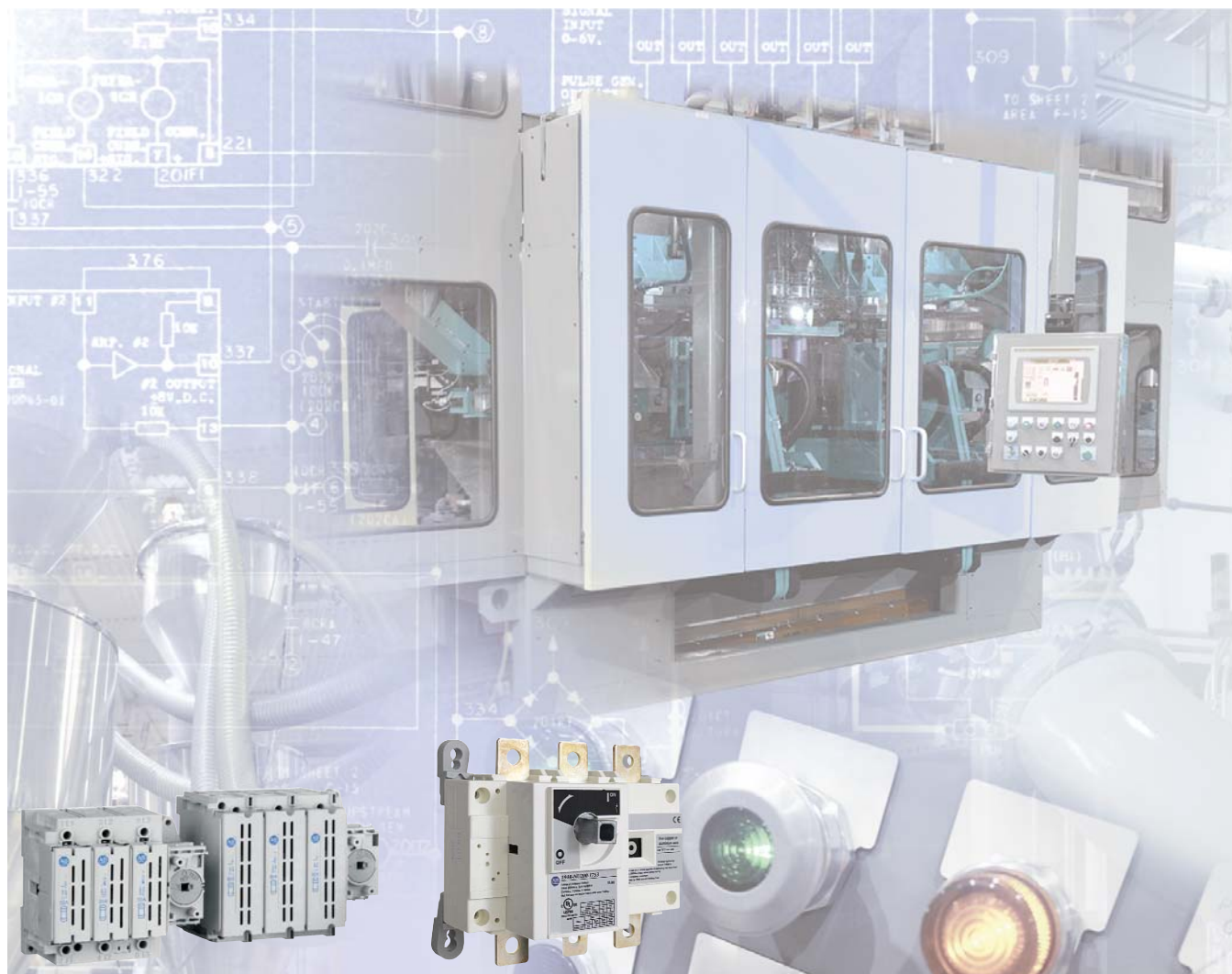


Bulletin 194R

Fused and Non-Fused Disconnect Switches



LISTEN.
THINK.
SOLVE.®

Bulletin 194R
Fused and Non-Fused Disconnects
 Product Overview

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"	Disconnecting means
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	Base/DIN Rail mounting	Base/DIN Rail 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, standard, or test mode versions - Handle colors in black and red/yellow and padlockable versions
Open Switch or Enclosed	- Open switch - Enclosed: UL/CSA rated enclosure	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/Certifications	- UL 98, UL 508 - CSA C22.2, No. 14 - IEC 60947-3 Low Voltage Switchgear and Controlgear part 3 - CE	- CSA C22.2, No. 14 - IEC 60947-3 Low Voltage Switchgear and Controlgear part 3 - CE
Product Selection	Page 4	Page 4



Bulletin 194R Global Fused and Non-Fused Disconnects

- 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)

Certifications

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

Table of Contents

Product Selection 5

NFPA 79 Internal
Operating Handle
with Shaft..... 15

Specifications..... 18

Proper Selection of
Disconnect Switches 48

Fuse Description 49

Standards Compliance

IEC 60947/EN60947-3
BS EN60947-3
VDE 0660
CSA 22.2 No. 4
NEMA KS-1
UL 98
UL 508

The Bulletin 194R line of fused and non-fused global 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.

Fused and Non-Fused Disconnects

Cat. No. Explanation

Catalog Number Explanation



Cat. No. 194R-J30-1753



Cat. No. 194R-NE160-1753

194R – J 30 – 1753 S

a *b* *c* *d*

a

Fuse Type	
Code	Description
C	UL Class CC, CSA Type HRCI-MISC
J	UL Class J, CSA Type HRCI-J
H	CSA Type HRCII-C
B	BS88♣
D	DIN♣
F	NFC♣
L	UL Class L, CSA Type HRC-L
N	Non-fused (20...63 A)‡
NE	Non-fused, IEC (100...1250 A)‡§
NU	Non-fused, UL (100...1200 A)‡

b

Load Size★	
Code	Description
20	20 A (BS88)
25	25 A (NFC)
30	30 A (CC, J, HRCI-J)
	30 A (non-fused)
	30 A (HRCII-C)
32	32 A (BS88, NFC)
	32 A (DIN)
60	60 A (J, HRCI-J, HRCII-C)
	60 A (non-fused)
63	63 A (BS88, DIN, NFC)
100	100 A (BS88, DIN, NFC, J, HRCI-J, HRCII-C)
125	125 A (BS88, DIN, NFC, Non-fused)
160	160 A (BS88, DIN, NFC, Non-fused)
200	200 A (BS88, DIN, NFC, J, HRCI-J, HRCII-C, non-fused)
250	250 A (BS88, DIN, NFC, J, HRCI-J, HRCII-C, non-fused)
400	400 A (BS88, DIN, NFC, J, HRCI-J, HRCII-C, non-fused)
600	600 A (BS88, DIN, NFC, J, HRCI-J, HRCII-C, non-fused)
630	630 A (BS88, DIN, NFC, non-fused)
800	800 A (BS88, DIN, NFC, L, HRCI-L, non-fused)
1200	1200 A (Non-fused)
1250	1250 A (BS88, DIN, non-fused)

c

No. of Poles	
Code	Description
1753	3-pole switch
1754	4-pole switch (non-fused: 100...1250 A; fused: 20...63 A)

d

Fuse Indication	
Code	Configuration
Blank	No fuse status indication
S	Fuse status indication (20...63 A)

★ See page 29 for dimensional reference data.

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

§ Does not carry UL Certification

♣ Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

Fourth pole (20...63 A), additional auxiliary contacts, and handle options available in accessory section.

UL/CSA Fused Disconnect Switches



Cat. No. 194R-J30-1753



Cat. No. 194R-J100-1753

Rated Current [A]	Maximum Hp Ratings ★							Fuse	Dim. Ref.	Cat. No.
	1-Phase (60 Hz)		3-Phase (60 Hz)			DC				
	120V	240V	240V	480V	600V	125V	250V			
UL Class CC and CSA HRCI-MISC Fuses										
30	2	3	7.5	15	20	3	5	30 A CC, HRCI-Misc	A1	194R-C30-1753
UL Class J and CSA HRCI-J Fuses										
30	2	3	7.5	15	20	3	5	30 A Class J, HRCI-J	A1	194R-J30-1753
60	3	10	15	30	50	5	10	60 A Class J, HRCI-J	B1	194R-J60-1753
CSA HRCII-C Fuses										
30	2	3	7.5	15	20	3	5	30A HRCII-C	B1	194R-H30-1753
60	3	10	15	30	50	5	10	60A HRCII-C	B1	194R-H60-1753
UL Class J and CSA HRCI-J Fuses										
30	2	3	7.5	15	20	3	5	30 A Class J, HRCI-J	A1	194R-J30-1753
60	3	10	15	30	50	5	10	60 A Class J, HRCI-J	B1	194R-J60-1753
100	7-1/2	15	30	60	75	7.5	20	100 A Class J, HRCI-J	F5	194R-J100-1753
200	—	25	60	125	150	15	40	200 A Class J, HRCI-J	F6	194R-J200-1753
400	—	50	125	250	350	20	50	400 A Class J, HRCI-J	F7	194R-J400-1753
600	—	—	200	500	500	—	—	600 A Class J, HRCI-J	F8	194R-J600-1753
UL Class L and CSA HRCI-L Fuses										
800	—	—	200	500	500	—	—	800 A Class L, HRCI-L	F9	194R-L800-1753

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

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

Bulletin 194R
Fused and Non-Fused Disconnects
 Product Selection

UL/CSA Non-fused Disconnect Switches



Cat. No. 194R-N30-1753



Cat. No. 194R-NU200-1753

Non-Fused											
Fuse Description	Rated Current† [A]	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

† 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.

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

IEC Fused Disconnect Switches



Cat. No. 194R-F32-1753

Cat. No. 194R-F63-1753



Cat. No. 194R-D160-1753

BS88 Fused Disconnect Switches✱

Load Rating I_e [A]	Ratings (AC23)			Fuse	Dim. Ref.	Cat. No.
	With Fuse Links					
	3-Phase Maximum kW (50 Hz)					
	200/230V	380/400/415V	660/690V			
20	5.5	11	15	BS88 A1	A1	194R-B20-1753
32	9	18.5	30	BS88 A2	A1	194R-B32-1753
63	18.5	30	55	BS88 A3	B1	194R-B63-1753
100	—	57	90	BS88, size A4	F13	194R-B100-1753
160	—	80	110	BS88, size A4	F14	194R-B160-1753
200	—	100	150	BS88, size B1-B2	F15	194R-B200-1753
250	—	132	220	BS88, size B1-B3	F15	194R-B250-1753
400	—	220	220	BS88, size B1- B4	F16	194R-B400-1753
630	—	355	295	BS88, size C1- C2	F17	194R-B630-1753
800	—	450	400	BS88, size C1-C3	F17	194R-B800-1753
1250	—	560	400	BS88, size D1	F18	194R-B1250-1753

DIN Fused Disconnect Switches✱

Load Rating I_e [A]	Ratings (AC23)			Fuse	Dim. Ref.	Cat. No.
	With Fuse Links					
	3-Phase Maximum kW (50 Hz)					
	200/230V	380/400/415V	660/690V			
32	9	18.5	30	NH 000	B1	194R-D32-1753
63	18.5	30	55	NH 000	B1	194R-D63-1753
125	—	63	90	DIN, size T00	F13	194R-D125-1753
160	—	80	110	DIN, size T00	F13	194R-D160-1753
250	—	132	220	DIN, size T1	F15	194R-D250-1753
400	—	220	220	DIN, size T2	F16	194R-D400-1753
630	—	355	295	DIN, size T3	F17	194R-D630-1753
800	—	450	400	DIN, size T3	F17	194R-D800-1753
1250	—	560	400	DIN, size T4	F18	194R-D1250-1753

NFC Fused Disconnect Switches✱

Load Rating I_e [A]	Ratings (AC23)			Fuse	Dim. Ref.	Cat. No.
	With Fuse Links					
	3-Phase Maximum kW (50 Hz)					
	200/230V	380/400/415V	660/690V			
25	7.5	11	22	NFC 14x51 mm	A1	194R-F25-1753
32	9	18.5	30	NFC 14x51 mm	A1	194R-F32-1753
63	18.5	30	55	NFC 22x58 mm	B1	194R-F63-1753

✱ Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

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

Bulletin 194R
Fused and Non-Fused Disconnects
 Product Selection

IEC Non-fused Disconnect Switches



Cat. No. 194R-N30-1753



Cat. No. 194R-NE160-1753

Non-Fused											
Fuse Description	Rated Current† [A]	No. of Poles	Maximum Hp Ratings				Maximum kW Ratings			Dim. Ref.	Cat. No.
			1-Phase (60 Hz)		DC		3-Phase (50 Hz)				
			120V	240V	125V	250V	220/230V	380/400/415V	660/690V		
Non-fused disconnect switches must use separately installed fuses for upstream short circuit protection.	30	3	2	3	3	5	7.5	15	20	A2	194R-N30-1753
	60	3	3	10	5	10	15	30	40	B2	194R-N60-1753
	125	3	—	—	—	—	—	63	55	F1	§ 194R-NE125-1753
		4	—	—	—	—	—	63	55	F1	§ 194R-NE125-1754
	160	3	—	—	—	—	—	80	55	F1	§ 194R-NE160-1753
		4	—	—	—	—	—	80	55	F1	§ 194R-NE160-1754
	250	3	—	—	—	—	—	132	90	F2	§ 194R-NE250-1753
		4	—	—	—	—	—	132	90	F2	§ 194R-NE250-1754
	400	3	—	—	—	—	—	220	150	F3	§ 194R-NE400-1753
		4	—	—	—	—	—	220	150	F3	§ 194R-NE400-1754
	630	3	—	—	—	—	—	280	150	F3	§ 194R-NE630-1753
		4	—	—	—	—	—	280	150	F3	§ 194R-NE630-1754
	800	3	—	—	—	—	—	450	185	F4	§ 194R-NE800-1753
		4	—	—	—	—	—	450	185	F4	§ 194R-NE800-1754
	1250	3	—	—	—	—	—	710	415	F5	§ 194R-NE1250-1753
		4	—	—	—	—	—	710	415	F5	§ 194R-NE1250-1754

† 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.

§ Does not carry UL Certification.

† 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.

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

Complete UL/CSA Disconnect Switch Kits

Includes disconnect switch, operating handle with defeater mechanism and operating shaft, NFPA handle, auxiliary contacts, and padlock attachment.

Product Selection — Kits

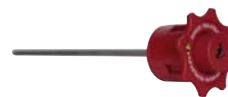
Catalog Number Explanation



Switch body



Operating handle



NFPA Handle and shaft

$$194R - \frac{J}{a} \quad \frac{30}{b} - \frac{1753}{c} \quad \frac{S_{\Delta}}{d} - \frac{TY}{e} \quad \frac{N1}{f}$$

a

Fuse Type	
Code	Description
C	UL Class CC, CSA Type HRCI-MISC (30 A)
J	UL Class J, CSA Type HRCI-J (30 A or 60 A)
H	CSA Type HRCI-C (30 A or 60 A)
B	BS88 (20 A, 32 A, or 63 A)⚡
D	DIN (32 A or 63 A)⚡
F	NFC (25 A, 32 A, or 63 A)⚡
N	Non-fused (30 A or 60 A)⚡

C

No. of Poles	
Code	Description
1753	3-pole switch

d

Fuse Indication	
Code	Configuration
Blank	No fuse status indication
SΔ	Fuse status indication

△ Class C and J fuses only

 f

Shaft & NFPA79 Handle	
Code	Description
R1	Cat. No. 194R-R1 shaft (10.3 in.)
R2	Cat. No. 194R-R2 shaft (18.0 in.)
N1	Cat. No. 194R-NHR1 NFPA79 handle with 12 in. shaft and guard tube
N2	Cat. No. 194R-NHR2 NFPA79 handle with 21 in. shaft and guard tube

b

Load Size 		
Code	Description	Dimensional Ref. 
20	20 A (BS88)	A1
25	25 A (NFC)	A1
30	30 A (CC, J, HRCI-J)	A1
	30 A (Non-Fused) 	A2
	30 A (HRCII-C)	B1
32	32 A (BS88, NFC)	A1
	32 A (DIN)	B1
60	60 A (J, HRCI-J, HRCII-C)	B1
	60 A (Non-Fused) 	B2
63	63 A (BS88, DIN, NFC)	B1

e

External Handle	
Code	Description
PY	Std/pistol red/yellow handle, 4/4X, IP66 (Cat. No. 194R-HS4E)
PB	Std/pistol black handle, 4/4X, IP66 (Cat. No. 194R-HS4)
TY	Test mode red/yellow handle, 4/4X, IP66 (Cat. No. 194R-HST4E)
TB	Test mode black handle, 4/4X, IP66 (Cat. No. 194R-HST4)
LY	Extended length red/yellow handle, 4/4X, IP66 (Cat. No. 194R-HS4EL)
LB	Extended length black handle, 4/4X, IP66 (Cat. No. 194R-HS4L)

★ See page 29 for dimensional reference data.

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

- ❖ Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

Fused and Non-Fused Disconnects

Catalog Number Explanation

UL Enclosed Disconnect Switches (Fused and Non-Fused)

Catalog Number Explanation

194R-KA Non-Metallic Enclosure UL Type 3/4/4X, IP66	194R-FA Painted Steel Enclosure UL Type 3/4/12, IP66	194R-CA Stainless Steel Enclosure UL Type 4/4X, IP66
		

194R – $\frac{C}{a}$ $\frac{J}{b}$ $\frac{30}{c}$ $\frac{-1753}{d}$ $\frac{S\Delta}{e}$ – $\frac{TB}{f}$ – $\frac{P}{g}$

a

Enclosure Type	
Code	Description
K	Thermoplastic, Type 4/4X
F	Painted metal, Type 3/4/12
C	Stainless steel, Type 4/4X

b

Fuse Type	
Code	Description
C	UL Class CC, CSA Type HRCI-MISC (30 A)
J	UL Class J, CSA Type HRCI-J (30 A or 60 A)
H	CSA Type HRCII-C (30 A or 60 A)
B	BS88 (20 A, 32 A, or 63 A)*
D	DIN (32 A or 63 A)*
F	NFC (25 A, 32 A, or 63 A)*
N	Non-fused (30 A or 60 A)†

c

Load Size*		
Code	Description	Dimensional Ref. ★
20	20 A (BS88)	A1
25	25 A (NFC)	A1
30	30 A (CC, J, HRCI-J)	A1
	30 A (Non-Fused) ‡	A2
	30 A (HRCII-C)	B1
32	32 A (BS88, NFC)	A1
	32 A (DIN)	B1
60	60 A (J, HRCI-J, HRCII-C)	B1
	60 A (Non-Fused) ‡	B2
63	63 A (BS88, DIN, NFC)	B1

★ See page 29 for dimensional reference data.

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

* Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

d

No. of Poles	
Code	Description
1753	3-pole switch

e

Fuse Indication	
Code	Configuration
Blank	No fuse status indication
SΔ	Fuse status indication

Δ Class C and J fuses only

f

External Handle	
Code	Description
PY	Std red/yellow handle, 4/4X, IP66 (Cat. No. 194R-HS4E)
PB	Std black handle, 4/4X, IP66 (Cat. No. 194R-HS4)
TY	Test mode red/yellow handle, 4/4X, IP66 (Cat. No. 194R-HST4E)
TB	Test mode black handle, 4/4X, IP66 (Cat. No. 194R-HST4)
LY	Extended length red/yellow handle, 4/4X, IP66 (Cat. No. 194R-HS4EL)
LB	Extended length black handle, 4/4X, IP66 (Cat. No. 194R-HS4L)

g

Other Accessories	
Code	Configuration
Blank	No accessory
P	Padlock attachment

4th Pole Modules

Rated Current [A]	Maximum Hp Ratings★							Fuse	Dim. Ref.	Cat. No.‡
	1-Phase (60 Hz)		3-Phase (60 Hz)			DC				
	120V	240V	240V	480V	600V	125V	250V			
Non-Fused										
30‡	2	3	7.5	15	20	3	5	—	A2	194R-30-NN
60§	3	10	15	30	40	5	10	—	B2	194R-60-NN
UL Class CC and CSA HRCI-MISC Fuses										
30	2	3	7.5	15	20	3	5	30 A CC, HRCI-Misc	A1	194R-30-NC
UL Class J and CSA HRCI-J Fuses										
30	2	3	7.5	15	20	3	5	30 A J, HRCI-J	A1	194R-30-NJ
60	3	10	15	30	50	5	10	60 A J, HRCI-J	B1	194R-60-NJ
CSA HRCII-C Fuses										
30	2	3	7.5	15	20	—	—	30A HRCII-C	B1	194R-30-NH
60	3	10	15	30	50	—	—	60A HRCII-C	B1	194R-60-NH

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

‡ 30 A UL, 40 A IEC

§ 60 A UL, 80 A IEC

BS88 Fuses♣

Load Rating I_e [A]	Ratings (AC23)			Fuse	Dim. Ref.	Cat. No.‡
	With Fuse Links					
	3-Phase Maximum kW (50 Hz)					
	200/230V	380/400/415V	660/690V			
20	5.5	11	15	BS88 A1	A1	194R-20-NB
32	9	18.5	30	BS88 A1	A1	194R-32-NB
63	18.5	30	55	BS88 A3	B1	194R-63-NB

DIN Fuses♣

Load Rating I_e [A]	Ratings (AC23)			Fuse	Dim. Ref.	Cat. No.‡
	With Fuse Links					
	3-Phase Maximum kW (50 Hz)					
	200/230V	380/400/415V	660/690V			
32	9	18.5	30	NH 000	B1	194R-32-ND
63	18.5	30	55	NH 000	B1	194R-63-ND

NFC Fuses♣

Load Rating I_e [A]	Ratings (AC23)			Fuse	Dim. Ref.	Cat. No.†
	With Fuse Links					
	3-Phase Maximum kW (50 Hz)					
	200/230V	380/400/415V	660/690V			
25	7.5	11	22	NFC 14 x 51 mm	A1	194R-25-NF
32	9	18.5	30	NFC 14 x 51 mm	A1	194R-32-NF
63	18.5	30	55	NFC 22 x 58 mm	B1	194R-63-NF

‡ For fuse status indication add **S** to catalog number, example: 194R-30-NN becomes 194R-30-NNS.

