

# Molded Case Circuit Breakers

## ED 125A Frame Sentron Series

*Selection*

### Ordering Instructions

- All ED Frame Sentron circuit breakers are supplied with load side lugs. If line side lugs are required, add "L" suffix to catalog number. Consult Siemens sales office for any additional charge
- 50°C Calibration, 400HZ - see page 7-91. All ED frame circuit breakers may be reverse connected

### Type ED2<sup>⑤</sup>

Continuous Current Rating @ 40°C	Blue Label					
	1-Pole		2-Pole		3-Pole	
	120V AC	125V DC	240V AC	125V DC 250V DC	240V AC	
	Catalog Number		Catalog Number		Catalog Number	
15	ED21B015 <sup>④</sup> ■		ED22B015		ED23B015	
20	ED21B020 <sup>④</sup> ■		ED22B020		ED23B020	
25	ED21B025■		ED22B025■		ED23B025■	
30	ED21B030■		ED22B030		ED23B030	
35	ED21B035■		ED22B035■		ED23B035■	
40	ED21B040■		ED22B040		ED23B040	
45	ED21B045■		ED22B045■		ED23B045■	
50	ED21B050■		ED22B050		ED23B050	
60	ED21B060■		ED22B060		ED23B060	
70	ED21B070■		ED22B070		ED23B070	
80	ED21B080■		ED22B080■		ED23B080	
90	ED21B090■		ED22B090■		ED23B090■	
100	ED21B100■		ED22B100		ED23B100	

### Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
<b>ED2, ED4, ED6, HED4, HHED6</b>		
1	30	38
2	10	25
3	10	38
<b>CED6</b>		
2	5	20
3	5	30

### Lugs

Ampere Rating	No. of Poles	Catalog Number	Wire Range
<b>Aluminum Body Lugs</b>			
All 15–25A	1, 2, 3	Line/Load SA1E025	#14–#10 Cu #12–#10 Al
All 30–100A	1, 2, 3	Line Side LN1E100	#10–1/0 Cu/Al
ED2, 4, CED6 30–60A	1	Load Side LD1E060	#10–#4 Cu/Al
ED2, 4, CED6 70–100A	1	Load Side LD1E100	#6–#1/0 Cu/Al
ED2, 4, HED4, HHED6 30–100A	2, 3	Load Side LN1E100	#10–1/0 Cu/Al
ED6 20–50A	2, 3	Line Side LN1E100	#10–1/0 Cu/Al
All 110, 125A	2, 3	Line/Load TA1E6125	#3–3/0 Cu #1–2/0 Al
<b>Copper Body Lugs</b>			
All 30–125A	1, 2, 3	Line/Load TC1ED6150 <sup>③</sup>	#10–1/0 Cu only
<b>Compression Lugs</b>			
All ED, HHED, CED		CCE125	2/0

### Type ED4<sup>⑤</sup>

Continuous Current Rating @ 40°C	Blue Label					
	1-Pole		2-Pole		3-Pole	
	120V AC	125V DC	480V AC	250V DC	480V AC	
	Catalog Number		Catalog Number		Catalog Number	
15	ED41B015 <sup>④</sup>		—		ED43B015	
20	ED41B020 <sup>④</sup>		ED42B020		ED43B020	
25	ED41B025		ED42B025		ED43B025	
30	ED41B030		ED42B030		ED43B030	
35	ED41B035■		ED42B035■		ED43B035	
40	ED41B040		ED42B040		ED43B040	
45	ED41B045■		ED42B045■		ED43B045	
50	ED41B050		ED42B050		ED43B050	
60	ED41B060		ED42B060		ED43B060	
70	ED41B070		ED42B070		ED43B070	
80	ED41B080■		ED42B080■		ED43B080	
90	ED41B090■		ED42B090■		ED43B090	
100	ED41B100		ED42B100		ED43B100	
110	—		ED42B110■		ED43B110	
125	—		ED42B125		ED43B125	

