



## 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

MCS THE NEXT

What

# Modular Control System

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

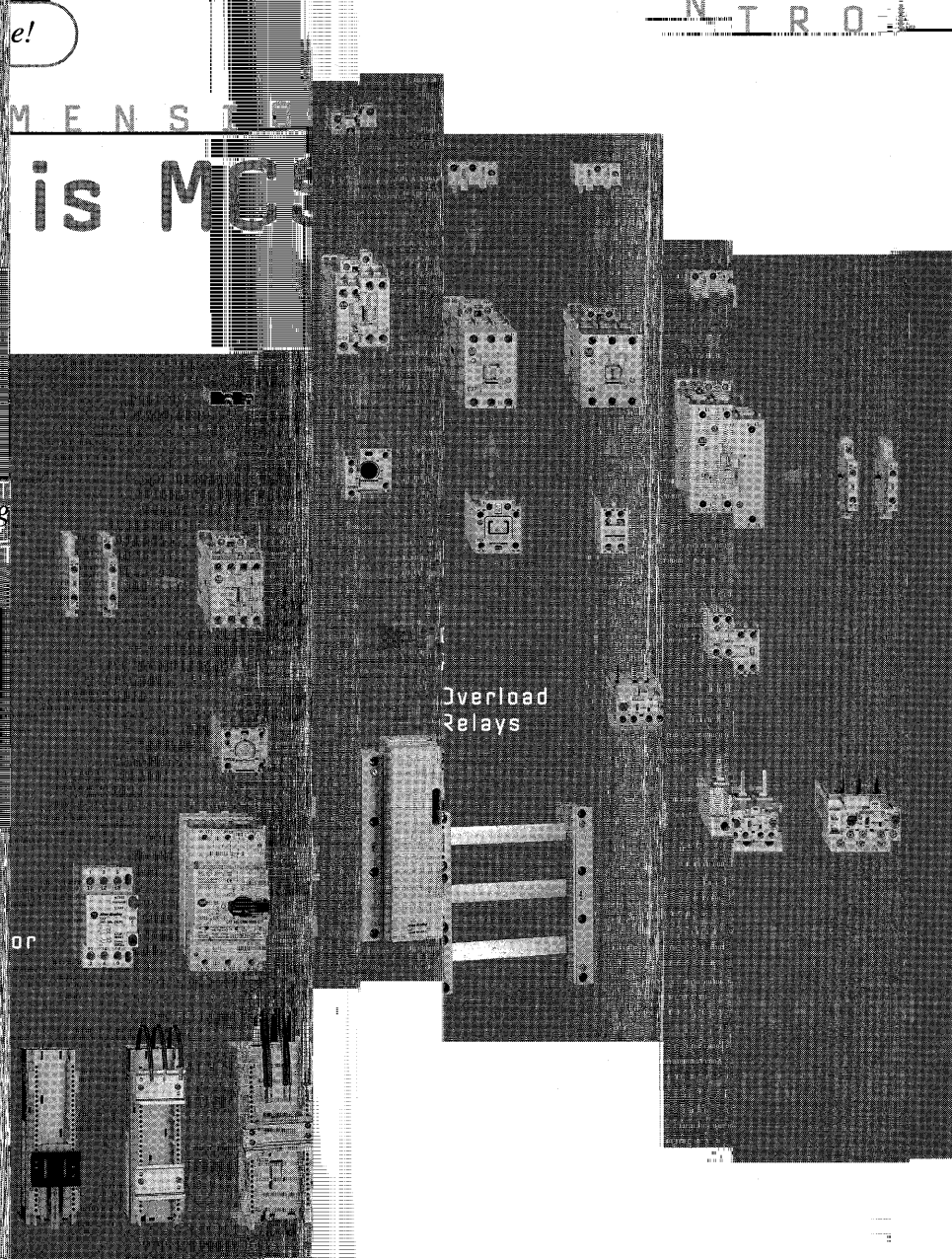
Panel System

Coil Mount  
Accessories

Contactors  
& Side Mount  
Accessories

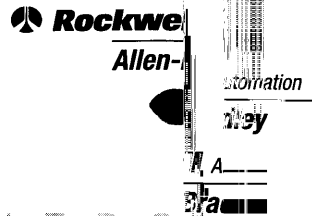
Front Mount  
Accessories

Manual Motor  
Starter/Protection



Overload  
Relays

# Common MCS I



On-Line  
arter

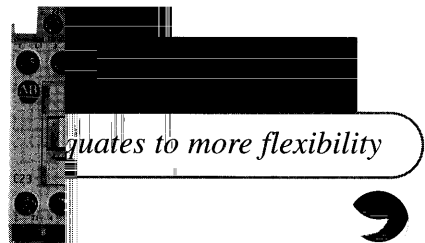
Reve  
Star

SION IN CONTROL

# arter Configurat ns

Quickly assemble  
from these common  
components:

- Panel System Adapters
- Manual Motor Starter/Protectors
- Overload Relays
- Contactors
- Accessories and Wiring Kits

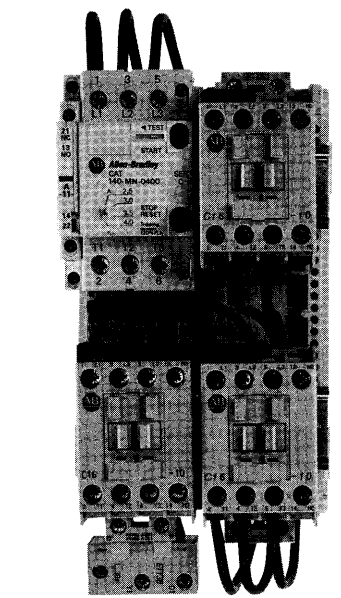


equates to more flexibility

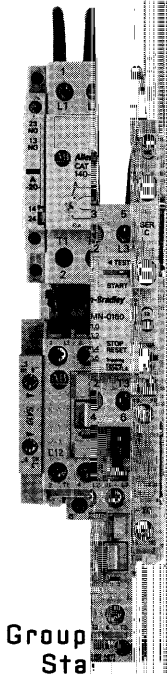
## Motor St

Direct-  
Sta

Sing  
Star



Wye-Delta/Star-Delta  
Starter



Group  
Sta

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

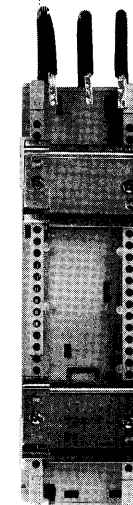
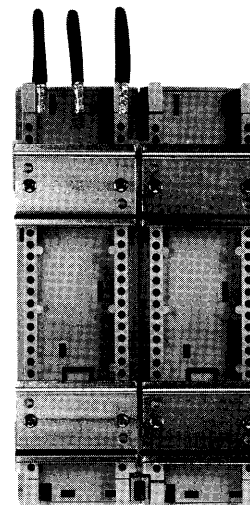
Accessories and Wiring Kits

