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# Connecting made simple.

Solutions for easy  
disconnects and additions.

3M™ Medium Voltage  
Separable Connectors

[3M.com/Energy](http://3M.com/Energy)



# 3M separable connector solutions

3M offers separable connector solutions up to 35 kV for connecting electrical cable and equipment. The 3M™ Deadbreak Elbow Connectors, 600 A connect equipment and cable on primary feeder and network circuits. 3M™ Loadbreak Elbow Connectors, 200 A are fully shielded and insulated plug-in separable connectors used for connecting underground cable to transformers, switchgear and junctions equipped with loadbreak bushings.

## Table of contents

### 3M Deadbreak Elbow Connectors, 600 A

Overview .....	4
Selection Tables .....	5–6
Accessories Ordering Information.....	7–9

### 3M Loadbreak Elbow Connectors, 200 A

Overview .....	11
Selection Tables .....	12–13
Accessories Ordering Information.....	14–16
Contact Information .....	17
Important Notice.....	18





## 3M™ Deadbreak Elbow, Connectors, 600A





# Overview



## 3M™ Deadbreak Elbow Connector, 600 A

3M Deadbreak Elbow Connectors, 600 A and accessories from 3M provide an easy way to terminate cables and equipment, and splice primary cable at 25/28 kV and 35 kV. It is fully shielded and features a bolted connection in aluminum and terminates or splices power cables with copper or aluminum conductors ranging in size from #2 AWG to 1500 kcmil.

All deadbreak products and accessories meet or exceed all applicable requirements of:

- ANSI/IEEE Std 386™ for separable insulated connector systems
- IEEE Std 592™ for exposed semiconducting shields

Voltage Class, Phase-to-Phase	Product Ratings	
	25/28 kV	35 kV
Maximum Operating Line-to-Ground Voltage	16.2 kV	21.1 kV
Corona Voltage Level (partial discharge extinction voltage)	21.5 kV	26 kV
AC Withstand, 1 Minute	45 kV	50 kV
Impulse-Withstand Voltage (BIL)	125 kV	150/200 kV
Continuous Current		
Aluminum	600 A	
Copper	900 A	
Short-time Current		
Aluminum	25 kA, 0.17 s - 10 kA, 3 s	
Copper	40 kA, 0.17 s - 10 kA, 3 s	

All 3M Deadbreak Elbow Connectors, 600 A are 100% Production-tested for PD and Either AC or BIL.

Voltage Class, Phase-to-Phase	Product Ratings	
	25/28 kV	35 kV
Corona Voltage Level (partial discharge extinction voltage)	21.5 kV	26 kV
AC Withstand, 1 Minute	45 kV	50 kV
Impulse-Withstand Voltage (BIL)	125 kV	150/200 kV



# Selection tables

## 3M™ Deadbreak Elbow 25/28 kV, 600 A

3M™ Deadbreak Elbow 625-Series includes 25/28 kV 600 A Elbow with test point, stud, lug, insulating plug with end cap and jacket seal.

<b>6</b>	<b>2</b>	<b>5</b>	<b>E</b>	<i>w1</i>	X	X	<b>A</b>	<b>L</b>
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**Table W1**  
Cable Adapter

Code	Insulation Range
<b>E</b>	0.530 in. – 0.680 in. (13.5mm – 17.3mm)
<b>F</b>	0.640 in. – 0.820 in. (16.3mm – 20.8mm)
<b>G</b>	0.760 in. – 0.950 in. (19.3mm – 24.1mm)
<b>H</b>	0.850 in. – 1.050 in. (21.6mm – 26.7mm)
<b>J</b>	0.980 in. – 1.180 in. (24.9mm – 30.0mm)
<b>K</b>	1.090 in. – 1.310 in. (27.7mm – 33.3mm)
<b>L</b>	1.180 in. – 1.465 in. (30.0mm – 37.2mm)
<b>LM</b>	1.280 in. – 1.430 in. (32.5mm – 36.3mm)
<b>M</b>	1.370 in. – 1.630 in. (34.8mm – 41.4mm)
<b>N</b>	1.515 in. – 1.780 in. (38.5mm – 45.2mm)
<b>P</b>	1.725 in. – 1.935 in. (43.8mm – 49.1mm)

