

UL/CSA Non-fused Disconnect Switches



Cat. No. 194R-N30-1753



Cat. No. 194R-J100-1753

Note: Your order must include 1) Cat. No. of disconnect switch, 2) shaft, 3) handle, and 4) any accessories.

Fuse Description	Rated Current [A] ⁽¹⁾	No. of Poles	Maximum Hp Ratings							Dim. Ref.	Cat. No.
			1-Phase (60 Hz)		3-Phase (60 Hz)			DC			
			120V	240V	240V	480V	600V	125V	250V		
Non-fused disconnect switches must use separately installed fuses for upstream short circuit protection.	30	3	2	3	7.5	15	20	3	5	A2	194R-N30-1753
	60	3	3	10	15	30	40	5	10	B2	194R-N60-1753
	100	3	7-1/2	15	30	75	100	10	15	F1	194R-NU100-1753
		4	7-1/2	15	30	75	100	10	15	F1	194R-NU100-1754
	200	3	—	50	75	150	200	15	15	F1	194R-NU200-1753
		4	—	50	75	150	200	15	15	F1	194R-NU200-1754
	400	3	—	—	125	250	350	20	50	F2	194R-NU400-1753
		4	—	—	125	250	350	20	50	F2	194R-NU400-1754
	600	3	—	—	200	400	350	20	50	F3	194R-NU600-1753
		4	—	—	200	400	350	20	50	F3	194R-NU600-1754
	800	3	—	—	200	500	500	—	—	F4	194R-NU800-1753
		4	—	—	200	500	500	—	—	F4	194R-NU800-1754
	1200	3	—	—	200	500	500	—	—	F4	194R-NU1200-1753
		4	—	—	200	500	500	—	—	F4	194R-NU1200-1754

(1) 30 A UL-rated device has I_{the} of 40 A per IEC. 60 A UL-rated device has I_{the} of 80 A per IEC.

Bulletin 194R Overview

	 Bulletin 194R-C, J, H, B, D, F, L, N, NU	 Bulletin 194R-NE
Product Type	Fused and non-fused rotary disconnect switches	Non-fused IEC rotary disconnect switches
Current Range	20...1200 A	100...1250 A
Main Applications	- UL 98 ratings "suitable as service entrance disconnecting means" - UL 508, CSA ratings "suitable as at-motor disconnect" - UL and IEC applications	- Disconnecting means - IEC applications
Functionality	3- or 4-pole fusible or non-fusible disconnect for standard OFF-ON or emergency stop in a main panel disconnect application 4th pole available as modular accessory - Test mode switch position	3- or 4-pole non-fusible disconnect for standard OFF-ON or emergency stop in a main panel disconnect application 4th pole available as modular accessory - Test mode switch position
Mounting Styles	20...63 A: DIN Rail/Panel mounting; 100...1250 A: Panel mounting	Panel mounting
Handles	- Available in rotary styles, UL Type 1/3R/4/4X/12, IP66, standard, or test mode versions - Handle colors in black and red/yellow and padlockable versions 30 A/60 A legend markers (optional) — uses Cat. No. 1492-MS6X12 markers	- Available in rotary styles, UL Type 1/3R/4/4X/12, IP66, or standard versions - Handle colors in black and red/yellow and padlockable versions
Open Switch or Enclosed	- Open switch - Enclosed: UL/CSA rated enclosure for 20...63 A devices	Open switch
UL/CSA Electrical Ratings:		
Rated Voltage U_e	690V AC	690V AC
Rated Current I_e	20...1200 A	100...1250 A
Rated Power P_e [FLA]	Varies w/ 1- or 3-phase switch, voltage	Varies w/ 1- or 3-phase switch, voltage
Short-Circuit Ratings	200 kA	200 kA
Mechanical Life [ops]	10 000	10 000
IEC Rated Current I_e		
AC-1	20...1200 A @ 690V	100...1250 A @ 690V
AC-21A	Varies w/ 1- or 3-phase switch, voltage	Varies w/ 1- or 3-phase switch, voltage
AC-22A	Varies w/ 1- or 3-phase switch, voltage	Varies w/ 1- or 3-phase switch, voltage
Ambient Operational Temp.	-20...+60 °C (-4...+140 °F)	-20...+60 °C (-4...+140 °F)
Ambient Enclosed Temp.	-20...+60 °C (-4...+140 °F)	-20...+60 °C (-4...+140 °F)
Ambient Storage Temp.	-40...+65 °C (-40...+149 °F)	-40...+65 °C (-40...+149 °F)
Protection class per IEC 529	- Switch bodies: IP2 - Fuse carriers: IP30	Switch bodies: IP2
Optional Accessories	- Operator handles - Multi-length shafts - Auxiliary contacts - Terminal covers - NFPA 79 internal handle with shaft	- IP66 handles - Multi-length shafts - Auxiliary contacts - Terminal covers - NFPA 79 internal handle

