



**Features and Benefits Comparison of the Bulletin
100-C Line to the Bulletin 100-A Line**

This Publication compares the major features and benefits of the Modular Control System (MCS) Bulletin 100-C Line to the Bulletin 100-A Line.

Refer to Publication 0100C-1.0.1 for detailed MCS selection, specification, and dimension information.

It is flexible, easy-to-apply,
and meets global requirements

Configurable components to meet a
wide range of motor control and
protection needs

MCS Advantage VS. 100-A

1 Today's technology in a smaller, more flexible package

Modular Control System

MCS is the next generation
of Allen-Bradley IEC Motor
Control and Protection Components

Panel System

is MCS

Overload
Relays

Coil Mount
Accessories

Contactors
& Side Mount
Accessories

Front Mount
Accessories

Manual Motor
Starter/Protection

 **Rockwell** Automation
Allen-Bradley

Common MCS



Motor Starter Configurations

Quickly assemble
from these common
components:

Panel System Adapters

Manual Motor Starter/Protectors

Overload Relays

Contactors

Accessories and Wiring Kits

equates to more flexibility

Motor Starter

Direct-
Star

Single
Star

Wye-Delta/Star-Delta
Starter

Group
Star

Advantage VS. 100-A

2

Modularity of MCS components e

Common MCS Motor Starter Configurations

Quickly assemble
from these common
components:

► Panel System Adapters

Manual Motor Starter/Protectors

Overload Relays

Contactors

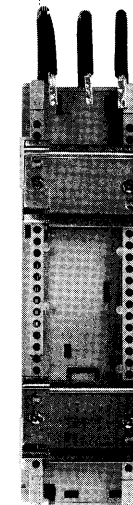
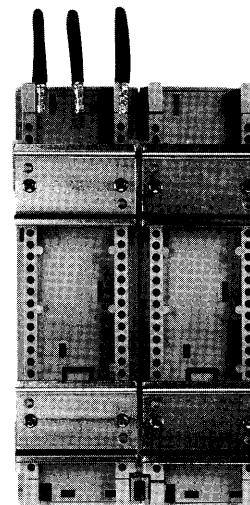
Accessories and Wiring Kits

Direct-on-Line
Starter

Reversing
Starter

Wye-Delta/Star-Delta
Starter

Group Motor
Starter



Advantage VS. 100-A

3

Modularity of MCS components equates to more flexibility

Advantage VS. 100-A

4 Modularity of MCS components equates to more flexibility

Rockwell
Allen-Bradley Automation

MCS THE NEXT DIMENSION IN CONTROL

Common MCS Motor Starter Configurations

Quickly assemble
from these common
components:

PLC System Adapters

Manual Motor
Starter/Protectors

Load Relays

Reactors

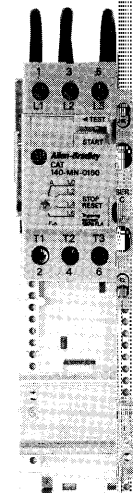
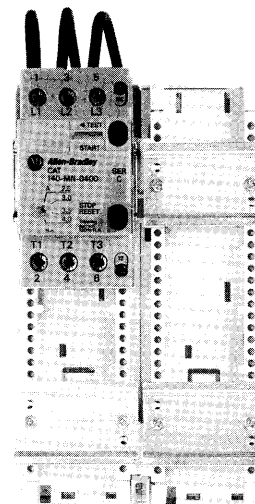
Accessories and Wiring Kits

Direct-on-Line
Starter

Reversing
Starter

Wye-Delta/Star-Delta
Starter

Group Motor
Starter

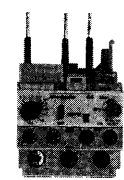


Common MCS Motor Starter Configurations

Quickly
from the
controls
Panel System
Manual Motor

Overload
Assemble
Common
nts:
Adapters
starter/Protectors
ays

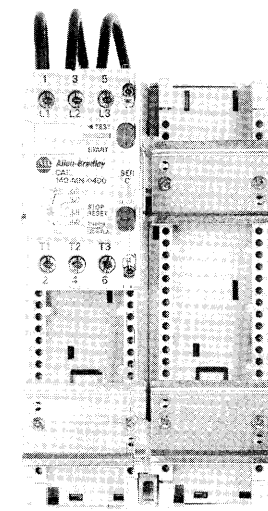
Wiring Kits



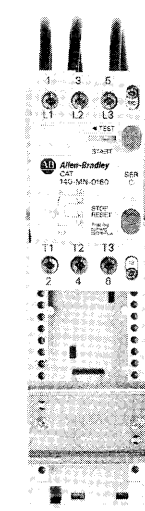
Direct-on-Line Starter



Reversing Starter



Wye-Delta/Star-Delta Starter



Group Motor Starter

Advantage VS. 100-A

Modularity of MCS components equates to more flexibility

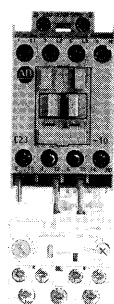
Common MCS Motor S

Configurations

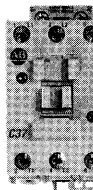
Quickly assemble
from these common
components:

- Panel Mount System Adapters
- Manual Motor Starter/Protectors
- Overload Relays

- Accessories and Wiring Kits



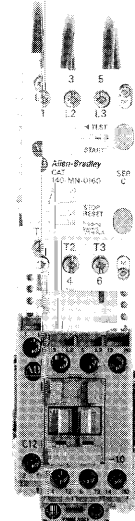
Direct-on-Line Starter



Reversing starter

Starter Config

Wye-Delta/Star Starter



Group Stop Motor Starter

Advantage VS. 100-A

Modularity of MCS components equates to more flexibility

Common MCS Motor Starter Configurations

Quickly assemble
from these common
components:

