Siemens integrated electric-racking system (SIERS) provides additional personnel protection against arc-flash exposure for operators by providing a means of remotely racking the drawout circuit breaker for Siemens types GM-SG non-arc-resistant 5 kV-15 kV, GM-SG-AR arc-resistant 5 kV-15 kV, or GM38 non-arc-resistant 38 kV switchgear.

Type SIERS delivers a safe, easy-to-use, cost-effective, reliable and flexible way to remotely rack a drawout circuit breaker while standing outside of the arc-flash zone. This reduces the need for personal protective equipment (PPE) per the NFPA-70E® standard.

Safety:
- Maintain all of the safety interlocks as required by IEEE Std. C37.20.2
- If interference is experienced while racking, the circuit breaker will attempt to return to the DISCONNECTED position
- The control pendant (hand-held controller) provides clear light-emitting diode indication of the location of the circuit breaker in the CONNECTED, DISCONNECTED, and TEST positions
- When plugged into a specific circuit breaker compartment, the control pendant will override any electronic control system (HMI, SCADA or similar).

Easy to use and operate:
- User-friendly control pendant with easy to read display and controls
- Provisions for energizing the SIERS with an external 120 Vac power supply with an extension cord (optional)
- High-torque, fixed-mounted motor in the circuit breaker compartment provides smooth and efficient movement of the circuit breaker from CONNECTED position to the TEST position, or to the DISCONNECT position.

Reliable:
- Logic to sense interference issue during racking
- Operation is smooth and consistent
- Control pendant is industrial class
- Factory installed and tested as a complete racking system.

Flexible:
- Powered from a control power transformer located in the switchgear at 120 Vac, or by an external supply (either 120 Vac or 125 Vdc)
- Controls can be integrated into the switchgear secondary control circuits interface with the protection relay to provide interface with SCADA systems, local HMI or discrete wiring
- Available as a field retrofit for existing Siemens types GM-SG, GM-SG-AR and GM38 switchgear.

Control options:
- Type SIERS device is available in three configurations: basic version, local HMI version (Smart-Gear® power distribution solution), and custom version, e.g., SCADA or other systems.
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<th>Type</th>
<th>Configuration</th>
<th>Description</th>
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| Basic      | 1             | Each circuit breaker cell is equipped with an integrated, electric-racking system, which includes a fixed-mounted, high-torque motor and logic control module, control-pendant connector powered by control power in the switchgear or an external supply (either 120 Vac or 125 Vdc) when necessary. Typically, one control pendant is supplied per lineup.  
  - Type SIERS integrated, electric-racking system - one per circuit breaker cell  
  - Control pendant – one per lineup. |
| Local HMI  | 2             | Basic type plus local HMI panel PC interface with GM-SG, GM-SG-AR or GM38 lineup(s) in the electrical room:  
  - Panel PC display HMI with easy-to-use graphic interface. |
| Remote SCADA | 3            | Basic type plus custom interface with SCADA or other system:  
  - Local HMI (optional). |

**Configurations:**  
**Configuration 1: Basic type**  
- Racking system  
- Control pendant with plug-in control cord connection to switchgear  

**Configuration 2: Local HMI type**  
- Communication connection  
- I/O contacts between SIERS controller and relay  
- Control pendant with plug-in control cord connection to switchgear  

**Configuration 3: Remote SCADA type**  
- SCADA or similar  
- Communication connection  
- I/O contacts between SIERS controller and relay  
- Control pendant with plug-in control cord connection to switchgear