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



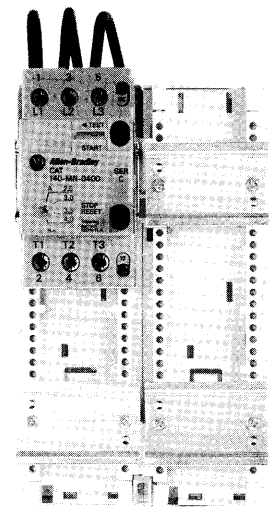
MCS THE NEXT DIMENSION IN CONTROL

# Common MCS Motor Starter Configurations

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co  
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▶ quickly assemble  
from these common  
components:

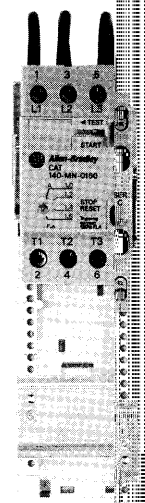
- ▶ Terminal System Adapters
- ▶ Manual Motor Starter/Protectors
- ▶ Thermal Load Relays
- ▶ Protectors
- ▶ Accessories and Wiring Kits



Direct-on-Line Starter

Reversing Starter

Wye-Delta/Star-Delta Starter



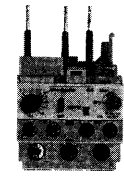
Group Motor Starter

# Common MCS Motor Starter Configurations

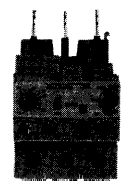
Quickly  
from the  
control  
control  
Panel System  
Manual Motor

Overload  
Assemble  
Common  
nts:  
Accessories  
Adapters  
Starter/Protectors  
ays

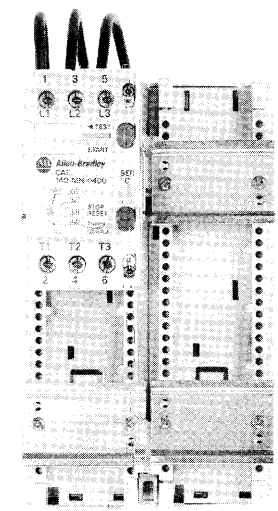
Wiring Kits



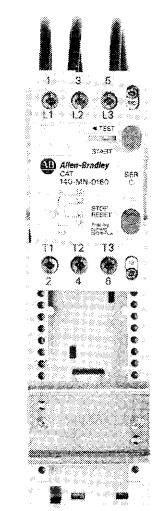
Direct-on-Line Starter



Reversing Starter



Wye-Delta/Star-Delta Starter



Group Motor Starter

Advantage VS. 100-A

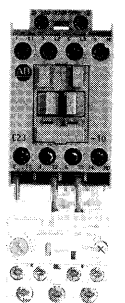
Modularity of MCS components equates to more flexibility

# Common MCS Motor S

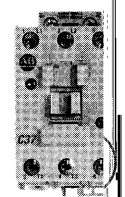
# Configurations

Quickly assemble from these common components:

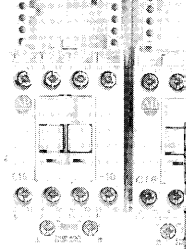
- Panel Mount System Adapters
- Manual Motor Starter/Protectors
- Overload Relays
- Interlocking Contactors
- Accessories and Wiring Kits



Direct-on-Line Starter



Reversing Starter



Wye-Delta/Star Starter



Group Motor Starter

## Starter Config

Advantage VS. 100-A

6 Modularity of MCS components equates to more flexibility



# Common MCS Motor Starter Configurations

Quickly assemble from these common components:

