

# Universal Visible-blade Disconnect Switches Specifications

Bulletin Numbers 1494U, 1494V

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This document provides selection and specification information for the Bulletin 1494U and Bulletin 1494V universal visible-blade disconnect switches. Universal visible-blade disconnect switches can be user- or factory-assembled. These disconnect switches provide visual indication of the ON or OFF status of the knife-blade disconnect design. You can choose from fusible or non-fusible versions. These disconnect switches also allow for either rod or cable operation.

## Components Product Selection

Use the components product selection tables for user-assembled devices.

### Disconnect Switches

Continuous Current Rating [A] 600V AC 250/600V DC	Maximum Hp - UL and CSA Applications									Maximum kW - IEC Applications (Category AC 23)			Switch with Right-hand Mechanism Cat. No.
	3-Phase, 60 Hz					1 Phase, AC		DC <sup>(1)</sup>		3-Phase, 50 Hz			
	115V	200...208V	230V	460V	575V	115V	230V	250V	600V	220...240V	380...440V	500...600V	
30	3	7.5	7.5	15	20	2	3	—	15	5.5	11	15	1494U-D30 <sup>(2)</sup>
60	7.5	15	15	30	50	3	10	—	30	11	22	37	1494U-D60 <sup>(2)</sup>
100	—	25	30	60	75	—	—	—	50	22	45	55	1494U-D100 <sup>(2)</sup>
200	—	50...60	60	125	150	—	—	—	40	48	90	110	1494U-D200
400	—	75	125	250	350	—	—	50	—	90	185	257	1494U-D400
600	—	150	200	400	500	—	—	50	—	150	295	375	1494V-DS600

(1) Ratings are based on two poles in series to break one line of the DC supply voltage and the remaining pole to break the second DC supply line.

(2) Aluminum lugs are installed on the line side of each disconnect switch. Additional aluminum lugs are included with each disconnect switch that are to be field-installed on the load side of the switch or on the fuse block.

### Connecting Rods

Approximate dimensions are not intended for manufacturing purposes.

Disconnect Switch Size [A]	Enclosure Working Depth [in. (mm)] <sup>(1)</sup>		Cat. No.
	Minimum	Maximum	
30, 60, 100	6-3/4 (172)	19 (483)	1494U-R1
200	6-3/4 (172)	9-1/8 (232)	1494V-RA3
	9-1/8 (232)	21-5/8 (585)	1494V-RA4
400, 600	9-1/2 (241)	10 (254)	1494V-RB3 <sup>(2)</sup>
	9-1/2 (241)	23 (584)	1494V-RB4 <sup>(2)</sup>

(1) Enclosure depth is measured from the top of the flange to the disconnect switch mounting surface.

(2) Kit includes two connecting rods.

### Operating Handles

Handle Type	Description	Mounting	Disconnect Switch Size [A]	Cat. No.
Type 1, 3R, 4, 4X, 12	Nonmetallic	Right or Left Flange	30, 60, 100	1494U-HP1
Type 1, 3R, 4, 12	Painted Metal			1494U-HM1
Type 4, 4X	Stainless Steel			1494U-HS1
Type 1, 3R, 4, 4X, 12	Nonmetallic		200	1494F-P1
Type 1, 3R, 4, 12	Painted Metal		200	1494F-M1
			400, 600	1494F-M2
Type 4, 4X	Stainless Steel		200	1494F-S1
			400, 600	1494F-S2

## Trailer Fuse Block Kits

Disconnect Switch Size [A]	Fuse	Cat. No.
30	see <a href="#">Fuse Clip Kits</a>	1494U-F30
60		1494U-F60
100		1494U-F100
200		1494U-F200
400		1494U-F400
600	Class J	1494V-F5600
	Class H	1491-N621 <sup>(1)</sup>
	Class R	1491-R621 <sup>(1)</sup>

(1) Three fuse kits are required per application.

## Cable Mechanism

Disconnect Switch Size [A]	Cable Length [ft (m)]	Right-hand Cable Mechanism Cat. No.
30, 60, 100	3 (0.91)	1494U-C313
	4 (1.22)	1494U-C314
	5 (1.52)	1494U-C315
	6 (1.83)	1494U-C316
200	4 (1.22)	1494U-C24
	5 (1.52)	1494U-C25
	6 (1.83)	1494U-C26
400	4 (1.22)	1494U-C44
	5 (1.52)	1494U-C45
	6 (1.83)	1494U-C46
600	4 (1.22)	1494U-C64
	5 (1.52)	1494U-C65
	6 (1.83)	1494U-C66

