# MOTOR PROTECTION CIRCUIT BREAKERS

series 330

c3controls' Series 330 Motor Protection Circuit Breakers provide reliable overload and short circuit protection for all your motor control applications. Our motor protection circuit breakers are ideal for use in multi-motor applications – providing space savings, labor savings, and cost savings. They install on a standard 35mm DIN rail, and they work with a variety of accessories to make wiring as easy as possible.


**Section 9**



## PROVEN

**Conformity to Standards:**
UL 508, 60947-4-1
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 to download product certifications.


REVISION 06.2022

# MOTOR PROTECTION CIRCUIT BREAKERS

**c3controls offers a comprehensive line of Motor Control products designed and manufactured to meet the needs of the machine builder. We promise durable products at a price that gives you an edge, and we guarantee same-day shipping. Check out all the features of our Series 330 Motor Protection Circuit Breakers below!**

## DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

| | |
|---|---|
| ✓ **Proven** | Our Series 330 Motor Protection Circuit Breakers are UL Listed and CE marked meeting global standards requirements. |
| ✓ **Self-Protected** | Our self-protected devices eliminate the need for upstream fuses and circuit breakers, and they provide reliable motor protection. |
| ✓ **Compact** | Only 45mm (1-49/64") wide up to 20HP @ 460V (15kW @ 400V) in both thermal and magnetic and magnetic only versions. |
| ✓ **Wide Variety of Accessories** | Including standard auxiliary contacts, trip indicating auxiliary contacts, shunt and undervoltage release modules, and many wiring accessories such as commoning links and feeder terminals for easy distribution of power to multiple motor protection circuit breakers. |
| ✓ **Modular Design** | Modular design allows Series 330 Motor Protection Circuit Breakers to be easily used with the complete range of Series 300 Contactors and accessories. |
| ✓ **Easy to Install** | 35mm DIN rail mounting for fast and easy installation and removal, or panel mounting with mounting feet for more secure installation in high shock and vibration applications. |
| ✓ **Visible Markings** | High visibility labels and markings; dual IEC and NEMA terminal markings for ease of wiring anywhere in the world. |
| ✓ **Space Savings** | Control panel sizes can be reduced because the short circuit protection provided by the Series 330 enables individual motor branch circuit fuses or circuit breakers and overload relays to be eliminated. |
| ✓ **Added Safety** | IP20 guarded terminals with dual terminal markings prevent accidental contact with live parts. |
| ✓ **Limited Lifetime Warranty*** | Every product is backed by our limited lifetime warranty—unmatched in the industry—bringing you quality components that perform in the most demanding applications. |
| ✓ **Guaranteed Same-Day Shipping*** | Product availability reduces inventory, and improves cash-flow—saving you money. With c3controls any order for standard catalog items received by 6:00pm ET is guaranteed to ship same-day. |
| ✓ **Advantage Pricing** | Our approach to product development, manufacturing, and focus on servicing the OEM and Electrical Equipment Builder reduces cost. The result—the best value in the industry. |

*See c3controls Terms & Conditions

> *"We began to think we weren't going to find a vendor who could provide us with Motor Protection Circuit Breakers at a price that made replacing fuses affordable. And then we found c3controls."*

Joe O'Leary, Chief Engineer • **Aztec Machinery Company**

MPCB w/Thermal & Magnetic Trip Elements

MPCB w/Magnetic Trip Elements

Type E MPCB

## UNIQUE PRODUCT LINE FEATURES

### MULTI-FUNCTION DEVICE

**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 |

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.

### SELF-PROTECTED

DISCOVER E TYPE E

Listed as a UL 60947-4-1 Type E self-protected combination Manual Motor Controller for circuits capable of delivering up to 50kA @ 460V.

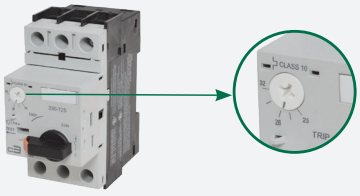
### HIGH FAULT SCCR

High fault short circuit current rating of 50kA @ 480V provides safety and reliability in high fault applications.

### SEAMLESS COMPATIBILITY

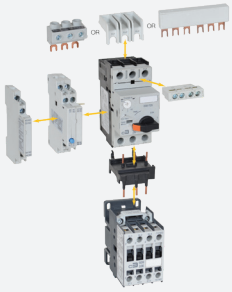
The modular design of our Series 330 MPCB allows for direct mounting onto Series 310 (9A to 40A) AC/DC Contactors and Series 300 and 310 AC/DC Miniature Contactors.

### ADJUSTABLE CURRENT SETTING



Full load current adjustment ratio enables overload relay to be set to exact FLA of motor. Provides phase protection for the motor against overload currents.

### SNAP-ON ACCESSORIES



Snap-on accessories are easily installed without the use of tools, lowering assembly and installation costs.

# 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.

**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.

c UL us CE

## 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.

# 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.

## IT'S EASY TO BUILD YOUR OWN CIRCUIT BREAKER

*Simply pick the code number from each of the sections below and combine them to build your part number.*


### Motor Protection Circuit Breakers with Thermal and Magnetic Trip Elements

**330-T25S** ____ + ____

I II

Example: To build one of our most popular Circuit Breakers, the part number would be **330-T25S + II** or **330-T25S2U32**

DISCOUNT SCHEDULE **F**

### I. MOTOR PROTECTION CIRCUIT BREAKER TYPE

| CODE | DESCRIPTION |
|---|---|
| 330-T25S | 32A Motor Protection Circuit Breaker with Thermal and Magnetic Trip Elements |

Provides overload and short circuit protection.

### II. CURRENT AND POWER RATINGS

| CODE | RATED OPER. CURRENT (A) | ADJUSTMENT RANGE (A) | MAGNETIC TRIP CURRENT (A) | ULTIMATE INTERRUPTING CURRENT (Icu) (kA) | | RATINGS FOR SWITCHING AC MOTORS* | | | | | | | | LIST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 3 PHASE kW (50Hz) | | | | 3 PHASE HP (60Hz) | | | | |
| | | | | 400V | 480V | 230V | 400/415V | 500V | 690V | 200V | 230V | 460V | 575V | |
| 2C16 | 0.16 | 0.10 ~ 0.16 | 2.1 | 100 | 100 | — | — | — | 0.06 | — | — | — | — | $122.00 |
| 2C25 | 0.25 | 0.16 ~ 0.25 | 3.3 | 100 | 100 | — | 0.06 | 0.06 | 0.12 | — | — | — | — | $122.00 |
| 2C40 | 0.40 | 0.25 ~ 0.40 | 5.2 | 100 | 100 | — | 0.09 | 0.12 | 0.18 | — | — | — | — | $132.00 |
| 2C63 | 0.63 | 0.40 ~ 0.63 | 8.2 | 100 | 100 | 0.06 | 0.12 | 0.25 | 0.25 | — | — | — | 1/4 | $136.00 |
| 2D10 | 1.0 | 0.63 ~ 1.0 | 13 | 100 | 100 | 0.12 | 0.25 | 0.37 | 0.55 | — | — | 1/2 | 1/2 | $139.00 |
| 2D16 | 1.6 | 1.0 ~ 1.6 | 21 | 100 | 100 | 0.18 | 0.55 | 0.75 | 1.1 | 1/4 | 1/3 | 3/4 | 1 | $139.00 |
| 2D25 | 2.5 | 1.6 ~ 2.5 | 33 | 100 | 100 | 0.37 | 0.75 | 1.1 | 1.5 | 1/2 | 1/2 | 1-1/2 | 1-1/2 | $139.00 |
| 2D40 | 4.0 | 2.5 ~ 4.0 | 52 | 100 | 100 | 0.75 | 1.5 | 2.2 | 3 | 3/4 | 1 | 2 | 3 | $139.00 |
| 2D63 | 6.3 | 4.0 ~ 6.3 | 82 | 100 | 100 | 1.1 | 2.2 | 3 | 4 | 1-1/2 | 1-1/2 | 3 | 5 | $148.00 |
| 2U10 | 10 | 6.3 ~ 10 | 130 | 100 | 42 | 2.2 | 4 | 4 | 7.5 | 3 | 3 | 7-1/2 | 10 | $154.00 |
| 2U16 | 16 | 10 ~ 16 | 208 | 50 | 10 | 3.7 | 7.5 | 9 | 12.5 | 5 | 5 | 10 | 15 | $170.00 |
| 2U20 | 20 | 16 ~ 20 | 260 | 50 | 10 | 3.7 | 9 | 12.5 | 15 | 5 | 7-1/2 | 15 | 20 | $185.00 |
| 2U25 | 25 | 20 ~ 25 | 325 | 50 | 10 | 5.5 | 12.5 | 15 | 22 | 7-1/2 | 7-1/2 | 15 | 20 | $218.00 |
| 2U32 | 32 | 25 ~ 32 | 416 | 50 | 10 | 7.5 | 15 | 18.5 | 30 | 10 | 10 | 20 | 25 | $218.00 |

*NOTE: HP and kW ratings shown in the table above are for reference. The final selection of the motor protection circuit breaker must be based on the actual motor full load current.