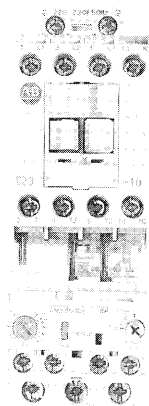
Panel System Adapters

Manual Motor Starters/Protectors

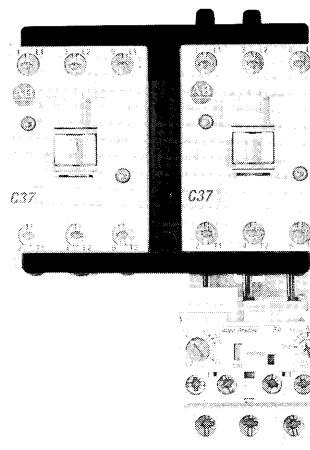
Overload Relays

Contactors

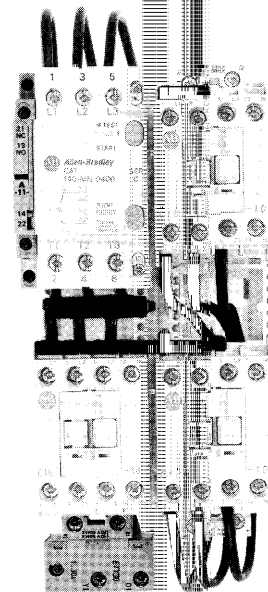
► Accessories and Wiring Kits



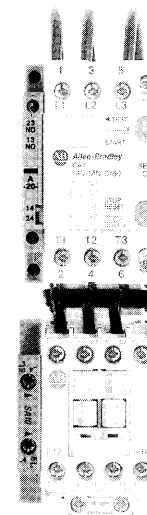
Direct-on-Line
Starter



Reversing
Starter



Wye-Delta/Star-Delta
Starter



Group Motor
Starter

MCS Advantage VS. 100-A

7

Modularity of MCS components equates to more flexibility

Why Switch

- Smaller Dimensions
- Comprehensive Feature Set
- Greater Variety of Accessories
- More Extensive System Integration
- Wider Variant Friendly Community

side requirements

Compliant with a Wide Range of Global Standards



to MCS?

VS. 100-A
to meet the latest world-wide

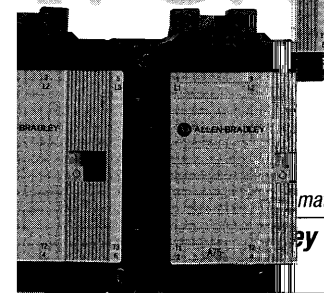
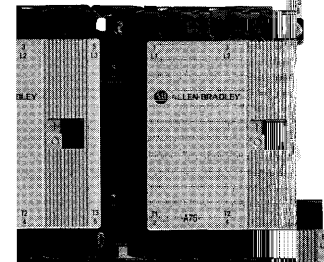
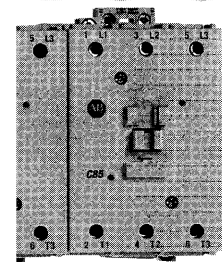
Bulletin 100-A

Requirements

MCS Advantage
8 Design Features
Switch from

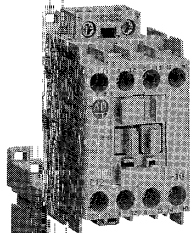
Meets Latest Safety Component

CONTROL

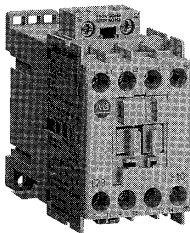


12

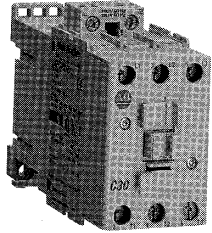
100-C
100-A



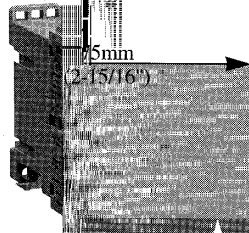
C09..C12



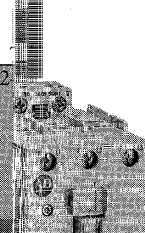
C16..C23



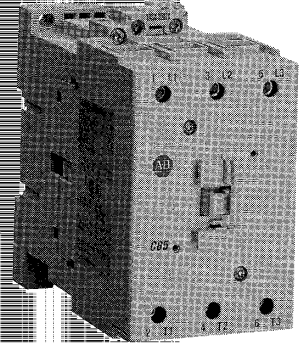
C30



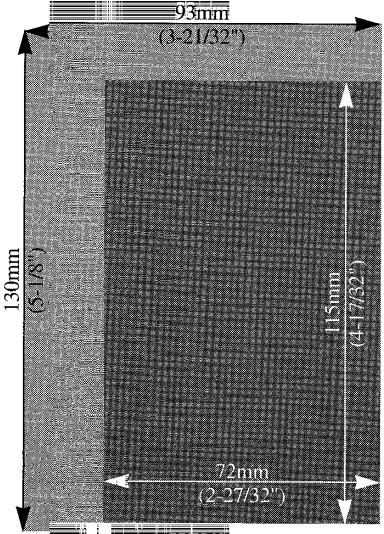
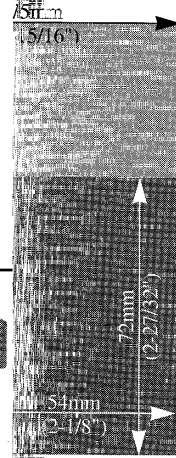
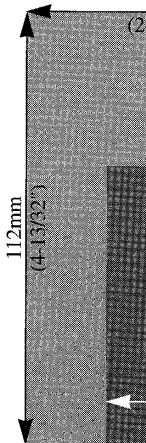
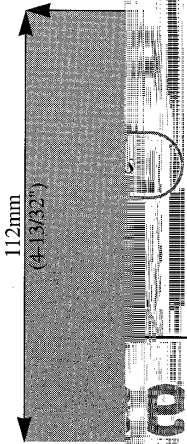
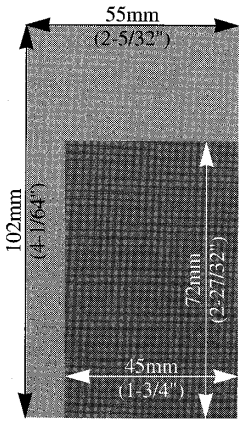
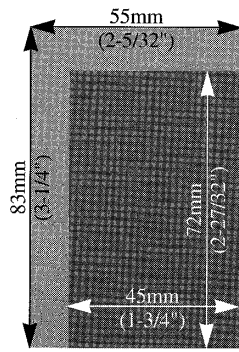
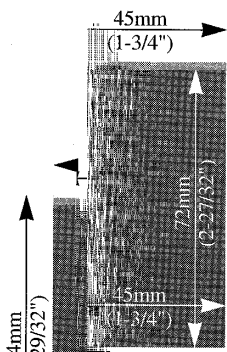
C37



