

# E300/E200 Electronic Overload Relay Specifications

Bulletin Numbers 193, 592

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## Summary

The E300™ and E200™ Electronic Overload Relays are the newest technology for overload protection. The modular design, communication options, diagnostic information, simplified wiring, and integration into Logix technology make it the ideal overload for motor control applications in an automation system.

The E300/E200 relay consists of three modules: sensing, control, and communications. You have choices in each of the three with additional accessories to tailor the electronic overload for the exact needs of your application. The communication module determines whether the complete assembled device is an E300 or an E200 overload relay.

| Description                  | Mounting Options  | Current Range [A]                      | For Use With   | Cat. No.              |                    |
|------------------------------|---|--|--|-----------------------|--------------------|
| Voltage/Current/Ground Fault | IEC Contactors  | 0.5...30                               | 100-C09...C23  | 193-ESM-VIG-30A-C23   |                    |
|                              |   |  | 100-C30...C55  | 193-ESM-VIG-30A-C55   |                    |
|                              |   | 6...60                                 | 100-C30...C55  | 193-ESM-VIG-60A-C55   |                    |
|                              |   | 10...100                               | 100-C60...100-C97  | 193-ESM-VIG-100A-C97  |                    |
|                              |   | 20...200                               | 100-D115...100-D180  | 193-ESM-VIG-200A-D180 |                    |
|                              |   |  | 100-E116...100-E146  | 193-ESM-VIG-200A-E146 |                    |
|                              |   |  | 100-E190...100-E205  | 193-ESM-VIG-200A-E205 |                    |
|                              |   | DIN Rail / Panel Mount Power Terminals | 0.5...30   | All contactors        | 193-ESM-VIG-30A-T  |
|                              |   |  | 6...60   |                       | 193-ESM-VIG-60A-T  |
|                              | 10...100  |  | 193-ESM-VIG-100A-T   |                       |                    |
|                              | 20...200  |  | 193-ESM-VIG-200A-T   |                       |                    |
|                              | DIN Rail / Panel Mount Power Terminals<br>Directly replaces 193-ECPM_ | 0.5...30                               | 193-ESM-VIG-30A-E3T  |                       |                    |
|                              |   | 6...60                                 | 193-ESM-VIG-60A-E3T  |                       |                    |
|                              |   | 10...100                               | 193-ESM-VIG-100A-E3T   |                       |                    |
|                              | DIN Rail / Panel Mount Pass-thru                                      | 0.5...30                               | External current and potential transformers                      |                       | 193-ESM-VIG-30A-CT |
|                              | Bulletin 500 NEMA Contactors  | 0.5...30                               | NEMA Size 0...2  |                       | 592-ESM-VIG-30A-S2 |
|                              |   | 6...60                                 |  |                       | 592-ESM-VIG-60A-S2 |
|                              |   | 10...100                               | NEMA Size 3  | 592-ESM-VIG-100A-S3   |                    |
|                              |   | 20...200                               | NEMA Size 4  | 592-ESM-VIG-200A-S4   |                    |
|                              | Bulletin 300 NEMA Contactors  | 0.5...30                               | 300-AO_ Series C, NEMA Size 0                                    | 193-ESM-VIG-30A-C23   |                    |
|                              |   |  | 300-AO_ Series B, NEMA Size 0<br>300-BO_ Series B, NEMA Size 1   | 193-ESM-VIG-30A-C55   |                    |
|                              |   | 6...60                                 | 300-CO_ Series C, NEMA Size 2                                    | 193-ESM-VIG-60A-C55   |                    |
|                              |   | 10...100                               | 300-CO_ Series B, NEMA Size 2<br>300-DO_ Series D, NEMA Size 3   | 193-ESM-VIG-100A-C97  |                    |
|                              |   | 20...200                               | 300-DO_ Series C, NEMA Size 3<br>300-EO_ Series B/C, NEMA Size 4 | 193-ESM-VIG-200A-D180 |                    |
| N/A                          |   | 300-FO_ Series A/B/C, NEMA Size 5      | 193-ESM-VIG-30A-T <sup>(1)</sup>                                 |                       |                    |

(1) Requires 193-CT-\_-300A external CT kit.

### Control Modules

| Description   | No. of Inputs/Outputs | Rated Control Voltage [V] | Cat. No.         |
|---|-----------------------|---------------------------|------------------|
| I/O Module  | 6 in/3 out            | 24V DC                    | 193-EIO-63-24D   |
|   | 2 in/2 out            |                           | 193-EIO-22-24D   |
|   | 4 in/3 out            | 110...120V AC, 50/60 Hz   | 193-EIO-43-120   |
|   | 2 in/2 out            |                           | 193-EIO-22-120   |
|   | 4 in/3 out            | 220...240V AC, 50/60 Hz   | 193-EIO-43-240   |
|   | 2 in/2 out            |                           | 193-EIO-22-240   |
| I/O and Protection Module<br>Thermistor (PTC) and External Ground Fault<br>Current <sup>(1)</sup> | 4 in/2 out            | 24V DC                    | 193-EIOGP-42-24D |
|   | 2 in/2 out            | 110...120V AC, 50/60 Hz   | 193-EIOGP-22-120 |
|   | 2 in/2 out            | 220...240V AC, 50/60 Hz   | 193-EIOGP-22-240 |

(1) Requires Core Balanced Ground Fault Sensor Cat. No. 193-CBCT\_.