## Fuse Clip Kits

Fuse Class	Fuse Clip Rating [A]		Cat. No.
	250V	600V	
H, J	30	—	1494U-FC30J
	60	30	1494U-FC30J
	—	60	1494U-FC60J
	100	100	1494U-FC100J
R	30	—	1494U-FC302R
	60	30	1494U-FC30R
	—	60	1494U-FC60R
	100	100	1494U-FC100R
H, J	200	200	1401-N45
	400	400	1401-N46
J <sup>(1)</sup>	200	200	—
	400	400	—
	600	600	—
R	200	200	1401-N54
	400	400	1401-N55
H, R <sup>(2)</sup>	600	600	—

(1) Fuse clips are not required when bolted to a terminal.

(2) Included with Bulletin 1491 separately mounted fuse blocks.

## Accessories Product Selection

Optional accessories are available for all universal disconnect sizes.

### Auxiliary Contacts

Disconnect Switch Size [A]	Description	Cat. No.
30...200	1 N.O., 10 A rated, A600, Q600, standard contact	1494U-N0
	1 N.C., 10 A rated, A600, Q600, standard contact	1494U-NC
	1 N.O. low voltage, 2.5 A rated, C300, R150, QuadConnect™ contact	1494U-NOLV
	1 N.C. low voltage, 2.5 A rated, C300, R150, QuadConnect contact	1494U-NCLV
30...100	Electrical Interlock: 2 N.O., 10 A rated, 250V AC/DC	1494U-AE
400	1 N.O. and 1 N.C., early break, <b>right</b> -hand mechanism	1495-N43
600		1495-N34 <sup>(1)</sup>
200	2 N.O. and 2 N.C., early break, standard contact	1494U-AE200
400	2 N.O. and 2 N.C., early break, <b>right</b> -hand mechanism	1495-N44
600		1495-N35 <sup>(1)</sup>

(1) Additional adapter kit Cat. No. 1495-N36 is required for installation.

### Protective Covers

Disconnect Switch Size [A]	Fuse Class	Fuse Cover Cat. No.
30, 60, 100	Non-fusible	1494U-PC1
30	H, J	
30	R	
30	H, J	
60	H, J	
100	H, J	1494U-PC2
30	R	
60	R	
100	R	
200	H, J, R	1494U-PC200
400	H, J, R	1494U-PC400
600	Non-fusible	1495-N61
600	J	
600	H, J, R	1495-N69

### Adapters

Disconnect Switch Size [A]	Description	Cat. No.
30...100	Line Terminal Adapter (2 per package) - Terminals are connected to L1 and L2 to provide power even when the switch is de-energized. Wire Size: #14...8 AWG, copper	1494U-ALT31
	Cross Bar Adapter - The adapter attaches to the 1494U switch so that it can retrofit in existing 1494V and 1494C switch installations.	1494U-AC
200	Line Terminal Adapter (2 per package)	1494U-ALT200
400	Line Terminal Adapter (2 per package)	1494R-N19
600	Line Terminal Adapter (2 per package)	1494U-ALT600

### Lug Connectors (3 per package)

Disconnect Switch Size [A]	Description	Wire Size	Cat. No.
30...60	Aluminum	(2) #14...10 AWG, copper (2) #12...10 AWG, aluminum (1) #14...2 AWG, copper-aluminum	1494U-LA36
	Copper	(1) #14...4 AWG, copper (2) #14...8 AWG, copper (4) #16 AWG, copper	1494U-LC36
30...100	Aluminum, 6 ports	(1) #14...4 AWG, copper (1) #12...4 AWG, aluminum (2) #10 AWG, copper-aluminum	1494U-LM31
100	Aluminum	(1) #14...1/0 AWG, copper (1) #12...1/0 AWG, aluminum (2) #12...4 AWG, copper-aluminum	1494U-LA100
	Copper	(1) #8...1/0 AWG, copper	1494U-LC100
200	Aluminum	#6...250 MCM AWG	1494U-LA200
	Copper	#6...250 MCM AWG	1494U-LC200
	Aluminum, 6 ports	(1) #14...4 AWG, copper (1) #12...4 AWG, aluminum (2) #10 AWG, copper-aluminum	1494U-LM200
400	Aluminum	(2) #6...300 MCM AWG	1494U-LA400
	Copper	(2) 1/0...250 MCM AWG	1494R-N14
	Aluminum, 12 ports	(1) #14...4 AWG, copper (1) #12...4 AWG, aluminum (2) #10 AWG, copper-aluminum	1494U-LM400
600	Aluminum	(2) 1/0...500 MCM AWG	1494U-LA600
	Copper	(2) 1/0...350 MCM AWG	1494R-N10
		(2) 1/0...350 MCM AWG	1494R-N11 <sup>(1)</sup>
	Aluminum, 12 ports	(1) #14...4 AWG, copper (1) #12...4 AWG, aluminum (2) #10 AWG, copper-aluminum	1494U-LM600

(1) For use with Cat. No. 1491-N621 or 1491-R621 fuse blocks.

