

PRODUCT BROCHURE

Color-Keyed[®] motor lead disconnects



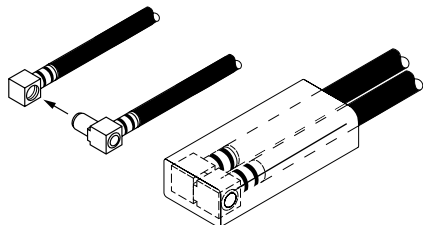
Motor lead disconnects

Flex wire listings

Cat. no.			Die nos.									
Female disconnect	Male disconnect	Double pin male disconnect	Color code	Flex /24	Class G	Class H	Class I (24)	Class K (30)	Class M (34)	6 ton	14/15 ton	
MD1614F-0	MD1614M-0	M2D1614M-0	Blue	—	—	—	—	—	—	—	—	
MD1614F-1	MD1614M-1	—	—	—	—	—	—	—	—	—	—	
MD1210F-1	MD1210M-1	M2D1210M-1	Yellow	—	—	—	—	—	—	—	—	
MD1210F-2	MD1210M-2	M2D1210M-2	—	—	—	—	—	—	—	—	—	
MD8F-1	MD8M-1	M2D8M-1	Red	8 (37/24)	8 (49 STR)	8 (133 STR)	—	8 (168 STR)	—	6TONXSS/ 6TON21XSS	15500X/ 15520XSS	
MD8F-2	MD8M-2	M2D8M-2	—	8 (37/24)	8 (49 STR)	8 (133 STR)	—	8 (168 STR)	—	6TONXSS/ 6TON21XSS	15500X/ 15520XSS	
MD6F-1	MD6M-1	M2D6M-1	Blue	6 (61/24)	5 (49 STR)	5 (133 STR)	5 (84 STR)	5 (336 STR)	—	6TONXSS/ 6TON24XSS	15500X/ 15522XSS	
MD6F-2	MD6M-2	M2D6M-2	—	6 (61/24)	5 (49 STR)	5 (133 STR)	5 (84 STR)	5 (336 STR)	—	6TONXSS/ 6TON24XSS	15500X/ 15522XSS	
MD4F-2	MD4M-2	M2D4M-2	Gray	5 (91/24)	4 (49 STR)	4 (133 STR)	4 (105 STR)	4 (420 STR)	4 (1061 STR)	6TONXSS/ 6TON29XSS	15500X/ 15527XSS	
MD2F-2	MD2M-2	M2D2M-2	Brown	3 (125/24)	3 (49 STR)	3 (133 STR)	3 (133 STR)	3 (532 STR)	3 (1323 STR)	6TONXSS/ 6TON33XSS	15500X/ 15528XSS	
MD2F-3	MD2M-3	M2D2M-3	—	3 (125/24)	3 (49 STR)	3 (133 STR)	3 (133 STR)	3 (532 STR)	3 (1323 STR)	6TONXSS/ 6TON33XSS	15500X/ 15528XSS	
MD1F-2	MD1M-2	M2D1M-2	Green	2 (150 or 175/24)	2 (49 STR)	2 (133 STR)	2 (133 STR)	2 (665 STR)	2 (1666 STR)	6TONXSS/ 6TON37SS	15500X/ 15513XSS	
MD1F-3	MD1M-3	M2D1M-3	—	2 (150 or 175/24)	2 (49 STR)	2 (133 STR)	2 (133 STR)	2 (665 STR)	2 (1666 STR)	6TONXSS/ 6TON21XSS	15500X/ 15513XSS	
MD10F-3	MD10M-3	M2D10M-3	Pink	1 (225/24)	1 (133 STR)	1 (133 STR)	1 (210 STR)	1 (836 STR)	1 (2107 STR)	6TONXSS/ 6TON42XSS	15500X/ 15508XSS	
MD20F-3	MD20M-3	M2D20M-3	Black	1/0 (275/24)	1/0 (133 STR)	1/0 (259 STR)	1/0 (266 STR)	1/0 (1064 STR)	1/0 (2646 STR)	6TONXSS/ 6TON45XSS	15500X/ 15526XSS	
MD30F-3	MD30M-3	M2D30M-3	Orange	2/0 (325/24)	2/0 (133 STR)	2/0 (259 STR)	2/0 (342 STR)	2/0 (1323 STR)	2/0 (3325 STR)	6TONXSS/ 6TON50XSS	15500X/ 15530XSS	
MD40F-3	MD40M-3	M2D40M-3	Purple	3/0 (450/24)	3/0 (133 STR)	3/0 (427 STR)	3/0 (418 STR)	3/0 (1666 STR)	3/0 (4256 STR)	6TONXSS/ 6TON54XSS	15500X/ 15511XSS	
MD40F-4	MD40M-4	—	—	3/0 (450/24)	3/0 (133 STR)	3/0 (427 STR)	3/0 (418 STR)	3/0 (1666 STR)	3/0 (4256 STR)	6TONXSS/ 6TON54XSS	15500X/ 15511XSS	