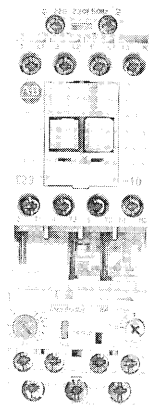
Panel System Adapters

Manual Motor Starters/Protectors

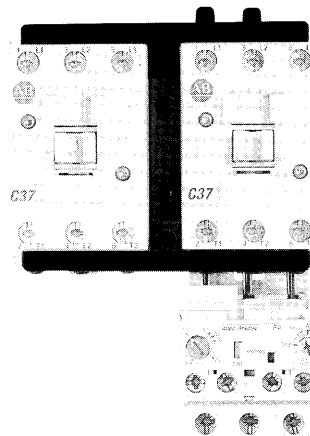
Overload Relays

Contactors

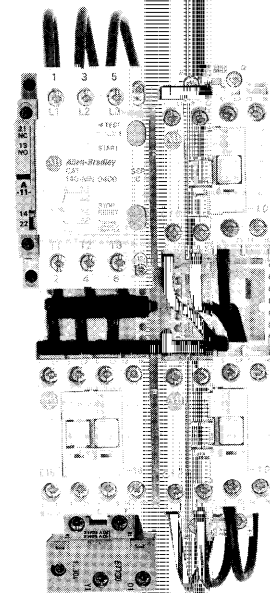
▶ Accessories and Wiring Kits



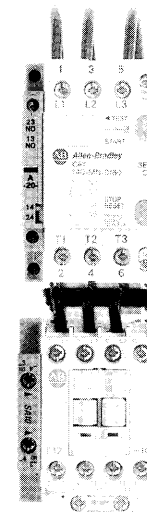
Direct-on-Line Starter



Reversing Starter



Wye-Delta/Star-Delta Starter



Group Motor Starter

MCS Advantage VS. 100-A

7

Modularity of MCS components equates to more flexibility

Greater Flexibility of Variety

# Why Switch

Dimensions

Smaller D

Comprehensive Feature Set

More Extensive

Range of Accessory

Extends the Entire System

Wider Variety

of Friendly

Common to

VS. 100-A

Environmentally

to meet the latest world-wide

Meets

Compliant with a Wide

Range of Global Standards

to meet requirements



# to MCS?

T D I M E N S I O N I N C O

## Allen-Bradley Bulletin 100-A

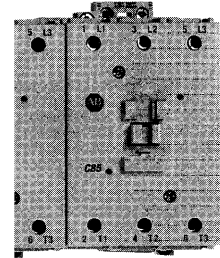
Requirements

Meets Latest Safety Components

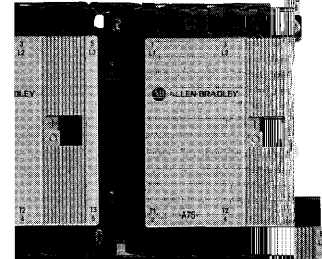
Match from

CONTROL

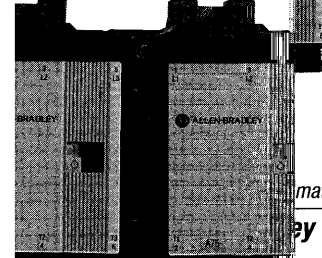
.85A



.75



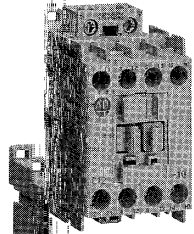
.75A



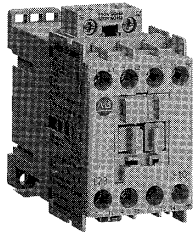
# Panel Space



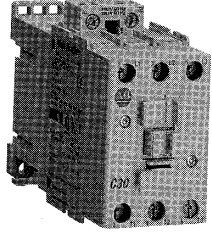
- 100-C
- 100-A



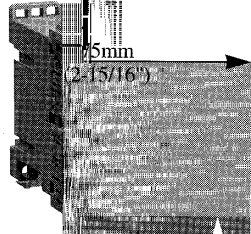
C09..C12



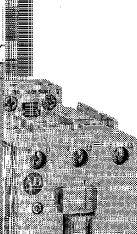
C16..C23



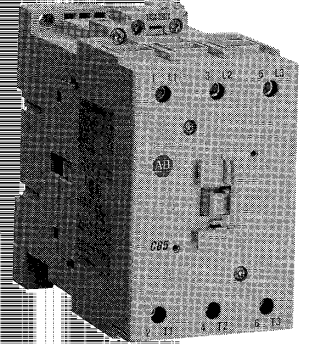
C30



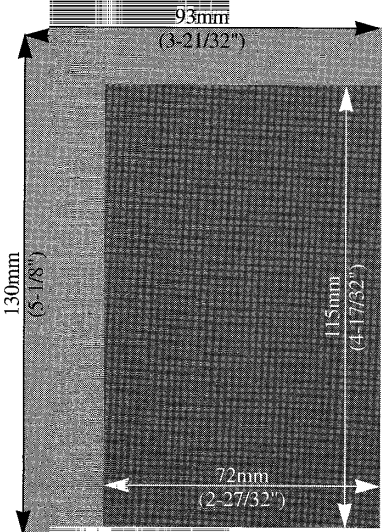
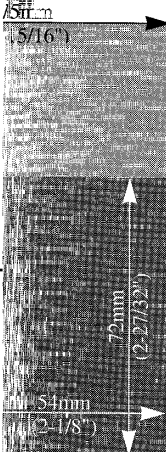
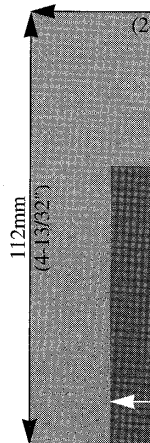
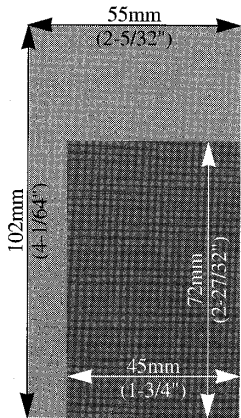
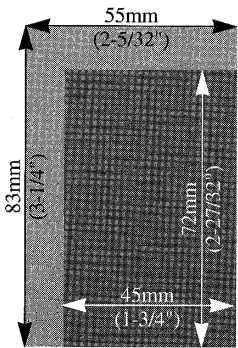
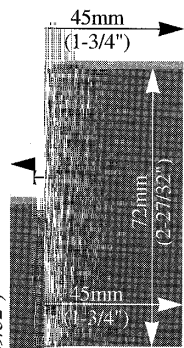
A38



