

Disconnect Switches

 **Allen-Bradley**

Rotary and Visible Blade



LISTEN.
THINK.
SOLVE.

Disconnect Switch Portfolio

Designed for global markets, the Allen-Bradley disconnect switch portfolio offers multiple operating mechanisms, switch bodies and mounting options to meet customer-specific requirements.

Importance of Disconnect Switches

Isolation

A disconnect switch interrupts the power to an electrical circuit or group of electrical circuits. They may be used as main disconnecting devices in switchboards or as feeder disconnects.

Interrupting Capacity

- Interrupting capacity up to 200 kA allows a single unit to address many applications
- Short circuit current rating (SCCR) coordination with Allen-Bradley contactors, overload relays and motor starters
- See our Global SCCR website for more information <http://www.rockwellautomation.com/support/global-sccr.page>

Operation

Mounted within an enclosure, disconnect switches are available with a range of flange-mount handles or rotary-style handles to comply with global requirements. Enclosure and door interlocks provide an additional level of operator safety by preventing the handles and doors from being opened while the disconnect switch is energized.



Operational Styles

Rotary Style



Rotary – fused

- Expands up to 1250 A for IEC, and 800 A for UL
- Suitable as at-motor disconnecting means (UL 508)
- Suitable as service entrance disconnecting means (UL 98)



Rotary – non-fused

- Expands up to 1250 A for IEC and 1200 A for UL
- Suitable as at-motor disconnecting means (UL 508)
- Suitable as service entrance disconnecting means (UL 98)

Visible Blade Style



Visible blade

- Clearly visible blades to determine if the switch is ON or OFF
- 30...100 A, 3-pole, 600 V AC/DC ratings
- 200...600 A, 3 pole, 600V AC/DC also available
- Suitable as service entrance disconnecting means (UL 98)



Fused style available with modular fuse block kits

Feature	Rotary	Visible Blade
Flange Mount Option	✓	✓
Rotary Handle Option	✓	
Cable Actuation	✓	✓
Rod/Shaft Actuation	✓	✓
IEC Ratings Up To	1250 A	600 A
UL Ratings Up To	1200 A	600 A
Withstand Ratings To	200 kA	200 kA
NFPA 79 Compliant	✓	✓
At-motor Disconnect	*	

*Options are available



Rotary Style

194R – Fused

The Bulletin 194R fused disconnect switch's compact design and integral fuse carriers reduce your panel space requirements.

- High short circuit current rating
- Touch-safe design
- Each phase is electrically isolated – minimizing possible phase to phase short
- Double-break switching for full fuse line and load side isolation when switch is OFF
- RoHS compliant

Fused: 20...1250 A for IEC markets

Fused: 30...800 A for UL markets



Certification

- CE
- CSA Certified — File No. LR1234
- UL Listed — File No. E 14841; Guide No. NLRV
- UL Listed — File No. E 47426; Guide No. WHTY



Fuses are electrically isolated from line and load when the disconnect is in the OFF position



Side operation available for 100... 1250 A fused disconnects, also available on 30... 60 A with additional accessory

194R – Non-fused

The Bulletin 194R non-fusible disconnect switches are rugged, durable, non-fused and approved for use in demanding applications and environments.

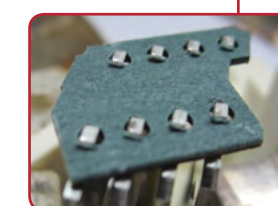
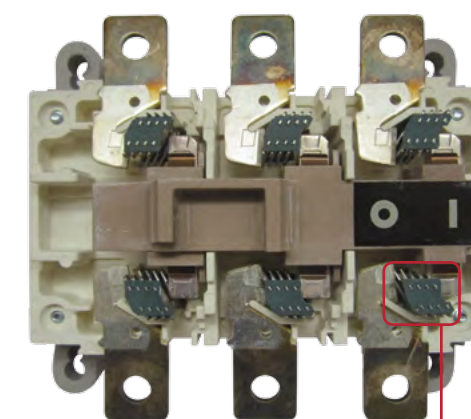
- Compact footprint for both UL and IEC switch bodies
- Suitable for severe utilization categories (AC-22 & AC-23)
- Fast opening and closing, independent from operator allows the switch to close on short circuit and also to operate high inductive load