## Some of Our Popular Configurations:

### MOTOR PROTECTION CIRCUIT BREAKERS WITH THERMAL AND MAGNETIC TRIP ELEMENTS

| CATALOG NUMBER | DESCRIPTION | LIST |
|---|---|---|
| 330-T25S2D63 | 6.3A Motor Protection Circuit Breaker with Thermal and Magnetic Trip Elements | $148.00 |
| 330-T25S2U10 | 10A Motor Protection Circuit Breaker with Thermal and Magnetic Trip Elements | $154.00 |
| 330-T25S2U16 | 16A Motor Protection Circuit Breaker with Thermal and Magnetic Trip Elements | $170.00 |
| 330-T25S2U20 | 20A Motor Protection Circuit Breaker with Thermal and Magnetic Trip Elements | $185.00 |

## IT'S EASY TO BUILD YOUR OWN CIRCUIT BREAKER

*Simply pick the code number from each of the sections below and combine them to build your part number.*

### Motor Protection Circuit Breakers with Magnetic Trip Element

**330-M25S** ____
*I* *II*

Example: To build one of our most popular Circuit Breakers, the part number would be **330-M25S + II** or **330-M25S2D16**


DISCOUNT SCHEDULE **F**

### I. MOTOR PROTECTION CIRCUIT BREAKER TYPE

| CODE | DESCRIPTION |
|---|---|
| 330-M25S | 32A Motor Protection Circuit Breaker with Magnetic Trip Element |

Provides short circuit protection.

### II. CURRENT AND POWER RATINGS

| CODE | RATED OPERATING CURRENT (A) | MAGNETIC TRIP CURRENT (A) | ULTIMATE INTERRUPTING CURRENT (Icu) (kA) | | RATINGS FOR SWITCHING AC MOTORS* | | | | | | | | LIST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 3 PHASE kW (50Hz) | | | | 3 PHASE HP (60Hz) | | | | |
| | | | 400V | 480V | 230V | 400/415V | 500V | 690V | 200V | 230V | 460V | 575V | |
| 2C16 | 0.16 | 2.1 | 100 | 100 | — | — | — | 0.06 | — | — | — | — | $122.00 |
| 2C25 | 0.25 | 3.3 | 100 | 100 | — | 0.06 | 0.06 | 0.12 | — | — | — | — | $122.00 |
| 2C40 | 0.40 | 5.2 | 100 | 100 | — | 0.09 | 0.12 | 0.18 | — | — | — | — | $132.00 |
| 2C63 | 0.63 | 8.2 | 100 | 100 | 0.06 | 0.12 | 0.25 | 0.25 | — | — | — | 1/4 | $136.00 |
| 2D10 | 1.0 | 13 | 100 | 100 | 0.12 | 0.25 | 0.37 | 0.55 | — | — | 1/2 | 1/2 | $139.00 |
| 2D16 | 1.6 | 21 | 100 | 100 | 0.18 | 0.55 | 0.75 | 1.1 | 1/4 | 1/3 | 3/4 | 1 | $139.00 |
| 2D25 | 2.5 | 33 | 100 | 100 | 0.37 | 0.75 | 1.1 | 1.5 | 1/2 | 1/2 | 1-1/2 | 1-1/2 | $139.00 |
| 2D40 | 4.0 | 52 | 100 | 100 | 0.75 | 1.5 | 2.2 | 3 | 3/4 | 1 | 2 | 3 | $139.00 |
| 2D63 | 6.3 | 82 | 100 | 100 | 1.1 | 2.2 | 3 | 4 | 1-1/2 | 1-1/2 | 3 | 5 | $148.00 |
| 2U10 | 10 | 130 | 100 | 42 | 2.2 | 4 | 4 | 7.5 | 3 | 3 | 7-1/2 | 10 | $154.00 |
| 2U16 | 16 | 208 | 50 | 10 | 3.7 | 7.5 | 9 | 12.5 | 5 | 5 | 10 | 15 | $170.00 |
| 2U20 | 20 | 260 | 50 | 10 | 3.7 | 9 | 12.5 | 15 | 5 | 7-1/2 | 15 | 20 | $185.00 |
| 2U25 | 25 | 325 | 50 | 10 | 5.5 | 12.5 | 15 | 22 | 7-1/2 | 7-1/2 | 15 | 20 | $218.00 |
| 2U32 | 32 | 416 | 50 | 10 | 7.5 | 15 | 18.5 | 30 | 10 | 10 | 20 | 25 | $218.00 |

*NOTE: HP and kW ratings shown in the table above are for reference. The final selection of the motor protection circuit breaker must be based on the actual motor full load current.

## Some of Our Popular Configurations:

### MOTOR PROTECTION CIRCUIT BREAKERS WITH MAGNETIC TRIP ELEMENT

| CATALOG NUMBER | DESCRIPTION | LIST |
|---|---|---|
| 330-M25S2D63 | 6.3A Motor Protection Circuit Breaker with Magnetic Trip Element | $148.00 |
| 330-M25S2U10 | 10A Motor Protection Circuit Breaker with Magnetic Trip Element | $154.00 |
| 330-M25S2U16 | 16A Motor Protection Circuit Breaker with Magnetic Trip Element | $170.00 |
| 330-M25S2U20 | 20A Motor Protection Circuit Breaker with Magnetic Trip Element | $185.00 |

# Motor Protection Circuit Breakers

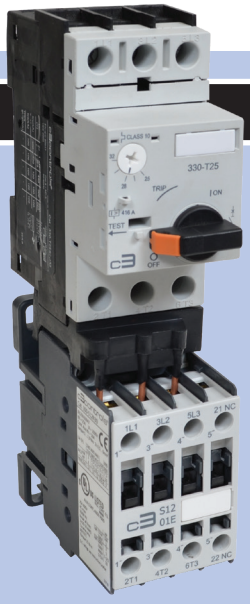

c3controls Series 330-T25S Motor Protection Circuit Breakers include both thermal and magnetic trip elements for overload and short circuit protection. They are ideal for use with Series 300 Contactors in group motor installations where panel space is at a premium and device modularity is required to satisfy virtually any application requirement. For the simplest applications, they can also be used by themselves as manual motor controllers. cULus and CE Markings make them suitable for use anywhere in the world. Small size, IP20 guarded terminals with dual terminal markings, and shared accessories will help reduce your total installed costs and enhance the features and performance of your equipment. Just look and see what the Series 330-T25S and 330-M25S have to offer.

Product features include:

- Series 330 Motor Protection Circuit Breakers direct mount onto:
  - Series 300 Non-Reversing and Series 310 Reversing, 9A to 40A AC and DC, Contactors
  - Series 300-M Miniature Non-Reversing and Series 310-M Miniature Reversing AC and DC Contactors
- Line side terminal barrier accessory snaps-on and installs without the use of tools.
- Removable and replaceable identification marker, standard on all c3controls Series 330 Motor Protection Circuit Breakers, simplifies troubleshooting in panels with many devices.
- High fault short circuit current rating of 50kA @ 480V provides safety and reliability in high fault applications.
- Certified as Manual Motor Controllers Suitable as Motor Disconnects for use in group motor installations in accordance with the NEC (National Electrical Code).
- Two versions available – with thermal and magnetic trip elements which provide overload (Trip Class 10) and short circuit protection, and magnetic trip element only for short circuit protection. Use the magnetic trip element only version with Series 320 Overload Relays for overload protection and the other outstanding features of the Series 320.
- Single phase sensitivity to protect motors against damaging phase loss conditions.
- Designed for optimum performance with Series 300-S09 to 300-S40 Contactors in group motor installations, and can achieve Type 2 coordination in circuits capable of delivering up to 50kA at 460V.
- Meets IEC 60947 requirements for starters and circuit breakers and provides isolation functionality.
- Modular design accommodates a wide variety of accessories, some of which snap-on without tools, lowering assembly and installation costs.
- 18mm wide trip indicating auxiliary contacts can be used to identify the trip cause – overload (1 NO and 1 NC) or short circuit (1 NO and 1 NC), to help determine the type of service/maintenance that may be required.
- Compact size – only 45mm (1-49/64") wide up to 20HP @ 460V (15kW @ 400V) to minimize the amount of panel area required.
- The "ON/OFF" manual operator enables individual motor circuits to be easily isolated without having to disconnect all of the circuits in a control panel.
- Operators can be padlocked in the "OFF" position (max. one 4.9mm [3/16"] padlock) preventing the motor protection circuit breaker from being turned "ON" when the equipment is being serviced.
- Visible trip indication for fast identification of which device tripped in a control panel where multiple motor protection circuit breakers are installed.
- IP20 guarded terminals with dual terminal markings prevent accidental contact with live parts.
- Combination head terminal screws allow the use of "straight", "phillips", or "posidrive" screwdrivers for fast and reliable wiring.
- Universal ratings and markings: A, kW, and HP ratings as well as applicable 3rd party certification markings.
- Test function to verify the performance of the device and the proper operation of the control circuit and accessories.

# Motor Protection Circuit Breakers

While our Series 330 Motor Protection Circuit Breakers are certified as Manual Motor Controllers Suitable as Motor Disconnects, and can be used to manually control individual motors and protect them against overload and short circuit currents, the greatest benefits can be realized by using the Series 330 Motor Protection Circuit Breakers in conjunction with Series 300 Contactors and Series 330 wiring accessories in Group Motor Installations.



## UNIQUE PRODUCT FEATURES

### Space Savings

Control panel sizes can be reduced because the short circuit protection provided by the Series 330 Motor Protection Circuit Breaker enables individual motor branch circuit fuses or circuit breakers and overload relays to be eliminated.