♣ Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

Replacement Fuse Hardware

Description	For Use With	Pkg. Qty.	Cat. No.
M4 x .7 Fuse screws	194R BS88 Fuse Types	2	194R-BS88-M4
M5 x .6 Fuse screws	194R BS88 Fuse Types	2	194R-BS88-M5

Fused and Non-Fused Disconnects

Product Selection

Conductor Mounting Hardware

Description	For Use With	Cat. No.	
(8) HM8 16 mm bolts (8) HM8 nuts (8) M8 washers	4-pole 125...160 A IEC non-fused switches	§	194R-HF-160-4
(8) HM10 20 mm bolts (8) HM10 nuts (8) M10 washers	4-pole 250 A IEC non-fused switches	§	194R-HF-250-4
(8) HM10 25 mm bolts (8) HM10 nuts (8) M10 washers	4-pole 400 A IEC non-fused switches	§	194R-HF-400-4
(8) HM12 30 mm bolts (8) HM12 nuts (8) M12 washers	4-pole 630 A IEC non-fused switches	§	194R-HF-630-4
(8) HM10 25 mm bolts (8) HM10 nuts (16) M10 washers	4-pole 100 and 200 A UL non-fused switches		194R-HF-200-4U
(8) HM12 30 mm bolts (8) HM12 nuts (16) M12 washers	4-pole 400 A UL non-fused switches		194R-HF-400-4U
(8) HM8 16 mm bolts (8) M8 washers	3-pole 100...160 A BS88 fused switches 3-pole 125...160 A DIN fused switches	⚡	194R-HF-160-3BD
(8) HM10 16 mm bolts (8) M10 washers	3-pole 200...250 A BS88 fused switches 3-pole 250 A DIN fused switches 3-pole 200 A UL fused switches	⚡	194R-HF-250-3BDU
(8) HM8 16 mm bolts (8) M8 washers (6) HM10 35 mm bolts (6) M10 nuts (12) M10 washers	3-pole 400 A BS88 fused switches 3-pole 400 A UL fused switches	⚡	194R-HF-400-3BU
(6) HM12 35 mm bolts (6) M12 nuts (12) M12 washers (12) M10 25 mm bolts (12) M12 washers	3-pole 630...800 A BS88 fused switches	⚡	194R-HF-800-3B
(6) HM10 nuts	3-pole 400 A DIN fused switches	⚡	194R-HF-400-3D
(6) HM12 nuts	3-pole 630...1250 A DIN fused switches	⚡	194R-HF-800-3D
(12) HM12 30 mm bolts (12) HM12 35 mm bolts (12) M12 nuts (36) M12 washers	3-pole 1250 A BS88 fused switches	⚡	194R-HF-1250-3B
(8) HM12 30 mm bolts (8) HM12 nuts	3-pole 600...800 A UL fused switches		194R-HF-800-3U

§ Does not carry UL Certification

⚡ Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

Replacement Fuse Carriers

	Description	Pkg. Quantity	Cat. No.†
 194R-J30-FC  194R-J30-FCS	30 A CC Fuse Carrier	1	194R-C30-FC
	30 A J Fuse Carrier	1	194R-J30-FC
	60 A J Fuse Carrier	1	194R-J60-FC
	20 A BS88 Fuse Carrier	1	194R-B20-FC
	32 A BS88 Fuse Carrier	1	194R-B32-FC
	63 A BS88 Fuse Carrier	1	194R-B63-FC
	30 A CSA HRCII-C Fuse Carrier	1	194R-H30-FC
	60 A CSA HRCII-C Fuse Carrier	1	194R-H60-FC
	32 A DIN Fuse Carrier	1	194R-D32-FC
	63 A DIN Fuse Carrier	1	194R-D63-FC
	25 A NFC Fuse Carrier	1	194R-F25-FC
	32 A NFC Fuse Carrier	1	194R-F32-FC
	63 A NFC Fuse Carrier	1	194R-F63-FC
	30 A Non-Fuse Carrier	1	194R-N30-FC
	60 A Non-Fuse Carrier	1	194R-N60-FC

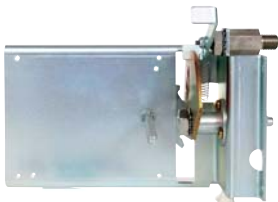
† For fuse status indication add **S** to catalog number, example: 194R-J30-FC becomes 194R-J30-FCS.

Cable-Operated Disconnect Kits§ (for 20...63 A switches)

	Description	Cable Length	Cat. No.
	Cable-operated disconnect switch with handle	3 ft.	194R-FC03
		4 ft.	194R-FC04
		6 ft.	194R-FC06
		10 ft.	194R-FC10

§ For additional information, please see page 52

Side-Mounted Disconnect Switch Kit† (for 20...63 A switches)

	Description	For Use With	Cat. No.
	Side-Mounted Kit (Disconnect Mechanism and Bracket)	All Bul. 194R 30/60 A disconnect switches and Bul. 194R-HS handles	194R-SDK1

† For more information, please see page 54

Disconnect Switch Padlock Accessory (for 20...63 A switches)

	Disconnect Switch Dim Ref.	Pkg. Qty.	Cat. No.§
	A1, A2, B1, B2	1	194R-PLA1

§ For padlock with ø 3...6 mm

Replacement Mounting Hardware (for 20...63 A switches)

	Pkg. Qty.	Description	For Use With	Cat. No.
	2	(1) M4 x .7 set screw, (1) shaft clip and (2) M4 x .7 mounting screws	A1, A2	194R-30-HDWR
	4	(1) M4 x .7 set screw, (1) shaft clip and (4) M4 x .7 mounting screws	B1, B2	194R-60-HDWR

Fused and Non-Fused Disconnects

Accessories

Auxiliary Contact Blocks^Δ

	Description	Contact Material	For Use With	Pkg. Quantity	Cat. No.
 Cat. No. 800F-X10	Contact Block Note: Sold only in multiples of 10. Order (quantity of) 10 to receive one package of 10 pieces. Latch not included.	N.O.	194R 30/60 A switches (all) 194R 100...1250 A switches (fused only)	10	800F-X10
		N.C.			800F-X01
		N.O.E.M.			800F-X10E
		N.C.L.B.			800F-X01L
		N.O. with stab terminals			800F-X10T
		N.C. with stab terminals			800F-X01T
		N.O. spring-clamp			800F-Q10
		N.C. spring-clamp			800F-Q01
	Auxiliary contact N.O./N.C.		194R 100...1250 A switches (non-fused only) [§]	1	194R-1STNONC
				1	194R-2NDNONC

^Δ Also used for test mode function for 20...63 A switches.

[§] Does not carry UL Certification

Operating Handles (Accepts 3 Padlocks)

	Description	For Use With	Color	Degree of Protection	Cat. No.
	Padlockable handle, standard	Bul. 194R disconnect switches up to 60 A	Black	Type 3R, 3, 12, 4, 4X	194R-PB
			Red/Yellow	Type 3R, 3, 12, 4, 4X	194R-PY
	Padlockable handle, test mode	Bul. 194R disconnect switches up to 60 A	Black	Type 3R, 3, 12, 4, 4X	194R-PBT
			Red/Yellow	Type 3R, 3, 12, 4, 4X	194R-PYT
	Operating Handle Standard orientation with defeater	IEC Non-fused disconnect switches: 125...630 A IEC Fused disconnect switches: 100...400 A UL Disconnect switches: 100...400 A	Black	IP66 (Type 1, 3R, 12, 4, 4X)	194R-HM4
			Red/Yellow	IP66 (Type 1, 3R, 12, 4, 4X)	194R-HM4E
		IEC Non-fused disconnect switches: 800...1250 A IEC Fused disconnect switches: 630...1250 A UL Non-fused disconnect switches: 600...1200 A UL Fused disconnect switches: 600...800 A	Black with light grey cover	IP65 (Type 1, 3R, 12, 4, 4X)	194R-HM4-L
			Red/Yellow	IP65 (Type 1, 3R, 12, 4, 4X)	194R-HM4E-L
	Operating Handle Standard orientation without defeater	IEC Non-fused disconnect switches: 800...1250 A IEC Fused disconnect switches: 630...1250 A UL Non-fused disconnect switches: 600...1200 A UL Fused disconnect switches: 600...800 A	Black with light grey cover	IP65 (Type 1, 3R, 12, 4, 4X)	194R-HM4-N2-L
			Red/Yellow	IP65 (Type 1, 3R, 12, 4, 4X)	194R-HM4E-N2-L

OSHA Lockout/Tag Out Compliance (LOTO)

OSHA CFR36 Section 1910 mandates that disconnects be able to be locked out while in the OFF position during servicing. All Bulletin 194R handles comply with this important safety requirement.



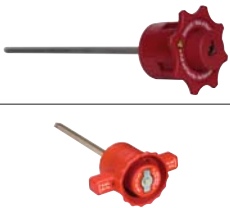
(Please see NFPA Article 430 for disconnect requirements of motor applications)

Operating Shafts

	Description	For Use With	Operating Shaft Length	Cat. No.
	Extension shaft Standard length	140U-P*, 194R-P*, and 194R-P*T handles	12 in. (30.48 cm)	194R-S1
			21 in. (53.34 cm)	194R-S2
	Extension Shaft Standard length	Bul. 194R-HM handles for 100...400 A switches	12.6 in. (320 mm)	194R-R7
	Extension Shaft Extended length		22.8 in. (580 mm)	194R-R8
	Extension Shaft Standard length	Bul. 194R-HM handles for non-fused switches 600...1250 A	12.6 in. (320 mm)	194R-R9
	Extension Shaft Extended length		22.0 in. (560 mm)	194R-R10
	Extension Shaft Standard length	Bul. 194R-HM handles for fused switches 600...1250 A	12.6 in. (320 mm)	194R-R11
	Extension Shaft Extended length		22.0 in. (560 mm)	194R-R12

NFPA 79 Internal Operating Handle with Shaft

An internal handle that permits operation of the disconnect switch when the panel door is open, in compliance with NFPA 79.

	Description	For Use With	Operating Shaft Length	Cat. No.
	NFPA 79 internal operating handle with shaft	140U-P*, 194R-P*, and 194R-P*T handles	12 in. (30.48 cm)	194R-N1
			21 in. (53.34 cm)	194R-N2
		100...400 A UL fused disconnect switches	12.6 in. (320 mm)	194R-HM4-NFPA1
			22 in. (560 mm)	194R-HM4-NFPA3
		600...800 A UL fused disconnect switches	12.6 in. (320 mm)	194R-HM4-NFPA2
			22 in. (560 mm)	194R-HM4-NFPA4

Terminal Shields

	Description	For Use With	No. of Poles	Mounting Position	Disconnect Switch Dim Ref.	Quantity Required Per Disconnect Switch	Pkg. Qty.	Cat. No.
	30 A Terminal Shield (three terminals)	—	—	—	A1, A2	2	2	194R-30-C3
	60 A Terminal Shield (three terminals)	—	—	—	B1, B2	2	2	194R-60-C3
	30 A Terminal Shield (one terminal)	—	—	—	A1, A2	2	2	194R-30-C1
	60 A Terminal Shield (one terminal)	—	—	—	B1, B2	2	2	194R-60-C1
	IEC Terminal Shrouds	IEC Non-fused switches, 125...160 A	3	line or load side	F1	1	3	194R-LNC7
		IEC Non-fused switches, 125...160 A	4		F1	1	4	194R-LNC8
		IEC Non-fused switches, 250 A	3		F2	—	3	194R-LNC9
		IEC Non-fused switches, 250 A	4		F2	2	4	194R-LNC10
		IEC Non-fused switches, 400...630 A	3		F3	2	3	194R-LNC11
		IEC Non-fused switches, 400...630 A	4		F3	2	4	194R-LNC12
	IEC Terminal Screens	IEC Non-fused switches, 800 A	3	line or load side	F4	2	1	194R-LNC13
		IEC Non-fused switches, 800 A	4		F4	2	1	194R-LNC14
		IEC Non-fused switches, 1250 A	3		F5	2	1	194R-LNC15
		IEC Non-fused switches, 1250 A	4		F5	2	1	194R-LNC16
	UL Terminal Screen	UL Non-fused switches, 100...200 A	3	line side	F1	1	1	194R-LNC17
		UL Non-fused switches, 100...200 A	3	load side	F1	1	1	194R-LNC18
		UL Non-fused switches, 100...200 A	4	line or load side	F1	2	1	194R-LNC19
		UL Non-fused switches, 400 A	3	line side	F2	1	1	194R-LNC20
		UL Non-fused switches, 400 A	3	load side	F2	1	1	194R-LNC21
		UL Non-fused switches, 400 A	4	line or load side	F2	2	1	194R-LNC22
		UL Non-fused switches, 600 A	3	load side	F3	1	1	194R-LNC23
		UL Non-fused switches, 600 A	4	load side	F3	1	1	194R-LNC24
		UL Non-fused switches, 800...1200 A	3	load side	F4	1	1	194R-LNC25
	UL Terminal Screen	IEC Fused switches	3	line or load side	F13, F14	2	1	194R-LNC27
		IEC Fused switches	3		F15, F16	2	1	194R-LNC28
		IEC Fused switches (see Dim. Ref.) UL Fused switches, 600...800 A	3		F17	2	1	194R-LNC29
	IEC (BS/DIN) Terminal Shrouds	IEC Fused switches	3	line or load side	F18	2	1	194R-LNC30
		UL Fused switches, 200 A	3		F6	2	1	194R-LNC31
	UL/IEC (BS/DIN) Terminal Shrouds	IEC Fused switches (see Dim. Ref.) UL Fused switches, 400 A	3	line or load side	F7, F16	2	1	194R-LNC32

Lug Kits — order separately

	Description	Wire Size	Dimension Reference	For Use With	Pkg. Quantity	Cat. No.
	Multi-Tap Terminal Lugs Load side only	(3) 14...4 AWG (3) 0.75...25 mm ²	A1 (194R-C30, -J30), A2 (194R-N30)	—	1	194R-30-MTL3
		(3) 14...4 AWG (3) 0.75...25 mm ²	B1 (194R-J60, -H30, - H60), B2 (194R-N60)	—	1	194R-60-MTL3
	Terminal Lug Kit	(1) 300 MCM	—	UL Non-fused switches: 100...200 A UL Fused switches: 200 A	3	194R-TL1
		(1) 300 MCM	—	UL Non-fused switches: 100...200 A	4	194R-TL2
		(1) 600 MCM	—	UL Fused and non- fused switches: 400 A	3	194R-TL3
		(1) 600 MCM	—	UL Non-fused switches: 400 A	4	194R-TL4
		(2) 350 MCM	—	UL Fused and non- fused switches: 400 A	3	194R-TL5
		(2) 350 MCM	—	UL Non-fused switches: 400 A	3	194R-TL6
		(2) 600 MCM	—	UL Non-fused switches: 600 A UL Fused switches: 600...800 A	3	194R-TL7
		(2) 600 MCM	—	UL Non-fused switches: 600 A	4	194R-TL8
			(2) 600 MCM	—	UL Non-fused switches: 800...1200 A	6
(2) 600 MCM			—	UL Non-fused switches: 800...1200 A	8	194R-TL10

Other Accessories

	Description	For Use With	Disconnect Switch Dim Ref.	Pkg. Qty.	Cat. No.
	Cone guide for shafts longer than 320 mm (12.6 in.)	Cat. No. 194R-HM4-L, - HM4E-L, -HM4-N2-L, and - HME-N2-L handles	—	1	194R-HSG2
	Shaft Guard — Provides extra protection against contact with shaft	Cat. No. 194R-R1 and -R2 shafts	A1, A2, B1, B2	1	194R-R1G
	Operating Shaft Coupler — Used to extend shaft length an additional 4.75 in.	Cat. No. 194R-R1 and -R2 shafts	A1, A2, B1, B2	1	194R-SC1
	Operating Handle Instruction Label	100...200 A UL Non-fused disconnect switches 200 A UL Fused disconnect switches	ALL	10	194R-L1

Bulletin 194R

Fused and Non-Fused Disconnects

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	
CSA Fuse Type/UL Fuse Type			Class CC/HRCI-MISC ‡		Class J/HRCI-J		Class J/HRCI-J	
Maximum Fuse Cartridge Size			[A]	30	30		60	
Maximum Voltage	AC	[V]	600		600		600	
	DC	[V]	250		250		250	
Ampere Rating			[A]	30	30		60	
Maximum Short Circuit Prospective Fault Current			[kA]	200	200		200	
Fuse Operating Characteristics			Time Delay		Non-Time Delay	Time Delay		Non-Time Delay
Maximum Hp, 3-Phase AC								
	200V, 60 Hz	[Hp]	5	3	7.5	3	15	7.5
	240V, 60 Hz	[Hp]	5	3	7.5	3	15	7.5
	480V, 60 Hz	[Hp]	10	5	15	5	30	15
	600V, 60 Hz	[Hp]	10	7.5	20	7.5	50	15
Maximum Hp, 1-Phase AC								
	120V, 60 Hz	[Hp]	0.75	0.5	2	0.5	3	1.5
	240V, 60 Hz	[Hp]	2	1.5	3	1.5	10	3
Maximum Hp, DC								
	125V DC	[Hp]	2	3	3	2	5	5
	250V DC	[Hp]	3	5	5	5	10	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	
CSA Fuse Type/UL Fuse Type			Class J/HRCI-J	Class J/HRCI-J	Class J/HRCI-J	Class J/HRCI-J	Class J/HRCI-J	
Maximum Fuse Cartridge Size			[A]	100	200	400	600	800
Maximum Voltage	AC	[V]	600	800	600	600	600	
	DC	[V]	250\$	250\$	250\$	250\$	250\$	
Ampere Rating			[A]	100	200	400	600	800
Maximum Short Circuit Prospective Fault Current			[kA]	200	200	200	200	200

§ 3 poles in series

Mechanical Data		
Cat. No.	194R-C30-1753, 194R-J30-1753	194R-J60-1753
Degree of Protection (per IEC 60947-3) Switch Only Switch with Terminal Shield & Fuse Carriers	IP20 IP20	IP20 IP20
Mechanical Endurance § Operations	10 000	10 000
Operating Torque (Maximum) N•m lb•in	3.5 35	3.5 35
Terminal Capacity Power Terminals mm ² AWG	2.5...10 #14...#8	2.5...25 #14...#4
Auxiliary Contact Terminals mm ² AWG	2.5...4 #14...#12	2.5...4 #14...#12
Maximum Number of Auxiliary Circuits	6	6
Approximate Weight kg lbs	0.92 2.03	1.32 2.9
Minimum Enclosure Size Approximate dimensions in millimeters (inches) Height Width Depth	248 (9-3/4) 171 (6-3/4) 148 (5-13/16)	248 (9-3/4) 197 (7-3/4) 148 (5-13/16)
Switch Dimension Reference (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.