Certification

- CE
- CSA Certified — File No. LR1234
- UL Listed — File No. E 14841; Guide No. NLRV
- UL Listed — File No. E 47426; Guide No. WHTY

Target Industries

- Food & Beverage
- Material Handling
- Packaging



Sweeping contacts allows a high short circuit withstand



Enclosed options available

Visible Blade Style

1494U – Universal

Providing the extra level of visual ON or OFF indication of a knife-blade disconnect, the Bulletin 1494U offers a universal design that supports either rod or cable operation.

- Fusible or non-fusible
- Smaller footprint
- NFPA 79 Compliant
- Enclosure interlock – Prevents handle from being moved to the ON position when door is open



Certification

- CE Marked
- CSA Certified
- UL Listed
- CCC

Fuse Blocks

- Common base across 30/60/100 A
- Integrated phase barriers
- J and R fuse clips are available for fusible styles

Visible Blade Construction

- Reliable visible blade indication
- Blades visible – switch is de-energized
- Blades hidden – switch is energized



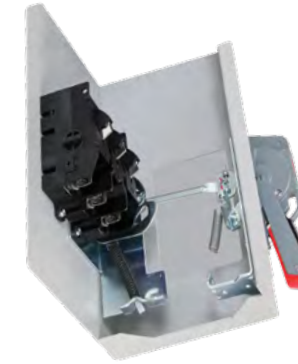
Universal Design

- Provides flexibility of installation for either rod or cable operated applications



Rod Operated System

- One rod length to cover enclosure depths with working depths up to 19"



Cable Operated System

- Cable available in 3', 4', 5', and 6' lengths
- Thinner cable design for more flexibility and lower bend diameter (6")



Target Industries

- Automotive
- Food & Beverage
- Oil & Gas
- Water/Wastewater
- Paper & Packaging
- Utilities & Mining
- Industrial Manufacturing



Accessories

The variety of accessories for our disconnect switch portfolio allows you to customize the switch to meet your application needs, while providing isolation to your downstream devices.

Operating Mechanisms & Handles

Flexible operating and mounting options adapt to almost any application.

194R & 1494U Handles



1494U Cable Mechanism



194R Rotary Handles



NFPA79 Internal Handle



Lugs

Single and multi-port lugs allow for easy installation of multiple wires.

194R Single and multi-port lugs



1494U Single and multi-port lugs



Protective Cover

Enhanced safety for customers with the optional one piece back-of-hand cover designed to protect against the line and load sides of the switch.

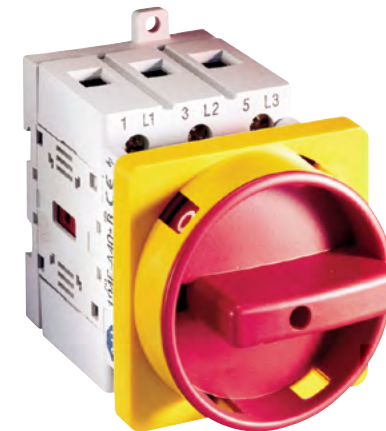


1494U Cover

At-motor Disconnect

194E – Load Switches

- Base/DIN Rail, or front-door mounting configurations
- Available in OFF-ON and changeover configurations
- 3- and 6-pole switches
- Padlockable handles available (up to 3 padlocks)



194L – Control & Load Switches

- Available in ON-OFF, changeover, star-delta (wye-delta), reversing, ammeter, voltmeter and step switch configurations
- Front door, Base/DIN Rail mounting configurations
- 1...6-pole versions
- Padlockable handles available (up to 3 padlocks)



