



Cutler-Hammer

Magnum Air Circuit Breakers (IEC) Renewal Parts and Accessories

Renewal Parts

Supersedes RP.22F.01.T.E,
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Description

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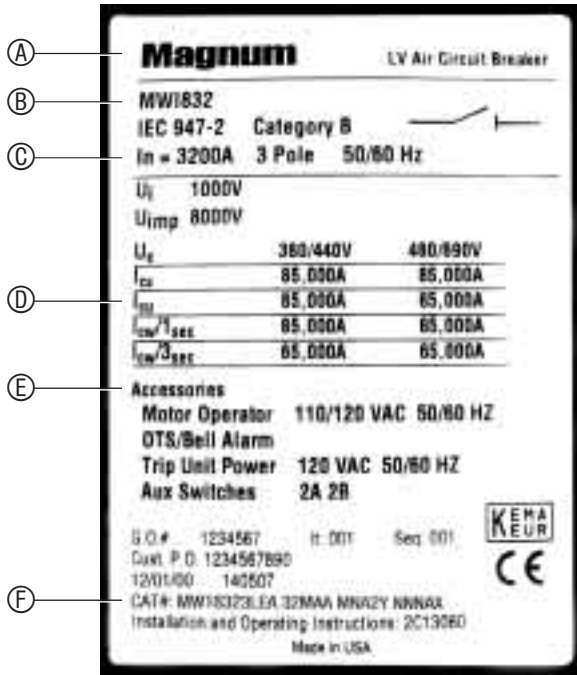
NOTE:

Items in this Renewal Parts Data book are designed for field installation by qualified personnel.

Contact Eaton's Cutler-Hammer business if assistance for field installation is required, or for information about any parts not referenced or identified.



Procedure for Identifying Breaker Type



MWI Type Breaker

- Ⓐ Low voltage air circuit breaker family name
- Ⓑ Breaker family designation number
- Ⓒ Breaker frame size in amperes
- Ⓓ Interrupting capacity rating
- Ⓔ Accessories
- Ⓕ Catalog number

The Catalog Number is a 25-digit number located on the breaker's nameplate.

An example of this number is:

- MWI8323LEA32MAAMNA2YNNNAX

Eaton's Cutler-Hammer Magnum™ circuit breakers can be identified using either the Cat# or the G.O. (General Order Number) which is located on the breaker's nameplate.

An example of this number is:

- G.O. #1234567 It: 001

Ordering Instructions

1. Check the nameplate to identify the type of breaker you have. (If adding accessories or options to existing breakers, you must also provide the information for those accessories.)
2. Identify the part(s) from the photos shown.
3. Determine the Style or Catalog Number for the required parts.
4. Specify the quantity required.
5. Order the parts from your local Cutler-Hammer distributor.
6. State the method of shipment.

IMPORTANT NOTE:

Cutler-Hammer Engineering Services and Systems offers parts installation and authorized repair. Call **1-800-498-2678** for the CHES District Operating Center nearest you.

Non-Warranty Repair

The Cutler-Hammer business offers non-warranty factory repair service for Magnum breakers. A non-warranty breaker is one that has exceeded its original factory warranty.

The non-warranty repair service features:

- Quality Magnum breakers repair specified and audited by factory engineers according to procedures.
- Only genuine new Cutler-Hammer replacement parts.
- Original factory specifications and design drawings used by factory trained technicians.
- One-year factory warranty issued from date of shipment from repair center.
- Repair lead time of four to six weeks.

Magnum Breaker Catalog Identification

Table 1. Catalog Numbering System

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
M	W								A	-														X

3. Type

I = Standard IEC Frame
 K = (1100 V)
 N = Narrow Frame

4. Interrupt/Withstand

4 = 40/40 (MWI only)
 6 = 65/65
 8 = 85/85
 C = 100/85 - 100/100
 E = 150/100

5 and 6. Continuous Amperes

08 = 800
 12 = 1250
 16 = 1600
 20 = 2000
 25 = 2500
 32 = 3200
 40 = 4000 ABCABC
 50 = 5000 ABCABC
 63 = 6300 ABCABC
 4N = 4000 AABBC
 5N = 5000 AABBC
 6N = 6300 AABBC

7. Poles

3 = Three
 4 = Four

8. Mounting Configuration

F = Fixed Front
 H = Fixed Horizontal
 V = Fixed Vertical
 L = Drawout Horizontal

9. Nameplate Language

E = English
 A = Spanish

11 and 12. Sensor/Plugs

NN = None	13 = 1250
02 = 200	16 = 1600
05 = 250	20 = 2000
03 = 300	25 = 2500
04 = 400	30 = 3000
06 = 600	32 = 3200
07 = 630	40 = 4000
08 = 800	50 = 5000
10 = 1000	63 = 6300
12 = 1200	

13 and 14. Trip Unit

NN = Unprotected
 22 = 220 LI
 52 = 520 LSI
 5W = 520i LSiG
 M2 = 520M LSI
 MT = 520M LSI 24/48 Vdc
 MU = 520M LSI 120 Vac
 MV = 520M LSI 240 Vac
 MW = 520Mi LSiG
 MJ = 520Mi LSiG 24/48 Vdc
 MK = 520Mi LSiG 120 Vac
 ML = 520Mi LSiG 240 Vac
 ME = 520M LSiA 24/48 Vdc
 MC = 520M LSiA 120 Vac
 MF = 520M LSiA 240 Vac
 1W = 1150i LSI 24/48 Vdc
 1N = 1150i LSI 120 Vac
 1P = 1150i LSI 240 Vac
 1R = 1150i LSiG/A 24/48 Vdc
 1S = 1150i LSiG/A 120 Vac
 1T = 1150i LSiG/A 240 Vac
 CU = 520MC LSI 120 Vac
 CV = 520MC LSI 240 Vac
 CT = 520MC LSI 24/48 Vdc
 CK = 520MCi LSiG 120 Vac
 CL = 520MCi LSiG 240 Vac
 CJ = 520MCi LSiG 24/48 Vdc
 CC = 520MC LSiA 120 Vac
 CF = 520MC LSiA 240 Vac
 CE = 520MC LSiA 24/48 Vdc

15. Shunt Trip

N = None
 A = 110 - 127 Vac/Vdc
 R = 208 - 240 Vac/Vdc
 C = 24 Vdc
 H = 48 Vdc

16. Motor Operator

M = Manual Operated
 N = 110 - 125 Vac
 W = 110 - 125 Vdc
 T = 220 - 250 Vdc
 P = 220 - 250 Vac
 L = 24 Vdc
 K = 48 Vdc

17. Spring Release

N = None
 A = 110 - 127 Vac/Vdc
 R = 208 - 240 Vac/Vdc
 C = 24 Vdc
 H = 48 Vdc

18. UVR/Second ST

N = None
 A = 110 - 127 Vac (Instant.)
 R = 208 - 240 Vac (Instant.)
 C = 24 Vdc (Instant.)
 H = 48 Vdc (Instant.)
 E = 110 - 125 Vdc (Instant.)
 F = 220 - 250 Vdc (Instant.)
 G = 32 Vdc (Instant.)
 X = 380 - 415 Vac (Instant.)
 J = 480 Vac (Instant.)
 K = 600 Vac (Instant.)
 1 = 110 - 127 Vac/Vdc (2nd ST)
 2 = 208 - 240 Vac/Vdc (2nd ST)
 3 = 24 Vdc (2nd ST)
 4 = 48 Vdc (2nd ST)

19. Auxiliary Switch

N = None
 2 = 2A/2B
 4 = 4A/4B
 6 = 6A/6B

20. OTS/Bell Alarm

N = None — with Trip Indicator
 E = None — without Trip Indicator
 Y = 2 Form C

21. Padlocks

N = None
 M = Metal
 P = Plastic
 C = Close PB Metal
 H = Close PB Plastic

22. Operations Counter / Keylock

X	Counter	Keylock
N	None	None
K	None	Kirk
C	None	Castell
R	None	Ronis
A	Counter	None
Y	Counter	Kirk
L	Counter	Castell
H	Counter	Ronis