C23



C60..C85



**Advantage VS. 100-A**

*Reduced panel space requirements for AC and DC contactors*

MCS A6

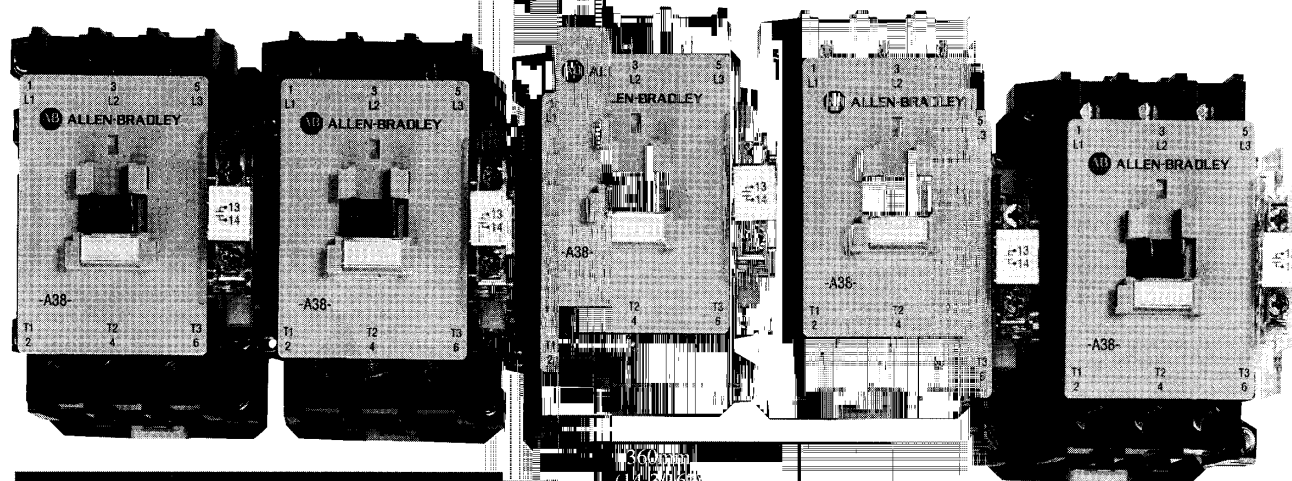
15 THE NEXT DIME

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e Savin

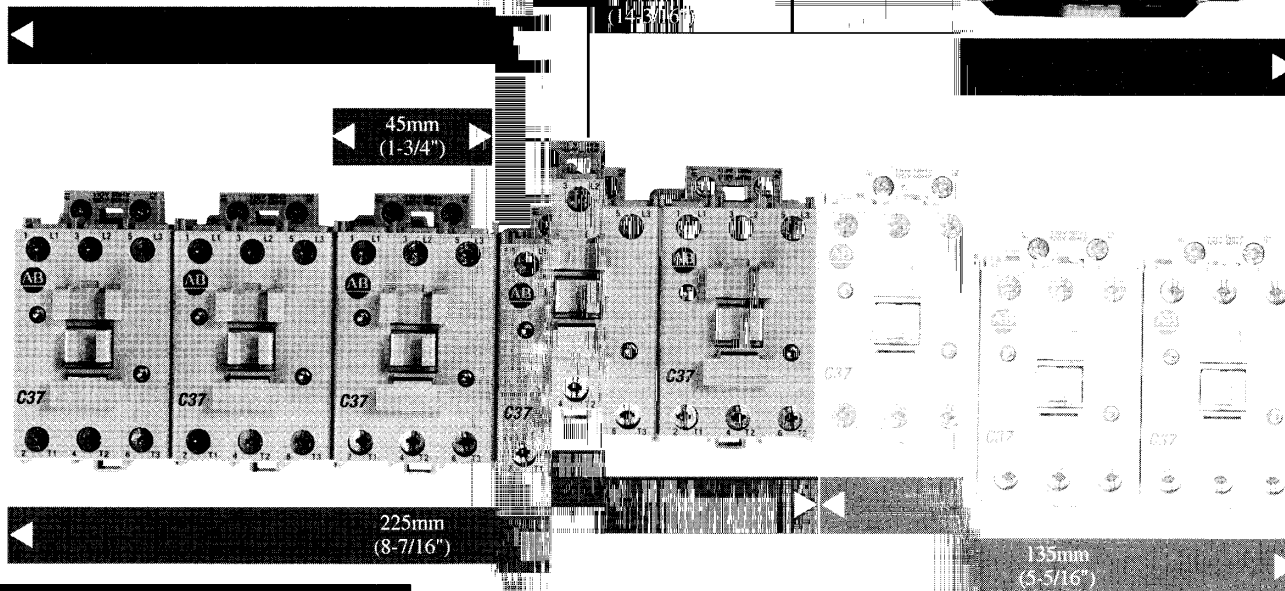
**Rockwell Automation**  
**Allen-Bradley**

# 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

Model 100-A

Easy access for all starter configurations

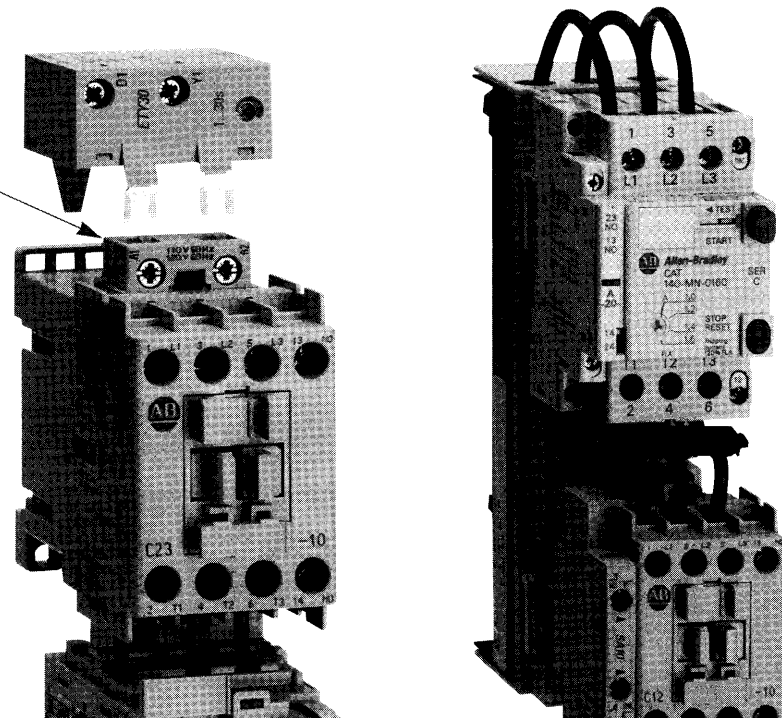
Rockwell Automation  
Allen-Bradley

- 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

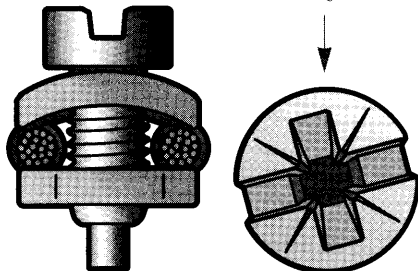
12 Maintained c

# Power Terminations

MCS 100-C

## Saddle Clamp

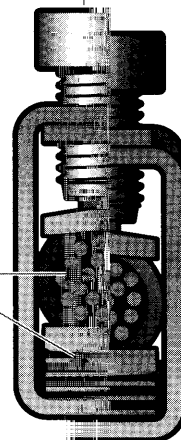
- Slotted
- Phillips
- Pozidriv®



9..23A

## Box Lug - Dual Clamping Mechanism

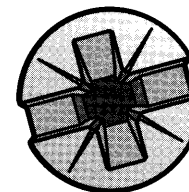
Accepts flexibar,  
stranded wire,  
solid conductors, etc.



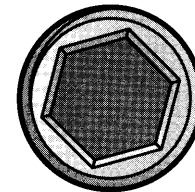
30..85A

- Slotted
- Phillips
- Pozidriv®

4mm / 5/16"  
Allen Head



30..43A

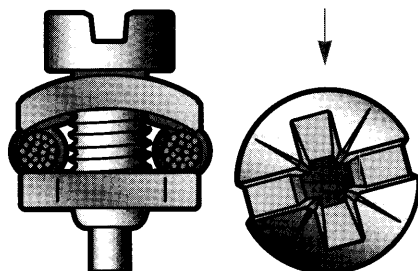


60..85A

100-A

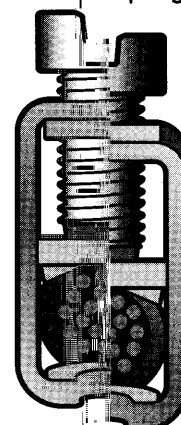
## Saddle Clamp

- Slotted
- Phillips
- Pozidriv®



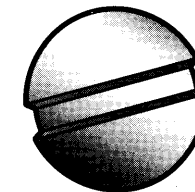
9..30A

## Box Lug - Single Clamping Mechanism



38..75A

Slotted



38..75A

Advantage VS. 100-A

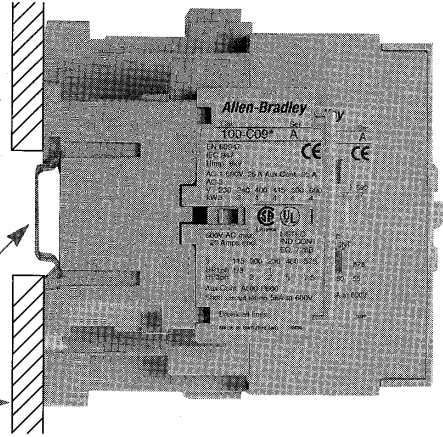
13 Greater flexibility & reliability of power terminations

