

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

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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	Contactors provide 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.
✓ 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

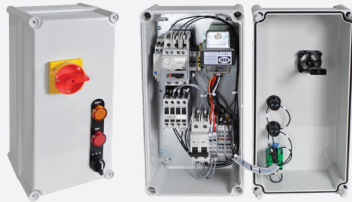


Carbon Steel Enclosure



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



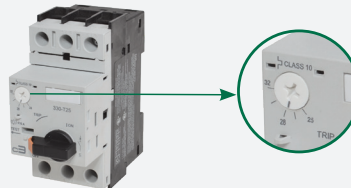
High fault short circuit current rating of 50kA @ 480V provides safety and reliability in high fault applications.

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 as standard.

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.

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

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



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
(Blank)	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

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.
- 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													
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	50													
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													

CIRCUIT DIAGRAMS

CIRCUIT DIAGRAM AND INSTRUCTIONS

POWER CIRCUIT

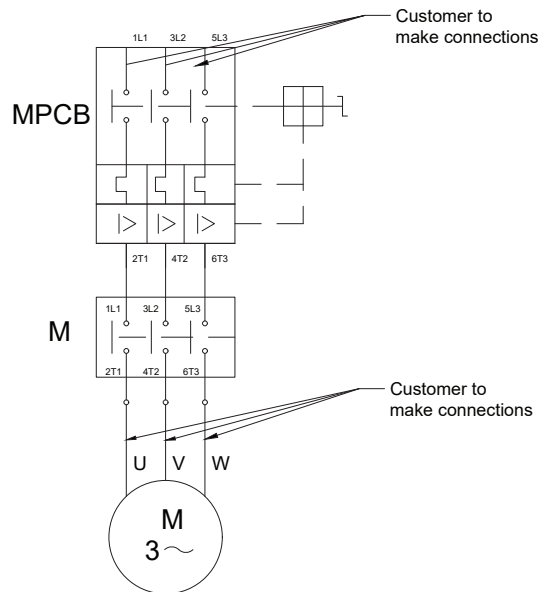
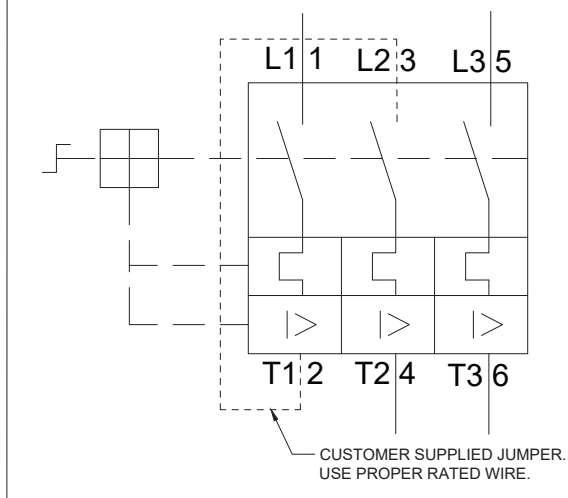


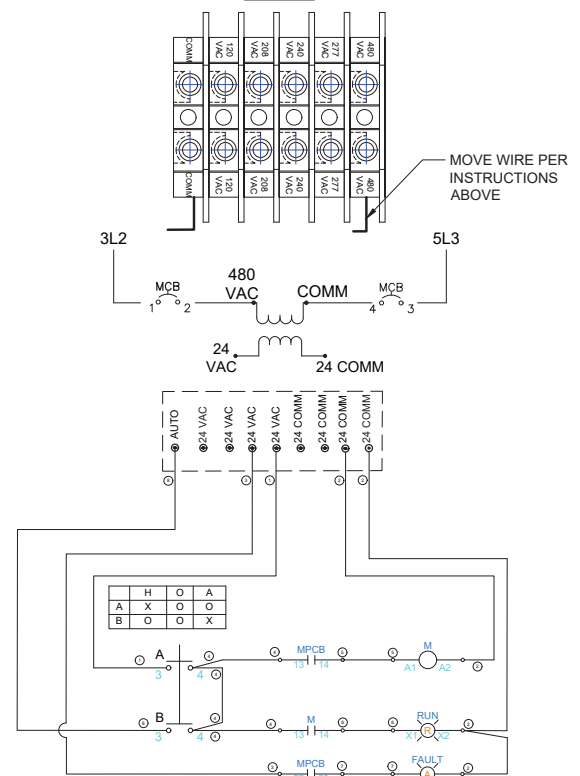
FIGURE 1 - SINGLE PHASE WIRING



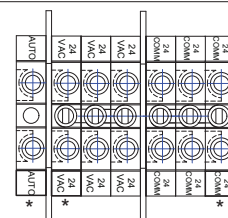
CONTROL CIRCUIT

- THE STARTER IS WIRED FOR 480VAC THREE PHASE 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 TERMINAL STRIP TO THE DESIRED VOLTAGE. (SEE BELOW)
- AVAILABLE OPERATING VOLTAGES ARE: 120VAC AND 240VAC SINGLE PHASE (SEE FIGURE 1 FOR SINGLE PHASE) AND 208VAC, 240VAC, AND 480VAC THREE PHASE.

