

# The Perfect Solution for Proper Motor Control & Protection

# **New Motor Control Products**































#### Solutions

# Motor Control 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.



### 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.



H: 58mm (2.28") W: 45mm (1.77") D: 52mm (2.05")

#### 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

Overload Relays and Motor Protection Circuit Breakers include bimetallic Trip Class 10 protection against overload and phase loss conditions with ambient temperature compensation, and the motor protection circuit breakers are also able to provide short circuit protection as Type E self-protected combination motor controller or to achieve Type 2 Coordination.



## Adjustable Current Setting

Full load current adjustment ratio of approximately 1:1.5 enables overload relay to be set to exact FLA of motor.



#### **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 valuable panel space, cost, and time during installation.



#### Common Accessories

Designing starter assemblies and panels is easy!
Our complete range of motor control devices shares
common accessories reducing inventory and simplifying
installation and assembly. Snap-on accessories are easily
installed, lowering assembly and installation costs.

# Range

### **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.



# NON-REVERSING & REVERSING CONTACTORS

- Standard and miniature sizes available, including control relays
- Four frame sizes for devices rated from 9A to 105A up to 75HP@480V / 55KW@400V
- Integral auxiliary contact, 3 power poles + 1 auxiliary, are standard on all 9A to 25A
- AC and DC operating coils for control circuit application flexibility



# 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



# MOTOR PROTECTION CIRCUIT BREAKERS

- Available as open or enclosed for motor full load currents from 0.1A to 32A
- 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



# 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	00	Part IX	330	630	Type E: 330 630
Motor branch-circuit, short circuit, and ground-fault protection		Part IV	330		Type E: 330 630
Motor circuit conductor		Part II			
Motor controller		Part VII			
Motor control circuits		Part VI	300/310 330	620 630	Type E: 330 630
otor control circuits		101011		_	
Motor overload protection		Part III			
Motor	4	Part I	320 330	620 630	Type E: 330 630

# Performance & Safety

# 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.





#### 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 nonmetallic materials are as



# 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.



#### 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 and standard contactors, or 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.



## 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 @ 460V.





## Selectable Reset Mode

Manual or automatic reset and test modes, and stop button all in a single device for convenient control circuit wiring.



## Integral Auxiliary

Integral auxiliary contacts, 3 power poles + 1 auxiliary, are standard on all c3controls 9A to 25A non-reversing contactors.



#### **Enhanced Safety**

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



## 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.



#### 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.

## GET THE MOST OUT OF OUR COMPLETE LINE OF MOTOR CONTROL PRODUCTS.

Download resources, request a catalog, and configure products!

#### **SHOP NOW:**

www.c3controls.com/ motor-control