Enclosed control & load switch options available

Enclosed Disconnect Switches



194R Rotary Disconnect Switches

- Lockout-Tagout functionality
- Use as at-motor isolation
- Enclosure options:
 - Thermoplastic, NEMA 4/4X
 - Painted Metal, NEMA 3/4/12
 - Stainless Steel, NEMA 4/4X



1494G Hazardous Location Safety Disconnect Switches

- Viewing window to display the switch blades
- 30...100 A switch ratings
- Type 3R, 7 & 9 bolted enclosure with breather and drain
- Class I, Division 1 & 2, Groups C & D and Class II, Groups E, F & G hazardous gas or dust locations certifications



1494G Heavy Industrial Safety Disconnect Switches

- Fully-exposed switch blades
- For use in indoor and outdoor applications
- 30...600 A switch ratings
- Enclosure Options:
 - Thermoplastic, NEMA 4/4X
 - Painted Metal, NEMA 3R/4/12
 - Stainless Steel, NEMA 4/4X

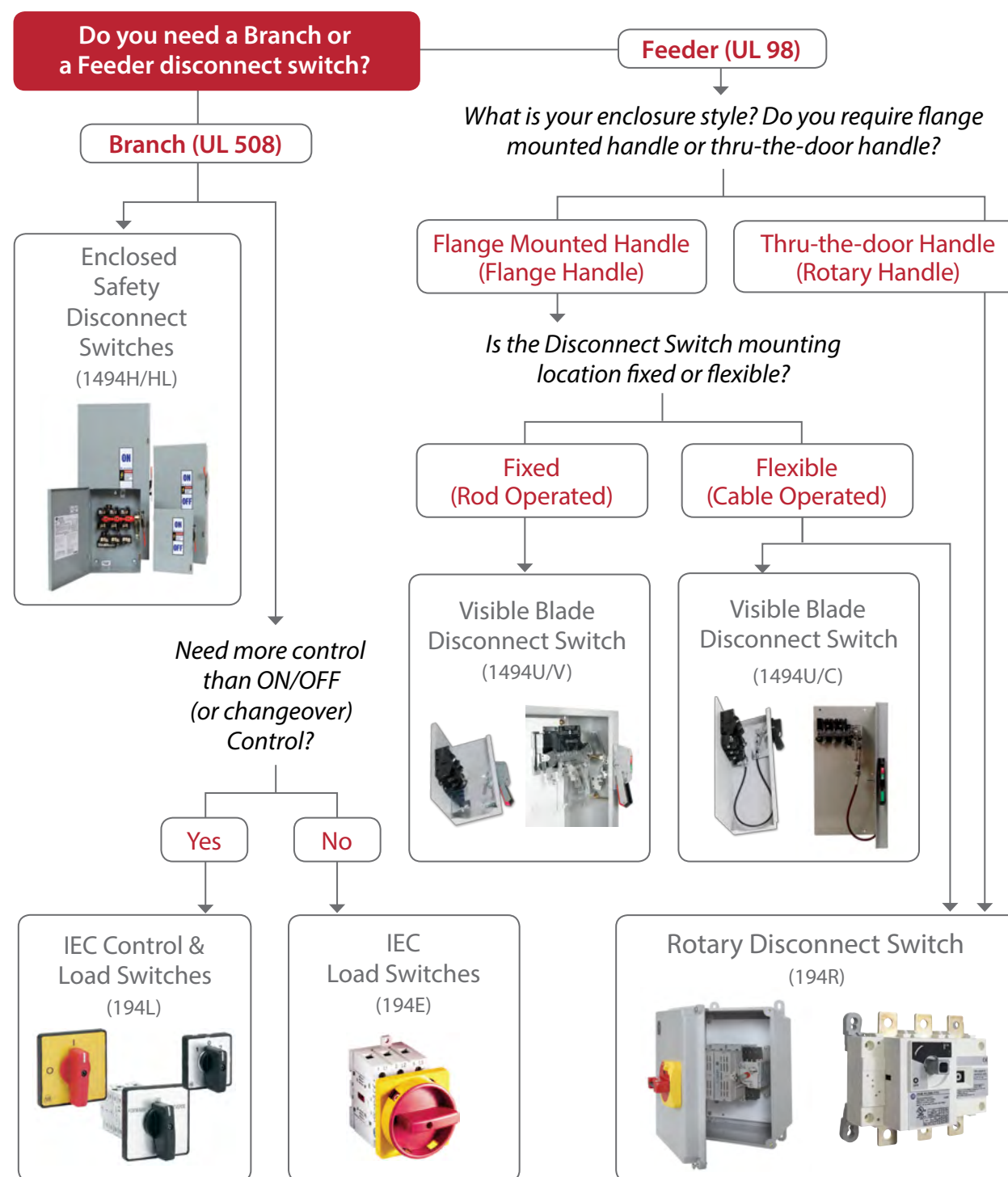


1494H Industrial/General Duty Safety Disconnect Switches

- 30...200 A switch ratings
- Enclosure Types 1, 3R or 12
- Internal mounting holes for time saving installation

Disconnect Switch Selection

Multiple types of disconnect switches are available to address local codes and varying application requirements. Addressing these basic questions can help to identify the disconnect switch best suited for your application.





Local Distributor

Visit our website to find your local Distributor.

www.rockwellautomation.com/distributor



On-Line Product Directory

Our portfolio of disconnect switches are designed to protect your manufacturing investments.

ab.rockwellautomation.com/Circuit-and-Load-Protection/Disconnect-Switches



Global Short-Circuit Current Rating

Determine the short-circuit rating of your industrial panel with the SCCR selection tool.

www.rockwellautomation.com/global/support/global-sccr.page



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Rotary Disconnect Switch, Fused 194R

