

ENCLOSED UL508A COMBINATION MOTOR STARTERS



c3controls' Series ECP-300 Enclosed UL508A Combination Motor Starters come with all the features and benefits of our Series 330 Motor Protection Circuit Breaker, Series 300 Contactor, Series 1100 UL 489 Branch Circuit Breaker, and 22mm IEC pilot devices with the added protection of our durable Polycarbonate or Carbon Steel enclosures. Our Series ECP-300 combination motor starters are factory wired with a control transformer saving you time and reducing installation costs.



Section 30

Enclosed UL508A Combination Motor Starters	4
Specifications	6
Dimensions	8

PROVEN



Conformity to Standards:

MOTOR PROTECTION CIRCUIT BREAKERS

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

CONTACTORS

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

ENCLOSURES

UL 50
CSA C22.2 No. 94
IEC 60529

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)

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)

UL Listed

CSA Certified

Visit c3controls.com to download product certifications.



ENCLOSED UL508A COMBINATION MOTOR STARTERS

All our products are fully certified, rated, and backed by our limited lifetime warranty to meet the needs of the machine builder, and our Enclosed Combination Motor Starters are no exception. Check out the incredible features in the chart below!

DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

✓ Proven	Our Series ECP-300 Enclosed UL508A Combination Motor Starters are UL508A Listed and CE marked meeting global standards requirements.	
✓ Enclosure Flexibility	Our ECP-300 Enclosed UL508A Motor Starters are available in Polycarbonate (Type 4X) and two versions of Carbon Steel (Type 1 or Type 3R, 4).	
✓ Reliable	Contactor provides repeated ON/OFF switching for the motor, and the motor protection circuit breaker includes both a Class 10 thermal and magnetic trip elements for overload and short circuit protection of the motor and motor branch circuit conductors.	
✓ Enhanced Integration	Our ECP-300 Enclosed UL508A Motor Starters are pre-wired to accept inputs from your BAS, PLC, relay or other dry contact for control in Auto mode.	
✓ Simple Solution	c3controls' Electrical Engineers have designed enclosed combination motor starters specifically for any electric impeller, fan, pump, conveyor, or air handling motor applications.	
✓ 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.	
✓ Quick Shipment	We assemble, test and ship within 5 days,—and confirm every order ensuring accuracy.	
✓ 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

Polycarbonate Enclosure



Carbon Steel Enclosure



UNIQUE PRODUCT LINE FEATURES

FACTORY ASSEMBLED AND WIRED



Factory assembled and wired starters and pilot devices provide the convenience of a single catalog number and shorter control panel bill of material.

SELF-PROTECTED



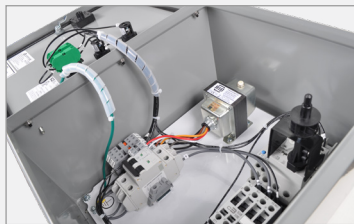
Listed as a UL 60947-4-1A Type E Self-Protected Combination Manual Motor Controller for circuits capable of delivering up to 50kA @ 460V.

HIGH FAULT SCCR



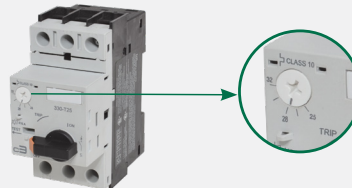
High fault short circuit current rating of 50kA @ 480V provides safety and reliability in high fault applications.

PRE-WIRED CONTROL CIRCUIT



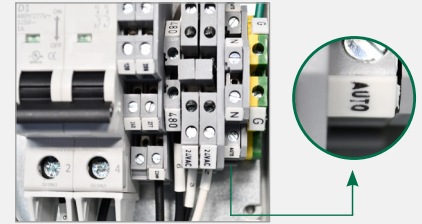
Pre-wired for quick and easy field installation, including color-coded and marked terminal blocks, control transformer, and controls circuit protection for simplicity of control circuit voltage, 24VAC or 120VAC options available.

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.

INTEGRATION READY



The integration ready Hand-Off-Auto control circuit is pre-wired to accept Auto Run, On / Off commands from your BAS, PLC, relay or other dry contact for remote control in Auto mode.

**FIND IT
FAST**

Enclosed UL508A
Combination Motor Starters



- Certifications
- Specifications
- Dimension Drawings
- Installation Instructions
- Easy to Buy

c3controls.com

IT'S EASY TO BUILD YOUR OWN ENCLOSED UL508A STARTER

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

Enclosed UL508A Combination Motor Starter

ECP - 300 - - -

I II III IV V

Example: To build one of our most popular Enclosed UL508A Combination Starters, the part number would be
ECP + 300 + III + IV + V or **ECP-300-2D63-M4-UXC**



I. PRODUCT SERIES

CODE	DESCRIPTION
ECP	Series ECP, Engineered Control Panel

II. PRODUCT TYPE

CODE	DESCRIPTION	LIST
300	Enclosed UL508A Combination Motor Starter	\$1,012.50

III. MOTOR STARTER SIZE

CODE	RATED OPERATING CURRENT (A)	ADJUSTMENT RANGE (A)	MAGNETIC TRIP CURRENT (A)	1 PHASE HP** (60HZ)		3 PHASE HP** (60HZ)			LIST
				115V	230V	200V	230V	460V	
2C16	0.16	0.1 ~ 0.16	2.1	—	—	—	—	—	—
2C25	0.25	0.16 ~ 0.25	3.3	—	—	—	—	—	—
2C40	0.40	0.25 ~ 0.4	5.2	—	—	—	—	—	—
2C63	0.63	0.4 ~ 0.63	8.2	—	—	—	—	—	—
2D10	1.0	0.63 ~ 1.0	13	—	—	—	—	1/2	—
2D16	1.6	1.0 ~ 1.6	21	—	1/10	1/4	1/3	3/4	—
2D25	2.5	1.6 ~ 2.5	33	—	1/6	1/2	1/2	1-1/2	—
2D40	4.0	2.5 ~ 4.0	52	1/8	1/3	3/4	1	2	—
2D63	6.3	4.0 ~ 6.3	82	1/4	3/4	1-1/2	1-1/2	3	—
2U10	10	6.3 ~ 10	130	1/2	1-1/2	3	3	7-1/2	—
2U16	16	10 ~ 16	208	1	3	5	5	10	—
2U20	20	16 ~ 20	260	1-1/2	3	5	7-1/2	15	\$ 56.25
2U25	25	20 ~ 25	325	2	3	7-1/2	7-1/2	15	\$112.50
2U32	32	25 ~ 32	416	3	5	10	10	20	\$168.75

**Note: HP ratings shown in the table above are for reference. The final selection of the motor starter must be based on the actual motor full load current.

IV. ENCLOSURE

CODE	MATERIAL	ENVIRONMENTAL RATING	DIMENSIONS (HXWxD)	LIST
P4X	Polycarbonate	Type 1, 4/4X, and IP66	14-7/8" x 7-13/32" x 7-1/8"	—
M1	Carbon Steel, ANSI-61 grey powder coating inside and out	Type 1	14" x 12" x 8"	\$281.25
M4	Carbon Steel, ANSI-61 grey powder coating inside and out	Type 3R, 4, & 12	14" x 12" x 8"	\$506.25

V. PRIMARY/SECONDARY VOLTAGE

CODE	DESCRIPTION		LIST
	PRIMARY MOTOR VOLTAGE	SECONDARY CONTROL VOLTAGE	
UXC	480 VAC	24 VAC	—
	277 VAC		
	240 VAC		
	208 VAC		
	120 VAC		
UD	480 VAC	120 VAC	\$18.00
	277 VAC		
	240 VAC		
	208 VAC		
CD	600 VAC	120 VAC	\$24.00
	575 VAC		
	550 VAC		

DISCOUNT
SCHEDULE

H

ENCLOSED UL508A E630 COMBINATION MOTOR STARTERS

c3controls Series ECP-300 Enclosed UL508A Combination Motor Starters are assembled from our Series 330 Motor Protection Circuit Breaker, Series 300 Contactor, Series 1100 489 Branch Circuit Breaker, and 22mm IEC pilot devices, all within the protection of a durable Polycarbonate or Carbon Steel enclosure. Our Series ECP-300 combination motor starters are factory wired with a control transformer saving you time and reducing installation costs.

Product features include:

- Enclosed combination motor starters offer the convenience of a single catalog number.
- Provides the same great features and benefits as our Enclosures, Series 330 Motor Protection Circuit Breakers, Series 300 Contactors, Series 1100 UL 489 Branch Circuit Breakers, and Series 22mm IEC Pilot Devices.
- Polycarbonate enclosure comes with a lift-off cover and is rated Type 4X.
- Carbon Steel enclosure comes in two versions; Type 1 or Type 3R, 4.
- Integration ready control circuit comes equipped with a Hand-Off-Auto selector switch and pre-wired connection points to accept Auto Run, On / Off commands from your BAS, PLC, relay or other dry contact for remote operation in Auto mode.
- Red/Yellow operating handle can be padlocked in the OFF position with up to three padlocks for extra safety and security needed during maintenance activities.
- Unobstructed access to the two contactor coil terminals on the load-side of the starter makes control circuit wiring simple.
- Compact starter size reduces enclosure size resulting in space savings and lower installed costs.
- Single phase sensitivity to protect motors against damaging phase loss conditions.
- Universal ratings and markings: A, kW, and HP ratings as well as applicable 3rd party certifications.

