CENTERLINE®
Motor Control Centers

Rockwell Automation

Global MCC solutions to meet your application needs

NEMA CENTERLINE 2100

480…600V

IEC CENTERLINE 2500

380…690V

CENTERLINE 1500

2400…7200V

CENTERLINE MCC Design Strategy

Globally consistent IEC and NEMA MCC solutions to meet your regional manufacturing needs.

Proven CENTERLINE bus design

- Improved heat dissipation
- Easier installation and maintenance
- Increased current carrying capacity
- Lower operating cost

Intelligent motor control components

- Drives, soft starters, electronic overload relays

IntelliCENTER® / Integrated Architecture® platform

- Enhances the intelligence of your MCC using built-in EtherNet/IP to capture information used for predictive maintenance, process monitoring and advanced diagnostics

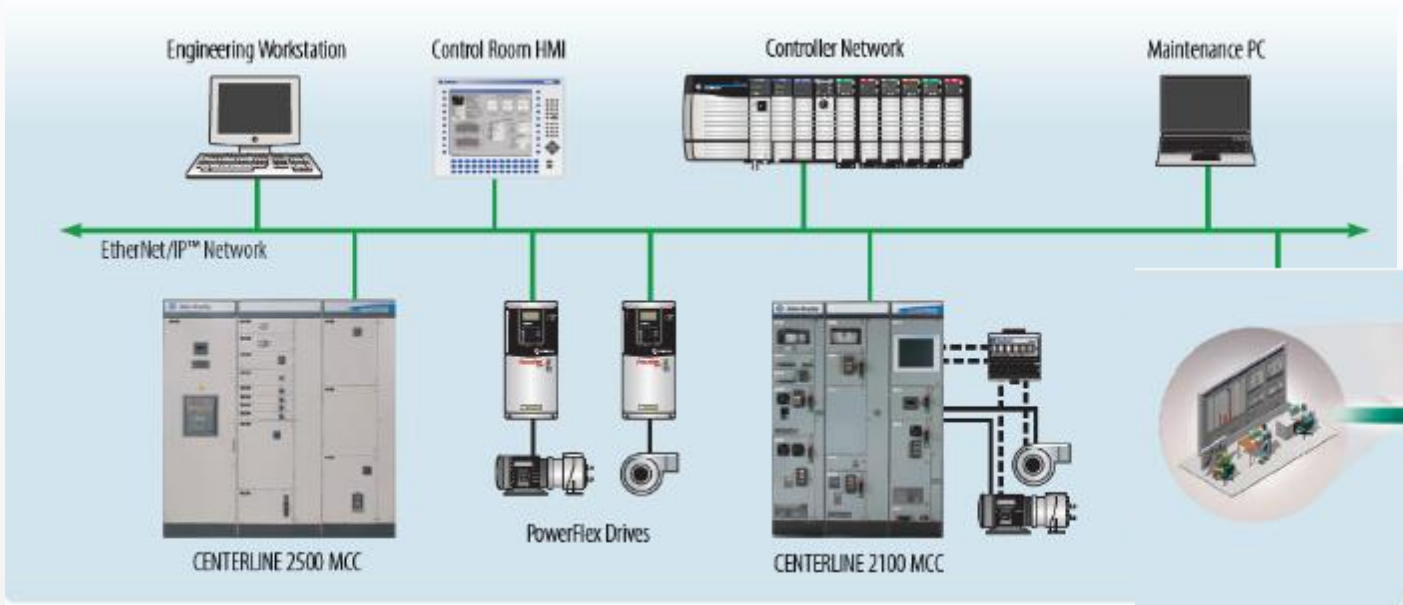
Safety

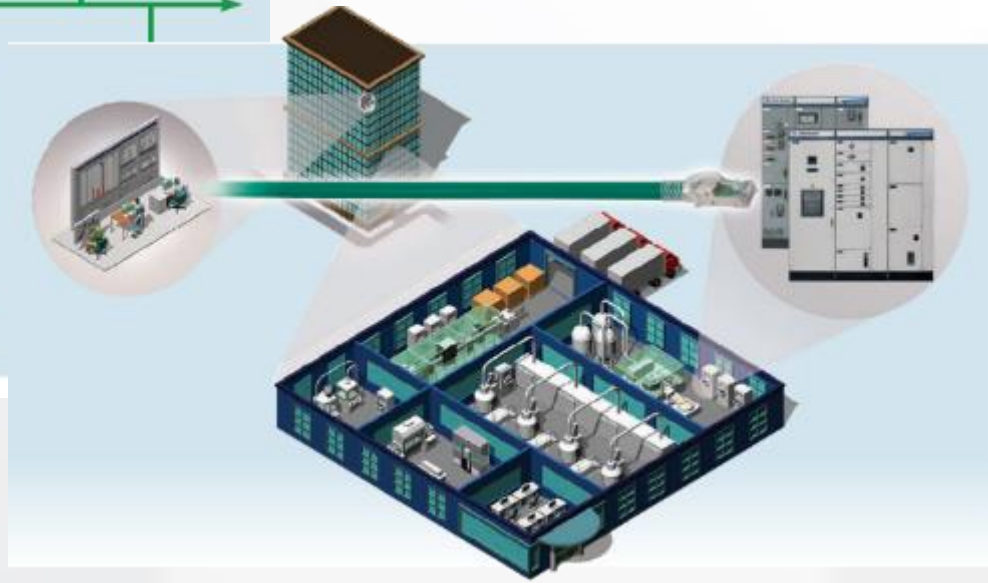
