

Bulletin 194E, 16...100 A

Bulletin 194E IEC Load Switches

Description



Bulletin 194E load switches are designed for use as local motor isolation or other load switch applications. Available with 3- and 6-pole versions with add-on additional poles, grounding and neutral terminals and auxiliary contacts, the Bulletin 194E shares the same operating handles as the Bulletin 194L Control and Load Switches.

Bulletin 194E switches are offered in two mounting styles, Front/Door and Base/DIN configurations for a variety of installations. Switch body styles for Bulletin 194E base-mounted switches include standard interlock shaft; Bulletin 194E front-mounted switches include standard shaft.

Two-position OFF-ON switch is used to connect or disconnect a variety of inductive loads, including solenoids, valves, magnetic starters, relays, and motors. Handles featuring marked legend plates are available in Selector-Knob, Disk-Style, Rectangular-Style and Key-Operated versions. Selector-Knob versions are available in three sizes. Most handles are available in colors of grey/black or red/yellow and have padlockable versions.

- Suitable as At-Motor Disconnect Switch (UL508)
- 16, 25, 32, 40, 63, 80, 100 A Inductive Load-Rated Switches
- IP66/ UL Type 1/3/3R/12 Operating Handles
- IP2LX Finger-Safe Terminals
- 3- and 6-Pole Versions; Add-on Accessory Poles to Make 4-, 5-, 7- and 8-Pole Units
- Front/Door or DIN/Base Mounting Configurations
- Available in OFF-ON and Changeover Configurations
- 3- and 6-Pole Enclosed Switches
- Optional Thermoplastic Enclosures
- Positive-Guided Actuation
- Padlockable Handles Available (up to 3 padlocks)

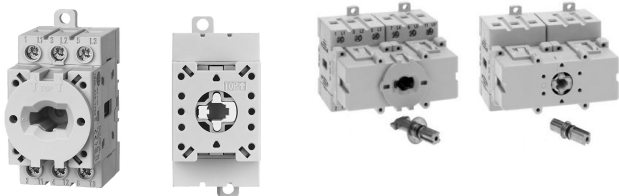
Standards Compliance

IEC 60947-1
IEC 60947-3 Low-voltage
switchgear and control gear
part 3
UL 508
CSA: C22.2 No. 14

Certifications

UL Listed (File No. E14841, Guide NLRV)
CSA Certified (LR 13908)
IEC
CE
CCC

194E 16...100 A Small-Frame Switches (Handles listed on Bulletin 194E/194L Handles (for use with Bulletin 194E Switches))



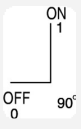
3-Pole Base Mount 3-Pole Front Mount 6-Pole Base Mount 6-Pole Front Mount

194E – A 32 – 1753

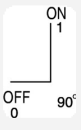
a b c

a		b		c			
Installation Type		Load Size		Function/Circuit Diagram Ref. #			
Code	Description	Code	Description	Code	Function	Description	Circuit Diagram Ref. #
A	Base/DIN mounting	16	16 A	1753	OFF/ON	3-pole, 2-position (90°)	1753
E	Front/Door mounting	25	25 A	1756	OFF/ON	6-pole, 2-position (90°)	1756
		32	32 A	1783	OFF/ON	3-pole, 2-position (90° - inverted)	1783
		40	40 A	3753	Changeover	3-pole, 3-position (90°)	3753
		63	63 A				
		80	80 A				
		100	100 A				

Frequently Ordered* OFF-ON 3-Pole Switch (includes operating shaft) (Handles listed on Bulletin 194E/194L Handles (for use with Bulletin 194E Switches))

Function Switching Angle	Contact Target Configuration X = Contact Closed O = Contact Open		Rated Current [A]	AC23A Rated Power [kW] at 690V AC 50 Hz	Hp @ 480V AC 60 Hz 3ØPhase	OFF-ON 3-Pole Switch (includes operating shaft)		
	No. of Circuits	Handle Position				Base-Mounted	Front-Mounted	
		OFF/O				ON/1	Cat. No.	Cat. No.
	1	O	X	16	7.5	7.5	194E-A16-1753	194E-E16-1753
	2	O	X	25	11	10	194E-A25-1753	194E-E25-1753
	3	O	X	32	15	15	194E-A32-1753	194E-E32-1753
				40	18.5	20	194E-A40-1753	194E-E40-1753
				63	22	25	194E-A63-1753	194E-E63-1753
				80	37	40	194E-A80-1753	194E-E80-1753
				100	45	50	194E-A100-1753	194E-E100-1753

Frequently Ordered* OFF-ON 6-Pole Switch (includes operating shaft) (Handles listed on Bulletin 194E/194L Handles (for use with Bulletin 194E Switches))

Function Switching Angle	Contact Target Configuration X = Contact Closed O = Contact Open		Rated Current [A]	AC23A Rated Power [kW] at 690V AC 50 Hz	Hp @ 480V AC 60 Hz 3ØPhase	OFF-ON 6-Pole Switch (includes operating shaft)		
	No. of Circuits	Handle Position				Base-Mounted	Front-Mounted	
		OFF/O				ON/1	Cat. No.	Cat. No.
	1	O	X	16	7.5	7.5	194E-A16-1756	194E-E16-1756
	2	O	X	25	11	10	194E-A25-1756	194E-E25-1756
	3	O	X	32	15	15	194E-A32-1756	194E-E32-1756
	4	O	X	40	18.5	20	194E-A40-1756	194E-E40-1756
	5	O	X	63	22	25	194E-A63-1756	194E-E63-1756
	6	O	X	80	37	40	194E-A80-1756	194E-E80-1756
				100	45	50	194E-A100-1756	194E-E100-1756

* See Catalog No. Explanation for more load size and change-over switch options.

Bulletin 194E/194L Handles (for use with Bulletin 194E Switches)

Color	Handles (Includes Legend Plate and Control Knob)			
Red/Yellow (Emergency Stop colors)				Bulletin 194L handles are available in both screw fixing and 22.5 mm mounting hole style.
	Type I (IP66, UL Type 3/3R/12)	Type L (IP66, UL Type 3/3R/12) With Locking For One Padlock (Padlock Not Included)	Type N (IP66, UL Type 3/3R/12)♣	
Black/Grey (Standard Operation colors)				
	Type A (IP66, UL Type 3/3R/12)	Type E (IP66, UL Type 3/3R/12) With Locking For One Padlock (Padlock Not Included)	Type G (IP66, UL Type 3/3R/12)♣	Type S (IP66, UL Type 3/3R/12)

♣ These handles are for use with -175 and -178 (ON-OFF) switches only and are dual marked with ON-OFF and 1-0.

Cat. No. Explanation

194L – HE 6 N – 175
 a b c d

a
Code
HC
HE

b			
Code	Use with Handle Type	Handle Legend Plate Size	Use With 194E Switch Size
4	A, E, I, L†	48 mm x 48 mm (1-57/64 in. x 1-57/64 in.)	194E-16...63 A
	S	48 mm x 62 mm (1-57/64 in. x 2-7/16 in.)	194E-25...63 A
6	A, E, I, L	64 mm x 64 mm (2-33/64 in. x 2-33/64 in.)	194E-25...100 A
	G, N‡ §	67 mm x 67 mm (2-41/64 in. x 2-41/64 in.)	194E-25...100 A
	S	64 mm x 78 mm (2-33/64 in. x 3-5/64 in.)	194E-25...100 A
8	A, I	88 mm x 88 mm (3-15/32 in. x 3-15/32 in.)	194E-40...100 A
	G, N♣	90 mm x 90 mm (3-35/64 in. x 3-35/64 in.)	194E-40...100 A

c	
Code	Legend Plate Type
A	Square
I	Square
E	Square/lockable
L	Square/lockable
G	Disc/lockable (up to 3 locks)
N	Disc/lockable (up to 3 locks)
S	Large Square with extra legend area

d		
Code	Description	Legend Marking
175	O-I	
175I	OFF-ON	
350	1-0-2 (Reversing)	
375	1-0-2 (90 degrees) (Changeover)	
178	O-I	
178I	OFF-ON	

* For 22.5 mm mounting hole style handle (code HC), select either handle type A, E, I, or L with 48 x 48 mm legend plate size (code 4) only or handle type G or N with 64 x 64 mm legend plate size (code 6) only.