## Replacement Parts Product Selection

Description	Cat. No.
Hardware Kit for 30...100 A Disconnect Switches- The kit includes (4) mounting screws and (1) line-side shield.	1494U-K31
Hardware Kit for 30...100 A Fuse Blocks- The kit includes (2) mounting screws and (2) phase barriers.	1494U-PB31
200 A Phase Barrier	1494U-PB200

## Kits Product Selection

Use the kits product selection tables for factory-assembled devices.

## Catalog Number Explanation

Examples that are given in this section are not intended to be used for product selection.

$\frac{1494U}{a} - \frac{R}{b} \frac{30}{c} - \frac{C3}{d}$

a	
Bulletin Number	
Code	Description
1494U	Disconnect switch, rod, or cable operated <sup>(1)</sup>

b	
Fusing	
Code	Description
N	Non-fusible
J	Class J clips
R	Class R clips

c	
Switch Rating	
Code	Description
30	30 A
60	60 A
100	100 A
200	200 A
400	400 A
600	600 A

d	
Protection Type	
Code	Description
CR	Threaded rod
C3	Cable length — 3 ft (0.91 m)
C4	Cable length — 4 ft (1.2 m)
C5	Cable length — 5 ft (1.5 m)
C6	Cable length — 6 ft (1.8 m)
HJ	H/J fuse clip
LA	Lugs — Aluminum
LC	Lugs — Copper
M	Painted metal handle
N	Non-metallic handle
NC	(1) N.O. auxiliary contact — 10 A
NO	(1) N.C. auxiliary contact — 10 A
PC	Protective cover — for line and load
S	Stainless steel handle

(1) Aluminum lug/line kits are provided with each disconnect switch, sizes 30...100 only.