- Provides enhanced safety features as part of the standard offering

CENTERLINE 2500 IEC MCC

CENTERLINE 2100 NEMA MCC

IntelliCENTER Technology





- A single network for all automation and process control equipment
- Seamlessly linked to the front office for increased access to information
- Common package for both CENTERLINE 2100 NEMA and CENTERLINE 2500 IEC MCCs

Powerful Diagnostic Tools with IntelliCENTER Software

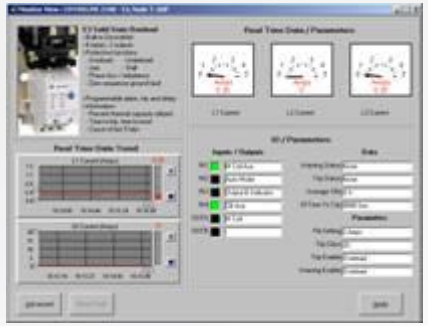
IntelliCENTER Software provides intuitive tools that are available anywhere, anytime

Identifies potential faults

- Crucial feedback from your motors helps minimize downtime
- Recording process data allows comparison over time and verifies consistent performance

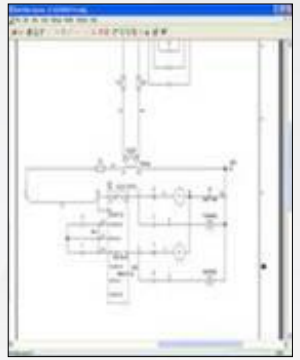
Facilitates quick repair with direct access to critical component documentation