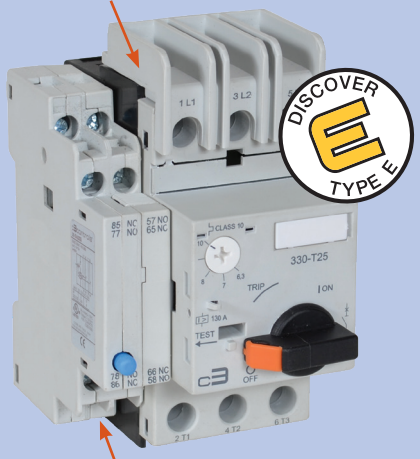
### Labor Savings

Starter assembly and installation of the starter assemblies in Group Motor Installations is easier and faster with the use of connection modules between the contactor and motor protection circuit breaker and commoning links to conveniently distribute power to multiple starter assemblies. In addition to labor savings, the components look nice too, and provide IP20 protection to guard against accidental contact with live parts.

### Cost Savings

Smaller size enclosures, reduced wiring, and DIN rail installation all combine to provide a lower cost control panel with superior performance in normal operating conditions as well as in overload or short circuit conditions.

Line Side Terminal Barrier




Trip Indicating Auxiliary Contact

### Discover Type E

Listed as a UL 60947-4-1 Self-protected Combination Manual Motor Controller when accessories trip indicating auxiliary contact (330-STA22S25) and line side terminal barrier (330-LSTBS25) are assembled for circuits capable of delivering up to 50kA @ 460V. For field assembly only.

Type E devices provide motor disconnect means, branch short circuit and ground fault protection, motor control and motor overload protection, reducing panel size and eliminating upstream fuses or circuit breakers for a motor circuit.

We also offer fully assembled Type E and Type F Direct-On-Line (DOL) Starters, refer to Section 11 Pages 10-17. For Enclosed Type E and Type F assemblies refer to Section 12 Pages 10-17.

## IT'S EASY TO BUILD YOUR OWN OPERATING HANDLE

*Simply pick the code number from each of the sections below and combine them to build your part number.*


### Motor Protection Circuit Breaker External Operating Handle

**330 - S2 PHG** ____ ____
*I II III IV V*

Example: To build one of our most popular External Operating Handles, the part number would be **330 + S2 + PHG + IV + V** or **330-S2PHGRY06**

#### I. OPERATING HANDLE INSTALLATION

| CODE | DESCRIPTION | LIST |
|---|---|---|
| 330 | External Operating Handle | $45.00 |

#### II. MOTOR PROTECTION CIRCUIT BREAKER FRAME SIZE

| CODE | DESCRIPTION |
|---|---|
| S2 | 32 Ampere |

DISCOUNT SCHEDULE **F**

#### III. OPERATING HANDLE TYPE

| CODE | DESCRIPTION | LIST |
|---|---|---|
| PHG | Round (Type 1, 2, 3, 3R, 4/4X, 12, 13 and IP65) | $15.00 |

Each operating handle includes a support bracket and coupling to ensure alignment with the motor protection circuit breaker even in deep enclosures.

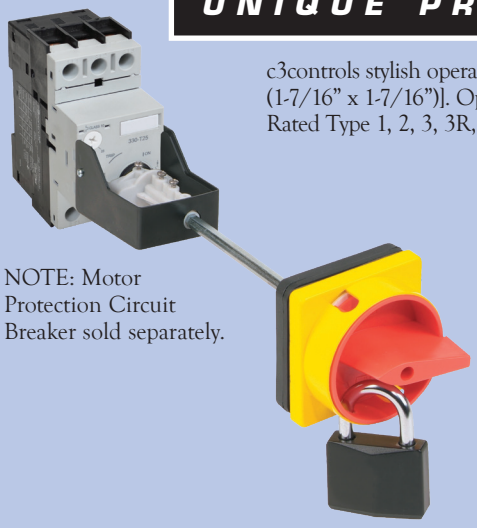
#### IV. OPERATING HANDLE COLOR

| CODE | OPERATOR COLOR | BEZEL COLOR |
|---|---|---|
| RY | Red | Yellow |
| BG | Black | Grey |

#### V. OPERATING SHAFT LENGTH

| CODE | DESCRIPTION | LIST |
|---|---|---|
| 06 | 150mm (5-57/64") | $ 6.30 |
| 12 | 300mm (11-13/16") | $12.60 |

## UNIQUE PRODUCT FEATURES



NOTE: Motor Protection Circuit Breaker sold separately.

c3controls stylish operating handles are easy to install in standard 4-hole panel drilling layouts [36mm x 36mm (1-7/16" x 1-7/16")]. Operating handles can be installed in enclosures with door thicknesses up to 4mm (5/32"). Rated Type 1, 2, 3, 3R, 4/4X, 12, 13 and IP65 for the most demanding industrial environments.

1. Provide reliable actuation of Series 330 Motor Protection Circuit Breakers and Series 630 Direct-On-Line (DOL) Starters from the outside of the enclosure and can be locked OFF for extra safety. Refer to Section 9 Pages 6 & 7 for our complete selection of Series 330 Motor Protection Circuit Breakers and Section 11 Pages 6 & 7 for Series 630 Direct-On-Line (DOL) Starters.
2. Handles can be padlocked OFF with up to three padlocks.
3. Operating handles with ON/OFF and I/O markings.
4. Door interlock – can only be opened in the OFF position.
5. Positive, reliable actuation of our Series 330 Motor Protection Circuit Breaker is ensured through the rigid steel operating shaft that can be cut to length to fit in enclosures up to 421mm (16-37/64") deep.

### Mix and Match Any Color

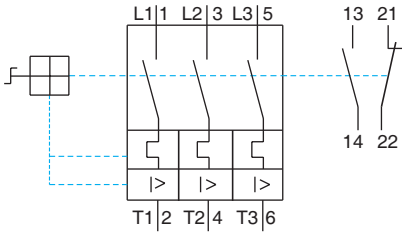
64mm x 64mm
(2-17/32" x 2-17/32")

## Some of Our Popular Configurations:

**MOTOR PROTECTION CIRCUIT BREAKER EXTERNAL OPERATING HANDLE**

| CATALOG NUMBER | OPERATING HANDLE TYPE | OPERATING HANDLE COLOR | LIST |
|---|---|---|---|
| 330-S2PHGRY06 | Round | Red/Yellow | $66.30 |
| 330-S2PHGRY12 | Round | Red/Yellow | $72.60 |

## FRONT MOUNTED AUXILIARY CONTACTS




Our front mounted auxiliary contacts do not add depth to the motor protection circuit breaker and installs within its foot print – no extra panel area is required. IP20 guarded terminals protect against accidental contact with live parts. These contacts snap-on and install without the use of tools.

| CODE | CONTACT CONFIGURATION | LIST |
|---|---|---|
| 330-FA11S25 | 1 Normally Open and 1 Normally Closed | $21.00 |

## MOTOR PROTECTION CIRCUIT BREAKER ENCLOSURES

Our Motor Protection Circuit Breaker Enclosure accessory is a custom fit enclosure design specifically for use with our Series 330 Motor Protection Circuit Breaker providing reliable operation and superior performance. CE certified with an IP55 environmental rating.

Available in two frame sizes: Frame Size 1– 55mm internal mounting width allows the assembly of a side mounted auxiliary contact, and Frame Size 2 – 65mm internal mounting width allows the assembly of a shunt release module or undervoltage module.

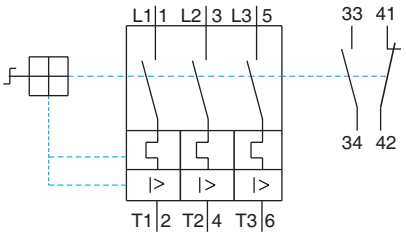
The enclosure has integrated ground and neutral connections, and four (4) standard PG16 knock outs (2 on the top and 2 on the bottom).

The operating handle, which is available in two colors, can be padlocked in the "OFF" position with up to three padlocks for extra safety and the security necessary during maintenance activities.

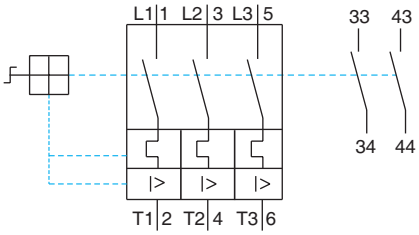
| FRAME SIZE 1 (55MM INTERNAL MOUNTING WIDTH) | | |
|---|---|---|
| **CODE** | **DESCRIPTION** | **LIST** |
| 330-BABS1RY | Motor Protection Circuit Breaker Enclosure with ABS Plastic and Red/Yellow Handle | $63.00 |
| 330-BABS1BG | Motor Protection Circuit Breaker Enclosure with ABS Plastic and Black/Grey Handle | $63.00 |
| **FRAME SIZE 2 (65MM INTERNAL MOUNTING WIDTH)** | | |
| 330-BABS2RY | Motor Protection Circuit Breaker Enclosure with ABS Plastic and Red/Yellow Handle | $78.00 |
| 330-BABS2BG | Motor Protection Circuit Breaker Enclosure with ABS Plastic and Black/Grey Handle | $78.00 |

## SIDE MOUNTED AUXILIARY CONTACTS

330-SA11S25



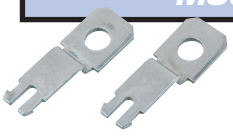

330-SA20S25




Our side mounted auxiliary contacts feature IP20 guarded terminals to protect against accidental contact with live parts. These contacts snap-on to the left side of the motor protection circuit breaker and install without the use of tools.