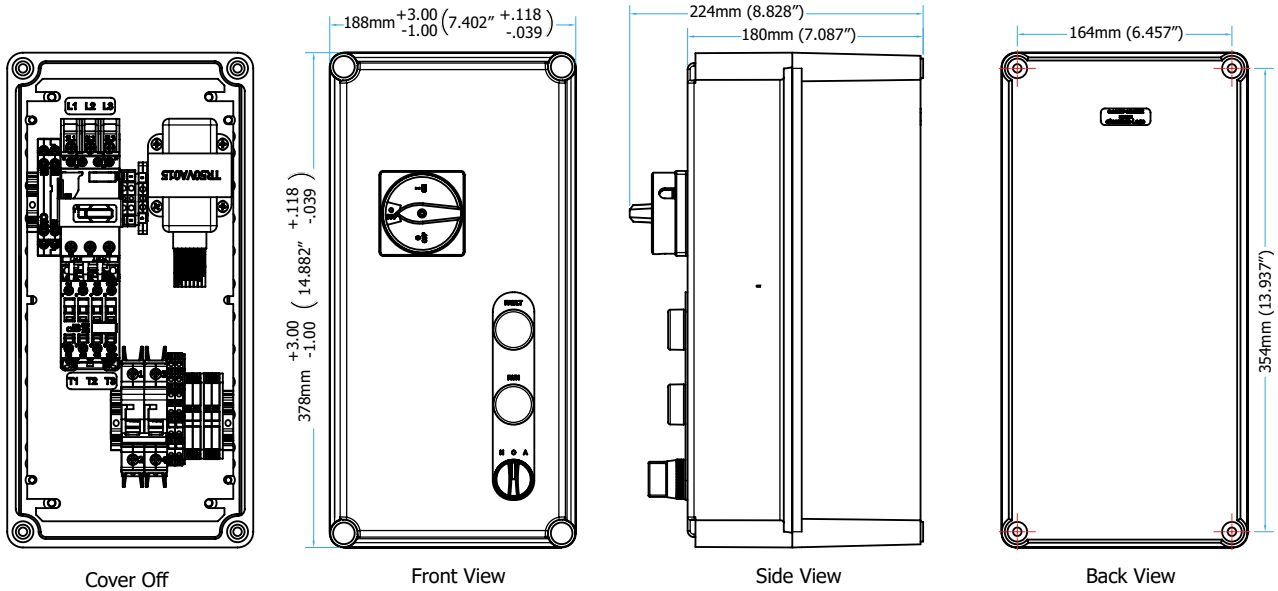


ELECTRICAL SPECIFICATIONS															
		2C16	2C25	2C40	2C63	2D10	2D16	2D25	2D40	2D63	2U10	2U16	2U20	2U25	2U32
ELECTRICAL GENERAL		For detailed contactor specifications by starter rating code, see Section 4 Page 13													
		For detailed motor protection circuit breaker specifications by catalog number, see Section 9 Page 13													
	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 Range	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													
Transformer Size	VA	50													
ELECTRICAL UL APPLICATIONS		For detailed contactor specifications by starter rating code, see Section 4 Page 13													
		For detailed motor protection circuit breaker specifications by catalog number, see Section 9 Page 13													
MAIN CIRCUITS															
Rated Operating Voltage, Ue	VAC	460													
Short Circuit Current Rating @ 480V AC	kA	10													
Maximum Fuse or Circuit Breaker Size	A	450													
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
COIL CHARACTERISTICS		For detailed contactor specifications by starter rating code, see Section 4 Page 14													
Rated Insulation Voltage, Ui	V	1,000													
Operating Limits		80 ~ 110% of Rated Coil Voltage													
MECHANICAL		For detailed contactor specifications by starter rating code, see Section 4 Page 15													
		For detailed motor protection circuit breaker specifications by catalog number, see Section 9 Page 14													
ENVIRONMENTAL															
Ambient Operating Temperature	°C / °F	-20 to 55 / -4 to 131													
Ambient Storage Temperature	°C / °F	-50 to 80 / -58 to 176													
Altitude / ft.		2,000 / 6,562													
Shock	g	15													
Enclosure: Polycarbonate (Blank)		Type 1, 4/4X and IP66													
Enclosure: Carbon Steel (M1)		Type 1													
Enclosure: Carbon Steel (M4)		Type 3R, 4, & 12													

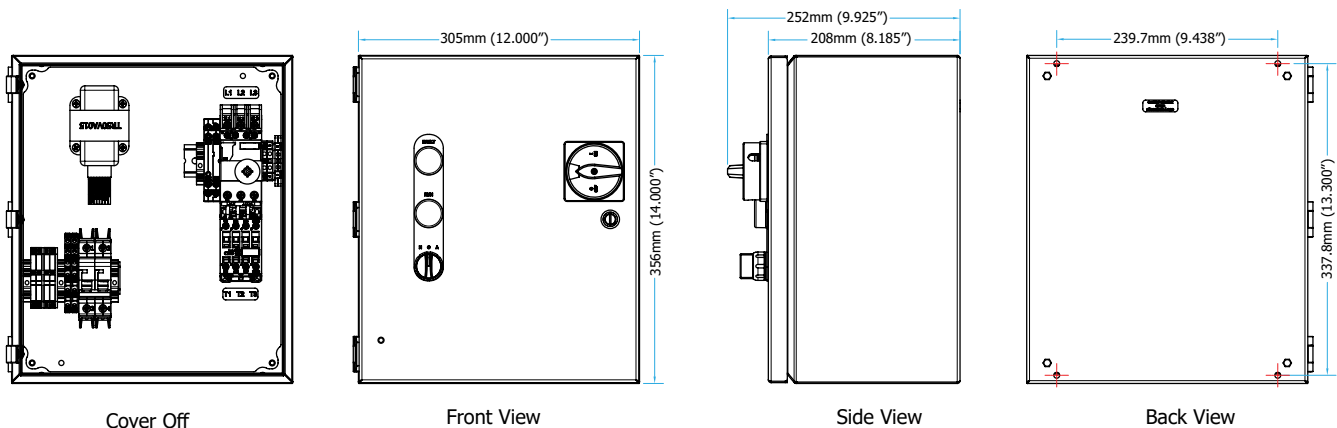
CONSTRUCTION SPECIFICATIONS															
		2C16	2C25	2C40	2C63	2D10	2D16	2D25	2D40	2D63	2U10	2U16	2U20	2U25	2U32
CONSTRUCTION		For detailed contactor specifications by starter rating code, see Section 4 Page 15													
		For detailed motor protection circuit breaker specifications by catalog number, see Section 9 Page 15													
	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													
MPCB 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													
MPCB TERMINAL TORQUE															
	Nm	2 ~ 2.5													
	Lb-in.	17.7 ~ 22.1													

NOTE: For circuit diagrams, wiring schematics and to download installation instructions visit c3controls.com.

ENCLOSED STARTER ASSEMBLIES WITH POLYCARBONATE ENCLOSURE



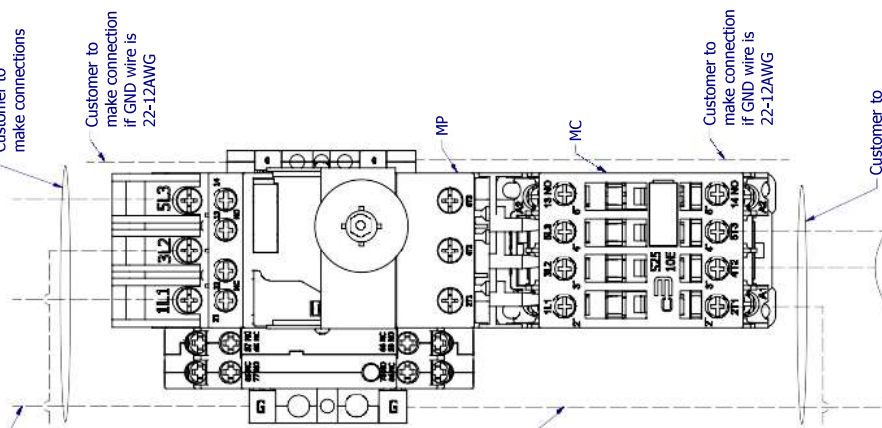
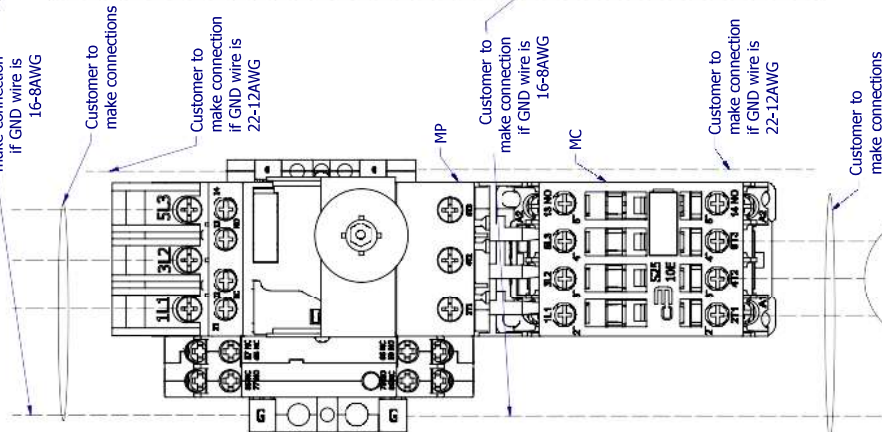
ENCLOSED STARTER ASSEMBLIES WITH CARBON STEEL ENCLOSURE



