Migration Solutions

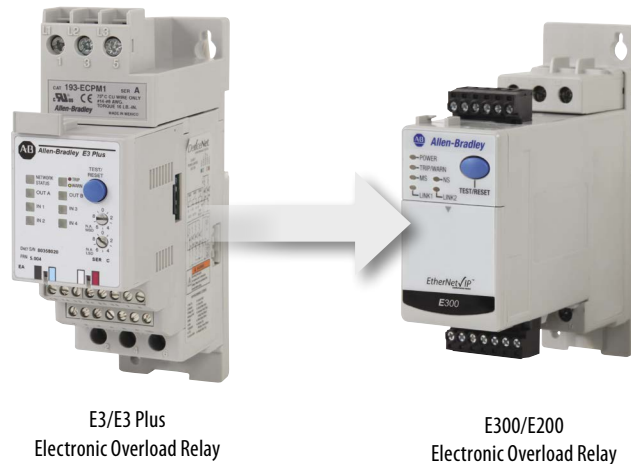## E3/E3 Plus to E300/E200 Electronic Overload Relay

Why Upgrade or Migrate

While the E3/E3 Plus Overload Relay has been a valuable part of our portfolio for the past twenty years, this product will no longer be available for sale after October 2019.* Now is the time to migrate to the E300™ or E200™ Electronic Overload Relay. As the latest state-of-the-art electronic overload relay offering, the E300/E200 Electronic Overload Relay offers many modular features designed to help improve your motor control and protection needs.

E300/E200 Basic Product Overview

• Modular design for application customization with various sensing, control and communication module options

• Diagnostic information to monitor motor performance

– Current, voltage, power and energy

– % Thermal capacity utilization

– Time to trip/reset

– Trip snapshot

– Trip/warning histories

• Logix integration with add-on profiles, add-on instructions and pre-configured operator faceplate objects

• Supports Automatic Device Configuration (ADC-EtherNet/IP) and Automatic Device Replacement (ADR-DeviceNet)

• DeviceLogix™ Technology Enabled

• Optional Dual port EtherNet/IP, Single port DeviceNet or Universal Serial Bus (USB) communication options

*Discontinued date may be subject to change.

E3/E3 Plus
Electronic Overload Relay

E300/E200
Electronic Overload Relay

Why Upgrade or Migrate?

Rockwell Automation understands that your overload relays are a critical asset in your automation system, and we support that by providing you with the latest technology to maximize your investment. New technologies can improve and extend the operation of existing equipment and provide an immediate boost to productivity. By migrating from your legacy E3/E3 Plus™ Overload to a new E300/E200 Electronic Overload Relay, you can help to decrease downtime, increase speed to market, and optimize operations well into the future.

We will help you to meet this demand to innovate by proactively planning and managing your transition every step of the way to help you get the highest possible return on your automation investment.

ACTIVE* → ACTIVE MATURE* → END OF LIFE* → DISCONTINUED*

*ACTIVE: Most current offering within a product category.
ACTIVE MATURE: Product is fully supported, but a newer product or family exists. Gain value by migrating.
END OF LIFE: Discontinued date announced — actively execute migrations and last time buys. Product generally orderable until the discontinued date.[1]
DISCONTINUED: New product no longer manufactured or procured.[2] Repair/exchange services may be available.
1 - Outages on specific items may occur prior to the Discontinued date. 2 - Limited stock may be available in run-out mode, regionally.

