (BPA)

Avertissement concernant la Proposition 65 de Californie—composés de nickel et Bisphénol A (BPA)

⚠️ WARNING: This product can expose you to chemicals including Nickel compounds, which are known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

⚠️ ADVERTENCIA: Este producto puede exponerle a químicos incluyendo compuestos de níquel, que son conocidos por el Estado de California como causantes de cáncer, y Bisfenol A (BPA), que es conocido por el Estado de California como causante de defectos de nacimiento u otros daños reproductivos. Para mayor información, visite www.P65Warnings.ca.gov.

⚠️ Avertissement: Ce produit peut vous exposer à des agents chimiques, y compris composés de nickel, identifiés par l'État de Californie comme pouvant causer le cancer, et Bisphénol A (BPA) reconnus par l'État de Californie comme pouvant causer des malformations congénitales ou autres troubles de l'appareil reproducteur. Pour de plus amples informations, prière de consulter www.P65Warnings.ca.gov.