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### 600V Circuit Breakers



#### Sentron MD Breakers

##### Selection and ordering data

	480V	600V
MD, SMD6	50KAIC	25KAIC
HMD, SHMD6	65KAIC	50KAIC
CMD, SCMD6	100KAIC	65KAIC

2- & 3-pole up to 800A for circuit protection up to 600 volt circuits (UL/CSA)



#### Sentron ND Breakers

##### Selection and ordering data

	480V	600V
ND, SND6	50KAIC	25KAIC
HND, SHND6	65KAIC	50KAIC
CND, SCND6	100KAIC	65KAIC

2- & 3-pole up to 1600A for circuit protection up to 600 volt circuits (UL/CSA)



#### Sentron PD Breakers

##### Selection and ordering data

	480V	600V
PD, SPD6	50KAIC	25KAIC
HPD, SHPD6	65KAIC	50KAIC
CPD	100KAIC	65KAIC

2- & 3-pole up to 1600A for circuit protection up to 600 volt circuits (UL/CSA)

### 600V Circuit Breakers



#### Sentron RD Breakers

##### Selection and ordering data

	480V	600V
RD	50KAIC	25KAIC
HRD	65KAIC	50KAIC

2- & 3-pole up to 2000A for circuit protection up to 600 volt circuits (UL/CSA)

#### Sentron Circuit Breakers: Additional Information

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Introduction

Ordering

In the FD through RD frames, you may order molded case circuit breakers three basic ways:

- As separately ordered frames, trip units and lugs
- As frame, trip unit and lugs ordered as one catalog number and shipped unassembled or assembled
- As Frame and Trip Unit shipped assembled and with the trip unit made non-removable, in compliance with UL 489 requirements that to be reverse fed the circuit breaker must not have an interchangeable trip unit.

These two options are described in the following:

**Components Ordered Separately**

To get the components for a 3-pole, 400 Amp standard interrupting circuit breaker, you would order the frame (JD63F400), the trip unit (JD63T400) and six lugs (TA2J6500). This option is normally useful only if you stock and use large volumes of product and wish to reduce your inventory cost. You may stock, for example, a smaller number of frames (JD63F400) and a variety of trip units (JD63T300, JD63T350, etc.) and assemble breakers as you need them.

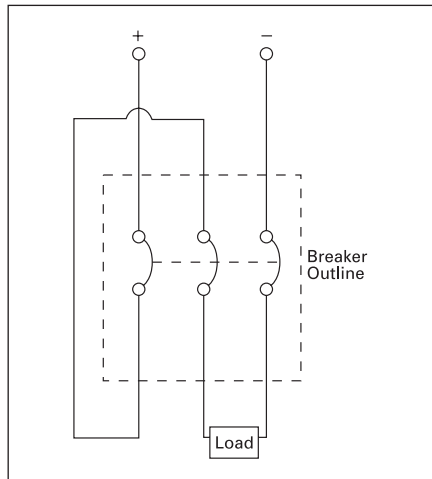
**Frame, Trip Unit and Lugs Ordered Together**

If you order the catalog number JD63B400, you will receive a frame, a trip unit and 6 lugs in separate packages. By suffixing this number with "L" (e.g. JD63B400L), you will receive frame, trip unit and lugs assembled in one container. Pursuant to UL 489, a product ordered thus will have the markings "LINE" and "LOAD", and may not be "reverse fed" (with power flowing from the "OFF" end of the breaker toward the "ON" end).

**Non-Interchangeable Trip Breakers**

If you place an "X" after the frame size designator (e.g. JXD63B400), you will receive a frame and trip unit assembled, with the trip unit made non-removable. If you suffix an "L" to this catalog number (e.g. JXD63B400L), you will receive the breaker, non-removable trip unit and lugs assembled. Unless you anticipate a specific need to change the breaker's ampere rating in the future, this is the preferred ordering method, as the products are assembled to Siemens' specifications in our factories. These breakers are suitable for use reverse fed according to UL 489, since the trip unit is not removable.

The smaller frames (QJ, ED and below) do not have removable trip units, and consequently are shipped only as assembled products. To add lugs, see the ordering instructions on each product's catalog page.

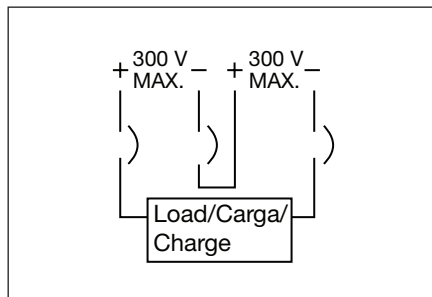


500V DC Wiring Configuration

**Connecting Breakers for DC Application**

Most Siemens thermal magnetic trip MCCBs are applicable on direct current (dc) systems. Generally, for 250 V dc systems a two pole breaker is used, with one pole on each leg of the supply circuit. For three pole breakers applied on 500 V undergrounded DC systems, it is important to connect the power supply "zig-zag" through the breaker as shown in the figure below. This assures that the Voltage between phases on the breaker terminals is uniformly distributed.