Elevation View
Quick status overview of your MCC



Monitor View
Detailed unit status information and real time trending

Maintenance Information
Manuals and drawings



Engineering Drawings
Created specifically for your MCC

Allen-Bradley

by ROCKWELL AUTOMATION

Air Circuit Breakers

Molded Case Circuit Breakers

Motor Protection Circuit Breakers

Disconnect Switches

Contactor

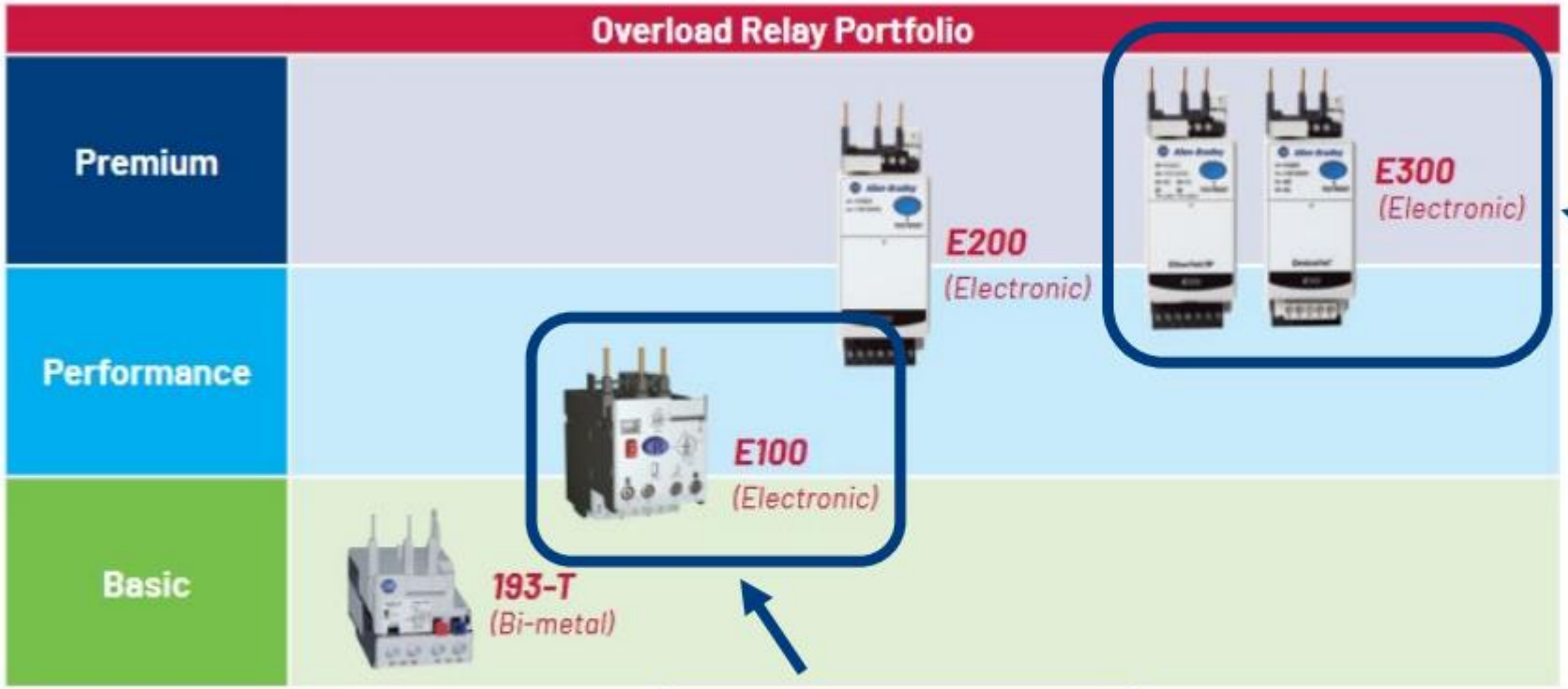
Electronic Overload Relays

Soft Starters

Variable Frequency Drives

Programmable Automation Controllers

CL2100 Overload Relay Portfolio



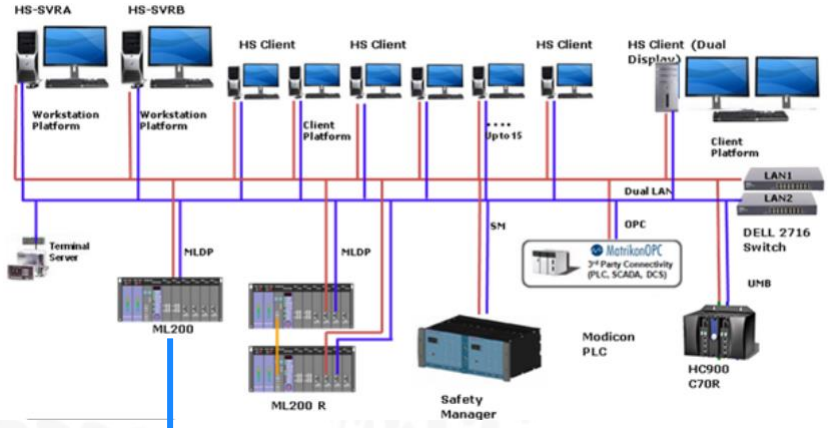
Today
Available CTO with embedded Ethernet or DeviceNet