**Table X**  
Lug

Code Shearbolt	Code Compression	Concentric/Compressed	Compact/Solid
<b>SB1</b>	<b>22</b>	#2	#1
	<b>23</b>	#1	1/0
	<b>24</b>	1/0	2/0
	<b>25</b>	2/0	3/0
	<b>26</b>	3/0	4/0
	<b>27</b>	4/0	250
<b>SB2</b>	<b>28</b>	250	300
	<b>29</b>	300	350
	<b>30</b>	350	400
	<b>32</b>	450	500/550
<b>SB3</b>	<b>33</b>	500	600
	<b>35</b>	600	700
	<b>36</b>	650	750/800
	<b>38</b>	700/750	900
<b>SB4</b>	<b>39</b>	800	900
	<b>40</b>	900	1,000
	<b>41</b>	1,000	—
	<b>44</b>	1,250	—

**Note:** For other 25/28 kV applications, please contact your sales representative for details.

**Note:** Please contact a 3M Representative for more information if you are unsure which product you need.

# Selection tables

## 3M™ Deadbreak Elbow 35 kV, 600 A

3M™ Deadbreak Elbow 635-Series includes 35 kV 600 A Elbow with test point, stud, lug, insulating plug with end cap and jacket seal.

<b>6</b>	<b>3</b>	<b>5</b>	<b>E</b>	w2	x	x	<b>A</b>	<b>L</b>
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**Table W2**  
Cable Adapter

Code	Insulation Range
<b>D</b>	0.750 in. – 0.985 in. (19.1mm – 25.0mm)
<b>E</b>	0.930 in. – 1.040 in. (23.6mm – 26.4mm)
<b>F</b>	0.980 in. – 1.115 in. (24.9mm – 28.3mm)
<b>G</b>	1.040 in. – 1.175 in. (26.4mm – 29.9mm)
<b>H</b>	1.095 in. – 1.240 in. (27.8mm – 31.5mm)
<b>J</b>	1.160 in. – 1.305 in. (29.5mm – 33.2mm)
<b>K</b>	1.220 in. – 1.375 in. (31.0mm – 34.9mm)
<b>L</b>	1.285 in. – 1.395 in. (32.6mm – 35.4mm)
<b>M</b>	1.355 in. – 1.520 in. (34.3mm – 38.6mm)
<b>N</b>	1.485 in. – 1.595 in. (37.7mm – 40.5mm)
<b>P</b>	1.530 in. – 1.640 in. (38.9mm – 41.7mm)
<b>Q</b>	1.575 in. – 1.685 in. (40.0mm – 42.8mm)
<b>R</b>	1.665 in. – 1.785 in. (42.3mm – 45.3mm)
<b>S</b>	1.755 in. – 1.875 in. (44.6mm – 47.6mm)
<b>T</b>	1.845 in. – 1.965 in. (46.9mm – 49.9mm)
<b>U</b>	1.935 in. – 2.055 in. (49.2mm – 52.2mm)
<b>V</b>	2.025 in. – 2.145 in. (51.4mm – 54.5mm)

**Table X**  
Lug

Code Shearbolt	Code Compression	Concentric/Compressed	Compact/Solid
<b>SB1</b>	<b>22</b>	#2	#1
	<b>23</b>	#1	1/0
	<b>24</b>	1/0	2/0
	<b>25</b>	2/0	3/0
	<b>26</b>	3/0	4/0
	<b>27</b>	4/0	250
<b>SB2</b>	<b>28</b>	250	300
	<b>29</b>	300	350
	<b>30</b>	350	400
	<b>32</b>	450	500/550
<b>SB3</b>	<b>33</b>	500	600
	<b>35</b>	600	700
	<b>36</b>	650	750/800
	<b>38</b>	700/750	900
<b>SB4</b>	<b>39</b>	800	900
	<b>40</b>	900	1,000
	<b>41</b>	1,000	—
	<b>44</b>	1,250	—
<b>*</b>	—	1,500	—

