

# Rotary Disconnect Switch Specifications

Bulletin Number 194R

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## Additional Resources



These documents contain additional information concerning related products from Rockwell Automation.

| Resource  | Description   |
|---|---|
| Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a> | Provides general guidelines for installing a Rockwell Automation industrial system. |
| Product Certifications website, <a href="http://www.ab.com">http://www.ab.com</a>           | Provides declarations of conformity, certificates, and other certification details. |

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.



Bulletin 194R Overview

|   |  |  |
|---|--|--|
|   |    |   |
|   | <b>Bulletin 194R-C, J, H, B, D, F, L, N, NU</b>  | <b>Bulletin 194R-NE</b>  |
| <b>Product Type</b>                       | Fused and non-fused rotary disconnect switches   | Non-fused IEC rotary disconnect switches   |
| <b>Current Range</b>                      | 20...1200 A  | 100...1250 A   |
| <b>Main Applications</b>                  | <ul style="list-style-type: none"> <li>UL 98 ratings "suitable as service entrance disconnecting means"</li> <li>UL 508, CSA ratings "suitable as at-motor disconnect"</li> </ul>  | <ul style="list-style-type: none"> <li>Disconnecting means</li> </ul>  |
| <b>Functionality</b>                      | <ul style="list-style-type: none"> <li>3- or 4-pole fusible or non-fusible disconnect for standard OFF-ON or emergency stop in a main panel disconnect application</li> <li>4th pole available as modular accessory</li> <li>Test mode switch position</li> </ul>                                  | <ul style="list-style-type: none"> <li>3- or 4-pole non-fusible disconnect for standard OFF-ON or emergency stop in a main panel disconnect application</li> <li>4th pole available as modular accessory</li> <li>Test mode switch position</li> </ul> |
| <b>Mounting Styles</b>                    | Base/DIN Rail mounting   | Base/DIN Rail mounting   |
| <b>Handles</b>                            | <ul style="list-style-type: none"> <li>Available in rotary styles, UL Type 1/3R/4/4X/12, IP66, standard, or test mode versions</li> <li>Handle colors in black and red/yellow and padlockable versions</li> <li>30 A/60 A legend markers (optional) — uses Cat. No. 1492-MS6X12 markers</li> </ul> | <ul style="list-style-type: none"> <li>Available in rotary styles, UL Type 1/3R/4/4X/12, IP66, standard, or test mode versions</li> <li>Handle colors in black and red/yellow and padlockable versions</li> </ul>                                      |
| <b>Open Switch or Enclosed</b>            | <ul style="list-style-type: none"> <li>Open switch</li> <li>Enclosed: UL/CSA rated enclosure</li> </ul>  | <ul style="list-style-type: none"> <li>Open switch</li> </ul>  |
| <b>UL/CSA Electrical Ratings:</b>         |  |  |
| <b>Rated Voltage <math>U_e</math></b>     | 690V AC  | 690V AC  |
| <b>Rated Current <math>I_e</math></b>     | 20...1200 A  | 100...1250 A   |
| <b>Rated Power <math>P_e</math> [FLA]</b> | Varies w/ 1- or 3-phase switch, voltage  | Varies w/ 1- or 3-phase switch, voltage  |
| <b>Short-Circuit Ratings</b>              | 200 kA   | 200 kA   |
| <b>Mechanical Life [ops]</b>              | 10 000   | 10 000   |
| <b>IEC Rated Current <math>I_e</math></b> |  |  |
| <b>AC-1</b>                               | 20...1200 A @ 690V   | 100...1250 A @ 690V  |
| <b>AC-21A</b>                             | Varies w/ 1- or 3-phase switch, voltage  | Varies w/ 1- or 3-phase switch, voltage  |
| <b>AC-22A</b>                             | Varies w/ 1- or 3-phase switch, voltage  | Varies w/ 1- or 3-phase switch, voltage  |
| <b>Ambient Operational Temp.</b>          | -20...+60 °C (-4...+140 °F)  | -20...+60 °C (-4...+140 °F)  |
| <b>Ambient Enclosed Temp.</b>             | -20...+60 °C (-4...+140 °F)  | -20...+60 °C (-4...+140 °F)  |
| <b>Ambient Storage Temp.</b>              | -40...+65 °C (-40...+149 °F)   | -40...+65 °C (-40...+149 °F)   |
| <b>Protection class per IEC 529</b>       | <ul style="list-style-type: none"> <li>Switch bodies: IP2</li> <li>Fuse carriers: IP30</li> </ul>  | <ul style="list-style-type: none"> <li>Switch bodies: IP2</li> </ul>   |
| <b>Optional Accessories</b>               | <ul style="list-style-type: none"> <li>Operator handles</li> <li>Multi-length shafts</li> <li>Auxiliary contacts</li> <li>Terminal covers</li> <li>NFPA 79 internal handle with shaft</li> </ul>   | <ul style="list-style-type: none"> <li>IP66 handles</li> <li>Multi-length shafts</li> <li>Auxiliary contacts</li> <li>Terminal covers</li> <li>NFPA 79 internal handle</li> </ul>  |
| <b>Standards/Certifications</b>           | <ul style="list-style-type: none"> <li>UL 98, UL 508</li> <li>CSA C22.2, No. 14</li> <li>IEC 60947-3 Low Voltage Switchgear and Controlgear part 3</li> <li>CE</li> </ul>  | <ul style="list-style-type: none"> <li>CSA C22.2, No. 14</li> <li>IEC 60947-3 Low Voltage Switchgear and Controlgear part 3</li> <li>CE</li> </ul>   |
| <b>Product Selection</b>                  | <b>Page 4</b>  | <b>Page 4</b>  |