Standards Compliance and Certifications—Bulletin 194R-C, J, H, B, D, F, L, N, NU

Standards Compliance
UL 98
UL 508
CSA C22.2, No. 14
IEC/EN 60947-3 Low Voltage Switchgear and Controlgear part 3
BS EN60947-3
VDE 0660
NEMA KS-1

Certifications
CE Marked
CSA Certified (File No. LR1234)
UL Listed (File No. E 14841, Guide NLRV; File No. E 47426, Guide WHTY)

Standards Compliance and Certifications—Bulletin 194R-NE

Standards Compliance
IEC/EN 60947-3 Low Voltage Switchgear and Controlgear part 3

Certifications
CE Marked

Product Overview

The Bulletin 194R line of fused and non-fused rotary disconnect switches provides the flexibility to meet worldwide applications. The disconnect switches are UL Listed and CSA Certified and are designed to meet IEC 60947-3, VDE, DIN, BS and applicable NEMA requirements.

Features

- 20 A...1250 A Sizes
- Fused switch versions:
 - BS88 -DIN
 - CSA HRCII-C - CSA HRCI-MISC - HRC-L
 - UL Class J- UL Class CC - UL Class L
 - NFC
- Operating handle ingress ratings:
 - IP42 (Type 1)
 - IP66 (Type 3R, 3, 12, 4, 4X)
- Handle with or without test mode
- Padlockable handle for up to three padlocks
- 6 auxiliary contacts can be added
- Suitable as service entrance disconnecting means (UL 98)
- Suitable as at-motor disconnecting means (UL 508)

Non-Fused Disconnect Switches for CSA and UL Class Applications

Non-fused disconnect switches must be used with separately installed fuses.

Electrical Ratings					
Cat. No.		194R-N30-1753		194R-N60-1753	
Maximum Voltage, AC	[V]	600		600	
Maximum Voltage, DC	[V]	250		250	
Ampere Rating	[A]	30		60	
Maximum Short Circuit Prospective Fault Current	[kA]	200		200	
Maximum Hp, 3-Phase AC					
200V, 60 Hz	[Hp]	7.5	3	15	7.5
240V, 60 Hz	[Hp]	7.5	3	15	7.5
480V, 60 Hz	[Hp]	15	5	30	15
600V, 60 Hz	[Hp]	20	7.5	50	15
Maximum Hp, 1-Phase AC					
120V, 60 Hz	[Hp]	2	0.5	3	1.5
240V, 60 Hz	[Hp]	3	1.5	10	3
Maximum Hp, DC					
125V DC	[Hp]	3	2	5	5
250V DC	[Hp]	5	5	10	10
Power Lost	[W]	2		6	

Electrical Ratings							
Cat. No.		194R-NU100	194R-NU200	194R-NU400	194R-NU600	194R-NU800	194R-NU1200
Rated Current	[A]	100	200	400	600	800	1200
Standards Compliance		UL 98, IEC					
Ratings per UL/CSA							
Maximum Voltage, AC	[V]	600					
Maximum Voltage, DC	[V]	250					
Maximum Short Circuit Fault Current	[kA]	200	200	200	200	100	100
Fuse Type		J	J	J	J	L	L
Max. Fuse Rating	[A]	100	200	400	600	800	1200
Max. Hp Rating, 3-phase							
240V	[Hp]	30	75	125	200	200	200
480V	[Hp]	75	150	250	400	500	500
600V	[Hp]	100	200	350	350	500	500
Max. Hp Rating, DC							
125V, 2 poles in series	[Hp]	10	15	20	20	—	—
240V, 3 poles in series	[Hp]	15	15	50	50	—	—