### Type ED6<sup>⑤</sup>

Continuous Current Rating @ 40°C	Blue Label					
	1-Pole <sup>①</sup>		2-Pole		3-Pole	
	347V AC	125V DC	600V AC	250V DC	600V AC	500V DC
	Catalog Number		Catalog Number		Catalog Number	
15	ED61B015		—		ED63B015	
20	ED61B020		ED62B020		ED63B020	
25	ED61B025		ED62B025■		ED63B025	
30	ED61B030		ED62B030		ED63B030	
35	ED61B035		ED62B035■		ED63B035	
40	ED61B040		ED62B040■		ED63B040	
45	ED61B045■		ED62B045■		ED63B045	
50	ED61B050		ED62B050■		ED63B050	
60	ED61B060		—		ED63B060	
70	ED61B070■		—		ED63B070	
80	ED61B080		—		ED63B080	
90	ED61B090		—		ED63B090	
100	ED61B100■		—		ED63B100	
110	—		—		ED63B110	
125	—		—		ED63B125	

### Enclosures (Neutral Included)<sup>⑥</sup>

Type	Catalog Number
1 (Surface)	E2N1S (15–100A)
1 (Flush)	E2N1F (15–100A)
3R	E2N3R (15–100A)
4–4X	ED6SS4 (15–100A)
7–9	EA (15–60A)
7–9	EB (70–100A)
12	E2N12 (15–100A)
1 (Surface)	CED6N1S <sup>②</sup>
1 (Flush)	CED6N1F <sup>②</sup>
3R	CED6N3R <sup>②</sup>
12	CED6N12 <sup>②</sup>

Note: ED frame circuit breakers qualified to UL 489 Supplement SB "Naval"— See page 7-91 for additional information

- Built to order. Allow 2–3 weeks for delivery.
- ① CSA Certified only (Not UL)

② For CED types and all 110–125 ampere ED frames.

③ See Note: A, page 7-88.

④ SWD rated.

⑤ HACR rated.

⑥ Not for use with HHED6 breakers.

Modifications page 7-91  
 Enclosures Section 6  
 Accessories pages 7-47 and 7-95 to 7-100

# Molded Case Circuit Breakers

## ED 125A Frame Sentron Series

### Selection/Dimensions

#### Type HED4<sup>④</sup>

Black Label

Continuous Current Rating @ 40°C	1-Pole		2-Pole		3-Pole
	277V AC	125V DC	480V AC	250V DC	480V AC
	Catalog Number		Catalog Number		Catalog Number
15	HED41B015 <sup>①</sup>		HED42B015		HED43B015
20	HED41B020 <sup>①</sup>		HED42B020		HED43B020
25	HED41B025		HED42B025■		HED43B025
30	HED41B030		HED42B030		HED43B030
35	HED41B035■		HED42B035■		HED43B035
40	HED41B040		HED42B040		HED43B040
45	HED41B045■		HED42B045■		HED43B045
50	HED41B050■		HED42B050		HED43B050
60	HED41B060■		HED42B060■		HED43B060
70	HED41B070■		HED42B070■		HED43B070
80	HED41B080■		HED42B080■		HED43B080
90	HED41B090■		HED42B090■		HED43B090
100	HED41B100■		HED42B100■		HED43B100
110	—		HED42B110■		HED43B110
125	—		HED42B125■		HED43B125

FIGURE 1 - ED, HED, HHED

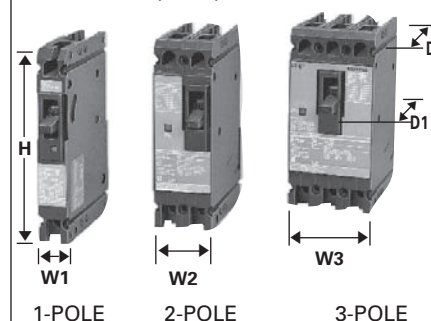
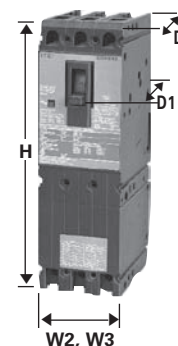