## Specifications

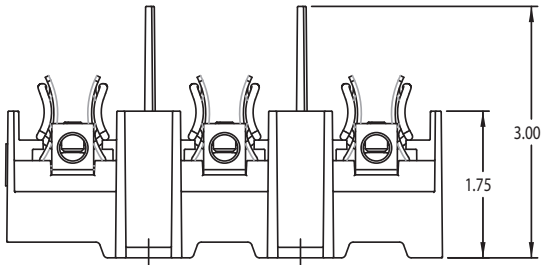
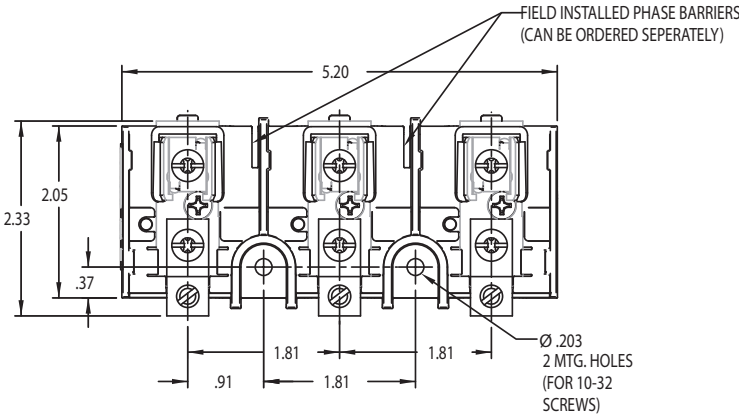
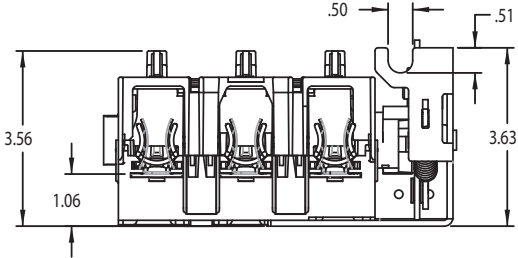
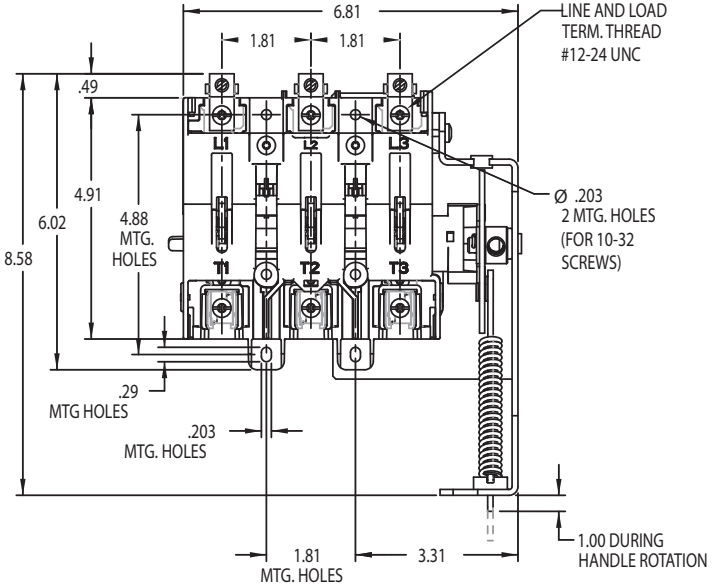
Auxiliary Contact Electrical Ratings							
Standard Contact 1 N.O. or 1 N.C.	NEMA/EEMAC	A600 <sup>(1)</sup> , Q600					
	IEC	AC 15, DC 13 to IEC/EN60947-5-1 and UL 508, 17V, 5 mA minimum					
Low-Level Contact 1 N.O. or 1 N.C.	NEMA/EEMAC	C300, R150					
	IEC	AC 15, DC 13 to IEC/EN60947-5-1 and UL 508, 5V, 1 mA minimum					
Electrical Interlock Ratings							
Standard Contact 2 N.O.	NEMA/EEMAC	10 A: 250V AC, 0.3 A: 250V DC					
Mechanical							
Degree of Protection	Operating handles	Non-metallic Type 1, 3R, 4, 4X, 12 Painted Type 1, 3R, 4, 12 Stainless steel Type 4, 4X					
Switch Size		30 A	60 A	100 A	200 A	400 A	600 A
Mechanical Life (typical operations)		10 000			8000	6000	5000
Switching Frequency (operations/min), maximum		6			5	4	3
Environmental							
Ambient Temperature	Open	-20...+60 °C (-4...+140 °F)					
	Enclosed	-20...+40 °C (-4...+104 °F)					
	Storage	-40...+65 °C (-40...+149 °F)					
Altitude (per IEC 947-1)		2000 m (6562 ft)					
Relative Humidity (per IEC 947-1)		90% at 20 °C (68 °F) and 50% at 40 °C (104 °F)					
Design Specification/Test Requirements							
Dielectric Strength		2200V for 1 minute					
Short-circuit Withstand Capability		10 000 A, 600V AC/DC: unfused or with Class H fuses 10 000 A, 600V DC: with Class J or Class R fuses 200 000 A, 600V AC: with Class J or Class R fuses					
Construction							
Switch Body Material		Glass-filled thermoplastic			Glass-filled thermoset plastic		
Switch Size		30 A	60 A	100 A	200 A	400 A	600 A
Conductor Size		#14...8 AWG (1.5...10 mm <sup>2</sup> )	#14...4 AWG (2.5...16 mm <sup>2</sup> )	#8...1/0 AWG (10...50 mm <sup>2</sup> )	#6...4/0 AWG (16...95 mm <sup>2</sup> )	2 of #1/0 AWG...250 MCM (2 per lug), 2 of 185 mm <sup>2</sup> ...250 MCM, or 1 of #4 AWG...500 MCM	2 of #1/0 AWG...350 MCM (2 per lug), 2 of 185 mm <sup>2</sup> ...350 MCM, or 1 of #4 AWG...500 MCM
Recommended Torque		Switch side Lug to terminal	45 lb•in 20 lb•in	45 lb•in 50 lb•in	150 lb•in 90 lb•in	275 lb•in 175 lb•in	275 lb•in 275 lb•in
Switches, Mechanisms, and Accessory Kits		Zinc-plated steel, RoHS Compliant finish					

(1) The rating for 1 N.O., 200 A is B600.