Specifications

Fused Disconnect Switches for UL Class Fuses and CSA HRCI-J

| Electrical Ratings                                     |                      |            |                |            |                |            |
|--|----------------------|------------|----------------|------------|----------------|------------|
| Cat. No.   | 194R-C30-1753        |            | 194R-J30-1753  |            | 194R-J60-1753  |            |
| <b>CSA Fuse Type/UL Fuse Type</b>                      | Class CC/HRCI-MISC ‡ |            | Class J/HRCI-J |            | Class J/HRCI-J |            |
| <b>Maximum Fuse Cartridge Size</b>                     | [A]                  | 30         | 30             | 30         | 60             | 60         |
| <b>Maximum Voltage</b>                                 | AC [V]               | 600        | 600            | 600        | 600            | 600        |
|  | DC [V]               | 250        | 250            | 250        | 250            | 250        |
| <b>Ampere Rating</b>                                   | [A]                  | 30         | 30             | 30         | 60             | 60         |
| <b>Maximum Short Circuit Prospective Fault Current</b> | [kA]                 | 200        | 200            | 200        | 200            | 200        |
| <b>Fuse Operating Characteristics</b>                  |                      | Time Delay | Non-Time Delay | Time Delay | Non-Time Delay | Time Delay |
| <b>Maximum Hp, 3-Phase AC</b>                          |                      |            |                |            |                |            |
| 200V, 60 Hz  | [Hp]                 | 5          | 3              | 7.5        | 3              | 15         |
| 240V, 60 Hz  | [Hp]                 | 5          | 3              | 7.5        | 3              | 15         |
| 480V, 60 Hz  | [Hp]                 | 10         | 5              | 15         | 5              | 30         |
| 600V, 60 Hz  | [Hp]                 | 10         | 7.5            | 20         | 7.5            | 50         |
| <b>Maximum Hp, 1-Phase AC</b>                          |                      |            |                |            |                |            |
| 120V, 60 Hz  | [Hp]                 | 0.75       | 0.5            | 2          | 0.5            | 3          |
| 240V, 60 Hz  | [Hp]                 | 2          | 1.5            | 3          | 1.5            | 10         |
| <b>Maximum Hp, DC</b>                                  |                      |            |                |            |                |            |
| 125V DC  | [Hp]                 | 2          | 3              | 3          | 2              | 5          |
| 250V DC  | [Hp]                 | 3          | 5              | 5          | 5              | 10         |

‡ Based on Rockwell Automation tests in accordance with the requirements as defined in CSA C22.2 No. 4, IEC 60947-3 and UL 98.

| Electrical Ratings                                     |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|
| Cat. No.   | 194R-J100-1753 | 194R-J200-1753 | 194R-J400-1753 | 194R-J600-1753 | 194R-J800-1753 |
| <b>CSA Fuse Type/UL Fuse Type</b>                      | Class J/HRCI-J |                |                |                |                |
| <b>Maximum Fuse Cartridge Size</b>                     | [A]            | 100            | 200            | 400            | 600            |
| <b>Maximum Voltage</b>                                 | AC [V]         | 600            | 800            | 600            | 600            |
|  | DC [V]         | 250§           | 250§           | 250§           | 250§           |
| <b>Ampere Rating</b>                                   | [A]            | 100            | 200            | 400            | 600            |
| <b>Maximum Short Circuit Prospective Fault Current</b> | [kA]           | 200            | 200            | 200            | 200            |

§ 3 poles in series

| Mechanical Data  |                                 |               |
|--|---------------------------------|---------------|
| Cat. No.   | 194R-C30-1753,<br>194R-J30-1753 | 194R-J60-1753 |
| <b>Degree of Protection</b> (per IEC 60947-3)                  |                                 |               |
| Switch Only  | IP20                            | IP20          |
| Switch with Terminal Shield & Fuse Carriers                    | IP20                            | IP20          |
| <b>Mechanical Endurance</b> §                                  | Operations                      | 10 000        |
|  |                                 | 10 000        |
| <b>Operating Torque</b> (Maximum)                              | N•m                             | 3.5           |
|  | lb•in                           | 35            |
| <b>Terminal Capacity</b>                                       | mm <sup>2</sup>                 | 2.5...10      |
| Power Terminals  | AWG                             | #14...#8      |
|  | mm <sup>2</sup>                 | 2.5...4       |
| Auxiliary Contact Terminals                                    | AWG                             | #14...#12     |
| <b>Maximum Number of Auxiliary Circuits</b>                    |                                 | 6             |
| <b>Approximate Weight</b>                                      | kg                              | 0.92          |
|  | lbs                             | 2.03          |
| <b>Minimum Enclosure Size</b>                                  | Height                          | 248 (9-3/4)   |
| Approximate dimensions in millimeters (inches)                 | Width                           | 171 (6-3/4)   |
|  | Depth                           | 148 (5-13/16) |
| <b>Switch Dimension Reference</b><br>(See dimension drawings.) |                                 | A1            |
|  |                                 | B1            |

§ Based on Rockwell Automation tests in accordance with the requirements as defined in CSA C22.2 No. 4, IEC 60947-3 and UL 98.