FIGURE 2 - CED (3-Pole shown)



Dimensions (in inches)

Breaker Type	W1	W2	W3	H	D	D1
Figure 1 ED2, ED4, ED6, HED4, ED6 ETI <sup>⑤</sup>	1	2	3	6.35	3.92	4.56
Figure 1 HHED6	—	2	3	6.53	3.92	4.56
Figure 2 CED6, CED6 ETI <sup>⑤</sup>	—	2	3	9.58	3.92	4.56

#### Fuseless Current Limiting

#### Type HHED6<sup>⑥</sup>

Black Label

#### Type CED6<sup>⑥</sup>

Red Label

Continuous Current Rating @ 40°C	3-Pole		2-Pole	3-Pole
	600V AC		600V AC, 250V DC	600V AC, 500V DC <sup>⑦</sup>
	Catalog Number <sup>②</sup>		Catalog Number	Catalog Number
15	HHED63B015A		CED62B015	CED63B015
20	HHED63B020		CED62B020■	CED63B020
25	HHED63B025		—	—
30	HHED63B030		CED62B030■	CED63B030
35	HHED63B035		—	—
40	HHED63B040		CED62B040■	CED63B040
45	HHED63B045		—	—
50	HHED63B050		CED62B050■	CED63B050
60	—		CED62B060■	CED63B060
70	—		CED62B070■	CED63B070
80	—		CED62B080■	CED63B080
90	—		CED62B090■	CED63B090
100	—		CED62B100■	CED63B100
110	—		—	CED63B110■
125	—		CED62B125■	CED63B125

#### Interrupting Ratings

Breaker Type	UL 489 AIR (File #E10848)								IEC 947-2						
	RMS Symmetrical Amperes (KA)														
	Volts AC						Volts DC			Volts AC (50/60Hz)					
	120	240	277	347	480	600	125	250	500 <sup>⑧</sup>	220/240		380/415		500	
lcu	lcs	lcu	lcs	lcu	lcs	lcu	lcs	lcs	lcu	lcs	lcu	lcs	lcu	lcs	
ED2 (1-P)	10	—	—	—	—	—	5	—	—	—	—	—	—	—	
ED2 (2, 3-P)	—	10	—	—	—	—	—	5 (2-P)	—	—	—	—	—	—	
ED4 (1-P)	65	—	22	—	—	—	30	—	—	—	—	—	—	—	
ED4 (2, 3-P)	—	65	—	—	18	—	—	30 (2-P)	—	—	—	—	—	—	
ED6 (1P)	—	—	—	30 <sup>⑨</sup>	—	—	—	—	—	—	—	—	—	—	
ED6 (2, 3-P)	—	65	—	—	25	18	—	—	18 (3-P)	65	17	35	9	18	
HED4 (1-P) (15–30A)	100	—	65	—	—	—	30	—	—	—	—	—	—	—	
HED4 (1-P) (35–100A)	100	—	25	—	—	—	30	—	—	—	—	—	—	—	
HED4 (2, 3-P) <sup>⑩</sup>	—	100	—	—	42	—	—	30 (2-P)	—	—	—	—	—	—	
HHED6 (2, 3-P) <sup>⑪</sup>	—	100	—	—	65	18 <sup>⑫</sup>	—	—	—	—	—	—	—	—	
CED6 (2, 3-P)	—	200	—	—	200	100	—	50 (2-P)	30 (3-P)	—	—	—	—	—	

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

①SWD rated.

②When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems.

③ HED4 and HHED6 type circuit breakers meet the UL criteria for “current limiting” at 240V AC.

④ ED6-ETI, CED6-ETI, see page 7-74 for ordering information.

⑤ Single Pole 15-30A 30KA @ 347V non-UL.  
35-100A 18KA @ 347V non-UL.

⑥ HACR rated.

⑦ HHED63B015A is rated 18KAIC at 600/347V.

# Molded Case Circuit Breakers

## Accessories

*Selection*

Accessories for:

### ED 125A Frame



### Combinations

Available only when ordered together. Only one module can be added to a breaker. Additional accessories, which always attach to the left pole, cannot be added to the combination later. Adds 1 inch pole space.