‡ Order 194E- 16 A Type G and N handles as Cat. No. 194E-HE4N-175 or 194E-HE4G-175

§ Use Type G and N with ON-OFF function only (selection "d", code -175)

♣ Cat. No. 194R-HE front-mounting switch only

Frequently Ordered 194L Handles — OFF-ON Base/Front-Mounted 3- and 6-Pole Switch Handles (Switch Body listed on Frequently Ordered* OFF-ON 3-Pole Switch (includes operating shaft) (Handles listed on Bulletin 194E/194L Handles (for use with Bulletin 194E Switches)))

Handle Type	Degree of Protection	Handle Color	Bezel Plate Size	For Use With	Legend Plate Marking	Cat. No.
E	IP66 (UL Type 1) (UL Type 3/3R/12)	Black/Grey	48 x 48 mm (1-57/64 x 1-57/64 in.)	194E-16...63 A	0-1	194L-HE4E-175
				194L-E12...40 A, -1753 194L-A12...40 A, -1753	OFF-ON	194L-HE4E-175I
L		Red/Yellow	48 x 48 mm (1-57/64 x 1-57/64 in.)	194E-16...63 A	0-1	194L-HE4L-175
				194L-E12...40 A, -1753 194L-A12...40 A, -1753	OFF-ON	194L-HE4L-175I
G	IP66 (UL Type 3/3R/12)	Black/Grey	54 x 54 mm (2-1/8 x 2-1/8 in.)	194E-16 A	0-1 OFF-ON	194E-HE4G-175
			67 x 67 mm (2-41/64 x 2-41/64 in.)	194E-25...100 A 194L-E12...40 A, -1753 194L-A12...40 A, -1753	0-1 OFF-ON	194L-HE6G-175
			88 x 88 mm (3-15/32 x 3-15/32 in.)	194E-40...100 A	0-1 OFF-ON	194L-HE8G-175
N		Red/Yellow	54 x 54 mm (2-1/8 x 2-1/8 in.)	194E-16 A	0-1 OFF-ON	194E-HE4N-175
			67 x 67 mm (2-41/64 x 2-41/64 in.)	194E-25...100 A 194L-E12...40 A, -1753 194L-A12...40 A, -1753	0-1 OFF-ON	194L-HE6N-175
			88 x 88 mm (3-15/32 x 3-15/32 in.)	194E-40...100 A	0-1 OFF-ON	194L-HE8N-175
L	IP66 (UL Type 3/3R/12)	Red/Yellow	48 x 48 mm (1-57/64 x 1-57/64 in.)	194L-E12...40 A, -1753	0-1	194L-HC4L-175
					OFF-ON	194L-HC4L-175I

Bulletin 194E Open and Enclosed Switch Kits

Cat. No. Explanation

194E - Y 32 - 1753 - 6N

a b c d

a	
Code	Installation Type
A	Base/DIN mounting, open type switch
E	Front/Door mounting, open type switch
Y	Enclosed base mounting switch with handle (Uses IP66 ABS thermoplastic enclosure)

b	
Code	Load Size
16	16 A*
25	25 A
32	32 A
40	40 A
63	63 A
80	80 A
100	100 A

* For 16 A Enclosed Switch: use "16M" (3-pole enclosure has M16/20 knockouts, 6-pole 16 A enclosure has M25/32 knockouts). For 25/32 A Enclosed Switch with M20/25 metric knockouts: use "25M" or "32M".


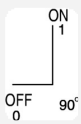
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Code	Configuration
1753	3-pole OFF/ON (90°)
1756	6-pole OFF/ON (90°)

d	
Code	Handle Style
4N	194E-HE4N-175 (use with 16 A switch)
4G	194E-HE4G-175 (use with 16 A switch)
4A	194L-HE4A-175 (use with 16...100 A switch)
6N	194L-HE6N-175 (use with 25...100 A switch)
6G	194L-HE6G-175 (use with 25...100 A switch)
6A	194L-HE6A-175 (use with 25...100 A switch)


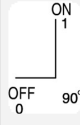
Frequently Ordered Switch Kits — OFF-ON Front- and Base-Mounted 3-Pole Switch With Cat. No. 194L-HE6N-175 Red/Yellow Handle

	Function Switching Angle	Rated Current [A]	AC23A Rated Power [kW] at 690V AC	HP @ 480V AC 60 Hz, 3Phase	Base-Mounted Cat. No.	Front-Mounted Cat. No.
		25	7.5	10	194E-A25-1753-6N	194E-E25-1753-6N
		32	11	15	194E-A32-1753-6N	194E-E32-1753-6N
		63	18.5	25	194E-A63-1753-6N	194E-E63-1753-6N

Base-Mounting Distribution Switches (handles are pre-assembled to switch)

	Function Switching Angle	No. of Circuits	Contact Target		Handle Color	Legend Plate Marking	Lockable (One Padlock)	Rated Current [A]	AC23A Rated Power [kW] at 690V AC	Hp @ 480V AC 60 Hz, 3Phase	Cat. No.
			OFF/0	ON/1							
		1 2 3	O O O	X X X	Red/Yellow	0-1	Yes	25	11	—	194E-A25-1753-R
					Black/Grey	0-1	No				194E-A25-1753-O
					Red/Yellow	0-1	Yes	32	15	—	194E-A32-1753-R
					Black/Grey	0-1	No				194E-A32-1753-O

Frequently Ordered Enclosures — 3- and 6-Pole Enclosed Switches With Cat. No. 194L-HE6N-175 Red/Yellow Operating Handles

	No. of Poles		Rated Current [A]	Handle Color	Cat. No.	
	3		16		Red/Yellow	194E-Y16-1753-4N
			25			194E-Y25-1753-6N
			32			194E-Y32-1753-6N
			40			194E-Y40-1753-6N
Uses Base-Mounted Switches	6	25	Red/Yellow	194E-Y25-1756-6N		

Bulletin 194E Enclosed Disconnect Load Switches with 194R Handles (with Defeater, suitable for 3 padlocks)

194E-FA Painted Steel Enclosure UL Type 3/4/12, IP66	194E-CA Stainless Steel Enclosure UL Type 4/4X, IP66	194E-KA Non-Metallic Enclosure UL Type 3/4/4X, IP66	194E-AA Metallic Enclosure UL Type 1, IP54	194E-GA Painted Steel Enclosure UL Type 3/4/12, IP66	194E-DA Stainless Steel Enclosure UL Type 4/4X, IP66
					

Cat. No. Explanation * ‡

194E - FA 32 E - P11 - P11 - 6

a b c d d e

a	
Code	Enclosure Type
FA	UL Type 3/4/12, IP66 painted steel, hinged, for 16...100 A switches
GA	UL Type 3/4/12, IP66 painted steel, hinged, in 6 x 6 x 4 in. size, for 16...32 A 3-pole switches §
CA	UL Type 4/4X, IP66 stainless steel, hinged, for 16...100 A switches
DA	UL Type 4/4X, IP66 stainless steel, hinged, in 6 x 6 x 4 in. size, for 16...32 A 3-pole switches §
KA	UL Type 3/4/4X, IP66 non-metallic, for 16...100 A switches
AA	UL Type 1, IP54 painted steel, hinged, for 16...100 A switches (Same enclosure as FA without gasketing)

b	
Code	Load Size
16	16 A
20	25 A
32	32 A
40	40 A
63	63 A
80	80 A
00	100 A

c	
Code	Handle Color (194R-HS __)
Blank	Grey/black
E	Red/yellow

d	
Code	Left Side + Right Side Modifications★
Blank	No Option
-P11	1 N.O. + 1 N.C. auxiliary contacts
-PL11	1 N.O. + 1 N.C.L.B. auxiliary contacts
-P22	2 N.O. + 2 N.C. auxiliary contacts
-PD10	1 N.O. E.B.Δ
-NP	Additional pole
-PE	Grounding pole
-TN	Neutral pole

e	
Code	Switch Type
Blank	3-pole switch
-6	6-pole switch♣

★ Modifications: Up to two suffix codes may be added to an enclosed disconnect load switch. See Guidelines, Accessory Configuration Guidelines. If only one accessory is chosen, it is mounted on the left side of the switch.