- Expands up to 1250 A for IEC, and 800 A for UL
- Touch-safe, compact design
- Padlocking available
- Double-break switching for full fuse line and load side isolation when switch is OFF
- Side operation

Rotary Disconnect Switch, Non-fused 194R

- Expands up to 1250 A for IEC, and 1200 A for UL
- Compact footprint for both UL and IEC switch bodies
- Suitable for severe utilization categories (AC-22 & AC-23)



Rotary Disconnect Switch, Enclosed 194R

- Lock-out tag-out functionality
- Use as at-motor isolation
- Enclosure options:
 - Thermoplastic, NEMA 4/4X
 - Painted Metal, NEMA 3/4/12
 - Stainless Steel, NEMA 4/4X



Disconnect
Switches

Circuit
Breakers



1-2...1-13



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Control &
Load Switches



1-20...1-23

Contactors



1-24...1-35

Starters



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Motor
Protection



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Solid-State
Motor Control



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Product Selection

194R Rotary Disconnect Switches, UL/CSA

Rated Current [A]	Maximum Hp Ratings, 3-Phase (60 Hz)				Fused		Non-Fused
	240V	480V	600V				
			Fused	Non-Fused	Fuse Type	Cat. No. *	Cat. No. ^Δ
30	7.5	15	20	20	30 A Class J, HRCI-J	194R-J30-1753 †	194R-N30-1753
60	15	30	50	40	60 A Class J, HRCI-J	194R-J60-1753 †	194R-N60-1753
100	30	60	75	100	100 A Class J, HRCI-J	194R-J100-1753	194R-NU100-1753
200	60	125	150	200	200 A Class J, HRCI-J	194R-J200-1753	194R-NU200-1753
400	125	250	350	350	400 A Class J, HRCI-J	194R-J400-1753	194R-NU400-1753
600	200	500	500	350	600 A Class J, HRCI-J	194R-J600-1753	194R-NU600-1753
800	200	500	500	500	800 A Class L, HRCI-L	194R-L800-1753	194R-NU800-1753
1200	200	500	—	500	—	—	194R-NU1200-1753

* Time delay fuses may be required to utilize the disconnect switch at its maximum horsepower rating.