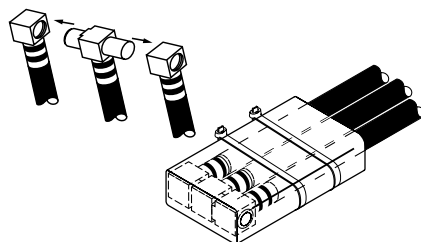
Motor lead disconnects

One line/one load 600 volt connection



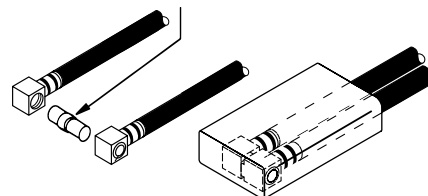
(One male, one female connector required)

One line/two load 600 volt connection



(One male, two female connectors required)

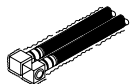
5 kV connections



Supplied with boot, pin, silicon gel (two female connectors required)

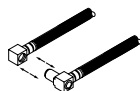
UL test results

Vibration



30 cycles/sec
 $\frac{1}{8}$ total amplitude in excess of 3,000 hours. No loss of performance.

Engage — Disengage



25 cycles - In accordance with UL310. No loss of performance.

High current cycling



4 cycles per UL486A. Control wire deteriorated. Connector still performed.

Heat rise



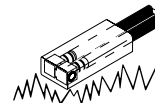
Meets specifications per UL486A.

Current cycling



500 cycles - in accordance with UL486B. Well within specifications. Extremely suitable.

Insulators



Flammability - per UL94HB. Meets requirements. Dielectric - per UL486A.

Ground fault



1200 A RMS, 2.5 cycles 6 "shots". No loss of performance. No increase in resistance.

Secureness



Meets specifications per UL486A.

Motor lead disconnects



Quick, reliable change-out of electric motors with no bolting, taping or loose connections.

Complete line of motor lead disconnects for 600 V and 5 kV applications, covering wire range from #16 AWG through 500 kcmil

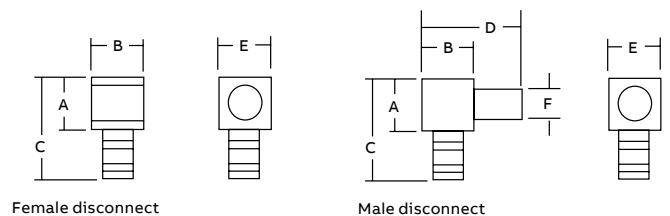
- Fast, snap-together assembly offers maximum labor savings
- No need for nuts, bolts and washers or insulating tape — simply slide on reusable boot
- Total assembly fits into tight motor housings

- Quick disconnect — no knife cutting of melted tape, eliminating the risk of accidental cutting of wire insulation, resulting motor downtime or installer exposure
- Meet or exceed electrical and mechanical performance of bolted connections
- Constructed of high-conductivity copper with tin plating
- Female disconnects equipped with beryllium copper interface band for dependable connections