| CODE | CONTACT CONFIGURATION | LIST |
|---|---|---|
| 330-SA11S25 | 1 Normally Open and 1 Normally Closed | $21.00 |
| 330-SA20S25 | 2 Normally Open | $21.00 |

## MOUNTING FOOT KIT

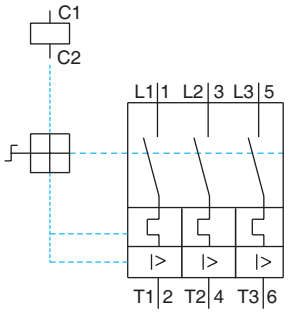


The mounting foot kit enables motor protection circuit breakers to be panel mounted instead of installed on a 35mm DIN rail.

| CODE | DESCRIPTION | LIST/PC. |
|---|---|---|
| 330-MF1 | Mounting Foot Kit (2 per pkg.) | $ 1.50 |

DISCOUNT SCHEDULE F

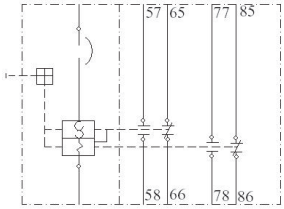
## SHUNT RELEASE MODULES




The shunt release module enables the motor protection circuit breaker to be turned "OFF" from a remote location. Snaps-on and installs on the right side of the motor protection circuit breaker without the use of tools. IP20 guarded terminals to protect against accidental contact with live parts. Wide range of 50/60Hz operating voltages. Can be used in conjunction with front mounted and side mounted auxiliary contacts.

| CODE | VOLTAGE RANGE | LIST |
|---|---|---|
| 330-SR25XC | 20 ~ 24V 50/60Hz | $50.00 |
| 330-SR25XJ | 40 ~ 48V 50/60Hz | $50.00 |
| 330-SR25XAH | 100 ~ 127V 50/60Hz | $50.00 |
| 330-SR25XF | 200 ~ 240V 50/60Hz | $50.00 |
| 330-SR25XQ | 365 ~ 440V 50/60Hz | $50.00 |

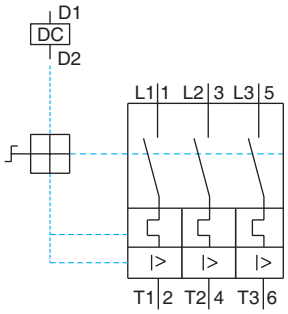
## TRIP INDICATING AUXILIARY CONTACTS




The trip indicating auxiliary contact module includes Overload Contacts and Short Circuit Contacts. When an overload trip occurs the Overload Contacts change state. When a short circuit trip occurs, the Overload Contacts and Short Circuit Contacts change state. In addition to the electrical contacts, the trip indicating auxiliary contact module includes a mechanical trip indication – the blue button protrudes from the module after a short circuit trip. The trip indicating contact module can be field installed without the use of tools on Series 330-T25S and 330-M25S Motor Protection Circuit Breakers and can be used in conjunction with standard front mounted (330-FA) and side mounted (330-SA) auxiliary contacts. NOTE: The Trip Indicating Auxiliary Contact and the Line Side Terminal Barrier are required to achieve Type E construction with a Series 330-T25S device.

| CODE | DESCRIPTION | LIST |
|---|---|---|
| 330-STA22S25 | 18mm Wide - Left Side Mounted Trip Indicating Auxiliary Contact (1 NO and 1 NC overload and 1 NO and 1 NC short circuit) | $57.00 |

## UNDERVOLTAGE RELEASE MODULES




The undervoltage release module automatically trips the motor protection circuit breaker when the supply voltage is less than 70 - 35% of the rated voltage of the undervoltage release module. Undervoltage release modules are ideal to ensure motors do not automatically restart after a power outage when the motor protection circuit breaker is being used by itself as a manual motor controller. Snaps-on and installs on the right side of the motor protection circuit breaker without the use of tools. IP20 guarded terminals to protect against accidental contact with live parts. Wide range of 50/60Hz operating voltages. Can be used in conjunction with front mounted and side mounted auxiliary contacts.

| CODE | VOLTAGE RANGE | LIST |
|---|---|---|
| 330-UR25C | 20V 50Hz / 24V 60Hz | $50.00 |
| 330-UR25XC | 24V 50/60Hz | $50.00 |
| 330-UR25H | 24V 50Hz / 28V 60Hz | $50.00 |
| 330-UR25AG | 95V 50Hz / 110V 60Hz | $50.00 |
| 330-UR25D | 110V 50Hz / 120V 60Hz | $50.00 |
| 330-UR25AH | 110 ~ 115V 50Hz / 127V 60Hz | $50.00 |
| 330-UR25L | 180V 50Hz / 208V 60Hz | $50.00 |
| 330-UR25AJ | 190V 50Hz / 220V 60Hz | $50.00 |
| 330-UR25F | 208V 50Hz / 240V 60Hz | $50.00 |
| 330-UR25P | 230 ~ 240V 50Hz / 277V 60Hz | $50.00 |
| 330-UR25AL | 325V 50Hz / 380V 60Hz | $50.00 |
| 330-UR25Q | 380V 50Hz / 440V 60Hz | $50.00 |
| 330-UR25R | 400 ~ 415V 50Hz / 480V 60Hz | $50.00 |
| 330-UR25T | 500V 50Hz / 600V 60Hz | $50.00 |

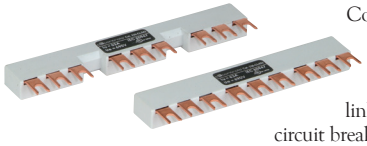
## LINE SIDE TERMINAL BARRIER


The line side terminal barrier provides increased electrical clearances to comply with the UL 60947-4-1 Self-Protected Combination Motor Controller (Type E) requirements. The terminal barrier can be field installed on Series 330-T25S and 330-M25S Motor Protection Circuit Breakers. NOTE: The Line Side Terminal Barrier and the Trip Indicating Auxiliary Contact are required to achieve Type E construction with a Series 330-T25S device.

| CODE | DESCRIPTION | LIST |
|---|---|---|
| 330-LSTBS25 | Line Side Terminal Barrier | $30.75 |

DISCOUNT SCHEDULE F

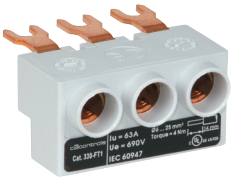
## COMMONING LINKS



Commoning links provide a convenient means of distributing 3-phase power to a group of motor protection circuits. 45mm spacing commoning links are for use with motor protection circuit breakers without auxiliary contact modules or with a front mounted auxiliary contact module (330-FA11S25). 54mm spacing commoning links are for use with motor protection circuit breakers with a side mounted auxiliary contact module (330-SA11S25 or 330-SA20S25). IP20 construction to guard against accidental contact with live parts. Used in conjunction with 330-FT1S2 Feeder Module.

| CODE | FOR USE WITH | CONTINUOUS CURRENT RATING | LENGTH | LIST |
|---|---|---|---|---|
| | **45MM SPACING** | | | |
| 330-CL452S2 | 2 Motor Protection Circuit Breakers | 63A | 91mm | $34.00 |
| 330-CL453S2 | 3 Motor Protection Circuit Breakers | 63A | 136mm | $40.00 |
| 330-CL454S2 | 4 Motor Protection Circuit Breakers | 63A | 181mm | $45.00 |
| 330-CL455S2 | 5 Motor Protection Circuit Breakers | 63A | 226mm | $48.00 |
| | **54MM SPACING** | | | |
| 330-CL542S2 | 2 Motor Protection Circuit Breakers | 63A | 100mm | $35.00 |
| 330-CL543S2 | 3 Motor Protection Circuit Breakers | 63A | 154mm | $41.00 |
| 330-CL544S2 | 4 Motor Protection Circuit Breakers | 63A | 208mm | $48.00 |
| 330-CL545S2 | 5 Motor Protection Circuit Breakers | 63A | 262mm | $51.00 |

## FEEDER TERMINAL FOR COMMONING LINK TERMINALS



The feeder terminal accepts the main branch circuit conductors and distributes power to the 330-CL Commoning Links. The feeder terminal overlaps the commoning link when installed. IP20 guarded terminals to protect against accidental contact with live parts. Continuous current rating: 63A.

| CODE | DESCRIPTION | LIST |
|---|---|---|
| 330-FT1S2 | Feeder Terminal | $39.00 |

## ADJUSTMENT SCALE COVER

The adjustment scale cover prevents inadvertent or unauthorized adjustment of the full load current dial setting of the motor protection circuit breaker.

| CODE | DESCRIPTION | LIST/PC. |
|---|---|---|
| 330-SCS2 | Adjustment Scale Cover (5 per pkg.) | $ 5.50 |

## SHROUD FOR UNUSED COMMONING LINK TERMINALS

The highly visible yellow terminal shroud with the hazard symbol is for covering unused terminals of the 330-CL commoning links. Use of the shroud insulates the unused terminals and enables the easy installation of additional motor protection circuit breakers in the future.