**Note:** For other 35 kV applications, please contact your sales representative for details.

**Note:** Please contact a 3M Representative for more information if you are unsure which product you need.



# Ordering information



## 3M™ Deadbreak Component, Connecting Plugs, 600 A

Part Number	Description	Quantity
625CP	600 A Connecting Plug 25/28 kV	1/box
635CP	600 A Connecting Plug 35 kV	1/box



## 3M™ Deadbreak Cable Adapters

Part Number	Description	Quantity
625CAw1	Deadbreak Adapter, 25/28 kV (refer to table W1 on page 4)	1/box
635CAw2	Deadbreak Adapter, 35 kV (refer to table W2 on page 5)	1/box



## 3M™ Deadbreak Component, Insulating Plug w/ Caps, 600 A

Part Number	Description	Quantity
625IPC	Insulating Plug with Cap, 25/28 kV	1/box
635IPC	Insulating Plug with Cap, 35 kV	1/box



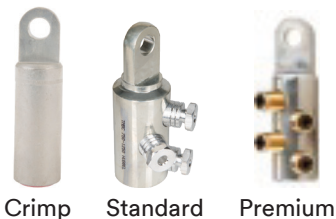
## 3M™ Deadbreak Component, Elbow Insulating Caps, 600 A

Part Number	Description	Quantity
625IC	Insulating Cap, 25/28 kV Deadbreak	1/box
635IC	Insulating Cap, 35 kV Deadbreak	1/box



## 3M™ Deadbreak Component, Aluminum Studs, 600 A

Part Number	Description	Quantity
625ALSTUD	Aluminum Stud, 5/8"-11 UNC Threaded, 25/28 kV	1/box
635ALSTUD	Aluminum Stud, 5/8"-11 UNC Threaded, 35 kV	1/box



## 3M™ Deadbreak Component Shearbolt and Crimp Lugs, 600 A

Part Number	Description	Quantity
xAL	Deadbreak AL Compression Lug, 25/28 kV, 35kV	1/box
SBx	Deadbreak Shearbolt Lug, 25/28 kV, 35kV	1/box
QLSx	Premium Shearbolt Lug, 25/28 kV, 35kV	1/box

**Note:** For compression code, refer to Table X on pages 5.

## 3M™ Silicone Lubricant Grease

Part Number	Description	Quantity
Silicone Lube	Silicone Lubricant Grease	4g/packet

# Ordering information

## 3M™ Deadbreak Elbow Bushing Extenders, 600 A



3M Deadbreak Elbow Bushing Extenders, 600 A is used to increase the distance between the 600 A bushing interface and the 600 A T-body. The extender is insulated and shielded to protect dead front integrity.

Part Number	Description	Quantity
625BX	Bushing Extender, 25/28 kV Deadbreak	1/box
635BX	Bushing Extender, 35 kV Deadbreak	1/box

## 3M™ Loadbreak Elbow Reducing Tap Plugs, 600 A



3M Loadbreak Elbow Reducing Tap Plugs, 600 A adds a 200 A loadbreak interface to an existing 600 A deadbreak T-Body. It is used for adapting an existing 600 A elbow to a 200 A tap or for different applications. It can be used for installing surge arrestors, testing or grounding 600 A systems. The Elbow Tap Plug (ETP) is fault close rated to 10,000 A and complies with IEEE Std 386™.

Part Number	Description	Quantity
615RTP	600 A Reducing Tap Plug, 15 kV	1/box
625RTP	600 A Reducing Tap Plug, 25/28 kV	1/box
635RTP	600 A Reducing Tap Plug, 35 kV, Small Interface (IEEE int. 7B)	1/box

## 3M™ Cold Shrink Shield Adapter Kits 8459/8460 Series for Bottom Seal



3M Cold Shrink Shield Adapter Kits 8460 Series accommodates the grounding of accessories installed on conventional tape, longitudinally corrugated (LC), wire and UniShield® Power Cables. The 3M Shield Adapter Kit design provides a fault current capacity of 600 A on 15–35 kV class cables.