‡ To order the cat. no. 194E-FA40/FA63 or 194E-CA40/CA63 93-pole switches) in the larger 80/100A sized enclosure, add an X after the handle color. For example, Cat. No. 194E-FA40E becomes Cat. No. 194E-FA40EX.

§ GA and DA type enclosures: use with 3-pole 16...32 A switches only.

♣ 80 and 100 A switches are special order; allow for longer delivery time. For 25, 32, 40 and 63 A switches, add an "X" after the handle color.

Δ See the Accessory Configuration Guidelines on Accessory Configuration Guidelines.

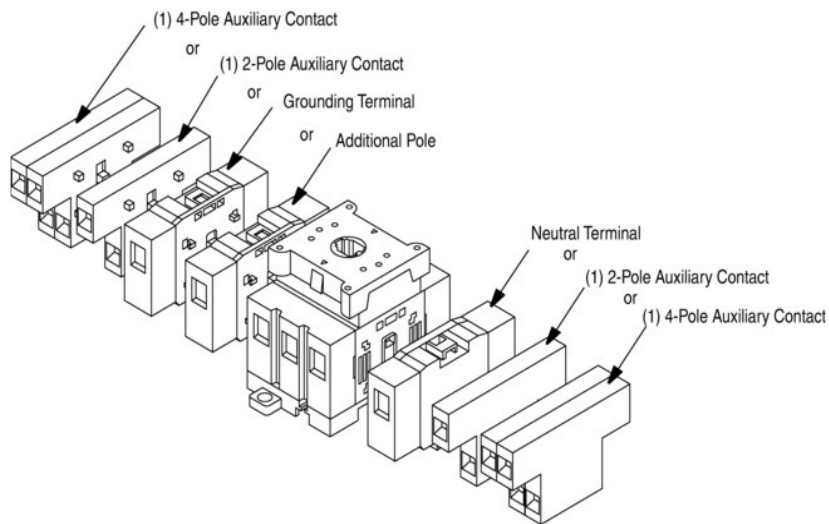
Frequently Ordered Bulletin 194E Enclosed Switches with Bulletin 194R Handle

Description	Rated Current (A)	Dimension Reference	Handle Color	Cat. No.★
Stainless steel enclosure, IP66/Type 4/4X	25	A1	Black	194E-CA20
			Red/Yellow	194E-CA20E
	32	A1	Black	194E-CA32
			Red/Yellow	194E-CA32E
	63	A1	Black	194E-CA63
			Red/Yellow	194E-CA63E
Painted steel enclosure, IP66/Type 3/4/12	25	A1	Black	194E-FA20
			Red/Yellow	194E-FA20E
	32	A1	Black	194E-FA32
			Red/Yellow	194E-FA32E
	40	A1	Black	194E-FA40
			Red/Yellow	194E-FA40E
Non-metallic enclosure, IP66/Type 4/4X	25	C1	Black	194E-KA20
			Red/Yellow	194E-KA20E

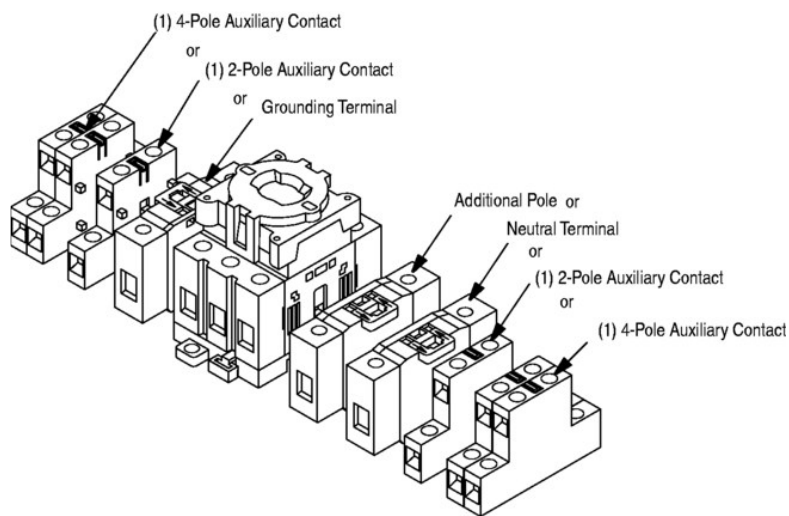
★ Modifications: Up to two suffix codes may be added to an enclosed disconnect load switch. See Guidelines, Accessory Configuration Guidelines. If only one accessory is chosen, it is mounted on the left side of the switch.

IEC Load Switch Accessories

194E-E16...100 A, Front/Door Mounting



194E-A16...100 A, Base/DIN Rail Mounting




Accessory Configuration Guidelines

Accessory drawings represent modular, snap-on features of Bulletin 194E accessories. They are not suggesting possible accessory configurations. Use the following guidelines for choosing Bul. 194E accessory configurations.

- Up to two accessories may be added to the Bulletin 194E switch body.
- For the Bul. 194E 16, 25, 32, 40, or 63 A switches, the early break auxiliary contact (-PD10) may only be used in the following configurations:
 - As a single unit on either side of the switch
 - As a single unit on a side when used with a switch + 4th pole (-NP)
 - As a single unit on a side when used with a switch + ground terminal (-PE)
 - As a single unit on a side when used with a switch + neutral terminal (-TN)
 No other auxiliary contact may be used in combinations with an early break auxiliary contact (-PD10)
- Other combinations of auxiliary contacts are permissible.
- For the Bul. 194E 80 and 100 A switches, any combination of auxiliary contacts, 4th pole, ground terminal, neutral terminal, and -PD10 is permissible.


Auxiliary Contacts	No. of Auxiliary Contacts	For Use With	Cat. No.*
	1 N.O. + 1 N.C.	194E-A16...100	194E-A-P11
		194E-E16...100	194E-E-P11
	1 N.O. + 1 N.C.L.B.	194E-A16...100	194E-A-PL11
		194E-E16...100	194E-E-PL11
	2 N.O. + 2 N.C.	194E-A16...100	194E-A-P22
		194E-E16...100	194E-E-P22
	1 N.O.E.B.	194E-A16	194E-A16-PD10
		194E-A25...100	194E-A-PD10
		194E-E16	194E-E16-PD10
		194E-E25...100	194E-E-PD10

Additional Pole, 1 N.O.	For Use With	Cat. No.★
	194E-A16	194E-A16-NP
	194E-A25	194E-A25-NP
	194E-A32	194E-A32-NP
	194E-A40	194E-A40-NP
	194E-A63	194E-A63-NP
	194E-A80	194E-A80-NP
	194E-A100	194E-A100-NP
	194E-E16	194E-E16-NP
	194E-E25	194E-E25-NP
	194E-E32	194E-E32-NP
	194E-E40	194E-E40-NP
	194E-E63	194E-E63-NP
	194E-E80	194E-E80-NP
	194E-E100	194E-E100-NP


Earthing/Grounding Terminal	For Use With	Cat. No.★
	194E-A16	194E-A16-PE
	194E-A25/32	194E-A32-PE
	194E-A40/63	194E-A63-PE
	194E-A80/100	194E-A100-PE
	194E-E16	194E-E16-PE
	194E-E25/32	194E-E32-PE
	194E-E40/63	194E-E63-PE
	194E-E80/100	194E-E100-PE

Neutral Terminal	For Use With	Cat. No.★
	194E-A16	194E-A16-TN
	194E-A25/32	194E-A32-TN
	194E-A40/63	194E-A63-TN
	194E-A80/100	194E-A100-TN
	194E-E16	194E-E16-TN
	194E-E25/32	194E-E32-TN
	194E-E40/63	194E-E63-TN
194E-E80/100	194E-E100-TN	



★ A maximum of two side-mount accessories may be added to a 194E switch (one on each side).