Rockwell Automation

E3/E3 Plus to E300/E200 Electronic Overload Relay

	Feature	ANSI/IEEE Device No.	EC1	EC2	EC3	EC4	EC5	E200	E300
Protection	Current Range (A)	N/A	0.4…5000	0.4…5000	0.4…5000	0.4…5000	0.4…5000	0.5…65000	0.5…65000
	Thermal Overload	49/51	✓	✓	✓	✓	✓	✓	✓
	Auto or Manual Reset	86	✓	✓	✓	✓	✓	✓	✓
	Mechanical Jam (Stall)	48	✓	✓	✓	✓	✓	✓	✓
	Undercurrent	37	✓	✓	✓	✓	✓	✓	✓
	Phase Loss	46	✓	✓	✓	✓	✓	✓	✓
	Zero Sequence Ground Fault	50G		✓	✓	✓	✓	✓	✓
	Phase Reversal	47					✓	✓	✓
	Current Imbalance	46	✓	✓	✓	✓	✓	✓	✓
	PTC Thermistor Monitoring	49		✓	✓		✓	✓	✓
	Starts / Hour	66		✓	✓	✓	✓	✓	✓
	Time Between Starts	N/A		✓	✓	✓	✓	✓	✓
	Speed Switch Input	14		✓	✓	✓	✓	✓	✓
	Undervoltage	27					✓	✓	✓
	Overvoltage	59					✓	✓	✓
	Power Factor	55					✓	✓	✓
	Underfrequency	81L					✓	✓	✓
	Overfrequency	81I					✓	✓	✓
	Underpower	37					✓	✓	✓
	Reactive Power	N/A					✓	✓	✓
	Resistance Temperature Detection (RTD)	49						✓	✓
	Heat Trace	N/A				✓			
Metering	Phase Current Magnitudes			✓	✓	✓	✓	✓	✓
	Three-Phase Average Current			✓	✓	✓	✓	✓	✓
	Percent Motor Load			✓	✓	✓	✓	✓	✓
	Current Imbalance Percentage			✓	✓	✓	✓	✓	✓
	Ground Current Magnitude			✓	✓	✓	✓	✓	✓
	System Frequency						✓	✓	✓
	Phase Voltage Magnitudes						✓	✓	✓
	Average Voltage						✓	✓	✓
	Voltage Imbalance Percentage						✓	✓	✓
	Real Power (kW)						✓	✓	✓
	Reactive Power (kVAR)						✓	✓	✓
	Apparent Power (kVA)						✓	✓	✓
	Power Factor						✓	✓	✓
	Energy (kWhr)						✓	✓	✓
	kVARhr						✓	✓	✓
	% Thermal Capacity Used (TCU)			✓	✓	✓	✓	✓	✓
	Starts Available			✓	✓	✓	✓	✓	✓
	Resistance Temperature Detection (RTD)							✓	✓
I/O	Output Relays		1	2	2	2	2	2-11	2-11
	Digital Inputs		2	4	4	4	6	2-22	2-22
	Analog Outputs		2					3-12	3-12
	Analog Input		2					1-4	1-4
Integration	EtherNet/IP Communications		✓	✓	✓	✓	✓		✓
	DeviceNet Communications		✓	✓	✓	✓	✓		✓
	Universal Serial Bus (USB) Type B							✓	
	Studio5000/Logix Compatible		✓	✓	✓	✓	✓		✓
	DeviceLogix Technology			✓	✓	✓	✓	✓	✓
	Supported in Connected Components Workbench (CCW)							✓	

Migration Options & Application

The E200/E300 Electronic Overload Relay provides a flexible design and advanced intelligence. With real-time motor diagnostic information to proactively indicate when a motor is having a problem allowing you to efficiently troubleshoot.

Communication Module

193-ECM*	Features
	• EtherNet/IP
	• DeviceNet
	• E200/Parameter Configuration Module (PCM)*
	Includes Single USB Type B interface port

Control Module

193-EIO*	Control Voltage	I/O		I/O and Protection	
		Inputs	Relay Outputs	Inputs	Relay Outputs
	110…120V AC 50/60 Hz	4	3	2	2
		2	2	–	–
	220…240V AC 50/60 Hz	4	3	2	2
		2	2	–	–
	24V DC	6	3	4	2
		2	2	–	–

Sensing Module

592/193-ESM*	Sensing Options:	Current Range:
	• Voltage/Current/Ground Fault	• 0.5…30 A
	• Current/Ground Fault	• 6…60 A
	• Current	• 10…100 A
		• 20…200 A
		Current transformer solutions available for applications above 200 A

*Must use a combination of all three modules to create a complete E300/E200 Overload Relay.

Ideal Applications

• Water/Wastewater
• Mining
• Petrochemical
• Process

Usability

• Wide current range
• Advanced performance and diagnostics
• Embedded communications
• Modularity
• Multiple expansion options

Dimensional Comparison of E3 Plus to E300

The mounting footprint of the E3/E3 Plus as compared to the E200/E300 is relatively the same. In addition, the E200/E300 offers a specific sensing module ("E3T" suffix) that provides an identical DIN-RAIL or panel-mount configuration.

FRONT

PROFILE

E3/E3 Plus — E300 — E3/E3 Plus — E300

148 mm — 45 mm — 45 mm — 115 mm — 126 mm

Electrical Comparison of E3 Plus to E300

The terminal layout of the E200/E300 is similar to that of the E3/E3 Plus Overload. In addition, the E200/E300 offers a robust set of removal terminal blocks for easier installation and/or device replacement.