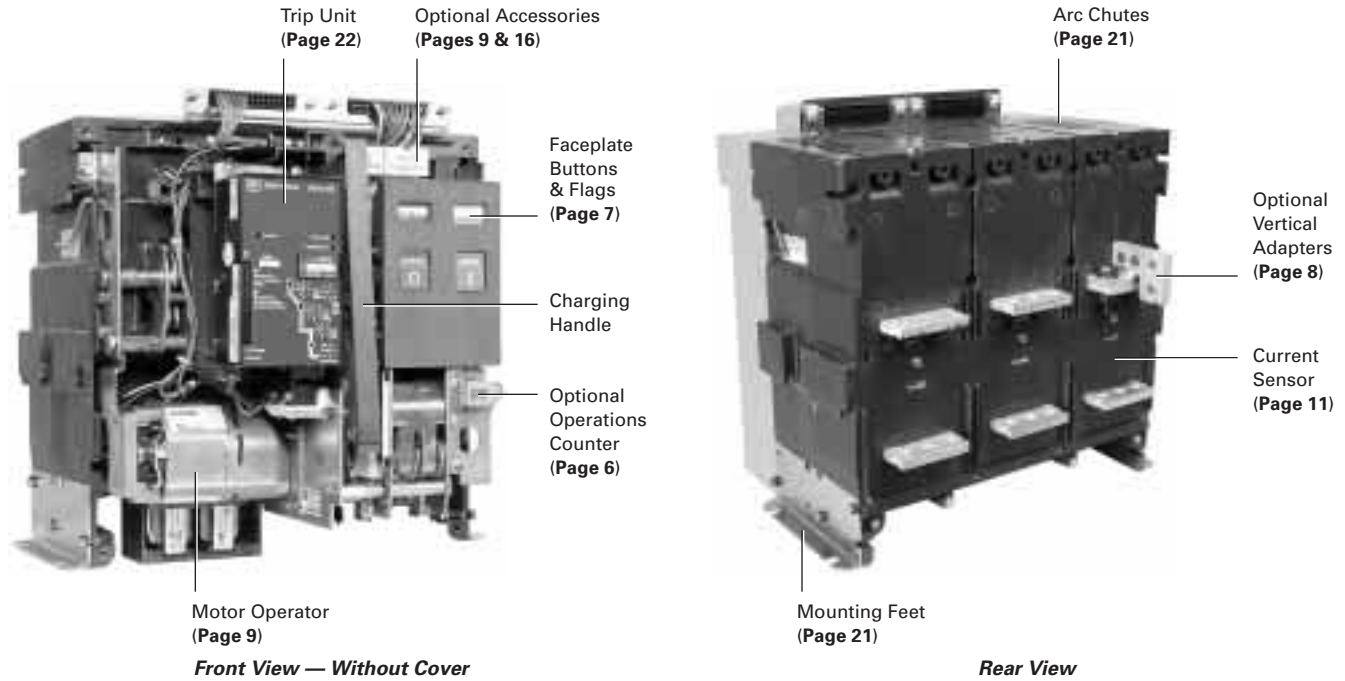
23. Latch Check Switch/Load Side Voltmeter

LCS Connection	Metering TU Volt Configuration (520M, 520MC, or 1150)
N = None	Standard
M = None	Load Side Voltage Metering
L = SR	Standard
Y = SR	Load Side Voltage Metering
C = Cust.	Standard
D = Cust.	Load Side Voltage Metering

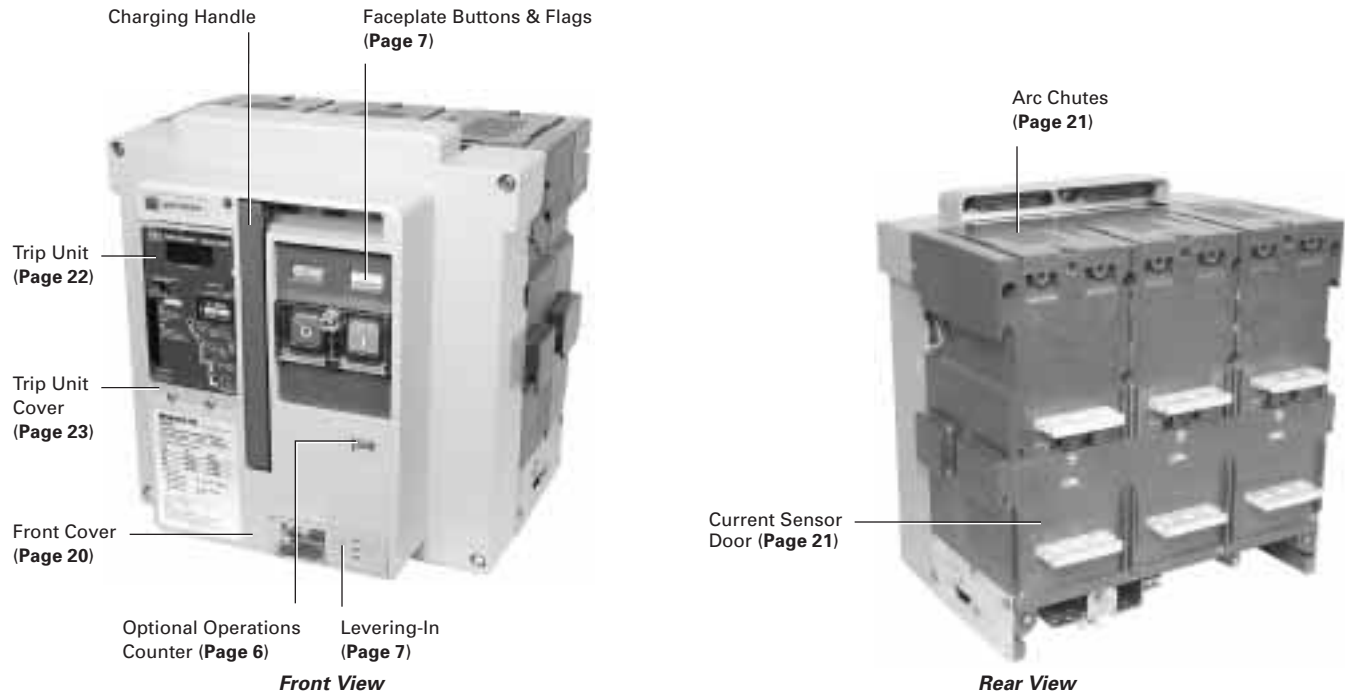
24. Shipping Instructions

A = Breaker Alone
 C = Breaker and Cassette
 P = Breaker in Prewired Cassette
 S = Breaker in Cassette with Shutters
 W = Breaker in Prewired Cassette with Shutters

Magnum Fixed Mounted Breaker (800 – 3200 A) — Standard Frame Shown



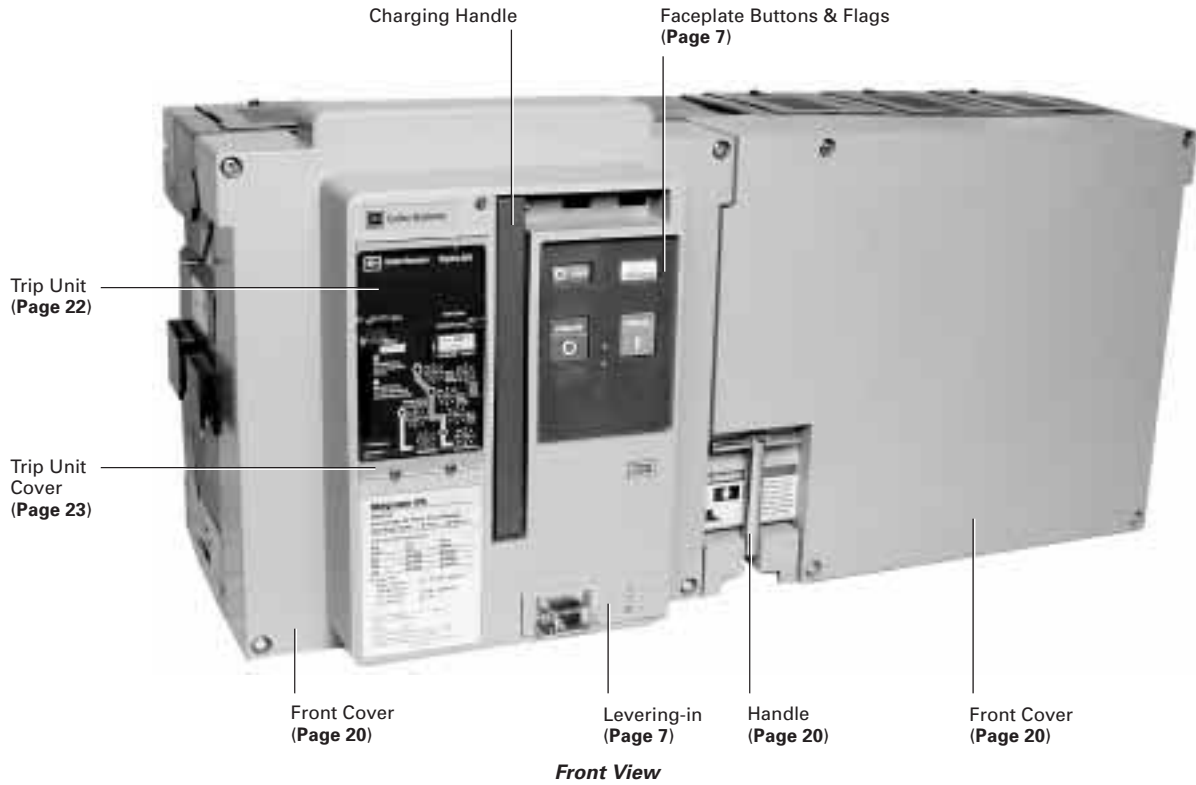
Magnum Drawout Breaker (800 – 3200 A) — Standard Frame Shown