**VISIT C3CONTROLS.COM TO
DOWNLOAD CAD DRAWINGS**

Power Circuit (3 PH)

Power Circuit (1 PH)



Notes:

- Use UL 1015 VW-1 600V MTW 75°C Solid or Stranded Copper Conductors.
- The starter is wired for 480VAC or 600VAC 3PH as default.
- To configure the starter for another operating voltage, the input to the control transformer must be changed.
- To change the input to the control transformer, move the wire installed in the "480" terminal to the desired terminal (See pg 2).
- Available operating voltages are: 120VAC & 240VAC single phase, 208VAC, 240VAC, 480VAC & 600VAC three phase.
- To wire a desired input for use as the "AUTO" input, use the terminal block labelled "AUTO" and "24VAC" or "24COM" OR "120VAC" or "120COM" located at the bottom of the panel.
- Up to 4 contactor AUX contacts can be added if needed [c3 Part # 300-SFA10 (for NO), c3 Part # 300-SFA01 (for NC)].

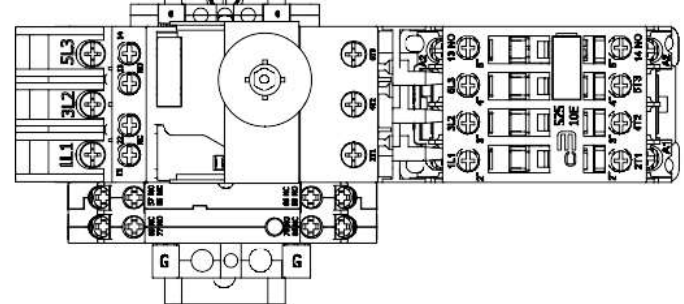
WARNING

- * Disconnect Power before proceeding with any work on this equipment.
- * Installation and maintenance by technical personnel only.
- * Installation of c3controls product must be in accordance with the NEC (U.S. National Electrical Code) regulations or local codes/standards per your application.
- * Any violation of these safety requirements could result in a personal injury and/or result in damage to the equipment.

AVERTISSEMENT:

- * Débranchez le pouvoir (la puissance) avant la suite de n'importe quel travail sur cet équipement.
- * Installation et maintien par personnel technique seulement.
- * Installez des produits conformément aux instructions d'opération et le NEC (le Code Electrique national américain) des règlements ou des codes applicables locaux et des normes.
- * Toute violation de ces exigences de sécurité pourrait entraîner des blessures corporelles et/ou endommager l'équipement.

Metallic Enclosure



VIEW1 - Back Plate Assembly
SCALE 15/16

REV	DATE	DESCRIPTION	CB	CB
2	1/17/24	Updated Terminal Block Configuration	CB	CB
1	7/25/23	Released	CB	CB

REVISION HISTORY

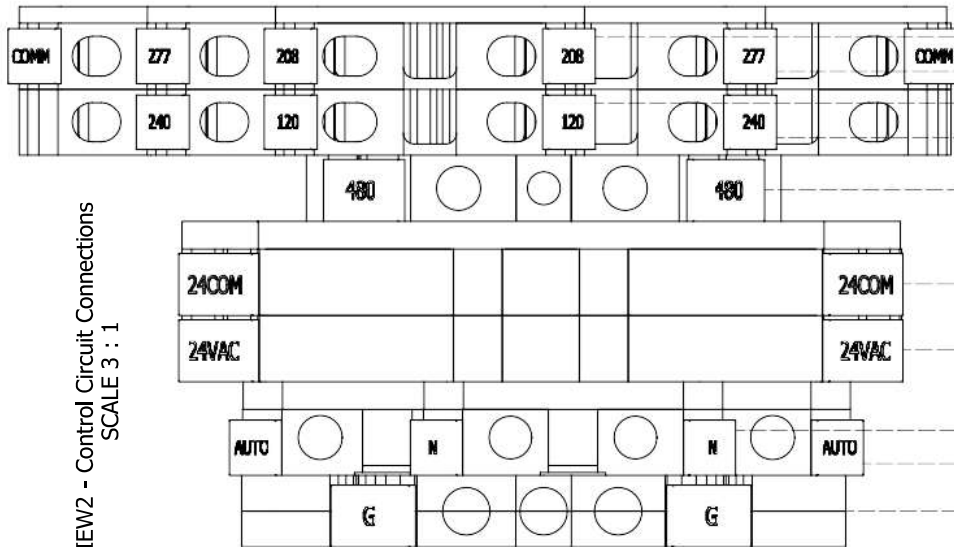
Units	in [mm]	Drawn By:	Modified By:	Approved By:	Created On:	Test #	Size	C	n/a	Part Number
TOLERANCE X.X +/-0.040 [L00] X.XX +/-0.010 [0.25] X.XXX +/-0.001 [0.03] ANGLES +/-0.5 DEG UNLESS OTHERWISE SPECIFIED		cbunnell	cbunnell	cbunnell	11/15/2021		2			12E00121
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c3controls
BEAVER, PA 15009
www.c3controls.com

ECR-300-2XXX-M4 Enclosure - Customer Install
Instructions (pg 1)

Metallic Enclosure

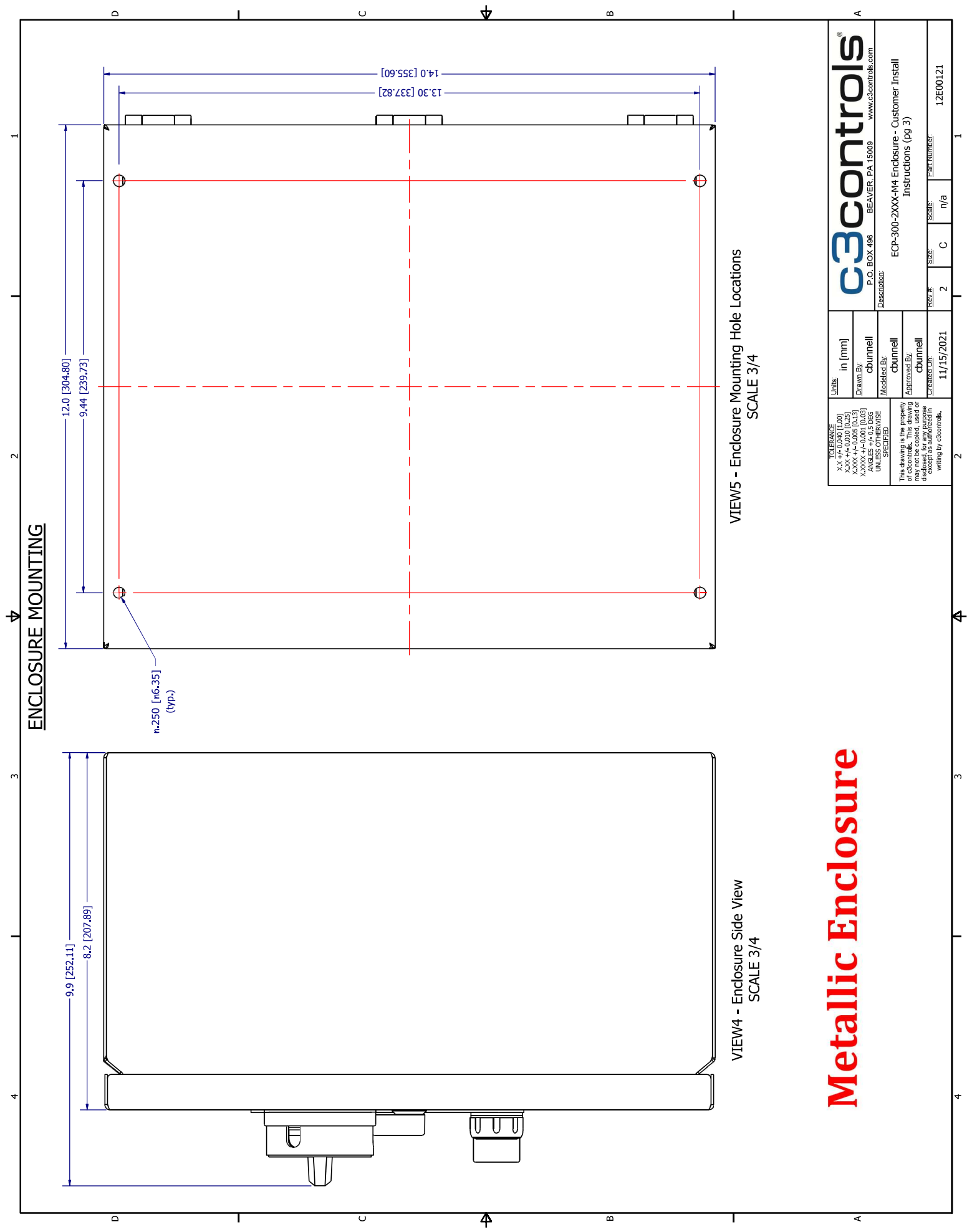
VIEW2 - Control Circuit Connections
SCALE 3 : 1



Notes:

- Terminal block marker "480" will be labeled "600" for the 600V transformer configuration.
- Terminal block marker "24VAC" will be labeled "120VAC" for the 120V output transformer configuration.
- Terminal block marker "24COM" will be labeled "120COM" for the 120V output transformer configuration.