E3 Plus

Terminal Designation	Reference	Description
1	IN 1	General-purpose sinking input number 1
2	IN 2	General-purpose sinking input number 2
3	IN 3	General-purpose sinking input number 3 ❶❷
4	IN 4	General-purpose sinking input number 4 ❶❷
5	V+	+24V DC supply for inputs
6	V+	
7	IN 5	General-purpose sinking input number 5 ❷
8	IN 6	General-purpose sinking input number 6 ❷
⏚	End	Earth Ground ❸
13/14	OUT A	Output A
23/24	OUT B	Output B ❶❷
95/96	Trip Relay	Trip Relay
IT1/IT2	PTC	Thermistor (PTC) input ❶❹
S1/S2	—	External ground fault sensor input ❷❺

❶ Features are available only with the E3 Plus Overload Relay (cat. nos. 193/592-EC2and 193/592-EC3).
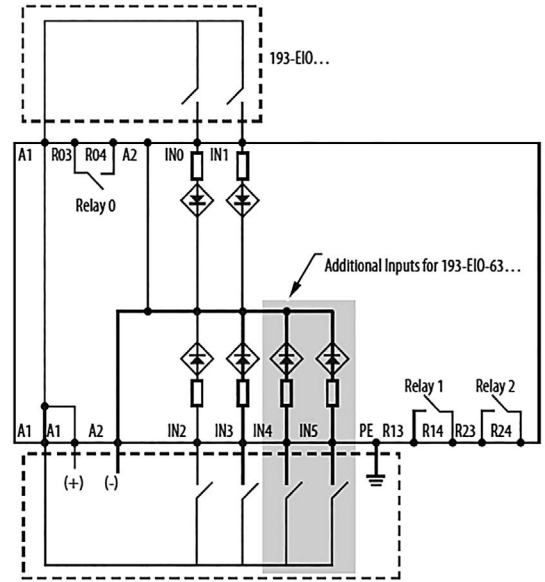❷ Available only on cat. nos. 193/592-EC5_ _.
❸ An earth ground connection to this terminal will assist in obtaining compliance with electromagnetic compatibility requirements.
❹ The use of shielded cable is recommended for the positive PTC thermistor circuit to assist in obtaining compliance with electromagnetic compatibility requirements.
❺ Available only on cat. nos. 193/592-EC3_ _ and 193/592-EC4_ _.

E200/E300

DeviceNet Communication Configuration

Terminal	Signal	Function	Color
1	V-	Common	Black
2	CAN_L	Signal Low	Blue
3	Drain	Shield	Non-insulated
4	CAN_H	Signal High	White
5	V+	Power Supply	Red

The E3/E3 Plus overload received its 24VDC power from the DeviceNet communication trunk. The E300 overload has multiple voltage supply options of 24VDC, 120VAC, and 240VAC. If utilizing the E300 24VDC supply option in conjunction with the E300 DeviceNet communication module, the 24VDC can be sourced from the DeviceNet communication trunk or via other external means. The E300 DeviceNet communication module consumes a maximum current of 50 mA at 24VDC. If multiple voltage supply options are required, E200/E300 expansion I/O can be added.

Programming Comparison of E3 Plus to E300 & Emulation Mode

The E300 Overload Relay used with the Series B Control Module (Note: Series A not supported) supports an E3/E3 Plus overload relay "Emulation Mode" when it is attached to a DeviceNet Communication Module. This allows a user to re-use configuration parameters from the E3/E3 Plus overload relay when utilizing configuration tools like ADR, the DeviceNet Configuration Terminal (193-DNCT), and RSNetWorx for DeviceNet. The Emulation Mode feature when enabled, replicates exactly the legacy parameter set of the target E3/E3 Plus device it is emulating. As such, the DeviceNet input/output assemblies are identical. Below is a table which provides a list of valid E3/E3 Plus emulated profiles that the E300 on DeviceNet supports. The E300 on DeviceNet supports RSNetWorx for DeviceNet Revision 27.00.00 or later. Proper interface within the software for the E300 and Emulation Mode profiles require separate EDS files which are available for download from the PCDC.

