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# Selection Guide Motor Control Device Solutions

The background image shows an industrial setting. On the left, there is a large, light-colored metal control panel with several analog gauges, switches, and a digital display showing '98.5'. To the right of the panel is a blue industrial machine with various pipes and components. The scene is set in a factory or workshop with a blue floor and overhead structures.

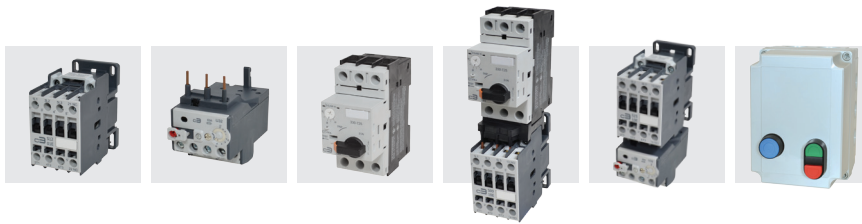
Expect more and get it  
from c3controls.

Our portfolio of Motor Control Devices consists of world-class products designed and manufactured to meet your requirements for quality and performance. Each product is certified satisfying international compliance standards, and is designed to be modular and compact to provide flexibility in configuration—reducing panel size and installation cost.



# Motor Control Device Solutions

c3controls motor control devices are the perfect solution for manufacturers who want proper motor control and superior motor protection without having to overpay or compromise on quality. In fact, we engineer so much performance and flexibility into our products, we can deliver a remarkably better value than our competitors.



c3controls  
products deliver  
like no other.

## Seamless Compatibility

Contactors, overload relays and motor protection circuit breakers are designed by c3controls to work together, with common connections and accessories, resulting in a high functioning compact starter.

## Compact

The small size of c3controls motor control devices, plus features like common accessories, enable assembly into smaller control panels for lower installed costs.

## Reliable Protection

Contactors provide the repeated on/off switching for the motor and are designed for motor, actuator, solenoid, and other power switching applications. Overload relays provide Trip Class 10 protection against overload and phase-loss conditions, and have ambient temperature compensation for motor protection in high temperature environments.

Motor protection circuit breakers provide overload, phase-loss and short circuit protection, can be used by themselves as manual motor controllers or with contactors in group motor installations, and can achieve Type 2 coordination for optimum performance.

Type E self-protected combination manual motor controllers provide disconnecting means, branch circuit protection, motor control and motor overload protection all in a single device.

## Proven

Our motor control devices are UL Listed and CE marked, meeting global standards requirements for use anywhere in the world.

**LEADING THE INDUSTRY**  
with our compact miniature 10HP contactors and control relays. One frame size (AC or DC)—28% reduction in panel area.

Ensures the protection of equipment and user.



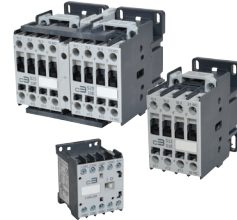
# Motor Control Overview

c3controls' complete range of motor control devices offer a wide variety of features, functionality, and performance levels in the most demanding applications.

series  
**300** series  
**310**

## Non-Reversing & Reversing Contactors

- Standard and miniature sizes available, including control relays.
- Four frame sizes for devices rated from 9A to 105A.
- Integral auxiliary contact, 3 power poles + 1 auxiliary, are standard on all 9A to 25A contactors.
- AC and DC operating coils for control circuit application flexibility.



series  
**320**

## Bimetallic Overload Relays

- Available in five frame sizes for motor full load currents from 0.28A to 112A.
- Provides thermal Trip Class 10 overload protection.
- Multi-function reset button enables selection of reset mode and test function.
- Single phase sensitivity for phase loss protection.



series  
**330** series  
**E330**

## Motor Protection Circuit Breakers

- Available as open or enclosed.
- Two versions available—Thermal/Magnetic trip element and Magnetic only trip element.
- For use in group motor installations and certified as Manual Motor Controllers Suitable as Motor Disconnects.
- UL Listed Type E devices are available.



series  
**620** series  
**630** series  
**E620** series  
**E630**

## Direct-On-Line (DOL) Starter Assemblies















- Assemblies offer the convenience of a single catalog number.
- Assemblies of Series 300 and 320 or Series 330 and 300.
- Unobstructed access to the coil terminals for simple control circuit wiring.
- UL Listed Type E assemblies are available for Series 630 and E630.
- Available as enclosed starters—factory assembled and wired.
- Polycarbonate enclosures are rated Type 1, 4/4X and IP66.



# NFPA 70 - National Electrical Code (NEC)

Understanding what functions are needed in your motor control circuit is critical when selecting motor control devices. Engineers benefit from the standards and codes established to ensure safety and protection to personnel and equipment.

More than just knowing the standards, c3controls, as a manufacturer of motor control products, has the application expertise you need to select the right products.

c3controls & Article 430 - Motors, Motor Circuits and Controllers					
	To Supply	NEC Part	c3controls Product Series		
Motor disconnecting means		Part IX	 330	 630	 Type E: 330 630
Motor branch-circuit, short circuit and ground-fault protection		Part IV			 Type E: 330 630
Motor circuit conductor		Part II			
Motor controller		Part VII	 300/310 330	 620 630	 Type E: 330 630
Motor control circuits		Part VI			
Motor overload protection		Part III	 320 330	 620 630	 Type E: 330 630
Motor		Part I			

Our motor control products align with Article 430 Part VII, Motor Controller, of the NFPA 70, the National Electrical Code.

# Optimal Performance and Safety

c3controls' motor control devices are designed to provide exceptional performance and long electrical life through a wide range of switching capabilities, features and functions.

100kA @ 480V

## High Fault Short Circuit Current Rating

c3controls' contactors, overload relays and motor protection circuit breakers are designed for high fault short circuit current with a rating of up to 100kA @ 480V and 600V with Class J fuses. This ensures the safety and protection of equipment and, most importantly, the people in the event of a fault.

## Enhanced Safety

IP20 guarded terminals with dual terminal markings prevent accidental contact with live parts.

## Multi-Function Device

c3controls' Series 330 motor protection circuit breakers are certified as Manual Motor Controllers Suitable as Motor Disconnects, can be used in Group Motor Installations, and can be used to manually control individual motors and protect them against overload and short circuit currents. Our self-protected devices eliminate the need for upstream fuses and circuit breakers, and they provide reliable motor protection. Designed for optimum performance in multi-motor installations.

## Flexible Installation

Overload relays can be installed directly on all miniature or standard contactors, separately on a 35mm DIN rail or panel mounted. Motor protection circuit breakers and contactors can be assembled as a single unit for DIN rail or panel mount installations. Our miniature contactors can even be installed and mounted in multiple orientations—including upside down for simplified installation.



## Proven

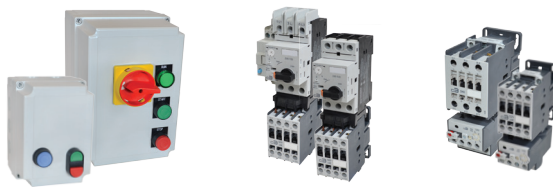
cULus Listed and CE marked meeting global standards requirements. Our motor control devices are suitable for use anywhere in the world. Environmentally friendly contacts are cadmium free, and non-metallic materials are asbestos and halogen free. All c3controls products are compliant to the RoHS directives.