TOLERANCE X.X +/-0.040 [L.00] X.XX +/-0.010 [0.25] X.XXX +/-0.005 [0.13] X.XXXX +/-0.001 [0.03] ANGLES +/-0.5 DEG UNLESS OTHERWISE SPECIFIED		Units in [mm]	c3controls® P.O. BOX 496 BEAVER, PA 15009 www.c3controls.com	
This drawing is the property of c3controls. This drawing may not be copied, used or distributed in any form except as authorized in writing by c3controls.		Drawn By: cbunnell	Description: ECP-300-2XXX-M4 Enclosure - Customer Install Instructions (pg 2)	
Modified By: cbunnell		11/15/2021	2	C
Approved By: cbunnell		11/15/2021	2	C
Checked On: cbunnell		11/15/2021	2	C
Part Number: 12E00121		11/15/2021	2	C



ENCLOSURE MOUNTING

Metallic Enclosure

TOLERANCE XX \pm 0.040 [1.00] XX \pm 0.010 [0.25] XXX \pm 0.005 [0.13] XXX \pm 0.001 [0.025] ANGLES \pm 0.5 DEG UNLESS OTHERWISE SPECIFIED		Units in [mm] Drawn By: cbunnell Modified By: cbunnell Approved By: cbunnell CREATED ON: 11/15/2021	c3controls® P.O. BOX 496 BEAVER, PA 15009 www.c3controls.com	
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TEST #	2	SIZE	C	n/a
SCALE				PART NUMBER: 12E00121

Power Circuit (3 PH)

Customer to make connections

Customer to make connection if GND wire is 22-12AWG

Customer to make connection if GND wire is 16-8AWG

MP

MC

Customer to make connections

Customer to make connection if GND wire is 22-12AWG

MOTOR

Notes:

- Use UL 1015 VW-1 600V MTW 75°C Solid or Stranded Copper Conductors.
- The starter is wired for 480VAC or 600VAC 3PH as default.
- To configure the starter for another operating voltage, the input to the control transformer must be changed.
- To change the input to the control transformer, move the wire installed in the "480" terminal to the desired terminal (See pg 2).
- Available operating voltages are: 120VAC & 240VAC single phase, 208VAC, 240VAC, 480VAC & 600VAC three phase.
- To wire a desired input for use as the "AUTO" input, use the terminal block labeled "AUTO" and "24VAC" or "240VAC" OR "120VAC" or "1200VAC" located at the bottom of the panel.
- Up to 4 contactor AUX contacts can be added if needed (c3 Part # 300-5FA10 (for NO), c3 Part # 300-5FA01 (for NC)).

Power Circuit (1 PH)

Customer to make connections

Customer to make connection if GND wire is 22-12AWG

Customer to make connection if GND wire is 16-8AWG

MP

MC

Customer to make connections

Customer to make connection if GND wire is 22-12AWG

MOTOR



WARNING

- * Disconnect Power before proceeding with any work on this equipment.
- * Installation and maintenance by technical personnel only.
- * Installation of c3controls product must be in accordance with the NEC (U.S. National Electrical Code) regulations or local codes/standards per your application.
- * Any violation of these safety requirements could result in a personal injury and/or result in damage to the equipment.



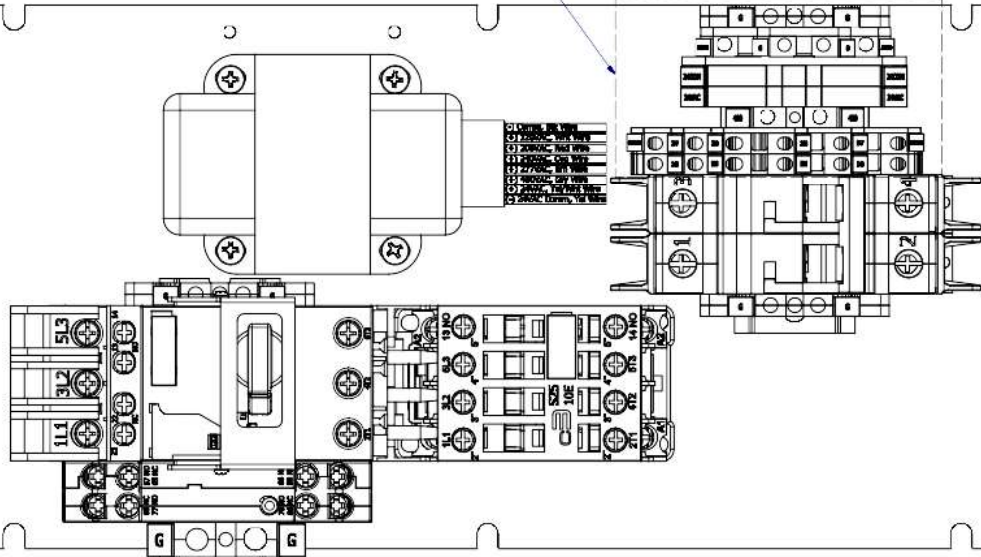
AVERTISSEMENT:

- * Débranchez le pouvoir (la puissance) avant la suite de n'importe quel travail sur cet équipement.
- * Installation et maintien par personnel technique seulement.
- * Installez des produits conformément aux instructions d'opération et le NEC (le Code Electrique national américain) des règlements ou des codes applicables locaux et des normes.
- * Toute violation de ces exigences de sécurité pourrait entraîner des blessures corporelles et/ou endommager l'équipement.

COMPONENT INFO

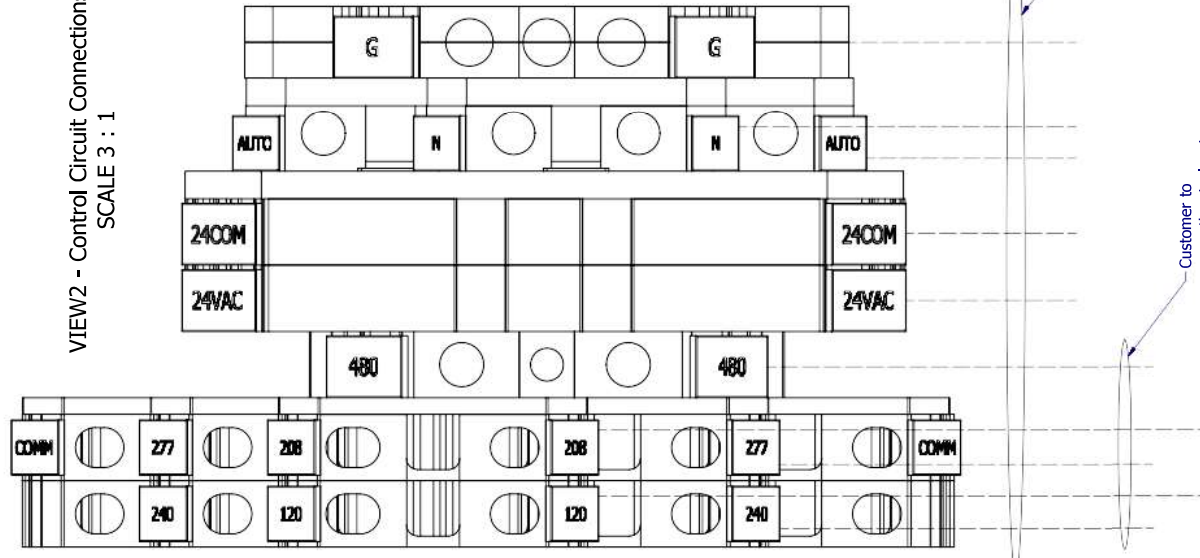
TERMINAL / SCREW LOCATION	TORQUE (LBF-IN)	WIRE SIZE (AWG)	STRIP LENGTH (IN)
Contactor Power Poles, 9-25A AC/DC	15	20-10	0.40
Contactor Power Poles, 32-40A AC/DC	25	18-6	0.40
Motor Protective Circuit Breaker Power Poles	20	14-10	0.40
Terminal Block	7	22-10	0.40
Terminal Block - Grounding (6mm Wide)	7	22-12	0.40
Terminal Block - Grounding (10mm Wide)	14	16-8	0.47