Valid E300 DeviceNet Emulated E3/E3 Plus Profiles

Product Code	Name String	Model	Description	Range	Lower	Upper	Schematic Note
3	E3 (1…5 A)	EC1	E3	(1…5 A)	1	5	Emulation Mode Parameter 300 = 3 [E3 (1…5 A)]
4	E3 Plus (1…5 A)	EC2	E3 Plus	(1…5 A)	1	5	Emulation Mode Parameter 300 = 4 [E3 Plus (1…5 A)]
5	E3 (3…15 A)	EC1	E3	(3…15 A)	3	15	Emulation Mode Parameter 300 = 5 [E3 (3…15 A)]
6	E3 Plus (3…15 A)	EC2	E3 Plus	(3…15 A)	3	15	Emulation Mode Parameter 300 = 6 [E3 Plus (3…15 A)]
7	E3 (5…25 A)	EC1	E3	(5…25 A)	5	25	Emulation Mode Parameter 300 = 7 [E3 (5…25 A)]
8	E3 Plus (5…25 A)	EC2	E3 Plus	(5…25 A)	5	25	Emulation Mode Parameter 300 = 8 [E3 Plus (5…25 A)]
9	E3 (9…45 A)	EC1	E3	(9…45 A)	9	45	Emulation Mode Parameter 300 = 9 [E3 (9…45 A)]
10	E3 Plus (9…45 A)	EC2	E3 Plus	(9…45 A)	9	45	Emulation Mode Parameter 300 = 10 [E3 Plus (9…45 A)]
11	E3 (18…90 A)	EC1	E3	(18…90 A)	18	90	Emulation Mode Parameter 300 = 11 [E3 (18…90 A)]
12	E3 Plus (18…90 A)	EC2	E3 Plus	(18…90 A)	18	90	Emulation Mode Parameter 300 = 12 [E3 Plus (18…90 A)]
29	E3 (0.4…2 A)	EC1	E3	(0.4…2 A)	0.4	2	Emulation Mode Parameter 300 = 29 [E3 (0.4…2 A)]
30	E3 Plus (0.4…2 A)	EC2	E3 Plus	(0.4…2 A)	0.4	2	Emulation Mode Parameter 300 = 30 [E3 Plus (0.4…2 A)]
31	E3 (9…5000 A)	EC1	E3	(9…5000 A)	9	5000	Emulation Mode Parameter 300 = 31 [E3 EC1 (9…5000 A)]
36	E3 EC3 (1…5 A)	EC3	E3 Plus external GF only	(1…5 A)	1	5	Emulation Mode Parameter 300 = 36 [E3 EC3 (1…5 A)]
38	E3 EC3 (3…15 A)	EC3	E3 Plus external GF only	(3…15 A)	3	15	Emulation Mode Parameter 300 = 38 [E3 EC3 (3…15 A)]
40	E3 EC3 (5…25 A)	EC3	E3 Plus external GF only	(5…25 A)	5	25	Emulation Mode Parameter 300 = 40 [E3 EC3 (5…25 A)]
42	E3 EC3 (9…45 A)	EC3	E3 Plus external GF only	(9…45 A)	9	45	Emulation Mode Parameter 300 = 42 [E3 EC3 (9…45 A)]
44	E3 EC3 (18…90 A)	EC3	E3 Plus external GF only	(18…90 A)	18	90	Emulation Mode Parameter 300 = 44 [E3 EC3 (18…90 A)]
46	E3 EC3 (0.4…2 A)	EC3	E3 Plus external GF only	(0.4…2 A)	0.4	2	Emulation Mode Parameter 300 = 46 [E3 EC3 (0.4…2 A)]
48	E3 EC3 (9…5000 A)	EC3	E3 Plus external GF only	(9…5000 A)	9	5000	Emulation Mode Parameter 300 = 48 [E3 EC3 (9…5000 A)]
50	E3 EC4 (1…5 A)	EC4	E3 Plus non-motor	(1…5 A)	1	5	Emulation Mode Parameter 300 = 50 [E3 EC4 (1…5 A)]
52	E3 EC4 (3…15 A)	EC4	E3 Plus non-motor	(3…15 A)	3	15	Emulation Mode Parameter 300 = 52 [E3 EC4 (3…15 A)]
54	E3 EC4 (5…25 A)	EC4	E3 Plus non-motor	(5…25 A)	5	25	Emulation Mode Parameter 300 = 54 [E3 EC4 (5…25 A)]
56	E3 EC4 (9…45 A)	EC4	E3 Plus non-motor	(9…45 A)	9	45	Emulation Mode Parameter 300 = 56 [E3 EC4 (9…45 A)]
58	E3 EC4 (18…90 A)	EC4	E3 Plus non-motor	(18…90 A)	18	90	Emulation Mode Parameter 300 = 58 [E3 EC4 (18…90 A)]
60	E3 EC4 (0.4…2 A)	EC4	E3 Plus non-motor	(0.4…2 A)	0.4	2	Emulation Mode Parameter 300 = 60 [E3 EC4 (0.4…2 A)]
62	E3 EC4 (9…5000 A)	EC4	E3 Plus non-motor	(9…5000 A)	9	5000	Emulation Mode Parameter 300 = 62 [E3 EC4 (9…5000 A)]
64	E3 EC5 (1…5 A)	EC5	E3 Plus w/Voltage, external GF only	(1…5 A)	1	5	Emulation Mode Parameter 300 = 64 [E3 EC5 (1…5 A)]
66	E3 EC5 (3…15 A)	EC5	E3 Plus w/Voltage, external GF only	(3…15 A)	3	15	Emulation Mode Parameter 300 = 66 [E3 EC5 (3…15 A)]
68	E3 EC5 (5…25 A)	EC5	E3 Plus w/Voltage, external GF only	(5…25 A)	5	25	Emulation Mode Parameter 300 = 68 [E3 EC5 (5…25 A)]
70	E3 EC5 (9…45 A)	EC5	E3 Plus w/Voltage, external GF only	(9…45 A)	9	45	Emulation Mode Parameter 300 = 70 [E3 EC5 (9…45 A)]
72	E3 EC5 (18…90 A)	EC5	E3 Plus w/Voltage, external GF only	(18…90 A)	18	90	Emulation Mode Parameter 300 = 72 [E3 EC5 (18…90 A)]
74	E3 EC5 (0.4…2 A)	EC5	E3 Plus w/Voltage, external GF only	(0.4…2 A)	0.4	2	Emulation Mode Parameter 300 = 74 [E3 EC5 (0.4…2 A)]
76	E3 EC5 (9…5000 A)	EC5	E3 Plus w/Voltage, external GF only	(9…5000 A)	9	5000	Emulation Mode Parameter 300 = 76 [E3 EC5 (9…5000 A)]