| CODE | DESCRIPTION | LIST |
|---|---|---|
| 330-CLSS2 | Shroud | $11.00 |

## CIRCUIT BREAKER – CONTACTOR LINK MODULE

The circuit breaker – contactor link module provides a mechanical and electrical linkage between a motor protection circuit breaker and a Series 300 Contactor. The circuit breaker – contactor link module makes starter assembly easy and enables the starter assembly to be installed on a single or two 35mm DIN rails.

| CODE | FOR USE WITH | LIST |
|---|---|---|
| 330-CMS216 | Series 300-M07 to 300-M16 AC or DC Operated Contactors | $26.00 |
| 330-CMS225A | Series 300-S09 to 300-S25 AC Operated Contactors | $26.00 |
| 330-CMS225D | Series 300-S09 to 300-S25 DC Operated Contactors | $26.00 |
| 330-CMS240A | Series 300-S32 to 300-S40 AC Operated Contactors | $26.00 |
| 330-CMS240D | Series 300-S32 to 300-S40 DC Operated Contactors | $26.00 |

DISCOUNT SCHEDULE F

# SPECIFICATIONS:

| ELECTRICAL SPECIFICATIONS | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CAT. NO. 330-T25S**** AND 330-M25S**** | | | | | | | | | | | | | |
| | | 2C16 | 2C25 | 2C40 | 2C63 | 2D10 | 2D16 | 2D25 | 2D40 | 2D63 | 2U10 | 2U16 | 2U20 | 2U25 | 2U32 |
| **ELECTRICAL GENERAL** | | | | | | | | | | | | | | | |
| | **UNITS** | | | | | | | | | | | | | | |
| Rated Operating Current | A | 0.16 | 0.25 | 0.40 | 0.63 | 1.0 | 1.6 | 2.5 | 4.0 | 6.3 | 10 | 16 | 20 | 25 | 32 |
| Current Setting Range① | A | 0.10 ~ 0.16 | 0.16 ~ 0.25 | 0.25 ~ 0.40 | 0.40 ~ 0.63 | 0.63 ~ 1.0 | 1.0 ~ 1.6 | 1.6 ~ 2.5 | 2.5 ~ 4.0 | 4.0 ~ 6.3 | 6.3 ~ 10 | 10 ~ 16 | 16 ~ 20 | 20 ~ 25 | 25 ~ 32 |
| Magnetic Trip Current | A | 2.1 | 3.3 | 5.2 | 8.2 | 13 | 21 | 33 | 52 | 82 | 130 | 208 | 260 | 325 | 416 |
| Operating Frequency | Hz | 50/60 | | | | | | | | | | | | | |
| Power Dissipation per pole | W | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 |
| Electrical Life | Ops. | 100,000 | | | | | | | | | | | | | |
| Maximum Operating Rate | Ops./Hr. | 15 | | | | | | | | | | | | | |
| **ELECTRICAL UL/CSA APPLICATIONS** | | | | | | | | | | | | | | | |
| **MAIN CIRCUITS** | | | | | | | | | | | | | | | |
| Rated Operating Voltage, Ue | VAC | 600 | | | | | | | | | | | | | |
| **RATED 1 PHASE OPERATING POWER, Pe** | | | | | | | | | | | | | | | |
| 115V | HP | — | — | — | — | — | — | — | 1/8 | 1/4 | 1/2 | 1 | 1-1/2 | 2 | — |
| 230V | HP | — | — | — | — | — | 1/10 | 1/6 | 1/3 | 3/4 | 1-1/2 | 3 | 3 | 3 | 5 |
| **RATED 3 PHASE OPERATING POWER, Pe** | | | | | | | | | | | | | | | |
| 200V | HP | — | — | — | — | — | 1/4 | 1/2 | 3/4 | 1-1/2 | 3 | 5 | 5 | 7-1/2 | 10 |
| 230V | HP | — | — | — | — | — | 1/3 | 1/2 | 1 | 1-1/2 | 3 | 5 | 7-1/2 | 7-1/2 | 10 |
| 460V | HP | — | — | — | — | 1/2 | 3/4 | 1-1/2 | 2 | 3 | 7-1/2 | 10 | 15 | 15 | 20 |
| 575V | HP | — | — | — | 1/4 | 1/2 | 1 | 1-1/2 | 3 | 5 | 10 | 15 | 20 | 20 | 25 |
| **MANUAL MOTOR CONTROLLER, MAXIMUM SHORT CIRCUIT CURRENT** | | | | | | | | | | | | | | | |
| @ 480V | kA | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| @ 600V | kA | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **MANUAL MOTOR CONTROLLER IN GROUP INSTALLATIONS, MAXIMUM SHORT CIRCUIT CURRENT** | | | | | | | | | | | | | | | |
| @ 480V | kA | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Maximum Fuse② | A | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 |
| @ 600V | kA | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Maximum Fuse② | A | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 |
| **MANUAL MOTOR CONTROLLER SUITABLE FOR TAP CONDUCTOR PROTECTION IN GROUP INSTALLATIONS, MAXIMUM SHORT CIRCUIT CURRENT** | | | | | | | | | | | | | | | |
| @ 480V | kA | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Maximum Fuse ② | A | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 |
| @ 600V | kA | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Maximum Fuse ② | A | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 | 450 |

① 330-T25S only.
② Not to exceed the maximum fuse/circuit breaker size, per the National Electrical Code.
NOTE: **** Represents the current and power ratings code. Refer to pages 6 & 7.

## ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

| | | CAT. NO. 330-T25S**** AND 330-M25**** | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2C16 | 2C25 | 2C40 | 2C63 | 2D10 | 2D16 | 2D25 | 2D40 | 2D63 | 2U10 | 2U16 | 2U20 | 2U25 | 2U32 |
| **ELECTRICAL IEC APPLICATIONS** | | | | | | | | | | | | | | | |
| | **UNITS** | | | | | | | | | | | | | | |
| **MAIN CIRCUITS** | | | | | | | | | | | | | | | |
| Rated Insulation Voltage, Ui | V | 690 | | | | | | | | | | | | | |
| Rated Impulse Voltage, Uimp | kV | 6 | | | | | | | | | | | | | |
| Rated Operating Voltage, Ue | VAC | 690 | | | | | | | | | | | | | |
| **RATED 3 PHASE AC-3 OPERATING POWER, Pe** | | | | | | | | | | | | | | | |
| 230V | kW | — | — | — | 0.06 | 0.12 | 0.18 | 0.37 | 0.75 | 1.1 | 2.2 | 3.7 | 3.7 | 5.5 | 7.5 |
| 400/415V | kW | — | 0.06 | 0.09 | 0.12 | 0.25 | 0.55 | 0.75 | 1.5 | 2.2 | 4 | 7.5 | 9 | 12.5 | 15 |
| 500V | kW | — | 0.06 | 0.12 | 0.25 | 0.37 | 0.75 | 1.1 | 2.2 | 3 | 4 | 9 | 12.5 | 15 | 18.5 |
| 690V | kW | 0.06 | 0.12 | 0.18 | 0.25 | 0.55 | 1.1 | 1.5 | 3 | 4 | 7.5 | 12.5 | 15 | 22 | 30 |
| **ULTIMATE SHORT CIRCUIT BREAKING CAPACITY, Icu** | | | | | | | | | | | | | | | |
| 230V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 400/415V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 50 | 50 | 50 | 50 | 50 |
| 440V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 50 | 50 | 50 | 50 | 50 |
| 500V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 42 | 10 | 10 | 10 | 10 |
| 690V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 8 | 6 | 6 | 6 | 4 | 4 | 4 | 4 |
| **RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY, Ics** | | | | | | | | | | | | | | | |
| 230V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 400/415V | kA | 100 | 100 | 100 | 100 | 100 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 440V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 25 | 15 | 15 | 15 | 15 |
| 500V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 21 | 8 | 8 | 8 | 8 |
| 690V | kA | 100 | 100 | 100 | 100 | 100 | 100 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| **BACK-UP FUSES, gG/gL③** | | | | | | | | | | | | | | | |
| 230V | A | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ |
| 400/415V | A | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | 100 | 125 | 125 | 125 |
| 400V | A | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | 80 | 80 | 80 | 100 | 100 |
| 500V | A | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | ④ | 63 | 80 | 80 | 80 | 80 |
| 690V | A | ④ | ④ | ④ | ④ | ④ | ④ | 25 | 32 | 50 | 50 | 63 | 63 | 63 | 63 |
| **MECHANICAL** | | | | | | | | | | | | | | | |
| Mechanical Life | Ops. | 100,000 | | | | | | | | | | | | | |
| **ENVIRONMENTAL** | | | | | | | | | | | | | | | |
| Ambient Operating Temperature | °C / °F | -20 to 60 / -4 to 140 | | | | | | | | | | | | | |
| Ambient Storage Temperature | °C / °F | -50 to 80 / 58 to 176 | | | | | | | | | | | | | |
| Altitude | m / ft. | 2,000 / 6,562 | | | | | | | | | | | | | |
| Shock | g | 15 | | | | | | | | | | | | | |

③ Back-up fuse required only if Icc > Icu.
④ No back-up fuse required.
NOTE: **** Represents the current and power ratings code. Refer to pages 6 & 7.