C43



C60..C85



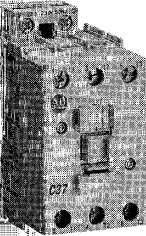
Advantage VS. 100-A

Reduced panel space requirements for AC and DC contactors

MCS A

15

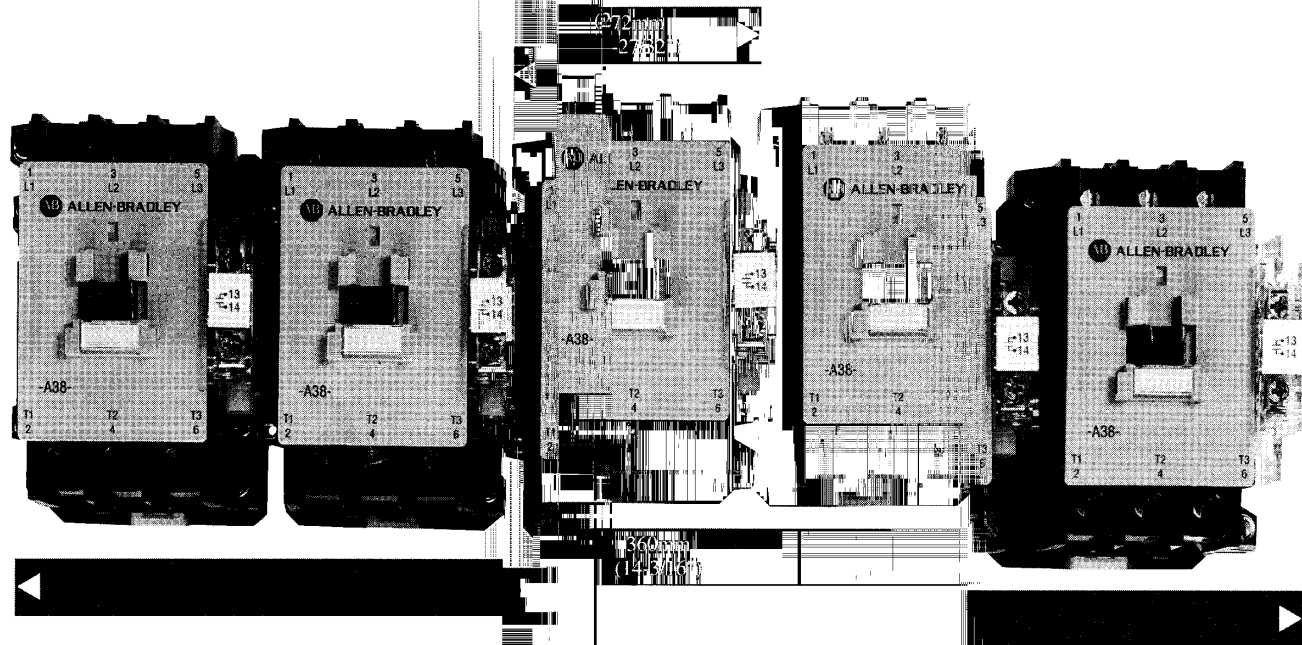
THE NEXT TIME



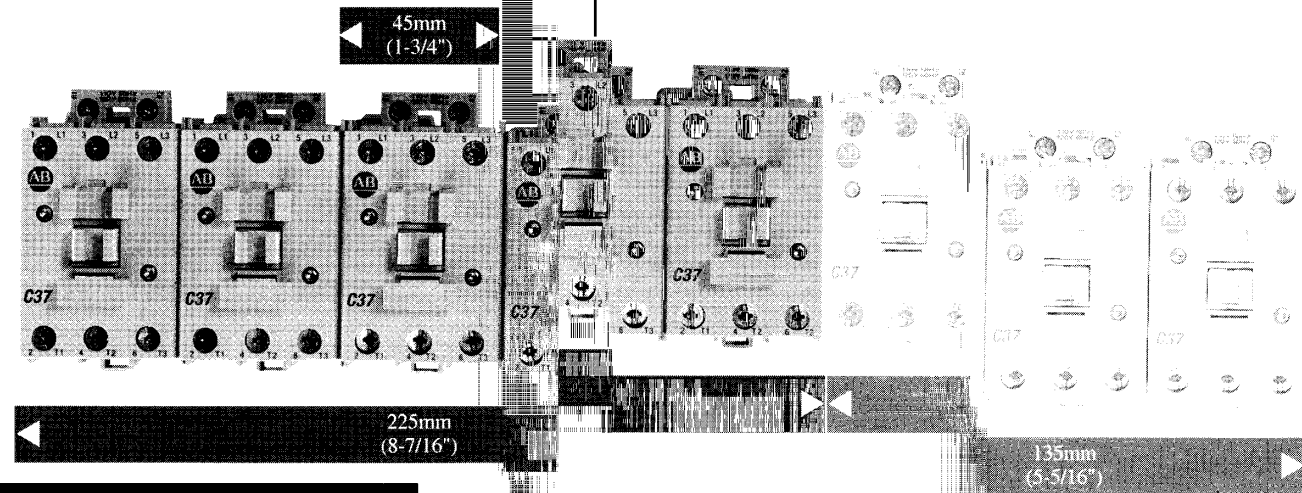
Rockwell Automation
Allen-Bradley

Increased Density = Reduced Panel Space

100-A38
Contactors



100-C37
Contactors



MCS Advantage VS. 100-A

11

MCS offers up to 50% panel space savings

"Load" Side

V.S. 100-A

Easy access for all starter configurations

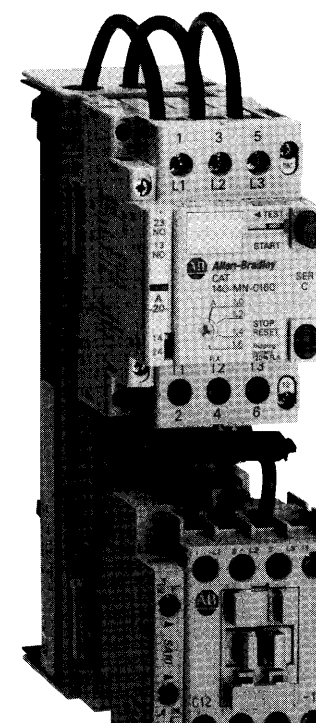
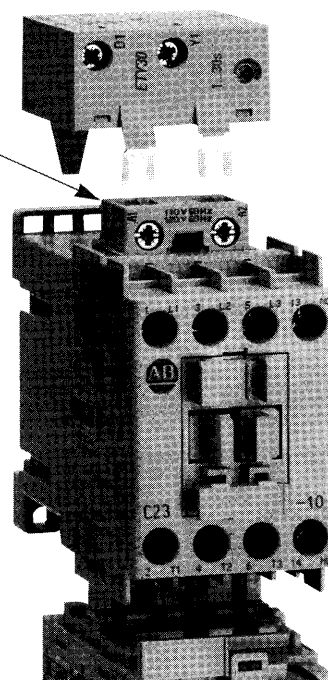
Rockwell Automation
Allen-Bradley

- Available with AC & DC Coil
- Easy access to coil terminals from "line" or "load" side
- Accommodates quick and easy field modifications
- Maintained use of coil mount plug-in accessories
- Allows for greater flexibility when building different starter types

THE NEXT DIMENSION IN CONTROL

Reversible Coil Terminals

"Line" Side



MDS Advantage

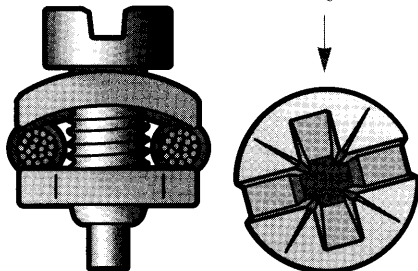
12 Maintained c

Power Terminations

MCS 100-C

Saddle Clamp

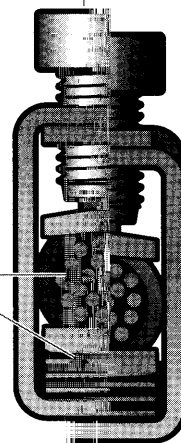
- Slotted
- Phillips
- Pozidriv®



9..23A

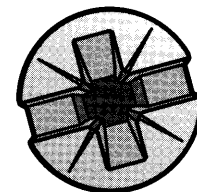
Box Lug - Dual Clamping Mechanism

Accepts flexibar,
stranded wire,
solid conductors, etc.