Part Number	Description	Quantity
8459	Jacket OD Range, 0.59 in. – 1.05 in. (15.0mm – 26.6mm)	1/box
8460	Jacket OD Range, 0.83 in. – 1.64 in. (21.1mm – 41.6mm)	3/box
8461	Jacket OD Range, 1.27 in. – 2.17 in. (32.3mm – 55.1mm)	1/box
8462	Jacket OD Range, 1.70 in. – 2.60 in. (43.2mm – 66.0mm)	1/box

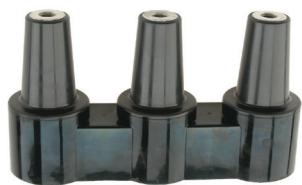


# Ordering information

## 3M™ Deadbreak Junction Bars, 600 A

3M Deadbreak Junction Bars, 600 A sectionalize feeders or provide a lateral tap. They can be installed in pad-mounted equipment or in a subsurface vault application. They are also fully-shielded and fully submersible and can be interfaced with all standard 600 A class separable connectors. Additionally, 3M Deadbreak Junction Bars, 600 A conform to all applicable requirements of IEEE Std 386™ and IEEE Std 592™.

Pre-molded 3M junctions are available in two, three and four point configurations. 3M Deadbreak Junction Bars, 600 A products contain an aluminum bus bar and mate with any 25/28 kV or 35 kV rated separable connector.



Part Number	Description	Quantity
<b>3M Deadbreak Junction Bars, 600 A (with brackets)</b>		
625J2B	Deadbreak Junction Bar, 25/28 kV, 2-Way	1/box
625J3B	Deadbreak Junction Bar, 25/28 kV, 3-Way	1/box
625J4B	Deadbreak Junction Bar, 25/28 kV, 4-Way	1/box
635J2B	Deadbreak Junction Bar, 35 kV, 2-Way	1/box
635J3B	Deadbreak Junction Bar, 35 kV, 3-Way	1/box
635J4B	Deadbreak Junction Bar, 35 kV, 4-Way	1/box
<b>3M Deadbreak Junction Bars, 600 A (with U-Straps)</b>		
625J2U	Deadbreak Junction Bar, 25/28 kV, 2-Way	1/box
625J3U	Deadbreak Junction Bar, 25/28 kV, 3-Way	1/box
625J4U	Deadbreak Junction Bar, 25/28 kV, 4-Way	1/box
635J2U	Deadbreak Junction Bar, 35 kV, 2-Way	1/box
635J3U	Deadbreak Junction Bar, 35 kV, 3-Way	1/box
635J4U	Deadbreak Junction Bar, 35 kV, 4-Way	1/box



## 3M™ Elbow Surge Arresters, 35 kV

The 3M™ Elbow Surge Arrester 635-SA Series is a gapless, metal oxide varistor (MOV) type arrester in a compact, deadfront EPDM insulated package, directly interfaceable with IEEE 386™ Interface 13 bushings (35 kV Class – 600A) without the need for adapters or reducers.

Part Number	Description	Quantity
<b>3M™ Surge Arresters, 600 A</b>		
635-SA27	Elbow Surge Arrester, 35 kV, DB, 22 kV MCOV/27 kV Duty Cycle	1/box
635-SA30	Elbow Surge Arrester, 35 kV, DB, 24.2 kV MCOV/30 kV Duty Cycle	1/box
635-SA33	Elbow Surge Arrester, 35 kV, DB, 27 kV MCOV/33 kV Duty Cycle	1/box
635-SA36	Elbow Surge Arrester, 35 kV, DB, 29 kV MCOV/36 kV Duty Cycle	1/box



# **3M™ Loadbreak Elbow, Connectors, 200A**





# Overview



## 3M™ Loadbreak Elbow Connectors, 200 A

3M™ Loadbreak Elbow Connectors, 15 kV, 25/28 kV and 35 kV, 200 A are fully shielded, insulated, and submersible products that provide a means to mate or disconnect cable to switchgear, transformers, or sectionalizing equipment on power distribution systems. They are used for pad-mounted or subsurface applications, where the components may be exposed to direct sunlight or continuously submerged in water up to 6 feet (2m).