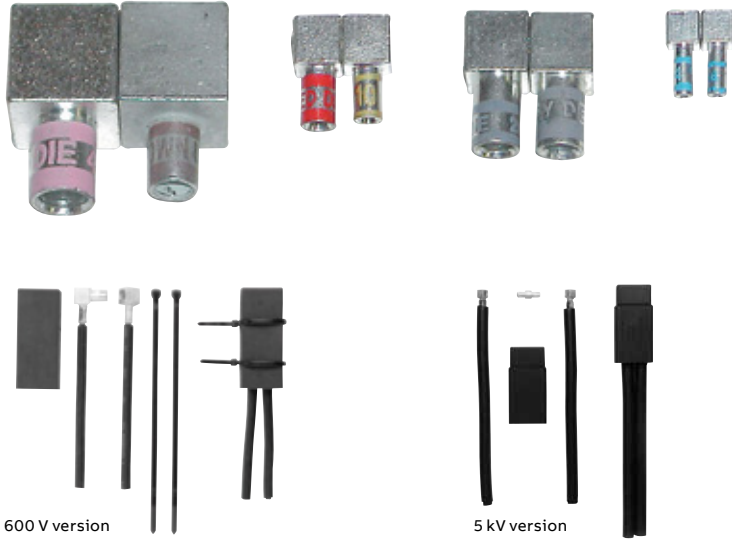
Motor lead disconnect — one line to one load (2 wire)

Cat. no.		Wire size (AWG or kcmil)	Body size	Color code	Boot insulation	Dimensions (in.)						Strip length (in.)
Female disconnect	Male disconnect					A	B	C	D	E	F	
MD1614F-0	MD1614M-0	#16-#14	0	Blue	MDBOOT-0	0.25	0.25	0.63	0.52	0.25	0.125	$\frac{3}{8}$
MD1614F-1	MD1614M-1	#16-#14	1	Blue	MDBOOT-1	0.38	0.38	0.78	0.75	0.38	0.250	$\frac{3}{8}$
MD1210F-1	MD1210M-1	#12-#10	1	Yellow	MDBOOT-1	0.38	0.38	0.78	0.75	0.38	0.250	$\frac{3}{8}$
MD1210F-2	MD1210M-2	#12-#10	2	Yellow	MDBOOT-2	0.50	0.50	0.90	1.00	0.50	0.370	$\frac{3}{8}$
MD8F-1	MD8M-1	#8	1	Red	MDBOOT-1	0.38	0.38	0.82	0.75	0.38	0.250	$\frac{7}{16}$
MD8F-2	MD8M-2	#8	2	Red	MDBOOT-2	0.50	0.50	0.95	1.00	0.50	0.370	$\frac{7}{16}$
MD6F-1	MD6M-1	#6	1	Blue	MDBOOT-1	0.38	0.38	0.88	0.75	0.38	0.250	$\frac{1}{2}$
MD6F-2	MD6M-2	#6	2	Blue	MDBOOT-2	0.50	0.50	1.02	1.00	0.50	0.370	$\frac{1}{2}$
MD4F-2	MD4M-2	#4	2	Gray	MDBOOT-2	0.50	0.50	1.06	1.00	0.50	0.370	$\frac{1}{2}$
MD2F-2	MD2M-2	#2	2	Brown	MDBOOT-2	0.50	0.50	1.09	1.00	0.50	0.370	$\frac{17}{32}$
MD2F-3	MD2M-3	#2	3	Brown	MDBOOT-3	0.88	0.88	1.46	1.75	0.88	0.500	$\frac{17}{32}$
MD1F-2	MD1M-2	#1	2	Green	MDBOOT-2	0.50	0.50	1.23	1.00	0.50	0.370	$\frac{9}{16}$
MD1F-3	MD1M-3	#1	3	Green	MDBOOT-3	0.88	0.88	1.56	1.75	0.88	0.500	$\frac{9}{16}$
MD10F-3	MD10M-3	1/0	3	Pink	MDBOOT-3	0.88	0.88	1.56	1.75	0.88	0.500	$\frac{9}{16}$
MD20F-3	MD20M-3	2/0	3	Black	MDBOOT-3	0.88	0.88	1.59	1.75	0.88	0.500	$\frac{5}{8}$
MD30F-3	MD30M-3	3/0	3	Orange	MDBOOT-3	0.88	0.88	1.71	1.75	0.88	0.500	$\frac{11}{16}$
MD40F-3	MD40M-3	4/0	3	Purple	MDBOOT-3	0.88	0.88	1.81	1.75	0.88	0.500	$\frac{3}{4}$
MD40F-4	MD40M-4	4/0	4	Purple	MDBOOT-4	1.25	1.25	2.89	2.69	1.25	0.813	1
MD250F-4	MD250M-4	250	4	Yellow	MDBOOT-4	1.25	1.25	2.89	2.69	1.25	0.813	$1\frac{1}{8}$
MD350F-4	MD350M-4	350	4	Red	MDBOOT-4	1.25	1.25	2.89	2.69	1.25	0.813	$1\frac{1}{4}$
MD500F-4	MD500M-4	500	4	Brown	MDBOOT-4	1.25	1.25	2.89	2.69	1.25	0.813	$1\frac{5}{16}$