Polycarbonate Enclosure



Polycarbonate Enclosure

VIEW2 - Control Circuit Connections
SCALE 3 : 1

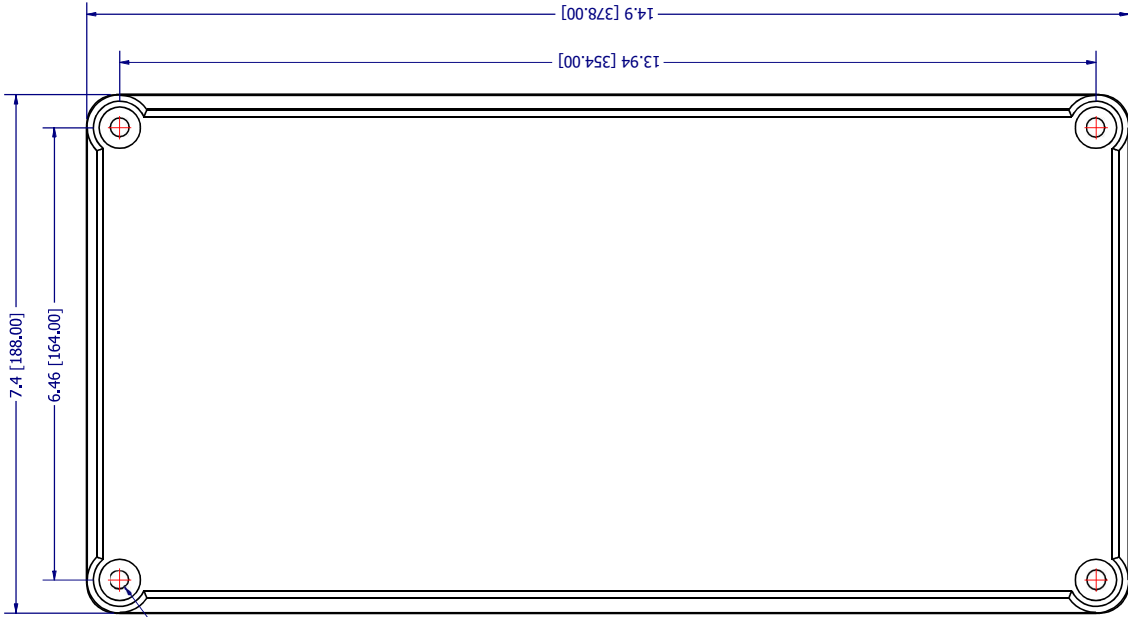
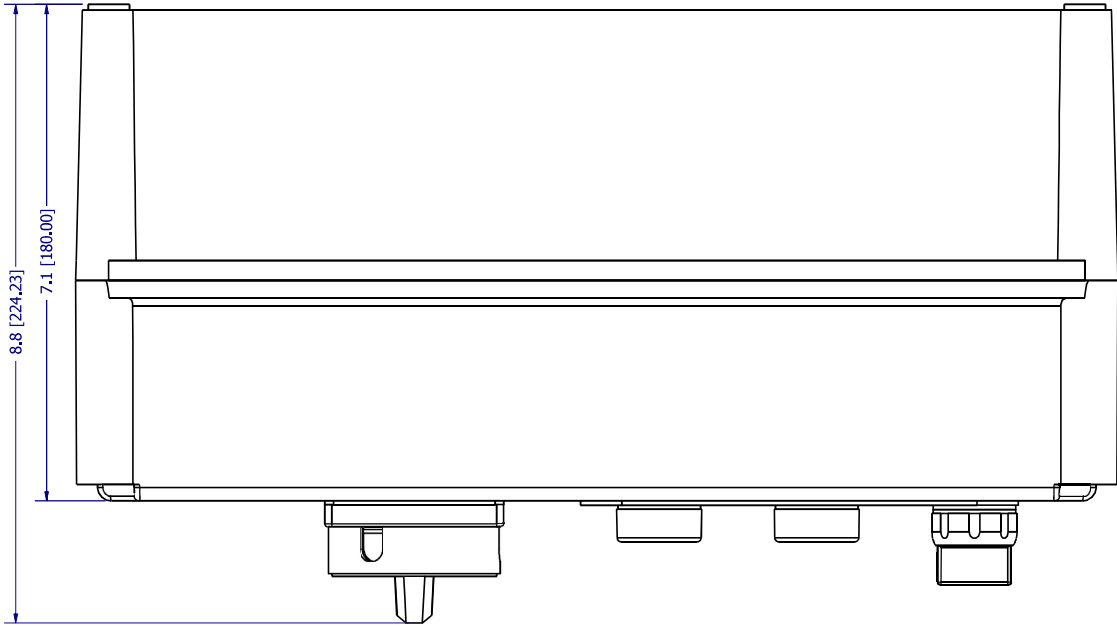


Notes:

- Terminal block marker "480" will be labeled "600" for the 600V transformer configuration.
- Terminal block marker "24VAC" will be labeled "120VAC" for the 120V output transformer configuration.
- Terminal block marker "24COM" will be labeled "120COM" for the 120V output transformer configuration.

tolerance XX \pm 0.040 [1.00] XX \pm 0.010 [0.25] XXX \pm 0.005 [0.13] XXX \pm 0.0025 [0.06] ANGLES \pm 0.5 DEG UNLESS OTHERWISE SPECIFIED This drawing is the property of c3controls. This drawing may not be copied, used or distributed in any form except as authorized in writing by c3controls.	Units	in [mm]	c3controls P.O. BOX 496 BEAVER, PA 15009 www.c3controls.com Description: ECP-300-2XXX Enclosure - Customer Install Instructions (pg 2)
	Drawn By:	cbunnell	
	Modified By:	cbunnell	
	Approved By:	cbunnell	
Created On:	7/14/2020	Rev #	2
	Size	C	n/a
Scale			n/a
Part Number:			12E00120

ENCLOSURE MOUNTING



Polycarbonate Enclosure

TOLERANCE		Units	in [mm]
X.X +/-0.040 [1.00]		Drawn By:	cbunnell
X.XX +/-0.010 [0.25]		Modified By:	cbunnell
X.XXX +/-0.005 [0.13]		Approved By:	cbunnell
X.XXXX +/-0.001 [0.025]		CREATED ON:	7/14/2020
ANGLES +/-0.5 DEG UNLESS OTHERWISE SPECIFIED		TEST #	2
This drawing is the property of c3controls. This drawing may not be copied, used or distributed in any form or manner without the written consent in writing by c3controls.		SIZE	C
		SCALE	n/a
		PART NUMBER	12E00120
		Description: ECP-300-2XXX Enclosure - Customer Install Instructions (pg 3)	
		P.O. BOX 496 BEAVER, PA 15009 www.c3controls.com	
		c3controls®	

MINIATURE CIRCUIT BREAKERS



SERIES 1100 PRODUCT PROFILE

c3controls offers a comprehensive line of **Miniature Circuit Breakers** 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 1100 Miniature Circuit Breakers below!



DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

✓ Proven	Our Series 1100 Miniature Circuit Breakers are UL Listed and Recognized, and CE marked to meet global standards requirements and are compliant to the RoHS directives.
✓ Compact Design	17.5mm wide per pole construction for reduced panel size, allowing for smaller control panels.
✓ Easy to Install	35mm DIN rail mounting for fast and easy installation and removal.
✓ Visible Markings	High visibility labels and markings; product part number, amperage, and UL & IEC short circuit ratings can be seen from the front and side of the device for easy identification.
✓ Added Safety	Line and load side IP20 guarded finger-safe terminals prevent accidental contact with live parts, while allowing ring, fork, and bare wire connections.
✓ Limited Lifetime Warranty*	Every product is backed by our 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

UNIQUE FEATURES

Full Range Circuit Protection

- Available in single pole, single pole + neutral, two pole, three pole, and three pole + neutral constructions and includes both thermal and magnetic trip elements for overload and short circuit protection.

Industry-Leading Short Circuit Rating

- 10kA @480Y/277V short circuit current rating on all multi-pole constructions – the highest interruption rating available in the market.

Trip-Free Design

- Holding the operating handle in the ON position will not prevent the miniature circuit breaker from tripping.

Easy Wiring

- Captive screws make it impossible to lose screws when wiring and our box lug design terminals will accept a wide-range of copper wire sizes. Line/load wiring is reversible for ease of use.

Visible Markings & Status Indication

- High visibility labels and markings can be seen from the front and side of the device for easy installation. Color-coded status window for clear visual of the breaker status.

Snap-On Accessories and Bus Bars

- Snap-on accessories are easily installed without the use of tools, further the bus bars also help lower assembly and installation costs.