Mechanical Data					
Cat. No.		194R-N30	194R-N60	194R-NU100	194R-NU200
Degree of Protection (per IEC 60947-3), Switch Only		IP20	IP20	IP20	IP20
Degree of Protection (per IEC 60947-3), Switch with Terminal Shield & Fuse Carriers		IP20	IP20	IP20	IP20
Mechanical Endurance	Operations	10 000	10 000	10 000	10 000
Operating Torque (Maximum)	N•m	3.5	3.5	10	10
	lb•in	35	35	88.5	88.5
Terminal Capacity, Power Terminals	mm ²	2.5...10	2.5...25	300 MCM	300 MCM
	AWG	#14...#8	#14...#4	#6	#6
Terminal Capacity, Auxiliary Contact Terminals	mm ²	2.5...10	2.5...25	—	—
	AWG	#14...#8	#14...#4		
Maximum Number of Auxiliary Circuits		6	6	2	2
Approximate Weight	kg	0.81	1.14	1.67/2.1	1.67/2.1
	lbs	1.78	2.52	3.7/4.3	3.7/4.3
Minimum Enclosure Size	Height [mm (in.)]	248 (9-3/4)	248 (9-3/4)	—	—
	Width [mm (in.)]	171 (6-3/4)	197 (7-3/4)		
	Depth [mm (in.)]	111 (4-3/8)	111 (4-3/8)		
Switch Dimension Reference (See dimension drawings.)		A2	B2	F1	F1

Mechanical Data					
Cat. No.		194R-NU400	194R-NU600	194R-NU800	194R-NU1200
Degree of Protection (per IEC 60947-3), Switch Only		IP20	IP20	IP20	IP20
Degree of Protection (per IEC 60947-3), Switch with Terminal Shield & Fuse Carriers		IP20	IP20	IP20	IP20
Mechanical Endurance	Operations	6 000	6 000	3 500	3 500
Operating Torque (Maximum)	N•m	14.5	37	50	50
	lb•in	128.3	327.5	442	442
Terminal Capacity, Power Terminals	mm ²	600 MCM	2 x 600 MCM	4 x 600 MCM	4 x 600 MCM
	AWG	#2	2 x #2	4 x #2	4 x #2
Maximum Number of Auxiliary Circuits		2	2	2	2
Approximate Weight	kg	3/3.8	8.2/10.3	11.6/14.5	11.6/14.5
	lbs	6.6/8.4	18.1/22.7	25.6/32	25.6/32
Switch Dimension Reference (See dimension drawings.)		F2	F3	F4	F4

Non-Fused Disconnect Switches for IEC Applications

Non-fused disconnect switches must be used with separately installed fuses.

Electrical Ratings							
Cat. No.		194R-N30		194R-N60		194R-NE125	194R-NE160
Maximum Voltage, AC	[V]	600		600		600	600
Maximum Voltage, DC	[V]	250		250		250	250
Ampere Rating	[A]	30		60		125	160
Maximum Short Circuit Prospective Fault Current	[kA]	200		200		200	200
Maximum Hp, 3-Phase AC							
200V, 60 Hz	[Hp]	7.5	3	15	7.5	—	—
240V, 60 Hz	[Hp]	7.5	3	15	7.5	—	—
480V, 60 Hz	[Hp]	15	5	30	15	—	—
600V, 60 Hz	[Hp]	20	7.5	50	15	—	—
Maximum Hp, 1-Phase AC							
120V, 60 Hz	[Hp]	2	0.5	3	1.5	—	—
240V, 60 Hz	[Hp]	3	1.5	10	3	—	—
Maximum Hp, DC							
125V DC	[Hp]	3	2	5	5	—	—
250V DC	[Hp]	5	5	10	10	—	—
Power Lost	[W]	2		6		—	—

Electrical Ratings						
Cat. No.		194R-NE250	194R-NE400	194R-NE630	194R-NE800	194R-NE1250
Maximum Voltage, AC	[V]	600	600	600	600	600
Maximum Voltage, DC	[V]	250	250	250	250	250
Ampere Rating	[A]	250	400	630	800	1250
Maximum Short Circuit Prospective Fault Current	[kA]	200	200	200	100	100

All Bulletin 194R Disconnect Switch Cat. Nos., 20...63 A Range

Environmental Data		
Ambient Temperature		
Open	°C (°F)	-2...+55 (-4...+131)
Enclosed	°C (°F)	-20...+40 (-4...+104)
Storage	°C (°F)	-40...+65 (-40...+149)
Altitude (per IEC 60947-1)		2 000
Relative Humidity (per IEC 60947-1)		90% @ +20 °C (+68 °F) 50% @ +40 °C (+104 °F)