All loadbreak products and accessories meet or exceed all applicable requirements of:

- IEEE Std 386™ for separable connectors
- IEEE Std 592™ for exposed semi-conducting shields

Voltage Class, Phase-to-Phase	Product Ratings		
	15 kV	25/28 kV	35 kV
Maximum Operating Line-to-Ground Voltage	8.3 kV	16.2 kV	21.1 kV
Maximum Operating Phase-to-Phase Voltage	14.4 kV	28.0 kV	36.6 kV
Corona Voltage Level (partial discharge extinction voltage)	11 kV	21.5 kV	26 kV
AC Withstand, 1 Minute	34 kV	45 kV	50 kV
Impulse-Withstand Voltage (BIL)	95 kV	125 kV	150 kV

Continuous Current	
Continuous Current	200 A
Short-time Current	
0.17 s Duration	10,000 A RMS Symmetrical
3 s Duration	3,500 A RMS Symmetrical

**All 3M Loadbreak Elbow Connectors, 200 A are 100% Production-Tested for PD and Either AC or BIL.**

Voltage Class, Phase-to-Phase	Product Ratings		
	15 kV	25/28 kV	35 kV
Impulse-Withstand Voltage (BIL)	95 kV	125 kV	150 kV
Corona Voltage Level (partial discharge extinction voltage)	11 kV	21.5 kV	26 kV
AC Withstand, 1 Minute	34 kV	45 kV	50 kV

# Selection tables

## 3M™ Loadbreak Elbow Connectors, 15 kV, 200 A

3M™ Loadbreak Elbow 215-Series includes 15 kV 200 A Elbow with test point, probe, lug and jacket seal.

2	1	5	L	B	W	W	X	B
---	---	---	---	---	---	---	---	---

Table W Housing Size	
Code	Insulation Range Inches (mm)
30	0.495 in – 0.730 in (12.57 mm - 18.54 mm)
40	0.635 in – 0.905 in (16.13 mm - 22.99 mm)
50	0.760 in – 1.135 in (19.30 mm - 28.83 mm)

Table X Lug		
Code Compression	Concentric/ Compressed	Compact/ Solid
1	#6	#4
2	#4	#2
3	#2	#1
4	#1	1/0
5	1/0	2/0
6	2/0	3/0
7	3/0	4/0
8	4/0	250

## 3M™ Loadbreak Elbow Connectors, 25/28 kV, 200 A

3M™ Loadbreak Elbow 228-Series includes 25/28 kV 200 A Elbow with test point, probe, lug and jacket seal.

2	2	8	L	B	W	W	X	B
---	---	---	---	---	---	---	---	---

Table W Housing Size	
Code	Insulation Range Inches (mm)
40	0.800 in – 1.140 in (20.32 mm - 28.96 mm)
50	0.920 in – 1.310 in (23.37 mm - 33.27 mm)

Table X Lug		
Code Compression	Concentric/ Compressed	Compact/ Solid
2	---	#2
3	#2	#1
4	#1	1/0
5	1/0	2/0
6	2/0	3/0
7	3/0	4/0
8	4/0	250

**Note:** II 3M complete kits come with the cold shrink bottom jacket seal and grounding options for multiple cable construction.

**Note:** Please contact a 3M Representative for more information if you are unsure which product you need.



# Selection tables

## 3M™ Loadbreak Elbow Connectors Large Interface, 35 kV, 200 A (IEEE int. 8)

3M™ Loadbreak Elbow 235-Series includes 35 kV 200 A Elbow with test point, probe, lug and jacket seal.

