SIEMENS

tiastar™ Motor Control Centers Arc Resistant

www.usa.siemens.com/mcc

Innovative protection for your most valuable asset: your personnel.

The Siemens tiastar™ arc resistant Motor Control Center (MCC) is the industry's first MCC tested to the ANSI/IEEE C37.20.7 testing guide, with representatives of Underwriters Laboratories, Inc. (UL) present to observe the testing procedures. The tiastar Motor Control Center has been designed with more advanced features to control arc flash exposure. Thus users experience superior arc resistance that meets a high standard in protecting people, capital investments and operations.

Managing Hazards and Reducing Risk are Top Priorities

Manufacturers in all segments of industry are constantly seeking methods to improve the safety of their workforce. One area of focus is the reduction of hazards associated with arc flash events. Siemens arc resistant tiastar Motor Control Center significantly reduces risk for workers entering areas with arc flash potential by containing and directing the arc flash incident energy away from personnel and maintaining the units physical integrity.

The arc resistant tiastar was developed to meet applicable safety codes and standards, while NFPA 70E and IEEE C37.20.7 provided the guidance to design and manufacture features that are capable of ensuring Type 2 accessibility of the motor control center.

The ability to provide Type 2 accessibility, as defined by IEEE C37.20.7, helps shield personnel on the front, rear and sides of the equipment from the damaging effects of arc flash incidents. Robust structural and bus designs, isolated horizontal and insulated vertical bus designs are critical to withstand the mechanical forces released during an arc flash event.

The Benefits of a Superior Arc Resistant Design

A HIGHER STANDARD	With UL observing and validating the testing of our arc resistant design, the design innovations of the Siemens tiastar Motor Control Center have set a new industry benchmark.
INCREASED PROTECTION FOR PERSONNEL	Your people are, and always will be, your most valuable asset. Improve workplace safety and protect your work force by lowering the risk of electrical shock and harmful exposure to arc flash incident energy.
PRESERVED ASSETS	Arc flash events endanger equipment and operations. Enhanced arc resistance reduces damage to nearby assets, which in turn cuts repair and replacement costs.
SMARTER, PASSIVE DESIGN	Passive designs do not rely on secondary devices to mitigate arc flash energies. Siemens arc resistant tiastar™ Motor Control Centers are manufactured to contain the energy created during an arcing event for 50ms.
IMPROVED SPECIFICATIONS	The lack of formal arc flash resistance standards for MCCs poses a challenge for engineers wanting to specify safer solutions. By meeting ANSI/IEEE C37.20.7 testing guides for Metal Enclosed Switchgear, Siemens has raised the bar for MCC designs and created a specifiable standard.

ANSI/IEEE Standard C37.20.7-2007

ANSI/IEEE C37.20.7, IEEE Guide for Testing Metal-Enclosed Switchgear Rated Up to 38kV for Internal Arcing Faults, provides guidelines to test the resistance to the effects of arcing due to an internal fault in metal enclosed equipment; equipment that successfully meets this standard demonstrates greater protection against arc flash hazards, as long as all safety protocols are followed. Note that use of Siemens arc resistance features do not substitute for proper safety procedures in compliance with OSHA and other government safety regulations. They do mean more advanced safety features that can keep your people and facility better protected against electrical dangers and hazards of arc flashes.

Additional Safety Options Available

Dynamic Arc Flash Sentry allows the setting of dual parameters for the circuit protective device. These dual parameters, normal and lower arc flash settings, are designed to enhance the safety of personnel who may work on or near energized equipment.

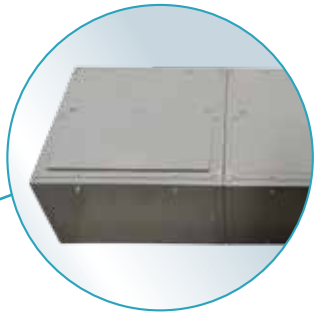
A normal setting optimizes the WL circuit breaker to provide the most efficient selective trip coordination.

Lower Arc Flash Energy setting enables a reduced operating time, allowing the instantaneous trip function via remote switches, key lock or other inputs.

Smart MCC Technology utilizes built-in networks and pre-configurations to control, monitor and troubleshoot the equipment remotely to minimize the need for personnel to enter the arc flash boundary.