Diagrams



Motor lead disconnects



Quick, easy installation!

- Choose appropriate Color-Keyed® disconnect for conductor size to be terminated. Note color of bands on disconnect barrel.
- Select proper installing die by matching die color to disconnect barrel color bands.
- Install die in ABB tool, insert stripped wire into barrel of disconnect and compress between color bands. Repeat for mating half.
- Snap the two halves together and slip on insulator over mated connection. Secure insulator with Ty-Rap® cable ties provided with the insulators.
- Material: high-conductivity copper
- Plating: tin
- Insulator: thermoplastic elastomer

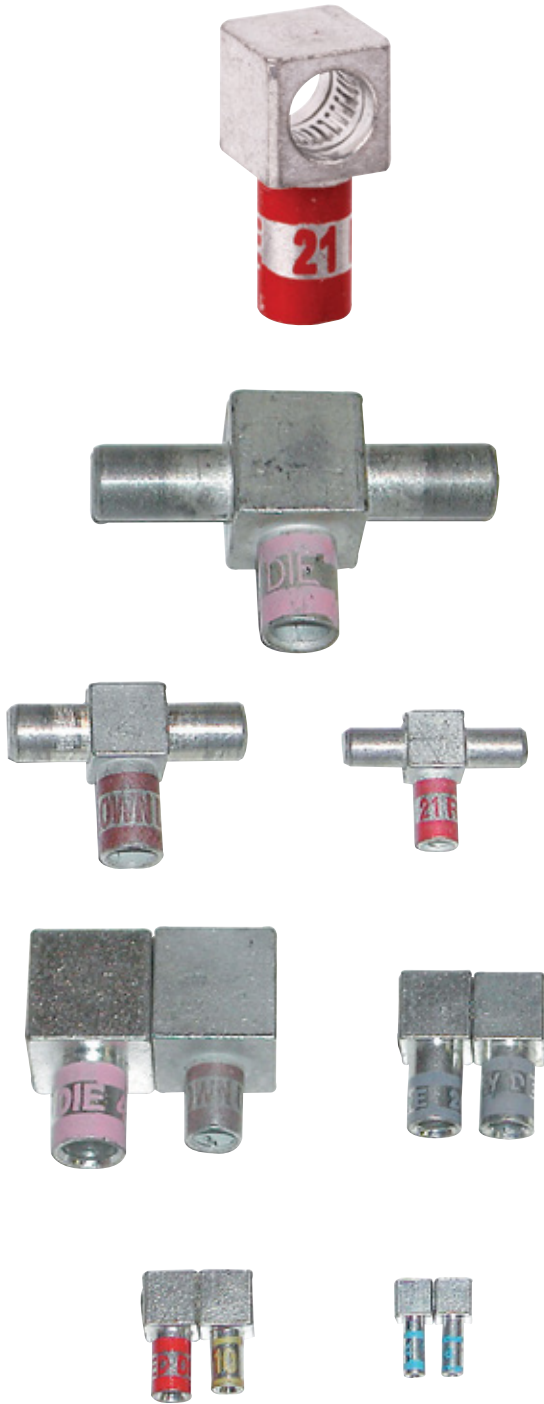
Motor lead disconnect — one line to one load (2 wire) (continued)