MCS THE NEXT

# Multiple Frame Interlocking

Interlock with  
detail connector -  
special components  
required

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

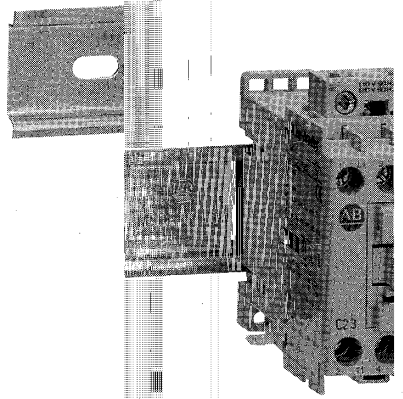


- Ideal for use in:
  - 2-speed
  - Wye-Delta/Star-Delta
  - Change-over
  - Transfer switch applications

- A single interlock fits entire contactor range - 9..85A (AC)

- Eliminates stocking of unique interlock components

- Easier and quicker panel layout, mounting and assembly



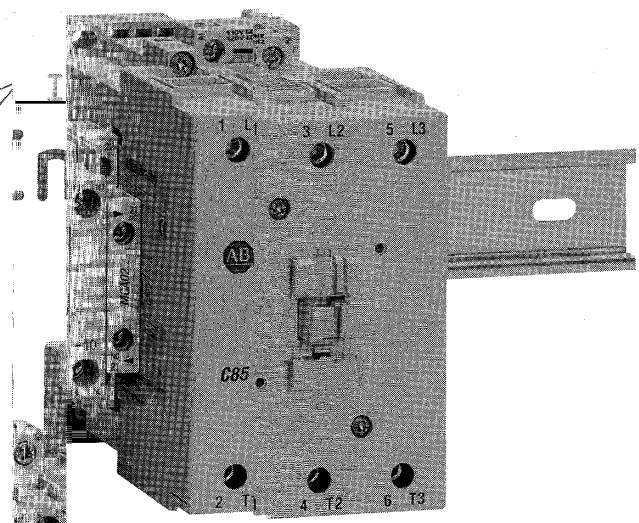
Interlocking  
panel

**Rockwell Automation**  
Allen-Bradley



ON IN CONTROL

## Interlocking



MCS Advantage VS. 100-A

14 Reduced panel space, labor, and component cost

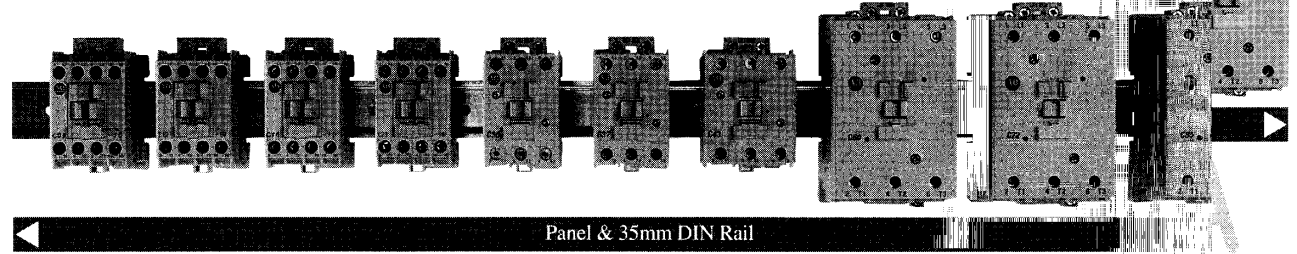
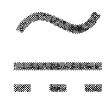


of contactors is panel and 35mm DIN rail mountable

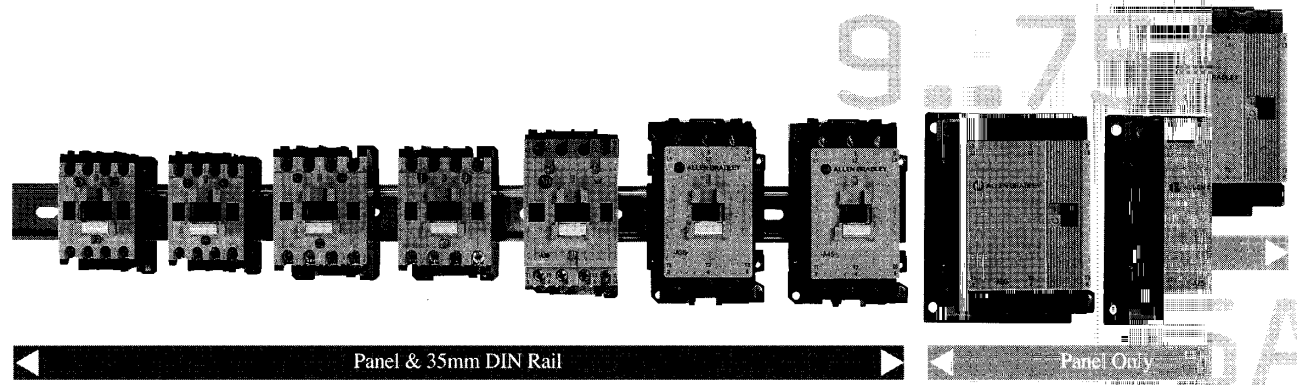
Allen Bradley

# Panel Mounting Options

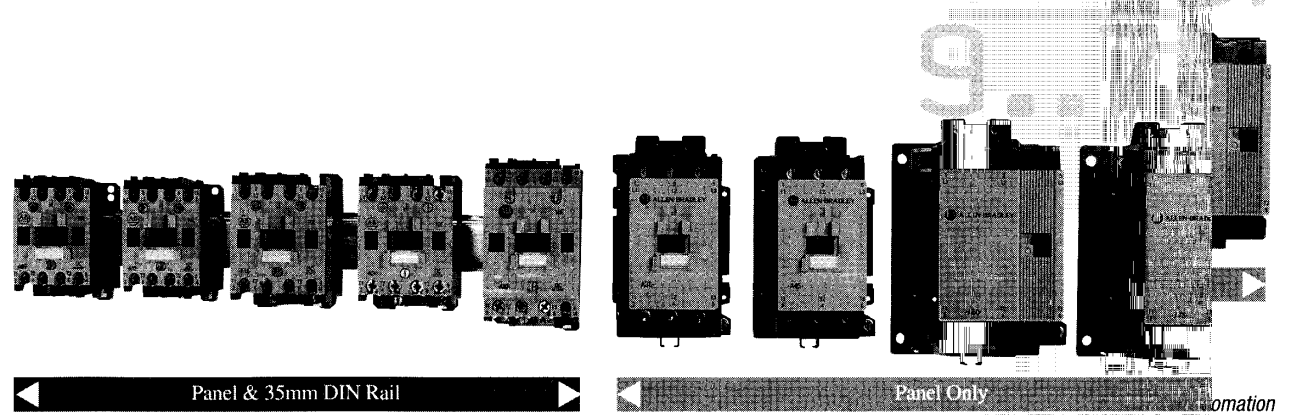
10 M  
CS-C AC contactors  
covering a range of 9..85 Amps  
DC contactors are the same size  
and rating.