2	3	5	L	B	L	W	X	B
---	---	---	---	---	---	---	---	---

Table W Housing Size	
Code	Insulation Range Inches (mm)
5	1.02 in. – 1.310 in. (25.91 mm - 33.27 mm)

Table X Lug		
Code Compression	Concentric/Compressed	Compact/Solid
4	---	1/0
5	1/0	2/0
6	2/0	3/0
7	3/0	4/0
8	4/0	250

## 3M™ Loadbreak Elbow Connectors Small Interface, 35 kV, 200 A (IEEE int. 7B)

3M™ Loadbreak Elbow 228-Series includes 25/28 kV 200 A Elbow with test point, probe, lug and jacket seal.

2	3	5	L	B	S	W	W	W	X	B
---	---	---	---	---	---	---	---	---	---	---

Table W Housing Size	
Code	Insulation Range inches (mm)
C30	0.846 in. – 1.051 in. (21.49 mm - 26.70 mm)
D40	0.976 in. – 1.181 in. (24.79 mm - 30.0 mm)
E50	1.087 in. – 1.311 in. (27.61 mm - 33.30 mm)

Table X Lug		
Code Compression	Concentric/Compressed	Compact/Solid
4	---	1/0
5	1/0	2/0
6	2/0	3/0
7	3/0	4/0
8	4/0	250

**Note:** II 3M complete kits come with the cold shrink bottom jacket seal and grounding options for multiple cable construction.

**Note:** Please contact a 3M Representative for more information if you are unsure which product you need.

# Ordering information



## 3M™ Loadbreak Bi-Metal Lugs

All Bi-metal compression lug meets all requirements of ANSI Std C119.4 for Class A connectors.

Part Number	Description	Quantity
200LUGxB	Long Bi-Metal Lug, Standard	1/box

**Note:** For compression code, refer to Table X on page 12.



## 3M™ Loadbreak Probes

Part Number	Description	Quantity
215LBP	Probe Kit, Complete with Pin Wrench, 15 kV	1/box
228LBP	Probe Kit, Complete with Pin Wrench, 25/28 kV	1/box
235LBSP	Probe Kit, Complete with Pin Wrench, 35 kV, Small Interface	1/box
235LBLP	Probe Kit, Complete with Pin Wrench, 35 kV, Large Interface	1/box



## 3M™ Loadbreak Bushing Inserts

Internal hex broach accepts a 5/16 inch wrench for proper installation torque. Yellow seating indicator provides a positive indication that the mating product is fully installed.

Part Number	Description	Quantity
215LBI	Bushing Insert, 15 kV Loadbreak	1/box
228LBI	Bushing Insert, 25/28 kV Loadbreak	1/box



## 3M™ Loadbreak Insulating Caps

Used as a temporary or permanent cover on an energized operating interface. Standard product has an insulating cuff. The insulating cap is supplied with a 36 inch lead for grounding.

Part Number	Description	Quantity
215IC	Insulating Cap, 15 kV Loadbreak	1/box
228IC	Insulating Cap, 25/28 kV Loadbreak	1/box

# Ordering information

## 3M™ Loadbreak Junction Bars, 200A

3M Loadbreak Junction Bars, 200A are used to sectionalize cables or as feed-thrus for making lateral tapes. They are available in two, three and four tap units. Adjacent taps are 4 inches center to center. Vented yellow seating (25 kV) indicator rings provide a positive indication that the mating product is fully installed and assists in minimizing no-load, partial vacuum flashovers..

Junctions with the corrosion-resistant stainless steel mounting bracket allow back plate mounting angles of 30, 45, or 60 degrees. This bracket can be adjusted for horizontal mounting to a flat surface. Junctions can also be ordered with only U-straps for horizontal surface mounting.