Cat. no.									Installing tools	
Female disconnect	Male disconnect	WT112M	TBM6, TBM6S		TBM5	TBM8	6 ton or TBM12 or 13400 hydraulic tools			
		WT111M	Upper die	Lower die	TBM5S	TBM8S	Die code	Color		
		WT2000	TBM45S							
MD1614F-0	MD1614M-0	Blue	—	—	—	—	—	—	—	
MD1614F-1	MD1614M-1	—	—	—	—	—	—	—	—	
MD1210F-1	MD1210M-1	Yellow	—	—	—	—	—	—	—	
MD1210F-2	MD1210M-2	—	—	—	—	—	—	—	—	
MD8F-1	MD8M-1	—	X	13475	13477	13454	13461	21	Red	
MD8F-2	MD8M-2	—	X	13475	13477	13454	13461	21	—	
MD6F-1	MD6M-1	—	X	13475	13477	13454	13461	24	Blue	
MD6F-2	MD6M-2	—	X	13475	13477	13454	13461	24	—	
MD4F-2	MD4M-2	—	X	13472	13476	13454	13461	29	Gray	
MD2F-2	MD2M-2	—	X	13474	13477	13454	13461	33	Brown	
MD2F-3	MD2M-3	—	X	13474	13477	13454	13461	33	—	
MD1F-2	MD1M-2	—	—	13474	13477	13455	13462	37	Green	
MD1F-3	MD1M-3	—	—	13474	13477	13455	13462	37	—	
MD10F-3	MD10M-3	—	—	13475	13477	13455	13462	42	Pink	
MD20F-3	MD20M-3	—	—	13474	13477	13455	13462	45	Black	
MD30F-3	MD30M-3	—	—	13474	13477	13455	13462	50	Orange	
MD40F-3	MD40M-3	—	—	13475	13477	13456	13463	54	Purple	
MD40F-4	MD40M-4	—	—	13475	13477	13456	13463	54	—	
MD250F-4	MD250M-4	—	—	13473	13476	13456	13463	62	Yellow	
MD350F-4	MD350M-4	—	—	13472	13476	13458	13466	71H	Red	
MD500F-4	MD500M-4	—	—	13478	13478	13458	13468	87H	Brown	

Specifications: Wire range: #16 to 4/0 AWG Rating: 600 V, 90 °C

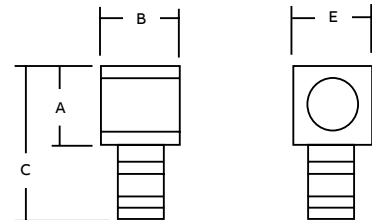
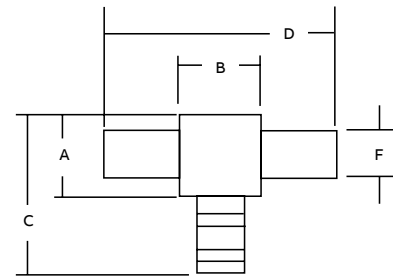
Motor lead disconnects



Motor lead disconnect — one line to two load (3 wire)

- KON-TOUR™ louvered contact bands
- Color coded to match installing dies
- Material: high-conductivity wrought copper
- Finish: electro-tin plate

Diagrams



Motor lead disconnects

Motor lead disconnect — one line to two load (3 wire)