### Equipment Ground Sensing

A field addable kit containing 30mA or 5 mA ground fault accessory module, current transformer with 24 inch leads, and current transformer mounting equipment. Current transformer to mount in gutter of lighting panel or any control panel. Accessory module operates from separate 120V control power source.

Both 30MA and 5MA devices are equipment protection devices only. Do not use for personnel protection.



### Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch	1 Shunt Trip and 1 Auxiliary Switch and 1 Alarm Switch	1 Shunt Trip and 1 Alarm Switch	1 Shunt Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
24		S17ED60	—	—	—	—
48		S18ED60	—	—	—	—
120		S01ED60	S01ED62A	S01ED62AB	S01ED62B	S01ED62AA
208		—	S02ED62A▲	S02ED62AB▲	S02ED62B▲	S02ED62AA▲
240		S03ED60	S03ED62A	S03ED62AB	S03ED62B▲	S03ED62AA▲
277		S15ED60▲	S15ED64A▲	S15ED64AB▲	S15ED64B▲	—
480		S04ED60	S04ED64A▲	S04ED64AB▲	S04ED64B▲	—
	12	S16ED60▲	S16ED62A▲	—	—	—
	24	S07ED60	S07ED62A	S07ED62AB▲	S07ED62B▲	S07ED62AA▲
	48	S09ED60▲	S09ED62A▲	S09ED62AB▲	S09ED62B▲	S09ED62AA▲
	125	S11ED60▲	S11ED62A▲	S11ED62AB▲	S11ED62B▲	S11ED62AA▲
	250	S13ED60▲	S13ED62A▲	S13ED62AB▲	S13ED62B▲	S13ED62AA▲

### Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 1 Auxiliary Switch and 1 Alarm Switch	1 Undervoltage Trip and 1 Alarm Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
120		U01ED60	U01ED62A	U01ED62AB▲	U01ED62B▲	U01ED62AA▲
208		U02ED60▲	U02ED62A▲	U02ED62AB▲	U02ED62B▲	U02ED62AA▲
240		U03ED60	U03ED62A▲	U03ED62AB▲	U03ED62B▲	U03ED62AA▲
277		U16ED60▲	U16ED64A▲	U16ED64AB▲	U16ED64B▲	—
480		U06ED60▲	U06ED64A▲	U06ED64AB▲	U06ED64B▲	—
600		U08ED60▲	—	—	—	—
	24	U13ED60	U13ED62A▲	U13ED62AB▲	U13ED62B▲	U13ED62AA▲
	48	U14ED60▲	U14ED62A▲	U14ED62AB▲	U14ED62B▲	U14ED62AA▲
	125	U10ED60▲	U10ED62A▲	U10ED62AB▲	U10ED62B▲	U10ED62AA▲
	250	U12ED60▲	U12ED62A▲	—	—	U12ED62AA▲

### Auxiliary Switch Combinations

Maximum Voltage		1 Auxiliary Switch	1 Alarm Switch and 1 Auxiliary Switch	2 Auxiliary Switches	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number
240	250	A01ED62	A01ED62B	A02ED62	A02ED62B
480		A01ED64	A01ED64B	—	—

Maximum Voltage		1 Auxiliary Switch	
AC	DC	Catalog Number	
	12	A01EDLV	Gold Plated Contacts—for PLC use

### Alarm Switch Only

Maximum Voltage		1 Alarm Switch	
AC	DC	Catalog Number	
240	250	B00ED62	
480		B00ED64	

### Ground Fault Sensing Relay Kit — Equipment Protection Only

For Use With Breaker Frame	Number of Poles	Description	Catalog Number	
			30mA	5mA
CED6, ED2, ED4 ED6, EFC, EFF, HED4, HHED6	1, 2, 3	Basic Kit	GF01ED60	GF01ED65
		Basic Kit with Normally Open Bell Alarm	GF01ED60B0	GF01ED65B0▲
		Basic Kit with Normally Closed Bell Alarm	GF01ED60BC	GF01ED65BC▲

▲ Built to order. Allow 6–8 weeks for delivery.