6-Pole Mechanical Coupling★ ‡	For Use With	Cat. No.
	194E-16	194E-G3821
	194E-25/32	194E-G3660
	194E-40/63	194E-G3661
	194E-80/100	194E-G3662

ABS Thermoplastic Enclosure – IP66, For High-Impact Applications (grounding screw included)	Description	No. of Poles	For Use With	Cat. No.
	For PG cable glands	3...4	194E-A25/32	194L-G3572
		3...4	194E-A40/63	194E-G3663
		6	194E-A25/32	
		6	194E-A40/63	194E-G3665
		3...4	194E-A80/100	
	For metric cable glands	3...4	194E-A25/32	194L-G3572M
		3...4	194E-A40/63	194E-G3663M
		6	194E-A25/32	
		6	194E-A40/63	194E-G3665M
		3...4	194E-A80/100	

Noryl Thermoplastic Enclosures – IP66, For Corrosion-Prone Applications (grounding screw included)	Description	No. of Poles	For Use With	Cat. No.
	For PG cable glands	3...4	194E-A25/32	194L-G3576
		6	194E-A25/32	194E-G3664
		3...4	194E-A40/63	
		6	194E-A40/63	194E-G3666
		3...4	194E-A80/100	
	For metric cable glands	3...4	194E-A25/32	194L-G3576M
		6	194E-A25/32	194E-G3664M
		3...4	194E-A40/63	
		6	194E-A40/63	194E-G3666M
		3...4	194E-A80/100	

Description	For Use With	Pkg. Qty.	Cat. No.
Additional Earth/Ground and Neutral Terminals – For Thermoplastic Enclosure	194L-G3663, G3664, G3665, G3666	5	194E-G3673
	194L-G3572 and G3676	5	194E-G3653

Terminal Covers	No. of Poles	For Use With	Cat. No.
	1	194E-16	194E-16-C1
	3	194E-16	194E-16-C3
		194E-25/32	194E-25-C3
		194E-40/63	194E-40-C3
		194E-80/100	194E-80-C3
	4	194E-25/32	194E-25-C4
	194E-40/63	194E-40-C4	
	194E-80/100	194E-80-C4	

* User must order (2) Bulletin 194E 3-pole switches separately.

‡ Coupling for changeover switch not available. Changeover switch must be ordered as a factory-assembled device (e.g., 194E-A25-3753).

Operating Shafts

	Length	Construction	Pkg. Qty.	Cat. No.
	34 mm (1-11/32 in.)	Plastic	5	194L-G3380
		Metal	5	194E-G3688
	44 mm (1-47/64 in.) (Standard Length)	Plastic	5	194L-G2830
		Metal		194E-G3687
	52 mm (2-3/64 in.)	Plastic	194L-G3194	
		Metal	194E-G3707	
Interlock Shaft (for base-mount switches)	57 mm (2-15/64 in.)	Plastic		194L-G3195


Bulletin 194E Load Switch Cat. No. Shaft Selection for use with 194E and 194L Thermoplastic Enclosures

Rated Current [A]	3-Pole Switches (-1753 suffix)		6-Pole Switches (-1756 suffix)		Changeover Switches (-3753 suffix)	
	194E-E...	194E-A...	194E-E...	194E-A...	194E-E...	194E-A...
16	plastic shaft (Cat. No. 194L-G3380)	plastic shaft (Cat. No. 194L-G2830)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)
25	plastic shaft (Cat. No. 194L-G3380)	plastic shaft (Cat. No. 194L-G2830)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)
32	plastic shaft (Cat. No. 194L-G3380)	plastic shaft (Cat. No. 194L-G2830)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)
40	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)
63	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194L-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)
80	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)
100	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)	metallic shaft (Cat. No. 194E-G3688)	metallic shaft (Cat. No. 194E-G3687)



Shaft Extension Kits

	Length	For Use With	Pkg. Qty.	Cat. No.
		24 mm (15/16 in.) Per Extension	194E-A...	10
Shaft Extension				

Metal Shaft Extensions — With Padlock Provision in OFF Position

	Length	For Use With	Pkg. Qty.	Cat. No.
		110...235 mm (4-21/64...9-1/4 in.) ‡	194E-A...	1
	230...350 mm (9-3/64...13-51/64 in.) ‡	194L-G3394		

Metal Shaft Adaptor Kits — For use with 194R Type 4/4X Handles

	Metal shaft adaptor kits – for use with 194R Type 4/4X handles kit includes bezel adapter and 194R-R1 operating shaft. Operating handle (Cat. No. 194R-HS4) must be ordered separately. ‡	For Use With	Pkg. Qty.	Cat. No.
		194E-A...	1	194E-G3675
	Metal Shaft Extension For modification of Cat. No. 194L-G3393/ G3394 when used with any switches other than 2-position, 90° rotation.	194E-A...	10	194L-G3399

‡ To use with Cat. No. 194L-G3399.



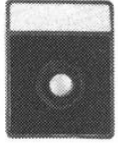
Other Accessories

194L/194E 22.5 mm Mounting Hole Style Handles (Type B, D) (For Front-Mounted Switches)

Description		Cat. No.
	22.5 mm Mounting Hole Style Handles (IP65) Handle Style: Knob Lever with Latch (For Use With 194E-E25...100 A, -1753) or 194L-E12...25 A, 194L-C32...40 A	194L-HCB-001
Type B		
	22.5 mm Mounting Hole Style Handles Key Removal Position (Includes Latch) For Use With 194L-E12...25 A, 194L-C32...40 A, 194E-E16...63 A, -1753	 194L-HCDC-001
	22.5 mm Mounting Hole Style Handles Key Removal Position (Includes Latch) For Use With 194L-E12...25 A, 194L-C32...40 A, 194E-E16...63 A, -1753	 194L-HCDD-001
	22.5 mm Mounting Hole Style Handles Key Removal Position (Includes Latch) For Use With 194L-E12...25 A, 194L-C32...40 A, 194E-E16...63 A, -1753	 194L-HCDG-001
Type D		


Accessory Description	Pkg. Qty.	Cat. No.
 Control Knob, Black, with Locking Facility (Use 1/4 in. max. hasp lock.) (Locks in 0°, 90°, 180°, and 270° positions)	10	* 194L-G2864N
Control Knob, Red, with Locking Facility (Use 1/4 in. max. hasp lock)		* 194L-G2864R

* These locking knobs can only be added to the "HE" style actuators. If a locking knob is desired on a "HC" style actuator, it has to be ordered as part of the main catalog number. For example, Cat. No. 194L-HC4E-175.

Accessory Description	Pkg. Qty.	Cat. No.	
 Control Knob, Type P Control Knob, Black, 31 mm (1-7/32 in.) Diameter	5	194L-G2888N	
Control Knobs, Type P Control Knob, Red, 31 mm (1-7/32 in.) Diameter		194L-G2888R	
 	Control Knob, Black, L = 37.5 mm (1-31/64 in.)	5	194L-G3154N
	Control Knob, Black, L = 48 mm (1-57/64 in.)		194L-G3155N
	Control Knob, Red, L = 37.5 mm (1-31/64 in.)		194L-G3154R
	Control Knob, Red, L = 48 mm (1-57/64 in.)		194L-G3155R
	Rectangular front frame with blank nameplate L = 48 x 62 mm (1-57/64 x 2-7/16 in.)	10	194L-G3196
Standard Black Control Knob	Rectangular Front Frame		194L-G3197
	Rectangular front frame with blank nameplate L = 64 x 78 mm (2-33/64 x 3-5/64 in.)		