Mechanical Data					
Cat. No.	194R-J100-1753	194R-J200-1753	194R-J400-1753	194R-J600-1753	194R-J800-1753
Degree of Protection (per IEC 60947-3) Switch Only Switch with Terminal Shield & Fuse Carriers	IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20
Mechanical Endurance § Operations	10 000	8 000	6 000	5 000	5 000
Operating Torque (Maximum) N•m lb•in					
Terminal Capacity Power Terminals mm ² AWG	#1	300 MCM #6	600 MCM; 2 x 300 MCM #2 or 2 x #6	2 x 600 MCM 2 x #2	2 x 600 MCM 2 x #2
Auxiliary Contact Terminals mm ² AWG	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12
Maximum Number of Auxiliary Circuits	4	8	8	8	8
Approximate Weight kg lbs	2.4 5.3	3.6 7.9	4.85 10.7	20 44	20 44
Minimum Enclosure Size Approximate dimensions in millimeters (inches) Height Width Depth	—	—	—	—	—
Switch Dimension Reference (See dimension drawings.)	F5	F6	F7	F8	F8

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

Bulletin 194R

Fused and Non-Fused Disconnects

Specifications

Non-Fused Disconnect Switches for CSA and UL Class Applications

Electrical Ratings						
Cat. No.			194R-N30-1753		194R-N60-1753	
			194R-NU100-1753, 194R-NU100-1754		194R-NU200-1753, 194R-NU200-1754	
Maximum Voltage	AC	[V]	600		600	
	DC	[V]	250		250	
Ampere Rating		[A]	30Δ		60Δ	
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	

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

Electrical Ratings						
Cat. No.			194R-NU400-1753, 194R-NU400-1754		194R-NU600-1753, 194R-NU600-1754	
			194R-NU800-1753, 194R-NU800-1754		194R-NU1200-1753, 194R-NU1200-1754	
Maximum Voltage	AC	[V]	600		600	
	DC	[V]	250		250	
Ampere Rating		[A]	400		600	
Fuse Type			J		L	
Maximum Short Circuit Prospective Fault Current		[kA]	200		100	

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

Bulletin 194R

Fused and Non-Fused Disconnects

Specifications

Mechanical Data					
Cat. No.		194R-N30-1753	194R-N60-1753	194R-NU100-1753, 194R-NU100-1754	194R-NU200-1753, 194R-NU200-1754
Degree of Protection (per IEC 60947-3) Switch Only Switch with Terminal Shield & Fuse Carriers		IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20
Mechanical Endurance § Operations		10 000	10 000	10 000	10 000
Operating Torque (Maximum)	N•m lb•in	3.5 35	3.5 35	10 88.5	10 88.5
Terminal Capacity Power Terminals	mm ² AWG	2.5...10 #14...#8	2.5...25 #14...#4	300 MCM #6	300 MCM #6
Auxiliary Contact Terminals	mm ² AWG	2.5...10 #14...#8	2.5...25 #14...#4	—	—
Maximum Number of Auxiliary Circuits		6	6	2	2
Approximate Weight	kg lbs	0.81 1.78	1.14 2.52	1.67/2.1 3.7/4.3	1.67/2.1 3.7/4.3
Minimum Enclosure Size Approximate dimensions in millimeters (inches)	Height Width Depth	248 (9-3/4) 171 (6-3/4) 111 (4-3/8)	248 (9-3/4) 197 (7-3/4) 111 (4-3/8)	—	—
Switch Dimension Reference (See dimension drawings)		A2	B2	F1	F1

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

Mechanical Data					
Cat. No.		194R-NU400-1753, 194R-NU400-1754	194R-NU600-1753, 194R-NU600-1754	194R-NU800-1753, 194R-NU800-1754	194R-NU1200-1753, 194R-NU1200-1754
Degree of Protection (per IEC 60947-3) Switch Only Switch with Terminal Shield & Fuse Carriers		IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20
Mechanical Endurance § Operations		6 000	6 000	3 500	3 500
Operating Torque (Maximum)		N•m lb•in	14.5 128.3	37 327.5	50 442
Terminal Capacity Power Terminals		mm ² AWG	600 MCM #2	2 x 600 MCM 2 x #2	4 x 600 MCM 4 x #2
Auxiliary Contact Terminals		mm ² AWG	—	—	—
Maximum Number of Auxiliary Circuits			2	2	2
Approximate Weight		kg lbs	3/3.8 6.6/8.4	8.2/10.3 18.1/22.7	11.6/14.5 25.6/32
Minimum Enclosure Size Approximate dimensions in millimeters (inches)		Height Width Depth	—	—	—
Switch Dimension Reference (See dimension drawings)			F2	F3	F4

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

Electrical Ratings									
Cat. No.			194R-N30-1753		194R-N60-1753		194R-NE125-1753, 194R-NE125-1754	194R-NE160-1753, 194R-NE160-1754	
Maximum Voltage	AC	[V]	600		600		600	600	
	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-NE400-1753, 194R-NE400-1754	194R-NE630-1753, 194R-NE630-1754	194R-NE800-1753, 194R-NE800-1754	194R-NE1250-1753, 194R-NE1250-1754
Maximum Voltage	AC	[V]	600	600	600	600
	DC	[V]	250	250	250	250
Ampere Rating		[A]	400	630	800	1250
Maximum Short Circuit Prospective Fault Current		[kA]	200	200	100	100

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)

Fused Disconnect Switches For CSA HRCII-C Fuses

Electrical Ratings			
Cat. No.		194R-H30-1753	194R-H60-1753
CSA Fuse Type		HRCII-C	HRCII-C
Maximum Fuse Cartridge Size	[A]	30	60
Maximum Voltage	AC [V]	600	600
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	15
240V, 60 Hz	[Hp]	7.5	15
480V, 60 Hz	[Hp]	15	30
600V, 60 Hz	[Hp]	20	50
Maximum Hp, 1-Phase AC			
120V, 60 Hz	[Hp]	2	3
240V, 60 Hz	[Hp]	3	10

Mechanical Data			
Cat. No.		194R-H30-1753	194R-H60-1753
Degree of Protection (per IEC 60947-3)			
Switch Only		IP 20	IP 20
Switch with Terminal Shield & Fuse Carriers		IP 20	IP 20
Mechanical Endurance ★	Operations	10 000	10 000
Operating Torque (Maximum)	N•m lb•in	3.5 35	3.5 35
Terminal Capacity			
Power Terminals	mm ² AWG	2.5...10 #14...#8	2.5...25 #14...#4
Auxiliary Contact Terminals	mm ² AWG	2.5...4 #14...#12	2.5...4 #14...#12
Maximum Number of Auxiliary Circuits		6	6
Approximate Weight	kg lbs	1.18 2.60	1.18 2.60
Minimum Enclosure Size	Height	248 (9-3/4)	248 (9-3/4)
Approximate dimensions in millimeters (inches)	Width	171 (6-3/4)	197 (7-3/4)
	Depth	148 (5-13/16)	148 (5-13/16)
Switch Dimension Reference (See dimension drawings.)		B1	B1

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

Bulletin 194R

Fused and Non-Fused Disconnects

Specifications

Fused Disconnect Switches For BS88 Fuses*

* Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

Electrical Ratings							
Cat. No.		194R-B20-1753	194R-B32-1753	194R-B63-1753	194R-B100-1753	194R-B160-1753	
Fuse Type	BS88 Dimension	A1	A2	A2, A3			
Rated Insulation Voltage (U _i)	[V]	1000	1000	1000	750	750	
Rated Conditional Short-Circuit Current (r.m.s.) at 415V	[kA]	100	100	100	—	—	
Rated Operational Current AC-22A (I _e)		Fuse Links	Shorting Links	Fuse Links	Fuse Links	Shorting Links	
200/230V 50 Hz	[A]	20	32	32	63	63	—
380/400/415V 50 Hz	[A]	20	32	32	63	63	100
500V 50 Hz	[A]	20	32	32	63	63	—
660/690V 50 Hz	[A]	20	32	32	63	63	100
Rated Operational Current AC-23A (I _e)							
200/230V 50 Hz	[A]	20	32	31	60.5	60	—
380/400/415V 50 Hz	[A]	22	32	35	57	57	100
500V 50 Hz	[A]	20	32	32.5	57	57	—
660/690V 50 Hz	[A]	17	32	32.5	57	57	100
Rated Thermal Current (I _{the})	[A]	20	32	32	63	63	100
Maximum kW, AC-23A 3-Phase							
200/230V 50 Hz	[kW]	5.5	9	9	18.5	18.5	—
380/400/415V 50 Hz	[kW]	11	18.5	18.5	30	30	51
500V 50 Hz	[kW]	11	18.5	18.5	30	30	—
660/690V 50 Hz	[kW]	15	30	30	55	55	90
Maximum Fuse Rating	[A]	20	—	32	63	—	100
Maximum Motor Circuit Fuse Link		20M32	—	32M63	63M100	—	—
Maximum Fuse Cut-off Current*	[kA]	7.5	7.5	7.5	10	10	—
Rated Short Time Current, 1 Second	[kA]	1	1	1	1	1	—

* Fuses must be selected with regard to the maximum prospective fault current of the system and the maximum cut-off current of the fuse when subjected to that maximum fault current. The maximum fuse cut-off current as specified for each disconnect switch must not be exceeded.

Electrical Ratings							
Cat. No.		194R-B200-1753	194R-B250-1753	194R-B400-1753	194R-B630-1753	194R-B800-1753	194R-B1250-1753
Fuse Type	BS88 Dimension	—	—	—	—	—	—
Rated Insulation Voltage (U _i)	[V]	750	750	750	750	750	750
Rated Conditional Short-Circuit Current (r.m.s.) at 415V	[kA]	—	—	—	—	—	—
Rated Operational Current AC-22A (I _e)		—	—	—	—	—	—
200/230V 50 Hz	[A]	—	—	—	—	—	—
380/400/415V 50 Hz	[A]	200	250	400	630	800	1250
500V 50 Hz	[A]	—	—	—	—	—	—
660/690V 50 Hz	[A]	200	250	315	500	800	800
Rated Operational Current AC-23A (I _e)							
200/230V 50 Hz	[A]	—	—	—	—	—	—
380/400/415V 50 Hz	[A]	200	250	400	630	800	1000
500V 50 Hz	[A]	—	—	—	—	—	—
660/690V 50 Hz	[A]	200	250	250	315	630	800
Rated Thermal Current (I _{the})	[A]	200	250	400	630	800	1250
Maximum kW, AC-23A 3-Phase							
200/230V 50 Hz	[kW]	—	—	—	—	—	—
380/400/415V 50 Hz	[kW]	80	132	220	355	450	560
500V 50 Hz	[kW]	—	—	—	—	400	400
660/690V 50 Hz	[kW]	110	220	220	295	—	—
Maximum Fuse Rating	[A]	200	250	400	630	800	1250
Maximum Motor Circuit Fuse Link		—	—	—	—	—	—
Maximum Fuse Cut-off Current*	[kA]	—	—	—	—	—	—
Rated Short Time Current, 1 Second	[kA]	—	—	—	—	—	—

* Fuses must be selected with regard to the maximum prospective fault current of the system and the maximum cut-off current of the fuse when subjected to that maximum fault current. The maximum fuse cut-off current as specified for each disconnect switch must not be exceeded.

Mechanical Data					
Cat. No.	194R-B20-1753	194R-B32-1753	194R-B63-1753	194R-B100-1753	194R-B160-1753
Degree of Protection (per IEC 60947-3) Switch Only Switch with Terminal Shield & Fuse Carriers	IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20
Mechanical Endurance Operations §	10 000	10 000	10 000	10 000	10 000
Operating Torque (Maximum) N•m lb•in	3.5 35	3.5 35	3.5 35	8.3 95	8.3 95
Terminal Capacity Power Terminals mm ²	2.5...10 #14...#8	2.5...10 #14...#8	2.5...25 #14...#4		
Auxiliary Contact Terminals mm ² AWG	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12
Maximum Number of Auxiliary Circuits	6	6	6		
Approximate Weight kg lbs	0.83 1.84	0.83 1.84	1.18 2.60	1.88 4.75	2.37 5.22
Minimum Enclosure Size Approximate dimensions in millimeters (inches) Height Width Depth	248 (9-3/4) 171 (6-3/4) 148 (5-13/16)	248 (9-3/4) 171 (6-3/4) 148 (5-13/16)	248 (9-3/4) 197 (7-3/4) 148 (5-13/16)		
Switch Dimension Reference (See dimension drawings.)	A1	A1	B1	F13	F14

§ Based on Rockwell Automation tests in accordance with the requirements as defined in IEC 60947-3.

Mechanical Data						
Cat. No.	194R-B200-1753	194R-B250-1753	194R-B400-1753	194R-B630-1753	194R-B800-1753	194R-B1250-1753
Degree of Protection (per IEC 60947-3) Switch Only Switch with Terminal Shield & Fuse Carriers	IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20	IP20 IP20
Mechanical Endurance Operations §	10 000	10 000	10 000	8 000	5 000	5 000
Operating Torque (Maximum) N•m lb•in	20 —	20 —	20 —	40 —	40 —	40 —
Terminal Capacity Power Terminals mm ²	240	240	240	240	240	240
Auxiliary Contact Terminals mm ² AWG	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12
Maximum Number of Auxiliary Circuits	4	8	8	8	8	8
Approximate Weight kg lbs	3.77 8.37	3.77 8.37	4.85 10.7	17.77 39	19.77 43.6	37 87.57
Minimum Enclosure Size Approximate dimensions in millimeters (inches) Height Width Depth	—	—	—	—	—	—
Switch Dimension Reference (See dimension drawings.)	F15	F15	F16	F17	F17	F18

§ Based on Rockwell Automation tests in accordance with the requirements as defined in IEC 60947-3.

Bulletin 194R

Fused and Non-Fused Disconnects

Specifications

Fused Disconnect Switches For DIN Fuses*

* Fuse classes BS88, DIN, and NFC are not suitable for use in North American applications

		Electrical Ratings			
Cat No.		194R-D32-1753	194R-D63-1753	194R-D125-1753	194R-D160-1753
Fuse Type	DIN Dimension	00	0, 00	—	—
Rated Insulation Voltage (U _i)	[V]	1000	1000	750	750
Rated Conditional Short-Circuit Current (r.m.s.) at 415V	[kA]	100	100	—	—
Rated Operational Current AC-22A (I _e)		Fuse Links	Fuse Links	—	—
200/230V 50 Hz	[A]	32	63	—	—
380/400/415V 50 Hz	[A]	32	63	—	160
500V 50 Hz	[A]	32	63	—	—
660/690V 50 Hz	[A]	32	63	—	160
Rated Operational Current AC-23A (I _e)					
200/230V 50 Hz	[A]	31	60.5	—	—
380/400/415V 50 Hz	[A]	35	57	—	160
500V 50 Hz	[A]	32.5	57	—	—
660/690V 50 Hz	[A]	32.5	57	—	160
Rated Thermal Current (I _{the})	[A]	40	63	125	160
Maximum kW, AC-23A 3-Phase					
200/230V 50 Hz	[kW]	9	18.5	—	—
380/400/415V 50 Hz	[kW]	18.5	30	—	63
500V 50 Hz	[kW]	18.5	30	—	—
660/690V 50 Hz	[kW]	30	55	—	90
Maximum Fuse Rating	[A]	32	63	125	160
Maximum Motor Circuit Fuse Link		—	—	—	—
Maximum Fuse Cut-off Current*	[kA]	14	20	—	—
Rated Short Time Current, 1 Second	[kA]	1	1	—	—

* Fuses must be selected with regard to the maximum prospective fault current of the system and the maximum cut-off current of the fuse when subjected to that maximum fault current. The maximum fuse cut-off current as specified for each disconnect switch must not be exceeded.

		Electrical Ratings				
Cat. No.		194R-D250-1753	194R-D400-1753	194R-D630-1753	194R-D800-1753	194R-D1250-1753
Fuse Type	BS88 Dimension	—	—	—	—	—
Rated Insulation Voltage (U _i)	[V]	750	750	750	750	750
Rated Conditional Short-Circuit Current (r.m.s.) at 415V	[kA]	—	—	—	—	—
Rated Operational Current AC-22A (I _e)						
200/230V 50 Hz	[A]	—	—	—	—	—
380/400/415V 50 Hz	[A]	250	400	630	800	1250
500V 50 Hz	[A]	—	—	—	—	—
660/690V 50 Hz	[A]	250	315	500	800	800
Rated Operational Current AC-23A (I _e)						
200/230V 50 Hz	[A]	—	—	—	—	—
380/400/415V 50 Hz	[A]	250	400	630	800	1000
500V 50 Hz	[A]	—	—	—	—	—
660/690V 50 Hz	[A]	250	250	315	630	800
Rated Thermal Current (I _{the})	[A]	250	400	630	800	1250
Maximum kW, AC-23A 3-Phase						
200/230V 50 Hz	[kW]	—	—	—	—	—
380/400/415V 50 Hz	[kW]	132	220	355	450	560
500V 50 Hz	[kW]	—	—	—	400	400
660/690V 50 Hz	[kW]	220	220	295	—	—
Maximum Fuse Rating	[A]	250	400	630	800	1250
Maximum Motor Circuit Fuse Link		—	—	—	—	—
Maximum Fuse Cut-off Current*	[kA]	—	—	—	—	—
Rated Short Time Current, 1 Second	[kA]	—	—	—	—	—

* Fuses must be selected with regard to the maximum prospective fault current of the system and the maximum cut-off current of the fuse when subjected to that maximum fault current. The maximum fuse cut-off current as specified for each disconnect switch must not be exceeded.

Bulletin 194R

Fused and Non-Fused Disconnects

Specifications

Mechanical Data					
Cat. No.		194R-D32-1753	194R-D63-1753	194R-D125-1753	194R-D160-1753
Degree of Protection (per IEC 60947-3)					
Switch Only		IP20	IP20	IP20	IP20
Switch with Terminal Shield & Fuse Carriers		IP20	IP20	IP20	IP20
Mechanical Endurance †	Operations	10 000	8 000	10 000	10 000
Operating Torque (Maximum)	N•m	3.5	3.5	8.3	8.3
	lb•in	35	35	95	95
Terminal Capacity Power Terminals	mm²	2.5...25	2.5...25	2.5...25	2.5...25
	AWG	#14...#4	#14...#4	#14...#4	#14...#4
Auxiliary Contact Terminals	mm² AWG	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12
Maximum Number of Auxiliary Circuits		6	6	6	6
Approximate Weight	kg	1.18	1.18	1.88	2.37
	lbs	2.60	2.60	4.75	5.22
Minimum Enclosure Size Approximate dimensions in millimeters (inches)	Height Width Depth	248 (9-3/4) 197 (7-3/4) 148 (5-13/16)	248 (9-3/4) 197 (7-3/4) 148 (5-13/16)	—	—
Switch Dimension Reference (See dimension drawings.)		B1	B1	F13	F13

† Based on Rockwell Automation tests in accordance with the requirements as defined in IEC 60947-3.

Mechanical Data						
Cat. No.		194R-D250-1753	194R-D400-1753	194R-D630-1753	194R-D800-1753	194R-D1250-1753
Degree of Protection (per IEC 60947-3)						
	Switch Only	IP20	IP20	IP20	IP20	IP20
Switch with Terminal Shield & Fuse Carriers		IP20	IP20	IP20	IP20	IP20
Mechanical Endurance Operations §		10 000	10 000	8 000	5 000	5 000
Operating Torque (Maximum)	N•m	20	20	40	40	40
	lb•in	—	—	—	—	—
Terminal Capacity						
Power Terminals	mm ²	240	240	240	240	240
Auxiliary Contact Terminals	mm ² AWG	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12	2.5...4 #14...#12
Maximum Number of Auxiliary Circuits		8	8	8	8	8
Approximate Weight	kg	3.77	4.85	17.77	19.77	37
	lbs	8.37	10.7	39	43.6	87.57
Minimum Enclosure Size	Height	—	—	—	—	—
Approximate dimensions in millimeters (inches)	Width					
	Depth					
Switch Dimension Reference (See dimension drawings.)		F15	F16	F17	F17	F18

§ Based on Rockwell Automation tests in accordance with the requirements as defined in IEC 60947-3.

Fused and Non-Fused Disconnects

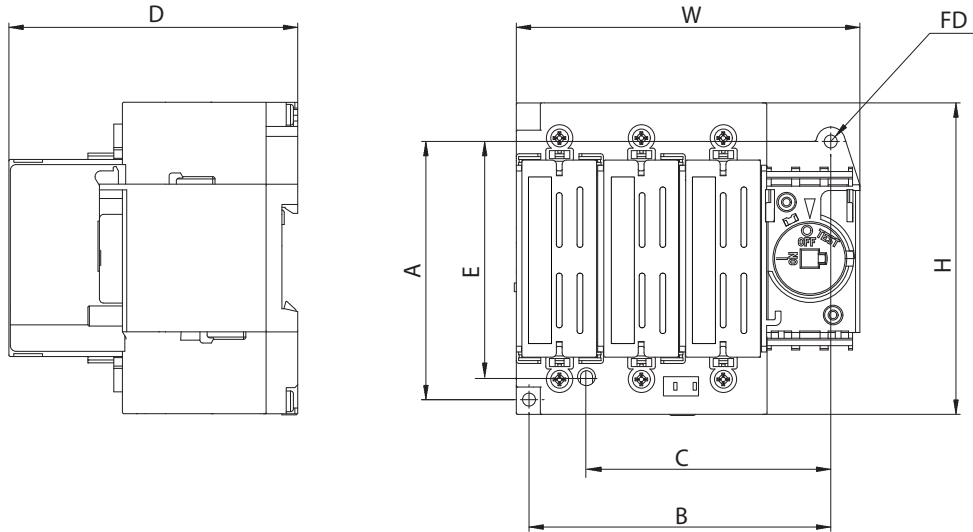
Specifications

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 3-pole Dimension Reference) for Fused Switches	

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

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



Disconnect Switch Dimension Reference	Approximate Dimensions mm (in)							
	H	W	D	A	B	C†	E†	FD
A1	108 (4-1/4)	120 (4-3/4)	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)	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)	114 (4-31/64)	100 (3-15/16)	120 (4-23/32)	N/A	N/A	4-M4, 4-#8
B2	113 (4-29/64)	142 (5-19/32)	93 (3-43/64)	100 (3-15/16)	120 (4-23/32)	N/A	N/A	4-M4, 4-#8

† Mounting holes for backward compatibility with Bulletin 194R legacy switches.