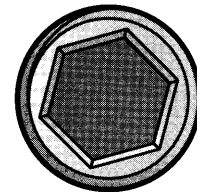
30..85A

- Slotted
- Phillips
- Pozidriv®



30..43A

4mm / 5/16"
Allen Head

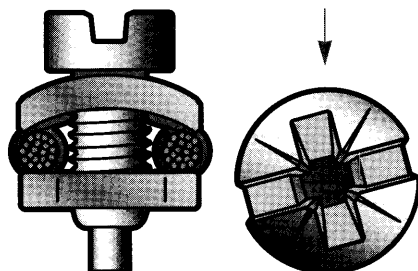


60..85A

100-A

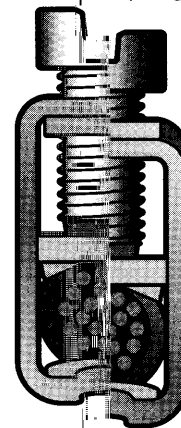
Saddle Clamp

- Slotted
- Phillips
- Pozidriv®



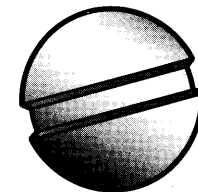
9..30A

Box Lug - Single Clamping Mechanism



38..75A

Slotted



38..75A

MCS Advantage VS. 100-A

13

Greater flexibility & reliability of power terminations

Rockwell Automation
Allen-Bradley

MCS THE NEXT

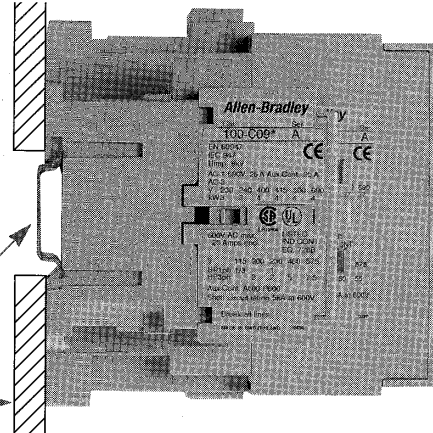
Multiple Frame

IMENS

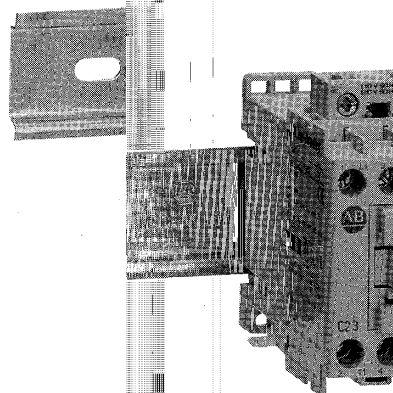
ame 1

Common interlock with
detail connector -
special components
wired

Interlocked devices
mount on same plane -
Conform to DIN rail
no
req.



- Ideal for use in:
 - 2-speed
 - Wye-Delta/Star-Delta
 - Change-over
 - Transfer switch applications
- A single interlock fits entire contactor range - 9..85A (AC)
- Eliminates stocking of unique interlock components
- Easier and quicker panel layout, mounting and assembly



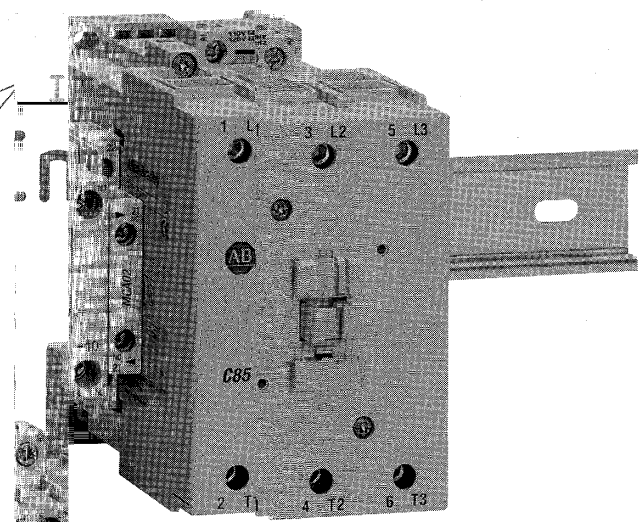
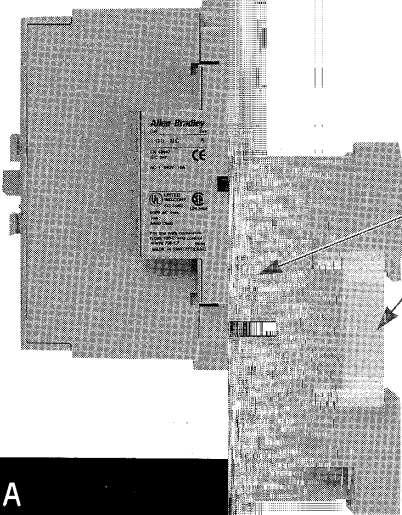
Inter
mount
panel