E300 Emulation Mode – I/O Mapping

E3/E3 Plus I/O	E300 on DNet I/O while in E3 Plus Emulation Mode
Outputs	
Out A – 13/14	Relay 0 – R03/R04
Out B – 23/24	Relay 2 – R23/R24*
OL Trip – 95/96	Relay 1 – R13/14
Inputs	
IN1	IN0
IN2	IN1
IN3	IN2
IN4	IN3

*This output is not available for E300 control modules that have fewer than 3 outputs.

Once the OL is in Emulation Mode, at left are the respective non-configurable I/O mappings for the device.

Note: In the event the E300 control module does not have sufficient I/O for the emulated E3/E3 Plus, a single expansion I/O module can be used to supplement for the remaining I/O. However, the number of I/O points cannot exceed that of the device it is emulating (i.e. expansion I/O beyond that which is needed for emulation mode will not be usable). The expansion operator diagnostic station (SDS) can be used to enable or disable Emulation Mode, but does not provide any functionality beyond that.

The SDS will also indicate when Emulation is enabled. The E300 while in emulation mode will accept E3 Plus DeviceLogix (DLX) code via ADR or through RSNetWorx for DeviceNet. It requires a couple of extra simple steps that the user needs to perform:

Step 1: Select the desired E3 Plus emulation mode profile (parameter 300 – E300 Mode)

Step 2: Enable E3 Plus Translate DLX Code (parameter 305 – E3 Plus Emulation Mode). This second step will convert E3 Plus DLX code written with v1.0 of the DLX library to v5.0 of the DLX library that runs within the E300 OL.