Additional Legend Plates/Frames

	Color	Legend Size	For Use With		Legend Plate Marking	Cat. No.
	Black/Grey	19.2 mm x 49 mm (3/4 in. x 1-59/64 in.)	Size 6 Type G and N style handles, Cat. Nos. 194L-HE6G/N	5	(Blank)	194L-G3667
					MAIN SWITCH	194L-G3667A
					HAUPTSCHALTER	194L-G3667B
					INTERR. PRINCIPALE	194L-G3667C
					INTERR. PRINCIPAUX	194L-G3667D
					INTERR. PRINCIPAL	194L-G3667E
					HUVUDBRYTARE	194L-G3667F
					WAHLSCHALTER	194L-G3667G
					EMERGENCY OFF	194L-G3667H
						Black/Grey
MAIN SWITCH	194L-G3515A					
HAUPTSCHALTER	194L-G3515B					
INTERR. PRINCIPALE	194L-G3515C					
INTERR. PRINCIPAUX	194L-G3515D					
INTERR. PRINCIPAL	194L-G3515E					
HUVUDBRYTARE	194L-G3515F					
WAHLSCHALTER	194L-G3515G					
EMERGENCY OFF	194L-G3515H					

Legend Plates	Legend Plate Color	Pkg. Quantity	Legend Plate Marking *		
			0-1	OFF-ON	Blank Legend Plate
			Cat. No.	Cat. No.	Cat. No.
	Silver	10	194L-A4-175	194L-A4-175I	194L-A4-000
			194L-A6-175	194L-A6-175I	194L-A6-000
			194L-A8-175	194L-A8-175I	194L-A8-000
	Yellow		194L-I4-175	194L-I4-175I	194L-I4-000
			194L-I6-175	194L-I6-175I	194L-I6-000
			194L-I8-175	194L-I8-175I	194L-I8-000

* Custom-engraved legend plates available. To order, use publication 194L-PP002*. Custom-Engraved legend plates require a 50 pc minimum order and a 6 week lead time.

Shaft for Enclosures

Enclosure Type	Suitable For			Suitable For		
	194L (Base-Mounted Switches)	No. of Contacts	Shaft	Use with 194E Switch	No. of Poles	Shaft Required
194L-G3572	194L-A12(16)	1/2	194L-G3195	194E-A25(32)	3 and 4	194L-G3194
194L-G3576	194L-A12(16)	3/4	Standard			
	194L-A20(25)	1/2	194L-G3194			
(95 x 150 x 86 mm)	194L-A20(25)	3/4	Standard			
194L-G3573	194L-A12(16)	5/6	194L-G3195	—	—	—
194L-G3577	194L-A12(16)	7/8	194L-G3194			
	194L-A12(16)	9/10	Standard			
	194L-A20(25)	5/6	194L-G3194			
(95 x 150 x 111 mm)	194L-A20(25)	7/8	Standard			
194E-G3663	—	—	—	194E-A40(63)	3 and 4	194L-G3194
194E-G3664				194E-A25(32)	6	Standard
(125 x 180 x 105 mm)						
194E-G3665	—	—	—	194E-A80(100)	3 and 4	194E-G3707
194E-G3666				194E-A40(63)	6	Standard
(175 x 230 x 120 mm)						

Accessory Combinations in Enclosure

Enclosure Type	Switch	No. of Poles	Shaft	Aux. Contacts (single or double)	Additional Pole Block	On Switch		On Enclosure	
						Neutral Terminal Block	Ground Terminal Block	Neutral Terminal Block	Ground Terminal Block
194L-G3572 (ABS) 194L-G3576 (Noryl)	194E-A25(32)	3	194L-G3194	X	X				
				X		X			
				X			X		
					X		X		
						X	X		
				X				X	
				X					X
(95 x 150 x 86 mm)							X	X	
194E-G3663 (ABS) 194E-G3664 (Noryl)	194E-A40(63)	3	194L-G3194	X	X			X	X
				X		X		X	X
				X			X	X	X
					X		X	X	X
						X	X	X	X
					X		X	X	X
(125 x 180 x 105 mm)	194E-A25(32)	6	194E-G3707					X	X
194E-G3665 (ABS) 194E-G3666 (Noryl)	194E-A80(100)	3	194E-G3707	X	X			X	X
				X		X		X	X
				X			X	X	X
					X		X	X	X
						X	X	X	X
					X		X	X	X
(175 x 230 x 120 mm)	194E-A40(63)	6	194E-G3707	1L+1R				X	X

Electrical Ratings

Performance Data			16 A	25 A	32 A	40 A	63 A	80 A	100 A	Aux. Contacts				
IEC Applications														
Rated operational voltage (U_b): IEC*			[V]	690	690	690	690	690	690	690				
Rated operational voltage (U_b): UL, CSA			[V]	600	600	600	600	600	600	600				
Rated isolation voltage (U_i): IEC/UL, CSA			[V]	690/600	690/600	690/600	690/600	690/600	690/600	690/600				
Rated impulse voltage (U_{imp}): UL, CSA			[kV]	8	8	8	8	8	8	8				
Test voltage, (U) 1 minute			[kV]	2.5	2.5	2.5	2.5	2.5	2.5	2.5				
Lost power per pole			[W]	0.58	1.0	1.5	1.6	2.4	3.6	5.5	0.4			
Rated frequency			[Hz]	50/60	50/60	50/60	50/60	50/60	50/60	50/60				
Conventional free air thermal current I_{th} *			[A]	25	40	50	63	75	100	120	12			
Conventional enclosed thermal current I_e *			[A]	20	32	40	50	63	80	100	10			
Rated current I_e*			[A]	16	25	32	40	63	80	100	10			
AC-1/	Non-inductive or only slightly inductive loads													
AC-21A	Switching of resistive loads with slight overload													
Rated power P_e														
AC-23A	Occasional switching of 3 ϕ motors and other highly inductive loads (criterion for selecting main switches)		230V	[kW]	5.5	7.5	7.5	15	18.5	22	30	—		
			400V	[kW]	7.5	11	15	22	30	37	55	—		
			690V	[kW]	7.5	11	15	18.5	22	37	45	—		
AC-3	Squirrel-cage motors; starting and stopping of running motors		230V	[kW]	4	5.5	7.5	11	15	18.5	22	—		
			400V	[kW]	5.5	7.5	11	15	18.5	30	37	—		
			690V	[kW]	5.5	7.5	11	15	18.5	30	22	—		
Short circuit current (co-ordination type 2) Rated conditional short-circuit current Maximum fuse rating of circuit (type g,G) Rated short-time current I_{Cw} (1 s)			400/415V	[kA]	20	20	15	20	15	30	25	—		
				[A]	20	25	35	50	63	80	100	—		
				[A]	800	900	900	1300	1300	2500	2500	—		
Rated breaking capacity AC23A (cosϕ 0.45)			230V	[A]	156	296	296	484	484	780	780	—		
			400V	[A]	120	256	256	504	504	800	800	—		
			690V	[A]	70	136	136	196	196	376	376	—		
DC switching capacity		1 pole												
Rated current I_e			24/48V	[A]	20	25	32	40	63	80	100	—		
			110V	[A]	5	5	6	8	10	16	20			
			220V	[A]	1	1	1	1.5	1.5	3	3			
			440V	[A]	0.5	0.5	0.5	0.6	0.6	0.7	0.7			
DC-21A	For resistive loads, $T \leq 1$ ms U_b max = 660V		2 poles in series		96V	[A]	20	25	32	40	63	80	100	—
					110V	[A]	20	23	25	32	50	70	80	
					220V	[A]	5	5	6	8	10	16	20	
					440V	[A]	1	1	1	1.5	1.5	3	3	
			3 poles in series		110V	[A]	20	25	32	40	63	80	100	—
					220V	[A]	13	13	15	20	28	50	63	
					440V	[A]	2.2	2.2	2.2	3.6	3.6	6.5	6.5	
					600V	[A]	1.3	1.5	1.5	2	2	3	3	
Rated power P_e			3 poles in series								—			
DC-23A, DC-3, DC-5			90V	[kW]	1	1.3	1.5	2.9	4.1	5.1	7.2			
For inductive loads, $T \leq 15$ ms			110V	[kW]	1	1.1	1.3	2.2	3.3	5.5	7			
			220V	[kW]	0.8	0.9	1.1	1.7	2	3.5	4.4			
			440V	[kW]	0.6	0.6	0.6	0.9	0.9	1.1	1.1			
			600V	[kW]	0.4	0.4	0.4	0.5	0.5	0.9	0.9			

* See standards compliance listed on Standards Compliance.