Wiring Schematic

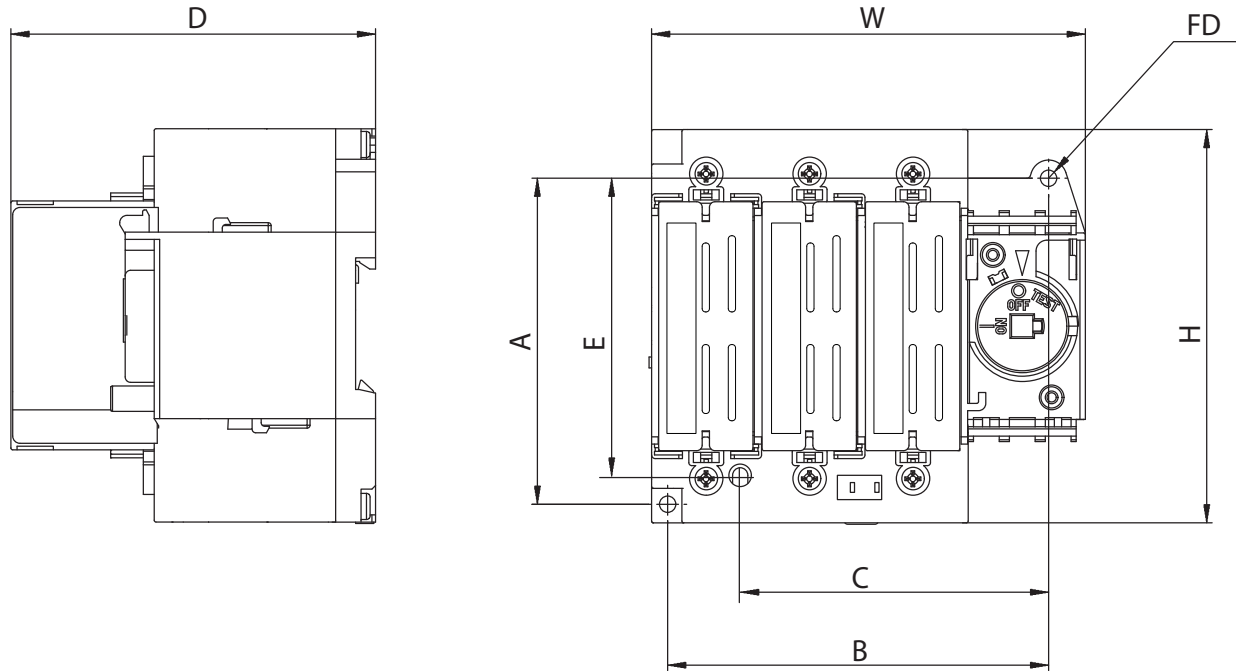
Figure 1 - Wiring Schematic

UL LISTED, CSA CERTIFIED	DIMENSION REFERENCE	CIRCUIT
Cat. No.		
194R-C30-1753	A1	
194R-J30-1753	A1	
194R-J60-1753	B1	
194R-H30-1753	B1	
194R-H60-1753	B1	
194R-N30-1753	A2	
194R-N60-1753	B2	
IEC SWITCHES	DIMENSION REFERENCE	CIRCUIT
Cat. No.		
194R-B20-1753	A1	
194R-B32-1753	A1	
194R-B63-1753	B1	
194R-D32-1753	B1	
194R-D63-1753	B1	
194R-F25-1753	A1	
194R-F32-1753	A1	
194R-F63-1753	B1	
194R-★-1754	See Column W4 for the width of the 4-pole switch	

Approximate Dimensions

Dimensions are in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

Figure 2 - Disconnect Switch Dimension References A1, A2, B1, and B2 (30 A and 60 A)