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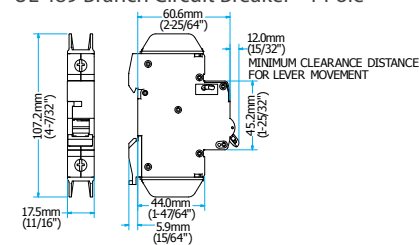
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SPECIFICATIONS

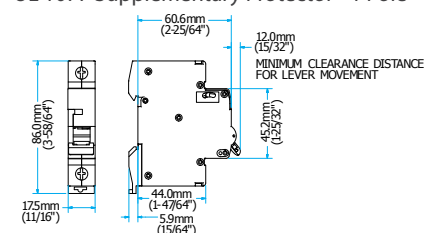
UL 489 BRANCH CIRCUIT BREAKERS							
	UNITS	1 POLE	1 + N POLE	2 POLE	3 POLE	3 + N POLE	
ELECTRICAL GENERAL							
Rated Operating Current	A	0.5 ~ 63					
Operating Frequency	Hz	50/60					
Electrical Life	Ops.	6,000					
Line/Load Wiring		Suitable for reverse feed					
ELECTRICAL UL/CSA APPLICATIONS							
Conformity to Standards		cULus, UL 489, CSA C22.2 No. 5					
AC Rated Operating Voltage	V	277			480Y/277		
DC Rated Operating Voltage	V	60	—	125 (wired in series)	—		
MAXIMUM SHORT CIRCUIT RATING							
@ 120 VAC	kA	10					
@ 240 VAC	kA	10					
@ 277 VAC	kA	10					
@ 480Y/277 VAC	kA	10					
@ 60 VDC	kA	10	—	10	—	—	
@ 125 VDC (wired in series)	kA	—	—	10	—	—	
ELECTRICAL IEC APPLICATIONS							
Conformity to Standards		IEC 60947-2, IEC 60898					
ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu)							
@ 240 VAC	kA	10					
@ 415 VAC	kA	10					
RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics)							
@ 240 VAC	kA	10					
@ 415 VAC	kA	10					
CONSTRUCTION - CONDUCTOR SIZE							
UL/CSA	AWG	1 x #18 ~ #3, 2 x #18 ~ #10					
Solid, Stranded, Fine Stranded	mm²	1 x 0.8 ~ 26.7					
ROHS COMPLIANCE For RoHS compliance documentation by product, refer to c3controls.com.							
UL 1077 SUPPLEMENTARY PROTECTORS							
	UNITS	1 POLE	1 + N POLE	2 POLE	3 POLE	3 + N POLE	
ELECTRICAL GENERAL							
Rated Operating Current	A	0.5 ~ 63					
Operating Frequency	Hz	50/60					
Electrical Life	Ops.	6,000					
Line/Load Wiring		Suitable for reverse feed					
ELECTRICAL UL/CSA APPLICATIONS							
Conformity to Standards		cURus, UL 1077, CSA C22.2 No. 235					
AC Rated Operating Voltage	V	277			480Y/277		
DC Rated Operating Voltage	V	60	—	125 (wired in series)	—		
MAXIMUM SHORT CIRCUIT RATING							
@ 120 VAC	kA	10					
@ 240 VAC	kA	10					
@ 277 VAC	kA	10					
@ 480Y/277 VAC	kA	10					
@ 60 VDC	kA	10	—	10	—	—	
@ 125 VDC (wired in series)	kA	—	—	10	—	—	
ELECTRICAL IEC APPLICATIONS							
Conformity to Standards		IEC 60947-2, IEC 60898					
ULTIMATE SHORT CIRCUIT BREAKING CAPACITY (Icu)							
@ 240 VAC	kA	10					
@ 415 VAC	kA	10					
RATED SERVICE SHORT CIRCUIT BREAKING CAPACITY (Ics)							
@ 240 VAC	kA	10					
@ 415 VAC	kA	10					
CONSTRUCTION - CONDUCTOR SIZE							
UL/CSA	AWG	1 x #18 ~ #3, 2 x #18 ~ #10					
Solid, Stranded, Fine Stranded	mm²	1 x 0.8 ~ 26.7					
ROHS COMPLIANCE For RoHS compliance documentation by product, refer to c3controls.com.							

DIMENSIONS

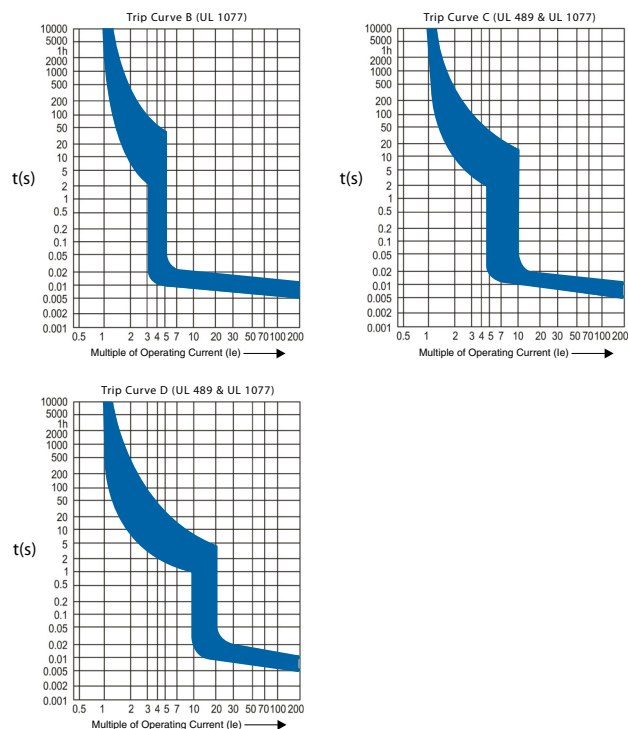
UL 489 Branch Circuit Breaker - 1 Pole



UL 1077 Supplementary Protector - 1 Pole



TRIP CURVES



CERTIFICATIONS

Conformity to Standards:

UL 489
UL 1077
UL 508
CSA C22.2 No. 5, No. 235
IEC 60947-2, IEC 60898

Certifications:

UL File#: E496118
UL File#: E496119
UL File#: E336563
UL File#: E508090
CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/ EU)



For complete ratings, detailed specifications, or to download product certifications visit c3controls.com.



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REVISION 03.2024

22MM IEC PILOT DEVICES



SERIES 22 PRODUCT PROFILE

c3controls line of **22mm IEC Pilot Devices** includes a wide range of push buttons, pilot lights, selector switches, special operators, and accessories, all engineered for superior durability and long life. We offer multiple cap types for our push buttons, including flush, extended, and mushroom caps, and our light units are available in multi voltage and full voltage.

THE MOST INNOVATIVE LINE OF AMERICAN ENGINEERED 22 IEC PILOT DEVICES

✓ Proven	Our 22mm IEC operators are UL Listed and CE marked meeting global standards requirements.  
✓ Environmentally Secure	With 4/4X and IP66 ratings, our 22mm line of pilot devices are built to last and withstand dust, corrosion, ice, and rain.
✓ Easy to Install	Our “snap-on” contact blocks are color coded for quick circuit identification and feature 35° angled captive terminal screws and self-lifting pressure plates for fast and easy wiring.
✓ Quick & Simple	The latching mechanism enables the user to wire the contact blocks & light modules separate from the operator and outside the confined space of the control panel.
✓ Low Profile	The 22mm line assumes the lead in the industry with the shortest depth behind the panel.
✓ Rugged Design	Manufactured to be the highest quality—inside and out. With its metal appearance and sleek design, you know you are getting the quality you deserve.
✓ Visible Certifications	Our product certifications and electrical ratings are clearly marked on the outside of the contact blocks for easy reference during installation.
✓ Heavy Duty	Polyester construction provides superior durability, corrosion resistance, moisture rejection and electrical insulation.
✓ Flexible	Our contact blocks can be stacked 2 deep and up to 3 across for a total of 6 circuits, providing the flexibility to operate multiple control circuits from a single operator.
✓ Convenient	Reduce inventory with our interchangeable modular design, providing endless options for appropriate operator interface.
✓ 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



UNIQUE FEATURES

Shorter Depth & Rugged Design

- Our compact line saves you space behind the panel with our shorter contact blocks and light modules delivering the shortest depth 22mm Pilot Devices engineered in the USA. And with our metal appearance you get quality and durability inside and out.

EN418 Emergency Stop Operators

- c3controls maintained push-twist-release operators meet the global compliance standards for EN418—Safety of Machinery, and they feature a unique trigger action and are available in both non-illuminated and illuminated versions.

Exclusive Multi-Voltage Lights

- Our multi-voltage light units—the only U.S. engineered multi-voltage light in the industry!—operate at any voltage from 20V to 277V AC or DC without losing intensity, making them easily interchangeable across multiple applications.

One Cam Design

- Our single cam design eliminates the need for multiple cam and selector switch configurations, reducing inventory and saves you labor time and costs.

Save Time with Dual Push Buttons

- With the ability to combine the functionality of two operators in one space, our Dual Push Buttons save you in labor costs and time spent in installation. Our dual push buttons are available in both illuminated and non-illuminated versions making them perfect for any application.



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REVISION 10.2021



22MM IEC PILOT DEVICES

SPECIFICATIONS

ELECTRICAL RATINGS

Lamp	Industry Number	Rated Volts	Lumens (MSCD)	Design Life (Hrs.)	Current Draw (mA)	Lamp Type	Shock & Vibration	Leakage Protection
FVB6	1866	6.3V	0.65	5,000	250	Incand.	Very Good	N/A
FVB12	756	14V	0.31	15,000	80	Incand.	Good	N/A
FVB24	757	28V	0.62	7,500	80	Incand.	Good	N/A
FVB55	1835	55V	1.1	5,000	50	Incand.	Good	N/A
FVB120	**	130V	0.36	10,000	20	Incand.	Good	N/A
LED6	**	6V†	Varies w/Color 2000 mcd Typical	100,000	50	LED*	Excellent	14 mA
LED12	**	12V†		100,000	< 20	LED*	Excellent	4 mA
LED24	**	24V†		100,000	< 20	LED*	Excellent	4 mA
LED130	**	120/130V†		100,000	< 10	LED*	Excellent	2 mA
W22UNR-12L	**	12V AC/DC†		100,000	< 18	LED*	Excellent	< 3 mA
W22UNR-24L	**	24V AC/DC†		100,000	< 18	LED*	Excellent	< 3 mA
W22UNR-120L	**	110-130V AC/DC†		100,000	< 18	LED*	Excellent	< 3 mA
W22UNR-240L	**	220-240V AC/DC†		100,000	< 18	LED*	Excellent	< 3 mA

* Specify Lamp color when ordering

** Designates a lamp design optimized for c3controls Illuminated Devices.

† LED voltage tolerance is +/-10%

MULTI-VOLTAGE POWER CONSUMPTION & CURRENT DRAW

System Voltage (V)	AC Current Draw (mA)	DC Current Draw (mA)	Power Consumption (W)
24	21	20	AC: <1 DC: <1/2
48	17	7	
120	3.5	—	
125	—	3	
240	2.5	—	
250	—	2	
277	2.5	—	

DIELECTRIC STRENGTH (MECHANICAL CONTACTS) 2200V for 1 Minute

STANDARD CONTACTS

	Utilization Category		Make Rating	Break Rating	Ith Thermal Current
	IEC	UL			
AC	AC-15	A600	7200VA	720VA	10A
DC	DC-13	Q600	69VA	69VA	2.5A

NOTE: For AC voltage below 72V AC the max. allowed switching current is 10A=Ith. For DC voltages below 28V DC the max. allowed switching current is 2.5A=Ith.