# Engineered to Deliver the Best Value

Beyond performance and safety, c3controls motor control products were specifically engineered to deliver the best value for the machine builder and electrical equipment builder.

Their modular design allows contactors and overload relays, and motor protection circuit breakers and contactors to be mixed-and-matched in an assembled starter for any combination of a FLC and desired electrical life. We offer a wide variety of starter configurations available in both open and enclosed that are fully assembled and pre-wired—all with the convenience of a single catalog number.

c3controls, as a manufacturer, provides a better total value delivering quality components backed by an unmatched lifetime warranty. Our secret—build it, back it, deliver it and support it like no other. A promise made, and a promise kept since 1976.



## Convenience

Factory assemblies provide the convenience of a single catalog number and shorter control panel bill of material.

## Factory Assembled and Wired

Convenient and reliable factory wired starters and pilot devices save time and reduce installation cost.

## Enclosed Starters

Pre-assembled with our Series 300 contactors, Series 330 motor protection circuit breakers or Series 320 overload relays, and 22mm IEC pilot devices, all within the protection of a durable polycarbonate enclosure. With its compact size and factory wiring, our enclosed starters are engineered to save you panel space, cost, and valuable time during installation.



## 6 | Standard Contactors



## 8 | Miniature Contactors & Control Relays



## 10 | Overload Relays



## 12 | Direct-On-Line Starters (Contactor + Overload Relay)



## 14 | Enclosed Direct-On-Line Starters (Contactor + Overload Relay)



## 16 | Motor Protection Circuit Breakers



## 18 | Enclosed Motor Protection Circuit Breakers



## 20 | Direct-On-Line Starters (Motor Protection Circuit Breaker + Contactor)



## 22 | Enclosed Direct-On-Line Starters (Motor Protection Circuit Breaker + Contactor)

series  
**300**  
non-reversing

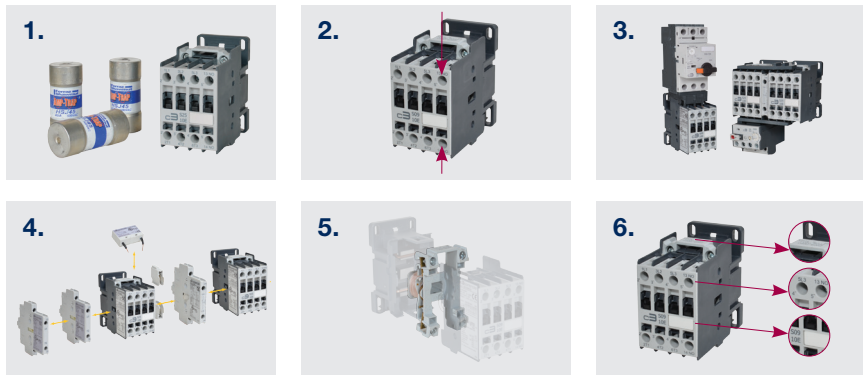
series  
**310**  
reversing

# Standard Contactors

c3controls Series 300 Non-Reversing and Series 310 Reversing Contactors are designed for use in power circuits and are ideal for industrial, light industrial and commercial applications. Their features, performance, small size and ease of installation make them ideal for controlling motors, actuators, solenoids and other power switching circuits, such as transformers, heaters, capacitors and lights.



## Features



100kA @ 480V

4 Terminal Coils

- 1. HIGH FAULT SCCR** - High fault short circuit current rating of 100kA @ 480V and 600V with Class J fuses, provides safety and reliability in high fault applications.
- 2. INTEGRAL AUXILIARY** - Integral auxiliary contacts, 3 power poles + 1 auxiliary, are standard on all c3controls 9A to 25A non-reversing contactors.
- 3. SEAMLESS COMPATIBILITY** - c3controls Series 300 Non-Reversing Contactors and Series 310, 9A to 25A, AC/DC Reversing Contactors are compatible with directly mounted Series 320-B2 Overload Relays, and our Series 300 Non-Reversing and Series 310 Reversing 9A to 40A AC/DC Reversing Contactors direct mount onto Series 330 Motor Protection Circuit Breakers.
- 4. COMMON ACCESSORIES** - Designing starter assemblies and panels is easy! No more remembering which auxiliary works with each contactor. Our complete range of Series 300 Non-Reversing and Series 310 Reversing Contactors shares common accessories, reducing inventory and simplifying installation and assembly.
- 5. MULTI-POINT TERMINAL COILS** - Four terminal coils on all 9A to 105A AC and DC operated contactors are easily accessible, two on the line side and two on the load side.
- 6. QUICK IDENTIFICATION** - Enhanced markings, improved identification labels, and dual IEC and NEMA terminal markings ensure quick identification of product from all angles, simplifying troubleshooting in panels with many devices.



## Range

- **TYPE:**
  - Non-Reversing
  - Reversing
- **OPERATING COILS/FREQUENCIES:**
  - AC (50Hz, 60Hz, 50/60Hz), DC, and DC electronic coil control, 50 - 105A
- **POWER POLES: 3 NORMALLY OPEN**
- **OPERATING CURRENT RATING (AC-3):**
  - Non-Reversing: 9 - 105A
  - Reversing: 9 - 80A
- **COIL VOLTAGES:**
  - AC (50Hz): 12 - 550V
  - AC (60Hz): 12 - 600V
  - AC (50/60Hz): 12 - 440V
  - DC: 12 - 250V
- **INSTALLATION/MOUNTING:**
  - 35mm DIN rail, panel
  - Installation and removal without the use of tools
- **ACCESSORIES:**
  - Front and side mounted auxiliary contacts, wiring modules, mechanical interlock, electrical and mechanical interlock, surge suppressors and replacement operating coils
- **ASSEMBLIES:**
  - Series 620 DOL Starters: Contactor + Overload Relay
  - Series 630 DOL Starters: Motor Protection Circuit Breaker + Contactor
  - Series E620 Enclosed DOL Starters: Contactor + Overload Relay
  - Series E630 Enclosed DOL Starters: Motor Protection Circuit Breaker + Contactor



50Hz, 60Hz,  
50/60Hz



Electronic Coil  
Control for  
50A - 105A  
DC devices

**[ 3 Normally Open Power Poles ]**

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
General Purpose Current Rating	A	25 - 140
Rated 3-Phase Power, Pe		5 - 75HP @ 460VAC
Short Circuit Current Rating	kA	100 (with Class J Fuses)
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Insulation Voltage, Ui	V	1000
Rated Impulse Voltage Withstand, Uimp	kV	6 - 8
Rated Operating Voltage, Ue	VAC	690
Rated Operating Current, Ie		
AC-1		25 - 140A @ 55° C (131° F)
AC-3		9 - 105A @ 380 - 400V
Rated 3-Phase Operating Power, Pe		
AC-3		4 - 55kW @ 380 - 400V
<b>COIL CHARACTERISTICS</b>		
Operating	xUc	80 - 110%
Pick-Up	xUc	AC: 60 - 80% DC: 45 - 80%
Sealed	xUc	AC: 35 - 60% DC: 15 - 60%
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Main Terminals		IP20 (with conductors connected on 25 - 105A contactors)
Coil Terminals		IP20
Auxiliary Contact Terminals		IP20
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-25 to +55 / -13 to +131
Ambient Storage Temperature	° C / ° F	-55 to +80 / -58 to +176
<b>ROHS COMPLIANCE</b>		
		For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .

## Proven

### Conformity to Standards:

UL 508, 60947-4-1A

CSA C22.2 No. 14

IEC 60947-1, 60947-4-1

### Certifications:

UL File #: E236197 (Guide NLDX, NLDX7), E68568 (Guide NKCR, NKCR7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



Visit [www.c3controls.com](http://www.c3controls.com) to download product certifications.

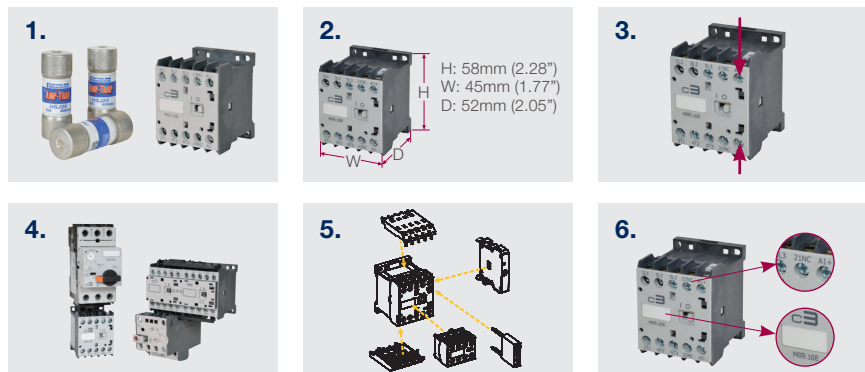


# Miniature Contactors & Control Relays

Small in size, big in performance! c3controls Series 300-M and 310-M Miniature Contactors are designed for use in power circuits and are ideal for light industrial, commercial and residential applications. Their features, performance, small size and ease of installation make them ideal for controlling motors, actuators, solenoids and other power switching circuits, such as heaters and lights. Common accessories enable the devices to be customized for each application.



## Features



100kA @ 480V

28% Size Reduction

- HIGH FAULT SCCR** - High fault short circuit current rating of 100kA @ 480V and 600V with Class J fuses, provides safety and reliability in high fault applications.
- COMPACT SIZE** - Leading the industry with our compact miniature 10HP contactors and control relays. One frame size (AC or DC) reduces panel area for lower installed costs – 28% reduction in panel area compared to standard devices.
- INTEGRAL AUXILIARY** - Integral auxiliary contacts, 1 NO or 1 NC, are standard on all c3controls contactors.
- SEAMLESS COMPATIBILITY** - Miniature Non-Reversing and Reversing Contactors are compatible with direct mounted Series 320-B1 Overload Relays and Series 330 Motor Protection Circuit Breakers.
- COMMON ACCESSORIES** - Designing starter assemblies and panels is easy! No more remembering which auxiliary works with each contactor. Our complete range of Miniature Contactors and Control Relays share common accessories, reducing inventory and simplifying installation and assembly.
- QUICK IDENTIFICATION** - Enhanced markings, improved identification labels, and dual IEC and NEMA terminal markings ensure quick identification of product from all angles, simplifying troubleshooting in panels with many devices.

## Range

- TYPE:
  - Non-Reversing
  - Reversing
- OPERATING COILS/FREQUENCIES:
  - AC (50Hz, 60Hz, 50/60Hz) and DC
- POWER POLES: 3 Normally Open
- OPERATING CURRENT RATING (AC-3): 7 - 16A
- COIL VOLTAGES:
  - AC (50Hz): 110V
  - AC (60Hz): 120 - 600V
  - AC (50/60Hz): 24 - 400V
  - DC: 12 - 250V
- INSTALLATION/MOUNTING:
  - 35mm DIN rail, panel, printed circuit board
  - Installation and removal without the use of tools
- ACCESSORIES:
  - Auxiliary contacts, printed circuit board link module, wiring module, electronic timers, mechanical interlock, surge suppressors and replacement operating coils
- ASSEMBLIES:
  - Compatible with directly mounted Series 320 Overload Relays, contactor link module accessory available for assembly with Series 330 Motor Protection Circuit Breakers



50Hz, 60Hz,  
50/60Hz

**[ 3 ]** Normally Open  
Power Poles

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
General Purpose Current Rating	A	18 - 22
Rated 3-Phase Power, Pe		5 - 10HP @ 460VAC
Short Circuit Current Rating	kA	100 (with Class J Fuses)
<b>ELECTRICAL IEC RATINGS</b>		
Rated Insulation Voltage, Ui	V	690
Rated Operating Voltage, Ue	VAC	690
Rated Operating Current, Ie		
AC-1		18 - 22A @ 55° C (131° F)
AC-3		6.3 - 14.8A @ 380 - 400V
Rated 3-Phase Operating Power, Pe		
AC-3		3 - 7.5kW @ 380 - 400V
<b>COIL CHARACTERISTICS</b>		
Operating	xUc	80 - 110%
Pick-Up	xUc	AC: 60 - 80% & DC: 40 - 70%
Drop-Out	xUc	AC: 40 - 60% & DC: 30 - 50%
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Main Terminals		IP20
Control Circuit Terminations		IP20
Auxiliary Contact Terminals		IP20
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-25 to +55 / -13 to +131
Ambient Storage Temperature	° C / ° F	-55 to +80 / -67 to +176
<b>ROHS COMPLIANCE</b>		
For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .		

## Proven

### Miniature Contactors

#### Conformity to Standards:

UL 508, 60947-4-1A  
CSA C22.2 No. 14  
IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E236197 (Guide NLDX, NLDX7)  
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Miniature Control Relays

#### Conformity to Standards:

UL 508, 60947-4-1A  
CSA C22.2 No. 14  
IEC 60947-1, 60947-5-1

#### Certifications:

UL File #: E68568 (Guide NKCR, NKCR7)  
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



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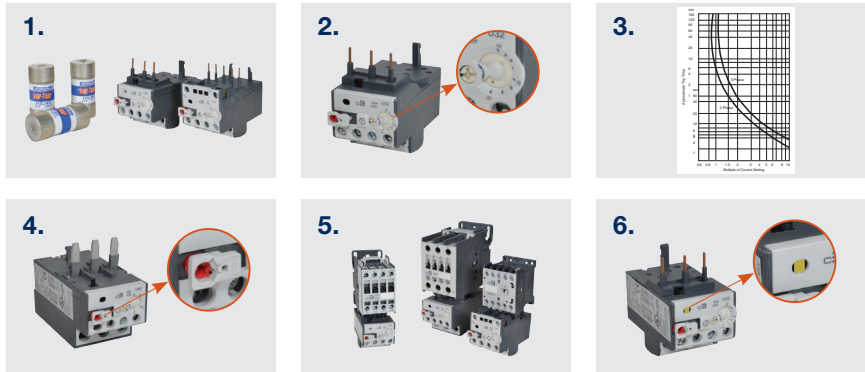


# Overload Relays

c3controls Series 320 Bimetallic Overload Relays provide Trip Class 10 overload protection for single and three-phase motors, and phase loss protection for three-phase motors. Small size, ease of installation and outstanding features like IP20 guarded terminals with dual terminal markings, integral stop button and direct mounting will help you reduce your total installed costs and enhance the features and performance of your equipment.