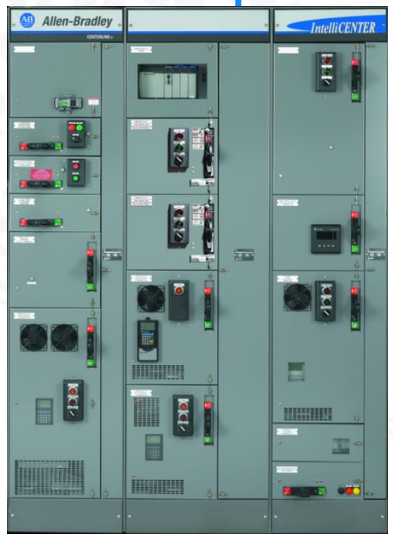
Modbus/TCP
Now Available

Future
Available CTO for non-networked MCC

Modbus TCP/IP within LVMCC

- Solution includes premium drives, soft starters, and now fixed speed starters for both CENTERLINE 2100 and 2500 offerings
- Aligns with the needs of customers within key industries such as oil and gas and other heavy industries
- Reduces hardware costs required to integrate an LVMCC into a third-party PLC or DCS





Embedded Diagnostics

Current

Time to Reset

Trip / Warning Histories

Proactively alert users...

Number of Starts

Voltage & Energy

% Thermal Capacity Utilization

Time to Trip

Operational Hours

PUBLIC INFORMATION

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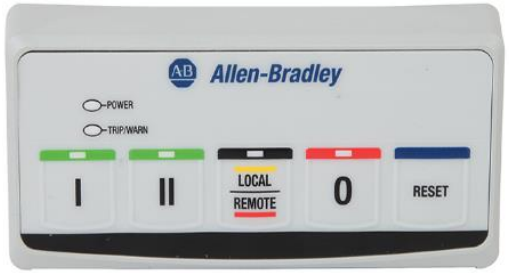
Control Station Terminology

Legacy Control Station

E300 Operator Stations

E300 Control Station



E300 Diagnostic Station

CENTERLINE 2100 Motor Control Centers

Safety By Design

Design

- CENTERLINE 2100 MCCs have safety advantages over other types of enclosures

Operation

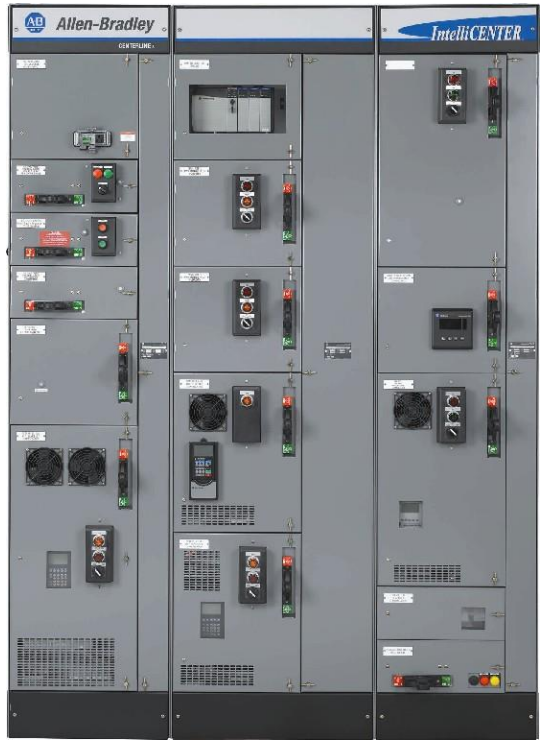
- Dependable CENTERLINE 2100 MCCs help prevent unplanned outages

Service and Maintenance

- CENTERLINE 2100 MCCs help provide a safer working environment when service and maintenance is needed