† Blown fuse indicator available by adding **S** to the end of the catalog number.

Δ Non-fused disconnect switches must use separately installed fuses for upstream short circuit protection.

194R Rotary Disconnect Switches, IEC

Load Rating [A]	Maximum kW Ratings				Fused		Non-Fused
	200/220/230V	380/400/415V	660/690V				
			Fused	Non-Fused	Fuse Type	Cat. No.	Cat. No. *
32	9	18.5	30	—	NH000	194R-D32-1753	—
63	18.5	30	55	—	NH000	194R-D63-1753	—
125	—	63	90	55	NH00	194R-D125-1753	194R-NE125-1753
160	—	80	110	55	NH00	194R-D160-1753	194R-NE160-1753
250	—	132	220	90	NH1	194R-D250-1753	194R-NE250-1753
400	—	220	220	150	NH2	194R-D400-1753	194R-NE400-1753
630	—	355	295	150	NH3	194R-D630-1753	194R-NE630-1753
800	—	450	400	185	NH3	194R-D800-1753	194R-NE800-1753
1250	—	560	400	415	NH4a	194R-D1250-1753	194R-NE1250-1753

* Non-fused disconnect switches must use separately installed fuses for upstream short circuit protection.



Padlockable handle,
test mode (30...60 A)



Padlockable handle,
standard (30...60 A)



Padlockable handle
(100...400 A)

Operating Handles

Range	Handle Operating Shaft *		Padlockable Handle	
	Cat. No. 12 in (304.8 mm)	Cat. No. 21 in (533.4 mm)	Cat. No. Black	Cat. No. Red/ Yellow
up to 60 A	194R-S1	194R-S2	194R-PB	194R-PY
up to 60 A	194R-S1	194R-S2	194R-PBT	194R-PYT
100...400 A	194R-R7	194R-R8	194R-HM4	194R-HM4E
600...1250A	194R-R9	194R-R10	194R-HM4-L	194R-HM4E-L
	600...1250 A	194R-HM4-L		

* For more lengths, please visit the web.

Drives



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For more information on our complete family of circuit protection products, please visit:
<http://ab.rockwellautomation.com/Circuit-and-Load-Protection>





Visible Blade Disconnect Switch 1494U Universal Mechanism

- 30...100A, 3-pole, 600 V AC/DC ratings
- Universal mechanism allows for rod or cable operation
- Fusible or non-fusible versions
- Lockable handle
- Visible blade construction for safety

Visible Blade Construction

- Reliable visible blade indication
- Blades visible – switch is de-energized
- Blades hidden – switch is energized

Fuse Blocks

- Common base across 30/60/100 A
 - Integrated Phase Barriers
 - J and R fuse clips are available for the fusible styles

Lug Connectors

- Included aluminum lugs will accept copper or aluminum wire

Universal Mechanism

- Provides flexibility of installation for either rod or cable operated applications



1494U Rod Operated System



1494U Cable Operated System

Lug Connectors

Disconnect Switch Size [A]	Description	Wire Size	Cat. No.
30...60	Aluminum, 1 port	(1) #14...2 AWG, copper-aluminum (2) #14...10 AWG, copper (2) #12...10 AWG, aluminum	1494U-LA36
100	Aluminum, 1 port	(2) #12...4 AWG, copper-aluminum (1) #14...1/0 AWG, copper (1) #12...1/0 AWG, aluminum	1494U-LA100
30...100	Aluminum, 6 port	(1) #14...4 AWG, copper (1) #12...4 AWG, aluminum (2) #10 AWG, copper-aluminum	1494U-LM31