## Features



100kA @ 480V

1:1.5 Full load current adjustment ratio

- 1. HIGH FAULT SCCR** - High fault short circuit current rating of 100kA @ 480V and 600V with Class J fuses, provides safety and reliability in high fault applications.
- 2. ADJUSTABLE CURRENT SETTING** - Full load current adjustment ratio of approximately 1:1.5 enables overload relay to be set to exact FLA of motor.
- 3. PHASE LOSS SENSITIVITY** - Single phase sensitivity to protect motors against damaging phase loss conditions.
- 4. SELECTABLE RESET MODE** - Manual or automatic reset and test modes, and stop button all in a single device for convenient control circuit wiring.
- 5. SEAMLESS COMPATIBILITY** - Series 320-B2 Overload Relays direct mount onto all Series 300 Non-Reversing and Series 310, 9A to 25A AC/DC, Reversing Contactors, and Series 320-B1 Overload Relays direct mount onto all Series 300/310 Miniature Non-Reversing and Reversing Contactors.
- 6. TRIP TEST FUNCTION** - Trip test function standard on all c3controls Series 320-B2 to 320-B5 overload relays, allows for easier installation, testing and troubleshooting.



## Range

- TYPE: Bimetallic (Thermal)
- CURRENT ADJUSTMENT RANGE: 0.28 - 112A
- POWER POLES: 3
- TRIP CLASS: 10
- RESET MODE:
  - Selectable Manual or Automatic
- TEST MODE: Selectable On or Off
- INSTALLATION/MOUNTING:
  - Direct mounting on 7A to 105A Non-Reversing Contactors
  - Separate mounting on 35mm DIN rail or panel
  - Installation and removal without the use of tools
- ACCESSORIES:
  - Separate mounting adapters
- ASSEMBLIES:
  - Series 620 DOL Starters: Contactor + Overload Relay
  - Series E620 Enclosed DOL Starters: Contactor + Overload Relay

**0.28 - 112A**  
Current Adjustment Range

Trip Class **10**

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
Short Circuit Current Rating	kA	100 (with Class J Fuses)
Control Circuit Pilot Duty Rating		AC: C600 DC: R300
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	690
Rated Insulation Voltage, Ui	V	690
Rated Impulse Voltage, Uimp	kV	6
<b>CONTROL CIRCUITS</b>		
Rated Operating Current, Ie		
AC-15		
@24V	A	4
@48V	A	3.5
@60V	A	3.5
@120V	A	3
@230V	A	2
@400V	A	1.5
@500V	A	0.5
@690V	A	0.3
DC-13		
@24V	A	1
@48V	A	0.5
@60V	A	0.5
@110V	A	0.25
@220V	A	0.1
@250V	A	0.1
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Main Circuit Terminals		IP20 (with wires connected)
Control Circuit Terminals		IP20
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-25 to +60 / -13 to +140
Ambient Storage Temperature	° C / ° F	-40 to +70 / -40 to +158
<b>ROHS COMPLIANCE</b>		
For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .		

## Proven

### Conformity to Standards:

UL File #: E68568 (Guide NKCR, NKCR7)

CSA C22.2 No. 14

IEC 60947-1, 60947-4-1

### Certifications:

UL File #: E68568 (Guide NKCR, NKCR7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



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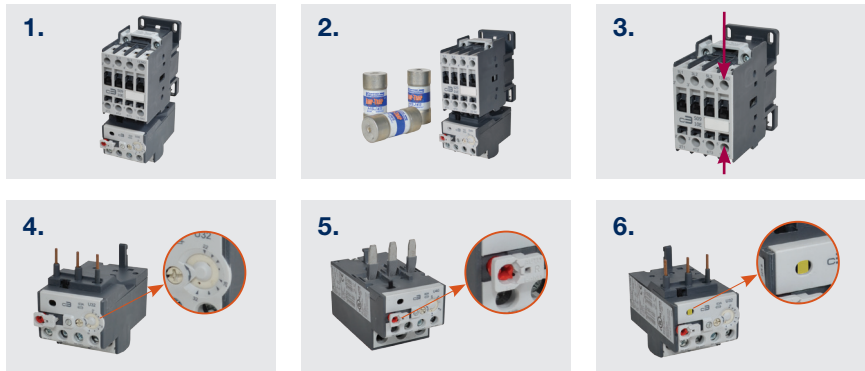
# DOL Starters

## (Contactor + Overload Relay)

c3controls Series 620 Direct-On-Line (DOL) Starters are assemblies of a Series 300 Contactor and a Series 320 Overload Relay designed for controlling and protecting single and three-phase motors. Small size, IP20 guarded terminals with dual terminal markings, shared accessories and ease of installation will help reduce total installed costs and enhance equipment functionality and performance.



### Features



100kA @ 480V

1:1.5 Full load current  
adjustment ratio

- 1. CONVENIENCE** - Factory assembly of a Series 300 Contactor and Series 320 Overload Relay provides the convenience of a single catalog number and shorter control panel bill of material.
- 2. HIGH FAULT SCCR** - High fault short circuit current rating of 100kA @ 480V and 600V with Class J fuses, provides safety and reliability in high fault applications.
- 3. INTEGRAL AUXILIARY** - Integral auxiliary contacts, 3 power poles + 1 auxiliary, are standard on all c3controls 9A to 25A non-reversing contactors.
- 4. ADJUSTABLE CURRENT SETTING** - Full load current adjustment ratio of approximately 1:1.5 enables overload relay to be set to exact Full Load Ampere (FLA) of motor.
- 5. SELECTABLE RESET MODE** - Manual or automatic reset and test modes, and stop button all in a single device for convenient control circuit wiring.
- 6. TRIP TEST FUNCTION** - Trip test function comes standard on all c3controls Series 320-B2 to 320-B5 overload relays and allows for easier installation, testing, and troubleshooting.

## Range

### Contactor

- TYPE: Non-Reversing
- POWER POLES: 3 Normally Open
- SWITCH RATINGS:
  - AC-2: 9 - 105A
  - AC-3: 9 - 105A
- OPERATING COIL VOLTAGES:
  - AC (50Hz): 12 - 550V
  - AC (60Hz): 12 - 600V
  - AC (50/60Hz): 12 - 440V
  - DC: 12 - 250V
- ACCESSORIES:
  - Front and side mounted auxiliary contacts, surge suppressors, replacement operating coils and contact kits

### Overload Relay

- TYPE: Bimetallic (Thermal)
- AMPERE RATINGS: 0.28 - 112A
- POWER POLES: 3
- TRIP CLASS: 10
- RESET MODE:
  - Selectable Manual or Automatic
- TEST MODE:
  - Selectable On or Off
- INSTALLATION/MOUNTING:
  - 35mm DIN rail, panel
  - Installation and removal without the use of tools
- ASSEMBLIES:
  - Series E620 Enclosed DOL Starters: Contactor + Overload Relay

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
Rated Operating Power, Pe		5 - 75HP @ 460VAC
Short Circuit Current Rating	kA	100 (with Class J Fuses)
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Insulation Voltage, Ui	V	1000
Rated Impulse Voltage, Uimp	kV	6 - 8
Rated Operating Voltage, Ue	VAC	690
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Main Terminals		IP20 (with conductors connected)
Coil Terminals		IP20
Auxiliary Contact Terminals		IP20
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-25 to +55 / -13 to +131
Ambient Storage Temperature	° C / ° F	-40 to +70 / -104 to +158
<b>ROHS COMPLIANCE</b>		
For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .		