# Molded Case Circuit Breakers

## FD 250A Frame Sentron Series

Selection

Type FXD6-A<sup>①⑦</sup>

Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker – Without Lugs)		
Continuous Current Rating @ 40°C	2-Pole	3-Pole
	Catalog Number	Catalog Number
70	FXD62B070■	FXD63B070
80	FXD62B080■	FXD63B080
90	FXD62B090■	FXD63B090
100	FXD62B100	FXD63B100
110	FXD62B110■	FXD63B110
125	FXD62B125	FXD63B125
150	FXD62B150	FXD63B150
175	FXD62B175	FXD63B175
200	FXD62B200	FXD63B200
225	FXD62B225	FXD63B225
250	FXD62B250	FXD63B250

Type FD6-A<sup>⑦</sup>

Blue Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/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
70	FD62B070■	FD62F250	FD62T070■
80	FD62B080■		FD62T080■
90	FD62B090■		FD62T090■
100	FD62B100■		FD62T100■
110	FD62B110■		FD62T110■
125	FD62B125■		FD62T125■
150	FD62B150■		FD62T150■
175	FD62B175■		FD62T175■
200	FD62B200■		FD62T200■
225	FD62B225■		FD62T225■
250	FD62B250■		FD62T250■

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
70	FD63B070■	FD63F250	FD63T070■
80	FD63B080■		FD63T080■
90	FD63B090■		FD63T090■
100	FD63B100■		FD63T100■
110	FD63B110■		FD63T110■
125	FD63B125■		FD63T125■
150	FD63B150■		FD63T150■
175	FD63B175■		FD63T175■
200	FD63B200■		FD63T200■
225	FD63B225■		FD63T225■
250	FD63B250■		FD63T250■

### Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (KA)									
	UL 489 AIR (File E10848)					IEC 947-2				
	Volts AC (50/60Hz)			Volts DC		Volts AC (50/60Hz)				
	240	480	600	250	500 <sup>④</sup>	220/240	380/415	500		
						lcu	lcs	lcu	lcs	
FXD6-A, FD6-A	65	35	22	30 (2-P)	18 (3-P)	65	33	35	9	—
HFXD6 <sup>⑤</sup> , HFD6 <sup>⑤</sup>	100	65	25	30 (2-P)	25 (3-P)	100	50	65	33	—
HHFD6 <sup>⑤</sup> , HHFXD6 <sup>⑤</sup>	200	100	25	—	—	—	—	—	—	—
CFD6	200	200	100	30 (2-P)	50 (3-P)	—	—	—	—	—

### Instantaneous Adjustment Trip Range

Breaker Ampere Rating	Nominal Instantaneous Values							±20% Tolerance High
	±20% Tolerance Low	2	3	4	5	6	7	
70-90	600	640	690	730	770	810	850	900
100-110	700	770	840	920	990	1060	1140	1200
125-150	800	900	1000	1100	1200	1300	1400	1500
175-200	900	1060	1210	1370	1520	1780	1930	2000
225-250	1100	1300	1500	1700	1900	2100	2300	2500

Note: FD frame qualified to UL489 supplement SB "NAVAL". See page 7-91 for additional information.

### Ordering Information

#### Complete Breaker Unassembled with Lugs

Prices of FD6, HFD6, and HHFD6 breakers includes frame, trip and both line and load lugs (TA1FD350A). 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 with-out Lugs

Prices of FXD6, HFXD6, HHFXD6, and CFD6 includes frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA1FD350A) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

50°C Applications see page 7-91.

400 Hz Applications see page 7-91.

### Lugs For 75°C Wire<sup>⑤</sup>

Catalog Number	Wire Range
TA1FD350A	#6–350 kcmil Cu #4–350 kcmil Al
TC1FD350	#6–350 kcmil Cu
Compression Lug	
CCF250	350 kcmil Cu/Al

### Enclosures

Type	Catalog Number
1	F6N1S(F)
3R	F6N3R
4-4X	FD6SS4
7-9	EC2
12	F6N12
Neutral <sup>⑥</sup>	N250

Modifications page 7-91  
Enclosures Section 6  
Accessories pages 7-50 and 7-95 to 7-100

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

① Type FXD6-A circuit breakers are UL Listed for reverse fed applications.