Part Number	Description	Quantity
<b>3M Loadbreak Junction Bars, 200 A (with brackets)</b>		
215J2B	200 A 2-Position Junction with Bracket, 15 kV	1/box
215J3B	200 A 3-Position Junction with Bracket, 15 kV	1/box
215J4B	200 A 4-Position Junction with Bracket, 15 kV	1/box
228J2B	200 A 2-Position Junction with Bracket, 25/28 kV	1/box
228J3B	200 A 3-Position Junction with Bracket, 25/28 kV	1/box
228J4B	200 A 4-Position Junction with Bracket, 25/28 kV	1/box
<b>3M Loadbreak Junction Bars, 200 A (with U-Straps)</b>		
215J2U	200 A 2-Position Junction with U-Strap, 15 kV	1/box
215J3U	200 A 3-Position Junction with U-Strap, 15 kV	1/box
215J4U	200 A 4-Position Junction with U-Strap, 15 kV	1/box
228J2U	200 A 2-Position Junction with U-Strap, 25/28 kV	1/box
228J3U	200 A 3-Position Junction with U-Strap, 25/28 kV	1/box
228J4U	200 A 4-Position Junction with U-Strap, 25/28 kV	1/box



# Ordering information

## 3M™ Loadbreak Surge Arresters, 200 A

The 3M Loadbreak Surge Arresters, 200 A are gapless, metal oxide varistor (MOV) devices, provide shielded arrester protection for medium voltage systems. The 3M 200 A Loadbreak Surge Arresters meet the relevant requirements of IEEE™ Std. C62.11 and IEEE™ Std. 386.

Part Number	Description	Quantity
<b>3M™ Loadbreak Surge Arrester, 15 kV Interface</b>		
215SA03	Loadbreak Surge Arrester, 2.55 kV MCOV, 3 kV Duty Cycle	1/box
215SA06	Loadbreak Surge Arrester, 5.1 kV MCOV, 6 kV Duty Cycle	1/box
215SA09	Loadbreak Surge Arrester, 7.65 kV MCOV, 9 kV Duty Cycle	1/box
215SA10	Loadbreak Surge Arrester, 8.4 kV MCOV, 10 kV Duty Cycle	1/box
215SA12	Loadbreak Surge Arrester, 10.2 kV MCOV, 12 kV Duty Cycle	1/box
215SA15	Loadbreak Surge Arrester, 12.7 kV MCOV, 15 kV Duty Cycle	1/box
215SA18	Loadbreak Surge Arrester, 15.3 kV MCOV, 18 kV Duty Cycle	1/box
<b>3M™ Loadbreak Surge Arrester, 25/28 kV Interface</b>		
225SA09	Loadbreak Surge Arrester, 7.65 kV MCOV, 9 kV Duty Cycle	1/box
225SA10	Loadbreak Surge Arrester, 8.4 kV MCOV, 10 kV Duty Cycle	1/box
225SA12	Loadbreak Surge Arrester, 10.2 kV MCOV, 12 kV Duty Cycle	1/box
225SA15	Loadbreak Surge Arrester, 12.7 kV MCOV, 15 kV Duty Cycle	1/box
225SA18	Loadbreak Surge Arrester, 15.3 kV MCOV, 18 kV Duty Cycle	1/box
225SA21	Loadbreak Surge Arrester, 17 kV MCOV, 21 kV Duty Cycle	1/box
<b>3M™ Loadbreak Surge Arrester, 35 kV Small Interface</b>		
235SAS24	Loadbreak Surge Arrester, Small Interface, 19.5 kV MCOV, 24 kV Duty Cycle	1/box
235SAS27	Loadbreak Surge Arrester, Small Interface, 22 kV MCOV, 27 kV Duty Cycle	1/box
235SAS30	Loadbreak Surge Arrester, Small Interface, 24.4 kV MCOV, 30 kV Duty Cycle	1/box
<b>3M™ Loadbreak Surge Arrester, 35 kV Large Interface</b>		
235SAL27	Loadbreak Surge Arrester, Large Interface, 22 kV MCOV, 27 kV Duty Cycle	1/box
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