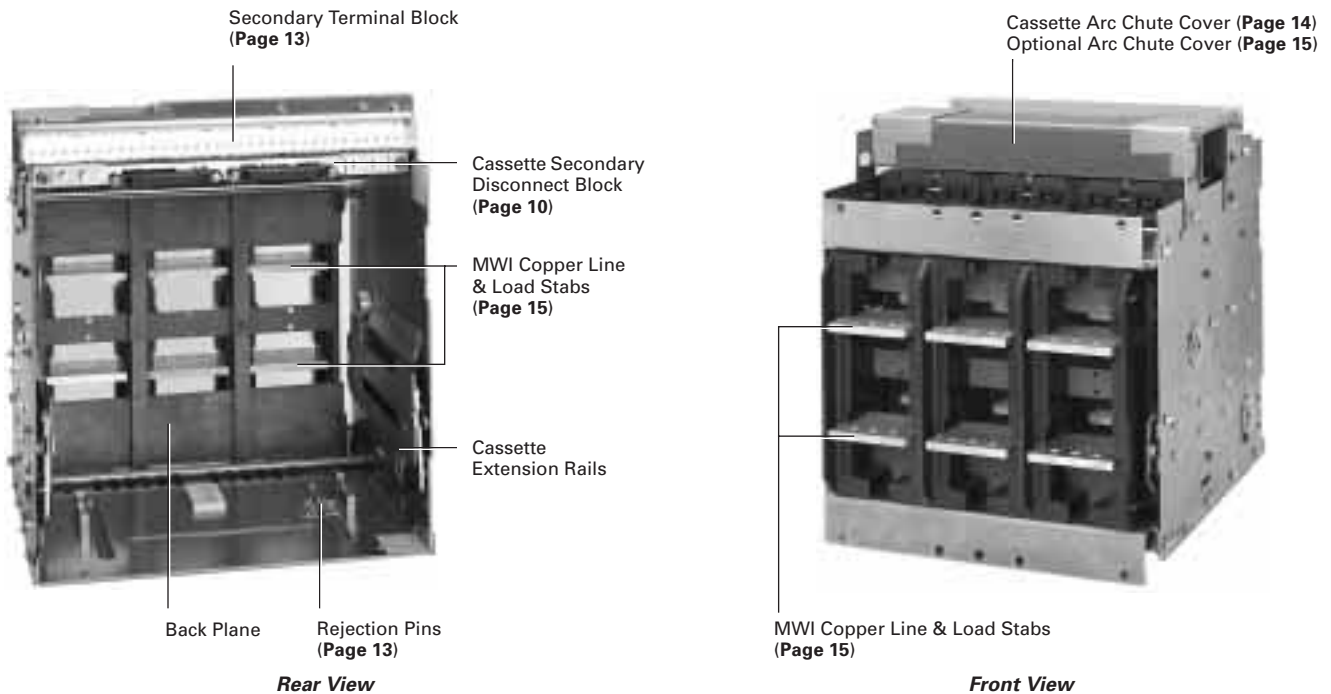
Note: Optional Breaker Key Interlock (not shown).

Note: Optional Breaker Key Interlock (not shown).

Magnum Drawout Breaker (4000 – 6300 A)



Magnum Drawout Cassette (800 – 3200 A) — Standard Frame Cassette Shown ①



① (4000 – 6300 A) not shown.

Breaker Mechanism and Related Parts

Table 2. Accessories Tray

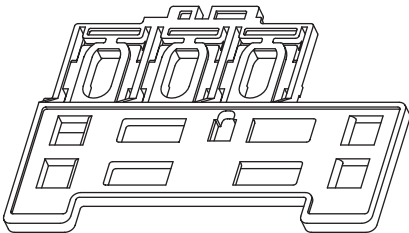
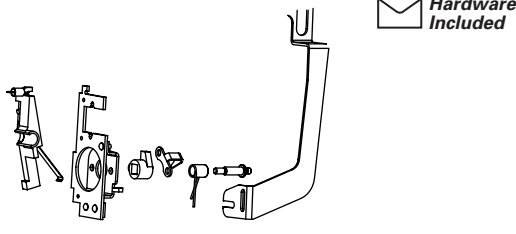
	
Description	Catalog Number
Tray where UVR Shunt, Spring Releases and Auxiliary Switch Mount	2A10891G01

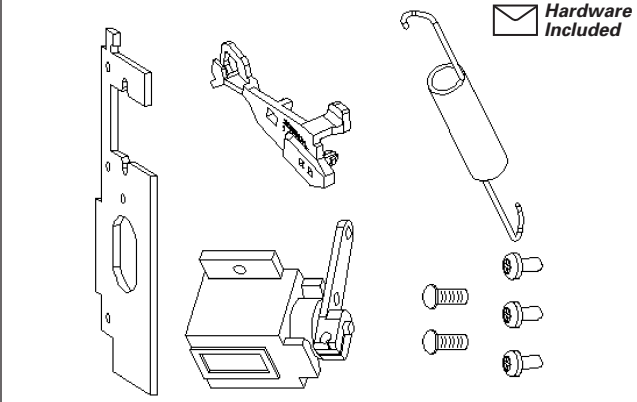
Table 3. Breaker Key Interlock Provision

			
Lock Type	Lock Required ①	Key Required ①	Catalog Number
Ronis	1104A	Protec	MBRLCKR
Castell	CL1019	CL1062	MBRLCKC
Kirk	KC40 --- 10	KC40	MBRLCKK

① The Cutler-Hammer business does not supply lock or key, only the provision.

Note: Castell shown.

Table 4. Operations Counter

	
Description	Catalog Number
Mechanical Counter	MCOUNT

Breaker Mechanism and Related Parts (Continued)

Table 5. Levering Door and Door Mechanism

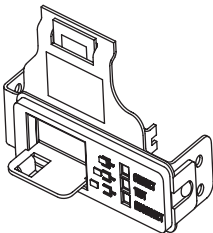

 <div style="float: right;">  Hardware Included </div>	
Breaker Type	Catalog Number
MWI	2A10894G01

Table 6. Levering Mechanism Assembly

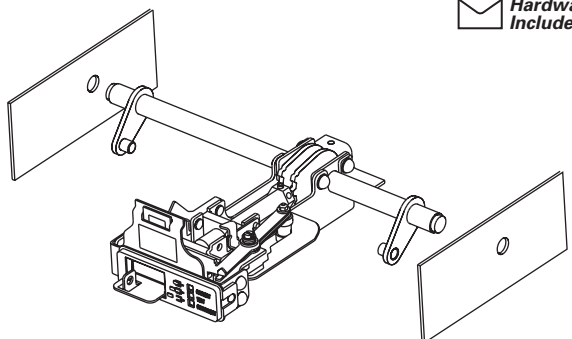

 <div style="float: right;">  Hardware Included </div>				
Breaker Type	Continuous Ampere Rating	Number of Poles	Frame Size	Catalog Number
MWI	Up to 3200	3	STD	2A10855G01
MWI	Up to 3200	4	STD	2A10855G02
MWI	4000 and Above	3	DBL	2A10855G03
MWI	4000 and Above	4	DBL	2A10855G04
MWN	Up to 2000	3	NAR	2A10855G11
MWN	Up to 2000	4	NAR	2A10855G12

Table 7. Opening Spring and Guide

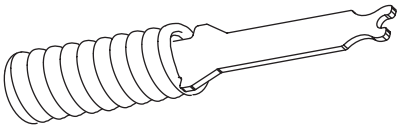
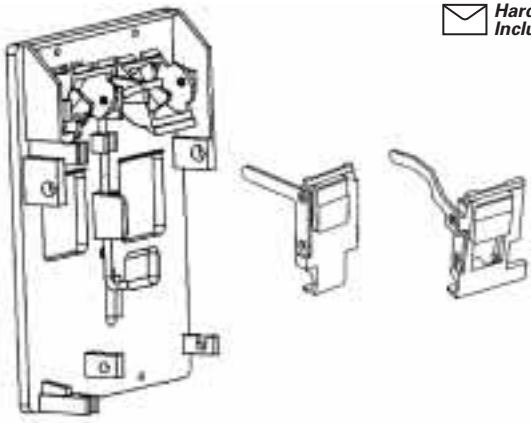

	
Description ^①	Catalog Number
Returns Pole Shaft to Open Position	2A10893G01
^① Need two sets for 4000 amperes and above breakers.	

Table 8. Faceplate, Buttons and Flags

 <div style="float: right;">  Hardware Included </div>	
Description	Catalog Number
Faceplate, Buttons and Flags	2A10895G01

Current Path

Table 9. Breaker Stationary Contact Kit

Continuous Ampere Rating	Interrupting Capacity (kA)	Number of Poles	Frame Size	Catalog Number
800	42	3	STD	2A10896G01
800/1600	65	3	STD	2A10896G02
800/2000	65/85/100	3	STD	2A10896G03
2000	65	3	STD	2A10896G03
2500/3200	65/85/100	3	STD	2A10896G04
800	42	4	STD	2A10896G05
800/1600	65	4	STD	2A10896G06
800/2000	85/100	4	STD	2A10896G07
2000	65	4	STD	2A10896G07
2500/3200	65/85/100	4	STD	2A10896G08
4000	85/100	3	DBL	2A10896G03
5000	85/100	3	DBL	2A10896G04
6300	85/100	3	DBL	2A10896G04
4000	85/100	4	DBL	2A10896G07
5000	85/100	4	DBL	2A10896G08
6300	85/100	4	DBL	2A10896G08
800/1600	Up to 65 kA	3	NAR	2A10896G12
800/1600	Up to 65 kA	4	NAR	2A10896G15

① Not required for narrow frame.

Note: 4000 – 6300 amperes require two kits.