**[ 3 ]** Normally Open Power Poles

**[ 0.28 - 112A ]** Current Adjustment Range

## Proven

### Contactors

#### Conformity to Standards:

UL 508, 60947-4-1A  
CSA C22.2 No. 14  
IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E236197 (Guide NLDX, NLDX7), E68568 (Guide NKCR, NKCR7)  
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Overload Relays

#### Conformity to Standards:

UL 508, 60947-4-1A  
CSA C22.2 No. 14  
IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E68568 (Guide NKCR, NKCR7)  
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



Visit [www.c3controls.com](http://www.c3controls.com) to download product certifications.



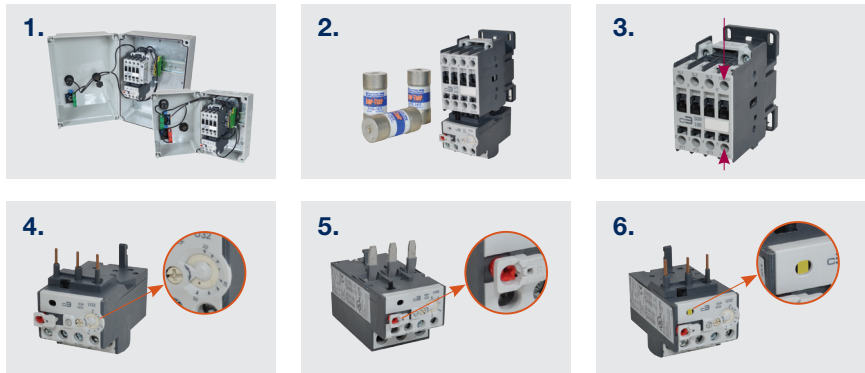
# Enclosed DOL Starters

## (Contactor + Overload Relay)

c3controls Series E620 Enclosed Direct-On-Line (DOL) Starters are assembled from our Series 300 Contactor, Series 320 Overload Relay, and 22mm IEC pilot devices, all with the protection of our durable Polycarbonate enclosure. To save you time and reduce installation costs, our Series E620 are factory assembled and wired, with the option of no pre-wiring.



### Features



100kA @ 480V

1:1.5 Full load current adjustment ratio

- 1. FACTORY ASSEMBLED & WIRED** - Factory assembled and wired starters and pilot devices provide the convenience of a single catalog number and a shorter control panel bill of material.
- 2. HIGH FAULT SCCR** - High fault short circuit current rating of 100kA @ 480V and 600V with Class J fuses, provides safety and reliability in high fault applications.
- 3. INTEGRAL AUXILIARY** - Integral auxiliary contacts, 3 power poles + 1 auxiliary, are standard on all c3controls 9A to 25A non-reversing contactors.
- 4. ADJUSTABLE CURRENT SETTING** - Full load current adjustment ratio of approximately 1:1.5 enables overload relay to be set to exact FLA of motor.
- 5. SELECTABLE RESET MODE** - Manual or automatic reset and test modes, and stop button all in a single device for convenient control circuit wiring.
- 6. TRIP TEST FUNCTION** - Trip test function standard on all c3controls Series 320-B2 to 320-B5 overload relays, allows for easier installation, testing, and troubleshooting.



## Range

### Contactors

- TYPE: Non-Reversing
- POWER POLES: 3 Normally Open
- SWITCH RATINGS:
  - AC-2: 9 - 80A
  - AC-3: 9 - 80A
- OPERATING COIL VOLTAGES:
  - AC (50Hz): 12 - 550V
  - AC (60Hz): 12 - 600V
  - AC (50/60Hz): 12 - 440V
  - DC: 12 - 250V

### Overload Relay

- TYPE: Bimetallic (Thermal)
- AMPERE RATINGS: 0.28 - 112A
- POWER POLES: 3
- TRIP CLASS: 10
- RESET MODE:
  - Selectable Manual
  - Automatic
- TEST MODE: Selectable On or Off
- INSTALLATION/MOUNTING:
  - 35mm DIN rail, panel
  - Installation and removal without the use of tools

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
Rated Operating Power, Pe		5 - 75HP @ 460VAC
Short Circuit Current Rating	kA	100 (with Class J Fuses)
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Insulation Voltage, Ui	V	1000
Rated Impulse Voltage, Uimp	kV	6 - 8
Rated Operating Voltage, Ue	VAC	690
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Main Terminals		IP20 (with conductors connected)
Coil Terminals		IP20
Auxiliary Contact Terminals		IP20
Enclosure		1, 4/4X and IP66
Pilot Devices		1, 2, 3, 3R, 4/4X, 12, 13 and IP66
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-25 to +55 / -13 to +131
Ambient Storage Temperature	° C / ° F	-40 to +70 / -104 to +150
<b>ROHS COMPLIANCE</b>		
For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .		

**[ 3 ]** Normally Open Power Poles

**[ 0.28 - 112A ]** Current Adjustment Range

## Proven

### Contactors

#### Conformity to Standards:

UL 508, 60947-4-1A  
CSA C22.2 No. 14  
IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E236197 (Guide NLDX, NLDX7), E68568 (Guide NKCR, NKCR7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Overload Relays

#### Conformity to Standards:

UL 508, 60947-4-1A  
CSA C22.2 No. 94  
IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E68568 (Guide NKCR, NKCR7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Enclosures

#### Conformity to Standards:

UL 50  
CSA C22.2 No. 94  
IEC 60529

#### Certifications:

UL Listed  
CSA Certified



Visit [www.c3controls.com](http://www.c3controls.com) to download product certifications.



# Motor Protection Circuit Breakers

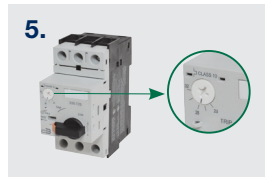
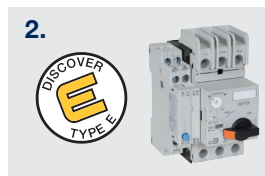
c3controls Series 330 Motor Protection Circuit Breakers provide reliable overload and short circuit protection, and are ideal for use with Series 300 and Series 310 Contactors. Also, ideal for use in group motor installations where panel space is at a premium and device modularity is required to satisfy virtually any application requirement. For the simplest applications, they can be used by themselves as manual motor controllers.



## Features

**1. ARTICLE 430 PART VII - NFPA 70**

	To Supply	NEC Part
Motor disconnecting means		Part IX
Motor branch-circuit, short circuit, and ground-fault protection		Part IV
Motor circuit conductor		Part II
Motor controller		Part VII
Motor control circuits		Part VI
Motor overload protection		Part III
Motor		Part I



- 1. MULTI-FUNCTION DEVICE** - Our Series 330 MPCBs are certified as Manual Motor Controllers Suitable as Motor Disconnects, can be used in Group Motor Installations, and can be used to manually control individual motors and protect them against overload and short circuit currents.
- 2. SELF-PROTECTED** - Listed as a UL 60947-4-1A Type E Self-protected Combination Manual Motor Controller for circuits capable of delivering up to 50kA @ 480V.
- 3. HIGH FAULT SCCR** - High fault short circuit current rating of 50kA @ 480V provides safety and reliability in high fault applications.
- 4. SEAMLESS COMPATIBILITY** - The modular design of our Series 330 MPCB allows for direct mounting onto Series 300 Non-Reversing and Series 310 Reversing (9A to 40A) AC/DC Contactors and Series 300 and 310 Reversing AC/DC Miniature Contactors.
- 5. ADJUSTABLE CURRENT SETTING** - Full load current adjustment setting enables overload relay to be set to exact FLA of motor. Provides phase loss protection for the motor against overload currents.
- 6. SNAP-ON ACCESSORIES** - Snap-on accessories are easily installed without the use of tools, lowering assembly and installation costs.