## CONSTRUCTION SPECIFICATIONS

| | | CAT. NO. 330-T25S**** AND 330-M25S**** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2C16 | 2C25 | 2C40 | 2C63 | 2D10 | 2D16 | 2D25 | 2D40 | 2D63 | 2U10 | 2U16 | 2U20 | 2U25 | 2U32 |
| **CONSTRUCTION** | | | | | | | | | | | | | | | |
| | **UNITS** | | | | | | | | | | | | | | |
| Number of Poles | ul | 3 | | | | | | | | | | | | | |
| Trip Class | ul | 10 | | | | | | | | | | | | | |
| Over Voltage Category | ul | III | | | | | | | | | | | | | |
| Pollution Degree | ul | 3 | | | | | | | | | | | | | |
| **INGRESS PROTECTION** | | | | | | | | | | | | | | | |
| Main Circuit Terminals | | IP20 | | | | | | | | | | | | | |
| Control Circuit Terminals | | IP20 | | | | | | | | | | | | | |
| **WEIGHT** | kg | 0.32 | | | | | | | | | | | | | |
| | lbs | 0.7 | | | | | | | | | | | | | |
| **CONDUCTOR SIZE** | | | | | | | | | | | | | | | |
| UL/CSA | AWG | 2 x 14 ~ 10 | | | | | | | | | | | | | |
| Solid | $mm^2$ | 2 x 1 ~ 2.5 | | | | | | | | | | | | | |
| Stranded | $mm^2$ | 2 x 1 ~ 2.5 | | | | | | | | | | | | | |
| Fine Stranded | $mm^2$ | 2 x 1 ~ 2.5 | | | | | | | | | | | | | |
| **TERMINAL TORQUE** | Nm | 2 ~ 2.5 | | | | | | | | | | | | | |
| | Lb-in. | 17.7 ~ 22.1 | | | | | | | | | | | | | |
| **ROHS COMPLIANCE** | | For RoHS compliance documentation by product, refer to www.c3controls.com | | | | | | | | | | | | | |

NOTE: **** Represents the current and power ratings code. Refer to pages 6 & 7.

## TYPE 2 COORDINATION SPECIFICATIONS①

| MOTOR PROTECTION CIRCUIT BREAKER | | | | |
|---|---|---|---|---|
| WITH THERMAL AND MAGNETIC TRIP ELEMENTS | WITH MAGNETIC TRIP ELEMENT ONLY | MAXIMUM SHORT CIRCUIT CURRENT @ 480V | MAXIMUM FUSE OR CIRCUIT BREAKER (AMP)② | CONTACTOR③ |
| 330-T25S2C16 | 330-M25S2C16 | 50kA | 450A | 300-S09 |
| 330-T25S2C25 | 330-M25S2C25 | 50kA | 450A | 300-S09 |
| 330-T25S2C40 | 330-M25S2C40 | 50kA | 450A | 300-S09 |
| 330-T25S2C63 | 330-M25S2C63 | 50kA | 450A | 300-S09 |
| 330-T25S2D10 | 330-M25S2D10 | 50kA | 450A | 300-S09 |
| 330-T25S2D16 | 330-M25S2D16 | 50kA | 450A | 300-S09 |
| 330-T25S2D25 | 330-M25S2D25 | 50kA | 450A | 300-S09 |
| 330-T25S2D40 | 330-M25S2D40 | 50kA | 450A | 300-S09 |
| 330-T25S2D63 | 330-M25S2D63 | 50kA | 450A | 300-S09 |
| 330-T25S2U10 | 330-M25S2U10 | 50kA | 450A | 300-S09 |
| 330-T25S2U16 | 330-M25S2U16 | 50kA | 450A | 300-S12 |
| 330-T25S2U20 | 330-M25S2U20 | 50kA | 450A | 300-S18 |
| 330-T25S2U25 | 330-M25S2U25 | 50kA | 450A | 300-S25 |
| 330-T25S2U32 | 330-M25S2U32 | 50kA | 450A | 300-S32 |

① Type 2 Coordination requires that, under short-circuit conditions, the contactor or starter shall cause no danger to persons or installation and shall be suitable for further use. The risk of contact welding is recognized, in which case the manufacturer shall indicate the measures to be taken with regard to the maintenance of the equipment.

② Per the National Electrical Code.

③ Minimum size contactor shown. Type 2 Coordination can also be achieved with a larger size contactor. For example: a 300-S12 instead of a 300-S09, or a 300-S18 instead of a 300-S12.

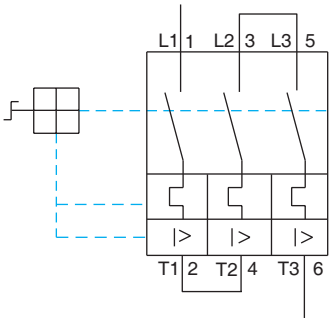
## AUXILIARY CONTACTS SPECIFICATIONS

| | | SIDE MOUNTED AUXILIARY CONTACT 330-SA | FRONT MOUNTED AUXILIARY CONTACT 330-FA |
|---|---|---|---|
| **ELECTRICAL GENERAL** | | | |
| | **UNITS** | | |
| Minimum Switching Capacity | A | 5mA @ 17V | 5mA @ 17V |
| **ELECTRICAL UL/CSA APPLICATIONS** | | | |
| Rated Operating Voltage, Ue | V | 600 | 300 |
| **PILOT DUTY RATING** | | 50/60 | |
| AC | | A600 | C300 |
| DC | | Q600 | R300 |
| General Use | | 10A @ 600V | 2.5A @ 240V |
| **ELECTRICAL IEC APPLICATIONS** | | | |
| Rated Insulation Voltage, Ui | V | 690 | 250 |
| Rated Operating Voltage, Ue | V | 690 | 250 |
| **RATED AC-15 OPERATING CURRENT, Ie** | | | |
| 24V | A | 6 | 2 |
| 230V | A | 4 | 0.5 |
| 380-415V | A | 3 | — |
| 440-500V | A | 2 | — |
| **RATED DC-13 OPERATING CURRENT, Ie** | | | |
| 24V | A | 2 | 1 |
| 60V | A | 0.5 | 0.15 |
| 110V | A | 0.5 | — |
| 220V | A | 0.25 | — |
| Short Circuit Protection with Fuses (gG/gL) | A | 10 | 10 |
| **CONSTRUCTION** | | | |
| Over Voltage Category | ul | III | III |
| Pollution Degree | ul | 3 | 3 |
| **INGRESS PROTECTION** | | | |
| Control Circuit Terminals | ul | IP20 | IP20 |
| **WEIGHT** | g | 20 | 38 |
| | oz. | 0.71 | 1.34 |
| **CONDUCTOR SIZE** | | | |
| UL/CSA | AWG | 2 x 18 ~ 14 | 2 x 18 ~ 14 |
| Solid | $mm^2$ | 2 x 0.5 ~ 2.5 | 2 x 0.5 ~ 2.5 |
| Stranded | $mm^2$ | 2 x 0.5 ~ 2.5 | 2 x 0.5 ~ 2.5 |
| Fine Stranded | $mm^2$ | 2 x 0.5 ~ 2.5 | 2 x 0.5 ~ 2.5 |
| Terminal Torque | Nm | 1 ~ 1.25 | 1 ~ 1.25 |
| | Lb-in. | 8.9 ~ 11.1 | 8.9 ~ 11.1 |

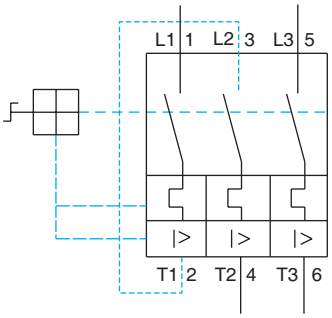
| RELEASE MODULES SPECIFICATIONS | | | |
|---|---|---|---|
| | | UNDER VOLTAGE RELEASE MODULES 330-UR | SHUNT RELEASE MODULES 330-SR |
| **ELECTRICAL** | | | |
| | **UNITS** | | |
| Rated Operating Voltage, Ue | V | 24 ~ 600 | 24 ~ 440 |
| Operating Range | ul | — | 70 ~ 110% |
| Pick-Up Voltage | ul | 85 ~ 110% | — |
| Drop-Out Voltage | ul | 70 ~ 35% | — |
| **POWER CONSUMPTION** | | | |
| Pick-Up | VA | — | 20.2 |
| Sealed | VA | — | 7.2 |
| **CONSTRUCTION** | | | |
| **INGRESS PROTECTION** | | | |
| Control Circuit Terminals | ul | IP20 | IP20 |
| **WEIGHT** | g | 115 | 115 |
| | oz. | 4.1 | 4.1 |
| **CONDUCTOR SIZE** | | | |
| UL/CSA | AWG | 2 x 18 ~ 14 | 2 x 18 ~ 14 |
| Solid | $mm^2$ | 2 x 0.5 ~ 2.5 | 2 x 0.5 ~ 2.5 |
| Stranded | $mm^2$ | 2 x 0.5 ~ 2.5 | 2 x 0.5 ~ 2.5 |
| Fine Stranded | $mm^2$ | 2 x 0.5 ~ 2.5 | 2 x 0.5 ~ 2.5 |
| Terminal Torque | Nm | 1 ~ 1.25 | 1 ~ 1.25 |
| | Lb-in. | 8.9 ~ 11.1 | 8.9 ~ 11.1 |