Table 10. Primary Disconnects (Finger Clusters)

Breaker Type	Continuous Ampere Rating	Interrupting Capacity (kA)	Catalog Number	
			3-Poles (Qty. 6)	4-Poles (Qty. 8)
MWI	800/1250	40	2A10898G01	2A10898G05
MWI	800/1250/1600	65	2A10898G02	2A10898G06
MWI	800/1250/1600	85/100	2A10898G03	2A10898G13
MWI	2000A	65/85/100	2A10898G03	2A10898G14
MWI	2500/3200	65/85/100	2A10898G04	2A10898G08
MWI	4000	65	2A10898G03 ②	2A10898G07 ②
MWI	5000/6300	85/100	2A10898G04 ②	2A10898G08 ②
MWN	800/1250	40	2A10898G11	—
MWN	800/1250/1600/2000	50/65	2A10898G12	—
MWN	800/1250	40	—	2A10898G13
MWN	800/1250/1600/2000	50/65	—	2A10898G14

② Order two kits.

Table 11. Breaker Moving Contact Kit

Continuous Ampere Rating	Interrupting Capacity (kA)	Number of Poles	Breaker Type	Catalog Number
800	40	3	STD	2A10897G01
1250	40	3	STD	2A10897G02
800/1250/1600	65	3	STD	2A10897G02
800/2000	85/100	3	STD	2A10897G03
2000	65	3	STD	2A10897G03
2500/3200	65/85/100	3	STD	2A10897G04
800	40	4	STD	2A10897G05
1250	40	4	STD	2A10897G06
800/1250/1600	65	4	STD	2A10897G06
80/2000	85/100	4	STD	2A10897G07
2000	65	4	STD	2A10897G07
2500/3200	65/85/100	4	STD	2A10897G08
800/1600	40/50	3	NAR	2A10897G21
800/2000	65	3	NAR	2A10897G22
2000	50/65	3	NAR	2A10897G22
800/1600	40/50	4	NAR	2A10897G23
800/2000	65	4	NAR	2A10897G24
2000	50/65	4	NAR	2A10897G24
4000	65/85/100	3	DBL	2A10897G09
5000/6300	65/85/100	3	DBL	2A10897G10
4000	65/85/100	4	DBL	2A10897G11
5000/6300	65/85/100	4	DBL	2A10897G12

Table 12. Vertical Adapters for Fixed Breakers and Drawout Cassettes

Continuous Ampere Rating	Interrupting Capacity (kA)	Catalog Number	
		3-Poles (Qty. 6)	4-Poles (Qty. 8)
800 – 1600 A 40/65 kA Only	40/65	MVADP16	MVADP416
800 – 1600 A, 2000 A, 4000 A 85/100 kA Only	85/100	MVADP20	MVADP420
2500 – 3200 A 5000 – 6300 A	65/85/100	MVADP20	MVADP420
3200	65/85/100	MVADP25	MVADP425
4000	65/85/100	MVADP40 ③	MVADP440 ③
5000/6300	65/85/100	MVADP50 ③	MVADP450 ③
Narrow	All Ratings	2A11795G61	2A11795G62

③ Quantity will be 12 for 3-pole or 16 for 4-pole.

Note: For Front Fixed Mounted Connections see Table 32.

Electrical Attachments

Table 13. Shunt Trip (Opening Coil)



Control Voltage	Catalog Number
110 – 127 Vac/Vdc 208 – 240 Vac/Vdc	MST1 MST2
24 Vdc 48 Vdc	MST3 MST4

Table 14. Spring Release (Closing Coil)



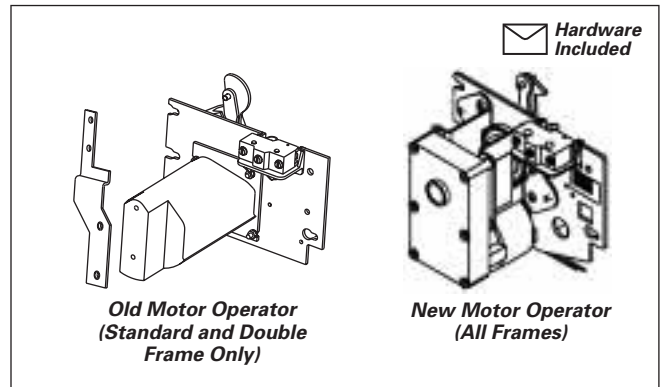
Control Voltage	Catalog Number
110 – 127 Vac/Vdc 208 – 240 Vac/Vdc	MSRA MSRR
24 Vdc 48 Vdc	MSRC MSRH

Table 15. Auxiliary Switch



Description	Catalog Number
2a/2b Contacts	MAUX2

Table 16. Motor Operator



Control Voltage	Catalog Number
110 – 125 Vac 208 – 240 Vac 24 Vdc	MMOTN MMOTP MMOTL
48 Vdc 110 – 125 Vdc 208 – 240 Vdc	MMOTK MMOTW MMOTT

Note: Applicable for all Magnum frames.

Note: Manufacturing change 2nd quarter 2003. The New Motor Operator is a direct replacement and will include all the required materials to mount in the location once housing the Old Motor Operator.

Electrical Attachments (Continued)

Table 17. Undervoltage Release


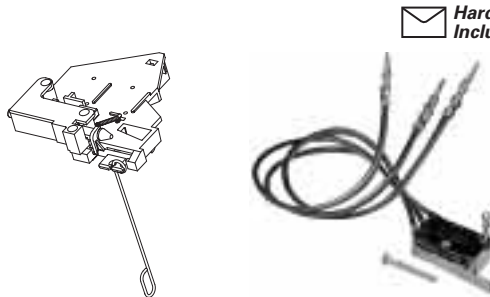

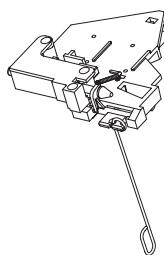

	
Control Voltage	Catalog Number
110 – 125 Vac 208 – 240 Vac 24 Vdc	MUVRA MUVRR MUVRC
32 Vdc 48 Vdc 110 – 125 Vdc	MUVRG MUVRH MUVRE
208 – 240 Vdc 380 – 415 Vac 480 Vac 600 Vac	MUVRF MUVRX MUVRJ MUVRK

Table 18. Breaker Pop-Out Trip Indicator With Switches and Bell Alarm — Overcurrent Trip Switch (OTS)

	
 Hardware Included	
 Breaker Pop-Out Trip Indicator	 Bell Alarm (OTS)
Description	Catalog Number
Breaker Pop-Out Visual Indicator for Overcurrent Trip (No Switches)	MDTRIND
Breaker Pop-Out Visual Indicator for Overcurrent Trip (With Switches)	MDTRINDBA
Bell Alarm Only (2 Form C Alarm Switches)	MOTS ①

① Requires breaker to be equipped with pop-out visual trip indicator assembly.

Table 19. Fixed Breaker Secondary Disconnect Block

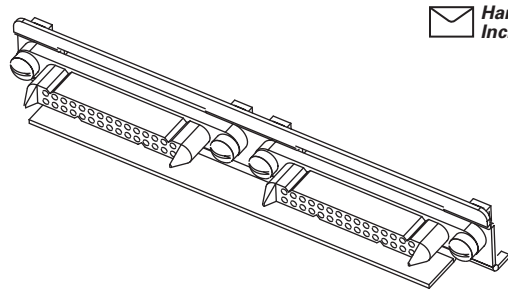

	
 Hardware Included	
Description	Catalog Number
2 – 30 Position Connectors Labeled and Assembled to Mounting Tray	MFXSECTB

Table 20. Breaker Terminal Block Bracket

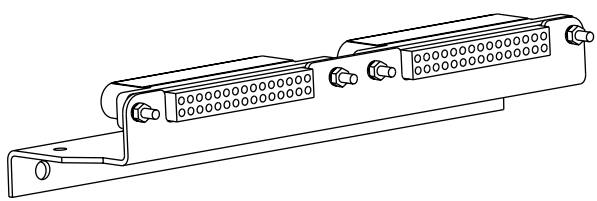




	
 Hardware Included	
Description	Catalog Number
2 – 30 Position Connectors Labeled for External Wiring	MD0ACBSECTB

Table 21. Secondary Repair Kit

	
 Hardware Included	
Description	Catalog Number
Kit Contains: (1) Amp Pin Removal Tool (1) 6 Point Terminal Block (1) 6 Point Blank Label (1) Female 30 Point Amp Connector (1) Male 30 Point Amp Connector (10) Wire Assembly	MSECTOOL

Electrical Attachments (Continued)

