



## SIERS 2.0

# Integrated electric-racking system

[usa.siemens.com/mvswitchgear](http://usa.siemens.com/mvswitchgear)

SIERS 2.0 provides increased safety, ease of use, and improved reliability options and features to enable users to remotely rack GMSG drawout circuit breakers, ground and test devices, and auxiliary trays. SIERS 2.0 also includes the feature to remotely open and close circuit breakers. To meet the particular user's cost and application requirements, SIERS 2.0 is available in two configuration setups, 1) portable HMI with carry case, and 2) local HMI smart. SIERS 2.0 provides both an innovative and flexible approach to monitoring and controlling metal-clad switchgear while safely standing outside of the arc-flash zone in front of the equipment or in a control room, which reduces the need for personal protective equipment (PPE) per the NFPA-70E® standard.

### Key features and benefits:

- Maintain all of the safety interlocks as required by IEEE Std. C37.20.2
- Interference detection to prevent damage to the motor
- HMI touchscreen provides a user-friendly and visible display
- Local override and permissive control
- Troubleshooting and diagnostic
- High-torque, fixed-mounted motor
- Available in two configurations (portable HMI and local HMI smart)
- Powered from a control power transformer located in the switchgear at 120 Vac or available 125 Vdc
- External 120 Vac power supply with extension cord (optional)
- Ethernet connection via standard protocols: Modbus or Profinet
- SCADA interface optional
- Field retrofit for existing Siemens GM-SG and GM-SG-AR switchgear.

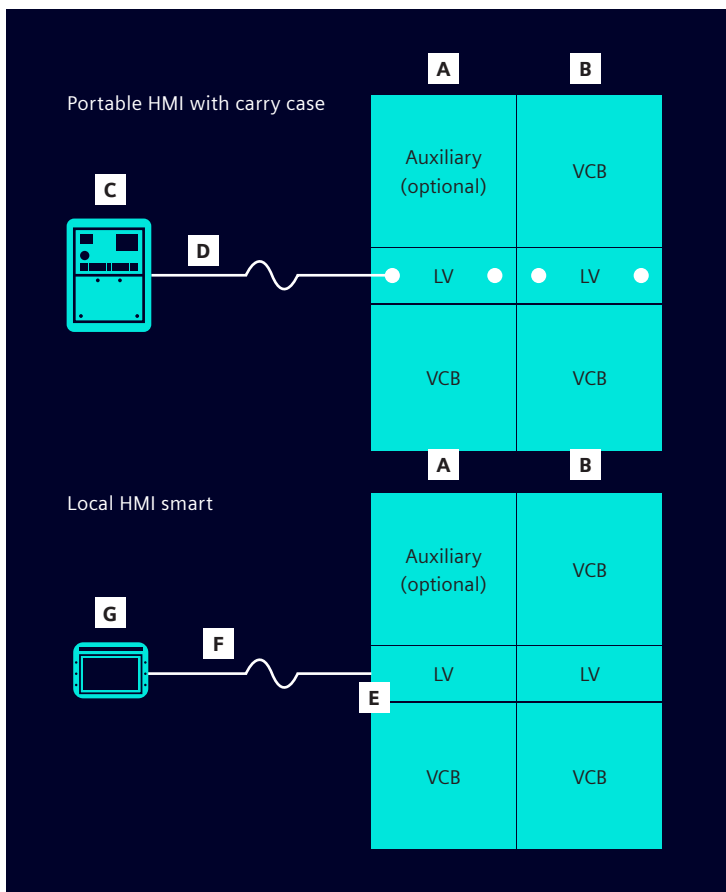
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## SIERS 2.0 types

Configuration	Components	Solution description
Portable HMI with carry case	<ul style="list-style-type: none"> <li>Logic controller and HMI touchscreen installed in a portable carry case</li> <li>Fixed-mounted motor in each VCB compartment<sup>1</sup></li> </ul>	<p>This option incorporates a high-torque motor fixed-mounted onto each racking mechanism in the circuit breaker compartment, and in each auxiliary tray compartment (optional). This option also includes a logic controller and an HMI touchscreen fixed-mounted inside a portable carry case. One carry case is provided per order. The portable carry case includes a 30-foot cord for the user to plug into an adapter plug located on the front of the low-voltage compartment door for the associated circuit breaker or auxiliary tray to interface with the racking motor. The system is powered by a 120 Vac or 125 Vdc source in the switchgear. Alternate power from 120 Vac power outlet is available. While standing outside of the arc-flash boundary, the user can perform the racking process and close or open operation for the circuit breaker. See figure No. 1 below for details.</p>
Local HMI smart	<ul style="list-style-type: none"> <li>CPU controller installed in LV compartment or control cabinet</li> <li>Portable HMI touchscreen</li> <li>30-foot cord</li> <li>Fixed-mounted smart motor in each VCB compartment<sup>1</sup></li> </ul>	<p>This option includes a smart motor fixed-mounted onto each racking mechanism in the circuit breaker compartment, and in each auxiliary tray compartment (optional). It also includes an advanced central processing unit (CPU) fixed-mounted and a portable HMI touchscreen pendant with a 30-foot cord stored in a low-voltage compartment or optionally available in a control cabinet located on the external sidewall of the switchgear lineup. The system is powered by a 120 Vac or 125 Vdc source in the switchgear. With the portable HMI plugged into the adapter plug located on low-voltage compartment door or the control cabinet via 30-foot cord, standing outside of the arc-flash boundary, the user can perform the racking process and the close or open operation for the circuit breakers. See figure No. 1 below for details.</p>

1. Optionally available for VT and CPT auxiliary drawout trucks. Also, when required, a half-high switchgear compartment is required.

Figure No. 1: SIERS 2.0 configuration setups



Item	Description
A	Circuit breaker and auxiliary compartment
B	Circuit breaker two-high configuration
C	Portable carry case including fixed-mounted HMI, logic controller, and controls
D	30-foot cord stored in the portable carrycase
E	CPU controller installed in switchgear LV compartment or control cabinet mounted on side of switchgear end section (control cabinet not available for outdoor enclosure)
F	30-foot cord (longer length optional)
G	Portable HMI touchscreen pendant stored in LV compartment or control cabinet

### Legal Manufacturer

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