# CIRCUIT DIAGRAMS

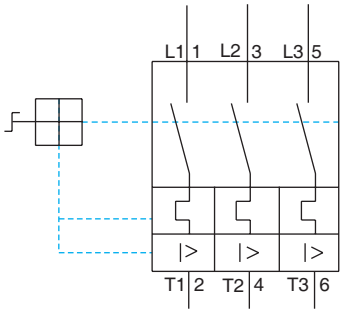
## 1 Phase – 1 Pole



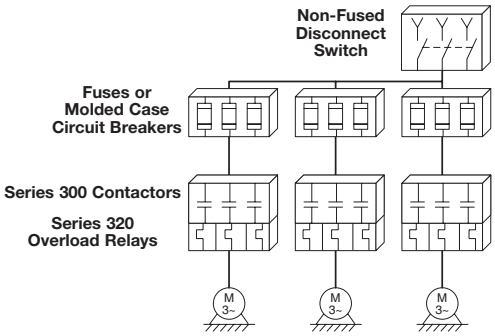

## 1 Phase – 2 Pole



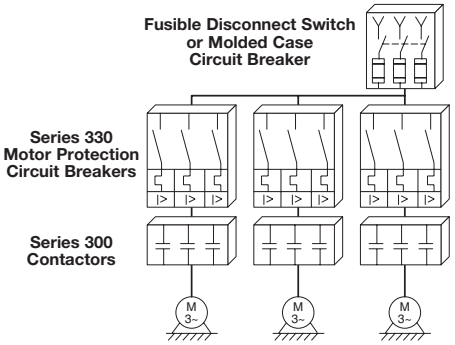

## 3 Phase – 3 Pole



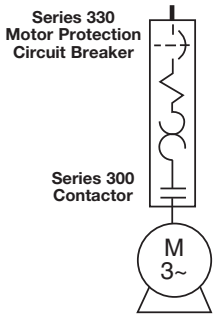

## Traditional Multi-Motor Application



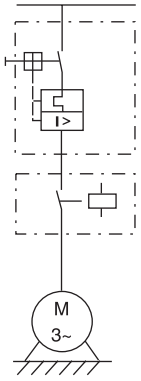

## Group Motor Application



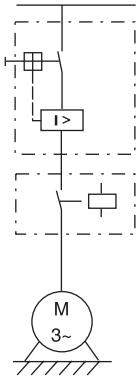

## Self-Protected Motor Application




## 330-T25S & 300-S

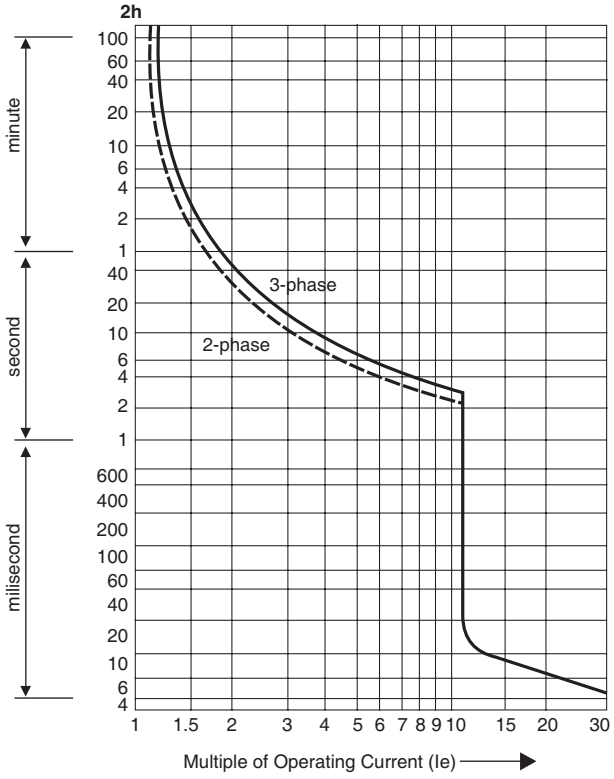



## 330-M25S & 300-S

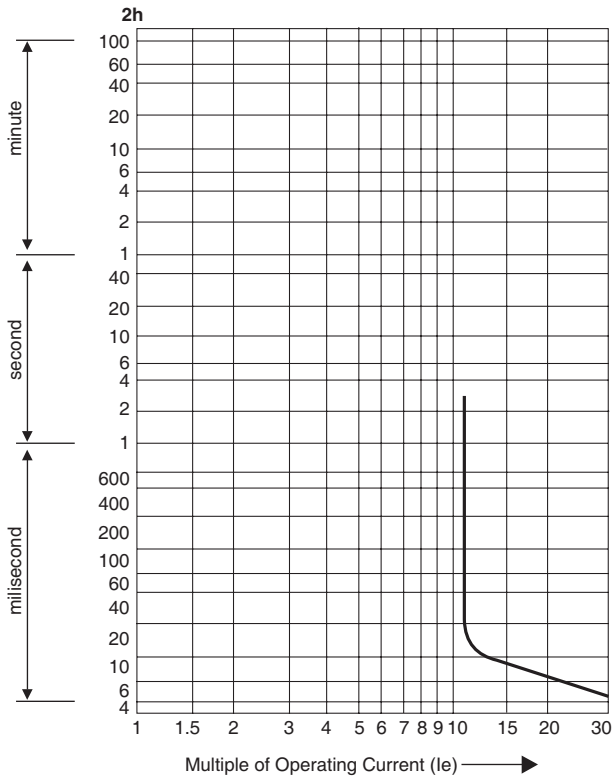


## TRIP CHARACTERISTICS

330-T25S

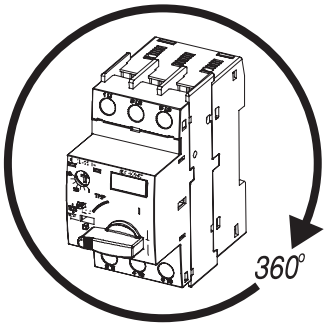



330-M25S*

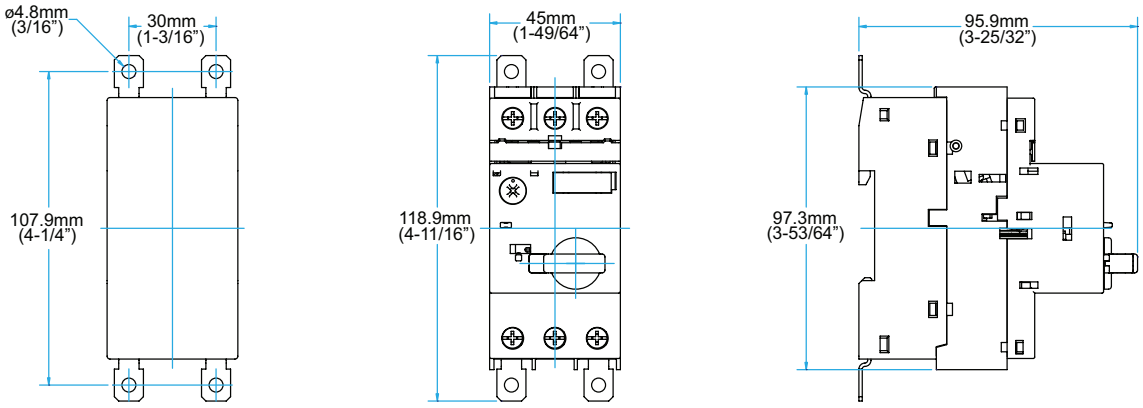



*NOTE: Protection below short circuit rating (12x Full Load Current) is provided by an overload protective device (ex. Series 320 or similar function built into the motor).