Table 22. Current Sensors (CTs) and Rating Plugs




Frame Size Amperes	Sensor and RP Ampere Rating	Contents of Kit		Number of Poles	Frame Type	Catalog Number
		Sensors	Rating Plugs			
Up to 1600	100	3	1	3	NAR	M3NRG0100
Up to 1600	200	3	1	3	NAR	M3NRG0200
Up to 1600	250	3	1	3	NAR	M3NRG0250
Up to 1600	300	3	1	3	NAR	M3NRG0300
Up to 1600	400	3	1	3	NAR	M3NRG0400
Up to 1600	600	3	1	3	NAR	M3NRG0600
Up to 1600	630	3	1	3	NAR	M3NRG0630
Up to 1600	800	3	1	3	NAR	M3NRG0800
Up to 1600	1000	3	1	3	NAR	M3NRG1000
Up to 1600	1200	3	1	3	NAR	M3NRG1200
Up to 1600	1250	3	1	3	NAR	M3NRG1250
Up to 1600	1600	3	1	3	NAR	M3NRG1600
Up to 1600	100	4	1	4	NAR	M4NRG0100
Up to 1600	200	4	1	4	NAR	M4NRG0200
Up to 1600	250	4	1	4	NAR	M4NRG0250
Up to 1600	300	4	1	4	NAR	M4NRG0300
Up to 1600	400	4	1	4	NAR	M4NRG0400
Up to 1600	600	4	1	4	NAR	M4NRG0600
Up to 1600	630	4	1	4	NAR	M4NRG0630
Up to 1600	800	4	1	4	NAR	M4NRG0800
Up to 1600	1000	4	1	4	NAR	M4NRG1000
Up to 1600	1200	4	1	4	NAR	M4NRG1200
Up to 1600	1250	4	1	4	NAR	M4NRG1250
Up to 1600	1600	4	1	4	NAR	M4NRG1600
Up to 3200	100	3	1	3	STD	M3SRG0100
Up to 3200	200	3	1	3	STD	M3SRG0200
Up to 3200	250	3	1	3	STD	M3SRG0250
Up to 3200	300	3	1	3	STD	M3SRG0300
Up to 3200	400	3	1	3	STD	M3SRG0400
Up to 3200	600	3	1	3	STD	M3SRG0600
Up to 3200	630	3	1	3	STD	M3SRG0630
Up to 3200	800	3	1	3	STD	M3SRG0800
Up to 3200	1000	3	1	3	STD	M3SRG1000
Up to 3200	1200	3	1	3	STD	M3SRG1200
Up to 3200	1250	3	1	3	STD	M3SRG1250
Up to 3200	1600	3	1	3	STD	M3SRG1600
Up to 3200	2000	3	1	3	STD	M3SRG2000
Up to 3200	2500	3	1	3	STD	M3SRG2500
Up to 3200	3000	3	1	3	STD	M3SRG3000
Up to 3200	3200	3	1	3	STD	M3SRG3200
Up to 3200	100	4	1	4	STD	M4SRG0100
Up to 3200	200	4	1	4	STD	M4SRG0200
Up to 3200	250	4	1	4	STD	M4SRG0250
Up to 3200	300	4	1	4	STD	M4SRG0300
Up to 3200	400	4	1	4	STD	M4SRG0400
Up to 3200	600	4	1	4	STD	M4SRG0600
Up to 3200	630	4	1	4	STD	M4SRG0630
Up to 3200	800	4	1	4	STD	M4SRG0800

Table 22. Current Sensors (CTs) and Rating Plugs Only

Frame Size Amperes	Sensor and RP Ampere Rating	Contents of Kit		Number of Poles	Frame Type	Catalog Number
		Sensors	Rating Plugs			
Up to 3200	1000	4	1	4	STD	M4SRG1000
Up to 3200	1200	4	1	4	STD	M4SRG1200
Up to 3200	1250	4	1	4	STD	M4SRG1250
Up to 3200	1000	4	1	4	STD	M4SRG1600
Up to 3200	2000	4	1	4	STD	M4SRG2000
Up to 3200	2500	4	1	4	STD	M4SRG2500
Up to 3200	3000	4	1	4	STD	M4SRG3000
Up to 3200	3200	4	1	4	STD	M4SRG3200
4000 – 5000	2000	6	1	3	DBL	M3RRG2000
4000 – 5000	2500	6	1	3	DBL	M3RRG2500
4000 – 5000	3200	6	1	3	DBL	M3RRG3200
4000 – 5000	4000	6	1	3	DBL	M3RRG4000
4000 – 5000	5000	6	1	3	DBL	M3RRG5000
6000	6000	6	1	4	DBL	M3RRG6000
6300	6300	6	1	4	DBL	M3RRG6300
4000 – 5000	2000	6	1	4	DBL	M4RRG2000
4000 – 5000	2500	8	1	4	DBL	M4RRG2500
4000 – 5000	3200	8	1	4	DBL	M4RRG3200
4000 – 5000	4000	8	1	4	DBL	M4RRG4000
4000 – 5000	5000	8	1	4	DBL	M4RRG5000
6000	6000	8	1	4	DBL	M4RRG6000
6300	6300	8	1	4	DBL	M4RRG6300

Table 23. Rating Plugs Only



RP Ampere Rating	Frame Type	Catalog Number
100	NAR/STD	2A11891G22
200	NAR/STD	2A11891G01
250	NAR/STD	2A11891G02
300	NAR/STD	2A11891G03
400	NAR/STD	2A11891G04
600	NAR/STD	2A11891G05
630	NAR/STD	2A11891G06
800	NAR/STD	2A11891G07
1000	NAR/STD	2A11891G08
1200	NAR/STD	2A11891G09
1250	NAR/STD	2A11891G10
1600	NAR/STD	2A11891G11
2000	NAR/STD	2A11891G12
2500	STD	2A11891G13
3000	STD	2A11891G14
3200	STD	2A11891G15
2000	DBL	2A11891G16
2500	DBL	2A11891G17
3200	DBL	2A11891G18
4000	DBL	2A11891G19
5000	DBL	2A11891G20
6000	DBL	2A11891G23
6300	DBL	2A11891G24


Electrical Attachments (Continued)

Table 24. Earth Fault Alarm/Power Supply Module (ATR)




Description	Voltage	Catalog Number
520M Trip Unit	24/48 Vdc	MPRMH
520M/520MC Trip Unit	120 Vac	MPRMA
520M Trip Unit	230 Vac	MPMR

Table 25. Auxiliary Power Module




Description	Catalog Number
120 Vac Input — 32 Vdc Output	PRTAAPM

Table 26. Power Relay Module (ATR) — Standard Frame Only



Description	Voltage	Catalog Number
1150/1150+ Trip Unit	24/48 Vdc	70C1005G01
1150/1150+ Trip Unit	120 Vac	70C1002G01
1150/1150+ Trip Unit	230 Vac	70C1002G02

Table 27. Neutral Current Sensors (Required for Ground Fault)



Ampere Rating	Catalog Number
200	9253C03H01
250	9253C03H02
300	9253C03H03
400	9253C03H04
600	9253C03H05
630	9253C03H14
800	9253C03H06
1000	9253C03H07
1200	9253C03H08
1250	9253C03H15
1600	9253C03H09
2000	9253C03H10
2500	9253C03H11
3000	9253C03H12
3200	9253C03H13
4000 ①	9253C03H10
5000 ①	9253C03H11

① Quantity of two required.

Cassette (Cell) Attachments

Table 28. Secondary Terminal Block Kit

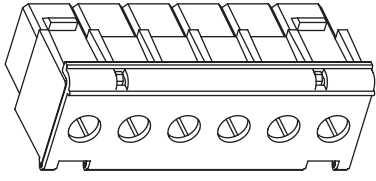
	
Description	Catalog Number
15 (6 Point) Terminal Blocks and Labels	MSECBK

Table 29. Secondary Terminal Wire Kit

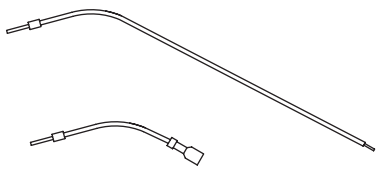
	
Description	Catalog Number
90 Wires with Terminal Connectors (Amp and Fasten on Opposite Ends)	MSECWR
30 Wires – 40-Inch Long (Amp Pin — One End Only)	MWK40

Table 30. Cassette Secondary Disconnect Block

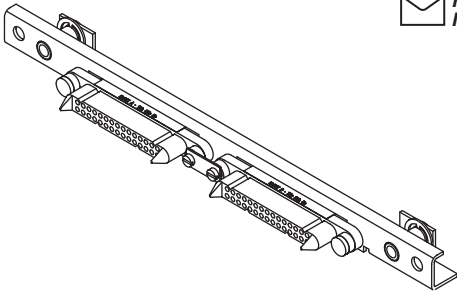

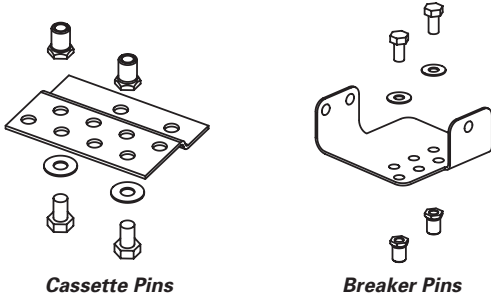

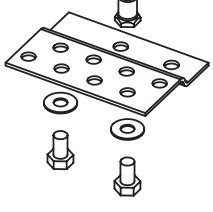
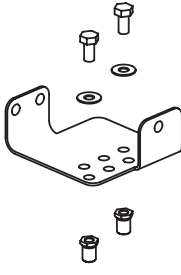
		
 <i>Hardware Included</i>		
Description	Frame Type	Catalog Number
2 – 30 Position Connectors to Wire to Customer Secondary Terminals	STD NAR	MDOCASSECTB MDNCASSECTB

Table 31. Cell Rejection Pins

		
 <i>Hardware Included</i>		
		
		
Description	Frame Type	Catalog Number
Cassette Pins	STD	MCELLREJBK
Breaker Pins	STD	2A11893G01
Breaker Pins	NAR	2A11893G92

Cassette (Cell) Attachments (Continued)

Table 32. Front Mounted Terminals

Cassette Shown for Reference Only

Hardware Included

Terminal Adapter Kit Type	Fixed Magnum Frame Type	Breaker Poles	Continuous Current (A)	Short Circuit Rating (kA)	Catalog Number
Front Mount	NAR	3	800 – 1200	Up to 65	NFC312KT
Front	NAR	3	1600 – 1200	Up to 65	NFC320KT
Front	STD	3	800 – 2500	65	SFNTC325
Front	STD	3	800 – 3200	85 – 100	SFNTC332
Front	DBL	3	4000	85 – 100	④
Front	DBL	3	5000	All	④
Front	NAR	4	800 – 1200	Up to 65	NFC412KT
Front	NAR	4	1600 – 2000	Up to 65	NFC420KT
Front Mount	STD	4	800 – 2500	65	SFNTC425
Front Mount	DBL	4	800 – 3200	85 – 100	SFNTC432
Front Mount	DBL	4	4000	All	④
Front Mount	DBL	3	5000	All	④

- ① 800 – 1250 amperes.
- ② 1600 – 2500 amperes, 4000 – 5000 amperes.
- ③ 3000 – 3200 amperes, 6300 amperes.
- ④ Contact the Cutler-Hammer business.