② 2-pole units are 3-pole width.

③ When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

④ Order neutral as separate item.

⑤ See Note A, page 7-88.

⑥ HFD6 and HHFD6 type circuit breakers meet the UL criteria for "current limiting" at 240 and 480V AC.

⑦ HACR rated.

# Molded Case Circuit Breakers

## FD 250A Frame Sentron Series

## Selection/Dimensions

Type HFD6, Type HFXD6<sup>②③④⑤⑥</sup> Black Label

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

### 2-Pole 600V AC, 250V DC (3-Pole Width)

Current Rating	Complete Breaker Unassembled w/Lugs	Frame Only	Trip Unit Only
70	HFD62B070■	HFD62F250	FD62T070■
80	HFD62B080■		FD62T080■
90	HFD62B090■		FD62T090■
100	HFD62B100■		FD62T100■
110	HFD62B110■		FD62T110■
125	HFD62B125■		FD62T125■
150	HFD62B150■		FD62T150■
175	HFD62B175■		FD62T175■
200	HFD62B200■		FD62T200■
225	HFD62B225■		FD62T225■
250	HFD62B250■		FD62T250■

### 3-Pole 600V AC, 500V DC<sup>①</sup>

Current Rating	Complete Breaker Unassembled w/Lugs	Frame Only	Trip Unit Only
70	HFD63B070■	HFD63F250	FD63T070■
80	HFD63B080■		FD63T080■
90	HFD63B090■		FD63T090■
100	HFD63B100■		FD63T100■
110	HFD63B110■		FD63T110■
125	HFD63B125■		FD63T125■
150	HFD63B150■		FD63T150■
175	HFD63B175■		FD63T175■
200	HFD63B200■		FD63T200■
225	HFD63B225■		FD63T225■
250	HFD63B250■		FD63T250■

Type HHFD, HHFXD6<sup>②③④⑥</sup>

### 3-Pole 600V AC, Extra High Interrupting

Current Rating	Complete Breaker Unassembled w/Lugs	Frame Only	Trip Unit Only
70	HHFD63B070■	HHFD63F250	FD63T070■
80	HHFD63B080■		FD63T080■
90	HHFD63B090■		FD63T090■
100	HHFD63B100■		FD63T100■
110	HHFD63B110■		FD63T110■
125	HHFD63B125■		FD63T125■
150	HHFD63B150■		FD63T150■
175	HHFD63B175■		FD63T175■
200	HHFD63B200■		FD63T200■
225	HHFD63B225■		FD63T225■
250	HHFD63B250■		FD63T250■

Type CFD6-A<sup>③⑥</sup>

### Fuseless Current Limiting

Red Label

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)	
Continuous Current Rating @ 40°C	3-Pole 600V AC/500V DC
	Catalog Number
70	CFD63B070■
80	CFD63B080■
90	CFD63B090■
100	CFD63B100■
110	CFD63B110■
125	CFD63B125■
150	CFD63B150■
175	CFD63B175■
200	CFD63B200■
225	CFD63B225■
250	CFD63B250■

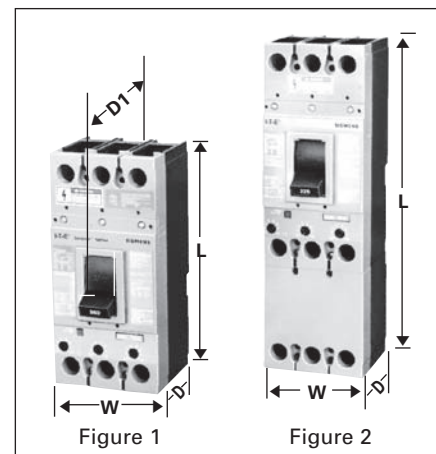
■ Built to order. Allow 2-3 weeks for delivery.