50kA @ 480V

## Range

- TYPE:
  - Thermal and Magnetic Trip Elements
  - Magnetic Trip Element only
- AMPERE RATINGS: 0.16 - 32A
- POWER POLES: 3
- TRIP CLASS: 10
- INSTALLATION/MOUNTING:
  - 35mm DIN rail, panel
  - Installation and removal without the use of tools
- ACCESSORIES:
  - Front and side mounted standard auxiliary contacts, shunt release and undervoltage release modules, commoning links, feeder terminal, line side terminal barrier, trip indicating auxiliary contacts, adjustment scale cover, commoning link shroud, mounting foot kit, starter assembly mounting plates, circuit breaker/contactors link module and external operating handle
- ASSEMBLIES:
  - Series 630 DOL Starters: Motor Protection Circuit Breaker + Contactor
  - Series E630 Enclosed DOL Starters: Motor Protection Circuit Breaker + Contactor

[ 3 Normally Open Power Poles ]

[ Trip Class 10 ]

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
Rated 3-Phase Operating Power, Pe	kA	1/2 - 20HP @ 460VAC
Short Circuit Current Rating	kA	50 @ 480V
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Insulation Voltage, Ui	V	690
Rated Impulse Voltage, Uimp	kV	6
Rated Operating Voltage, Ue	VAC	690
Rated 3-Phase Power, Pe @ 380 - 400VAC	kW	0.06 - 15
Rated Service Short Circuit Breaking Capacity, Ics		
230V	kA	100
400/415V	kA	25 - 100
440V	kA	15 - 100
500V	kA	8 - 100
690V	kA	3 - 100
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Main Terminals		IP20
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-20 to +60 / -4 to +140
Ambient Storage Temperature	° C / ° F	-50 to +80 / -58 to +176
<b>ROHS COMPLIANCE</b>		
		For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .

## Proven

### Conformity to Standards:

UL 508, 60947-4-1A

CSA C22.2 No. 14

IEC 60947-1, 60947-4-1

### Certifications:

UL File #: E187641 (Guide NLRV, NLRV7), E312106 (Guide NKJH, NKJH7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



Visit [www.c3controls.com](http://www.c3controls.com) to download product certifications.



# Enclosed Motor Protection Circuit Breakers

When you need reliable overload and short circuit protection for your motor control application, look to c3controls. Our Series E330 Enclosed Motor Protection Circuit Breakers are ideal for use in multi-motor applications—providing space, labor, and cost savings. The ABS plastic enclosure is rated IP55 and is CE certified, making them suitable for use anywhere in the world.



## Features



- 1. CUSTOM FIT ENCLOSURE DESIGN** - ABS Plastic enclosure designed specifically for the motor protection circuit breaker with integrated ground and neutral connections, and four knock outs.
- 2. PADLOCKABLE SWITCHES** - Handle can be padlocked in the "OFF" position with up to three padlocks for extra safety during maintenance.
- 3. SNAP-ON ACCESSORIES** - Snap-on side mounted accessories easily install on Series 330 Motor Protection Circuit Breakers without the use of tools, lowering assembly and installation costs.
- 4. ADJUSTABLE CURRENT SETTING** - Full load current adjustment setting enables overload relay to be set to exact FLA of motor. Provides phase loss protection for the motor against overload currents.
- 5. TRIP INDICATION** - Trip indicating auxiliary contacts can be used to identify the trip cause – overload or short circuit – to help determine the type of service/maintenance that may be required.
- 6. DURABLE** - Lift off ABS Plastic enclosure is rated IP55 and CE certified.

IP55



## Range

- TYPE:
  - Thermal and Magnetic Trip Elements
  - Magnetic Trip Element only
- AMPERE RATINGS: 0.1 - 32A
- POWER POLES: 3
- TRIP CLASS: 10
- INSTALLATION/MOUNTING:
  - 35mm DIN rail, panel
  - Installation and removal without the use of tools
- ACCESSORIES:
  - Front and side mounted standard auxiliary contacts, shunt release and undervoltage release modules and adjustment scale cover

[ 3 Normally Open Power Poles ]

[ Trip Class 10 ]

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
Rated 3-Phase Operating Power, Pe	kA	1/2 - 20HP @ 460VAC
Short Circuit Current Rating	kA	50 @ 480VAC
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Insulation Voltage, Ui	V	690
Rated Impulse Voltage, Uimp	kV	6
Rated Operating Voltage, Ue	VAC	690
Rated 3-Phase Power, Pe @ 380 - 400 VAC	kW	0.06 - 15
Rated Service Short Circuit Breaking Capacity, Ics		
230V	kA	100
400/415V	kA	25 - 100
440V	kA	15 - 100
500V	kA	8 - 100
690V	kA	3 - 100
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Main Terminals (with conductors connected)		IP20
Operating Handle		
Code E		IP55
Enclosure		
Code ABS		IP55
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-20 to +55 / -4 to +131
Ambient Storage Temperature	° C / ° F	-50 to +80 / -58 to +176
<b>ROHS COMPLIANCE</b>		
		For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .

## Proven

### Motor Protection Circuit Breakers Conformity to Standards:

UL 508, 60947-4-1A  
CSA C22.2 No. 14  
IEC 60947-1, 60947-4-1

### Certifications:

UL File #: E187641 (Guide NLRV, NLRV7), E312106 (Guide NKJH, NKJH7)  
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Enclosures

### Conformity to Standards:

IEC 60529

### Certifications:

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



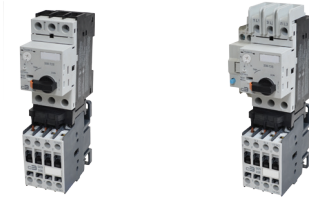
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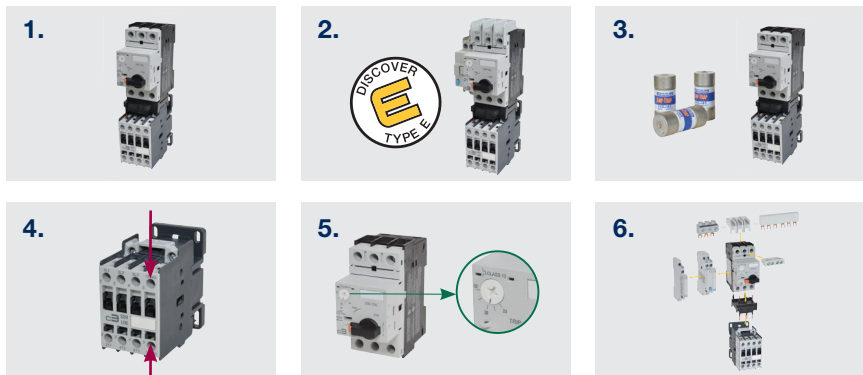
# DOL Starters

## (Motor Protection Circuit Breaker + Contactor)

c3controls Series 630 Assembled Starters are designed for controlling and protecting single- and three-phase motors and are ideal for multi-motor applications. Their features, performance, overload and short circuit protection, small size and ease of installation will help reduce total installed costs and enhance equipment functionality.