Rockwell Automation
Allen-Bradley



ON IN CONTROL

Interlocking



MCS Advantage VS. 100-A

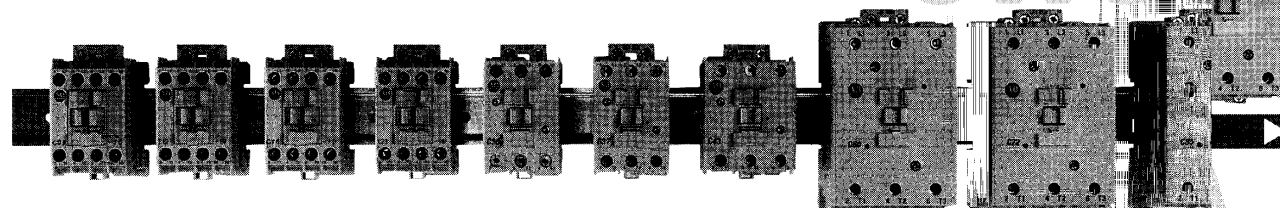
14 Reduced panel space, labor, and component cost

of contactors is panel and 35mm DIN rail mountable

Allen-Bradley

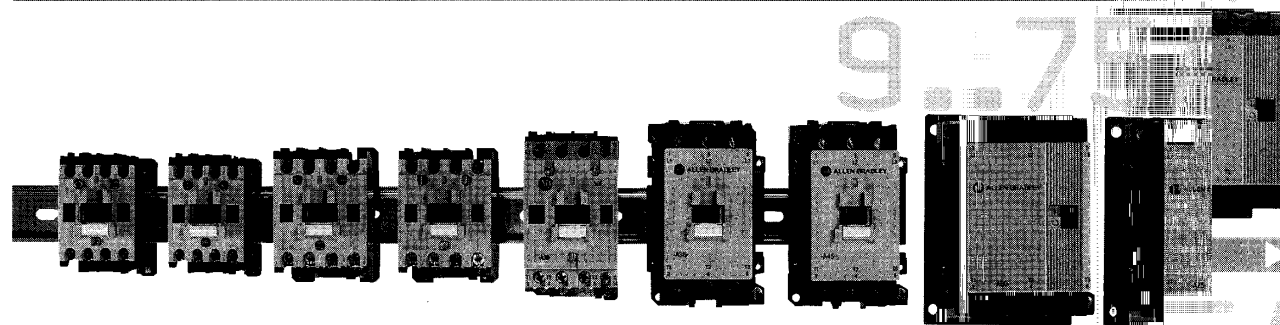
Panel Mounting Options

■ 10 Bulletin CS-C AC contactors covering a range of 9..85 Amps. These contactors are the same size and rating.



Panel & 35mm DIN Rail

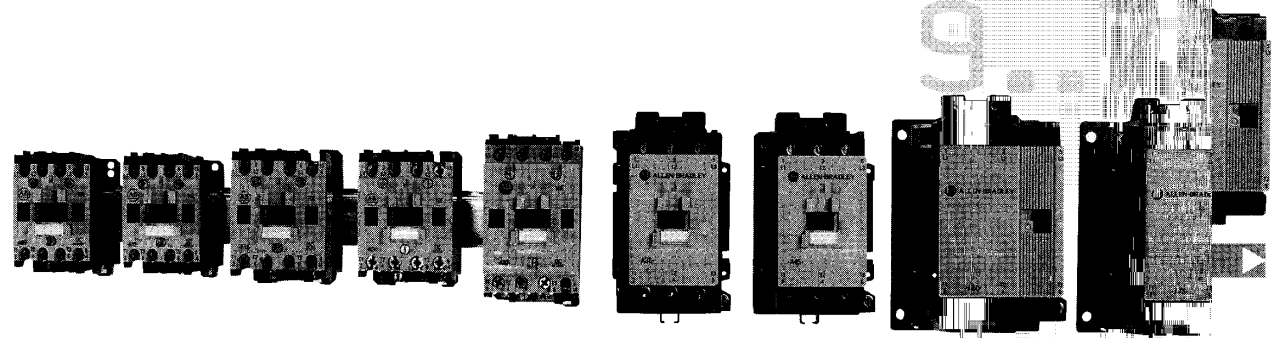
■ 9 Bulletin 100-A AC contactors covering a range of 9..75 Amps.



Panel & 35mm DIN Rail

Panel Only

■ 9 Bulletin 100-A DC contactors covering a range of 9..75 Amps.



Panel & 35mm DIN Rail

Panel Only

Advantage VS

15 Entire MCS line of 100-A

Information

Key

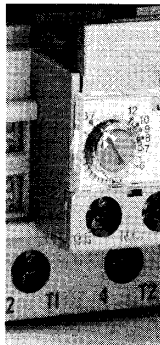
Rockwell Automation

Finger



- IP 2LX Protection
- Finger protection from all directions when conductors are installed
- Protective covers meet SUVA requirements

*Completely shr
terminal screw.*



Accessories

Cat No. 100-C..

- Interlocks
- Side Mount Auxiliary Contacts
- Front Mount Auxiliary Contacts
- Pneumatic Timers
- Mechanical Latch
- Electronic Timers
- Surge Suppressors
- DC Interface Module



	09	12	16	23	30	37	43	60	72	85
Interlocks										
Side Mount Auxiliary Contacts										
Front Mount Auxiliary Contacts										
Pneumatic Timers										
Mechanical Latch										
Electronic Timers										
Surge Suppressors										
DC Interface Module										

Cat No. 100-A..

- Interlocks
- Side Mount Auxiliary Contacts
- Front Mount Auxiliary Contacts
- Pneumatic Timers
- Mechanical Latch
- Electronic Timers
- Surge Suppressors
- DC Interface Module



	09	12	18	24	30	38	45	60	75	
Interlocks										
Side Mount Auxiliary Contacts										
Front Mount Auxiliary Contacts										
Pneumatic Timers										
Mechanical Latch										
Electronic Timers										
Surge Suppressors										
DC Interface Module										

■ Indicates multiple versions in product range

relays

Rockwell Automation
Allen-Bradley

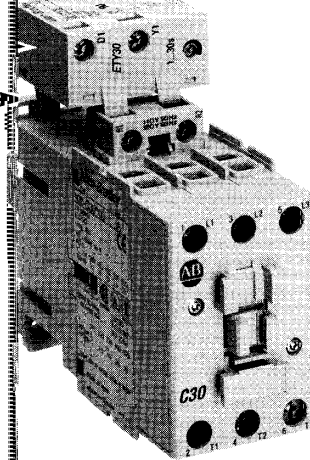
Low

- Reliable switching down to 17V, 5mA
- Ideal for use in low power control circuits:
 - PLCs
 - SLCs
 - Drives
 - Sensors

