



SIEMENS

Ingenuity for life

SIERS integrated electrical racking system family

For medium-voltage air-insulated switchgear, medium-voltage motor controllers, and low-voltage motor control centers

Siemens integrated electrical racking system (SIERS) provides additional personnel protection against arc-flash exposure for operators by providing a means of remotely racking GM-SG non-arc-resistant, GM-SG-AR arc-resistant, and GM38 medium-voltage air-insulated switchgear, SIMOVAC™ non-arc-resistant and SIMOVAC-AR™ arc-resistant medium-voltage controllers, or tiastar™ low-voltage motor control centers.

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

Safety features:

- Maintains all of the safety interlocks as required by IEEE Std. C37.20.2, UL 347, and UL 845

- If interference is experienced while racking, the retractable stabs, circuit breaker, or auxiliary tray will attempt to return to the DISCONNECTED position or the non-load isolation switch will attempt to return to the OFF position

- The control pendant (hand-held controller) provides clear light-emitting diode indication of the position of the non-load isolation switch, retractable stabs, circuit breaker, or auxiliary tray.

- When plugged into a specific 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 SIERS with an external 120 Vac power supply with an extension cord (optional)
- The high-torque, fixed-mounted motor integrated in the compartment provides smooth and efficient movement of the non-load isolation switch, retractable stabs, circuit breaker, or auxiliary tray between positions.

Reliable:

- Logic to sense interference issues during operations
- Operation is smooth and consistent
- Control pendant is industrial class
- Factory installed and tested as an integrated system.

Flexible:

- Powered from a control power transformer located in the assembly at 120 Vac, or by an external supply (either 120 Vac or 125 Vdc)
- Controls can be integrated into the 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 equipment.

Control options:

- SIERS devices are available in three control configurations: basic version, local HMI version (Sm@rtGear™ technology), and custom version, e.g., SCADA or other systems.

Features	Available with Siemens products					
	GM-SG	GM-SG-AR	GM38	SIMOVAC	SIMOVAC-AR	tiastar
Remote circuit breaker racking	X	X	X			
Remote isolation switch operator				X	X	
Remote retractable stabs operator						X
Remote closed door racking	X	X	X	X	X	X
Fixed-integrated motor	X	X	X	X	X	
Portable motor						X
Hand-held controller (pendant)	X	X	X	X	X	X
Local HMI interface	X	X	X	X	X	
Remote SCADA interface	X	X	X	X	X	

Type	Configuration	Description
Basic	1	<p>Each circuit breaker, auxiliary tray, or controller cell is equipped with a SIERS integrated electrical racking system, which includes a high-torque, fixed-mounted motor, logic-control module, control-pendant connector powered by control power in the equipment or an external supply (either 120 Vac or 125 Vdc) when necessary. Typically, one control pendant is supplied per lineup.</p> <ul style="list-style-type: none"> SIERS integrated electrical racking system; one per circuit breaker, auxiliary tray, or main contactor cell plus one control pendant per lineup. Each tiastar unit with SIERS includes the retractable stab mechanism and can optionally include a remote operator mechanism with control pendant. It is recommended one remote operator be purchased per installation (sold separately).
Local HMI	2	<p>Basic type plus local HMI panel PC interface with SIMOVAC, SIMOVAC-AR, GM-SG, GM-SG-AR or GM38 lineup(s) in the electrical room: a control power transformer located in the assembly at 120 Vac, or by an external supply (either 120 Vac or 125 Vdc)</p> <ul style="list-style-type: none"> Panel PC display HMI with easy-to-use graphic interface.
Remote SCADA	3	<p>Basic type plus custom interface with SCADA or other system:</p> <ul style="list-style-type: none"> Local HMI (optional).



SIERS for medium-voltage switchgear



SIERS for medium-voltage motor controllers



SIERS for low-voltage motor control centers

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