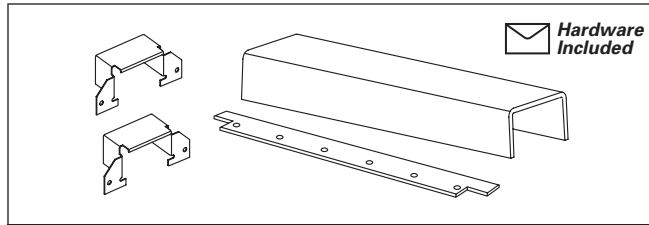
Table 33. Cassette Arc Hood Kit

Hardware Included

Ampere Rating	Breaker Type	Number of Poles	Catalog Number
Up to 3200	STD	3	2A11853G05
Up to 3200	STD	4	2A11853G06
4000 and Above	DBL	3	2A11853G07
4000 and Above	DBL	4	2A11853G08
Up to 2000	NAR	3	2A11853G15
Up to 2000	NAR	4	2A11853G05

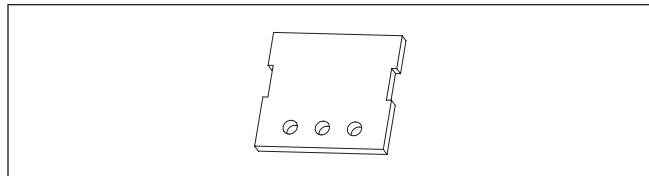
Cassette (Cell) Attachments (Continued)

Table 34. 1100 Volt Arc Hood Barrier Kit



Description	Number of Poles	Frame Type	Catalog Number
1100 Volt Arc Hood Kit	3	STD	MKBK3
1100 Volt Arc Hood Kit	4	STD	MKBK4

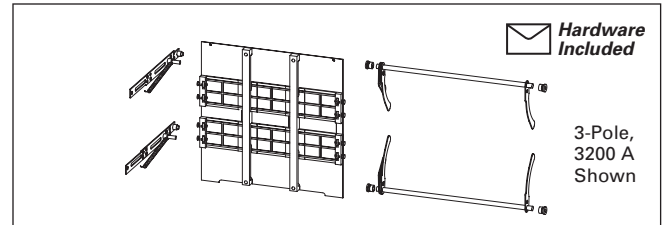
Table 35. MWI Type Copper Line and Load Stabs Kit (2 per Kit) — Standard Frame Shown



Stab Thickness Inches (mm)	Frame Type	Catalog Number
3/8 (9.5)	STD	2A10857G01
1 (25.4)	STD	2A10857G02
3/8 (9.5)	NAR	2A10857G03
3/8 (9.5)	DBL 4000 A	2A10857G01 ①
1 (25.4)	DBL 5000 – 6300 A	2A10857G02 ①

① 2 kits required on double frame design.

Table 36. MWI Type Cassette Shutters

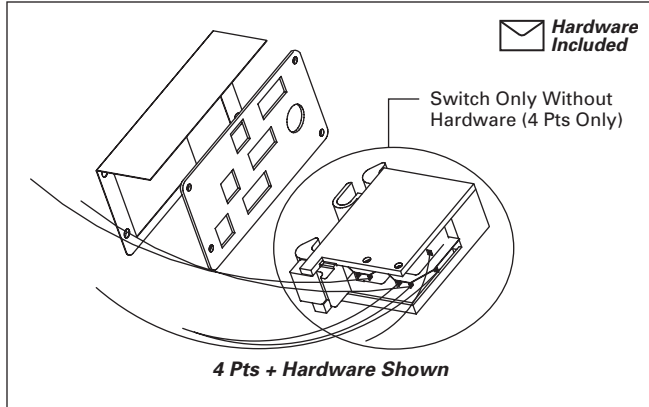


Ampere Rating	Frame Type	Number of Poles	Catalog Number
Up to 3200	STD	3	MISHTR332
Up to 3200	STD	4	MISHTR432
4000 – 6300	DBL	3	MISHTR363
4000 – 6300	DBL	4	MISHTR463
Up to 2000	NAR	3	MDNSHTR3P
Up to 2000	NAR	4	MDNSHTR4P

3-Pole, 3200 A Shown

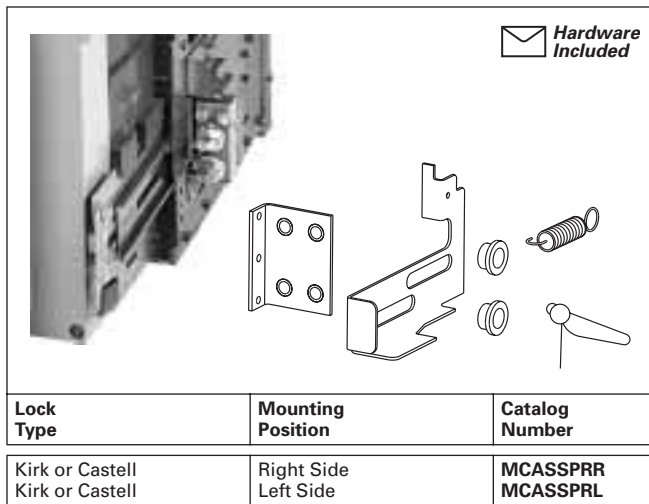
Breaker Accessories

Table 37. Cell Switch Kit



Breaker Type	Frame Type	Description	Catalog Number
MWI	STD/NAR	4 Pt. Switch + Hardware	M4CS
MWI	STD	8 Pt. Switch + Hardware	M8CS
MWI	STD	12 Pt. Switch + Hardware	M12CS
MWI	STD	4 Pt. Switch Only	MICELLSW

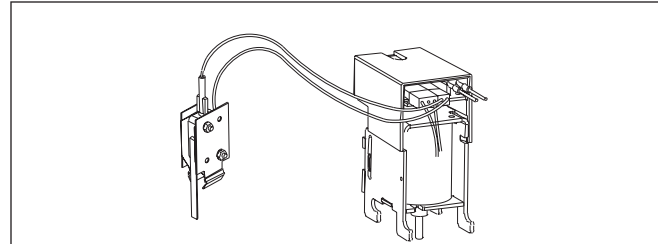
Table 38. Cassette Lock Provision ①



Lock Type	Mounting Position	Catalog Number
Kirk or Castell	Right Side	MCASSPRR
Kirk or Castell	Left Side	MCASSPRL

① The Cutler-Hammer business does not supply lock or key, only the provision. For Kirk, use lock Catalog Number KFL000021 for 2 cylinder and KFL000010H for 1 cylinder. For Castell, use lock Catalog Number F08000.

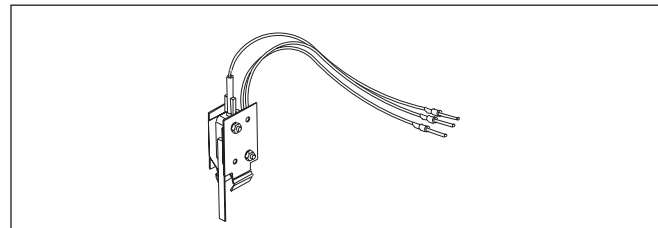
Table 39. Latch Check Switch for Use with Spring Release ②



Breaker Type	Catalog Number
MWI	MLSC1

② Spring release sold separately.