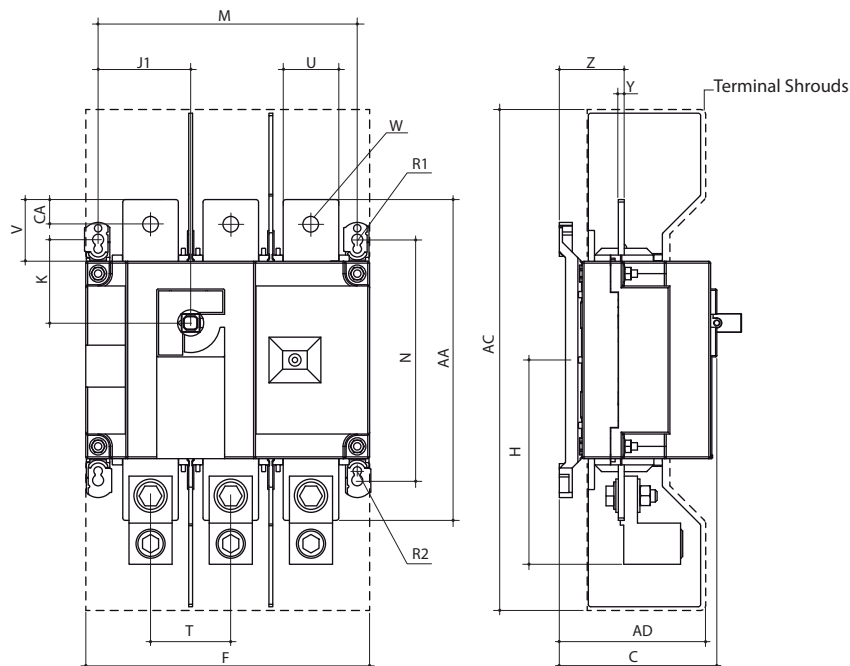
Fused and Non-Fused Disconnects

Approximate Dimensions

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

UL/CSA Disconnect Switches 100...1200 A

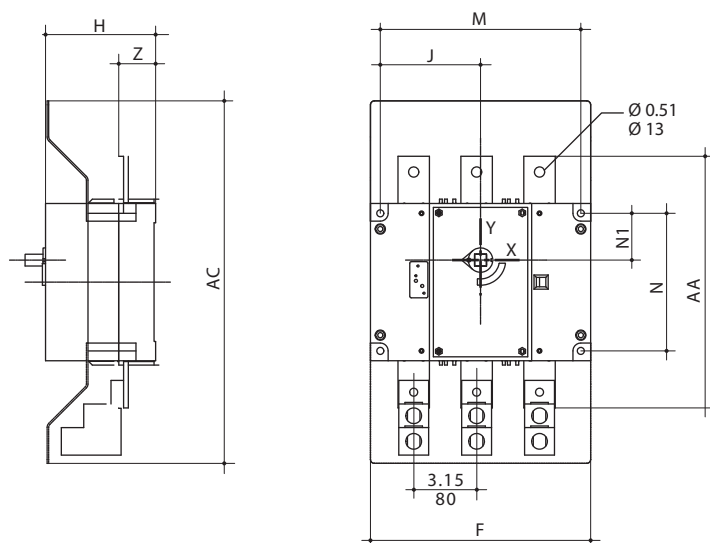
UL/CSA Non-Fused Disconnect Switches



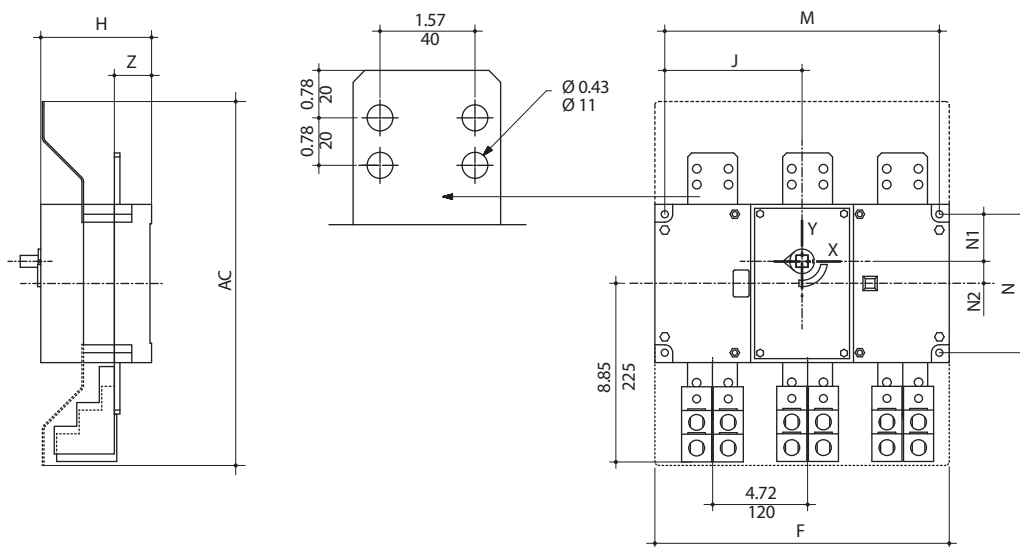
Cat. No. 194R-N...	Disconnect Switch Dimension Reference	Approximate Dimensions mm (in)													
		Overall	Terminal Shrouds		Switch Body					Switch Mounting					
		C	AC	AD	F (3-pole)	F (4-pole)	H	J1 (3-pole)	J1 (4-pole)	K	M (3-pole)	M (4-pole)	N	R1	R2
100	F1	94.6 (3.72)	256 (10.1)	77.5 (3.05)	180 (7.09)	230 (9.06)	107 (4.22)	55 (2.17)	105 (4.13)	45.6 (1.8)	160 (6.3)	210 (8.7)	135 (5.31)	9 (0.35)	7 (0.27)
200		94.6 (3.72)	256 (10.1)	77.5 (3.05)	180 (7.09)	230 (9.06)	107 (4.22)	55 (2.17)	105 (4.13)	45.6 (1.8)	160 (6.3)	210 (8.7)	135 (5.31)	9 (0.35)	7 (0.27)
400	F2	128 (4.92)	406 (16)	115 (4.15)	230 (9.05)	290 (11.4)	166 (6.53)	75 (2.95)	135 (5.31)	67.5 (2.65)	210 (8.26)	270 (10.6)	195 (7.67)	9 (0.35)	7 (0.27)

Cat. No. 194R-N...	Disconnect Switch Dimension Reference	Approximate Dimensions mm (in)							
		Connection							
		T	U	V	W	Y	Z	AA	AC
100	F1	50 (1.97)	25 (0.98)	30 (1.18)	11 (0.43)	3.5 (0.14)	34.4 (0.14)	160 (6.3)	15 (0.6)
200		50 (1.97)	25 (0.98)	30 (1.18)	11 (0.43)	3.5 (0.14)	34.4 (0.14)	160 (6.3)	15 (0.6)
400	F2	65 (2.56)	45 (1.77)	50 (1.97)	13 (0.43)	5 (0.2)	53 (2.08)	260 (10.2)	20 (0.8)

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



Cat. No. 194R-N...	Disconnect Switch Dimension Reference	Approximate Dimensions mm (in)											
		Terminal Shrouds	Switch Body					Switch Mounting				Connection	
		AC	F (3-pole)	F (4-pole)	H	J (3-pole)	J (4-pole)	M (3-pole)	M (4-pole)	N	N1	AA	Z
600	F3	460 (18.12)	280 (11)	360 (14.17)	140 (5.5)	127.5 (5)	167.5 (6.59)	255 (10.03)	335 (13.19)	175(6.88)	59.5 (2.34)	320 (12.6)	47 (1.85)



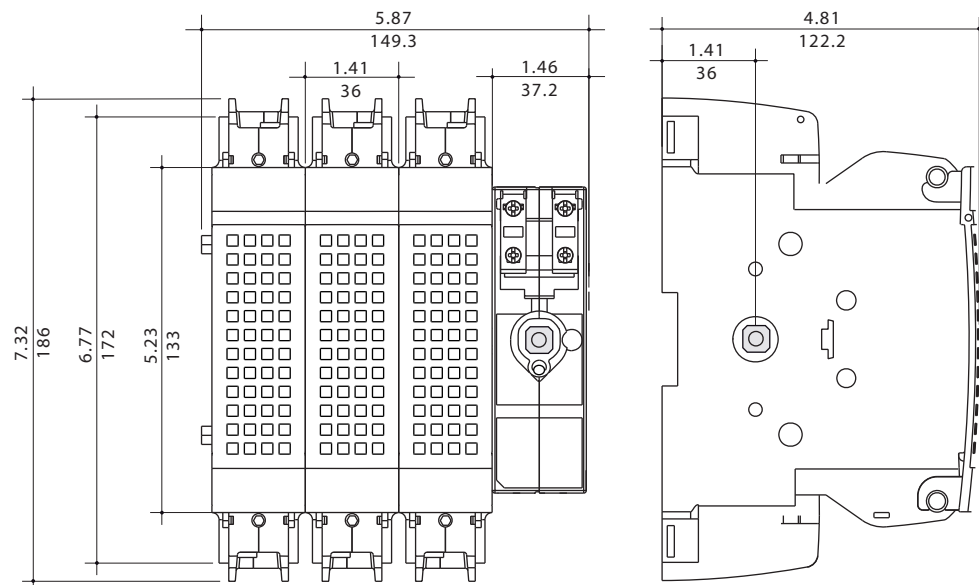
Cat. No. 194R-N...	Disconnect Switch Dimension Reference	Approximate Dimensions mm (in)											
		Terminal Shrouds	Switch Body					Switch Mounting				Connection	
		AC	F (3-pole)	F (4-pole)	H	J1 (3-pole)	J1 (4-pole)	M (3-pole)	M (4-pole)	N	N1	AA	Z
800	F4	460 (18.12)	372 (14.64)	492 (19.37)	140 (5.5)	173.5 (6.83)	233.5 (9.19)	347 (13.66)	467 (18.38)	175 (6.88)	59.5 (2.34)	28 (1.10)	47 (1.85)
1200		460 (18.12)	372 (14.64)	492 (19.37)	140 (5.5)	173.5 (6.83)	233.5 (9.19)	347 (13.66)	467 (18.38)	175 (6.88)	59.5 (2.34)	330 (13)	47 (1.85)

Fused and Non-Fused Disconnects

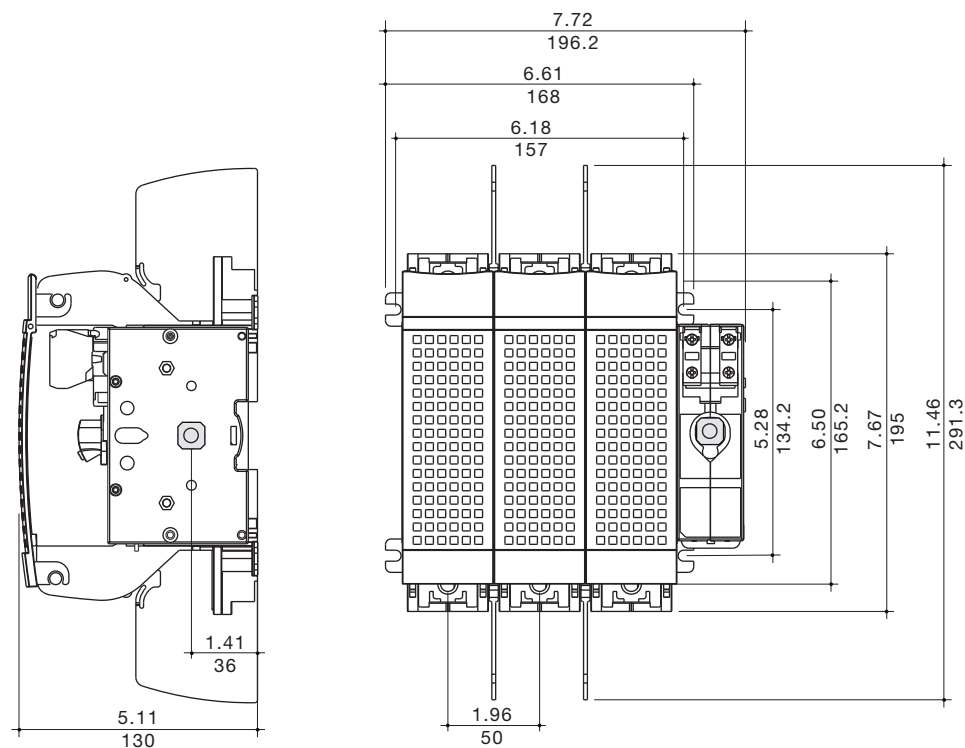
Approximate Dimensions

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

UL/CSA Fused Disconnect Switches

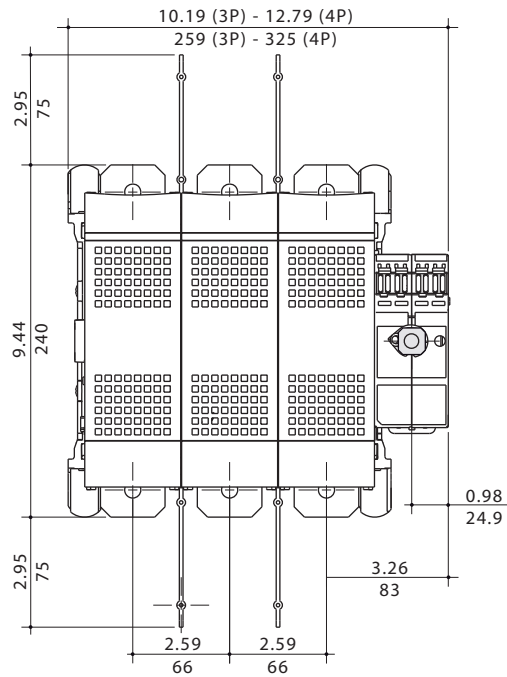
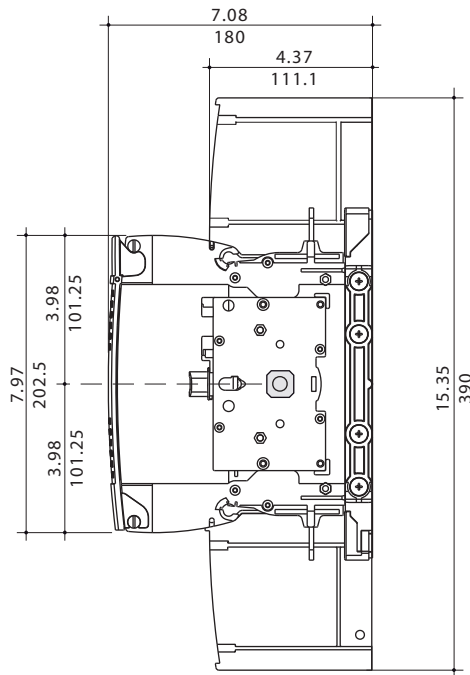


Cat. No. 194R-J100
Frame Size F5

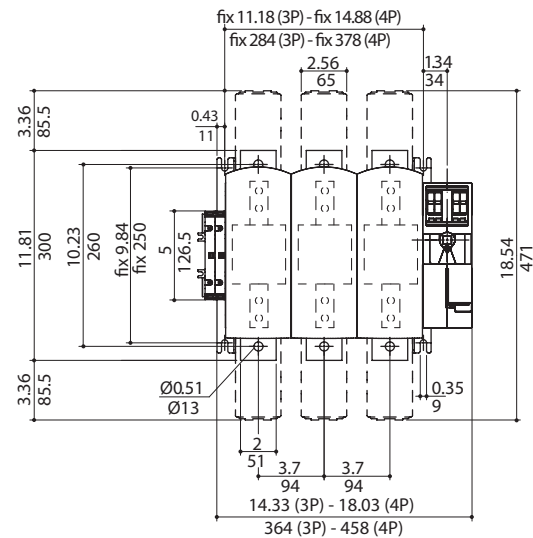
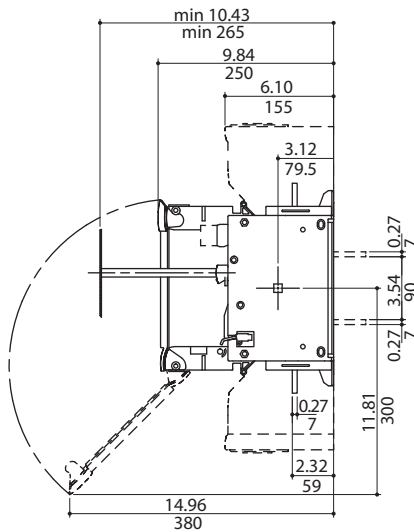


Cat. No. 194R-J200
Frame Size F6

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



Cat. No. 194R-J400
Frame Size F7



Cat. No. 194R-J600, -J800
Frame Size F8

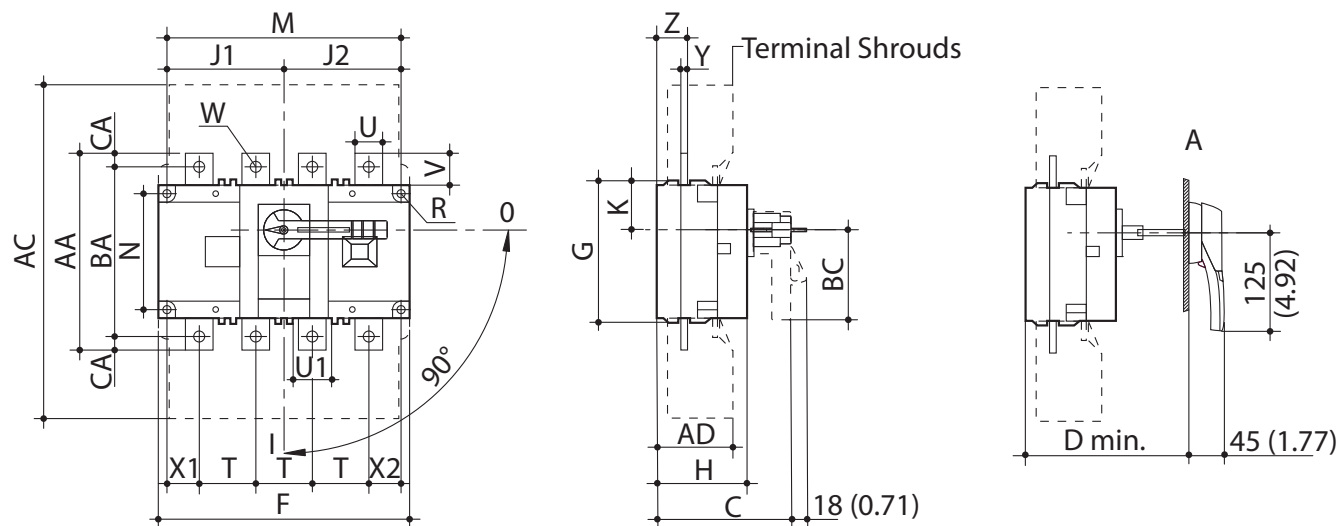
Fused and Non-Fused Disconnects

Approximate Dimensions

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

IEC Disconnect Switches 125...1250 A

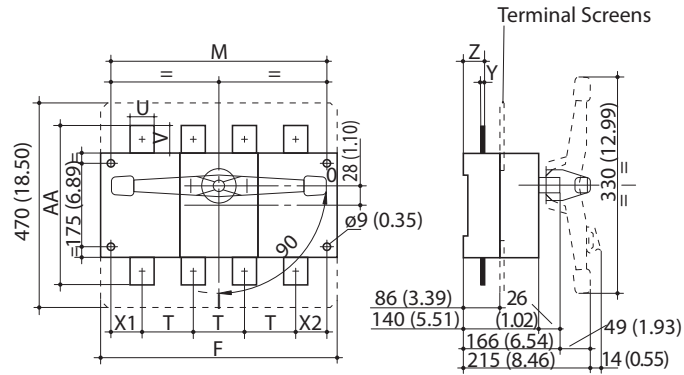
IEC Non-Fused Disconnect Switches



Cat. No. 194R-NE...	Approximate Dimensions mm (in)																
	Overall		Terminal Shrouds		Switch Body								Switch Mounting				
	C	D (min.)	AC	AD	F (3-pole)	F (4-pole)	G	H	J1 (3-pole)	J1 (4-pole)	J2	K	BC	M (3-pole)	M (4-pole)	N	R
125	115 (4.53)	125 (4.92)	235 (9.25)	50 (1.97)	140 (5.51)	170 (6.69)	93 (3.66)	65 (2.56)	45 (1.77)	75 (2.95)	75 (2.95)	31.5 (1.24)	80 (3.15)	120 (4.72)	150 (5.90)	65 (2.56)	5.5 (0.21)
160	115 (4.53)	125 (4.92)	235 (9.25)	50 (1.97)	140 (5.51)	170 (6.69)	93 (3.66)	65 (2.56)	45 (1.77)	75 (2.95)	75 (2.95)	31.5 (1.24)	80 (3.15)	120 (4.72)	150 (5.90)	65 (2.56)	5.5 (0.21)
250	125 (4.92)	135 (5.31)	280 (11.02)	60 (2.36)	180 (7.09)	230 (9.06)	108 (4.25)	75 (2.95)	55 (2.17)	105 (4.13)	105 (4.13)	34 (1.34)	115 (4.53)	160 (6.30)	80 (3.15)	210 (8.27)	5.5 (0.21)
400	160 (6.30)	165 (6.50)	401 (15.79)	89 (3.50)	230 (9.05)	290 (11.40)	170 (6.69)	110 (4.33)	75 (2.95)	135 (5.31)	135 (5.31)	55 (2.17)	115 (4.53)	210 (8.28)	270 (10.60)	140 (5.51)	7 (0.28)
630	160 (6.30)	165 (6.50)	401 (15.79)	89 (3.50)	230 (9.05)	290 (11.40)	170 (6.69)	110 (4.33)	75 (2.95)	135 (5.31)	135 (5.31)	55 (2.17)	115 (4.53)	210 (8.28)	270 (10.60)	140 (5.51)	7 (0.28)