Cat. no.		Dimensions (in.)										Strip length (in.)
Female disconnect	Male disconnect	Wire size (AWG)	Body size	Color code	Boot insulation	A	B	C	D	E	F	
MD1614F-0	M2D1614M-0	#16-#14	0	Blue	MDBOOT-1	0.250	0.250	0.630	0.770	0.250	0.12	3/8
MD1210F-1	M2D1210M-1	#12-#10	1	Yellow	M2DBOOT-1	0.380	0.380	0.780	0.750	0.380	0.25	3/8
MD1210F-2	M2D1210M-2	#12-#10	2	Yellow	M2DBOOT-2	0.500	0.500	0.900	1.500	0.500	0.37	3/8
MD8F-1	M2D8M-1	#8	1	Red	M2DBOOT-1	0.380	0.380	0.820	1.125	0.380	0.25	7/16
MD8F-2	M2D8M-2	#8	2	Red	M2DBOOT-2	0.500	0.500	0.950	1.500	0.500	0.37	7/16
MD6F-1	M2D6M-1	#6	1	Blue	M2DBOOT-1	0.380	0.380	0.875	1.125	0.380	0.25	1/2
MD6F-2	M2D6M-2	#6	2	Blue	M2DBOOT-2	0.500	0.500	1.020	1.500	0.500	0.37	1/2
MD4F-2	M2D4M-2	#4	2	Gray	M2DBOOT-2	0.500	0.500	1.060	1.500	0.500	0.37	1/2
MD2F-2	M2D2M-2	#2	2	Brown	M2DBOOT-2	0.500	0.500	1.090	1.500	0.500	0.37	17/32
MD2F-3	M2D2M-3	#2	3	Brown	M2DBOOT-3	0.875	0.875	1.460	2.630	0.875	0.50	17/32
MD1F-2	M2D1M-2	#1	2	Green	M2DBOOT-2	0.500	0.500	1.230	1.500	0.500	0.37	9/16
MD1F-3	M2D1M-3	#1	3	Green	M2DBOOT-3	0.875	0.875	1.560	2.630	0.875	0.50	9/16
MD10F-3	M2D10M-3	1/0	3	Pink	M2DBOOT-3	0.875	0.875	1.560	2.630	0.875	0.50	9/16
MD20F-3	M2D20M-3	2/0	3	Black	M2DBOOT-3	0.875	0.875	1.590	2.630	0.875	0.50	5/8
MD30F-3	M2D30M-3	3/0	3	Orange	M2DBOOT-3	0.875	0.875	1.710	2.630	0.875	0.50	11/16
MD40F-3	M2D40M-3	4/0	3	Purple	M2DBOOT-3	0.875	0.875	1.810	2.630	0.875	0.50	3/4

Operating range: 600 V max., 1000 V max. in signs and fixtures.
 Listing: UL* Listed and CSA Certified for #12-#8 AWG solid copper conductors and stranded copper conductors in the sizes shown.
 Selection: Always use the same body size when selecting male and female disconnects. For example, to connect a #2 AWG male to a #8 AWG female, select catalog numbers M2D2M-2 and MD8F-2. Both have body size 2.
 Insulation: Use insulating boots matching the disconnect body size as indicated in the chart. To protect the connection from moisture and dirt, use sealing compound (catalog number MDBOOT-SEAL).

Motor lead disconnect — one line to two load (3 wire) (continued)

Cat. no.		Installing tools							
Female disconnect	Male disconnect	WT112M WT111M ERG4002 WT2000	TBM25S	Upper die	Lower die	TBM6 TBM6S	TBM5 TBM5S	TBM8 TBM8S	6 ton or TBM12 or 13400 hydraulic tools
						Die set	Die set	Die set	Die code Color
MD1614F-0	M2D1614M-0	Blue	—	—	—	—	—	—	—
MD1210F-1	M2D1210M-1	—	—	—	—	—	—	—	—
MD1210F-2	M2D1210M-2	Yellow	—	—	—	—	—	—	—
MD8F-1	M2D8M-1	—	X	13475	13477	13454	13461	21	Red
MD8F-2	M2D8M-2	—	X	13475	13477	13454	13461	21	—
MD6F-1	M2D6M-1	—	X	13475	13477	13454	13461	24	Blue
MD6F-2	M2D6M-2	—	X	13475	13477	13454	13461	24	—
MD4F-2	M2D4M-2	—	X	13472	13476	13454	13461	29	Gray
MD2F-2	M2D2M-2	—	X	13474	13477	13454	13461	33	Brown
MD2F-3	M2D2M-3	—	X	13474	13477	13454	13461	33	—
MD1F-2	M2D1M-2	—	—	13474	13477	13455	13462	37	Green
MD1F-3	M2D1M-3	—	—	13474	13477	13455	13462	37	—
MD10F-3	M2D10M-3	—	—	13475	13477	13455	13462	42	Pink
MD20F-3	M2D20M-3	—	—	13474	13477	13455	13462	45	—
MD30F-3	M2D30M-3	—	—	13474	13477	13455	13462	50	Orange
MD40F-3	M2D40M-3	—	—	13475	13477	13456	13463	54	Purple