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



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

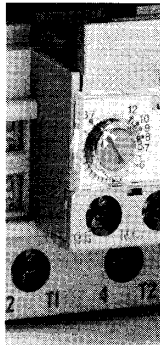


# Finger



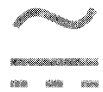
- IP 2LX Protection
- Finger protection from all directions when conductors are installed
- Protective covers meet SUVA requirements

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

37 43 60 72 85

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

38 45 60 75

■ Indicates multiple versions in product range

relays

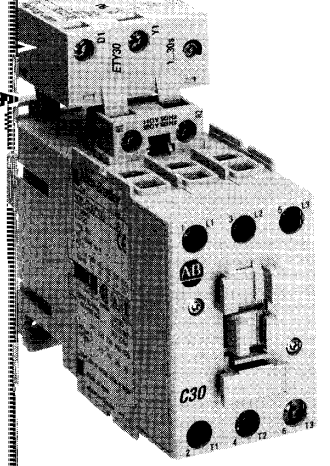
# Low

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

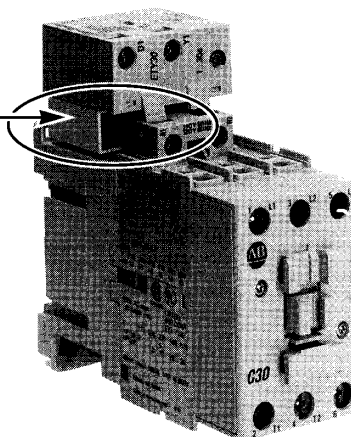
# Accessories

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

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



Surge Suppressor (fits compactly underneath timer)



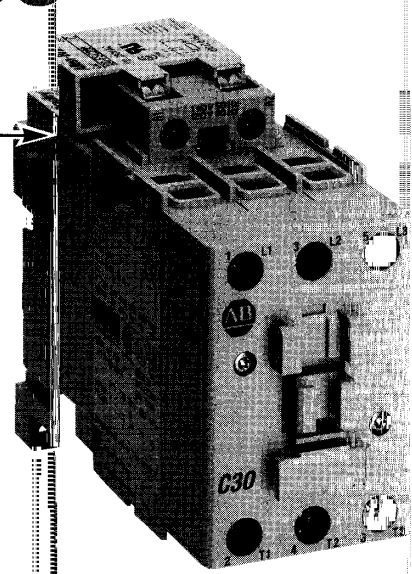
**MCS Advantage VS. 100-A** Labor costs

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

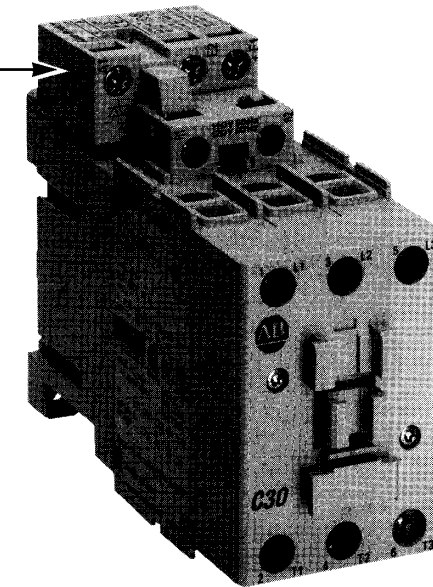
## Coil Mount Accessories

Surge Suppressor

- RC
- Varsistor
- Diode



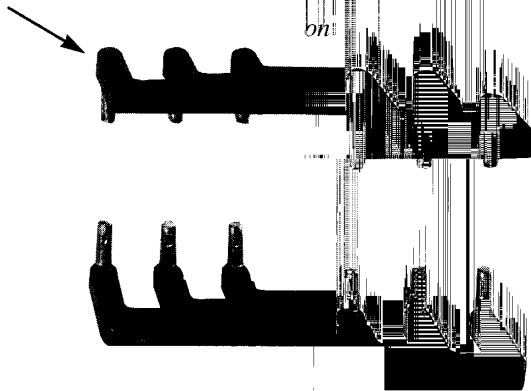
DC Interface Module - 18..30V DC Input



- "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

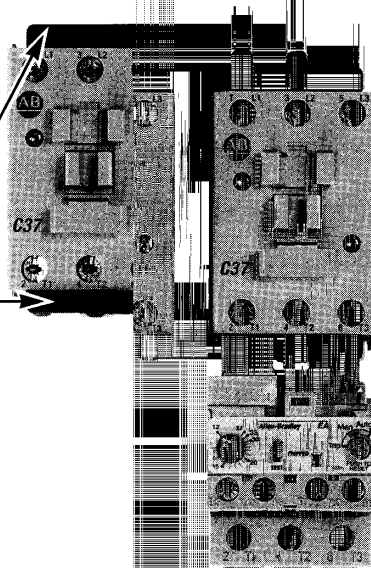


- Standard kits available for Reversing and Wye-Delta/Star-Delta assemblies

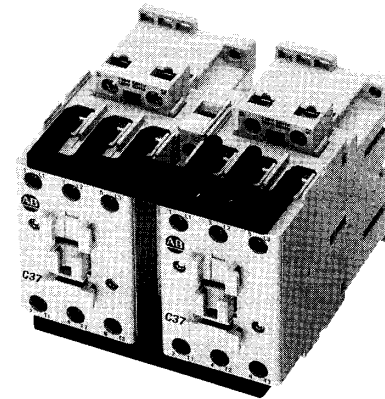
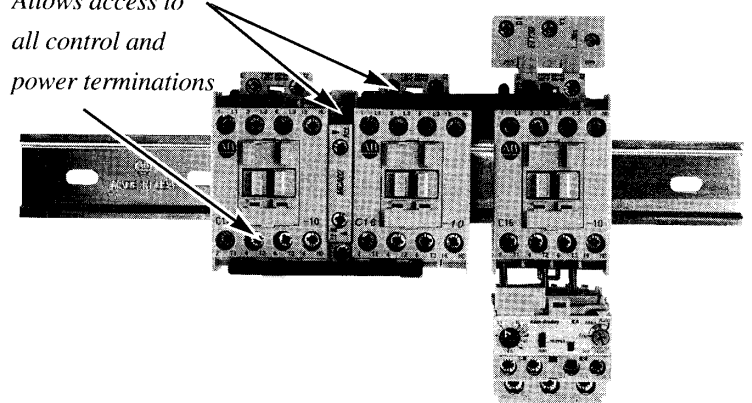
- Components satisfy requirements for:
  - 2-speed
  - Change-over
  - Transfer switch
  - Shorting connections