Fault Containment

- CENTERLINE 2100 MCCs robust design helps contain arc flash events



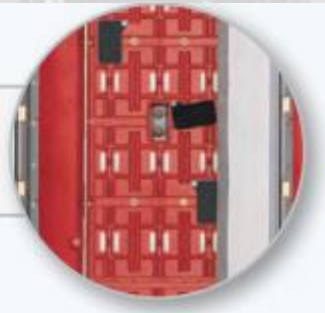
ArcShield™ Options

CENTERLINE 2100 with ArcShield		
Arc Resistant Rating	Device Limited	Duration Limited (100 ms)
Rated Voltage	Up to 600V	Up to 480V
Available Fault Current	Up to 65 kA	Up to 65 kA
Horizontal Bus Current Rating	600…1200 A	600…3000 A
*Top-plate Pressure Relief System (Requires 12" minimum clearance above MCC)	Not Required	Required
Vertical Wireway Baffle	Not Required	Required
Arc Containment Latches	2 Latches/Door	All Latches
Unit Support Pans	Bolted	Bolted
Vented Units Allowed	Yes (Arc Resistant Baffles)	No
Door Mounted Devices Allowed (Control stations, HIMs, viewing widows, etc.)	Yes	Yes

*Pressure relief system

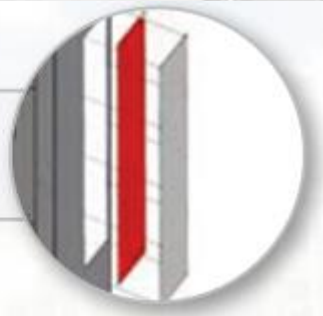
Arc-resistant latches on all doors

Automatic shutters



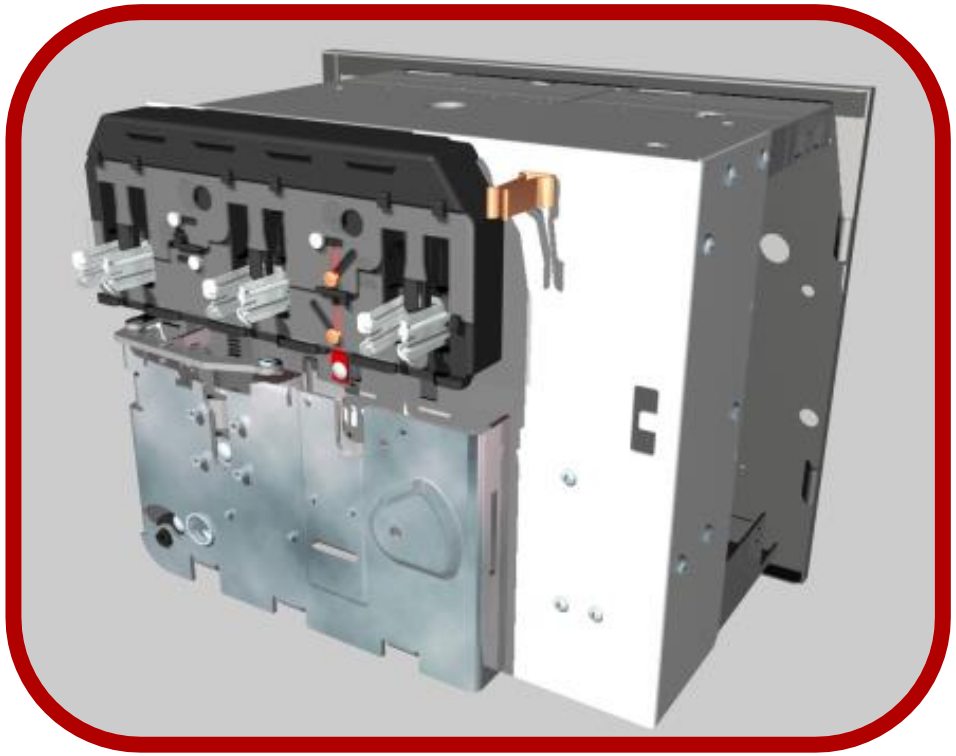
Horizontal ground bus at top and/or bottom

Reinforced back plates and end plates



SecureConnect™ Overview

- Personnel safety feature that allows operators to disconnect power from a MCC plug-in unit without opening the enclosure door or being in the arc flash boundary[1]
- Address the growing concern of working inside the arc flash boundary on live equipment
- Proactively address known hazards identified by major safety organizations and standards
  - NEC / NFPA 70
  - NFPA 70E
  - IEEE 1584
  - IEEE C37.20.7