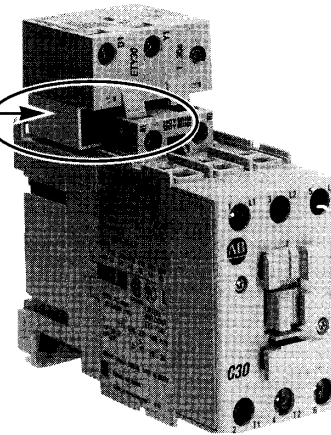
Accessories

*Electronic Timer
ensures high repeat
accuracy, available in
the following:*

- On-Delay
- Off-Delay
- Wye-Delta/Star-Delta



*Surge Suppressor
(fits compactly
underneath timer)*



MCS Advantage VS. 100-A

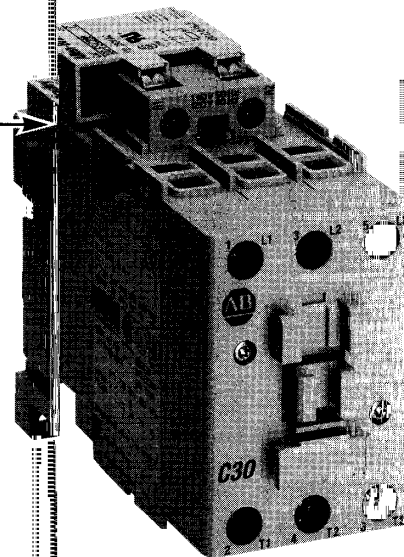
Labor costs

19 *Compact, easier to install, reducing wire and*

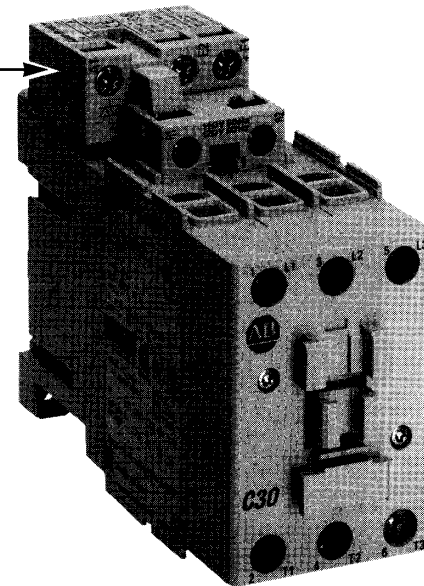
Coil Mount Accessories

Surge Suppressor

- RC
- Varsistor
- Diode



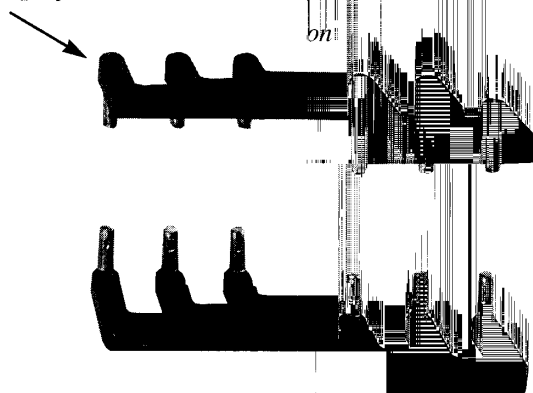
*DC Interface Module
- 18..30V DC Input*



- "Plug-in" coil mounting
- Mount on line or load side of coil terminations
- Quick installation
- Less wiring required

Power Wiring Kits

Single piece molded construction

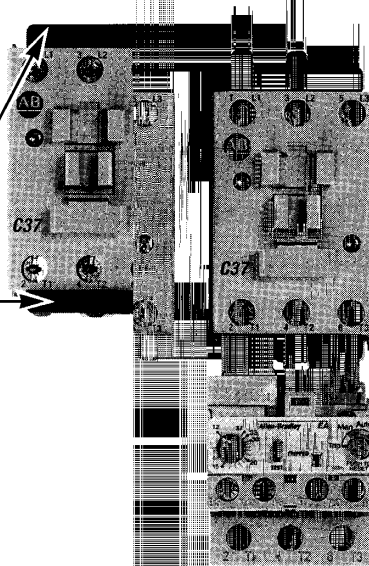


- Standard kits available for Reversing and Wye-Delta/Star-Delta assemblies

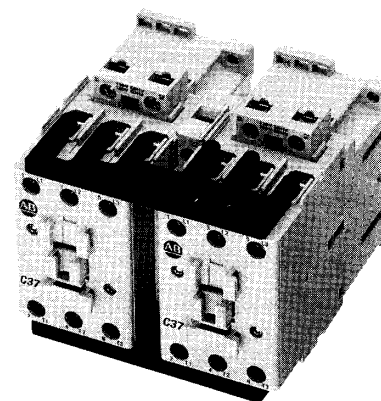
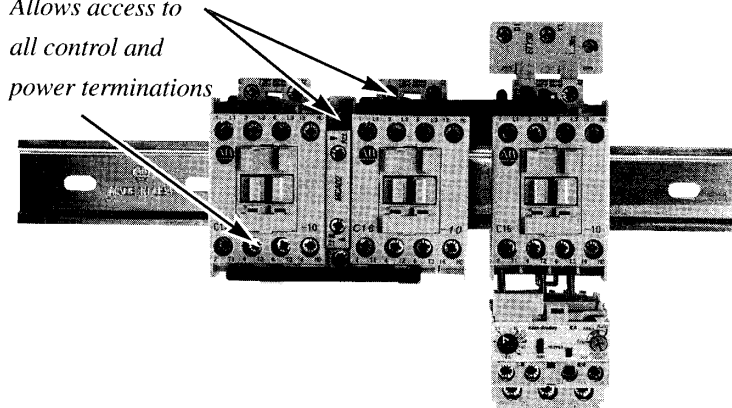
- Components satisfy requirements for:
 - 2-speed
 - Change-over
 - Transfer switch
 - Shorting connections

- IP 2LX Finger Protection

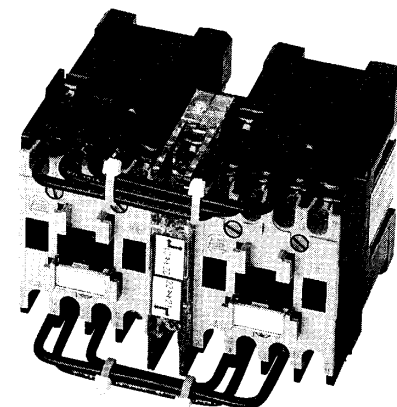
Slim profile



Allows access to all control and power terminations



100-C Wire Kit



100-A Wire Kit

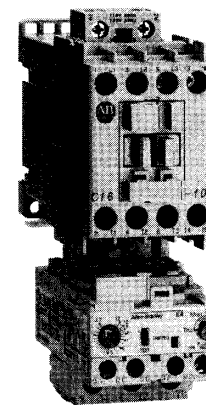
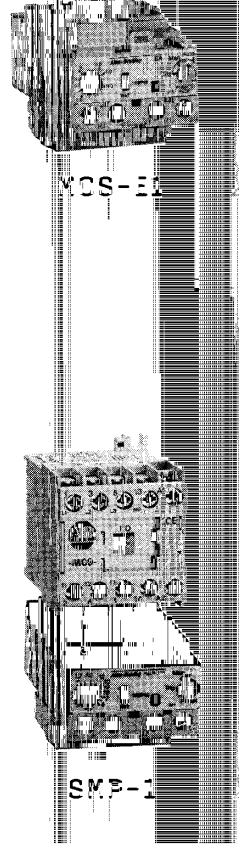
MCS Advantage VS. 100-A