① When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems.

③ For non-interchangeable trip 3-pole HFD6 type circuit

breaker, change prefix identifier from HFD6 to HFXD6. Price equals frame and trip prices combined, e.g. price of HFXD63B250 equals price of HFD63F250 plus price of FD63T250. Order lugs separately.

⑤ Type HFXD6, HHFXD6, CFD6 are UL Listed for reverse feed applications.



### Dimensions (in inches)

Breaker Type	W	L	D	D1 (to handle)
Figure 1 FXD6-A, FD6-A, HFD6, HFXD6, HHFD6, FD6-ETI <sup>⑤</sup>	4.50	9.50	4	5.25
Figure 2 CFD6, CFD6-ETI <sup>⑤</sup>	4.50	14.25	4	5.25

### Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
<b>FD6-A, HFD6, HHFD6, FXD6-A Assembled Circuit Breaker (less connectors)</b>		
2	1	8.6
3	1	10
<b>FD6-A, HFD6, HHFD6 Frame Only</b>		
2	1	7.5
3	1	8.7
<b>FD6 Trip Unit Only</b>		
2	1	1.1
3	1	1.3
<b>CFD6 Assembled Circuit Breaker (less terminals)</b>		
3	1	16

7  
MOLDED CASE  
CIRCUIT BREAKERS

# Molded Case Circuit Breakers

## Internal Accessories

*Selection*

Accessories:  
for FD, FFC & FFF 250A Frames



### Shunt Trip Combinations

Control Voltage		1 Shunt Trip
AC	DC	Catalog Number
24		S17FD60
120		S01FD60
240		S03FD60
277		S15FD60▲
480		S04FD60
600		S06FD60▲
	12	S16FD60▲
	24	S07FD60
	48	S09FD60▲
	125	S11FD60
	250	S13FD60▲

### Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
120		U01FD60	W01FD64
208		U02FD60▲	W02FD64▲
240		U03FD60	W03FD64▲
277		U16FD60▲	W16FD64▲
480		U06FD60▲	W06FD64▲
600		U08FD60▲	—
	24	U13FD60	W13FD64
	48	U14FD60▲	W14FD64▲
	125	U10FD60▲	W10FD64▲
	250	U12FD60▲	W12FD64▲

### Auxiliary Switch Combinations

Voltage		1 Auxiliary Switch	2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number
240		A01FD62	A02FD62
480		A01FD64	A02FD64
	12	A01FDLV	Gold Plated Contacts - for PLC use

### Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
480	250	B00FD64	C01FD64

▲ Built to order. Allow 6-8 weeks for delivery.

©Auxiliary switch application is for 480V AC maximum.

Note: Old F-frame accessories cannot be used in new Sentron line. Likewise, new FD-frame accessories cannot be used on old F-frame circuit breakers.

# Molded Case Circuit Breakers

## JD 400A Frame Sentron Series

Selection

### Type JXD2-A<sup>⑤</sup>

240V AC, 2-Pole 250V DC Only

Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)		
Continuous Current Rating @ 40°C	2-Pole (3-Pole Width) Catalog Number	3-Pole Catalog Number
200	JXD22B200■	JXD23B200
225	JXD22B225■	JXD23B225
250	JXD22B250■	JXD23B250
300	JXD22B300	JXD23B300
350	JXD22B350■	JXD23B350
400	JXD22B400	JXD23B400

### Type JXD6-A<sup>①⑤</sup>

600V AC, 2-Pole 250V DC, 3-Pole 500V DC<sup>②</sup>

Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)		
Continuous Current Rating @ 40°C	2-Pole (3-Pole Width) Catalog Number	3-Pole Catalog Number
200	JXD62B200■	JXD63B200
225	JXD62B225■	JXD63B225
250	JXD62B250■	JXD63B250
300	JXD62B300	JXD63B300
350	JXD62B350■	JXD63B350
400	JXD62B400	JXD63B400