See below for an alternative connection diagram. For a list of Sentron breakers with the DC ratings, please refer to pages Speedfax pages 7-11 to 7-16.





# MD 800A Frame Sentron Series

## Selection

### Type MXD6<sup>①④</sup>

Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)		
Continuous Current Rating @ 40°C	2-Pole <sup>②</sup>	3-Pole
	Catalog Number	Catalog Number
600	MXD62B600■	MXD63B600
700	MXD62B700■	MXD63B700
800	MXD62B800■	MXD63B800

### Type MD6<sup>⑥</sup>

Blue Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	Complete Breaker Unassembled with Lugs	Frame Only	Trip Unit Only
	Catalog Number	Catalog Number	Catalog Number

#### 2-Pole 600V AC, 250V DC<sup>②</sup>

Continuous Current Rating @ 40°C	Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
500	MD62B500■	MD62F800■	MD62T500■
600	MD62B600■		MD62T600■
700	MD62B700■		MD62T700■
800	MD62B800■		MD62T800■

#### 3-Pole 600V AC, 500V DC<sup>③</sup>

Continuous Current Rating @ 40°C	Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
500	MD63B500	MD63F800	MD63T500
600	MD63B600		MD63T600
700	MD63B700		MD63T700
800	MD63B800		MD63T800

### Lugs<sup>④</sup>

Catalog Number	Cables Per Lug	Lugs Per Kit	Wire Range
TA2K500	1-2	1	#1-500 kcmil Cu/Al
TA3K500	1-3	1	1/0-500 kcmil Cu/Al
TC2K500	1-2	1	#1-500 kcmil Cu
TC3K350	1-3	1	#1-350 kcmil Cu
Kits			
2TA2N8750 3TA2N8750	1-2	2 3	500-750 kcmil Cu/Al
2TA3N8750 3TA3N8750	1-3	2 3	500-750 kcmil Cu/Al
2TA4N8500 3TA4N8500	1-4	2 3	250-500 kcmil Cu/Al
2TA4P8500 3TA4P8500	1-4	2 3	250-500 kcmil Cu/Al

### Instantaneous Adjustment Trip Range

Ampere Rating	Nominal Instantaneous Values							
	Low +/- 20% Tolerance	2	3	4	5	6	7	High +/- 20% Tolerance
500	3000	3430	3860	4280	4710	5140	5570	6000
600-800	4000	4570	5140	5710	6280	6850	7420	8000

### Ordering Information

#### Complete Breaker Unassembled with Lugs

Pricing information for MD6 and HMD6 breakers includes frame, trip, and both line and load lugs (TA3K500). When ordered by these catalog numbers, the customer will receive the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

#### Complete Breaker Assembled without Lugs

Prices of MXD6, HMXD6 and CMD6 include frame with non-interchangeable trip units installed only. Order required lugs separately. For line and load lugs (TA3K500) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

#### 100% Rated<sup>⑤</sup> 3-Pole Only

Types MXD6, HMXD6 and CMD6 breakers are available with 100% ratings. To order add suffix "H" to catalog number, and 10% to list price. 100% rated MD breakers require the use of 90°C Cu cable sized at 75°C ampacity and lugs 3TA4P8500 or 3TA2N8750.

50°C Applications see page 17/104.

400Hz Applications see page 17/104.

### Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
MD6, HMD6, HMXD6, CMD6 Complete Breaker Assembled (less lugs)		
2	1	53
3	1	61.5
MD6, HMD6 Frame Only		
2	1	42.25
3	1	46
MD6, HMD6 Trip Unit Only		
2	1	4.5
3	1	6.5

### Enclosures

Type	Catalog Number
1	MND61
3R	MND63
12	MND612■
Neutral	W63623

Modifications page 17/104  
Accessories pages 17/79 and 17/108 to 17/113

■ Built to order. Allow 2-3 weeks for delivery.

①MXD6 circuit breakers are UL Listed for reverse connection applications.

②2-pole units available in 3-pole width only.

③ When wired as shown on page 17/5, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems.

④ See Note: A, page 17/101.

⑤ 80% rated breakers with the CE mark will also be marked in the 100% rated version.

⑥ HACR rated.

Note: MD frame qualified to UL489 supplement B "NAVAL". See page 17/104 for additional information.