20

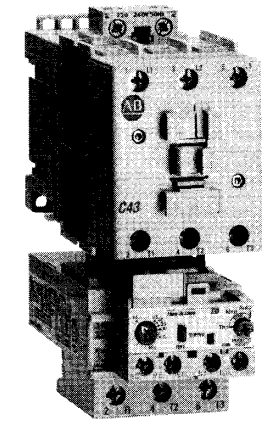
Molded construction provides for quick installation and full terminal access

Motor Protection

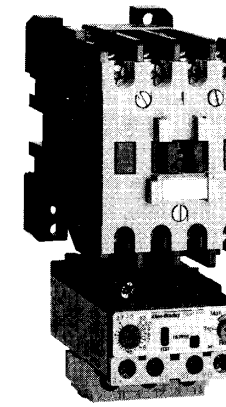
100-A Line



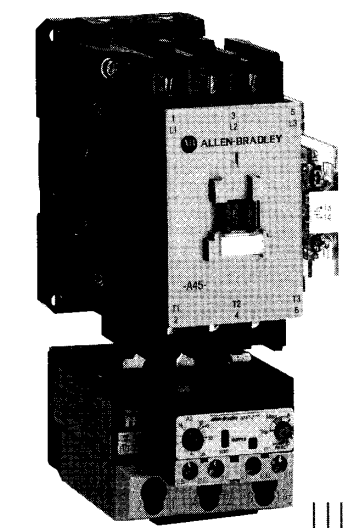
MCS-E1



MCS-E2



SMP-1



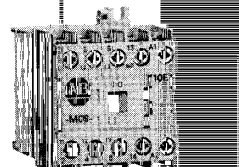
SMP-2



MCS Advantage VS. 100-A

21 SMP solid-state technology with MCS dimensions

Solid-State



MCS-E1 S

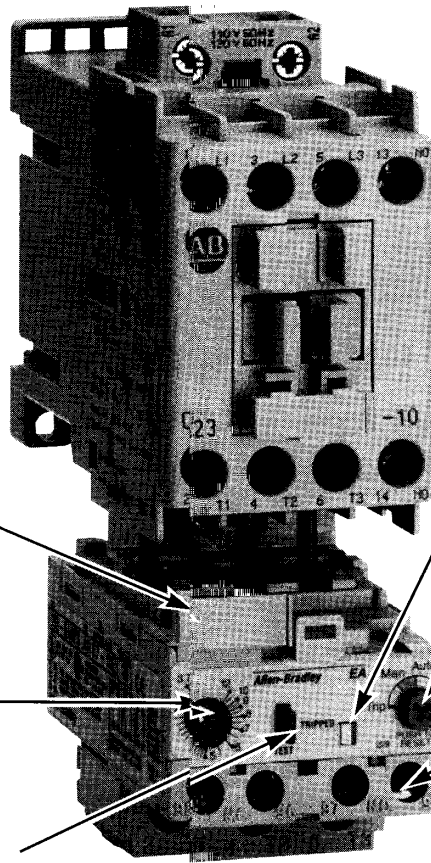
- Three or single phase versions
- Self-powered
- Low power consumption
- Phase loss protection

Label holder
for device designation

Wide current
adjustment
range (3.0 to 10.0 A)

00-A

and a full range of single phase overloads

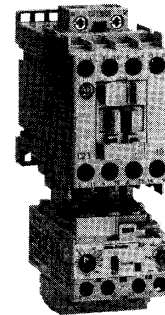


Visible trip indicator

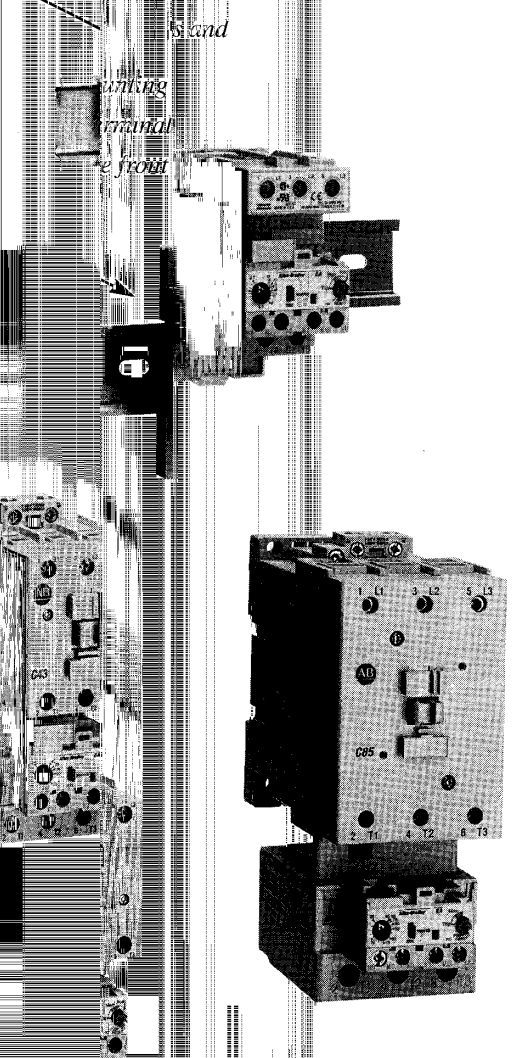
Reset Button:

- Automatic reset
- Manual reset
- Test trip

N.O./N.C. Alarm Contact;



Panel adapter for 35mm DIN rail or panel mounting. Controls are accessible from the front.



Rockwell Automation
Allen-Bradley

MCS Advantage VS.

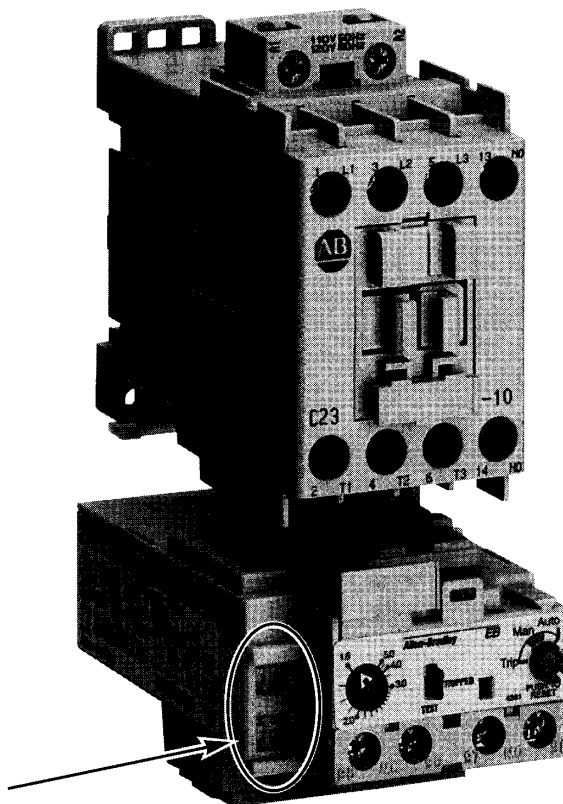
22 Compact dimension.