Electrical Ratings, Continued

Performance Data			16 A	25 A	32 A	40 A	63 A	80 A	100 A	Aux. Contacts
UL/CSA Applications										
Continuous current		[A]	16	25	32	40	63	80	100	—
Heavy Pilot Duty		[AC]	A600	A600	A600	—	—	—	—	A600
Standard Duty		[DC]	—	—	—	—	—	—	—	Q600
Motor rating 60 Hz Single-phase (2 poles)	120V, 1P	[FLA]	16	16	16	24	34	56	80	—
		[Hp]	1	1	1	2	3	5	7.5	
	240V, 1P	[FLA]	12	12	17	17	28	50	68	
		[Hp]	2	2	3	3	5	10	15	
	480V, 1P	[FLA]	8.5	8.5	14	21	26	34	68	
		[Hp]	3	3	5	7.5	10	15	30	
	600V, 1P	[FLA]	11.2	11.2	11.2	16	20	27	44	
		[Hp]	5	5	5	7.5	10	15	25	
Three-phase	120V, 3P	[FLA]	13.6	13.6	19.2	30.4	40	56	84	—
		[Hp]	2	2	3	5	7.5	10	15	
	240V, 3P	[FLA]	9.6	15.2	22	28	42	68	80	
		[Hp]	3	5	7.5	10	15	25	30	
	480V, 3P	[FLA]	11	14	21	27	34	52	65	
		[Hp]	7.5	10	15	20	25	40	50	
	600V, 3P	[FLA]	11	11	17	22	27	52	52	
		[Hp]	10	10	15	20	25	50	50	

Mechanical Data

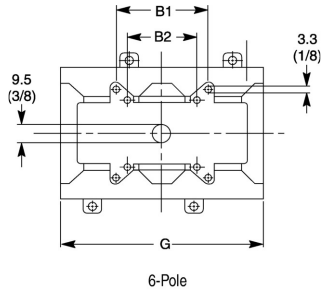
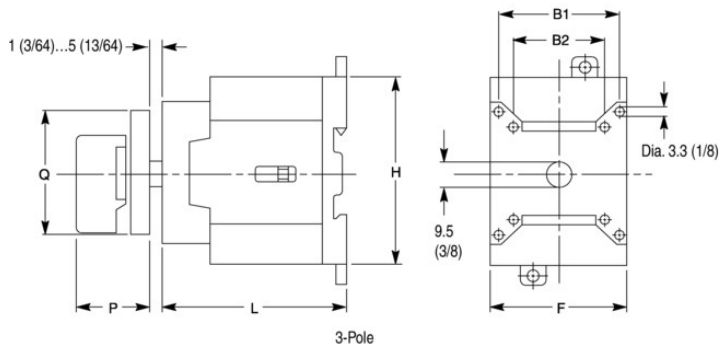
Performance Data			16 A	25...32 A	40...63 A	80...100 A	Aux. Contacts
Protection class according to IEC 529							
Motor rating 60 Hz							
handles			IP66	IP66	IP66	IP66	IP66
switch bodies			IP20	IP20	IP20	IP20	IP20
Mechanical life		[million operations]	0.2	0.2	0.2	0.2	0.2
Max wire gauges							
Terminal size per IEC 947-1			A4	A6	A7	A9	2xA2
rigid wire	1/2 conductor	[AWG]	(1)16...10/(2)16...12	(1)14...8/(2)14...10	(1)12...4/(2)12...8	(1)10...1/(2)10...4	18...14 0.75...2.5
		[mm ²]	(1)1...10/(2)1...4	(1)1.5...16/(2)1.5...6	(1)2.5...25/(2)2.5...16	(1)4...50/(2)4...25	
fine strands	1/2 conductor	[AWG]	(1)16...8/(2)16...12	(1)14...8/(2)14...10	(1)12...4/(2)12...8	(1)10...1/(2)10...6	18...14 0.5...2.5
		[mm ²]	(1)1.5...6/(2)1.5...4	(1)1.5...10/(2)1...6	(1)2.5...16/(2)2.5...10	(1)4...35/(2)4...16	
Tightening torque		[N•m]/[lb•in]	1.4/12.2	1.4/12.2	2.8/24.5	5.6/50	1/8.8

Environmental Data

Storage	-40...+80 °C (-40...+176 °F)
Operation	-25...+60 °C (-13...+140 °F)

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

Front Installation Cat. No. 194E-E...



Handles

Cat. No.	P	Q
194L-HE4A	28 (1-7/64)	48 x 48 (1-57/64 x 1-57/64)
194L-HE4I	28 (1-7/64)	48 x 48 (1-57/64 x 1-57/64)
194L-HE4S	28 (1-7/64)	48 x 62 (1-57/64 x 2-7/16)
194E-HE4N	34 (1-11/32)	54 x 54 (2-1/8 x 2-1/8)
194E-HE4G	34 (1-11/32)	54 x 54 (2-1/8 x 2-1/8)
194L-HE6A	28 (1-7/64)	64 x 64 (2-33/64 x 3-5/64)
194L-HE6I	28 (1-7/64)	64 x 64 (2-33/64 x 3-5/64)
194L-HE6S	28 (1-7/64)	64 x 78 (2-33/64 x 3-5/64)
194L-HE6N	34 (1-11/32)	67 x 67 (2-41/64 x 2-41/64)
194L-HE6G	34 (1-11/32)	67 x 67 (2-41/64 x 2-41/64)

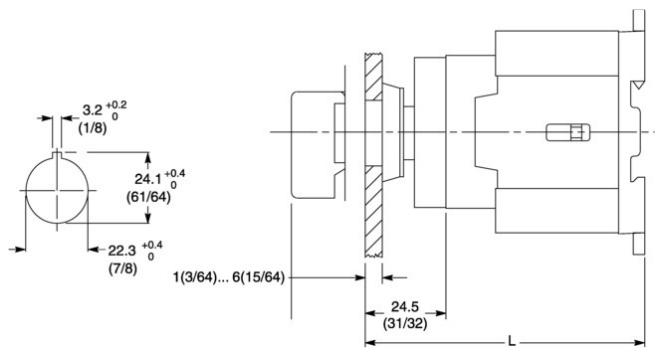
Switch Body

Use with Cat. No.	B1*	B2	F	H	L ‡	G
194E-E16	28 (1-7/64)	N/A	36 (1-37/64)	63 (2-31/64)	51 (2)	90 (3-35/64)
194E-E25/32	36 (1-27/64)	N/A	45 (1-25/32)	64 (2-33/64)	60 (2-3/8)	90 (3-1/2)
194E-E40/63	48 (1-57/64)	36 (1-27/64)	54 (2-1/8)	72 (2-27/32)	74 (2-29/32)	108 (4-1/4)
194E-E80/100	48 (1-57/64)	36 (1-27/64)	72 (2-27/32)	90 (3-35/64)	90 (3-35/64)	144 (5-11/16)

* Does not apply to 194E-40/63A, 6-Pole Switches. Use B2 dimensions for 6-pole devices.

‡ For 6-pole switches, add 1 in. to the "L" dimension.

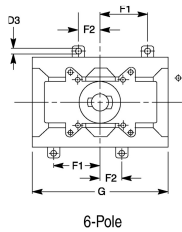
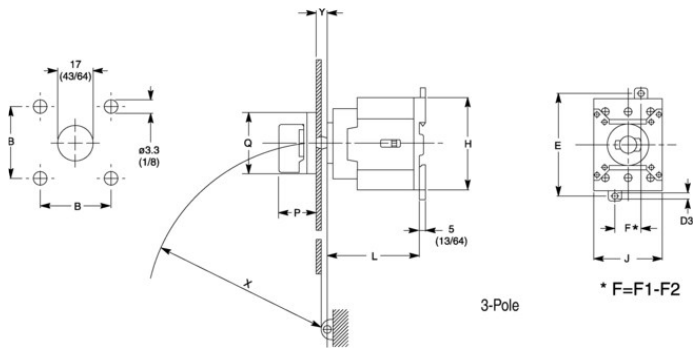
Cat. No. 194E-E Switch Body with Cat. No. 194L-HC4A Handle for 22.5 mm Hole Mounting Style



Type	L
194E-E16	76 (3)
194E-E25/32	84.5 (3-21/64)
194E-E40/63	98.5 (3-7/8)
194E-E80/100	114.5 (4-33/64)

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

Base Mounting Cat. No. 194E-A...