Cat. No. 194R-NE...	Approximate Dimensions mm (in)												
	Connection												
	T	U	U1	V	W	X1 (3-pole)	X1 (4-pole)	X2	Y	Z	AA	BA	AC
125	36 (1.41)	20 (0.79)	20.5 (0.81)	25 (0.98)	9 (0.35)	28 (1.10)	22 (87)	20 (0.79)	3.5 (0.14)	20.5 (0.81)	135 (5.31)	115 (4.53)	10 (0.39)
160	36 (1.41)	20 (0.79)	20.5 (0.81)	25 (0.98)	9 (0.35)	28 (1.10)	22 (87)	20 (0.79)	3.5 (0.14)	20.5 (0.81)	135 (5.31)	115 (4.53)	10 (0.39)
250	50 (1.97)	25 (0.98)	25.5 (1.00)	30 (1.18)	11 (0.43)	33 (1.30)	33 (1.30)	27 (1.06)	3.5 (0.14)	22.5 (0.89)	160 (6.30)	130 (5.12)	15 (0.60)
400	65 (2.56)	32 (1.26)	45.5 (1.79)	37.5 (1.48)	11 (0.43)	42.5 (1.67)	37.5 (1.48)	37.5 (1.48)	5 (0.20)	36 (1.41)	235 (9.25)	205 (8.07)	15 (0.60)
630	65 (2.56)	32 (1.26)	45.5 (1.79)	37.5 (1.48)	11 (0.43)	42.5 (1.67)	37.5 (1.48)	37.5 (1.48)	5 (0.20)	36 (1.41)	235 (9.25)	205 (8.07)	20 (0.79)

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



Cat. No. 194R-N...	Approximate Dimensions mm (in)											
	Switch Body		Switch Mounting		Connection							
	F (3-pole)	F (4-pole)	M (3-pole)	M (4-pole)	T	U	V	Y	X1	X2	Z	AA
800	280 (11.02)	360 (14.17)	255 (10.04)	335 (13.19)	80 (3.15)	50 (1.97)	60.5 (2.38)	7 (0.27)	47.5 (1.87)	47.5 (1.87)	46.5 (1.83)	321 (12.64)
1250	372 (14.65)	492 (19.37)	347 (13.66)	467 (18.39)	120 (4.72)	90 (3.54)	44 (1.73)	8 (0.31)	53.5 (2.11)	53.5 (2.11)	47.5 (1.87)	288 (11.34)

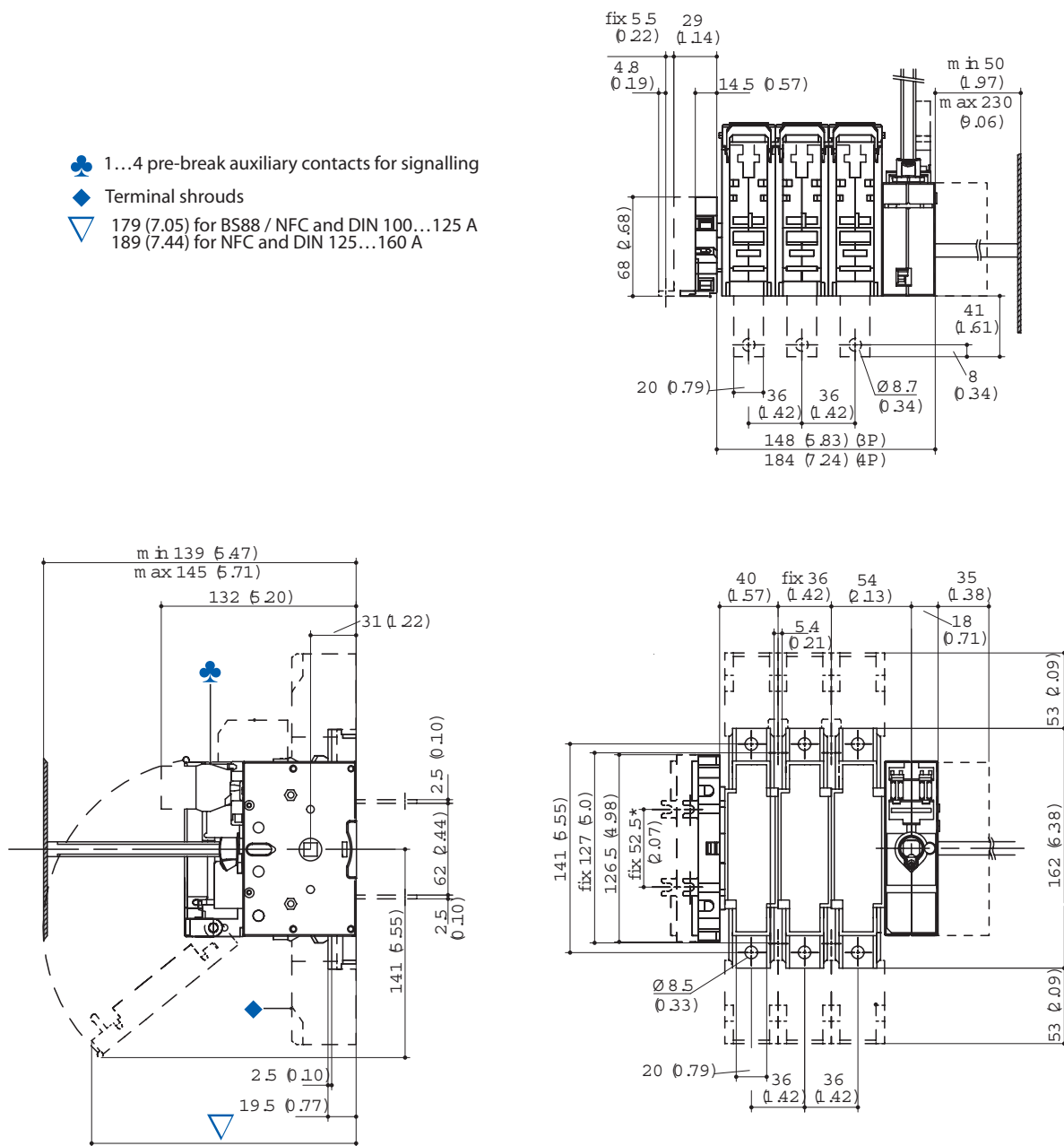
Fused and Non-Fused Disconnects

Approximate Dimensions

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

IEC Fused Disconnect Switches

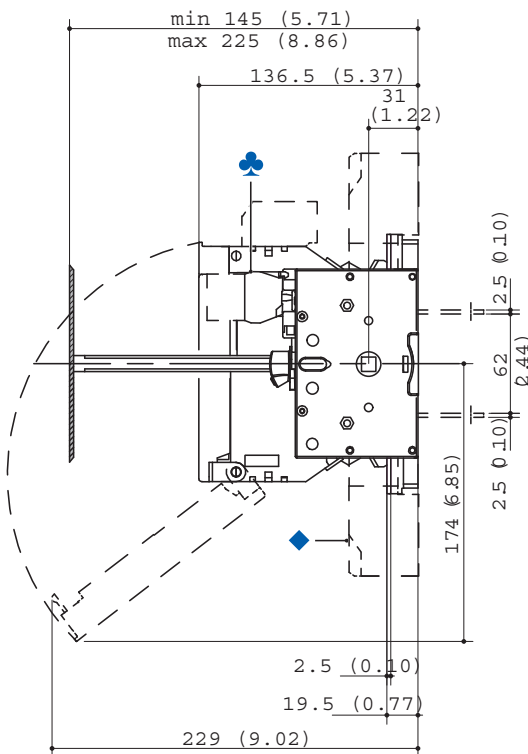
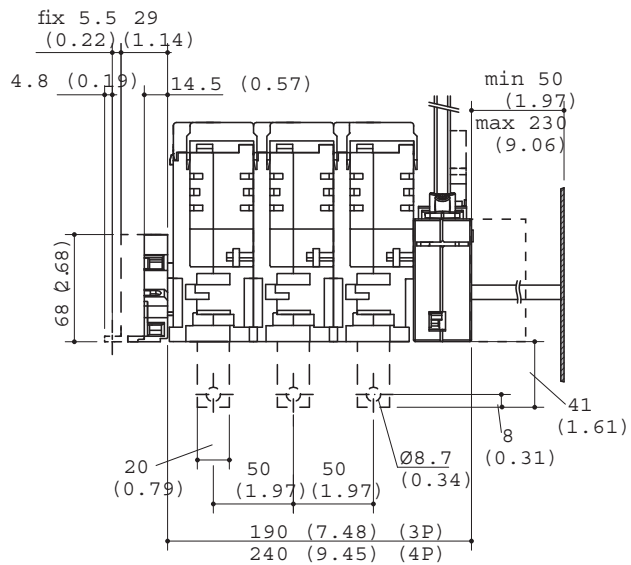
-  1...4 pre-break auxiliary contacts for signalling
-  Terminal shrouds
-  179 (7.05) for BS88 / NFC and DIN 100...125 A
189 (7.44) for NFC and DIN 125...160 A



Cat. No. 194R-B100-1753, 194R-D125-1753
Frame Size F13

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

- ♣ 1...4 pre-break auxiliary contact for signalling
- ◆ Terminal shrouds



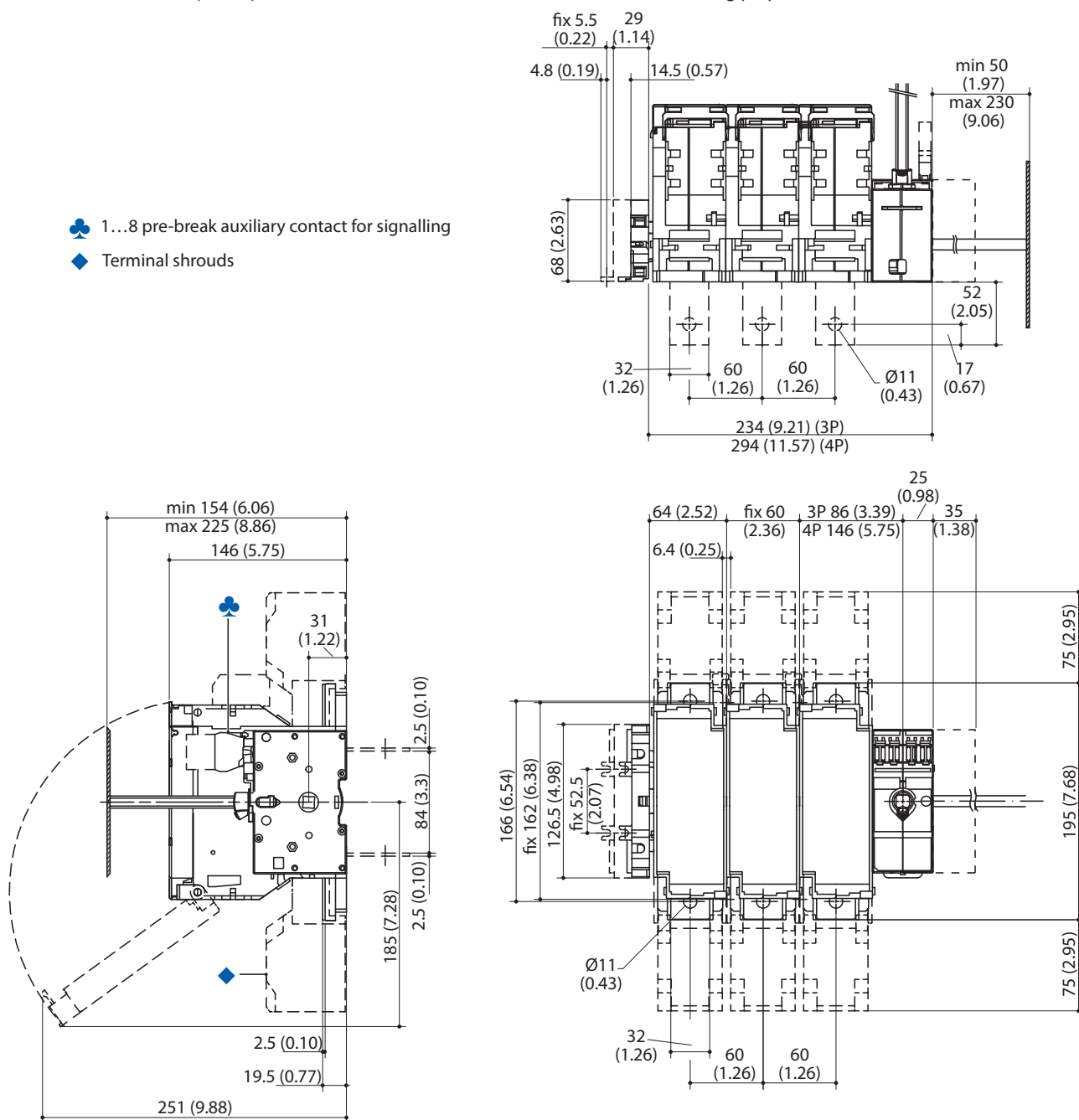
Cat. No. 194R-B160-1753, 194R-D160-1753
Frame Size F14

Fused and Non-Fused Disconnects

Approximate Dimensions

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

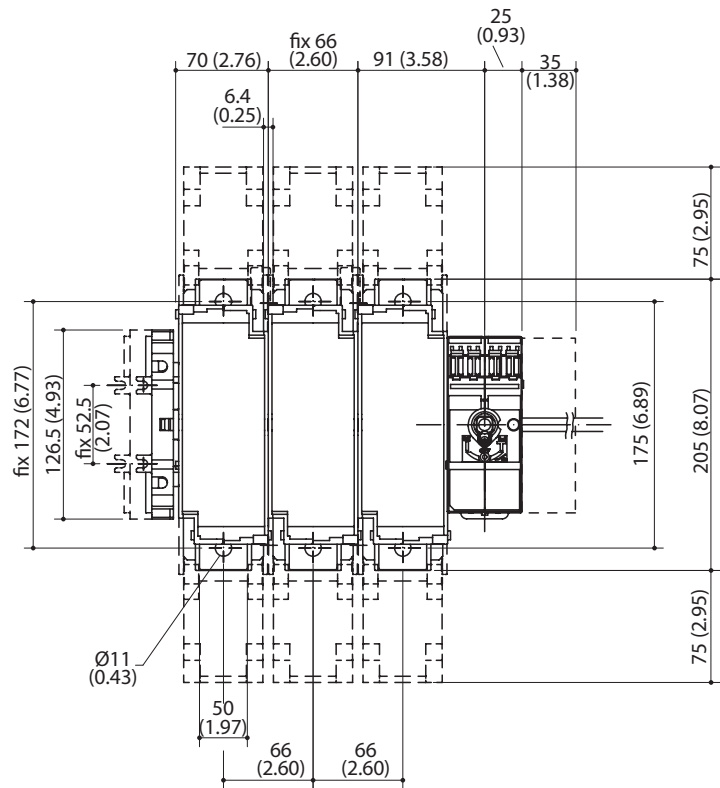
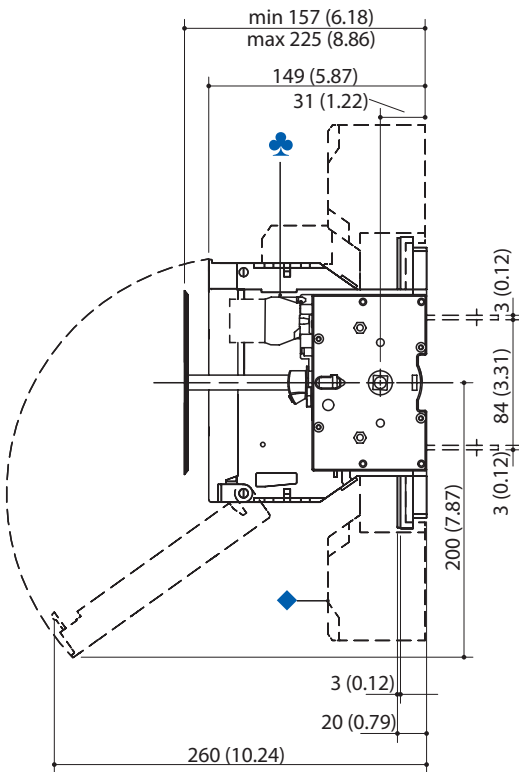
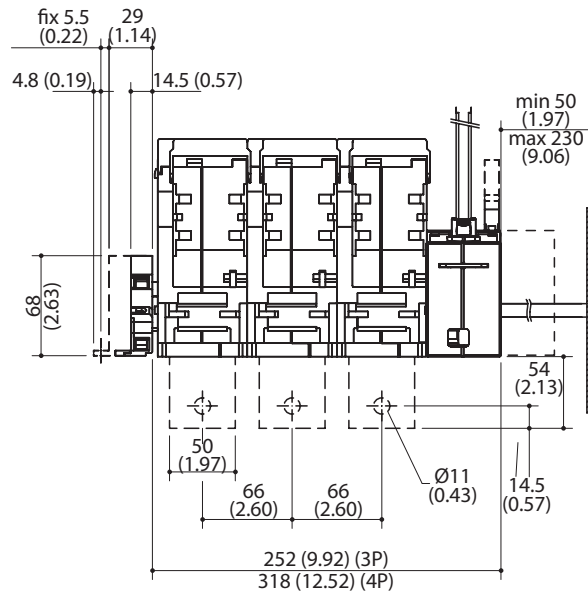
- ♣ 1...8 pre-break auxiliary contact for signalling
- ◆ Terminal shrouds



Cat. No. 194R-B200-1753, 194R-D250-1753
Frame Size F15

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

- ♣ 1...8 pre-break auxiliary contact for signalling
- ◆ Terminal shrouds



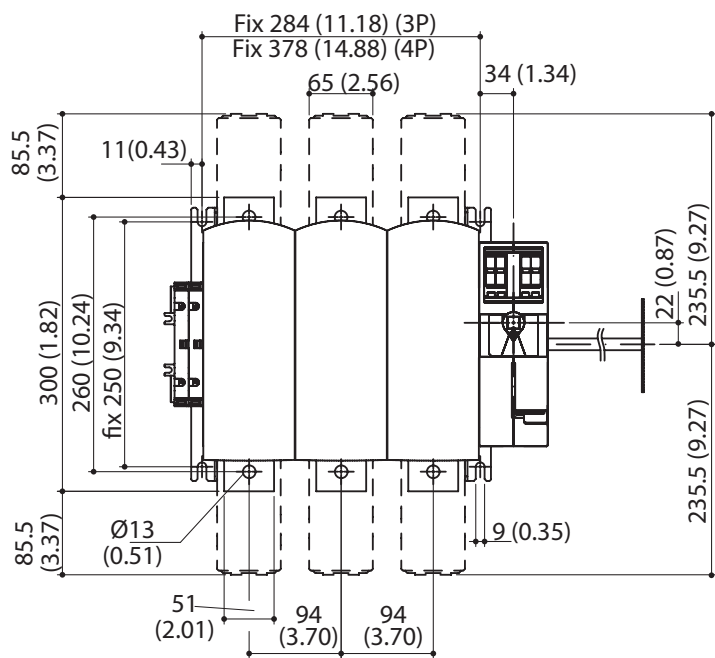
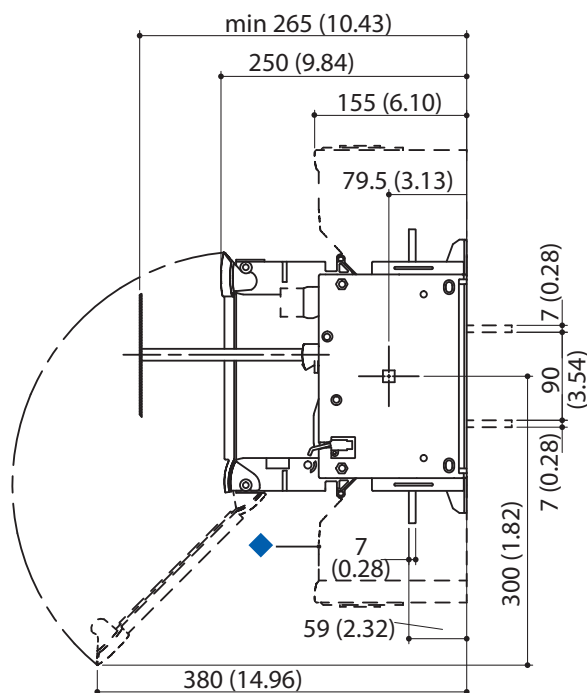
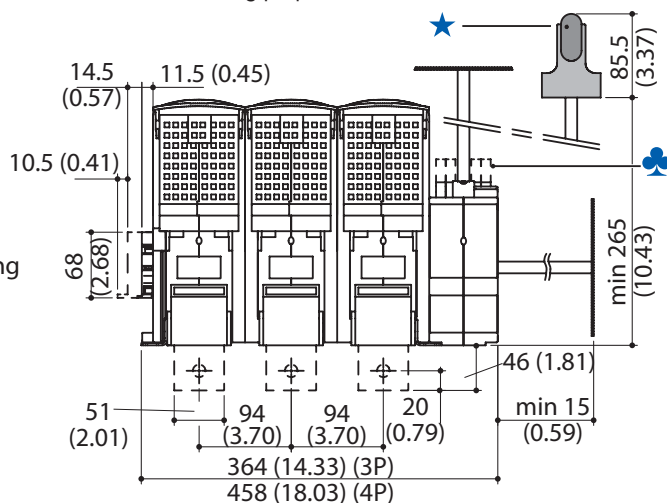
Cat. No. 194R-B400-1753, 194R-D400-1753
 Frame Size F16