ENVIRONMENTAL RATINGS

	Type 1, 2, 3, 3R, 4/4X, 12, 13
	Non-Illuminated and Illuminated Push-Twist-Release Operators for Indoor Use Only
	IP-66 (per EN 60529)
Operating Temperature	-40° C to +55° C (-40° F to +131° F)
Storage Temperature	-40° C to +85° C (-40° F to +185° F)

TERMINAL & WIRING CONSIDERATION

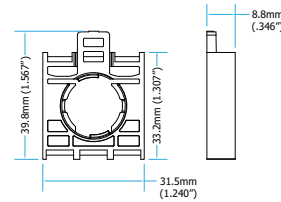
Wire: AWG 22-12 CU	(Copper only - Solid & Stranded) [5 ~ 4mm²] One or two wires permitted per termination.
Recommended Torque	7-10 lb-in [8 Nm]

ROHS COMPLIANCE For RoHS compliance documentation by product, refer to www.c3controls.com.

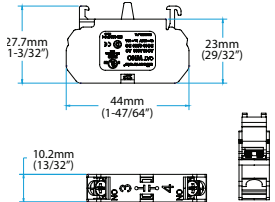
For complete ratings and detailed specifications refer to www.c3controls.com.

DIMENSIONS

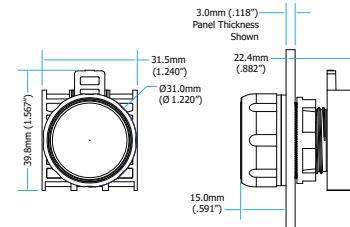
Latching Device



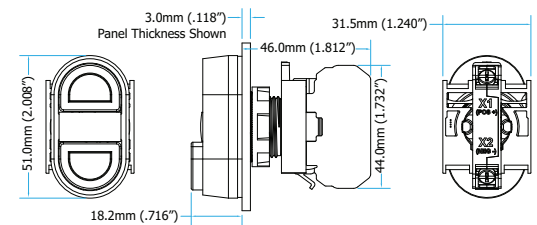
Contact Block



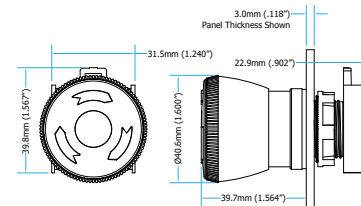
Non-Illuminated Operator (shown with Flush Cap)



Illuminated Full Voltage and Multi-Voltage Dual Push Button Operators (shown with 1 Flush Cap and 1 Extended Cap)



2-Position Push-Twist Release Maintained Non-Illuminated Operator (shown with 40mm [1-9/16"] Mushroom Cap)



CERTIFICATIONS

Conformity to Standards: PILOT DEVICES

UL 508
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)

MULTI-VOLTAGE LIGHT MODULES

UL 508
IEC 60947-1, 60947-5-1

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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REVISION 10.2021

MOTOR PROTECTION **CIRCUIT BREAKERS**



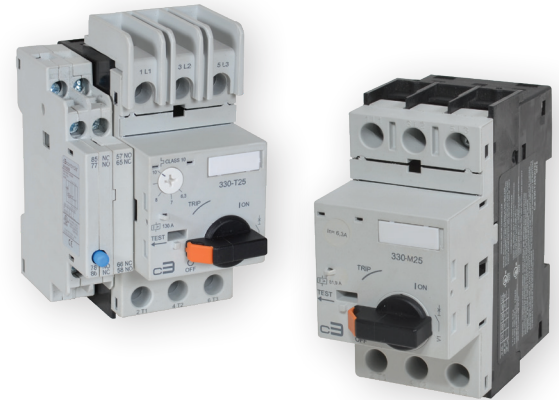
SERIES 330 PRODUCT PROFILE

c3controls **Series 330 Motor Protection Circuit Breakers** provide reliable overload and short circuit protection and are ideal for use in group motor installations—providing space, labor and cost savings. For the simplest applications, they can also be used by themselves as manual motor controllers.

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, external operating handle, 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.	
✓ Lifetime Warranty*	Every product is backed by our 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



UNIQUE PRODUCT LINE FEATURES

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.

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.

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.

External Operating Handle

- Easy to install external operating handle for reliable actuation of Series 330 Motor Protection Circuit Breakers from the outside of the enclosure.

Snap-On Accessories

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



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REVISION 06. 2022



MOTOR PROTECTION CIRCUIT BREAKERS

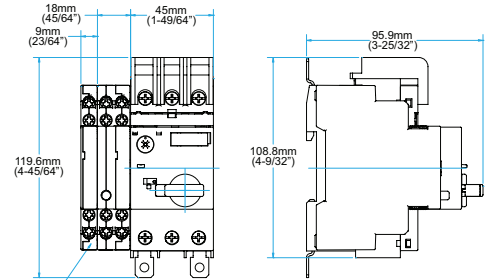
SPECIFICATIONS

	UNITS	
ELECTRICAL GENERAL		
Rated Operating Current	A	32
Current Setting Range ①	A	0.1 ~ 32
Magnetic Trip Current	A	13x Rated Operating Current
Power Operating Frequency	Hz	50/60
Electrical Life	Ops.	100,000
Max. Operating Rate	Ops./Hr.	15
ELECTRICAL UL/CSA APPLICATIONS		
Rated Operating Voltage, Ue	VAC	600
RATED 1 PHASE OPERATING POWER, Pe		
115V	HP	2
230V	HP	5
RATED 3 PHASE OPERATING POWER, Pe		
200V	HP	10
230V	HP	10
460V	HP	20
575V	HP	25
MANUAL MOTOR CONTROLLER, MAX. SHORT CIRCUIT CURRENT ②		
@ 480V	kA	50
@ 600V	kA	25
MANUAL MOTOR CONTROLLER IN GROUP INSTALLATIONS, MAX. SHORT CIRCUIT CURRENT ②		
@ 480V	kA	50
Max. Fuse ③	A	450
@ 600V	kA	25
Max. Fuse ③	A	450
MANUAL MOTOR CONTROLLER SUITABLE FOR TAP CONDUCTOR PROTECTION IN GROUP INSTALLATIONS, MAX. SHORT CIRCUIT CURRENT		
@ 480V	kA	50
Max. Fuse ③	A	450
@ 600V	kA	25
Max. Fuse ③	A	450
MECHANICAL		
Mechanical Life	Ops.	100,000
ENVIRONMENTAL		
Ambient Operating Temp.	°C / °F	-20 to 60 / -4 to 140
Ambient Storage Temp.	°C / °F	-50 to 80 / 58 to 176
Altitude	m / ft.	2,000 / 6,562
Shock	g	15
ROHS COMPLIANCE For RoHS compliance documentation by product, refer to www.c3controls.com .		
① 330-T25S only. ② Not to exceed the max. fuse/circuit breaker size, per the National Electrical Code.		

For complete ratings and detailed specifications refer to www.c3controls.com.