### Features



- 1. CONVENIENCE** - Factory assembly of a Series 330 Motor Protection Circuit Breaker and Series 300 Contactor provides the convenience of a single catalog number and shorter control panel bill of material.
- 2. SELF-PROTECTED** - Listed as a UL 60947-4-1A Type E Self-protected Combination Manual Motor Controller for circuits capable of delivering up to 50kA @ 480V.
- 3. HIGH FAULT SCCR** - High fault short circuit current rating of 50kA @ 480V provides safety and reliability in high fault applications.
- 4. INTEGRATED AUXILIARY CONTACTS** - Integral auxiliary contacts, 3 power poles + 1 auxiliary, are standard on all c3controls 9A to 25A non-reversing contactors.
- 5. ADJUSTABLE CURRENT SETTING** - Full load current adjustment setting enables overload relay to be set to exact FLA of motor. Provides phase loss protection for the motor against overload currents.
- 6. SNAP-ON ACCESSORIES** - Snap-on accessories are easily installed without the use of tools, lowering assembly and installation costs.

50kA @ 480V

## Range

### Contactor

- TYPE: Non-Reversing
- POWER POLES: 3 Normally Open
- SWITCH RATINGS (AC-3): 9 - 40A
- OPERATING COIL VOLTAGES:
  - AC (50Hz): 12 - 550V
  - AC (60Hz): 12 - 600V
  - AC (50/60Hz): 12 - 440V
- ACCESSORIES: Front and side mounted auxiliary contacts, surge suppressors, replacement operating coils and contact kits

### Motor Protection Circuit Breaker

- TYPE: Thermal and Magnetic Trip Elements
- AMPERE RATINGS: 0.16 - 32A
- POWER POLES: 3
- TRIP CLASS: 10
- ACCESSORIES: Front and side mounted standard auxiliary contacts, trip indicating auxiliary contacts, line side terminal barrier, shunt release modules, commoning links, feeder terminal, adjustment scale cover, commoning link shroud and external operating handle
- INSTALLATION/MOUNTING:
  - 35mm DIN rail, panel
  - Installation and removal without the use of tools
- ASSEMBLIES:
  - Series E630 Enclosed DOL Starters: Motor Protection Circuit Breaker + Contactor

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
Short Circuit Current Rating @460VAC	kA	50
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Insulation Voltage, Ui	V	690
Rated Impulse Voltage, Uimp	kV	6
Rated Operating Voltage, Ue	VAC	690
Rated 3-Phase Power, Pe		0.06 - 15kW @ 380 - 400VAC
Short Circuit Breaking Capacity		
Rated Service, Ics		100kA @ 230V
		25 - 100kA @ 400/415V
		15 - 100kA @ 440V
		8 - 100kA @ 500V
		3 - 100kA @ 690V
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Number of Poles		3
Pollution Degree		3
Trip Class		10
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-20 to +55 / -4 to +131
Ambient Storage Temperature	° C / ° F	-50 to +80 / -50 to +176
<b>ROHS COMPLIANCE</b>		
For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .		

[ 3 Normally Open Power Poles ]

[ Trip Class 10 ]

## Proven

### Motor Protection Circuit Breakers

#### Conformity to Standards:

UL 508, 60947-4-1A  
 CSA C22.2 No. 14  
 IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E187641 (Guide NLRV, NLRV7), E312106 (Guide NKJH, NKJH7)  
 CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Contactors

#### Conformity to Standards:

UL 508, 60947-4-1A  
 CSA C22.2 No. 14  
 IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E236197 (Guide NLDX, NLDX7), E68568 (Guide NKCR, NKCR7)  
 CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)



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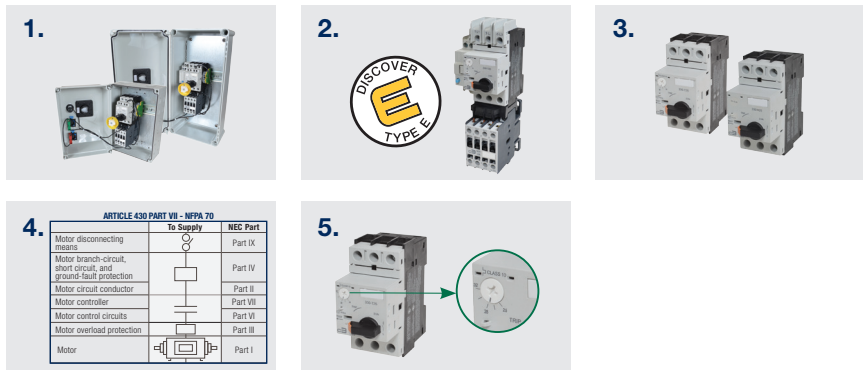


# Enclosed DOL Starters (Motor Protection Circuit Breaker + Contactor)

c3controls Series E630 Enclosed Direct-On-Line (DOL) Starters are assembled from our Series 330 Motor Protection Circuit Breakers, Series 300 Contactors and 22mm IEC pilot devices, all with the protection of our durable Polycarbonate enclosure. Our Series E630 is factory wired, with the option of no pre-wiring, saving you time and reducing installation costs, and is also available in Type E.



## Features



- 1. FACTORY ASSEMBLED & WIRED** - Factory assembled and wired starters and pilot devices provide the convenience of a single catalog number and shorter control panel bill of material.
- 2. SELF-PROTECTED** - Listed as a UL 60947-4-1A Type E Self-protected Combination Manual Motor Controller for circuits capable of delivering up to 50kA @ 480V.
- 3. HIGH FAULT SCCR** - High fault short circuit current rating of 50kA @ 480V provides safety and reliability in high fault applications.
- 4. MULTI-FUNCTION DEVICE** - Our Series 330 MPCBs are certified as Manual Motor Controllers Suitable as Motor Disconnects, can be used in Group Motor Installations, and can be used to manually control individual motors and protect them against overload and short circuit currents.
- 5. ADJUSTABLE CURRENT SETTING** - Full load current adjustment setting enables overload relay to be set to exact FLA of motor. Provides phase loss protection for the motor against overload currents.

**50kA @ 480V**



## Range

### Contactor

- TYPE: Non-Reversing
- POWER POLES: 3 Normally Open
- SWITCH RATINGS (AC-3): 9 - 40A
- OPERATING COIL VOLTAGES:
  - AC (50Hz): 12 - 550V
  - AC (60Hz): 12 - 600V
  - AC (50/60Hz): 12 - 440V

### Motor Protection Circuit Breaker

- TYPE: Thermal and Magnetic Trip Elements
- AMPERE RATINGS: 0.16 - 32A
- POWER POLES: 3
- TRIP CLASS: 10
- INSTALLATION/MOUNTING:
  - 35mm DIN rail, panel
  - Installation and removal without the use of tools