Motor lead disconnects

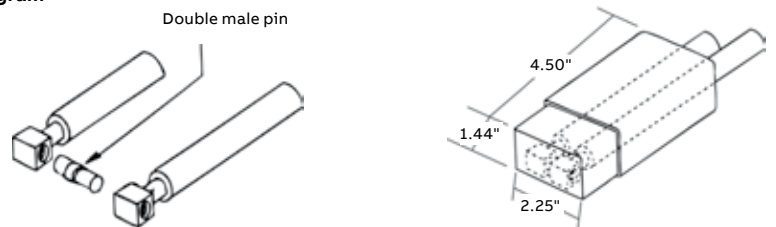


5 kV motor lead disconnect supplied with boot, pin, silicon gel (two female connectors required)



Cat. no.	Wire range (AWG)	Female disconnect cat. no.	Color code	Dimensions (in.)			Body size
				L	W	H	
5KVBOOT-2L	#8	MD8F-2	Red	4.50	2.25	1.44	2
5KVBOOT-2L	#6	MD6F-2	Blue	4.50	2.25	1.44	2
5KVBOOT-2L	#4	MD4F-2	Gray	4.50	2.25	1.44	2
5KVBOOT-2L	#2	MD2F-2	Brown	4.50	2.25	1.44	2
5KVBOOT-2L	#1	MD1F-2	Green	4.50	2.25	1.44	2
5KVBOOT-3L	#2	MD2F-3	Brown	4.50	2.25	1.44	3
5KVBOOT-3L	#1	MD1F-3	Green	4.50	2.25	1.44	3
5KVBOOT-3L	1/0	MD10F-3	Pink	4.50	2.25	1.44	3
5KVBOOT-3L	2/0	MD20F-3	Black	4.50	2.25	1.44	3
5KVBOOT-3L	3/0	MD30F-3	Orange	4.50	2.25	1.44	3
5KVBOOT-3L	4/0	MD40F-3	Purple	4.50	2.25	1.44	3

Diagram



Motor lead disconnect sealant

For easy, reliable sealing of motor disconnect boots.

Specifications

- Description: polybutene compound
- Application temperature: 40 °F to 100 °F
- Service temperature: -40 °F to 180 °F
- Dimensions: width 1", thickness 3/8", length (std. roll) 10', wrapped on release liner
- Environmental resistance: resists normal aging process
- Chemical resistance: resists acids, bases and alcohols
- Dielectric strength: 200 V/mil minimum
- Volume resistivity: 1013 ohms/cm
- Flame retardancy: pass VO vertical flame test.

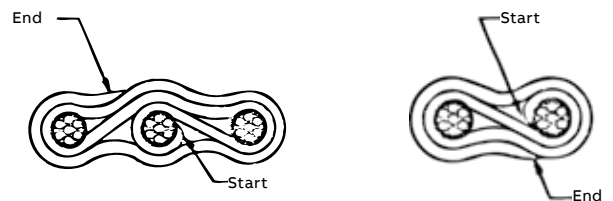
Installation

- Sealant should be used with ABB motor disconnect boots: MDBOOT-0, MDBOOT-1, MDBOOT-2 and MDBOOT-3.
- The cable should be clean and free of grease and other foreign substances.
- Apply two layers around each cable at the same distance from the connector.
- Slide the assembly into boot, apply Ty-Rap® cable ties and work sealant around wires at end of boot to eliminate voids.



Sealant

Cat. number	Description
MDBOOT-SEAL	Sealant



For watertight applications, contact Technical Services.



—

ABB Inc.

Electrification Products
860 Ridge Lake Blvd.
Memphis, TN 38120

Customer Service: 800-816-7809
Technical Support: 888-862-3289

abb.com/lowvoltage