### Approximate Dimensions

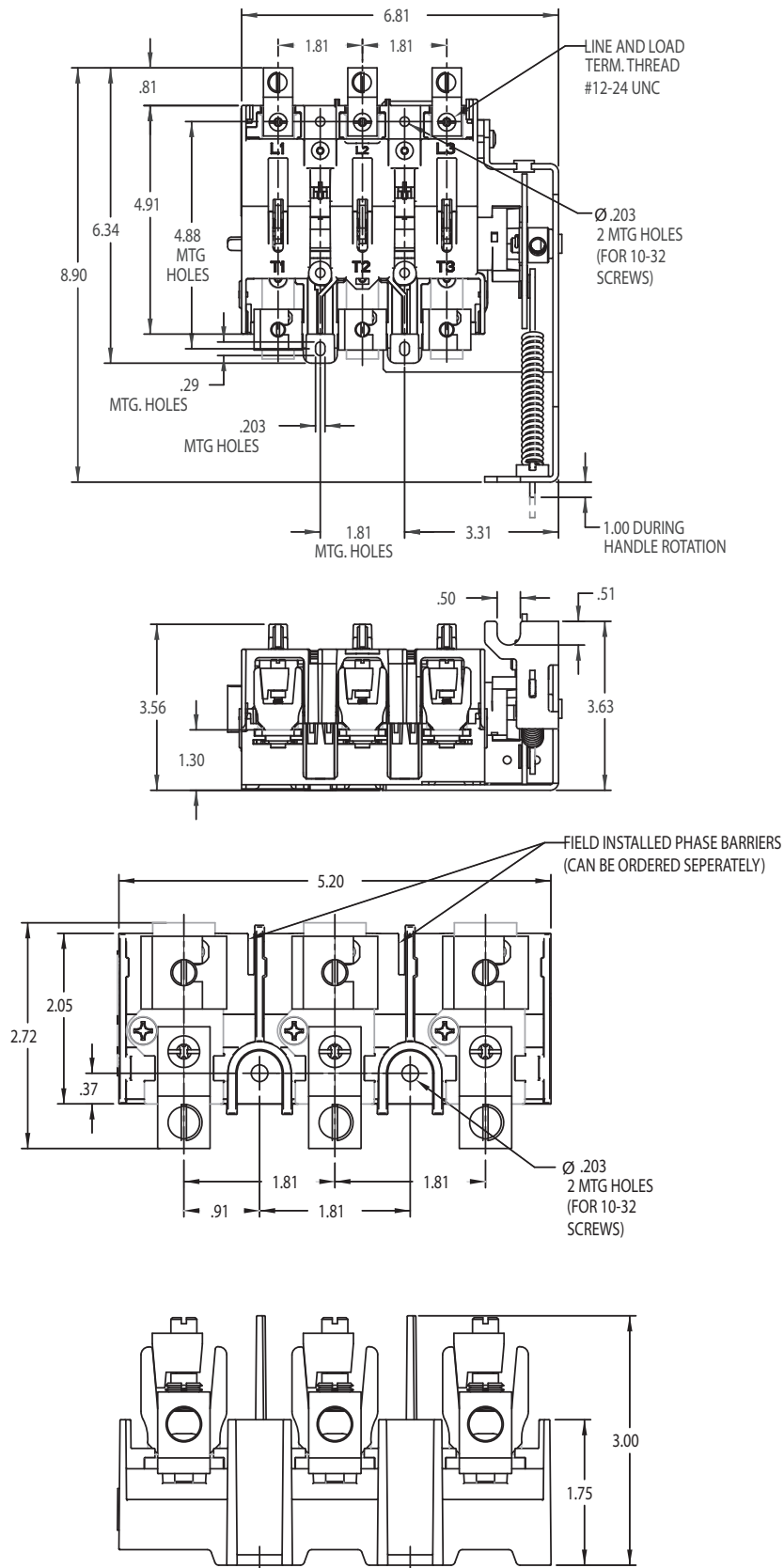
#### Universal Disconnect Switch and Fuse Block, 30...60 A

Approximate dimensions are shown in inches. Dimensions are not intended to be used for manufacturing purposes.