## Specifications

	UNITS	
<b>ELECTRICAL UL/CSA APPLICATIONS</b>		
Rated Operating Voltage, Ue	VAC	600
Short Circuit Current Rating @460VAC	kA	50
<b>ELECTRICAL IEC APPLICATIONS</b>		
Rated Insulation Voltage, Ui	V	690
Rated Impulse Voltage, Uimp	kV	6
Rated Operating Voltage, Ue	VAC	690
Rated 3-Phase Power, Pe		0.06 - 15kW @ 380 - 400VAC
Short Circuit Breaking Capacity		
Rated Service, Ics		100kA @ 230V
		25 - 100kA @ 400/415V
		15 - 100kA @ 440V
		8 - 100kA @ 500V
		3 - 100kA @ 690V
<b>CONSTRUCTION - INGRESS PROTECTION</b>		
Number of Poles		3
Pollution Degree		3
Trip Class		10
Operating Handle		1, 2, 3, 3R, 4/4X, 12, 13 and IP65
Enclosure		1, 4/4X and IP66
Pilot Devices		1, 2, 3, 3R, 4/4X, 12, 13 and IP66
<b>ENVIRONMENTAL</b>		
Ambient Operating Temperature	° C / ° F	-20 to +55 / -4 to +131
Ambient Storage Temperature	° C / ° F	-50 to +80 / -50 to +176
<b>ROHS COMPLIANCE</b>		
		For RoHS compliance documentation by product, refer to <a href="http://www.c3controls.com">www.c3controls.com</a> .

[ 3 Normally Open Power Poles ]

[ Trip Class 10 ]

## Proven

### Motor Protection Circuit Breakers

#### Conformity to Standards:

UL 508, 60947-4-1A

CSA C22.2 No. 14

IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E187641 (Guide NLRV, NLRV7), E312106 (Guide NKJH, NKJH7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Contactors

#### Conformity to Standards:

UL 508, 60947-4-1A

CSA C22.2 No. 14

IEC 60947-1, 60947-4-1

#### Certifications:

UL File #: E236197 (Guide NLDX, NLDX7), E68568 (Guide NKCR, NKCR7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

### Enclosures

#### Conformity to Standards:

UL 50

CSA C22.2 No. 94

IEC 60529

#### Certifications:

UL Listed

CSA Certified



Visit [www.c3controls.com](http://www.c3controls.com) to download product certifications.

# A Measurable Difference

At c3controls, we are committed to innovation. We took a fresh look at the needs of the engineer as we developed our new motor control devices leveraging our vertically integrated approach to create product designs, manufacturing and customer support that delivers a total value solution that is unmatched in the industry.

Committed  
to innovation  
and quality.

Many manufacturers make products like c3controls, but we are unique in our ability to produce world-class quality products and support your needs with a same-day shipping guarantee, expert technical support, personalized service, and pricing that creates an advantage for you. We consistently hear from our customers that they are looking for more from their suppliers—and they are finding it with c3controls.

c3controls is proud to offer our new motor control family of products, and is confident in the quality of these products that we back them with a lifetime warranty.

**Selecting the proper motor control solution is not always simple and straight-forward. What's important is getting the right product, right now, without overpaying. For more information about c3controls motor control devices and how to configure the right solution for your application, contact your c3controls representative at 724.775.7926 or visit [www.c3controls.com](http://www.c3controls.com).**

The background of the slide is a photograph of an industrial setting. It features several large, grey electrical control cabinets with various buttons, switches, and digital displays. In the foreground, there's a conveyor belt system with a white surface and orange-colored components. The overall scene suggests a manufacturing or industrial environment.

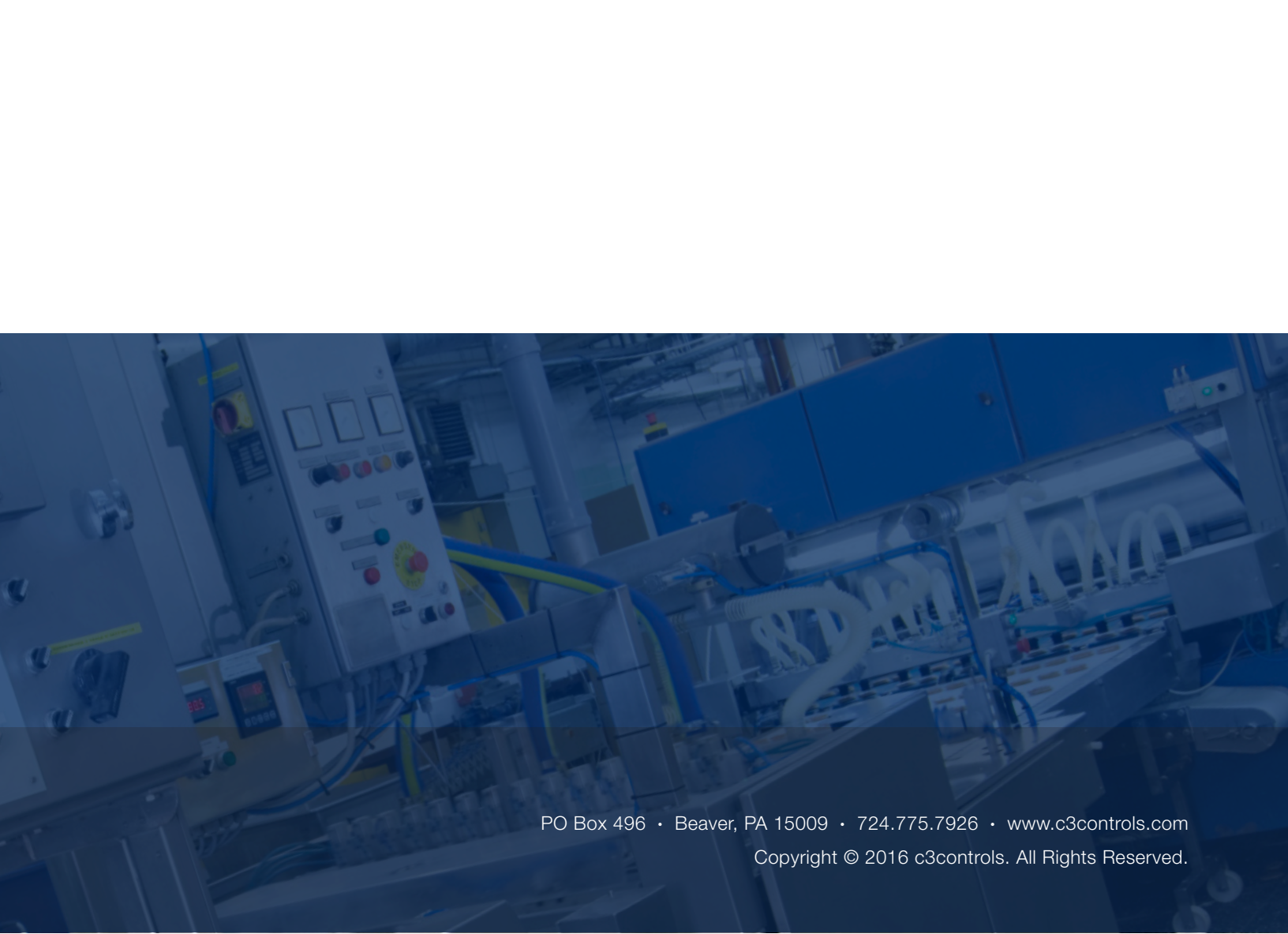
## Our Purpose.

To be the best electrical controls business on the planet!

Driven by respect for quality craftsmanship, simple design, and modern innovation—and committed to engineers who know they shouldn't have to overpay for great control products!

We will ultimately produce results that create extraordinary value enhancing the lives of everyone we serve.





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