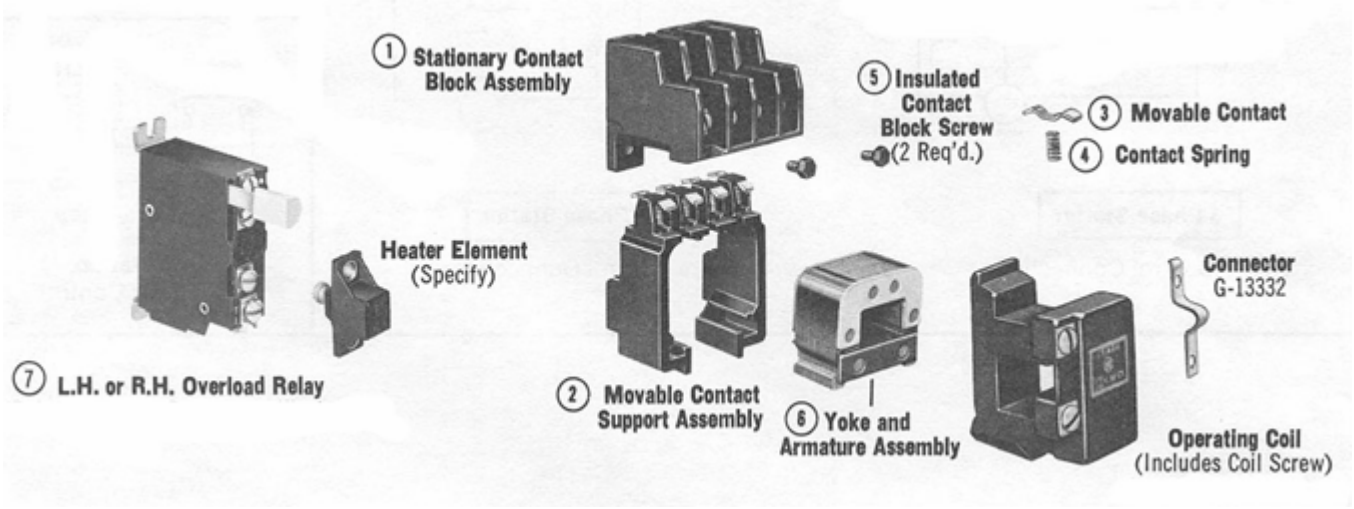
Bulletin 509 Single Phase Full Voltage Non-Reversing NEMA Starters
Size 00 (all series)

Renewal Parts

The 509 Single phase Size 00 starter consists of two switching poles, an extra pole to be used as a control circuit hold-in contact and overload protection is provided for one phase.

Figure 1 is an exploded view of a 509 starter – the Series A construction.



Renewal Parts for Series 'A' Devices

Item	Part Description	AB Part Number
1	Stationary Contact Block with Stationary Contacts	X-241077
2	Movable Contact Support with Movable Contacts and Springs	X-241535
	Movable Contact Support less Contacts and Springs	F-20964
3-4	Complete Set of Movable Contacts and Springs	Z-21102
5	Insulated Contact Block Screw	M-7243
6	Yoke and Armature Assembly	Z-31857
7	Overload Relay – Manual Reset (quantity of one required)	815-BOV4
	Overload Relay – Automatic Reset	Not Available
-	Complete Contactor	Not Available
-	Main Panel Mounting Plate	Not Available
-	Operating Coils	See coil table

Operating Coils for Series 'A' Devices

Cat No. Coil Suffix Code	AC Volts	Hz	Coil Renewal Part Number Series A
XWJ	24	60	69A27
XD, XWD	115-120	60	69A86
	110	50	
XS, XWS	110-115	50	69A86
XH, XWH	200-208	60	69A113
XP, XWP	220-230	50	69A83
XA, XWA	230-240	60	69A83
XT, XWT	230-240	50	69A83
XF, XWF	277	60	69A52

Bulletin 509 Single Phase Full Voltage Non-Reversing NEMA Starters, Size 00 (all series)

Renewal Parts for Series 'B' Devices

Part Description	AB Part Number
Contactor	Not Available
Contacts for Contactor	Not Available
Power Wiring Kit	Not Available
Main Panel Mounting Plate	599-NAT
Eutectic Overload Relay	592-BOV4
Solid State Overload Relay	See page 3
Operating Coil	See coil table

Renewal Parts for Series 'C' Devices

There was no bulletin 509 single phase, size 00, series 'C' construction. The series letter was advanced from Series B to Series D.

Renewal Parts for Series 'D' Devices

** = coil voltage suffix code

Part Description	AB Part Number
Contactor	500-TO**930
Contacts for Contactor	Not Available
Power Wiring Kit	105-PW23
Main Panel Mounting Plate	599-NAT
Eutectic Overload Relay	592-BOV4
Solid State Overload Relay	See page 3
Operating Coil	See coil table

Operating Coils for Series 'B' and 'D' Devices

Cat No. Coil Suffix Code	AC Volts	Hz	AB Part Number Series B
XWJ	24	60	GA013
XD, XWD	115-120	60	GA473
	110	50	
XS, XWS	110-115	50	GA473
XH, XWH	200-208	60	GA049
XP, XWP	220-230	50	GA474
XA, XWA	230-240	60	GA474
XT, XWT	230-240	50	GA442
XF, XWF	277	60	GA060