### Universal Disconnect Switch and Fuse Block, 100 A

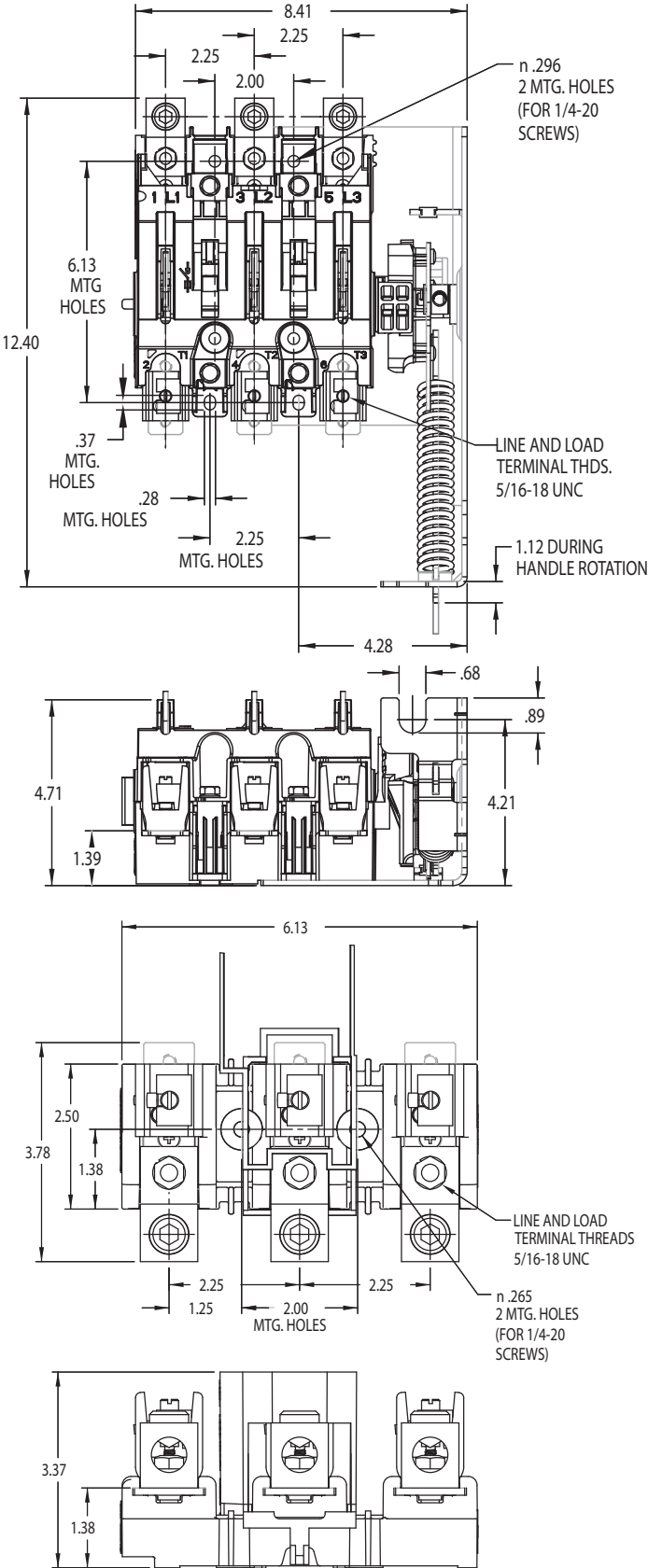
Approximate dimensions are shown in inches. Dimensions are not intended to be used for manufacturing purposes.





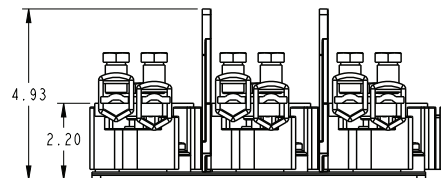
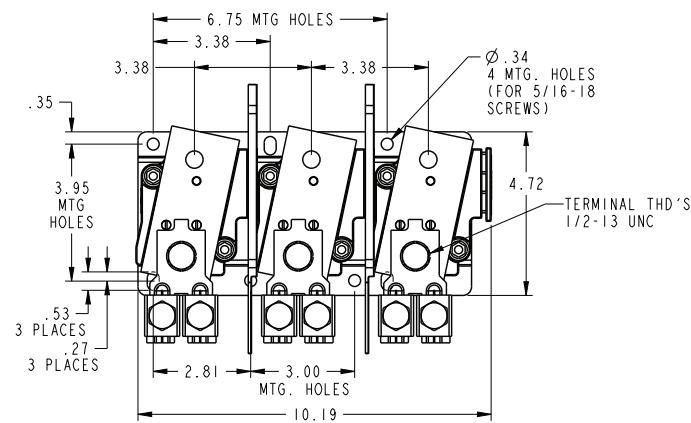
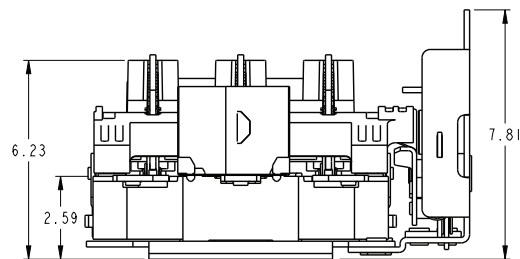
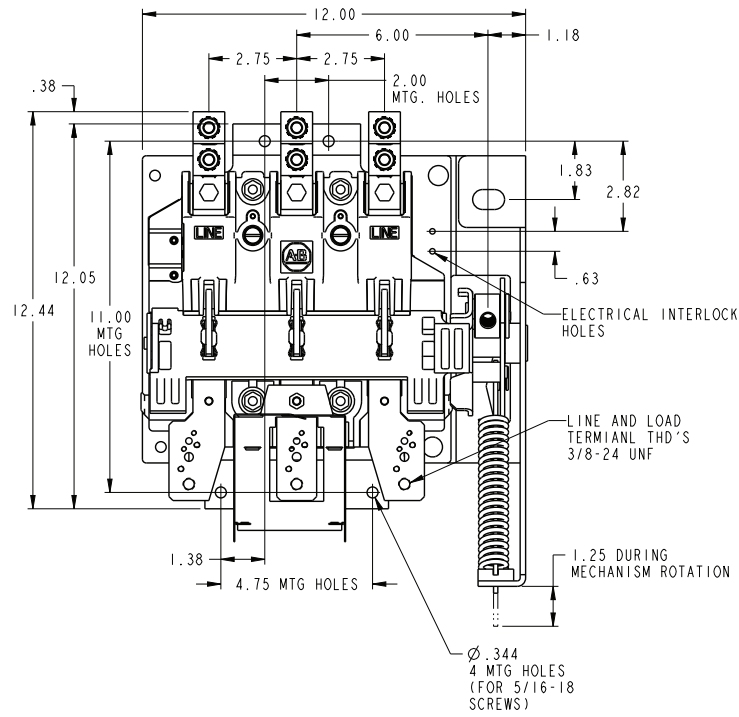
### Universal Disconnect Switch and Fuse Block, 200 A