Table 40. Latch Check Switch With One Form C Contact for Remote Indication



Breaker Type	Catalog Number
MWI	MLSC2

External Accessories

Table 41. Door Escutcheon With Gasket

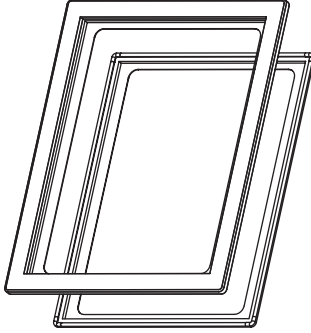

  Hardware Included	
Description	Catalog Number
Provides Protection Against Dust and Dripping Water (IP42)	MDES

Table 42. Padlockable Pushbutton Cover

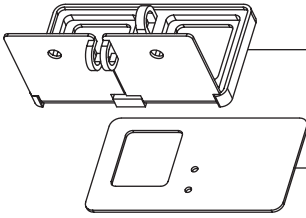

  Hardware Included	
<p>Frame</p> <p>"CLOSED" Button Cover</p>	
Description	Catalog Number
Metal Frame with Blocked Close Button Cover Plastic Frame with Blocked Close Button Cover	MCOVC MCOVH

Table 43. IP54 Cover Kit (Translucent)

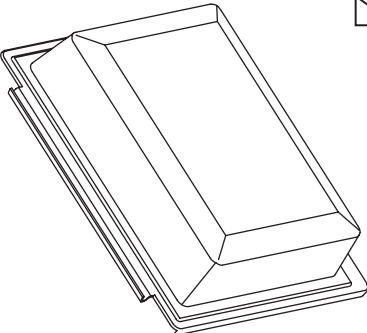

  Hardware Included	
Description	Catalog Number
Provides Protection Against Dust and Dripping Water (IP54)	MDESC

Table 44. CT Shorting and Jumper Block Kit

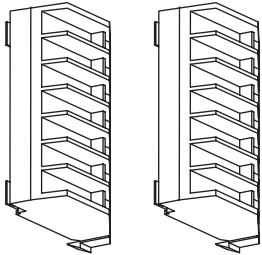

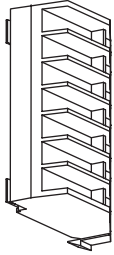

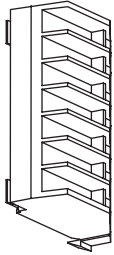

  Hardware Included	
Description	Catalog Number
Interstructure Wiring Terminations	MSJB

Table 45. CT Jumper Block Kit ^①

  Hardware Included	
Description	Catalog Number
Cell to Cell Wiring Terminations	MJB

^① Included in CT Shorting and Jumper Block Kit.

Table 46. CT Shorting Block ^②

  Hardware Included	
Description	Catalog Number
Metering CT Wire Termination	MSB

^② Included in CT Shorting and Jumper Block Kit.

Mechanical Interlock Configurations

Table 47. Mechanical Interlock Configurations — Some Assembly Required

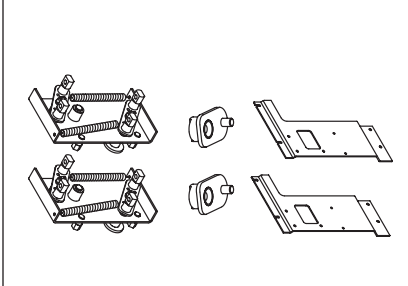
Type of Interlock	Typical Circuit	Interlocks Possible																								
<p>Type 2</p> <p>Across Two Circuit Breakers One normal power supply and one emergency power supply.</p>		<p>Circuit breaker A can only be closed if B is open and vice versa.</p> <p>A = Normal power supply. B = Emergency power supply.</p> <table border="1"> <thead> <tr> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> </tr> </tbody> </table>	A	B	0	0	1	0	0	1																
A	B																									
0	0																									
1	0																									
0	1																									
<p>Type 31</p> <p>Across Three Circuit Breakers Two normal power supplies and one emergency power supply.</p>		<p>Circuit breaker A and C can only be closed if B is open. B can only be closed when A and C are open.</p> <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> </tbody> </table>	A	B	C	0	0	0	1	0	0	0	1	0	0	0	1	1	0	1						
A	B	C																								
0	0	0																								
1	0	0																								
0	1	0																								
0	0	1																								
1	0	1																								
<p>Type 32</p> <p>Across Three Circuit Breakers The two half-bus bars can be powered by a single transformer (bus-tie closed) or by both at the same time (bus-tie open).</p>		<p>One or two circuit breakers out of three can be closed at the same time.</p> <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> </tbody> </table>	A	B	C	0	0	0	1	0	0	0	1	0	0	0	1	1	1	0	0	1	1	1	0	1
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1	1	0																								
0	1	1																								
1	0	1																								
<p>Type 33</p> <p>Across Three Circuit Breakers Three power supplies (generators or transformers) on the same bus bar, making operation in parallel impossible.</p>		<p>Only one of three circuit breakers can be closed.</p> <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> </tbody> </table>	A	B	C	0	0	0	1	0	0	0	1	0	0	0	1									
A	B	C																								
0	0	0																								
1	0	0																								
0	1	0																								
0	0	1																								

Mechanical Interlock — External Accessories

Mechanical Interlock Assembly Kits — For Fixed Breakers

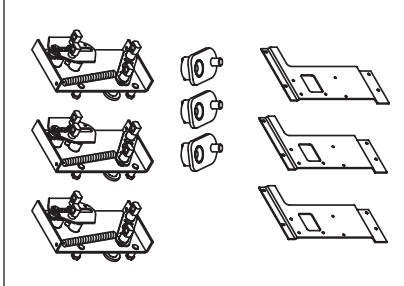
Note: Will also require rod or cable kits.

Table 48. 2-Way Fixed Breakers



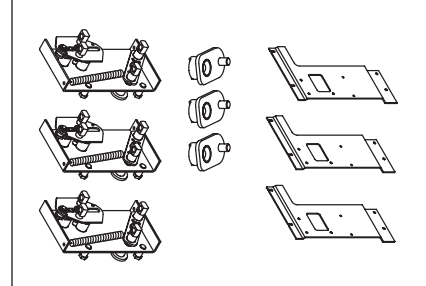
Type	Catalog Number
Rod (Requires 1 Rod Kit)	MI2FR
Cable (Requires 1 Cable Kit)	MI2FC

Table 49. 3-Way Fixed Breakers



Type	Catalog Number
Cable Type 31 (Requires 2 Cable Kits)	MI31FC
Cable Type 33 (Requires 3 Cable Kits)	MI33FC

Table 50. 3-Way Fixed Breakers

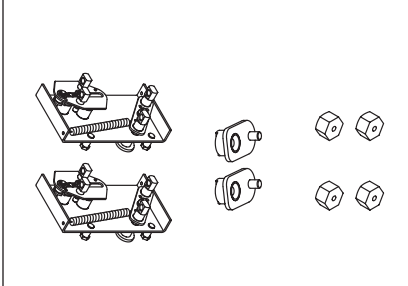


Type	Catalog Number
Cable Type 32 (Requires 3 Cable Kits)	MI32FC

Mechanical Interlock Assembly Kits — For Drawout Breakers

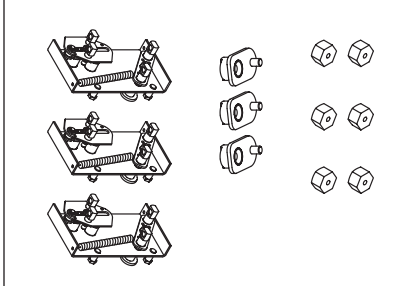
Note: Will also require rod or cable kits.

Table 51. 2-Way Drawout Breakers



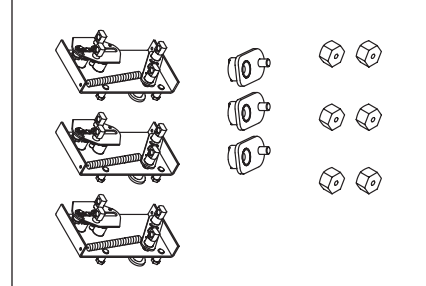
Type	Catalog Number
Rod (Requires 1 Rod Kit)	MI2DR
Cable (Requires 1 Cable Kit)	MI2DC

Table 52. 3-Way Drawout Breakers



Type	Catalog Number
Cable Type 31 (Requires 2 Cable Kits)	MI31DC
Cable Type 33 (Requires 3 Cable Kits)	MI33DC

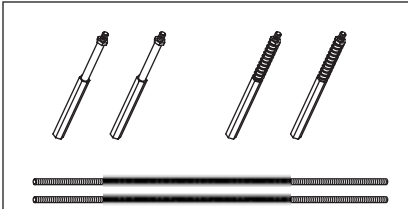
Table 53. 3-Way Drawout Breakers



Type	Catalog Number
Cable Type 32 (Requires 3 Cable Kits)	MI32DC

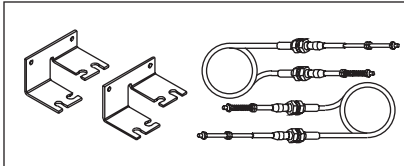
Rod or Cable Kits — Required for Mechanical Interlock Assembly Kits Above

Table 54. Rod Kit



Rod Type in Feet (m)	Catalog Number
2 Rods — 3 (0.9) Each	MIR

Table 55. Cable Kits



Cable Type in Feet (m)	Catalog Number
2 Cables — 5 (1.5) Each	MIC5
2 Cables — 6 (1.8) Each	MIC6
2 Cables — 8 (2.4) Each	MIC8
2 Cables — 10 (3.0) Each	MIC10

Basic Breaker Parts

Table 56. Breaker Front Cover

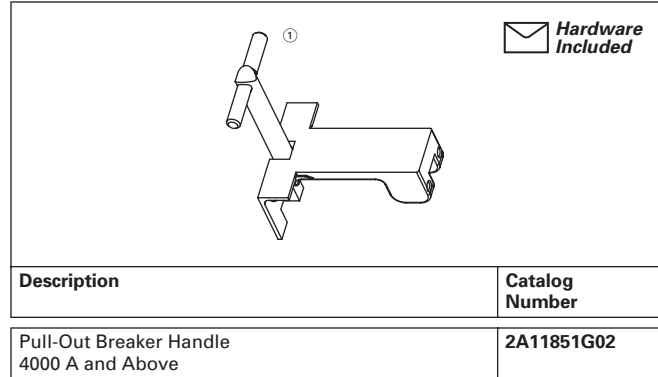


Breaker Type	Ampere Rating	Frame Type	Number of Poles	Catalog Number
MWI	Up to 3200	STD	4	2A11894G05
MWI	Up to 3200	STD	3	2A11894G06
MWI	4000 - 6300	DBL	4	2A11894G07
MWI	4000 - 6300	DBL	3	2A11894G08
MWN	Up to 2000	NAR	4	2A11894G11
MWN	Up to 2000	NAR	3	2A11894G12

Note: G.O.#, item and sequence # must be supplied in order for the proper nameplate to be applied.