Component Cross-reference Table

Discontinued Part Number	E3/E3 Plus Contactor Mounting/Description	E3/E3 Plus FLA Range	Recommended E300 Replacement Part Numbers	Conversion Notes
193-EC1PB	100-C09...100-C23	0.4 - 2.0A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Sensing Module current range is 0.5 - 30A
193-EC1AB	100-C09...100-C23, 300-A0*	1 - 5A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1AD	100-C30...100-C43	1 - 5A	193-ECM-DNT + 193-ESM-I-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1BB	100-C09...100-C23, 300-A0*	3 - 15A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1BD	100-C30...100-C43	3 - 15A	193-ECM-DNT + 193-ESM-I-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1CB	100-C09...100-C23, 300-A0*	5 - 25A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1CD	100-C30...100-C43	5 - 25A	193-ECM-DNT + 193-ESM-I-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1DD	100-C30...100-C43, 300-B0*, 300-C0*	9 - 45A	193-ECM-DNT + 193-ESM-I-60A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1DE	100-C60...100-C97	9 - 45A	193-ECM-DNT + 193-ESM-I-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1EE	100-C60...100-C97, 300-D0*	18 - 90A	193-ECM-DNT + 193-ESM-I-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1FF	100-D95...100-D180	28 - 140A	193-ECM-DNT + 193-ESM-I-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1GF	100-D95...100-D180, 300-E0*	42 - 210A	193-ECM-DNT + 193-ESM-I-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1GG	100-D210...100-D420, 300-F0*	42 - 210A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-201 (3 required)	No direct contactor mounting is available in E300 line
193-EC1HG	100-D210...100-D420, 300-F0*	60 - 302A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-301 (3 required)	No direct contactor mounting is available in E300 line
193-EC1JG	100-D210...100-D420	84 - 420A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-401 (3 required)	No direct contactor mounting is available in E300 line
193-EC1KH	100-D630...100-D860	125 - 630A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-601 (3 required)	No direct contactor mounting is available in E300 line
193-EC1LH	100-D630...100-D860	172 - 860A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-102 (3 required)	No direct contactor mounting is available in E300 line
193-EC1ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-I-30A-E3T + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2PB	100-C09...100-C23	0.4 - 2.0A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Sensing Module current range is 0.5 - 30A
193-EC2AB	100-C09...100-C23, 300-A0*	1 - 5A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2AD	100-C30...100-C43	1 - 5A	193-ECM-DNT + 193-ESM-IG-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2BB	100-C09...100-C23, 300-A0*	3 - 15A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2BD	100-C30...100-C43	3 - 15A	193-ECM-DNT + 193-ESM-IG-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2CB	100-C09...100-C23, 300-A0*	5 - 25A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting availan with E300
193-EC2CD	100-C30...100-C43	5 - 25A	193-ECM-DNT + 193-ESM-IG-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2DD	100-C30...100-C43, 300-B0*, 300-C0*	9 - 45A	193-ECM-DNT + 193-ESM-IG-60A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2DE	100-C60...100-C97	9 - 45A	193-ECM-DNT + 193-ESM-IG-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2EE	100-C60...100-C97, 300-D0*	18 - 90A	193-ECM-DNT + 193-ESM-IG-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2FF	100-D95...100-D180	28 - 140A	193-ECM-DNT + 193-ESM-IG-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2GF	100-D95...100-D180, 300-E0*	42 - 210A	193-ECM-DNT + 193-ESM-IG-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2GG	100-D210...100-D420, 300-F0*	42 - 210A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-201 (3 required)	No direct contactor mounting is available in E300 line
193-EC2HG	100-D210...100-D420, 300-F0*	60 - 302A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-301 (3 required)	No direct contactor mounting is available in E300 line
193-EC2JG	100-D210...100-D420	84 - 420A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-401 (3 required)	No direct contactor mounting is available in E300 line
193-EC2KH	100-D630...100-D860	125 - 630A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-601 (3 required)	No direct contactor mounting is available in E300 line
193-EC2LH	100-D630...100-D860	172 - 860A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-102 (3 required)	No direct contactor mounting is available in E300 line
193-EC3PB	100-C09...100-C23	0.4 - 2.0A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Sensing Module current range is 0.5 - 30A
193-EC3AB	100-C09...100-C23, 300-A0*	1 - 5A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3BB	100-C09...100-C23, 300-A0*	3 - 15A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3CB	100-C09...100-C23, 300-A0*	5 - 25A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3CD	100-C30...100-C43	5 - 25A	193-ECM-DNT + 193-ESM-IG-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3DD	100-C30...100-C43, 300-B0*, 300-C0*	9 - 45A	193-ECM-DNT + 193-ESM-IG-60A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3DE	100-C60...100-C97	9 - 45A	193-ECM-DNT + 193-ESM-IG-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3EE	100-C60...100-C97, 300-D0*	18 - 90A	193-ECM-DNT + 193-ESM-IG-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3FF	100-D95...100-D180	28 - 140A	193-ECM-DNT + 193-ESM-IG-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3GF	100-D95...100-D180, 300-E0*	42 - 210A	193-ECM-DNT + 193-ESM-IG-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC3GG	100-D210...100-D420, 300-F0*	42 - 210A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-201 (3 required)	No direct contactor mounting is available in E300 line
193-EC3HG	100-D210...100-D420, 300-F0*	60 - 302A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-301 (3 required)	No direct contactor mounting is available in E300 line
193-EC3JG	100-D210...100-D420	84 - 420A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-401 (3 required)	No direct contactor mounting is available in E300 line
193-EC3KH	100-D630...100-D860	125 - 630A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-601 (3 required)	No direct contactor mounting is available in E300 line
193-EC3LH	100-D630...100-D860	172 - 860A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-102 (3 required)	No direct contactor mounting is available in E300 line
193-EC3ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-IG-30A-E3T + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300

