

# tiastar™ motor control centers (MCCs)

## Deliver the reliability and power to drive performance day and night

By thinking beyond the standard MCC, and listening to your needs, we've raised the bar for all MCCs. Innovative features available in new combinations – like the market's first UL-witnessed arc-resistant MCC that includes high-density design – allows you to maximize your return on investment using cutting edge technology while minimizing its complexity and risks.

### Arc-flash resistant

**With UL-witnessed testing, tiastar sets the standard in enhanced protection for your most valuable asset.**

Siemens is the first manufacturer to implement arc-resistant MCCs with testing to IEEE C37.20.7-2007 and witnessed by the Underwriters Laboratory (UL). Decrease the risk of exposure to explosive arc-flash incident energy to better protect your most valuable asset, your personnel.



### Features:

- Reinforced enclosure and latching systems
- Internal venting system channels the flow of arc-fault gases
- Type 2A accessibility for protection at the front, sides, and back
- Full side sheet isolates all sections within a MCC to prevent arc faults from propagating
- Options, such as unique dual-trip setting that reduces the energy available in an arc flash and back-to-back design to save you footprint, are available.

### High density

**The right size: fit more control into less space, while retaining easy accessibility.**

User-friendly engineering enables a smaller footprint. High-density design meets UL and NEMA standards while reducing unit size for NEMA sizes 1-4 starters and feeder units, leveraging the associated cost advantages.

### Benefits:

- Up to 10-percent weight reduction and 25-percent smaller footprint compared to standard design
- Modular plug-in units are easy to install and remove.

### Smart

Smart MCC offerings include state-of-the-art motor control technology components and features that offer optimal motor control, protection, power monitoring, communications, and automation interfacing.

Siemens tiastar Smart MCC offers the highest performance among the Smart (intelligent) MCCs available today.

- **State-of-the-art Smart technology** - Connection to process control systems using the most important communication protocols: PROFIBUS, Modbus, PROFINET, and EtherNet I/P.
- **Smart components** - SIMOCODE Pro Smart motor controller, SIRIUS 3RW44 Soft Starters, and SINAMICS G120 drives provide the best combination of performance and information to the user.

- **Flexibility** - As your needs grow, available expansion modules offer new functionality.
- **Troubleshooting** - User friendly diagnostics tools enable quicker fault identification for easier troubleshooting of problems.

**Integrated drives:**

- Energy savings: variable frequency drives (VFDs) enable precision adjustment of rotation speeds to achieve higher motor performance and efficiency.
- Reduced harmonics: harmonic and distortion problems (electrical noise) can have a negative effect on other components in the system. Drive options are available allowing harmonic correction to meet IEEE 519 standards.
- Increased uptime: together with Smart MCCs, VFDs allow early warnings of potential production losses. Drives are edge devices in your Industrial Internet of Things (IIoT) and digitalization strategy.

**Safety integrated components:**

- Provides comprehensive and integrated solutions for the manufacturing and process industry, and it protects machines and the environment, while fulfilling current and future efficiency and flexibility requirements.

**Four tiastar types:**

- **Base.** Fastest shipping at an economical price point, yet robust and reliable with Siemens reputation.

tiastar product family					
Feature		Base	HD	18-pulse	Smart
High density	Small footprint	•	◇	•	
Arc resistant	UL witnessed IEEE C37.20.7 testing	•	•		•
Integrated drives	Compliance with IEEE 519	•	•	◇	•
Energy management	Optimized power consumption	•		•	◇
Advanced diagnostics	Asset management and protection			•	◇
Redundant control	Ensures continuous production			•	◇
Fast lane	Ships in days	◇	•		

- **High density (HD).** Anywhere physical space is at a premium, our high-density design enables greater production capacity with a smaller footprint, while conforming with UL standards and reducing capital expenses. Our ultra-efficient 6" modular units for starters sizes 1–2 deliver the performance of traditional 12" buckets at half the space.
- **18-pulse.** Designed to meet the needs of the municipal water market. Robust performance is matched by standout energy efficiency, while optional asset management features and predictive diagnostics enable quick resolution of production issues.
- **Smart.** Translate raw data into usable information to yield maximum productivity with minimum overhead. Online diagnostics and asset management increase transparency and visibility into your process, enabling instant fault protections, automated variable adjustments and proactive problem prevention.

Technical ratings	
Description	Rating
Horizontal bus ratings	600 A, 800 A, 1,200 A, 1,600 A, 2,000 A, 2,500 A <sup>1</sup>
Horizontal bus material	Copper with tin or silver plating, or aluminum with tin plating <sup>2</sup>
Vertical bus ratings	300 A, 600 A, 800 A
Vertical bus options	Isolated (standard), insulated and isolated (optional), or auto-shutters (optional)
Horizontal bus details	Temperature rise of 50 °C (optional) or 65 °C (standard) <sup>3</sup> over a 40 °C ambient temperature
Bus bracing	42 kAIC, 65 kAIC, or 100 kAIC
Maximum MCC voltage rating	600 V

**Footnotes:**

1. NEMA 1.
2. For 600 A to 1,200 A, 65 kA, 65 °C.
3. Up to 1,600 A.

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