# Adjustable Instantaneous Magnetic Trip Settings

## Application

Breaker Type	Maximum Continuous Amperes	Nominal AC Adjustable Trip Range								ETI Motor Circuit Protector Catalog Number	Thermal Magnetic Catalog Number		
		Low	2	3	4	5	6	7	High		3-Pole	2-Pole	3-Pole
HLMXD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	—	HLMXD63B500	
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	—	HLMXD63B600	
	700	3200	3500	3700	4200	4700	6400	7300	8000	—	—	HLMXD63B700	
	800	3200	3500	3700	4200	4700	6400	7300	8000	—	—	HLMXD63B800	
HLMD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	HLMD62B500	HLMD63B500	
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	HLMD62B600	HLMD63B600	
	700	3200	3500	3700	4200	4700	6400	7300	8000	—	HLMD62B700	HLMD63B700	
	800	3200	3500	3700	4200	4700	6400	7300	8000	—	HLMD62B800	HLMD63B800	
MD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	MD62B500	MD63B500	
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	MD62B600	MD63B600	
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	MD62B700	MD63B700	
	800	3000	3430	3860	4280	4710	5140	5570	6000	MXD63L800	—	—	
	800	4000	4570	5140	5710	6280	6850	7420	8000	MXD63A800	MD62B800	MD63B800	
	800	5000	5715	6430	7145	7860	8575	9290	10000	MXD63H800	—	—	
MXD6	500	3000	3430	3860	4280	4710	5140	5570	6000	—	MXD62B500	MXD63B500	
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	MXD62B600	MXD63B600	
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	MXD62B700	MXD63B700	
	800	3000	3430	3860	4280	4710	5140	5570	6000	MXD63L800	—	—	
	800	4000	4570	5140	5710	6280	6850	7420	8000	MXD63A800	MXD62B800	MXD63B800	
	800	5000	5715	6430	7145	7860	8575	9290	10000	MXD63H800	—	—	
HMD6	500	3000	3430	3860	4280	4710	5140	5570	6000	—	HMD62B500	HMD63B500	
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	HMD62B500	HMD63B600	
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	HMD62B700	HMD63B700	
	800	4000	4570	5140	5710	6280	6850	7420	8000	—	HMD62B800	HMD63B800	
HMXD6	500	3000	3430	3860	4280	4710	5140	5570	6000	—	—	HMXD63B500	
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	—	HMXD63B600	
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	—	HMXD63B700	
	800	4000	4570	5140	5710	6280	6850	7420	8000	—	—	HMXD63B800	
CMD6	400	3000	3430	3860	4280	4710	5140	5570	6000	—	—	—	
	500	3000	3430	3860	4280	4710	5140	5570	6000	—	—	—	
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	—	CMD63B600	
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	—	CMD63B700	
	800	3000	3430	3860	4280	4710	5140	5570	6000	CMD63L800	—	—	
	800	4000	4570	5140	5710	6280	6850	7420	8000	CMD63A800	—	CMD63B800	
ND6	800	4000	4570	5140	5710	6280	6850	7420	8000	—	ND62B800	ND63B800	
	900	5000	5715	6430	7145	7860	8575	9290	10000	—	ND62B900	ND63B900	
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	ND62B100	ND63B100	
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	ND62B120	ND63B120	
	NXD6	900	5000	5715	6430	7145	7860	8575	9290	10000	—	NXD62B900	NXD63B900
		1000	5000	5715	6430	7145	7860	8575	9290	10000	—	NXD62B100	NXD63B100
1200		5000	5715	6430	7145	7860	8575	9290	10000	—	NXD62B120	NXD63B120	
HND6		800	4000	4570	5140	5710	6280	6850	7420	8000	—	HND62B800	HND63B800
		900	5000	5715	6430	7145	7860	8575	9290	10000	—	HND62B900	HND63B900
		1000	5000	5715	6430	7145	7860	8575	9290	10000	—	HND62B100	HND63B100
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	HND62B120	HND63B120	
HNXD6	900	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HNXD63B900	
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HNXD63B100	
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HNXD63B120	
CND6	800	4000	4570	5140	5710	6280	6850	7420	8000	—	—	CND63B800	
	900	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CND63B900	
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CND63B100	
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CND63B120	
PD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PD63B120	
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PD63B140	
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PD63B160	
PXD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PXD63B120	
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PXD63B140	
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PXD63B160	
HPD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPD63B120	
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPD63B140	
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPD63B160	
HPXD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPXD63B120	
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPXD63B140	
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPXD63B160	
CPD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CPD63B120	
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CPD63B140	
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CPD63B160	
RD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RD63B180	
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RD63B200	
RXD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RXD63B180	
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RXD63B200	
HRD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRD63B180	
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRD63B200	
HRXD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRXD63B180	
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRXD63B200	