Approximate dimensions are shown in inches. Dimensions are not intended to be used for manufacturing purposes.



### Universal Disconnect Switch and Fuse Block, 400 A

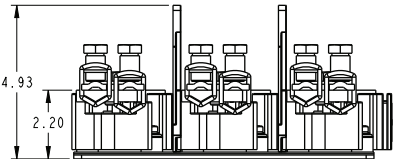
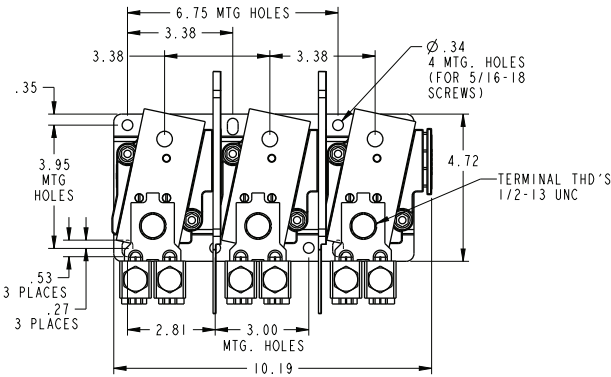
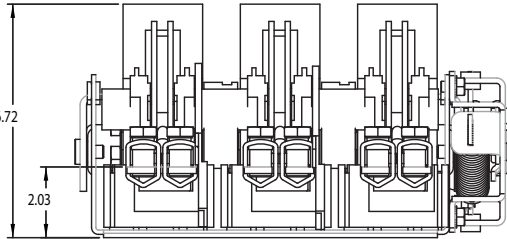
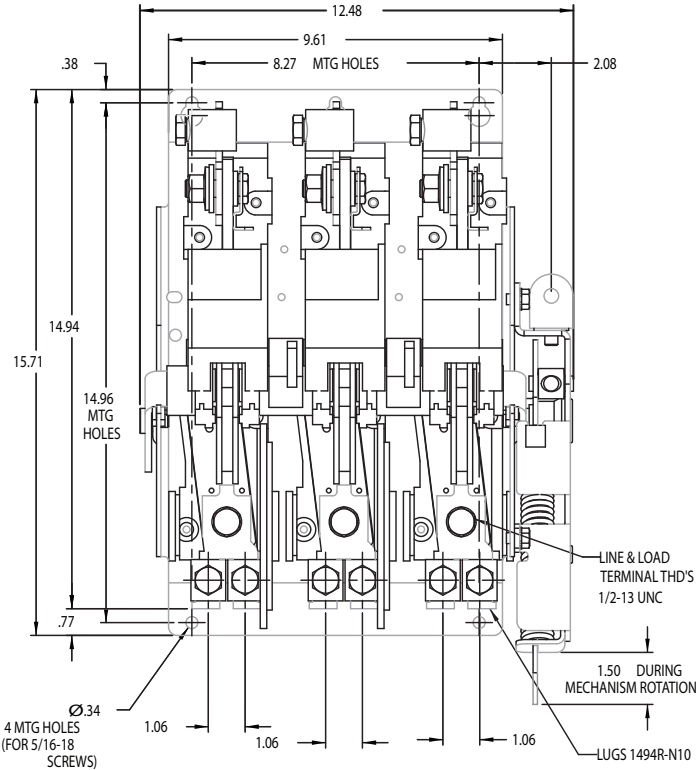
Approximate dimensions are shown in inches. Dimensions are not intended to be used for manufacturing purposes.