PRIMARY WIRING TERMINAL BLOCK
SECTION



24VAC / AUTO TERMINAL BLOCK SECTION

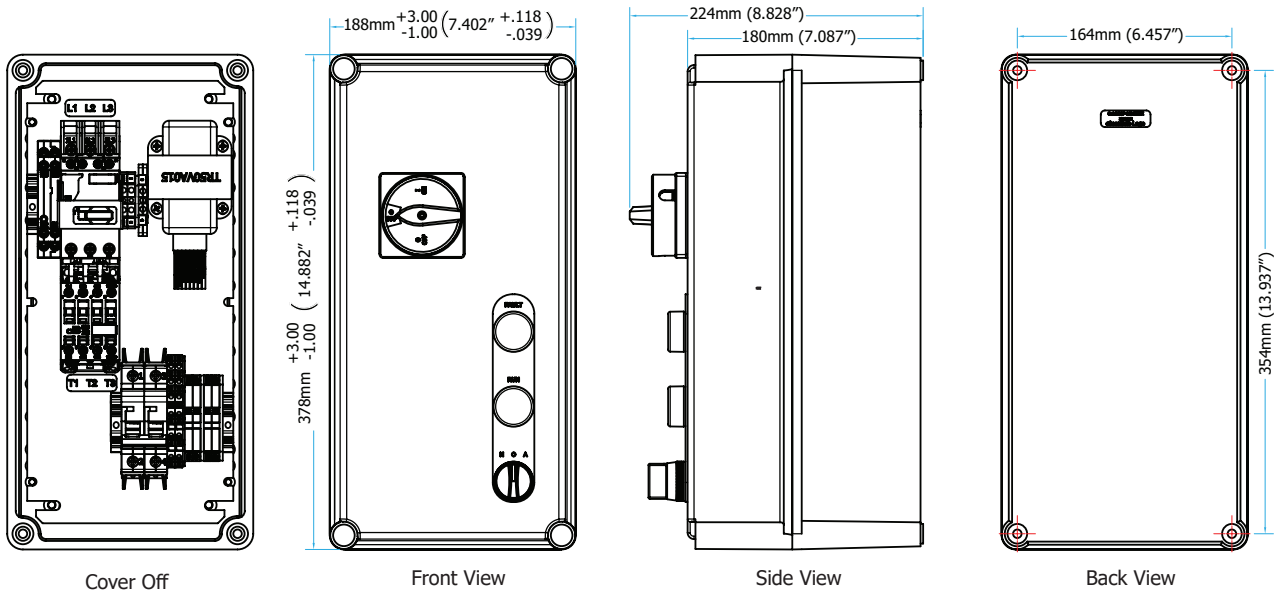


*OUTLINED TERMINAL POINTS ARE
AVAILABLE FOR CUSTOMER CONNECTION

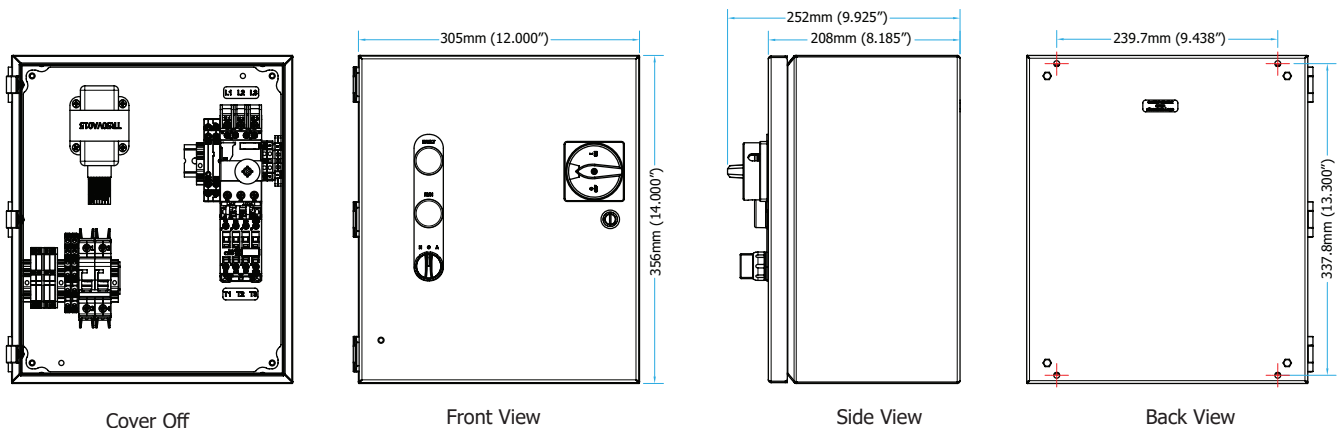
CONTROL CIRCUIT INSTRUCTIONS:

- TO WIRE A DESIRED INPUT FOR USE AS THE "AUTO" INPUT, USE THE TERMINAL BLOCKS LABELED "AUTO" AND "24VAC" OR "24COMM" LOCATED AT THE BOTTOM OF THE PANEL.
- UP TO FOUR (4) CONTACTOR AUXILIARY CONTACTS CAN BE ADDED IF NEEDED:
 - C3CONTROLS PART # 300-SFA10 NORMALLY OPEN
 - C3CONTROLS PART # 300-SFA01 NORMALLY CLOSED

ENCLOSED STARTER ASSEMBLIES WITH POLYCARBONATE ENCLOSURE



ENCLOSED STARTER ASSEMBLIES WITH CARBON STEEL ENCLOSURE



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