Component Cross-reference Table continued

Discontinued Part Number	E3/E3 Plus Contactor Mounting/Description	E3/E3 Plus FLA Range	Recommended E300 Replacement Part Numbers	Conversion Notes
193-EC3ZZ-NP	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-IG-30A-E3T + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC4PB	100-C09...100-C23	0.4 - 2.0A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EI0xx-xx-xxx	Sensing Module current range is 0.5 - 30A
193-EC4AB	100-C09...100-C23	1 - 5A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC4BB	100-C09...100-C23	3 - 15A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC4CB	100-C09...100-C23	5 - 25A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC4DD	100-C30...100-C43	9 - 45A	193-ECM-DNT + 193-ESM-IG-100A-S3 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC4EE	100-C60...100-C97	18 - 90A	193-ECM-DNT + 193-ESM-IG-100A-C97 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC4ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-IG-30A-E3T + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5PB	100-C09...100-C23	0.4 - 2.0A	193-ECM-DNT + 193-ESM-VIG-30A-C23 + 193-EI0xx-xx-xxx	Sensing Module current range is 0.5 - 30A
193-EC5AB	100-C09...100-C23	1 - 5A	193-ECM-DNT + 193-ESM-VIG-30A-C23 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5AD	100-C30...100-C43	1 - 5A	193-ECM-DNT + 193-ESM-VIG-30A-C55 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5BB	100-C09...100-C23	3 - 15A	193-ECM-DNT + 193-ESM-VIG-30A-C23 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5BD	100-C30...100-C43	3 - 15A	193-ECM-DNT + 193-ESM-VIG-30A-C55 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5CB	100-C09...100-C23	5 - 25A	193-ECM-DNT + 193-ESM-VIG-30A-C23 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5CD	100-C30...100-C43	5 - 25A	193-ECM-DNT + 193-ESM-VIG-30A-C55 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5DD	100-C30...100-C43	9 - 45A	193-ECM-DNT + 193-ESM-VIG-60A-C55 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5DE	100-C60...100-C97	9 - 45A	193-ECM-DNT + 193-ESM-VIG-100A-C97 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5EE	100-C60...100-C97	18 - 90A	193-ECM-DNT + 193-ESM-VIG-100A-C97 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5FF	100-D95...100-D180	28 - 140A	193-ECM-DNT + 193-ESM-VIG-200A-D180 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
193-EC5GF	100-D95...100-D180	42 - 210A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx + 1411-180RL-201 (3 required)	No direct contactor mounting is available in E300 line
193-EC5GG	100-D210...100-D420	42 - 210A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx + 1411-180RL-201 (3 required)	No direct contactor mounting is available in E300 line
193-EC5HG	100-D210...100-D420	60 - 302A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx + 1411-180RL-301 (3 required)	No direct contactor mounting is available in E300 line
193-EC5JG	100-D210...100-D420	84 - 420A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx + 1411-180RL-401 (3 required)	No direct contactor mounting is available in E300 line
193-EC5KH	100-D630...100-D860	125 - 630A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx + 1411-180RL-601 (3 required)	No direct contactor mounting is available in E300 line
193-EC5LH	100-D630...100-D860	172 - 860A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx + 1411-180RL-102 (3 required)	No direct contactor mounting is available in E300 line
193-EC5ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx	
193-NREC1ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-I-30A-E3T + 193-EI0xx-xx-xxx	
193-NREC3ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-IG-30A-E3T + 193-EI0xx-xx-xxx	
193-NREC5ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-VIG-30A-E3T + 193-EI0xx-xx-xxx	
592-EC1PC	NEMA Size 0 - 2	0.4 - 2.0A	193-ECM-DNT + 592-ESM-I-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC1PT	Panel Mount Only NEMA Size 00	0.4 - 2.0A	193-ECM-DNT + 193-ESM-I-30A-E3T + 193-EI0xx-xx-xxx	
592-EC1AC	NEMA Size 0 - 2	1 - 5A	193-ECM-DNT + 592-ESM-I-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC1AT	Panel Mount Only NEMA Size 00	1 - 5A	193-ECM-DNT + 193-ESM-I-30A-E3T + 193-EI0xx-xx-xxx	
592-EC1BC	NEMA Size 0 - 2	3 - 15A	193-ECM-DNT + 592-ESM-I-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC1BT	Panel Mount Only NEMA Size 00	3 - 15A	193-ECM-DNT + 193-ESM-I-30A-E3T + 193-EI0xx-xx-xxx	
592-EC1CC	NEMA Size 0 - 2	5 - 25A	193-ECM-DNT + 592-ESM-I-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC1DC	NEMA Size 0 - 2	9 - 45A	193-ECM-DNT + 592-ESM-I-60A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC1DD	NEMA Size 3	9 - 45A	193-ECM-DNT + 592-ESM-I-100A-S3 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC1ED	NEMA Size 4	18 - 90A	193-ECM-DNT + 592-ESM-I-100A-S3 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2PC	NEMA Size 0 - 2	0.4 - 2.0A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2PC-NP	NEMA Size 0 - 2	0.4 - 2.0A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2PT	Panel Mount Only NEMA Size 00	0.4 - 2.0A	193-ECM-DNT + 193-ESM-IG-30A-E3T + 193-EI0xx-xx-xxx	
592-EC2AC	NEMA Size 0 - 2	1 - 5A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2AC-NP	NEMA Size 0 - 2	1 - 5A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2AT	Panel Mount Only NEMA Size 00	1 - 5A	193-ECM-DNT + 193-ESM-IG-30A-E3T + 193-EI0xx-xx-xxx	
592-EC2BC	NEMA Size 0 - 2	3 - 15A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2BC-NP	NEMA Size 0 - 2	3 - 15A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2BT	Panel Mount Only NEMA Size 00	3 - 15A	193-ECM-DNT + 193-ESM-IG-30A-E3T + 193-EI0xx-xx-xxx	
592-EC2CC	NEMA Size 0 - 2	5 - 25A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	
592-EC2CC-NP	NEMA Size 0 - 2	5 - 25A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2DC	NEMA Size 0 - 2	9 - 45A	193-ECM-DNT + 592-ESM-IG-60A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2DC-NP	NEMA Size 0 - 2	9 - 45A	193-ECM-DNT + 592-ESM-IG-60A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2DD	NEMA Size 3	9 - 45A	193-ECM-DNT + 592-ESM-IG-100A-S3 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2ED	NEMA Size 3	18 - 90A	193-ECM-DNT + 592-ESM-IG-100A-S3 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC2ED-NP	NEMA Size 3	18 - 90A	193-ECM-DNT + 592-ESM-IG-100A-S3 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC3PC	NEMA Size 0 - 2	0.4 - 2.0A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC3AC	NEMA Size 0 - 2	1 - 5A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC3BC	NEMA Size 0 - 2	3 - 15A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300
592-EC3CC	NEMA Size 0 - 2	5 - 25A	193-ECM-DNT + 592-ESM-IG-30A-S2 + 193-EI0xx-xx-xxx	Direct contactor mounting available with E300