overload

Protection

MCSE-E2 Solid-State Overload Protection

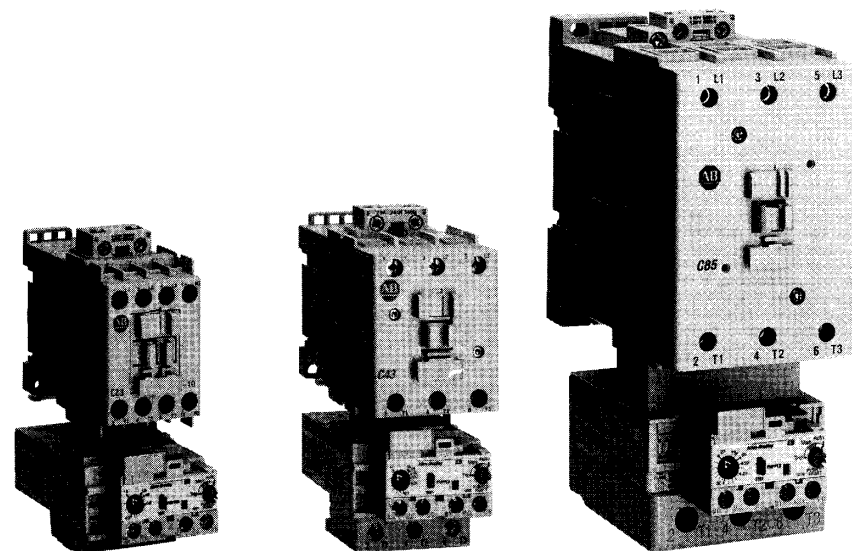
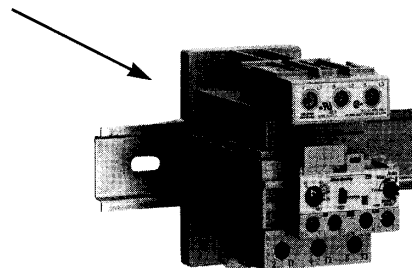
- Self-powered
- Low power consumption
- Phase loss protection
- Selectable trip class - 10, 15, 20
- Selectable Jam/Stall Protection
- Selectable Ground Fault Tripping



Selectable protection via
DIP switches:

- Trip Class
- Jam/Stall Protection
- Ground Fault Tripping

Panel adapter for separate mounting onto
35mm DIN rail or panel. All terminals and
controls are accessible from the front

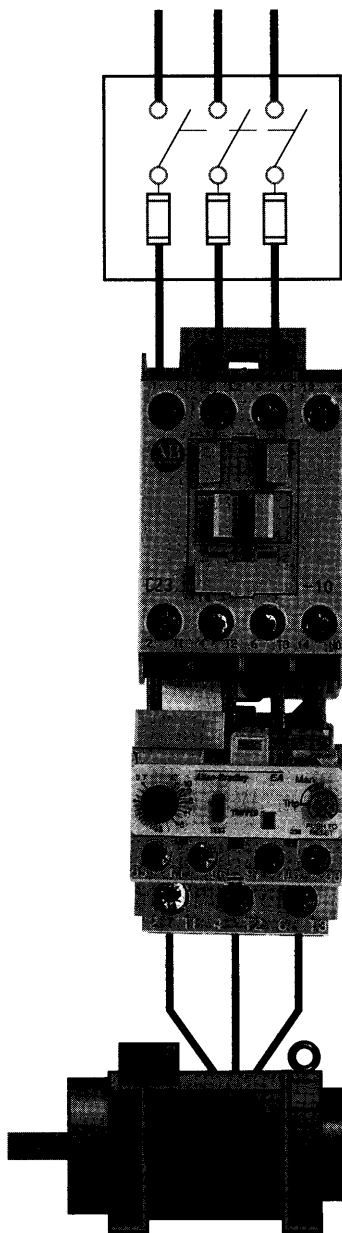


Advantage VS. 100-A

23 SMP-2 solid-state technology with MCS dimensions

"Type 2 Short-Circuit Coordination"

- UL Certified
- 600V/100kA Available
- UL Fuses
 - Class CC
 - Class J
- CSA Fuses
 - Class HRCI-Misc
 - Class HRCI-J
 - Class HRCII-C
- DIN & BS88 Fuses
- Contactors Only
 - w/MCS-E Overload Relays
 - w/MCS-T Overload Relays
- Busmann, Gould-Schawmut, Littelfuse Brands



Advantage VS. 100-A

24

Same level of performance and protection in a smaller package

Summary of Advantages

Flexible Motor Control Solutions:

- Panel Space Savings
- Worldwide Standards Compliance
- Environmentally Friendly

- Meets Latest Safety Requirements
- Solid-State Overload Protection
- Common Accessories Across Range

Advantage VS. 100-A

25 More functionality and flexibility in a smaller package

MCS THE NEXT

DIMENSION IN CONTROL

Summary of Advantages

Feature

Panel Space Savings

Environmentally Friendly

Safety Compliance

Worldwide Standards Compliance

Reversible Coil Terminals

Dual Power Terminations

IP 2LX Finger Protection

Multiple Frame Interlocking

Mounting Options

Solid-State Overload Protection

Single Phase solid-state Overload Protection

Common Accessories Across Range

Plug-in Coil Mount Accessories

Low Power Rated Auxiliary Contacts

MCS Advantage

Up to 50% panel space savings

Recyclable Packaging and Molding Materials,

Printed Cartons, Toxicity Compliances

Type 2 Coordination, Positive Guidance of Auxiliaries,

IEC, CE, UL, CSA, Lloyds, German Lloyds, RINA, Bureau Veritas, Norske Veritas, Russie Maritime, VVA, NFF, ZH1

Yes, 9..85A, AC & DC

Yes, 9..85A, AC & DC

Yes, All Components

Yes, 9..85A AC with Standard Components

Standard or 35mm DIN Rail Mounting

MCS-E1 & E2

Compact design to meet MCS dimensions

Complete Range

Yes, Manual or Manual/Auto, Class 10 or 20

Yes, 9..85A, AC & DC

Yes, 9..85A, AC & DC

Relays, Suppressors, Electronic Timers, DC Interface

Rated down to 17V, 5mA

100-A

Recyclable Packaging

Type 2 Coordination, IP 20

IEC, CE, UL, CSA

No

9..30A, AC & DC

IP 20

Special Components Required

Limited Mounting Options

SMP-1 & 2

Limited Range
Manual/Auto, Class 10

No

Limited Range and Commonality

Rated down to 24V, 10mA



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