Note: Includes mounting screws.

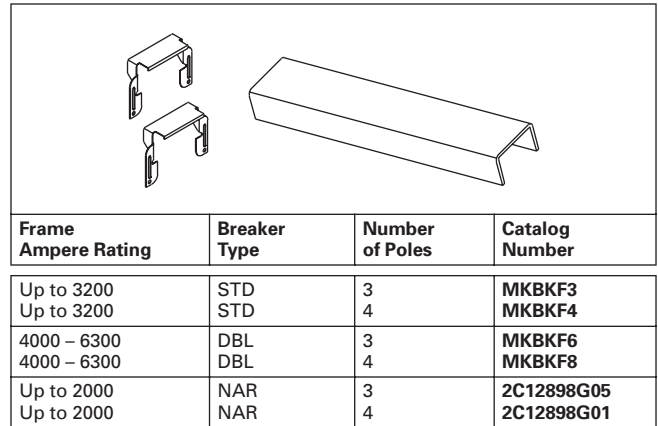
Table 57. Center Pull Handle



Description	Catalog Number
Pull-Out Breaker Handle 4000 A and Above	2A11851G02

① Double wide only.

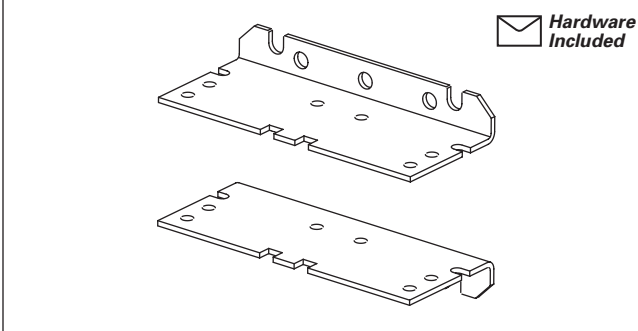
Table 58. Fixed Breaker Arc Hood



Frame Ampere Rating	Breaker Type	Number of Poles	Catalog Number
Up to 3200	STD	3	MKBKF3
Up to 3200	STD	4	MKBKF4
4000 - 6300	DBL	3	MKBKF6
4000 - 6300	DBL	4	MKBKF8
Up to 2000	NAR	3	2C12898G05
Up to 2000	NAR	4	2C12898G01

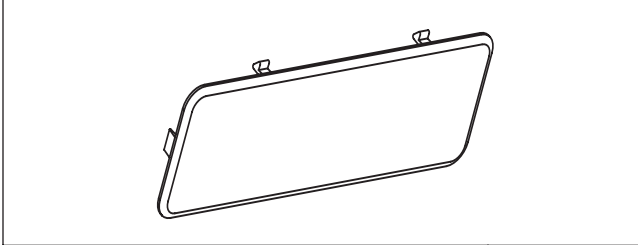
Basic Breaker Parts (Continued)

Table 59. Fixed Breaker Mounting Feet



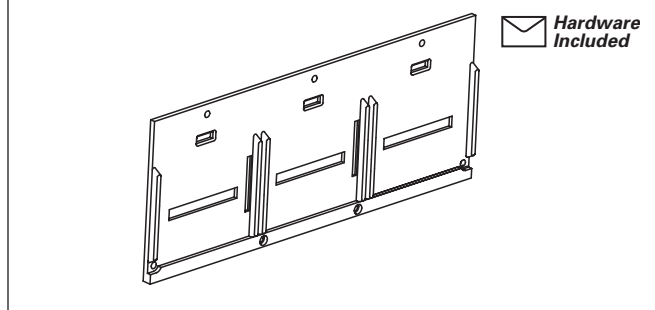
Description	Catalog Number
Mounts Fixed Breaker to Floor	2A10851G01

Table 60. Levering-In Blank Cover for Fixed Breakers



Breaker Type	Catalog Number
MWI	2C12815H01

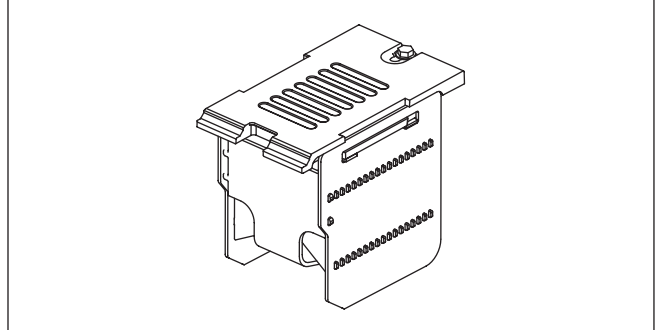
Table 61. Breaker Current Sensor Door



Breaker Continuous Ampere Rating	Number of Poles	Breaker Type	Catalog Number
800 – 2000	3	STD	2A10853G04
800 – 2000	4	STD	2A10853G03
2500 – 3200	3	STD	2A10853G02
2500 – 3200	4	STD	2A10853G01
4000	3	DBL	2A10853G04 ①
4000	4	DBL	2A10853G03 ①
6300	3	DBL	2A10853G02 ①
6300	4	DBL	2A10853G01 ①
800 – 1600	3	NAR	2A10853G05
800 – 1600	4	NAR	2A10853G06

① Order two kits.

Table 62. Arc Chutes ②



Number of Poles	Quantity	Breaker Type	Catalog Number ③
3	3	STD	2A11895G01
4	4	STD	2A11895G02
3	3	NAR	2A11895G03
4	4	NAR	2A11895G04

② Includes mounting screws.

③ For 4000 amperes and above, order two kits.

Trip Units

Table 63. Digitrip™ 220+



Description	Catalog Number
220 LI	2A11799G01

Table 64. Digitrip 520i



Description	Catalog Number
520 LSI 520i LSIG	2A11799G10 2A11799G12

Table 65. Digitrip 520M



Description	Catalog Number
520M LSI 520M LSIA 520Mi LSIG	2A11799G20 2A11799G23 2A11799G22

Table 66. Digitrip 520MC



Description	Catalog Number
520MC LSI 520MC LSIA 520MCi LSIG	2A11799G30 2A11799G33 2A11799G32

Table 67. Digitrip 1150i



Description	Catalog Number
1150 LSI 1150i LSI 1150i LSIG/LSIA	2A11799G40 2A11799G43 2A11799G44

Trip Units (Continued)

Table 68. Non-Automatic Trip Unit Covers

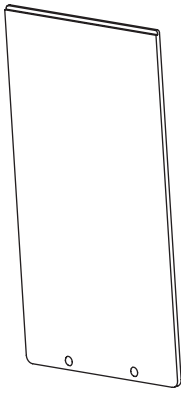

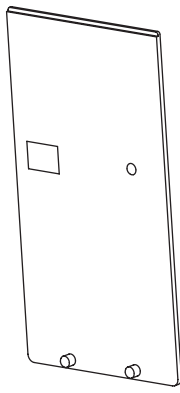

		 <i>Hardware Included</i>
Breaker Type	Catalog Number	
MWI	MTUNACI	

Table 69. Trip Unit Covers

		 <i>Hardware Included</i>
Trip Unit Type	Catalog Number	
220+/520/520M/520MC 1150+ ①	M220520CVR M1150CVR	

① STD/DBL frame only.

Note: Clear cover includes mounting screws.

Magnum Test Accessories

Table 70. Hand-Held Tester



Description	Catalog Number
Magnum Functional Test Kit	MTST1

Table 71. Trip Link Cable



Description	Catalog Number
Trip Link Cable	TRIPLINK

Table 72. DSII Portable Tester Kit



Description	Catalog Number
Can be Used on Magnum — Includes Tester Adapter Cable	8779C02G05

Table 73. Tester Adapter Cable



Description	Catalog Number
Includes Secondary Receptacle	8779C02G04

Table 74. Digital Relay Module



Description	Catalog Number
Digital Relay Module (Used with DT 1150)	70C1142G51

Table 75. Modbus® Translator Module



Description	Catalog Number
Modbus mMINT (Translates to MODBUS)	MMINT

Kirk is a registered trademark of the Kirk Key Interlock Company LLC.

Modbus is a registered trademark of Modicon, a division of Schneider Electric Industries SA.

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