Component Cross-reference Table continued

Discontinued Part Number	E3/E3 Plus Contactor Mounting/Description	E3/E3 Plus FLA Range	Recommended E300 Replacement Part Numbers	Conversion Notes
592-EC3DC	NEMA Size 0 - 2	9 - 45A	193-ECM-DNT + 592-ESM-IG-60A-S2 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC3ED	NEMA Size 3	18 - 90A	193-ECM-DNT + 592-ESM-IG-100A-S3 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC3FE	NEMA Size 4	28 - 140A	193-ECM-DNT + 592-ESM-IG-200A-S4 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC3HF	NEMA Size 5	60 - 302A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-301 (3 required)	No direct contactor mounting is available in E300 line
592-EC3KG	NEMA Size 6	125 - 630A	193-ECM-DNT + 193-ESM-IG-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-601 (3 required)	No direct contactor mounting is available in E300 line
592-EC5PC	NEMA Size 0 - 2	0.4 - 2.0A	193-ECM-DNT + 592-ESM-VIG-30A-S2 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC5AC	NEMA Size 0 - 2	1 - 5A	193-ECM-DNT + 592-ESM-VIG-30A-S2 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC5BC	NEMA Size 0 - 2	3 - 15A	193-ECM-DNT + 592-ESM-VIG-30A-S2 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC5CC	NEMA Size 0 - 2	5 - 25A	193-ECM-DNT + 592-ESM-VIG-30A-S2 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC5DC	NEMA Size 0 - 2	9 - 45A	193-ECM-DNT + 592-ESM-VIG-60A-S2 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC5ED	NEMA Size 3	18 - 90A	193-ECM-DNT + 592-ESM-VIG-100A-S3 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC5FE	NEMA Size 4	28 - 140A	193-ECM-DNT + 592-ESM-VIG-200A-S4 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
592-EC5HF	NEMA Size 5	60 - 302A	193-ECM-DNT + 193-ESM-VIG-30A-CT + 193-EIOxx-xx-xxx + 1411-180RL-301 (3 required)	No direct contactor mounting is available in E300 line
592-EC5KG	NEMA Size 6	125 - 630A	193-ECM-DNT + 193-ESM-VIG-30A-CT + 193-EIOxx-xx-xxx + 1411-180RL-601 (3 required)	No direct contactor mounting is available in E300 line
193-ECPM1	Panel Mount Only	Panel Adapter	193-ECM-DNT + 193-EIOxx-xx-xxx + 193-ESM-I-30A-E3T or 193-ESM-I-60A-E3T or 193-ESM-I-100A-E3T	
193-ECPM2	Panel Mount Only	Panel Adapter	193-ECM-DNT + 193-EIOxx-xx-xxx + 193-ESM-I-30A-E3T or 193-ESM-I-60A-E3T or 193-ESM-I-100A-E3T	
193-ECPM3	Panel Mount Only	Panel Adapter	193-ECM-DNT + 193-EIOxx-xx-xxx + 193-ESM-I-30A-E3T or 193-ESM-I-60A-E3T or 193-ESM-I-100A-E3T	
193-EIMD	120V Input Interface Module	120V Input Interface Module	193-EIOxx-xx-120 + 193-ECM-DNT + 193-ESM or 592-ESM Sensing Module	
193-EIMD60	120V Input Interface Module (60Hz Only)	120V Input Interface Module	193-EIOxx-xx-120 + 193-ECM-DNT + 193-ESM or 592-ESM Sensing Module	

Helpful Links and Other Resources

E200 and E300 Electronic Overload Relay Highlight Reel Video

E300/E200 Tech Data

E300 User Manual

E200 User Manual

E300 Electronic Overload Relay FAQs

E300 on DeviceNet – E3/E3 Plus Emulation Mode Demonstration Video

E300 on DeviceNet – Entering Emulation Mode via the Operator Diagnostic Station (SDS)

UL Listing Considerations when Modifying an MCC (Knowledge Base Article 64042)

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