[1] Use of safety features varies depending on MCC design

SecureConnect Benefits

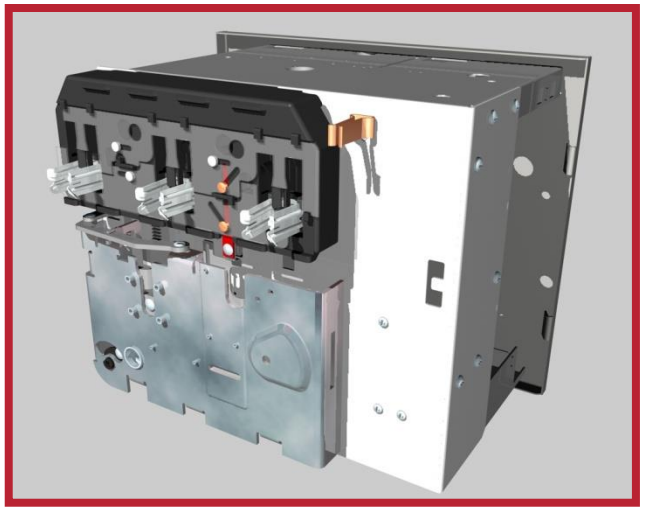
Reduce Electrical Shock and Exposure to Harmful Voltages

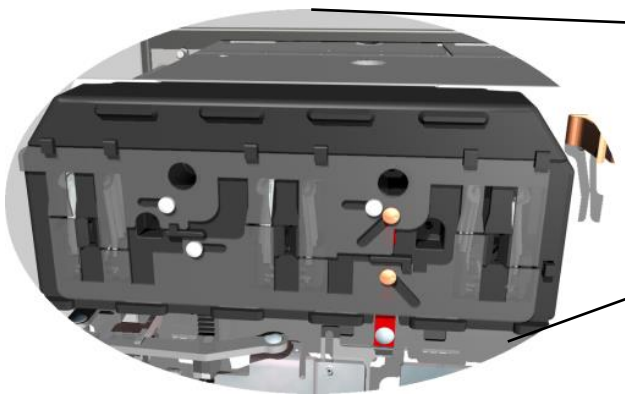
- Connect and Disconnect unit stabs without having to be exposed to live electrical parts
  - Remote operator allows you to work outside the arc-flash boundary of the MCC
- Further mitigate safety risk using our patented multi-point validation system
  - Provides redundant indication for disconnect position
- Enhanced compliance with NFPA70E Section 110.3 for your Electrical Safety Program

Stab Housing Shutters

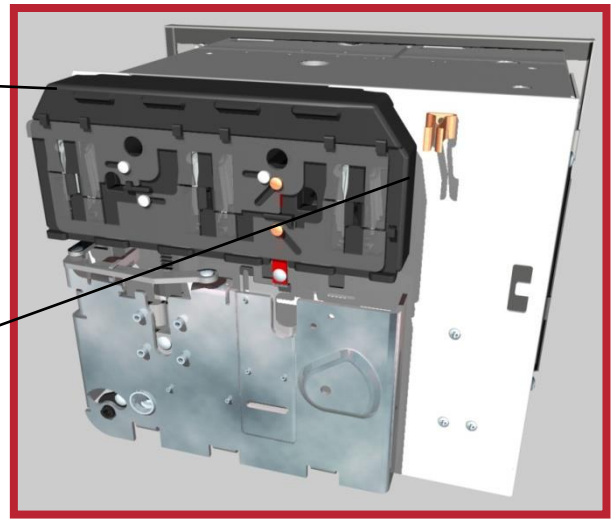
- **Two sets of shutters for increased electrical isolation**
  - Bus cover and stab housing shutters
- **Shutters are only opened when a connection to the Vertical Power Bus is needed**
  - Provides additional protection of power stabs when unit is removed from structure
- **Limit switch provides feedback to indicate the shutters are closed**

Shutters Open





Shutters Closed



SecureConnect Remote Operator System

CBS ArcSafe™
A Group CBS Company
Rockwell Automation
Encompass™ Product Partner

OH&S
OCCUPATIONAL HEALTH & SAFETY
2017
NEW PRODUCT OF THE YEAR

SecureConnect Remote Operator System

Previously, the SecureConnect operation could only be accomplished by using a manual ¼” Hex Driver and Socket Wrench.