Key Innovations in Arc Resistance

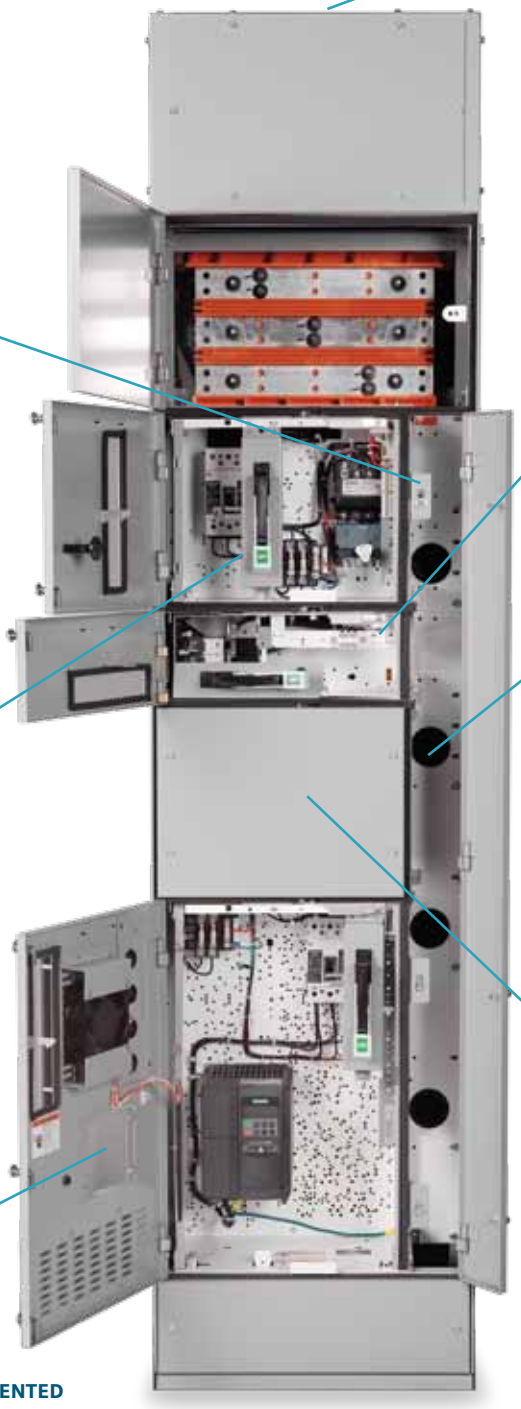
CONTAIN AND CHANNEL THE ARC FLASH INCIDENT ENERGY: By meeting ANSI/IEEE C37.20.7 Type 2 Arc Resistance, the new tiastar™ arc resistant design protects personnel at the front, back and sides of the equipment by directing the energy through the top.



MODIFIED PULL-BOX WITH PRESSURE FLAPS FOR PRESSURE RELIEF IN CASE OF AN ARC FLASH EVENT

REINFORCED ENCLOSURE AND FRONT DOORS

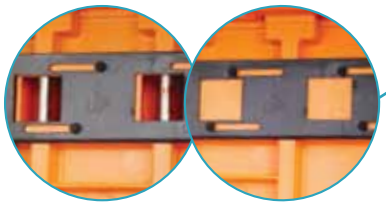
Extra hinges, stronger latching systems and reinforced cabinet ensure the equipment can withstand and contain pressure from internal arcing faults.



6" UNITS AVAILABLE IN SIEMENS tiastar ARC RESISTANT MCC

INTERNAL VENTING SYSTEM

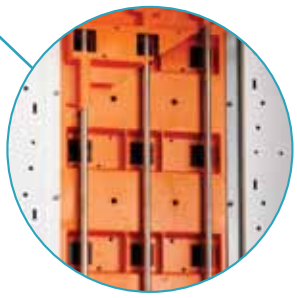
The vertical wireway is perforated with holes that channel the gasses to the back and out the top of the MCC.



AUTOMATIC SHUTTERS IN PLUG-IN UNIT COMPARTMENTS

The barrier automatically opens and closes to allow insertion or removal of units.

Isolates the vertical bus to prevent inadvertent contact lowering the risk to personnel.



INSULATED BUS BAR SYSTEM

Isolate energized components and prevent accidental contact and arcing faults from propagating.

NEW PROTECTION PLATE FOR VENTED DOORS ALLOWS THE INCLUSION OF ELECTRONIC STARTERS IN THE ARC RESISTANT MCC.

Subject to change without prior notice
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