Fused and Non-Fused Disconnects

Approximate Dimensions

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

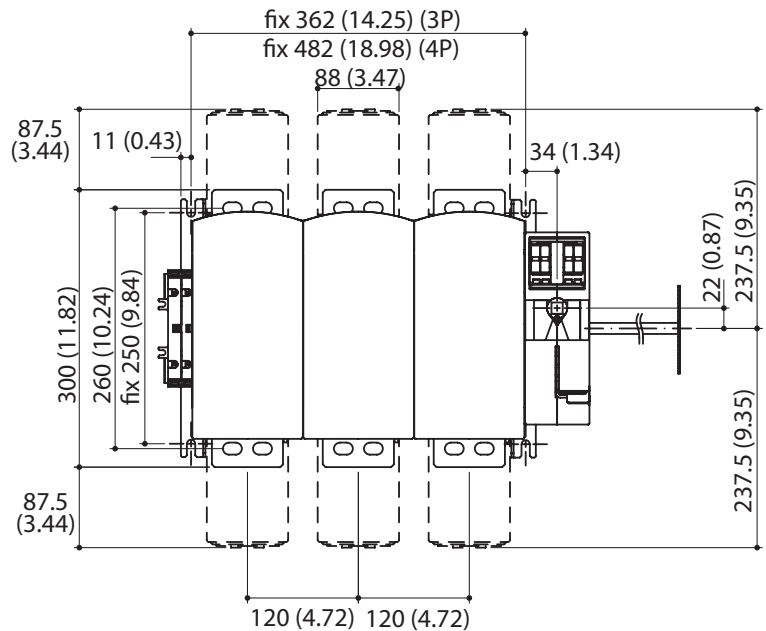
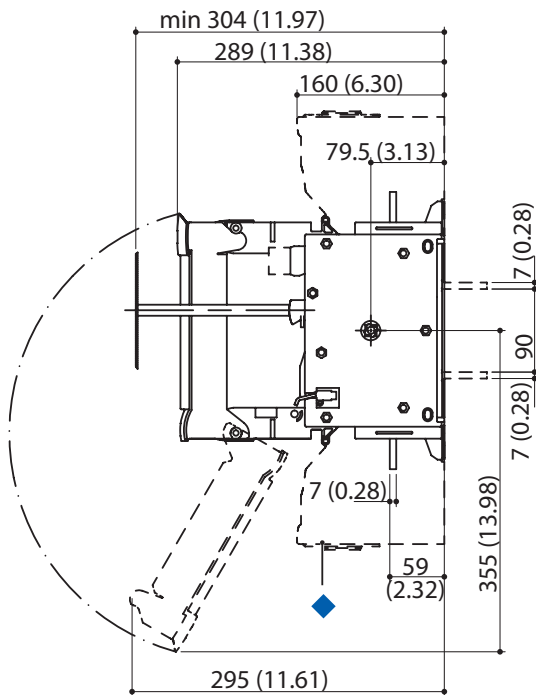
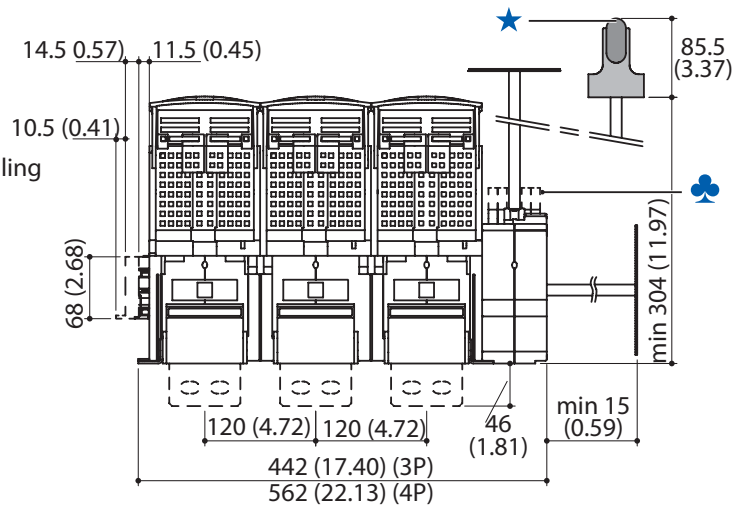
- ★ Direct operation
- ♣ 1...8 pre-break auxiliary contact for signalling
- ◆ Terminal shrouds



Cat. No. 194R-B630-1753, 194R-D630-1753, 194R-B800-1753, 194R-D800-1753
Frame Size F17

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

- ★ Direct operation
- ♣ 1...8 pre-break auxiliary contact for signalling
- ◆ Terminal shrouds



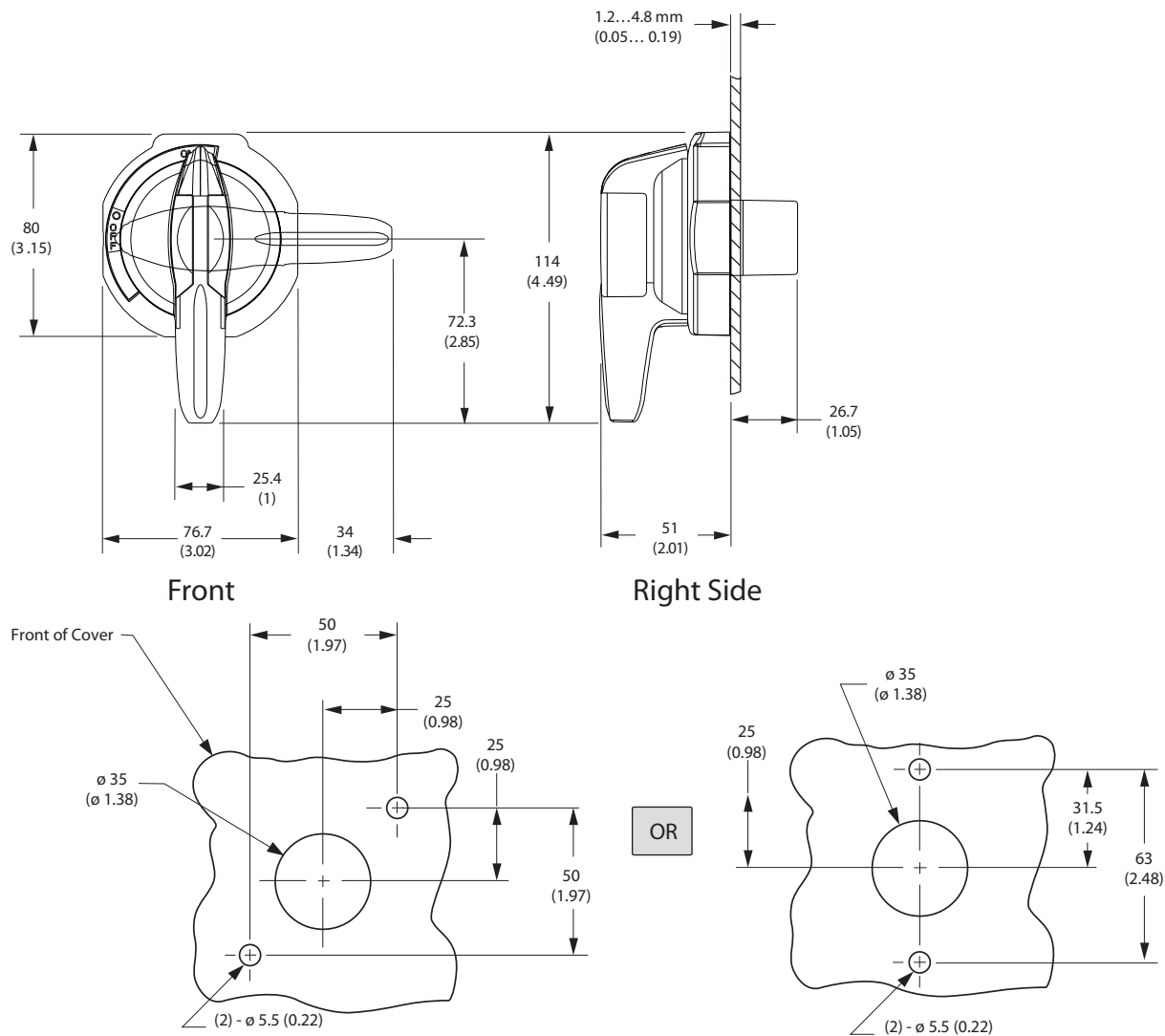
Cat. No. 194R-B1250-1753, 194R-D1250-1753
Frame Size F18

Fused and Non-Fused Disconnects

Approximate Dimensions

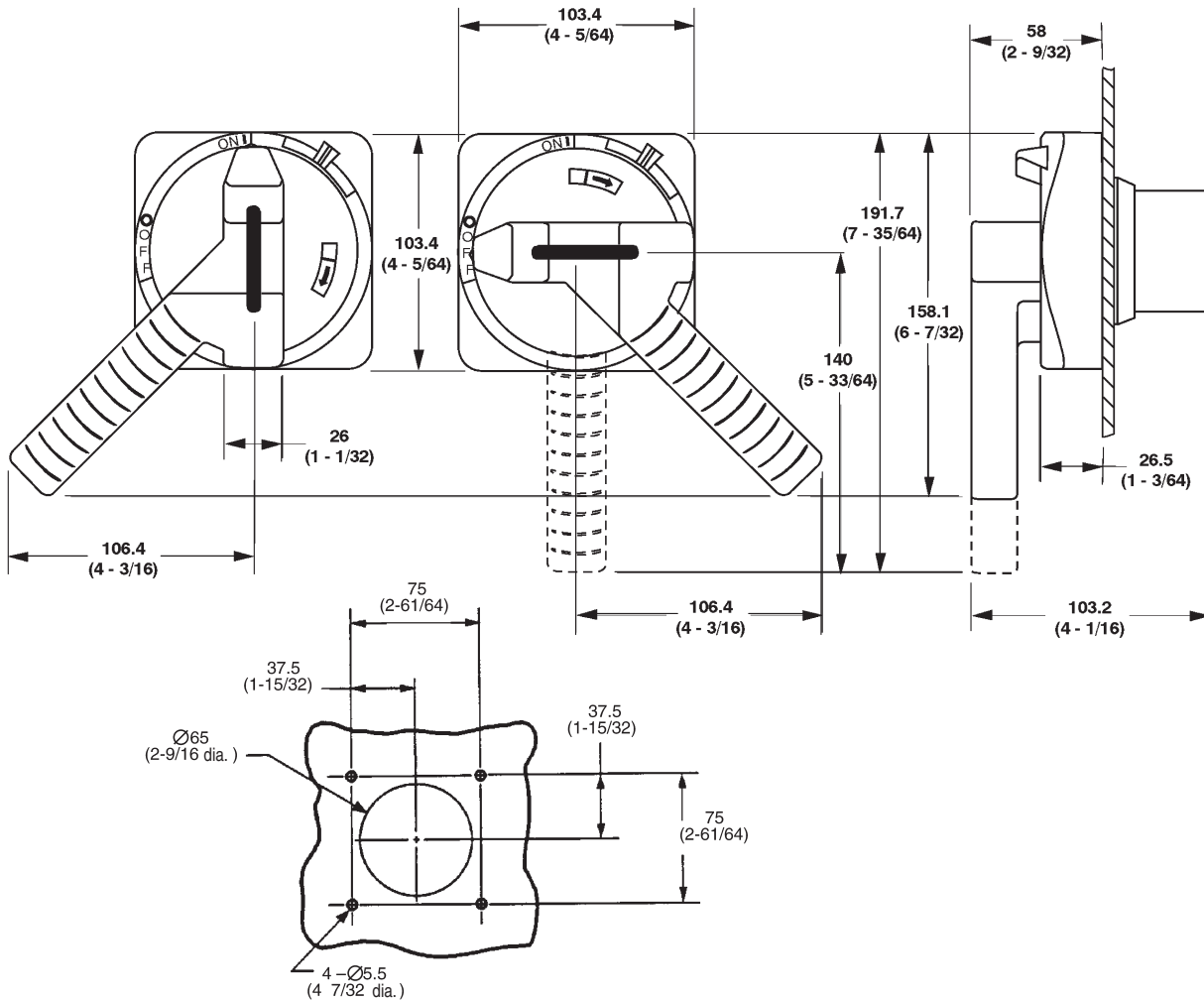
Dimensions in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

Operating Handles — Cat. Nos. 194R-P.../140U-P...

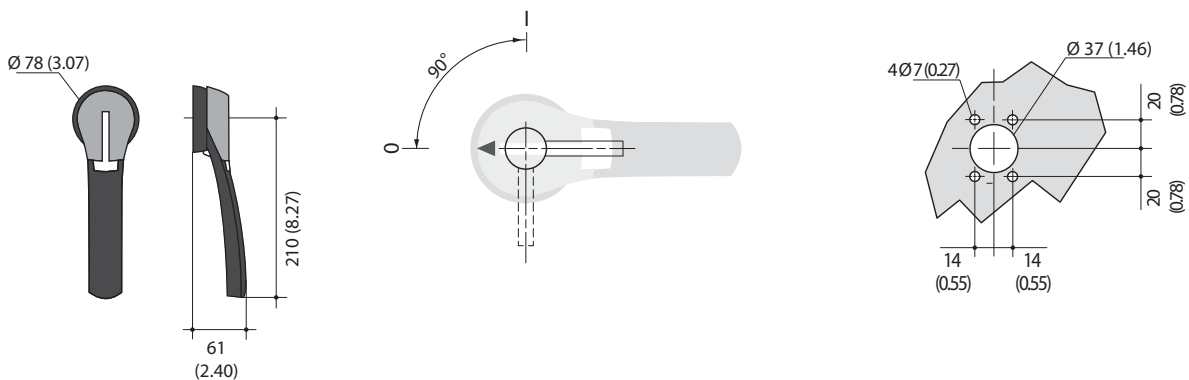


Dimensions in millimeters (inches). Dimensions are not intended to be used for manufacturing purposes.

Operating Handles — Cat. No. 194R-HM4, -HM4E



Operating Handles — Cat. No. 194R-HM4-L, -HM4E-L, -HM4-N2-L, -HM4E-N2-L

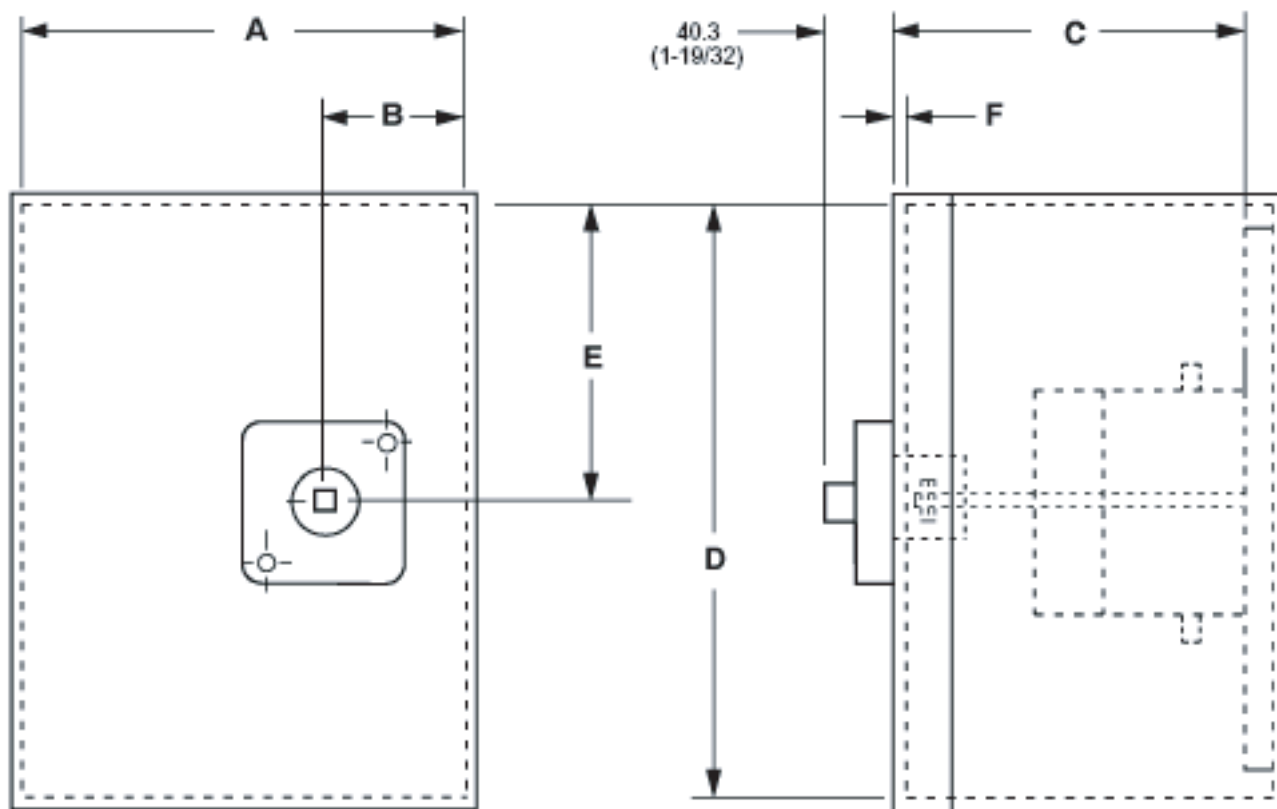


Fused and Non-Fused Disconnects

Approximate Dimensions

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

Disconnect Switch Dim. Ref.: A1, A2, B1, B2 (30 A and 60 A) Enclosure and Operating Handle

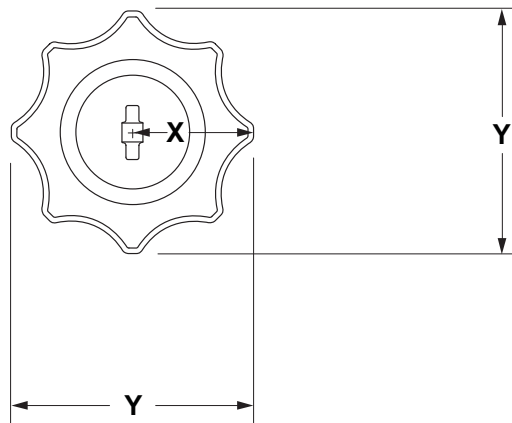
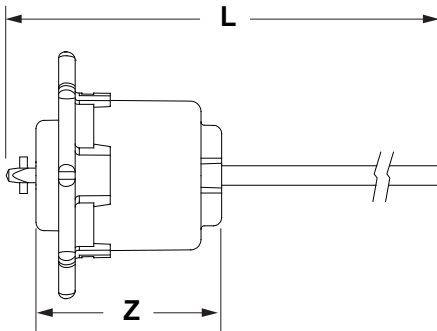


Enclosure Installation Dimensions

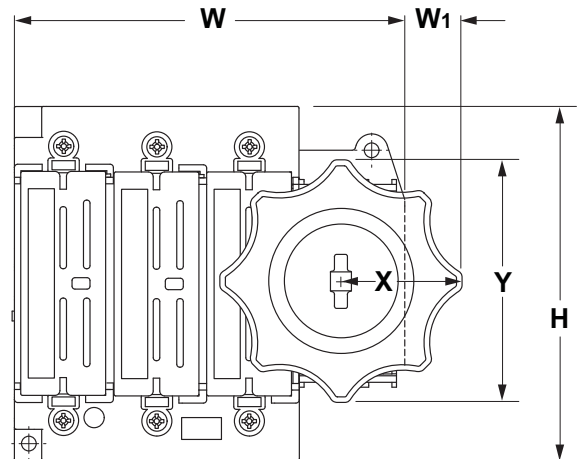
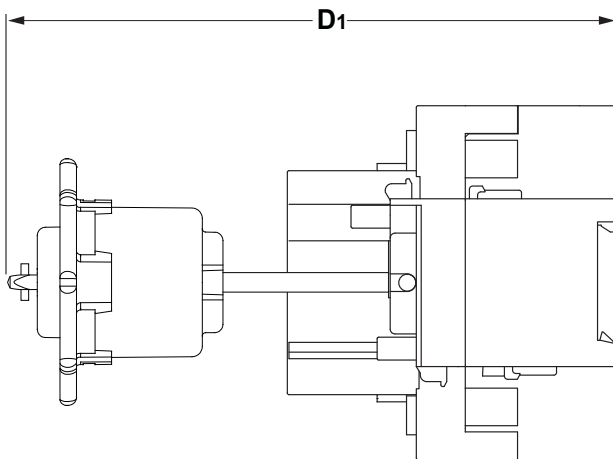
Cat. No.	Dimension Reference	A	B	C		D	E	F	
		Maximum	Minimum	Minimum	Maximum	Minimum	Minimum	Minimum	Maximum
194R-B20-1753	A1	171 (6-3/4)	45 (1-49/64)	147.6 (5-13/16)	454 (17-7/8)	248 (9-3/4)	89 (3-1/2)	1.4 (1/16)	4/78 (3/16)
194R-B32-1753									
194R-C30-1753									
194R-F32-1753									
194R-J30-1753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