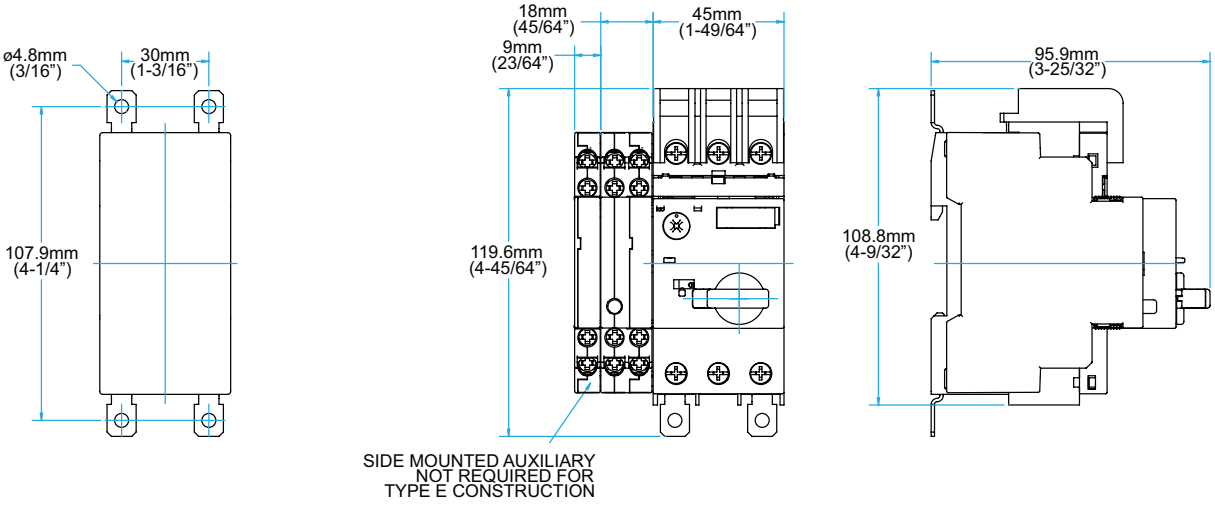
## OPERATING POSITION



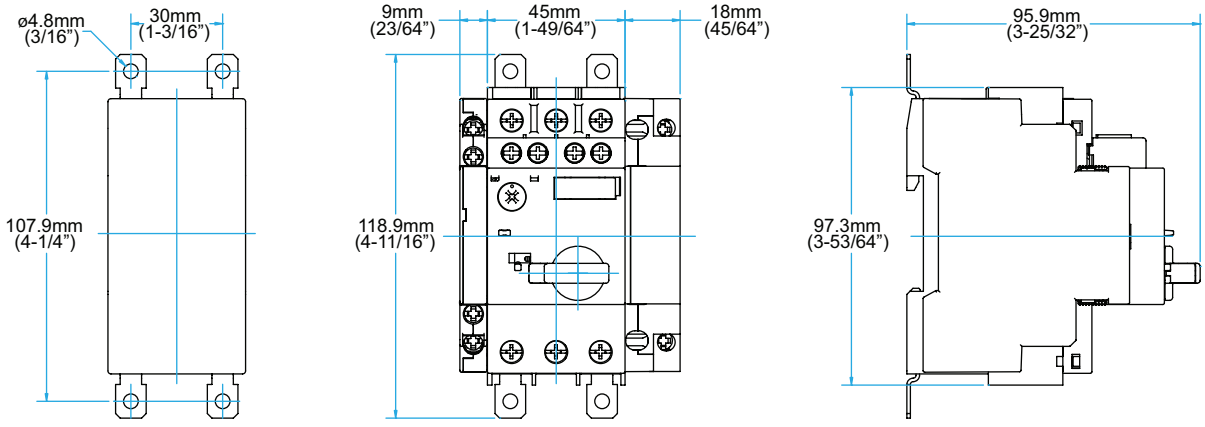
## MOTOR PROTECTION CIRCUIT BREAKER



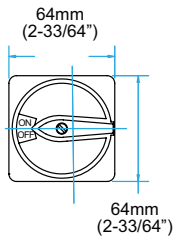

## TYPE E CONSTRUCTION – MOTOR PROTECTION CIRCUIT BREAKER




## MOTOR PROTECTION CIRCUIT BREAKER WITH SIDE MOUNTED AUXILIARY, FRONT MOUNTED AUXILIARY, SHUNT RELEASE AND UNDERVOLTAGE RELEASE MODULES

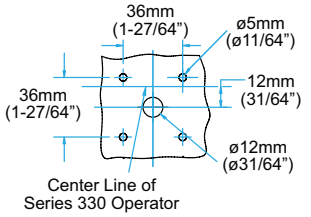


## EXTERNAL OPERATING HANDLE



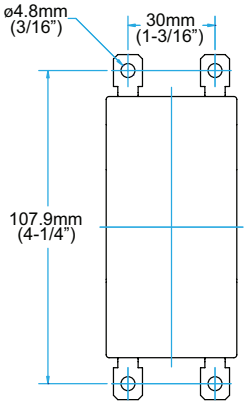

PANEL LAYOUT

NOTE: The center of the handle is 12mm (31/64") below the mounting center of the Series 330 Operator.

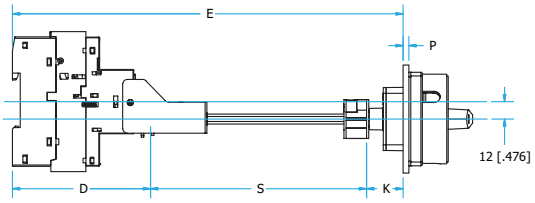



35mm DIN RAIL MOUNTING

PANEL MOUNTING




SHAFT CUTTING INSTRUCTIONS




E = Enclosure Depth
P = Panel Thickness
D = Device Depth
S = Shaft Length
K = Shaft Constant (27mm [1.06"])

S = E - D - K*

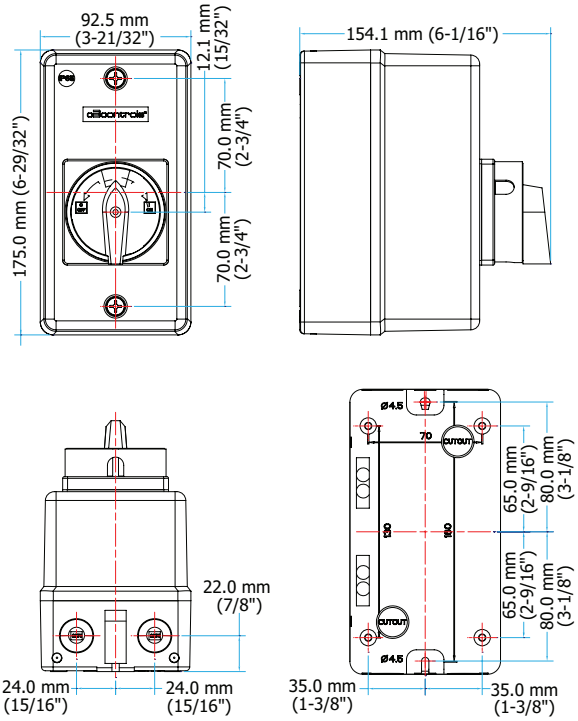
Minimum Panel Thickness (P) = 1mm (0.04")
Maximum Panel Thickness (P) = 4mm (0.16")

Minimum Enclosure Depth (E) = 177mm (6.97")
Maximum Enclosure Depth (E) = 421mm (16.57")

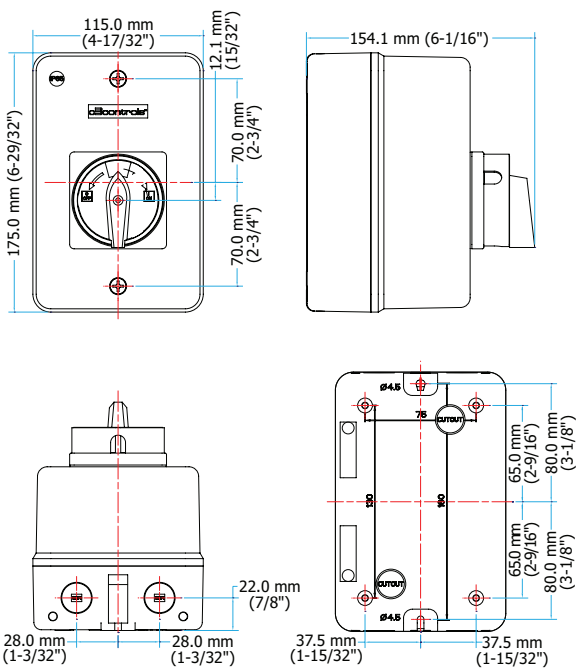
*NOTE: Subtract an additional 2.3mm (0.09") when mounting the Series 330 Motor Protection Circuit Breaker onto a DIN rail.

## MOTOR PROTECTION CIRCUIT BREAKER ENCLOSURES

### Frame Size 1

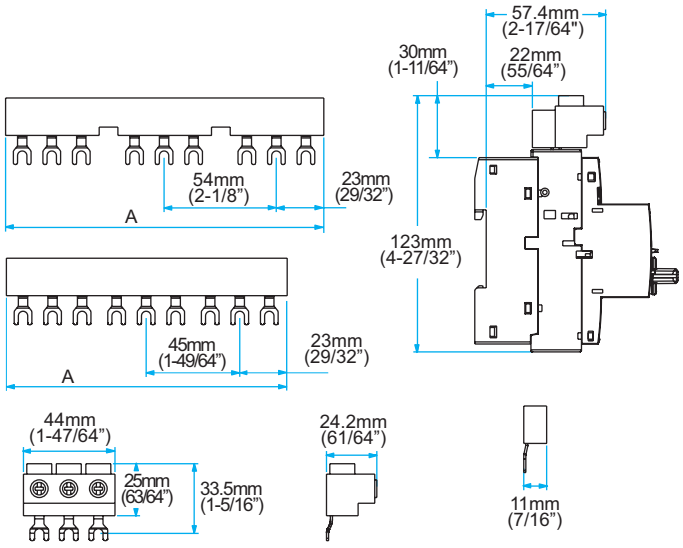



### Frame Size 2



## COMMONING LINKS AND FEEDER TERMINAL

330-T25S AND 330-M25S WITH COMMONING LINKS (330-CL45*S2 AND 330-CL54*S2) AND FEEDER TERMINAL (330-FT1)




| COMMONING LINKS | | |
|---|---|---|
| CODE | FOR USE WITH | A (LENGTH) |
| | 45MM SPACING | |
| 330-CL452 | 2 Motor Protection Circuit Breakers | 91mm (3-37/64") |
| 330-CL453 | 3 Motor Protection Circuit Breakers | 136mm (5-23/64") |
| 330-CL454 | 4 Motor Protection Circuit Breakers | 181mm (7-1/8") |
| 330-CL455 | 5 Motor Protection Circuit Breakers | 226mm (8-29/32") |
| | 54MM SPACING | |
| 330-CL542 | 2 Motor Protection Circuit Breakers | 100mm (3-15/16") |
| 330-CL543 | 3 Motor Protection Circuit Breakers | 154mm (6-1/16") |
| 330-CL544 | 4 Motor Protection Circuit Breakers | 208mm (8-3/16") |
| 330-CL545 | 5 Motor Protection Circuit Breakers | 262mm (10-5/16") |

NOTE: *Represents the code for the number of motor protection circuit breakers. Refer to the chart above or page 13.

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