Disconnect Switches

Circuit Breakers



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Control & Load Switches



1-20...1-23

Contactors



1-24...1-35

Starters



1-36...1-47

Motor Protection



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Solid-State Motor Control



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Product Selection

1494U Disconnect Switches¹

Continuous Current Rating [A] 600V AC, 600V DC	Maximum Hp – UL and CSA Applications					1-Phase, AC		DC ²	Maximum kW – IEC Applications (Category AC 23)			Switch with Right-Hand Mechanism Cat. No.
	3-Phase, 60 Hz					3-Phase, 50 Hz			3-Phase, 50 Hz			
	115V	200...208V	230V	460V	575V	115V	230V		220...240V	380...440V	500...600V	
30	3	7.5	7.5	15	20	2	3	15	5.5	11	15	1494U-D30
60	7.5	15	15	30	50	3	10	30	11	22	37	1494U-D60
100	–	25	30	60	75	–	–	50	22	45	55	1494U-D100

¹ Aluminum lug/line kits are provided with each disconnect switch.

² Ratings based on using two poles in series to break one line of the DC supply voltage and the remaining pole breaking the second DC supply line.

Connecting Rods

Disconnect Switch Size [A]	Enclosure Working Depth [in. (mm)] ³		Cat. No.
	Minimum	Maximum	
30, 60, 100, 200	6-3/4 (172)	19 (483)	1494U-R1

³ Enclosure working depth is measured from the top of the flange to the disconnect switch mounting surface. Dimensions are approximate.
NOTE: For enclosure depths greater than 19 in. but less than 23 in., select catalog number 1494V-RA4.

Operating Handles

Handle Type	Description	Mounting	Disconnect Switch Size [A]	Cat. No.
Type 1, 3R, 4, 4X, 12	Nonmetallic	Right or Left Flange	30, 60, 100	1494U-HP1
Type 1, 3R, 4, 12	Painted Metal			1494U-HM1
Type 4, 4X	Stainless Steel			1494U-HS1

Cable Mechanism

Disconnect Switch Size [A]	Cable Length [ft (m)]	Right-Hand Cable Mechanism Cat. No.
30, 60, 100	3 (0.91)	1494U-C313
	4 (1.22)	1494U-C314
	5 (1.52)	1494U-C315
	6 (1.83)	1494U-C316

Fuse Clip Kits

Fuse Class	Fuse Clip Rating [A]		Cat. No.
	250V	600V	
H/J	30	–	1494U-FC302J
	60	30	1494U-FC30J
	–	60	1494U-FC60J
	100	100	1494U-FC100J
R	30	–	1494U-FC302R
	60	30	1494U-FC30R
	–	60	1494U-FC60R
	100	100	1494U-FC100R

Trailer Fuse Block Kits

Disconnect Switch Size [A]	Cat. No.
30	1494U-F30
60	1494U-F60
100	1494U-F100



Product Selection Tools

Available online or for download, our tools help you access info while in the office or on the go.

www.rockwellautomation.com/support/selection.page

Drives



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Visible Blade Disconnect Switches 1494V Variable Depth

- 200...600 A, 3-pole, 600V AC ratings
- Rod-operated, flange-mounted handle
- Fusible or non-fusible versions
- Lockable handle
- Visible blade construction for safety

Visible Blade Disconnect Switches 1494C Cable Operated

- 200...600 A, 3-pole, 600V AC ratings
- Cable operation allows flexible mounting within the panel
- Fusible or non-fusible versions
- Lockable handle
- Visible blade construction for safety



Application Spotlight

Bulletin 1494 disconnect switches are time proven, robust design with visible blade construction that is the product of choice in automotive manufacturing applications.