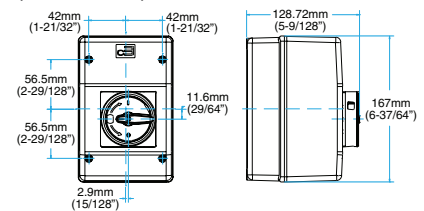
DIMENSIONS

Type E Construction



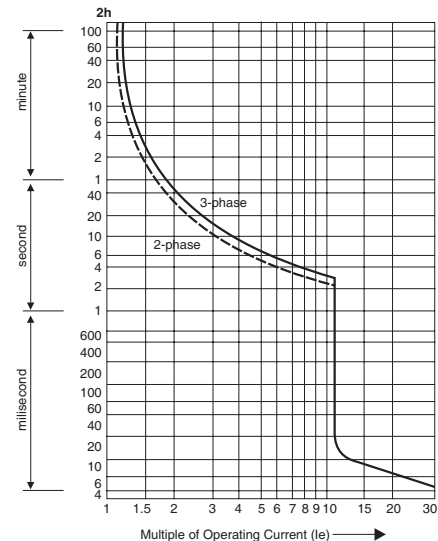
SIDE MOUNTED AUXILIARY
NOT REQUIRED FOR
TYPE E CONSTRUCTION

Enclosure (Frame Size 2)



TRIP CHARACTERISTICS

Series 330-T25S



For magnetic only curve, refer to www.c3controls.com

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)



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NON-REVERSING & REVERSING CONTACTORS

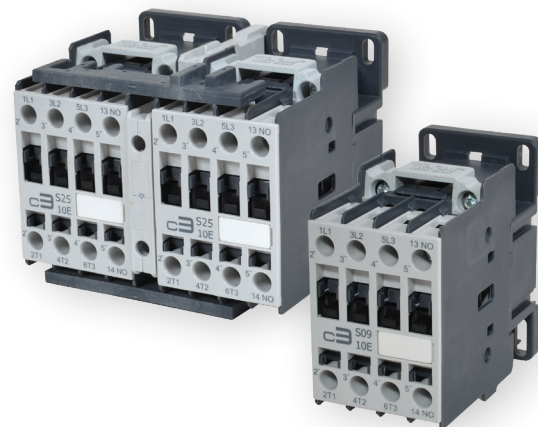


SERIES 300 & 310 PRODUCT PROFILE

The complete range of c3controls **Series 300 Non-Reversing and Series 310 Reversing Contactors** share common accessories, reducing inventory and enabling the devices to be customized for each application. Small size, IP20 guarded terminals with dual terminal markings, enhance the features and performance of your equipment.

DELIVERING SUPERIOR PRODUCT QUALITY AND MANUFACTURING EXCELLENCE

✓ Proven	Our Series 300 and 310 Standard Contactors are UL Listed and CE marked, meeting global standards requirements. 
✓ Compact Size	Reduced panel area for lower installed costs—Four (4) frame sizes directly interchangeable with other manufacturers.
✓ Lower Cost	Snap-on front mounted and side mounted auxiliary contacts install without the use of tools for lower installed costs.
✓ Convenient	Wide variety of AC and DC operating coils for control circuit application flexibility. 50A to 105A DC operated devices feature electronic coil control.
✓ Easy to Install	35mm DIN rail mounting for all contactors from 9A to 105A for fast and easy installation and removal, or panel mounting for more secure installation in high shock and vibration applications.
✓ Modular Design	Modular design allows easy installation of Series 320 Overload Relays and the complete range of Series 330 Motor Protection Circuit Breakers and accessories.
✓ Visible Certifications	Our product certifications and electrical ratings are clearly marked on the outside of the device for easy reference during installation.
✓ Environmentally Friendly	Environmentally friendly contacts are cadmium free and non-metallic materials are asbestos, halogen, and cadmium free. All c3controls products are compliant to the RoHS directives.
✓ Added Safety	IP20 guarded terminals with dual terminal markings prevent accidental contact with live parts.
✓ Lifetime Warranty*	Every product is backed by our 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.



UNIQUE PRODUCT LINE FEATURES

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.

Integral Auxiliary

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

Seamless Compatibility

- c3controls Series 310, 9A to 25A, AC/DC Reversing Contactors are compatible with directly mounted Series 320-B2 Overload Relays, and our 9A to 40A AC/DC Reversing Contactors direct mount onto 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 Series 300 Non-Reversing and Series 310 Reversing Contactors shares common accessories reducing inventory and simplifying installation and assembly.

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.

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.

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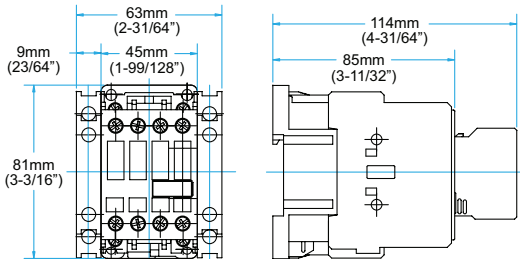
SPECIFICATIONS

		S09~S25	S32~S40	S50~S80	S95~S105
	UNITS				
ELECTRICAL GENERAL					
Rated Operating Frequency	Hz	25 ~ 400			
Rated Coil Frequencies	mΩ	AC: 50Hz, 60Hz, 50/60Hz DC & DC/AC: 50/60Hz			
ELECTRICAL UL/CSA APPLICATIONS					
Rated Operating Voltage, Ue	VAC	600			
General Purpose Current Rating	A	40	60	110	140
RATED 1 PHASE OPERATING CURRENT, Ie					
115V	A	24	34	80	100
230V	A	28	28	50	88
RATED 1 PHASE OPERATING POWER, Pe					
115V	HP	2	3	7-1/2	10
230V	HP	3	5	15	20
RATED 3 PHASE OPERATING CURRENT, Ie					
200V	A	25.3	32.2	62.1	92
230V	A	22	42	68	104
460V	A	21	40	65	96
575V	A	17	27	62	77
RATED 3 PHASE OPERATING POWER, Pe					
200V	HP	7-1/2	10	20	30
230V	HP	7-1/2	15	25	40
460V	HP	15	30	50	75
575V	HP	15	25	60	75
Size		0	1	2	3
Short Circuit Rating	kA	5	5	10	10
Max. Fuse Size	A	60	60	150	200
High Fault Short Circuit Rating	kA	100			
Max. Fuse Size	A	40	60	125	175
Electrical Endurance, AC-3 at Max. Rated 3 Phase Operating Power (@ 460V)	Ops. (mil.)	2.0	1.5	1.8	1.5
ELECTRICAL IEC APPLICATIONS					
Rated Insulation Voltage, Ui	V	1000			
Rated Impulse Voltage Withstand, Uimp	kV	6	6	8	8
Rated Operating Voltage, Ue	VAC	690			
Rated Thermal Current, Ith for Ambient Temp. <55° C (131° F)	A	45	60	110	140
RATED AC-1 OPERATING CURRENT, Ie					
At 55° C (131° F)	A	45	60	110	140
At 70° C (158° F)	A	32	48	88	110
RATED AC-3 OPERATING CURRENT, Ie					
220 ~ 240V; 380 ~ 400V; 415 ~ 440V	A	25	40	80	105
500V	A	19	32	63	85
660 ~ 690V	A	15	25	48	80
RATED 3 PHASE AC-3 OPERATING POWER, Pe					
220 ~ 240V	kW	6.5	11	22	30
380 ~ 400V	kW	11	18.5	37	55
415 ~ 440V	kW	12.5	22	45	55
500V	kW	15	25	45	65
660 ~ 690V	kW	15	30	45	65
RATED SHORT-TIME CURRENT, Icw					
1 Second	A	630	1265	2530	3300
5 Seconds	A	280	450	1130	1485
10 Seconds	A	200	400	800	1050
30 Seconds	A	115	230	460	600
1 Minute	A	80	165	325	430
3 Minutes	A	50	100	185	250
MAXIMUM ELECTRICAL SWITCHING RATE					
AC-1; AC-3	Ops./hr.	1200	1200	1200	600
AC-4	Ops./hr.	360	200	200	200
Electrical Endurance, AC-3 at Max. Rated 3 Phase Operating Power (@400V)	Ops. (mil.)	1.8	1.3	1.4	1.2
Making Capacity	A	450	550	1000	1280
BREAKING CAPACITY					
Ue ≤ 400V; Ue = 500V	A	250	450	920	1050
Ue = 690V	A	130	205	780	950
ROHS COMPLIANCE For RoHS compliance documentation by product, refer to www.c3controls.com .					

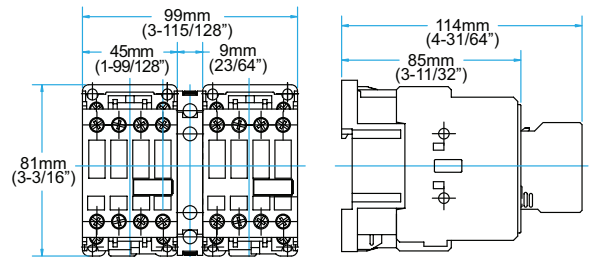
For complete ratings and detailed specifications refer to www.c3controls.com.

DIMENSIONS

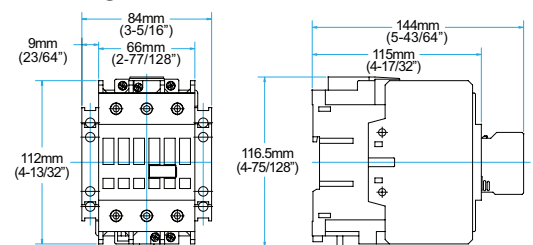
Non-Reversing, AC Coil (Series 300-S09, 300-S12, 300-S18 & 300-S25)



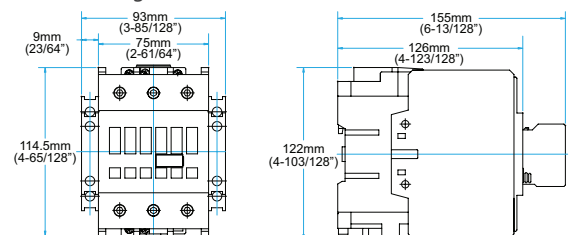
Reversing, AC Coil (Series 310-S09, 300-S12, 300-S18 & 300-S25)



Non-Reversing, AC Coil (Series 310-S50, 300-S65 & 300-S80)



Non-Reversing, AC Coil (Series 310-S95 & 300-S105)



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 c3controls.com to download product certifications.



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