### Communication Modules

| Description                           | Cat. No.    |
|---------------------------------------|-------------|
| EtherNet/IP                           | 193-ECM-ETR |
| DeviceNet                             | 193-ECM-DNT |
| Parameter Configuration Module (E200) | 193-ECM-PCM |

## Expansion Modules

| Description   | No. of Inputs/Outputs | Rated Control Voltage [V]   | Cat. No.                      |
|---|-----------------------|-----------------------------|-------------------------------|
| Digital Expansion Module, 24V DC                    | 4 in/2 out            | 24V DC                      | 193-EXP-DIO-42-24D            |
| Digital Expansion Module, 120V AC                   | 4 in/2 out            | 110 . . . 120V AC, 50/60 Hz | 193-EXP-DIO-42-120            |
| Digital Expansion Module, 240V AC                   | 4 in/2 out            | 220 . . . 240V AC, 50/60 Hz | 193-EXP-DIO-42-240            |
| Analog Expansion Module: mA, V, RTD, and Resistance | 3 universal in/1 out  | —                           | 193-EXP-AIO-31 <sup>(1)</sup> |
| Expansion Power Supply                              | —                     | 24V DC                      | 193-EXP-PS-DC                 |
|   |                       | 110 . . . 240V AC, 50/60 Hz | 193-EXP-PS-AC                 |
| Starter Control Station with 3-Meter Cable          | —                     | —                           | 193-EOS-SCS                   |
| Starter Diagnostic Station with 3-Meter Cable       | —                     | —                           | 193-EOS-SDS <sup>(1)</sup>    |

(1) Module requires control module firmware v3.000 or higher.

## Accessories

| Description                                      | For Use With  | Pkg. Qty. | Cat. No.   |
|--|---|-----------|--|
| Contactor Coil Module                            | 100-C09 . . . 100-C23 contactors  | 1         | 193-EIO-CM-C23                                   |
|  | 100-C30 . . . 100-C55 contactors  |           | 193-EIO-CM-C55                                   |
|  | 100-C60 . . . 100-C97 contactors  |           | 193-EIO-CM-C97                                   |
| 1-Meter Expansion Module Cable                   | —   | 1         | 193-EXP-CBL-1M                                   |
| 3-Meter Expansion Module Cable                   | —   | 1         | 193-EXP-CBL-3M                                   |
| Core Balanced Ground Fault Sensor <sup>(1)</sup> | 193-EIOGP-42-24D<br>193-EIOGP-22-120<br>193-EIOGP-22-240<br>193/592-ESM-IG-_-_<br>193/592-ESM-VIG-_-_ | 1         | 193-CBCT1<br>193-CBCT2<br>193-CBCT3<br>193-CBCT4 |

(1) Requires control module with "GP" for internal ground fault protection or sensing module with "G", but not both.

| Description            | For Use With       | Pkg. Qty. | Cat. No.                        |
|------------------------|--------------------|-----------|---------------------------------|
| Replacement Connectors | 193-EIO-63-24D     | 1         | 193-NCIO-63-CNT                 |
|                        | 193-EIO-43-120     |           | 193-NCIO-43-CNT                 |
|                        | 193-EIO-43-240     |           |                                 |
|                        | 193-EIOGP-42-24D   |           | 193-NCIOGP-42-CNT               |
|                        | 193-EIOGP-22-120   |           | 193-NCIOGP-22-CNT               |
|                        | 193-EIOGP-22-240   |           |                                 |
|                        | 193-ESM-VIG-30A-CT |           | 193-NCSM-VIG-CNT                |
|                        | 193-EXP-DIO-42-24D |           | 193-NCXP-DIO-CNT <sup>(1)</sup> |
|                        | 193-EXP-DIO-42-120 |           |                                 |
|                        | 193-EXP-DIO-42-240 |           |                                 |
|                        | 193-EXP-AIO-31     |           | 193-NCXP-AIO-CNT <sup>(1)</sup> |
|                        | 193-EXP-PS-DC      |           | 193-NCXP-PS-CNT <sup>(1)</sup>  |
|                        | 193-EXP-PS-AC      |           |                                 |
|                        | 193-ECM-DNT        |           | 193-NCCM-DNT-CNT                |