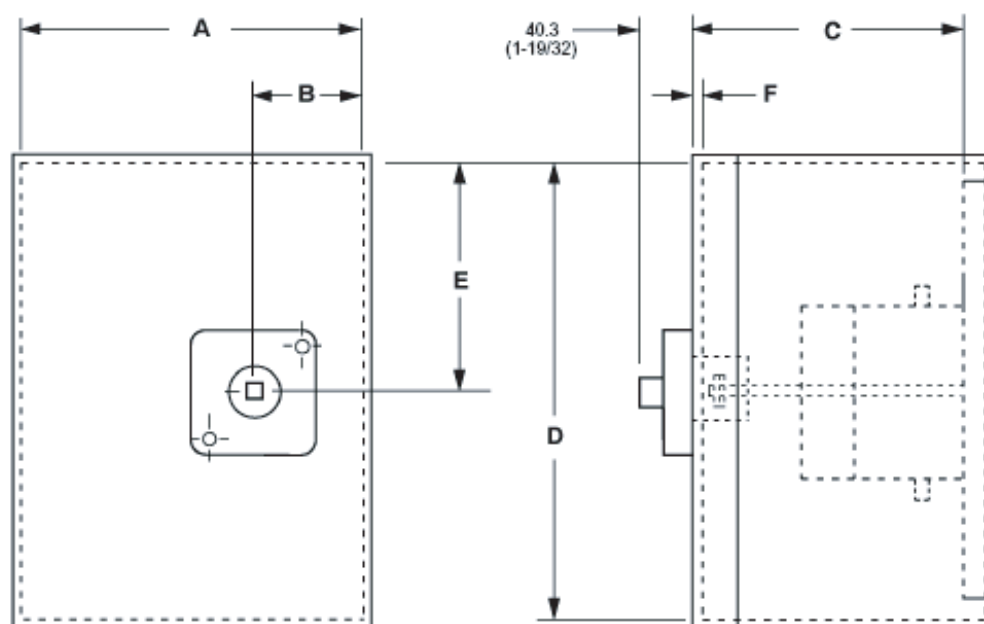


Disconnect Switch Dimension Reference	Approximate Dimensions [mm (in.)]								
	H	W (3-pole)	W (4-pole)	D	A	B	C ⁽¹⁾	E ⁽¹⁾	FD
A1	108 (4-1/4)	120 (4-3/4)	149 (5-7/8)	101 (4)	90 (3-9/16)	105 (4-1/8)	85 (3-11/32)	82 (3-15/64)	2-M4, 2-#8
A2	108 (4-1/4)	120 (4-3/4)	149 (5-7/8)	80 (3-1/8)	90 (3-9/16)	105 (4-1/8)	85 (3-11/32)	82 (3-15/64)	2-M4, 2-#8
B1	113 (4-29/64)	142 (5-19/32)	179 (7-3/64)	114 (4-31/64)	100 (3-15/16)	120 (4-23/32)	NA	NA	4-M4, 4-#8
B2	113 (4-29/64)	142 (5-19/32)	179 (7-3/64)	93 (3-43/64)	100 (3-15/16)	120 (4-23/32)	NA	NA	4-M4, 4-#8

(1) Mounting holes for backward compatibility with Bulletin 194R legacy switches.

Enclosures

Figure 22 - Disconnect Switch Dimension References: A1, A2, B1, B2 (30 A and 60 A) Enclosure and Operating Handle



Cat. No.	Dimension Reference	A	B	C		D	E	F	
		Maximum	Minimum	Minimum	Maximum	Minimum	Minimum	Minimum	Maximum
194R-B20-1753	A1	171 (6-3/4)	45 (1-49/64)	147.6 (5-13/16)	454 (17-7/8)	248 (9-3/4)	89 (3-1/2)	1.4 (1/16)	4/78 (3/16)
194R-B32-1753									
194R-C30-1753									
194R-F32-1753									
194R-J30-1753									
194R-N30-1753	A2	171 (6-3/4)	45 (1-49/64)	111 (4-3/8)	454 (17-7/8)	248 (9-3/4)	89 (3-1/2)	1.4 (1/16)	4/78 (3/16)
194R-B63-1753	B1	197 (7-3/4)	45 (1-49/64)	147.6 (5-13/16)	454 (17-7/8)	248 (9-3/4)	105 (4-9/64)	1.4 (1/16)	4/78 (3/16)
194R-D32-1753									
194R-D63-1753									
194R-F63-1753									
194R-H30-1753									
194R-H60-1753									
194R-J60-1753									
194R-N60-1753	B2	197 (7-3/4)	45 (1-49/64)	111 (4-3/8)	454 (17-7/8)	248 (9-3/4)	105 (4-9/64)	1.4 (1/16)	4/78 (3/16)