Today, the new SecureConnect Remote Operator allows remote operation of the SecureConnect unit further strengthening ***Personnel Safety.***

Remote Operator Available as: Wired Only (Std.) or Wired & Wireless (Optional)

Wired Pendant Control (Std.)

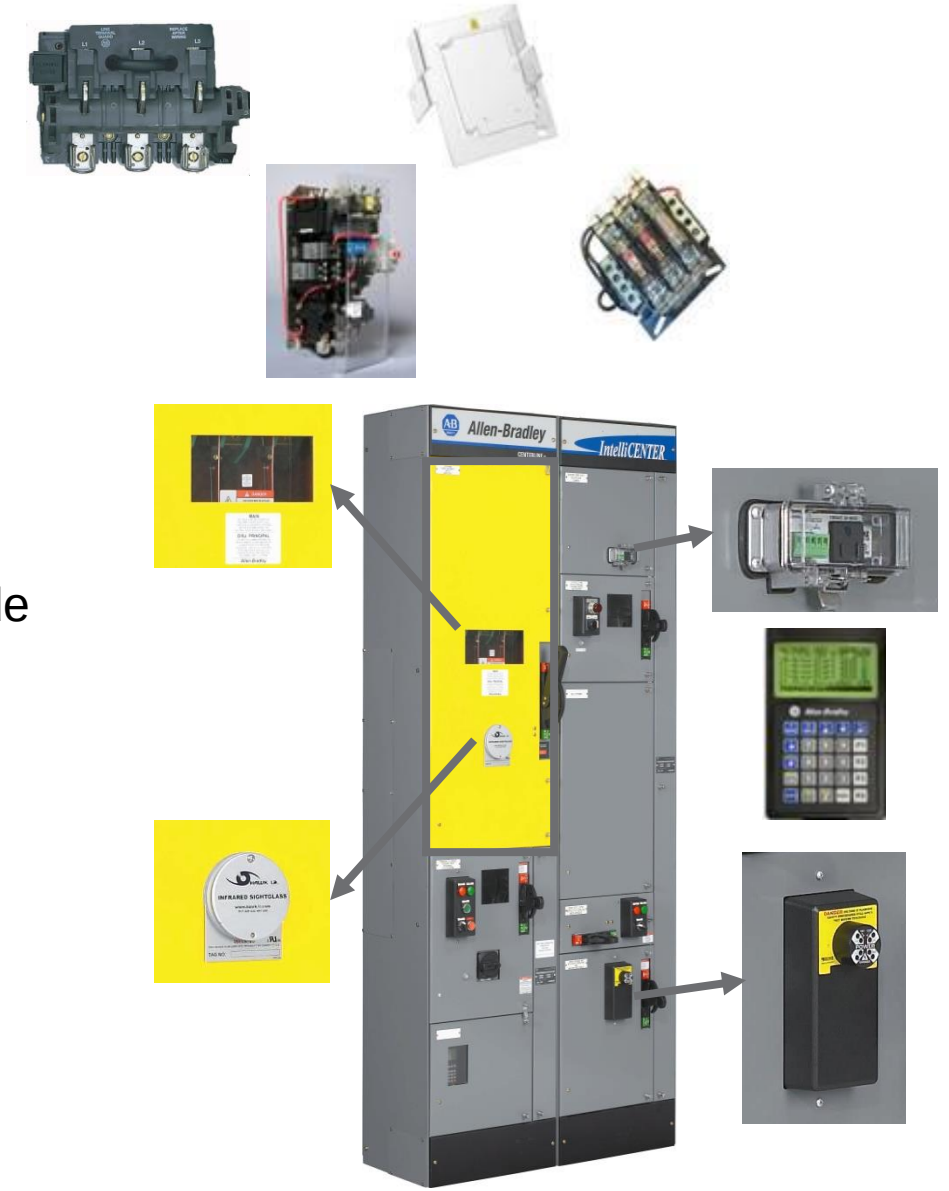
Optional Status Indicator

SecureConnect MCC Unit

Wireless Control

Other Safety Features Available for CENTERLINE 2100 with ArcShield

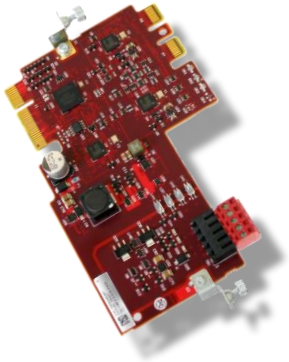
- Covers and barriers
  - Line side terminal guards
  - Fuse covers
  - Starter/contactor barrier
  - Finger-safe terminal blocks
  - Finger-safe control circuit transformers
- Keep doors closed
  - Through the door viewing windows for visible blade disconnect inspection
  - Infrared windows allow thermal inspection
  - Through the door network connections
  - Door mounted voltage detection
- Awareness
  - High visibility yellow door for Main



Other Safety Features Available for CENTERLINE 2100 with ArcShield

- SafeZone™ laser scanner (CMOD 0111)
  - Senses presence of personnel within defined arc flash boundary
  - Coordinate with upstream circuit breaker to enable and disable “Maintenance Mode”
  - By eliminating the time delay of the upstream breaker, available energy at the MCC is reduced
  - Prevents “Maintenance Mode” from being left on when not needed, reducing nuisance faults
- Arc flash detection system (CMOD’s 2806-2809)
  - Detection of arc flash in bus compartment