Handles		
Cat. No.	P	Q
194L-HE4A	28 (1-7/64)	48 x 48 (1-57/64 x 1-57/64)
194L-HE4I	28 (1-7/64)	48 x 48 (1-57/64 x 1-57/64)
194L-HE4S	28 (1-7/64)	48 x 62 (1-57/64 x 2-7/16)
194E-HE4N	34 (1-11/32)	54 x 54 (2-1/8 x 2-1/8)
194E-HE4G	34 (1-11/32)	54 x 54 (2-1/8 x 2-1/8)
194L-HE6A	28 (1-7/64)	64 x 64 (2-33/64 x 3-5/64)
194L-HE6I	28 (1-7/64)	64 x 64 (2-33/64 x 3-5/64)
194L-HE6S	28 (1-7/64)	64 x 78 (2-33/64 x 3-5/64)
194L-HE6N	34 (1-11/32)	67 x 67 (2-41/64 x 2-41/64)
194L-HE6G	34 (1-11/32)	67 x 67 (2-41/64 x 2-41/64)

Cover Requirements

For Use With	Y min.	X ≥	Y max.	X ≥
194E-A16	5 (13/64)	142 (5-19/32)	9.5 (3/8)	90 (3-35/64)
194E-A25/32	5 (13/64)	142 (5-19/32)	9.5 (3/8)	90 (3-35/64)
194E-A40/63	2.5 (7/64)	150 (5-29/32)	9.5 (3/8)	90 (3-35/64)
194E-A80/100	2.5 (7/64)	150 (5-29/32)	9.5 (3/8)	90 (3-35/64)

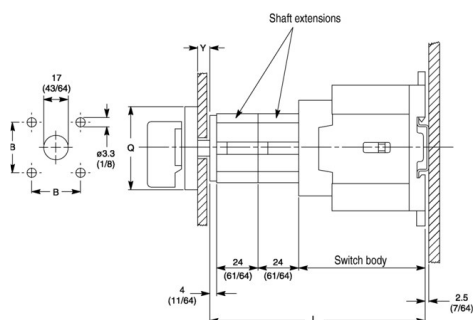
Switch Body

Use With Cat. No.	D3	E	F1	F2	G	H	L‡	J
194E-A16	4.5 (3/16)	70 (2-49/64)	45 (1-25/32)	12.5 (31/64)	90 (3-35/64)	63 (2-31/64)	80 (3-5/32)	36 (1-27/64)
194E-A25/32	4.5 (3/16)	70 (2-49/64)	30 (1-3/16)	15 (19/32)	90 (3-1/2)	64 (2-33/64)	59 (2-5/16)	45 (1-25/32)
194E-A40/63	4.5 (3/16)	80 (3-5/32)	37 (1-15/32)	17 (43/64)	108 (4-1/4)	72 (2-27/32)	73 (2-55/64)	54 (2-1/8)
194E-A80/100	5.6 (7/32)	95 (3-3/4)	48.5 (1-29/32)	23.5 (59/64)	144 (5-11/16)	90 (3-35/64)	89 (3-1/2)	72 (2-27/32)

‡ For 6-pole switches, add 1 in. to the "L" dimension.

Base Mounting Cat. No. 194E-A...

Cat. No. 194E-A... Switch Body with Cat. No. 194L-G2853 Shaft Extension



Switch Body

L ★	Cat. No.			
	194E-A 16	194E-A 25/32	194E-A 40/63	194E-A 80/100
With 1 shaft extension	79 (3-7/64)	88 (3-15/32)	102 (4-1/32)	118 (4-21/32)
With 2 shaft extensions	103 (4-37/64)	112 (4-27/64)	126 (4-31/32)	142 (5-19/32)
With 3 shaft extensions	127 (5)	136 (5-23/64)	150 (5-29/32)	166 (6-35/64)
With 4 shaft extensions	151 (6-61/64)	160 (6-5/16)	174 (6-55/64)	190 (7-31/64)
With 5 shaft extensions	175 (7-57/64)	184 (7-1/4)	198 (7-51/64)	214 (8-7/16)
With 6 shaft extensions	199 (8-27/32)	208 (8-13/64)	222 (8-3/4)	238 (9-3/8)

★ For 6-pole switches, add 1 in. to the "L" dimension.

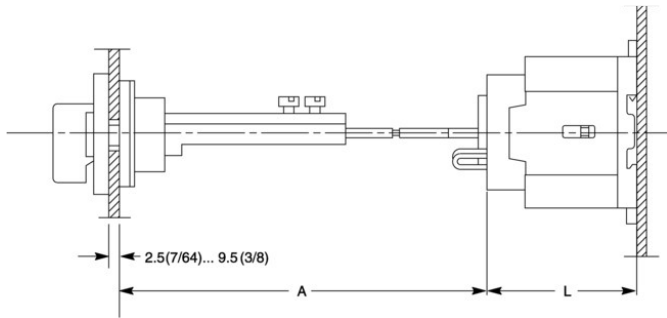
Shaft	Y
194L-G2830	2.5...9.5 (7/64...3/8)
194L-G3194	9...18 (23/64...23/32)
194L-G3195	14...23 (9/16)...(29/32)

Handles			
Type	B	Q	P
194L-HE4A	36 (1-27/64)	48 x 48 (1-57/64 x 1-57/64)	28 (1-7/64)
194L-HE4I	36 (1-27/64)	48 x 48 (1-57/64 x 1-57/64)	28 (1-7/64)
194E-HE4G	28 (1-7/64)	54 x 54 (2-1/8 x 2-1/8)	34 (1-11/32)
194E-HE4N	28 (1-7/64)	54 x 54 (2-1/8 x 2-1/8)	34 (1-11/32)
194L-HE6A	48 (1-57/64)	64 x 64 (2-33/64 x 2-33/64)	28 (1-7/64)
194L-HE6I	48 (1-57/64)	64 x 64 (2-33/64 x 2-33/64)	28 (1-7/64)
194L-HE6N	48 (1-57/64)	67 x 67 (2-41/64 x 2-41/64)	34 (1-11/32)
194L-HE6G	48 (1-57/64)	67 x 67 (2-41/64 x 2-41/64)	34 (1-11/32)

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

Base Installation Cat. No. 194E-A...

Cat. No. 194E-A Switch Body with Metal Shaft Extension



Cat. No.	A
194L-G3393	110...235 (4-11/32...9-1/4)
194L-G3394	230...350 (9-1/16...13-25/32)

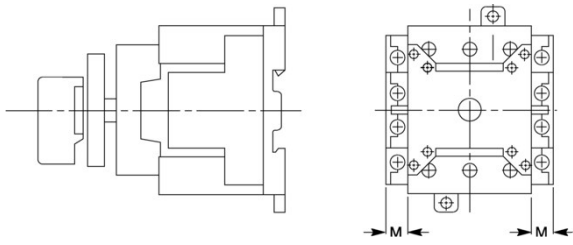
Cat. No.	L★
194E-A16	51 (2)
194E-A25/32	60 (2-3/8)
194E-A40/63	74 (2-59/64)
194E-A80/100	90 (3-35/64)

★ For 6-pole switches, add 1 in. to the "L" dimension.

Base and Front Installation

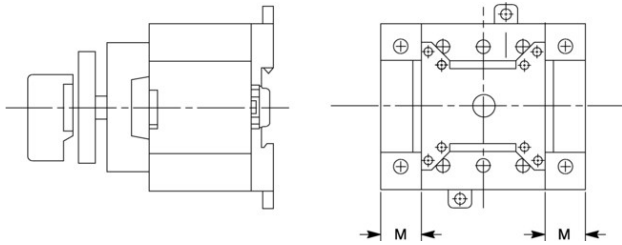
Cat. No. 194E... with Auxiliary Contact Block Installed

Contacts	M
1 N.O. + 1 N.C.	9 (23/64)
2 N.O. + 2 N.C.	18 (23/32)



Cat. No. 194E... with 4-Pole, Ground and Neutral Terminals

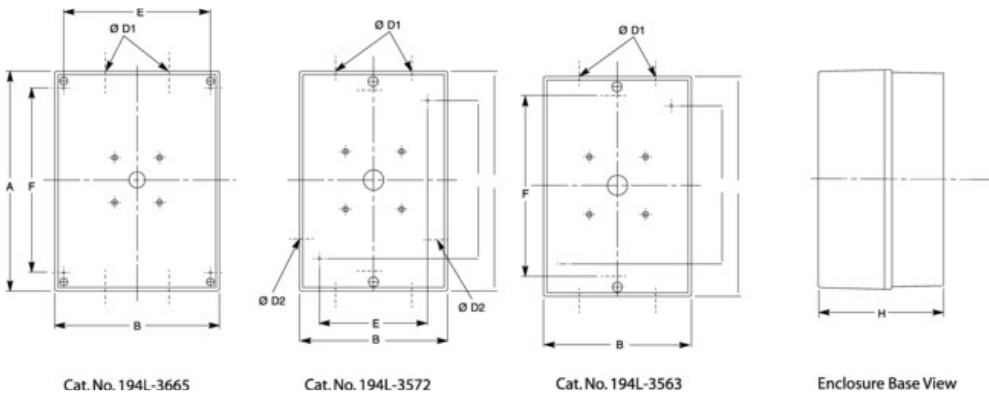
Cat. No.	M
194E-16	12.5 (31/64)
194E-25/32	14 (9/16)
194E-40/63	17.5 (11/16)
194E-80/100	22 (7/8)



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

Base Mounting Cat. No. 194E-A...