F

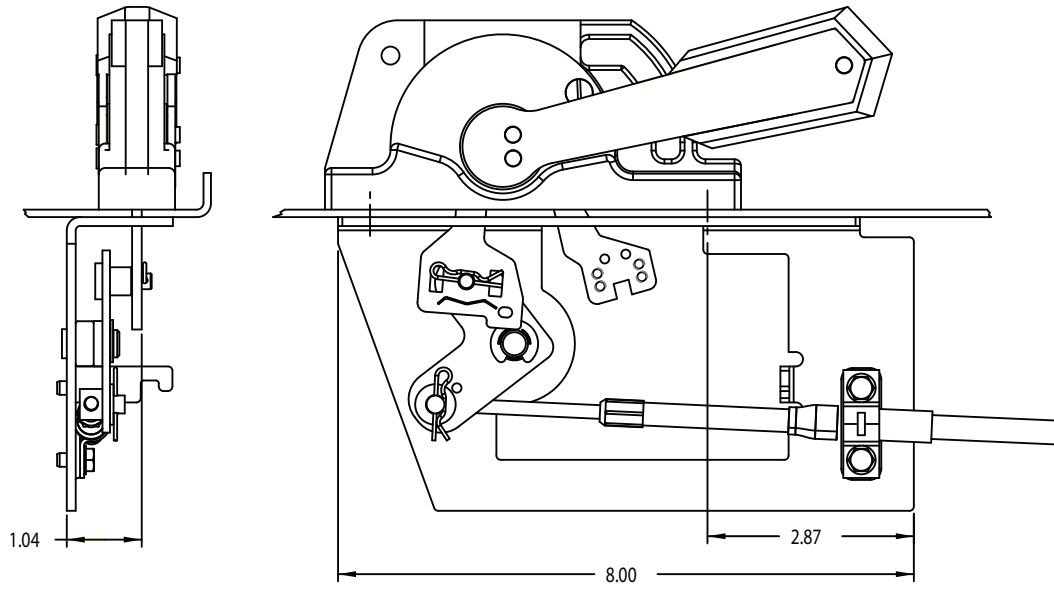
### Universal Disconnect Switch and Fuse Block, 600 A

Approximate dimensions are shown in inches. Dimensions are not intended to be used for manufacturing purposes.



### Universal Handle with Support Bracket

Approximate dimensions are shown in inches. Dimensions are not intended for to be used manufacturing purposes.



## Additional Resources

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

Resource	Description
Installing Your Main Disconnect Handle Just Became Easy, publication <a href="#">1494U-AT001A-EN-P</a>	Provides information for disconnect handle installation.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, <a href="http://www.rockwellautomation.com/global/certification/overview.page">http://www.rockwellautomation.com/global/certification/overview.page</a>	Provides declarations of conformity, certificates, and other certification details.

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

## Rockwell Automation Support

Use the following resources to access support information.

<b>Technical Support Center</b>	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	<a href="http://www.rockwellautomation.com/knowledgebase">www.rockwellautomation.com/knowledgebase</a>
<b>Local Technical Support Phone Numbers</b>	Locate the phone number for your country.	<a href="http://www.rockwellautomation.com/global/support/get-support-now.page">www.rockwellautomation.com/global/support/get-support-now.page</a>
<b>Direct Dial Codes</b>	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	<a href="http://www.rockwellautomation.com/global/support/direct-dial.page">www.rockwellautomation.com/global/support/direct-dial.page</a>
<b>Literature Library</b>	Installation Instructions, Manuals, Brochures, and Technical Data.	<a href="http://www.rockwellautomation.com/literature">www.rockwellautomation.com/literature</a>
<b>Product Compatibility and Download Center (PCDC)</b>	Get help determining how products interact, check features and capabilities, and find associated firmware.	<a href="http://www.rockwellautomation.com/global/support/pcdc.page">www.rockwellautomation.com/global/support/pcdc.page</a>

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Rockwell Automation maintains current product environmental information on its website at <http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

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