    - Fiber optics and control module
  - Operation
    - Shunt trip upstream circuit breaker
    - Activate crowbar device (speeds trip of CB and significantly reduces energy at point of arc fault)

CENTERLINE 2100 Safety Portfolio



Introduction to the CENTERLINE 2500

CENTERLINE 2500 started in 2006 to satisfy the need for an IEC-centric product in the global marketplace

- Adheres to IEC 61439-2
- LV MCC and Switchgear Capabilities

CENTERLINE 2500 is manufactured in locations outside the US in strategic global regions

CENTERLINE 2500 to 2100 Comparison

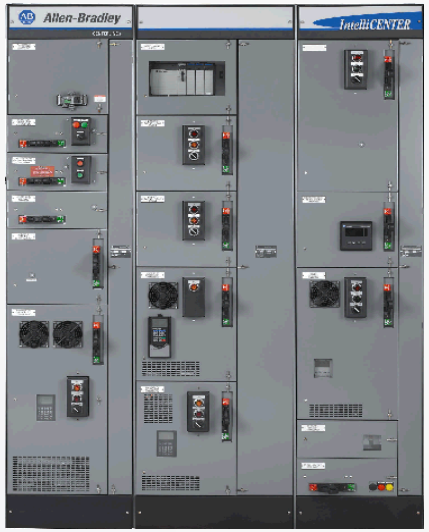
CENTERLINE 2500 (2006-Present)

IEC Standards (Outside of North America)
Columns
Unit Sizing = Modules
Max of 24 Mod Units per Column
1 Mod = 80 mm *(~3" or 4 Mod = 1SF)*
Metric Units
Developing Delivery Programs
Fully Withdrawable
Higher Unit Density
Rotary Handle
Configure with EST

CENTERLINE 2100 (1971-Present)

UL/NEMA Standards-North America
Sections
Unit Sizing = Space Factor
Max of 6.0 SF per Section
1 SF = 13" *(330 mm)*
English Units
Standard Delivery Programs
Partially Withdrawable
Lower Unity Density
Flange Handle
Configure with PCBr

Common to 2500 and 2100

Robust CENTERLINE horizontal and vertical bus structure

EtherNet/IP & DeviceNet™
Intelligent Motor Control Components & IntelliCENTER
Premier Integration with Logix
Configure ROM with CENTERLINE Builder (CLB)
Optional Safety features of SecureConnect and ArcShield