NFPA 79 Internal Handle with Shaft Dimensions

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



Catalog No.		L (max)	X	Y	Z
194R -NHR1	mm (in.)	305 (12)	38 (1-1/2)	76 (3)	57 (2-1/4)
194R -NHR2	mm (in.)	533 (21)	38 (1-1/2)	76 (3)	57 (2-1/4)



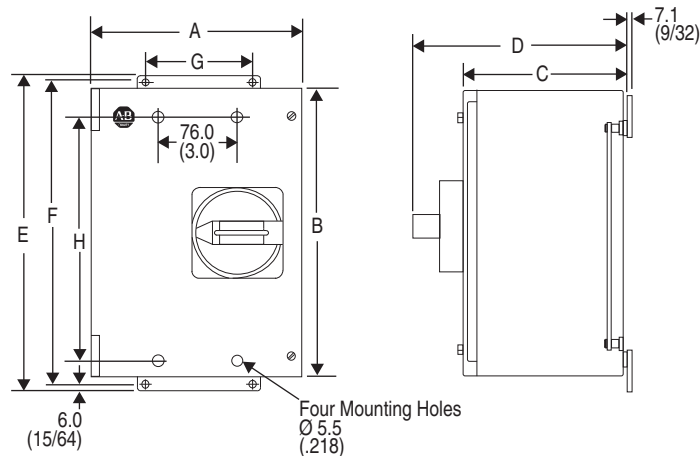
Catalog No.	Dim. Ref.		H	W	W ₁	D ₁ (min)	X	Y
194R-B20-* 194R-F25-* 194R-B32-* 194R-F32-* 194R-C30-* 194R-J30-*	A1	mm (in.)	108 (4-1/4)	120 (4-3/4)	19 (3/4)	184 (7-1/4)	38 (1-1/2)	76 (3)
194R-N30-*	A2	mm (in.)	108 (4-1/4)	120 (4-3/4)	19 (3/4)	160 (6-5/16)	38 (1-1/2)	76 (3)
194R-B63-* 194R-H30-* 194R-D32-* 194R-H60-* 194R-D63-* 194R-J60-* 194R-F63-*	B1	mm (in.)	113 (4-29/64)	142 (5-19/32)	19 (3/4)	196 (7-49/64)	38 (1-1/2)	76 (3)
194R-N60-*	B2	mm (in.)	113 (4-29/64)	142 (5-19/32)	19 (3/4)	176 (6-59/64)	38 (1-1/2)	76 (3)

Fused and Non-Fused Disconnects

Approximate Dimensions

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

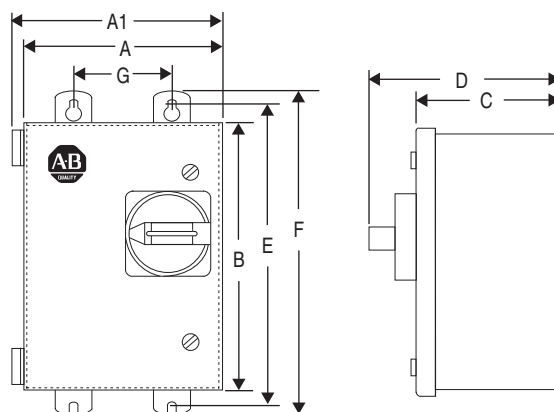
IP66 (Type 3/4/12) Watertight, Dusttight Sheet Metal Enclosure



External Mounting Feet Optional Cat. No. 198-F1

[A]	Type	Dim. Ref.	A	B	C	D	E	F	G	H
30	Non-Fused & Fused	A1 & A2	200 (7-7/8)	300 (11-13/16)	160 (6-19/64)	200 (7-7/8)	325 (12-51/64)	313 (12-21/64)	105 (4-1/8)	236 (9-9/32)
60	Non-Fused & Fused	B1 & B2	200 (7-7/8)	300 (11-13/16)	160 (6-19/64)	200 (7-7/8)	325 (12-51/64)	313 (12-21/64)	105 (4-1/8)	236 (9-9/32)

Type 4/4X Watertight, Corrosion-Resistant Stainless Steel Enclosure

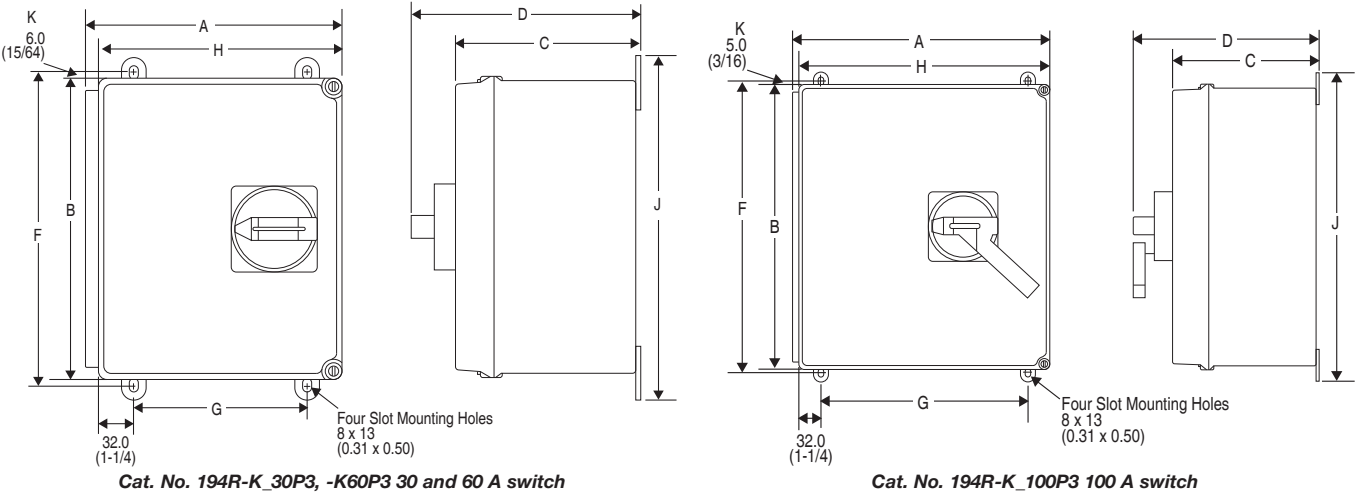


External Mounting Feet Optional Cat. No. 198-F3

[A]	Type	Dim. Ref.	A	A1	B	C	D	E	F	G	H
30	Non-Fused	A1	159 (6-1/4)	170 (6-11/16)	240 (9-7/16)	123 (4-27/32)	163 (6-7/16)	254 (10)	273 (10-3/4)	83 (3-1/4)	—
	Fused	A2	214 (8-7/16)	225 (8-7/8)	265 (10-7/16)	125 (4-29/32)	165 (6-1/2)	279 (11)	298 (11-23/32)	83 (3-1/4)	—
60	Non-Fused & Fused	B1 & B2	214 (8-7/16)	225 (8-7/8)	265 (10-7/16)	125 (4-29/32)	165 (6-1/2)	279 (11)	298 (11-23/32)	83 (3-1/4)	—

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

IP66 (Type 3/4/4X/12) Corrosion-Resistant, Non-Metallic Enclosure



Switch Size [A]	A	B	C	D	F	G	J	K
30/60	226 (8-59/64)	267 (10-1/2)	163 (6-27/64)	202 (7-61/64)	278 (10-61/64)	152 (6)	305 (12)	6 (15/64)

Fused and Non-Fused Disconnects

Fuse Description

Proper Selection of Disconnect Switches

Applications Within Canada and the United States

General

The requirements for disconnect switches used in motor branch circuits rated 600V and less are defined in Article 430, Part J of the U.S. National Electrical Code (NEC), NFPA70. Canadian Electrical Code (CEC) requirements are very similar in the area of motor branch circuit disconnect requirements. For simplicity, we will treat the NEC and CEC requirements as being the same — and reference specific sections of the U.S. National Electrical Code.

The requirements for properly sizing a disconnect switch are dependent on the type of application. The NEC refers to two types of applications: single motor and combination loads. A combination load consists of an application where two or more motors are used together or where one or more motors are used in combination with other loads, such as resistance heaters.

Single Motor Applications

Section 430-110 Paragraph (a) states that the disconnect switch must have an ampere rating of at least 115% of the full-load current rating of the motor.

Example 1: For a motor with a full-load current of 22 A, the disconnect switch must be rated at least 25.3 A (22×1.15). If the disconnecting means under evaluation is rated in horsepower, the selection of the disconnect switch is even more straightforward; a disconnect switch must have a horsepower rating equal to, or greater than the horsepower rating of the motor at the applicable voltage.

Example 2: For a motor with a 10 Hp rating at 460V AC, the disconnect switch must be rated at least 10 Hp at 460V AC. If the disconnect switch is rated in horsepower, and UL Listed, UL Component Recognized, or CSA Certified, it will meet the requirements for the 115% full load current rating stipulated by the NEC.

Combination Load Applications

Section 430-110 Paragraph (c) addresses the rating of the disconnecting means for combination loads. This paragraph essentially requires that the loads that “may be simultaneous on a single disconnecting means” be combined to provide equivalent full-load and locked-rotor currents for what is then to be considered as a single motor for the purpose of selecting the appropriate disconnecting means. This means that it is necessary to identify the particular combination of connected loads which can be operating simultaneously and will result in the maximum full-load and locked-rotor current sums.

The individual full-load current values are to be selected from Tables 430-148, 430-149, or 430-150 and the locked-rotor values are to be from Table 430-151.

The equivalent single motor full-load current is the sum of the simultaneously operating motor full-load currents and the rating in amperes of other loads operating at the same time. The equivalent locked-rotor current is the sum of the simultaneously started motors’ locked-rotor currents and the full-load currents of the remaining operating motor and non-motor loads.

The disconnecting means shall have a current rating equal to or greater than 115% of the equivalent single motor full-load current and have a horsepower rating equal to or greater than the horsepower rating determined from the equivalent locked-rotor summation.

Consider the following 460V application:

Load	Hp	Full-Load Current [A]
Motor 1	5	7.6 (simultaneous)
Motor 2	10	14.0 (not included) ★
Motor 3	15	21.0 (simultaneous)
Motor 4	20	27.0 (simultaneous)
Other		7.0 (simultaneous)
Total Equivalent		62.6 (simultaneous)

★ Motor 2 is not included in the total since it cannot operate simultaneously with the other motors, therefore, the disconnect switch must be rated at least 72 A (1.15×62.6).

Consider now the locked-rotor current analysis for the same application:

Load	Hp	Full-Load Current [A]
Motor 1	5	(7.6FLA) 45.6 (simultaneous)
Motor 2	10	84.0 (not included) ★
Motor 3	15	126.0 (simultaneous) ‡
Motor 4	20	162.0 (simultaneous) ‡
Other		7.0 (simultaneous)
Total Equivalent		302.6 (simultaneous)

★ Note again that Motor 2 cannot operate simultaneously with the other loads.

‡ The largest equivalent locked-rotor current occurs when motors 3 and 4 start together while the other loads marked “simultaneous” are already operating. Since Motor 1 is not starting with Motors 3 and 4, its full-load current will be added to the total instead of its locked-rotor current.

Table 430-151, which provides the correlation between locked-rotor currents and Hp ratings, shows that a 40 Hp rating is the equivalent for 302.6 locked-rotor amperes.

Therefore, the disconnect selected for this application must have a current rating of at least 72 A and a Hp rating of at least 40 Hp. In this case a Bulletin 194R rated for 100 A and 60 Hp at 460V would be an appropriate choice. What can be seen from this analysis is that, depending upon the number of motors that can start simultaneously, the actual size of the required disconnect is sometimes determined by the equivalent full load current (72 A) and other times by the equivalent horsepower determined from the locked rotor analysis (40 Hp).

Applications Outside the United States and Canada

General

Disconnect switches designed to IEC Standards and used in applications outside of North America are selected based on the ampere, horsepower, or kilowatt rating of the disconnect switch, under various utilization categories. Utilization categories for disconnect switches are as follows:

Nature of Current	Utilization Category		Typical Applications
	Frequent Operation	Infrequent Operation	
AC	AC-20A ★	AC-20B ★	Connecting and disconnecting under no load conditions
	AC-21A	AC-21B	Switching of resistive loads including moderate overloads
	AC-22A	AC-22B	Switching of mixed resistive and inductive loads, including moderate overloads
	AC-23A	AC-23B	Switching of motor loads or other highly inductive loads

★ The use of these utilization categories is not permitted in the U.S.

For any application, the disconnect switch rating (A, Hp, or kW) must be greater than or equal to the application full-load current or power (Hp or kW), in the appropriate utilization category.

Example 1: For a 380V 50 Hz distribution application (AC-22A), with a 63 A full load current, the disconnect switch must be rated at least 63 A at 380V 50 Hz for use in AC-22A applications.

Example 2: For a 415V 50 Hz motor application (AC-23A), with a 75 kW rating, the disconnect switch must be rated at least 75 kW at 415V 50 Hz for use in AC-23A applications.

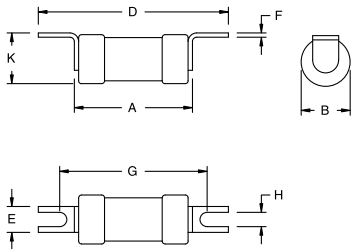
Fuse Description

With Bulletin 194R Fused Disconnect Switches

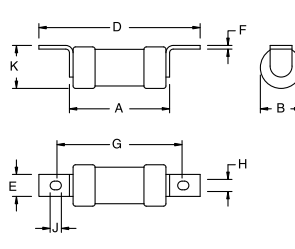
Bulletin 194R Fused Disconnect Switches have been designed to accept a variety of fuses for worldwide application flexibility. Following is a brief summary of typical fuse specifications, where the fuses are typically used, and which Bulletin 194R disconnect switches will accommodate each fuse type. Fuse manufacturers should be contacted for more specific information about each fuse type. **Fuses are not available from Rockwell Automation. BS88 Fuses (63 A shown)**

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

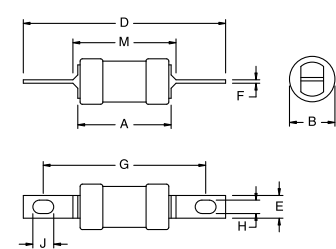
- IEC fuse type: Fuse-link for bolted connection
- Voltage rating: 660/690V AC
- Interrupting rating: 80 kA
- Standard cartridge sizes: A1, A2, A3, A4, B1, B2, B3, B4
- Typical ampere ratings: 2...400 A
- Construction: Blade type for bolted connection
- Can be installed on Bulletin 194R disconnect switch
Cat. Nos: 194RNA100P3, NA200P3, NA300P3, NA380P3, NA400P3, NB200P3, NB300P3
- Where used: United Kingdom, Australia, New Zealand, Asia



Standard cartridge size A1



Standard cartridge sizes A2, A3, A4



Standard cartridge sizes B1, B2, B3, B4

Dim. Ref.	Ampere Range [A]	A	B	D	E	F	G	H	K
A1	2...20	36.50 (1-7/16)	13.90 (35/64)	55.60 (2-3/16)	11.10 (7/16)	0.80 (1/32)	4.50 (1-3/4)	4.40 (11/64)	14.30 (9/16)

Dim. Ref.	Ampere Range [A]	A	B	D	E	F	G	H	J	K
A2	2...20	56.40 (2-7/32)	23.80 (15/16)	85.80 (3-3/8)	8.70 (11/32)	1.20 (3/64)	73.00 (2-7/8)	5.20 (13/64)	7.10 (9/32)	23.80 (15/16)
A3	35...63	56.40 (2-7/32)	23.80 (15/16)	85.80 (3-3/8)	8.70 (11/32)	1.20 (3/64)	73.00 (2-7/8)	5.20 (13/64)	7.10 (9/32)	23.80 (15/16)
A4	80...100	70.00 (2-3/4)	34.90 (1-3/8)	111.00 (4-3/8)	19.10 (3/4)	2.40 (3/32)	93.70 (3-11/16)	8.70 (11/32)	10.30 (13/32)	34.90 (1-3/8)

Dim. Ref.	Ampere Range [A]	A	B	D	E	F	G	H	J	M
B1	2...20	70.00 (2-3/4)	34.90 (1-3/8)	136.50 (5-3/8)	19.10 (3/4)	3.20 (1/8)	111.00 (4-3/8)	8.70 (11/32)	11.90 (15/32)	79.40 (3-1/8)
B2	125...200	77.00 (3-1/32)	41.30 (1-5/8)	136.50 (5-3/8)	19.10 (3/4)	3.20 (1/8)	111.00 (4-3/8)	8.70 (11/32)	11.90 (15/32)	79.40 (3-1/8)
B3	250...315	83.00 (3-9/32)	54.00 (2-1/8)	136.50 (5-3/8)	25.40 (1)	3.20 (1/8)	111.00 (4-3/8)	8.70 (11/32)	11.90 (15/32)	82.00 (3-1/4)
B4	355...400	70.00 (2-3/4)	61.10 (2-13/32)	136.50 (5-3/8)	25.40 (1)	6.30 (1/4)	111.00 (4-3/8)	8.70 (11/32)	11.90 (15/32)	85.80 (3-3/8)

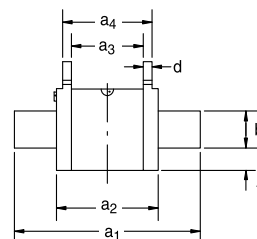
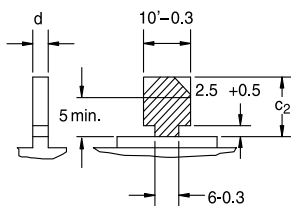
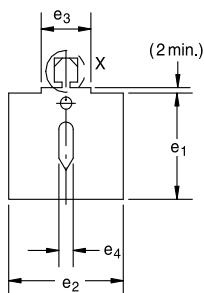
DIN Fuses (100 A shown)

Dimensions in millimeters only.

Dimensions are not intended to be used for manufacturing purposes.

- IEC fuse type: Fuse-link with blade contacts
- Voltage rating: 660/690V AC
- Interrupting rating: 120,000 A
- Standard cartridge sizes: 00, 0, 1 and 2
- Typical ampere ratings: 2...400 A

- Construction: Blade type
- Can be installed on Bulletin 194R disconnect switch Cat. Nos: 194RND072P3, ND138P3, ND250P3, ND300P3
- Where used: Europe, South America, Middle East and India



Size	Max. Rated Current [A]	a ₁	a ₂	a ₃	a ₄	b (min.)	d	e ₁ (max.)	e ₂ (max.)	e ₃	e ₄ ±0.2	f
00	100	78.5 ± 1.5	53	45 ± 1.5	49 ± 1.5	15	2 ± 0.5	48	30	20 ± 5	6	12.5
0	160	125 ± 2.5	67	62 ± 3 -1.5	68 ± 1.5 -3	15	2 ± 1.5 -0.5	48	40	20 ± 5	6	11.5
1	250	135 ± 2.5	71	62 ± 2.5	68 ± 2.5	20	2.5 ± 1.5 -0.5	53	52	20 ± 5 -2	6	10
2	400	150 ± 2.5	72	62 ± 2.5	68 ± 2.5	25	2.5 ± 1.5 -0.5	61	60	20 ± 5 -2	6	10

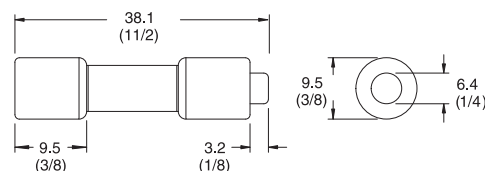
With Bulletin 194R Fused Disconnect Switches, Continued

CSA HRCI and UL Class Fuses (10 A shown)

Dimensions in millimeters (inches).

Dimensions are not intended to be used for manufacturing purposes.

- UL fuse type: Class CC
- CSA fuse type: HRCI-MISC
- Voltage rating: 600V AC
- Interrupting rating: 200 000 A
- Standard cartridge sizes: 30 A
- Typical ampere ratings: 1...30 A
- Construction: Ferrule type
- Can be installed on Bulletin 194R disconnect switch Cat. No: 194R-NC030P3
- Where used: North America

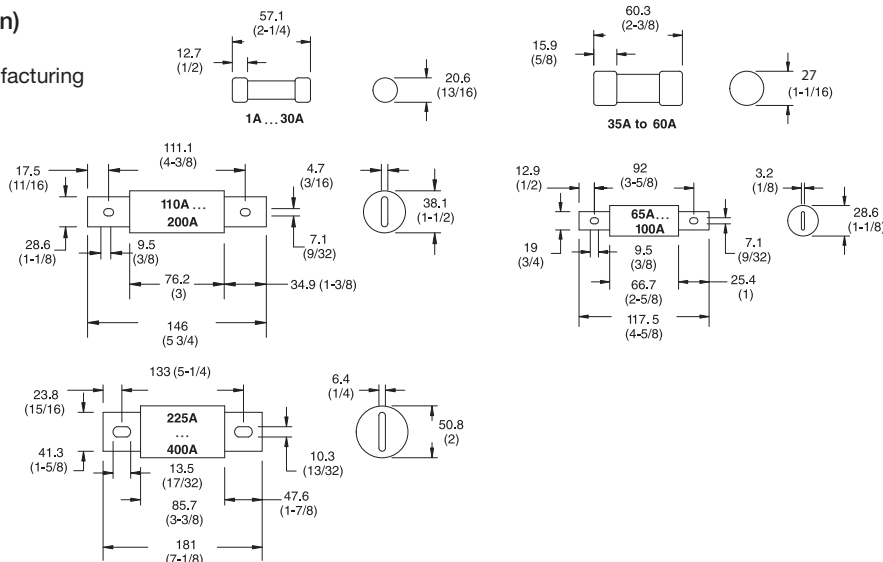


CSA HRCI and UL Class Fuses (30 A shown)

Dimensions in millimeters (inches).