Thermoplastic Enclosures



Cat. No. 194L-3665

Cat. No. 194L-3572

Cat. No. 194L-3563

Enclosure Base View

Complete Switches		Enclosures		Height A	Width B	Knockouts‡		Mounting Holes§		Depth H
Cat. No.	Poles	ABS Cat. No.	Noryl			ØD1		E	F	
194E-Y16	3 and 4	*	*	120 (4-23/32)	70 (2-3/4)	M16/M20 16/20 mm	PG11/PG16 18.5/22.5 mm	50 (1-31/32)	105 (4-9/64)	70 (2-49/65)
	6	194E-G3663	194E-G3664	180 (7-3/32)	125 (4-59/64)	M25/M30 25/30 mm	PG21/PG29 28.5/37.5 mm	On Center	145 (5-23/32)	105 (4-1/8)
194E-Y25/32	3 and 4	194L-G3572	194L-G3576	150 (5-29/32)	95 (3-3/4)	PG16/PG21 22.5/28.5 mm		60 (2-3/8)	115 (4-17/32)	86 (3-3/8)
	6	194E-G3663	194E-G3664	180 (7-3/32)	125 (4-59/64)	PG21/PG29 28.5/37.5 mm		On Center	145 (5-23/32)	105 (4-1/8)
194E-Y40/63	3 and 4	194E-G3663	194E-G3664	180 (7-3/32)	125 (4-59/64)	PG21/PG29 28.5/37.5 mm		On Center	145 (5-23/32)	105 (4-1/8)
	6	194E-G3665	194E-G3666	230 (9-1/16)	175 (6-57/64)	PG29/PG36 37.5/47.5 mm		155 (6-3/32)	195 (7-43/64)	120 (4-47/64)
194E-Y80/100	3 and 4	194E-G3665	194E-G3666	230 (9-1/16)	175 (6-57/64)	PG29/PG36 37.5/47.5 mm		155 (6-3/32)	195 (7-43/64)	120 (4-47/64)

* Empty enclosures not available for purchase.

‡ Cat. No. 194E-A16 units have 1 knockout on each end. all others have 2 knockouts on each end. A letter "M" in the catalog number indicates metric knockouts; the unit is otherwise supplied with PG knockouts.

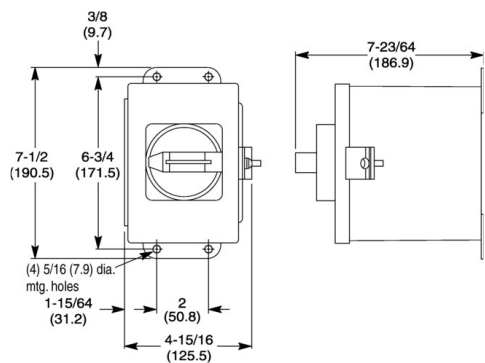
§ All mounting holes have a 4.2 mm (5/32 in.) diameter.

No. of Extensions	Cat. No. 194E-A 20/32...	Cat. No. 194E-A 40/63...	Cat. No. 194E-A 80/00...
With 1 extension	96 (3-25/32)	107 (4-7/32)	114 (4-31/64)
With 2 extensions	120 (4-23/32)	131 (5-5/32)	138 (5-7/16)
With 3 extensions	144 (5-43/64)	155 (6-7/64)	162 (6-3/8)
With 4♣ extensions	168 (6-39/64)	179 (7-3/64)	186 (7-21/64)
With 5♣ extensions	192 (7-9/16)	203 (8)	210 (8-17/64)
With 6♣ extensions	216 (8-1/2)	227 (8-15/16)	234 (9-7/32)

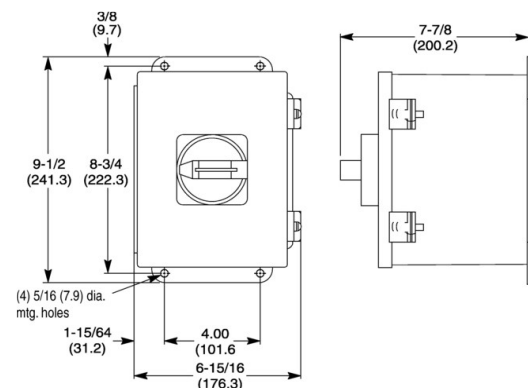
♣ When more than four modules are used, attach the first one to the switch body using the screws supplied with the extension (Cat. No. 194L-G2853).

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

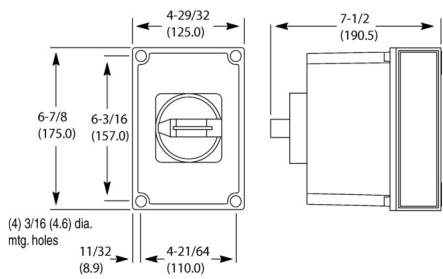
194E Enclosed Switches with 194R Handles



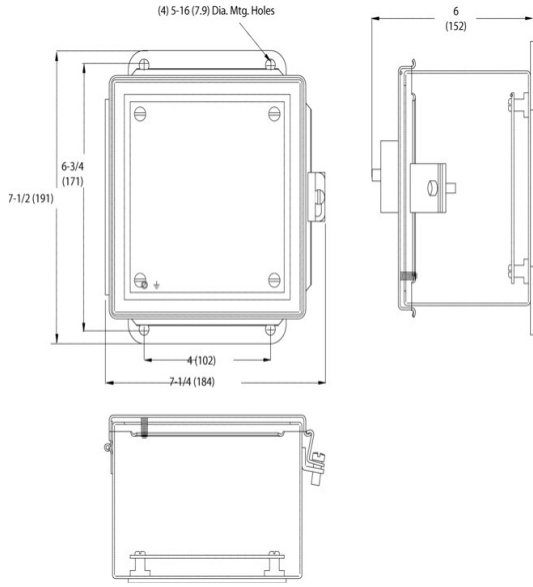
Cat. Nos. 194E-CA16...63, 194E-FA16...63, 194E-AA16...63



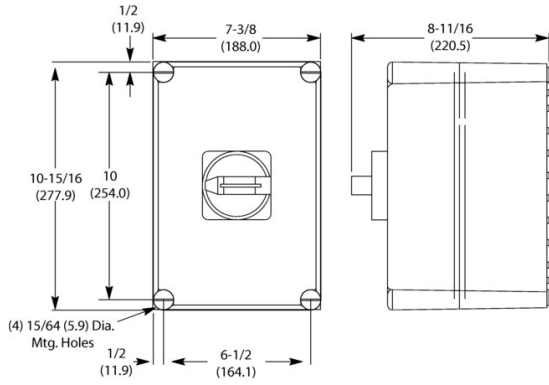
Cat. Nos. 194E-CA80...00, 194E-FA80...00, 194E-AA80...00
Cat. Nos. 194E-CA40X...63X, 194E-FA40X...63X, 194E-AA40X...63X



Cat. No. 194E-KA16...63



Cat. No. 194E-DA16...32, 194E-GA16...32



Cat. No. 194E-KA80...00