Cat No. Coil Suffix Code	AC Volts	Hz	AB Part Number Series D
XWJ	24	60	TA013
XD, XWD	115-120	60	TA473
	110	50	
XS, XWS	110-115	50	TA473
XH, XWH	200-208	60	TA049
XP, XWP	220-230	50	TA474
XA, XWA	230-240	60	TA474
XT, XWT	230-240	50	TA440
XF, XWF	277	60	TA480

Bulletin 509 Single Phase Full Voltage Non-Reversing NEMA Starters, Size 00 (all series)

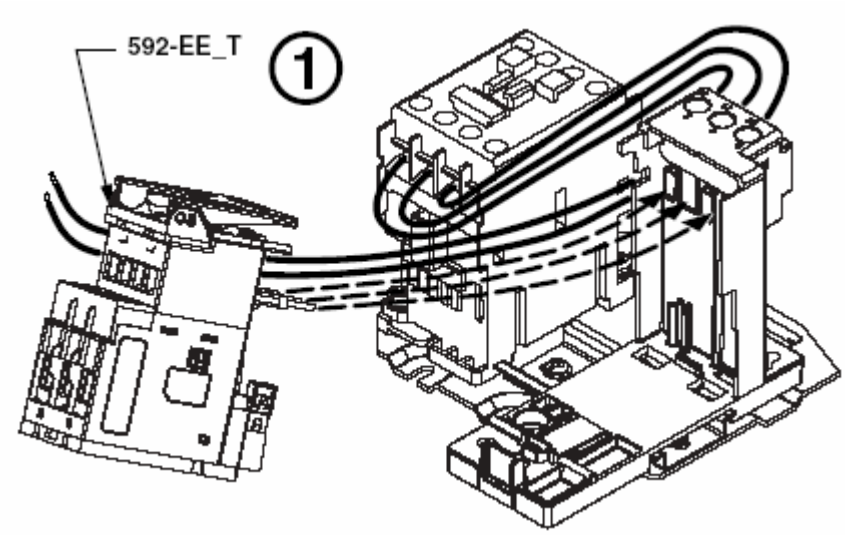
Solid-State Overload Relay - For Series 'B' Construction

E1 Plus Overload Relay with Automatic/Manual Reset, Field Selectable Trip Class 10, 15 or 30, Phase Loss Protection
Order the replacement overload relay catalog number from the table below. For example, the E1 Plus Class 10 overload relay for a 509-TOD-S1A would be ordered as catalog number 592S-EEPT.
To mount the E1 Plus overload relay, the overload relay panel adapter will need to be replaced. Order part number 193-EPB. The 193-EPB panel adapter is compatible will all of the E1 Plus overload listed in the table below.

Size	Full Load Current Adjustment Range (A)	Class 10 Cat. No. Suffix Code	Class 10 Overload Cat. No.	Class 20 Cat. No. Suffix Code	Class 20 Overload Cat. No.
E1 Plus Overload Relay Manual Reset, Phase Loss Protection, Class 10 or 20					
00	2 to 7	-S1A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)	-S2A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)
00	5 to 15	-S1B	592S-EERT	-S2B	592S-EERT
E1 Plus Overload Relay Automatic/Manual Reset, Phase Loss Protection, Class 10 or 20					
00	2 to 7	-S4A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)	-S5A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)
00	5 to 15	-S4B	592S-EERT	-S5B	592S-EERT

Solid-State Overload Relay - For Series 'D' Construction

(E1 Plus overload shown below)



E1 Plus Overload Relay with Automatic/Manual Reset, Field Selectable Trip Class 10, 15, 20, or 30, Phase Loss Protection
Order the replacement overload relay catalog number from the table below. For example, the E1 Plus Class 10 overload relay for a 509-TOD-S1A would be ordered as catalog number 592S-EEPT. If the Overload Panel Adapter needs to be replaced, order part number 193-EPB. The 193-EPB panel adapter is compatible will all of the E1 Plus overload listed in the table below.

Size	Full Load Current Adjustment Range (A)	Class 10 Cat. No. Suffix Code	Class 10 Overload Cat. No.	Class 20 Cat. No. Suffix Code	Class 20 Overload Cat. No.
E1 Plus Overload Relay Manual Reset, Phase Loss Protection, Class 10 or 20					
00	2 to 7	-S1A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)	-S2A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)
00	5 to 15	-S1B	592S-EERT	-S2B	592S-EERT
E1 Plus Overload Relay Automatic/Manual Reset, Phase Loss Protection, Class 10 or 20					
00	2 to 7	-S4A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)	-S5A	592S-EEPT (1 to 5 amps) or 592S-EERT (3.2 to 16 amps)
00	5 to 15	-S4B	592S-EERT	-S5B	592S-EERT

Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Allen-Bradley office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

Throughout this document we use notes to make you aware of safety considerations:

ATTENTION

Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

Use only replacement parts and devices recommended by Rockwell Automation to maintain the integrity of the equipment. It is the user's responsibility to ensure that the renewal part number selected is properly matched to the model, series and revision level of the equipment being serviced.

ATTENTION

Servicing energized Industrial Control Equipment can be hazardous. Severe injury or death can result from electrical shock, burn, or unintended actuation of controlled equipment. Recommended practice is to disconnect and lockout control equipment from power sources, and release stored energy, if present.

Refer to **National Fire Protection Association Standard No. NFPA70E, Part 2 and (as applicable) OSHA rules for Control of Hazardous Energy Sources (Lockout/Tagout) and OSHA Electrical Safety Related Work Practices** for safety related work practices, including procedural requirements for lockout/tagout, and appropriate work practices, personnel qualifications and training requirements where it is not feasible to de-energize and lockout or tagout electric circuits and equipment before working on or near exposed circuit parts.