- IP 2LX Finger Protection

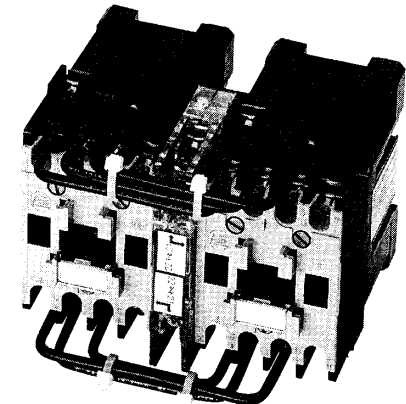
Slim profile



Allows access to all control and power terminations



100-C Wire Kit



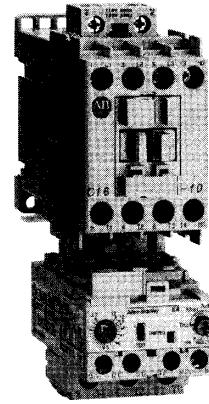
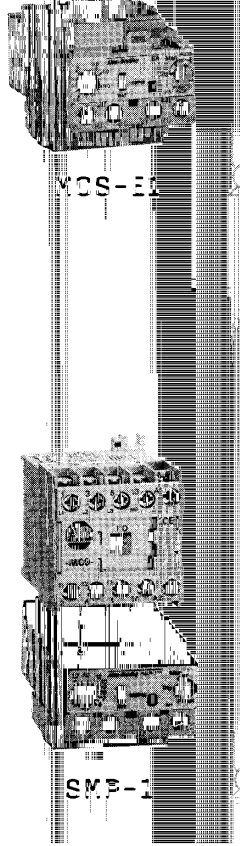
100-A Wire Kit

**MCS Advantage VS. 100-A**

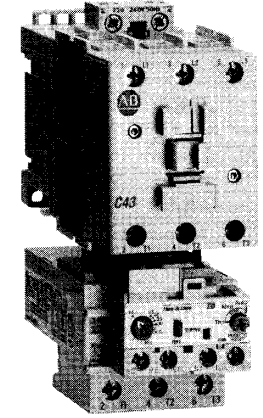
**20** Molded construction provides for quick installation and full terminal access

# Motor Protection

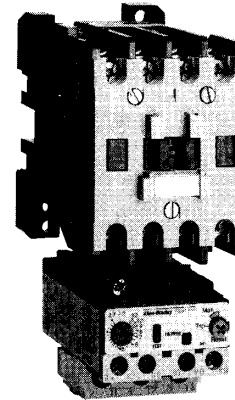
100-A Line



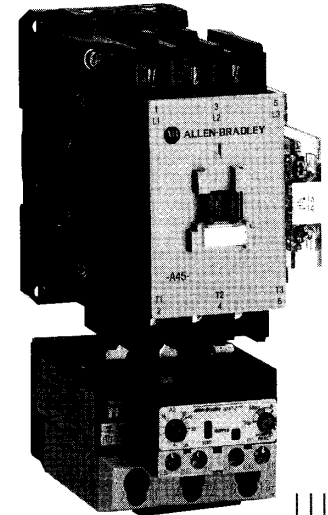
MCS-E1



MCS-E2



SMP-1



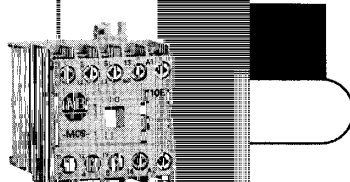
SMP-2



MCS Advantage VS. 100-A

21 SMP solid-state technology with MCS dimensions

## Solid-State

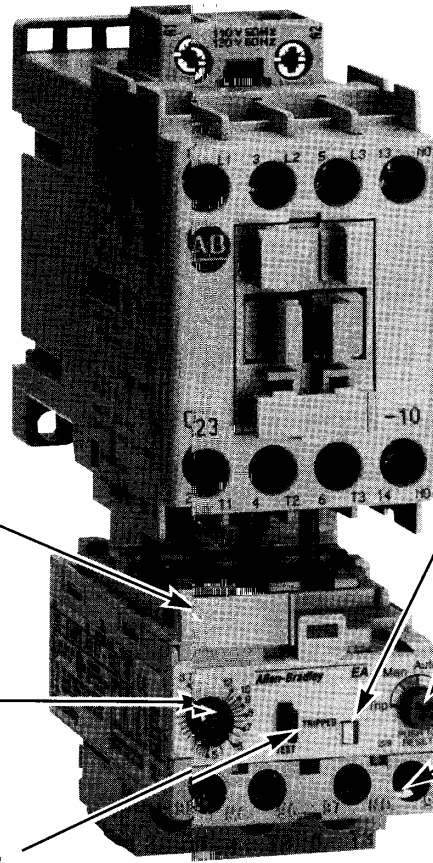


# MCS-E1 S

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

Label holes for device designation

Wide current adjustment range (3.00 - 30.00 A)

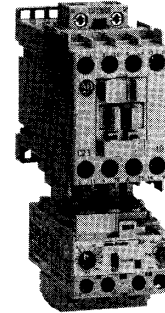


Visible trip indicator

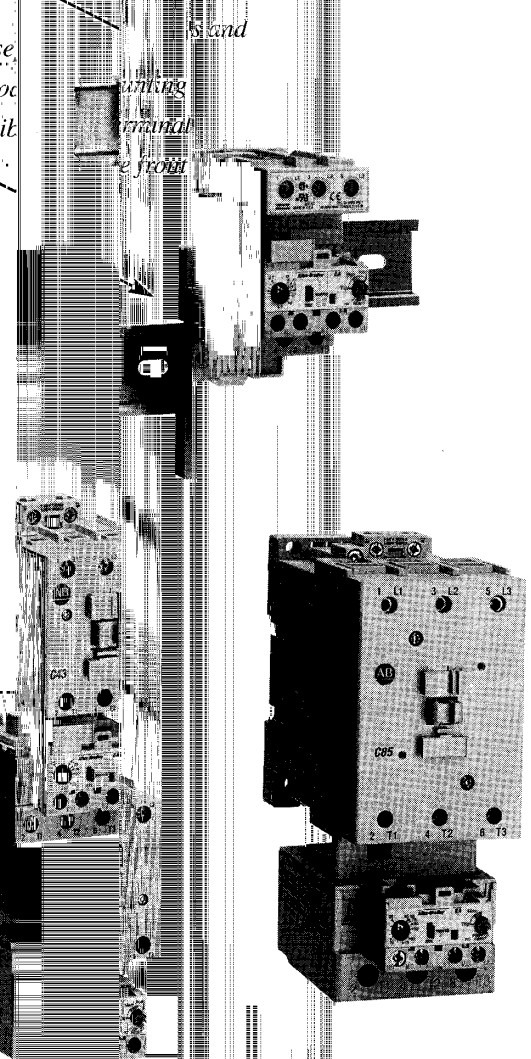
Reset Button:

- Automatic reset
- Manual reset
- Test trip

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



Panel adapter for 35mm DIN rail or panel controls are accessible



**Rockwell Automation**  
**Allen-Bradley**

3.00 - 30.00 A

standard and a full range of single phase overloads

MCS Advantage VS.

22 Compact dimension.

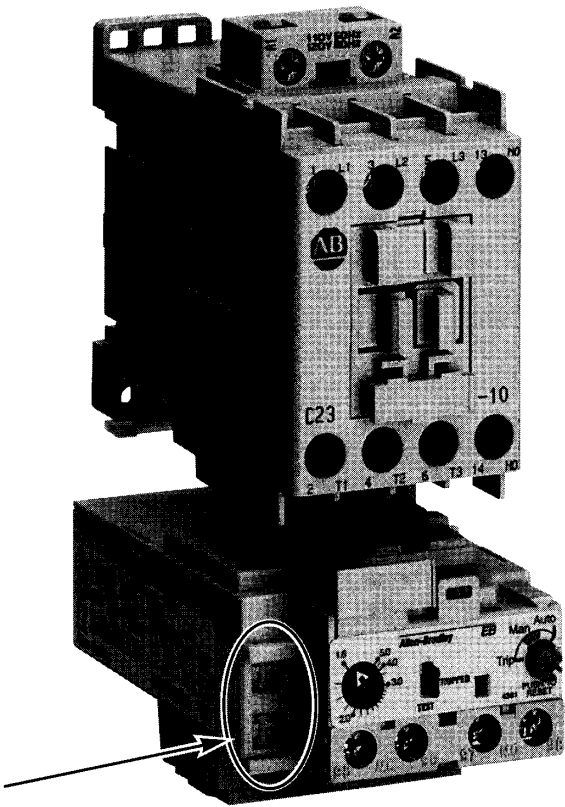
overload

protection



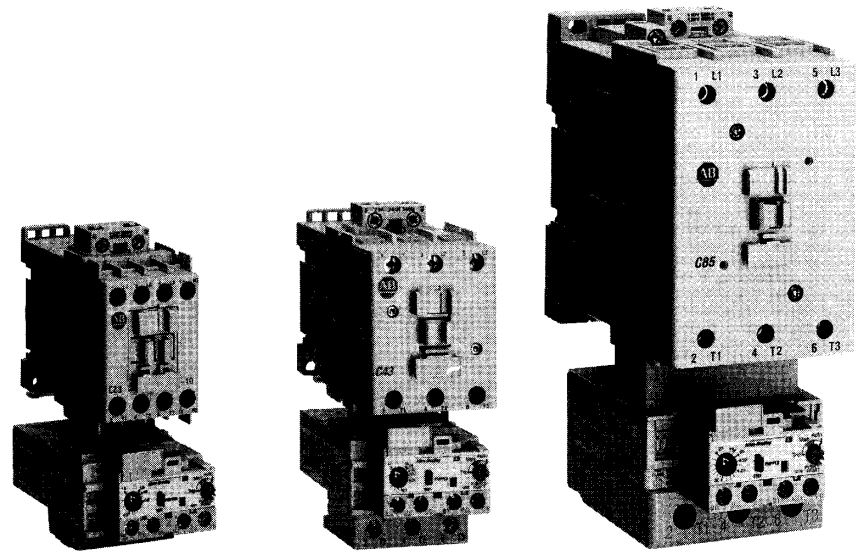
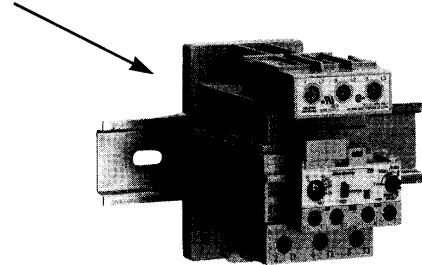
# MCSE-E2 Solid-State Overload Protection

- 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

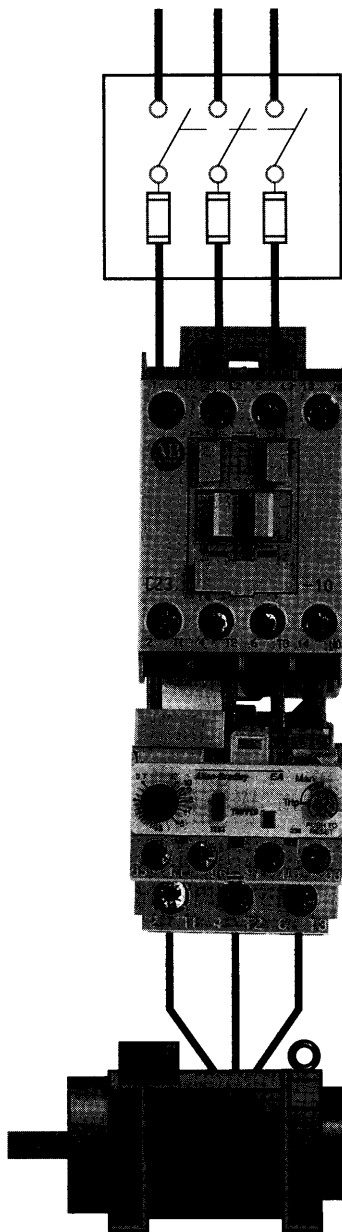


Advantage VS. 100-A

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

## Solutions:

- 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*

# 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, Toxicity Compliances, Protective SUVA Covers, IP 2LX

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

Yes, 9..85A, AC & DC

Yes, 9..85A, AC & DC

Yes, All Components

Yes, 9..85A AC with Standard Components

Panel or 35mm DIN Rail Mounting

9..85A, AC or DC

Class E1 & E2

Compact design to meet MCS dimensions

Complete Range

Manual or Manual/Auto, Class 10 or 20

Yes, 9..85A, AC & DC

Yes, 9..85A, AC & DC

Surge Suppressors, Electronic Timers, DC Interface

Rated down to 17V, 5mA

100-A

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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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