Disconnect Switches

Circuit Breakers



1-2...1-13



1-14...1-19

Control & Load Switches



1-20...1-23

Contactors



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Starters



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Motor Protection



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Solid-State Motor Control



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Product Selection

1494V Visible Blade Disconnect Switch Components

Continuous Current Rating [A] 600V AC, 250V DC	NEMA, UL, CSA Maximum Rating Hp		IEC Utilization Category AC-23 Maximum Rating kW		Rod Operated	
	3-Phase, 60 Hz		3-Phase, 50 Hz		Switch with Right-Hand Mechanism	Switch with Left-Hand Mechanism
	200...208V	460V	220...240V	380...440V	Cat. No.	Cat. No.
200	50...60	125	48	90	1494V-DS200	1494V-DSX200
400	75	250	90	185	1494V-DS400	1494V-DSX400
600	150	400	150	295	1494V-DS600 ¹	

1494C Visible Blade Disconnect Switch Components

Continuous Current Rating [A] 600V AC, 250V DC	NEMA, UL, CSA Maximum Rating Hp		IEC Utilization Category AC-23 Maximum Rating kW		Cable Operated	
	3-Phase, 60 Hz		3-Phase, 50 Hz		Switch with Right-Hand Mechanism	Switch with Left-Hand Mechanism
	200...208V	460V	220...240V	380...440V	Cat. No.	Cat. No.
200	50...60	125	48	90	1494F-D200	1494F-DX200
400	75	250	90	185	1494F-D400	1494F-DX400
600	150	400	150	295	1494V-DS600 ¹	

¹ Switch can be converted in the field for left-hand operation.

Cable Mechanisms for 1494C Disconnect Switch

Disconnect Switch Size [A]	Cable Length [ft]	Right-Hand Cable Mechanisms	Left-Hand Cable Mechanisms
		Cat. No.	Cat. No.
200	4	1494C-CM5	1494C-CMX5
	5	1494C-CM6	1494C-CMX6
	6	1494C-CM7	1494C-CMX7
	10	1494C-CM8	1494C-CMX8
400	4	1494C-CM9	1494C-CMX9
	5	1494C-CM10	1494C-CMX10
	6	1494C-CM11	1494C-CMX11
	10	1494C-CM12	1494C-CMX12
600	4	1494C-CM13	1494C-CMX13
	5	1494C-CM14	1494C-CMX14
	6	1494C-CM15	1494C-CMX15
	10	1494C-CM16	1494C-CMX16

Trailer Fuse Block Kits for 1494V & 1494C

Disconnect Switch Size [A]	Cat. No.
200	1494V-FS200
400	1494V-FS400
600	1494V-FS600

Fuse Clip Kits for 1494V & 1494C

Fuse Class	Fuse Clip Rating [A]		Cat. No. ⁴
	250V	600V	
J	200	200	1401-N45
	400	400	1401-N46
	600	600	⁵

⁴ Includes six clips and mounting hardware.

⁵ Fuse clips not required: fuse bolts directly to terminal.

Operating Handles for 1494V & 1494C

Handle Type ⁶	Description	Disconnect Switch Size [A]	Cat. No.
Type 1, 3R, 4, 4X, 12	Nonmetallic	200	1494F-P1
Type 1, 3R, 4, 12	Painted Metal	200	1494F-M1
		400, 600	1494F-M2
Type 4, 4X	Stainless Steel	200	1494F-S1
		400, 600	1494F-S2

⁶ Right or left flange mounting available.

Connecting Rods for 1494V Disconnect Switches

Disconnect Switch Size [A]	Enclosure Depth [in. (mm)] ²		Cat. No.
	Minimum	Maximum	
200	6-3/4 (172)	9-1/8 (232)	1494V-RA3
	6-3/4 (172)	21-5/8 (549)	1494V-RA4
400, 600	9-1/2 (241)	10 (254)	1494V-RB3 ³
	9-1/2 (241)	23 (584)	1494V-RB4 ³

² Enclosure depth is measured from the top of the flange to the disconnect switch mounting surface.

³ Kit includes two connecting rods.

Drives



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