Dimensions are not intended to be used for manufacturing purposes.

- CSA fuse type: HRCI-J
- UL fuse type: Class J
- Voltage rating: 600V AC
- Interrupting rating: 200 000 A
- Standard cartridge sizes: 30, 60, 100, 200, and 400 A
- Typical ampere ratings: 1...600 A; Blade type for bolted connection
- Can be installed on Bulletin 194R disconnect switch Cat. Nos: 194R-NJ030P3, NJ060P3, NJ100P3, NJ200P3, NJ400P3
- Where used: North America

Visit our website: www.ab.com/catalogs

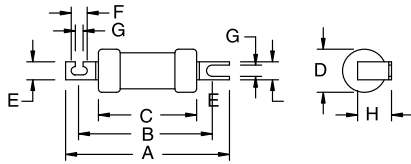
Publication 194R-SG003D-EN-P

CSA HRCII Fuses (100 A shown)

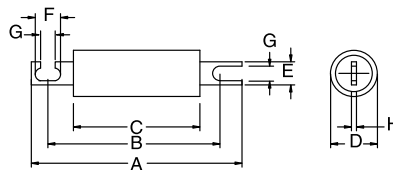
Dimensions in millimeters (inches).

Dimensions are not intended to be used for manufacturing purposes.

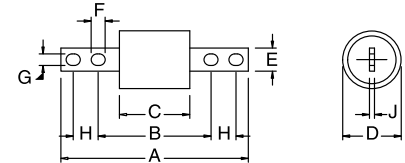
- CSA fuse type: HRCII-C
- Voltage rating: 600V AC
- Interrupting rating: 200 000 A
- Standard cartridge sizes: 30, 60, 100, 200, and 400 A
- Typical ampere ratings: 1...400 A
- Construction: Blade type for bolted connection
- Can be installed on Bulletin 194R disconnect switch
- **Cat. Nos: 194R-NA200P3, NA300P3, NH100P3, NH200P3, NH400P3**
- Where used: Canada



Standard Cartridge Sizes 30, 60, and 100 A



Standard Cartridge Size 200 A



Standard Cartridge Size 400 A

Current Range [A]	A	B	C	D	E	F	G	H	J
0...30	84.14 (3-5/16)	71.04 (2-51/64)	50.8 (2)	20.64 (13/16)	8.73 (11/32)	7.54 (19/64)	5.56 (7/32)	23.81 (15/16)	1.59 (1/16)
31...60	88.9 (3-1/2)	71.04 (2-51/64)	50.8 (2)	20.64 (13/16)	12.7 (1/2)	7.54 (19/64)	5.56 (7/32)	26.99 (1-1/16)	1.59 (1/16)
61...100	109.54 (4-5/16)	92.47 (3-41/64)	60.72 (2-25/64)	34.13 (1-11/32)	19.05 (3/4)	11.91 (15/32)	8.73 (11/32)	34.93 (1-3/8)	2.38 (3/32)
101...200	134.94 (5-5/16)	109.14 (4-19/64)	76.2 (3)	38.1 (1-1/2)	19.05 (3/4)	11.91 (15/32)	8.73 (11/32)	3.18 (1/8)	—
201...400	207.96 (8-3/16)	133.35 (5-1/4)	76.2 (3)	60.33 (2-3/8)	25.4 (1)	12.7 (1/2)	9.53 (3/8)	25.4 (1)	4.76 (3/16)
401...600	207.96 (8-3/16)	133.35 (5-1/4)	76.2 (3)	76.2 (3)	25.4 (1)	15.08 (19/32)	10.32 (13/32)	25.4 (1)	9.53 (3/8)

Bulletin 194R-FC

Fused and Non-Fused Disconnects

Product Selection

	Bulletin 194R-FC and 194R-LFC NFPA 79 Compliant IEC Cable-Operated Mechanism for Flange-Style Enclosures • Cable-operated mechanism with interlock • 194R-FC is compatible with all Bulletin 194R 30 and 60 A fused and non-fused disconnects (sold separately) • 194R-LFC is compatible with all Bulletin 194R-J100-1753 and 194R-J200-1753 disconnects (sold separately) • Uses Bulletin 1494F handles (sold separately) – IP66 (Type 3R, 3, 12, 4, 4X) • Padlockable handle mounts to flange-styled enclosures • Cable options available in 3...10 ft. lengths • NFPA 2002 Compliant	Table of Contents Product Selection..... 52 Approximate Dimensions..... 53 Standards Compliance for Disconnect Switch IEC 60947-4-1/EN60947-3 BS EN60947-3 VDE 0660 CSA 22.2 No. 4 NEMA KS-1 UL 98 Certifications UL Listed (File No. E 47426, Guide WHTY) CSA Certified (File No. LR1234) CE ASTA Certified LOVAG Certified
---	---	---

The Bulletin 194R-FC and 194R-LFC cable-operated mechanism with interlock provide a fully compliant solution to the 2002 changes in the National Fire Protection Association 79 (NFPA 79).

The 194R-FC cable-operated mechanisms for flange-style enclosures combines the small size of the 194R IEC next generation disconnect with the flexibility of a cable-operated mechanism to provide an NFPA 79 IEC solution for flange-style enclosures. The 194R-FC bracketed mechanism for 194R 30 and 60 A devices attaches to the 194R disconnect switch base and operates the ON-OFF action via cable to a standard 1494F handle. The 194R-LFC mechanism attaches to the side of the 194R-J100-1753 and 194R-J200-1753 disconnect switch and operates the ON-OFF action via cable to a standard 1494F handle.

The handle/interlock mechanism provides the 'no-tools' operation and the secondary interlock as required by NFPA 79 2002. The cable-operated mechanism is offered in 3...10 ft cable lengths, allowing a variety of placement options for the 194R disconnect within the enclosure. The handle (ordered separately) is available in 3 different styles: plastic, stainless steel, or painted metal.

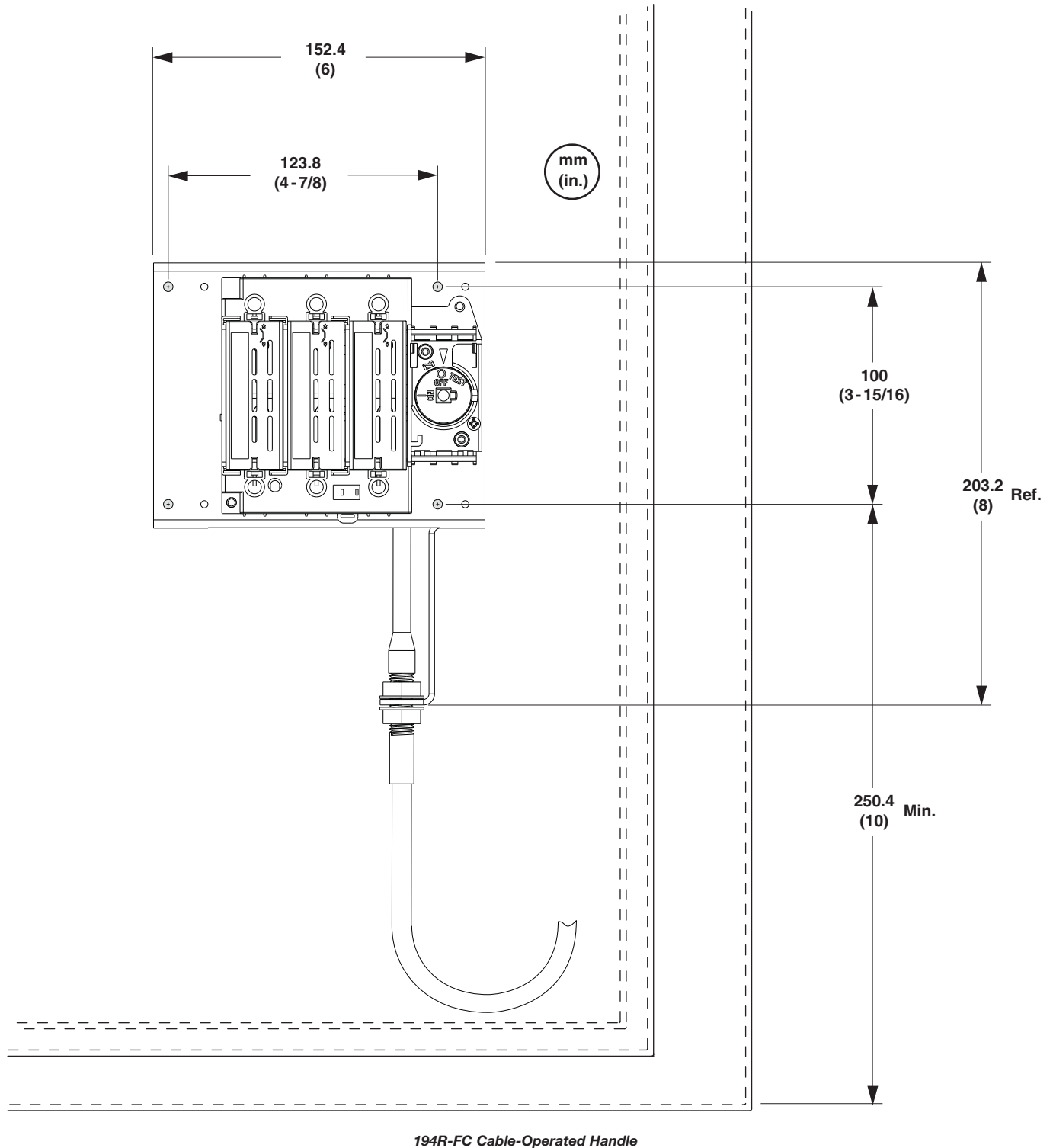
Product Selection

	Description	For Use With	Cable Length	Cat. No.
	Cable-operated disconnect mechanism	194R 30 and 60 A fused and non-fused disconnects (sold separately)	3 ft.	194R-FC03
			4 ft.	194R-FC04
			6 ft.	194R-FC06
			10 ft.	194R-FC10
	Cable-operated disconnect mechanism	194R-J100-1753, 194R-J200-1753 disconnects (sold separately)	3 ft.	194R-LFC03
			5 ft.	194R-LFC05
			10 ft.	194R-LFC10

	Handle Ingress Protection Rating	Description	Mounting	Disconnect Switch Size [A]	Cat. No.
	Type 1, 3R, 4, 4X, 12	Nonmetallic Handle 5-1/2 in. base	Right or Left Flange	30, 60, 100, 200	1494F-P1
	Type 1, 3R, 4, 12	Painted Metal 5-1/2 in. base	Right or Left Flange	30, 60, 100, 200	1494F-M1
	Type 4, 4X	Stainless Steel 5-1/2 in. base	Right or Left Flange	30, 60, 100, 200	1494F-S1

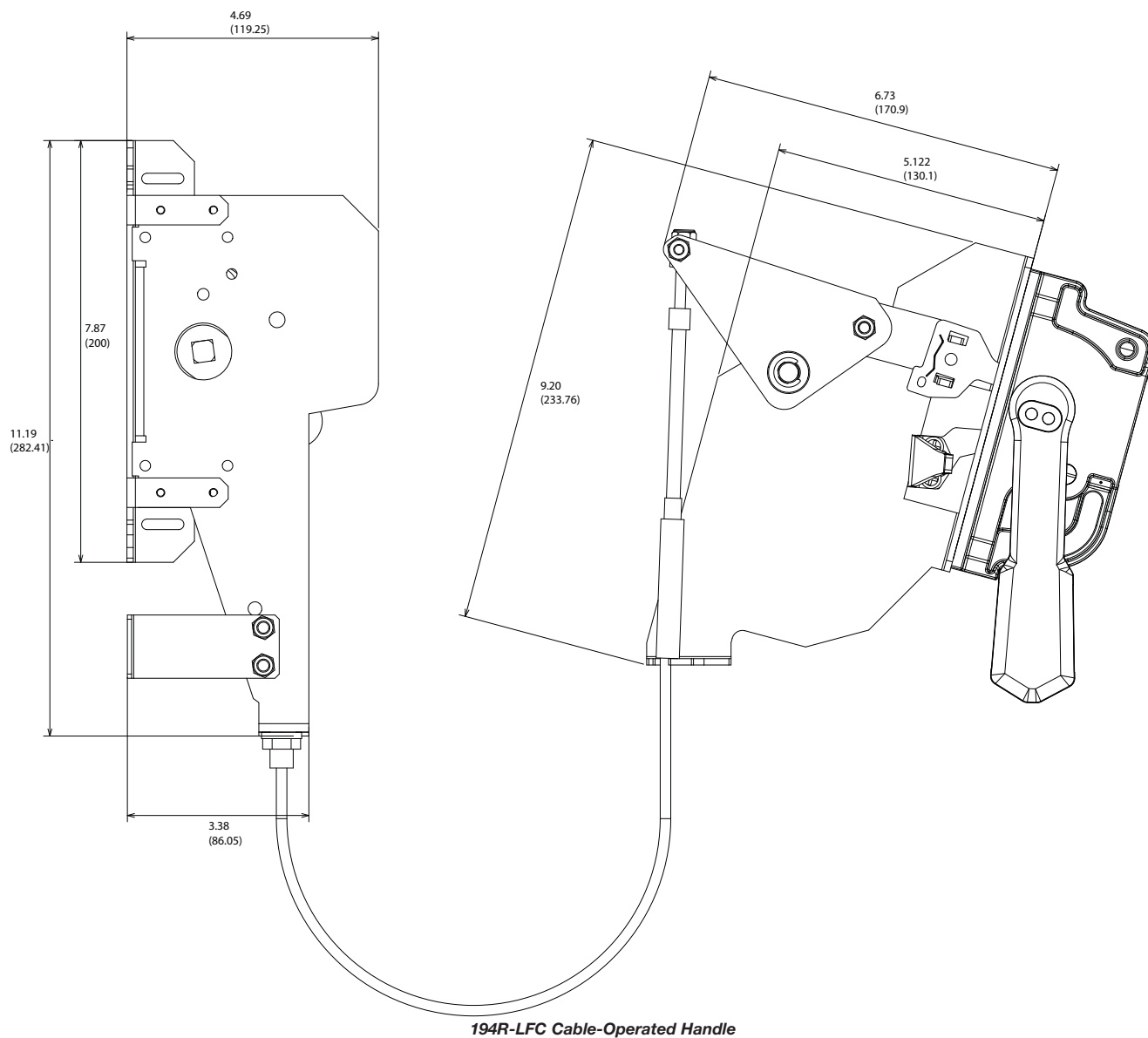
Approximate Dimensions

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



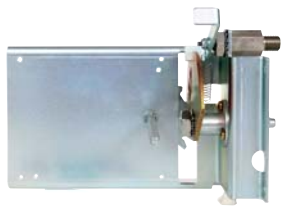
Bulletin 194R-FC
Fused and Non-Fused Disconnects
Approximate Dimensions

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



Fused and Non-Fused Disconnects

Product Selection



Cat. No. 194R-SDK1
Side-Mount Disconnect Switch Kit
 for all Bul. 194R 30 and 60 A Next
 Generation switches and Cat. No.
 194R-HS... handles

Cat. No. 194R-SDK1 NFPA 79 Compliant IEC Fused and Non-Fused Disconnects, Side-Mounted Kit

- Used with all 30/60 A fused and non-fused disconnects and Bul 194R-HS handles (both sold separately)
- Open switches
- Operating handle ingress ratings:
 - IP66 (Type 3R, 3, 12, 4, 4X)
- Padlockable handle

The Cat. No. 194R-SDK1 side-mount handle provides NFPA 79 compliancy with a bracketed switch and interlock system that is another Allen-Bradley exclusive. The 194R-HS rotary handle is mounted to the side of the enclosure and attaches to the 194R next generation disconnect and interlock mechanism. The side handle remains connected to the switch and interlock mechanism at all times. This solution provides the single, side handle design with the NFPA 79 compliancy of the secondary interlock. This kit is used with the 194R-HS family of disconnect handles (sold separately).

Table of Contents

Product Selection.....	this page
Approximate Dimensions.....	56

Standards Compliance for Disconnect Switch

IEC 60947-4-1/EN60947-3
 BS EN60947-3
 VDE 0660
 CSA 22.2 No. 4
 NEMA KS-1
 UL 489

Standards Compliance for Kit: Side-Mount Handle Mechanism with Disconnect Switch

UL 98
 CSA 22.2 No. 4

Certifications

UL Listed (File No. E119349,
 Guide WJAZ)
 CSA Certified (File No. LR1234)
 CE

Certifications for Kit: Side-Mount Handle Mechanism with Disconnect Switch

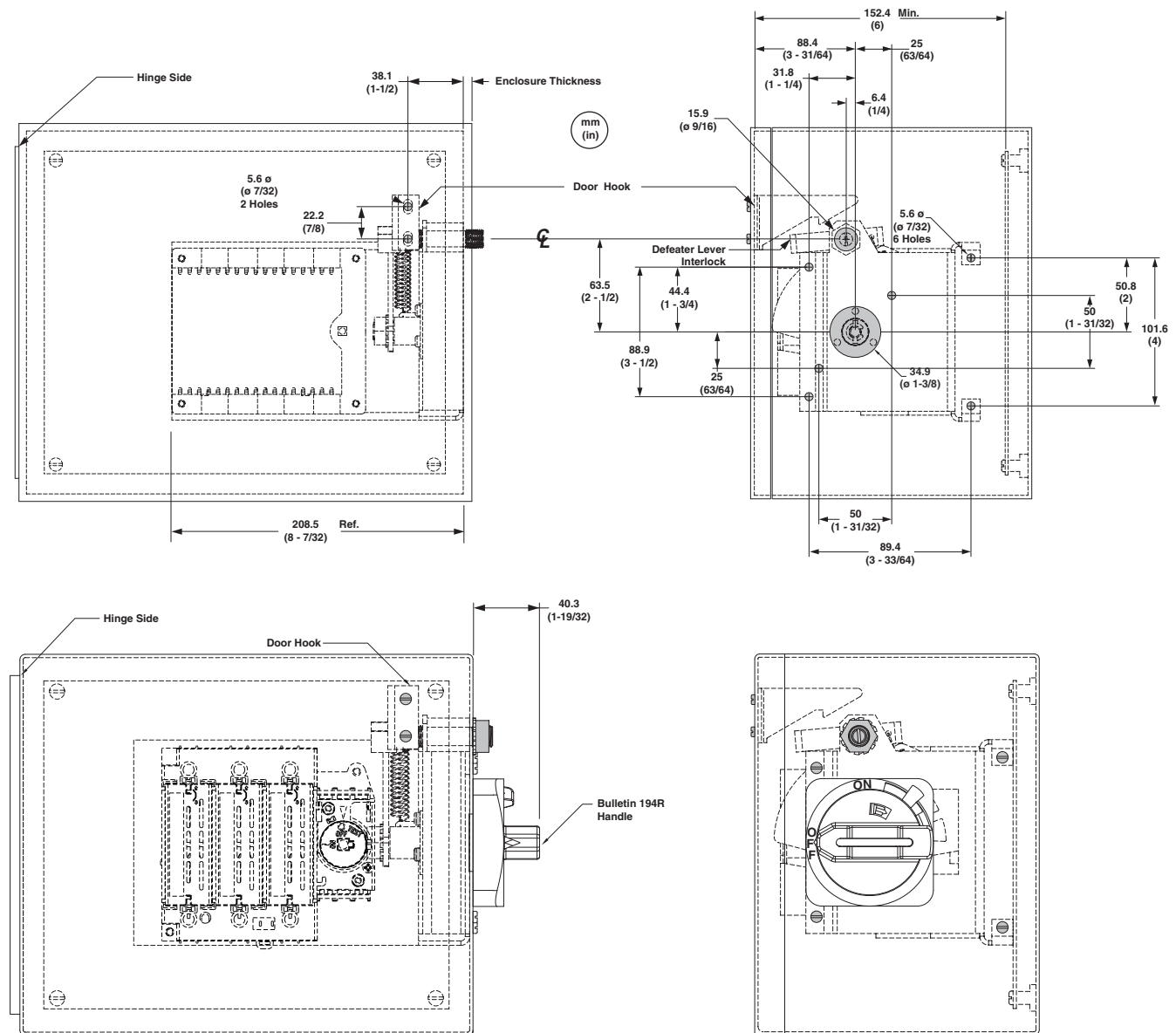
UL Listed (File No. E47426,
 Guide WHTY)
 CSA Certified (File No. LR1234)

Product Selection

Description	For Use With	Cat. No.
Side-Mounted Kit (Disconnect Mechanism and Bracket)	All Bul. 194R 30/60 A disconnect switches and Bul. 194R-HS handles	194R-SDK1

Approximate Dimensions

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



Allen-Bradley, Rockwell Software, Rockwell Automation, and LISTEN. THINK. SOLVE are trademarks of Rockwell Automation, Inc.
Trademarks not belonging to Rockwell Automation are property of their respective companies.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846