### Type JD6-A<sup>⑤</sup>

Blue Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs	Frame Only	Trip Unit Only
	Catalog Number	Catalog Number	Catalog Number
200	JD62B200■	JD62F400	JD62T200■
225	JD62B225■		JD62T225■
250	JD62B250■		JD62T250■
300	JD62B300■		JD62T300■
350	JD62B350■		JD62T350■
400	JD62B400		JD62T400

2-Pole 600V AC, 250V DC (3-Pole Width)

200	JD62B200■	JD62F400	JD62T200■
225	JD62B225■		JD62T225■
250	JD62B250■		JD62T250■
300	JD62B300■		JD62T300■
350	JD62B350■		JD62T350■
400	JD62B400		JD62T400

3-Pole 600V AC, 500V DC<sup>②</sup>

200	JD63B200	JD63F400	JD63T200
225	JD63B225		JD63T225
250	JD63B250		JD63T250
300	JD63B300		JD63T300
350	JD63B350		JD63T350
400	JD63B400		JD63T400

### Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (KA)									
	UL 489 AIR (File E10848)					IEC 947-2				
	Volts AC (50/60Hz)			Volts DC		Volts AC (50/60Hz)				
	240	480	600	250	500 <sup>②</sup>	220/240	380/415	500	lcs	lcs
JXD2-A	65	—	—	30 (2-P)	—	—	—	—	—	—
JXD6-A, JD6-A	65	35	25	30 (2-P)	25 (3-P)	65	33	40	20	—
HJD6-A, HJXD6-A	100	65	35	30 (2-P)	35 (3-P)	100	50	65	33	—
HHJD6, HHJXD6 <sup>②</sup>	200	100	50	—	—	—	—	—	—	—
CJD6-A	200	150	100	30 (2-P)	50 (3-P)	—	—	—	—	—

### Instantaneous Adjustment Trip Range

Breaker Ampere Rating	Nominal Instantaneous Values							
	±20% Tolerance Low	2	3	4	5	6	7	±20% Tolerance High
200-300	1250	1430	1610	1790	1960	2140	2320	2500
350-400	2000	2290	2570	2860	3140	3430	3710	4000

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

① Type JXD2 and JXD6 circuit breakers are UL Listed for reverse feed applications.

② When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

③ See Note: A, page 7-88.

④ HHJD6 type circuit breakers meet the UL criteria for "current limiting" at 240 and 480V AC.

⑤ HACR rated.

Note: JD frame qualified to UL489 supplement B "NAVAL." See page 7-91 for additional information.

### Ordering Information

#### Complete Breaker Unassembled with Lugs

Prices of JD6, HJD6, and HHJD6 breakers include frame, trip and both line and load lugs (TA2J6500). 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 JXD6, HJXD6, HHJXD6, and CJD6 include frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA2J6500) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

#### 100% Rated (3-pole only)

Types JXD6 and HJXD6 breakers are available with 100% ratings. To order add suffix "H" to catalog number, and 10% to list price. ■ 100% rated JD breakers require the use of 90°C Cu cable sized at 75°C ampacity and lugs TC1J6600 or TC2J6500.

50°C Applications see page 7-91.

400Hz Applications see page 7-91.

### Lugs For 75°C Wire<sup>③</sup>

Catalog Number	Cables per Lug	Wire Range
TA2J6500	1, 2	#3/0-500 kcmil Cu #4/0-500 kcmil Al
TA1L6750	1	500-750 kcmil Al 500-600 kcmil Cu
TC1J6600	1	#3/0-600 kcmil Cu
TC2J6500	1, 2	#3/0-500 kcmil Cu
Compression Lug		
CCL600	1	500 kcmil Cu/Al

Modifications page 7-91

Enclosures Section 6

Accessories pages 7-54 and 7-95 to 7-100

# Molded Case Circuit Breakers

## JD 400A Frame Sentron Series

## Selection/Dimensions

Type HJD6-A, HJXD6-A<sup>②④⑥</sup> **Black Label**

Interchangeable Trip			
Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs	Frame Only	Trip Unit Only
	Catalog Number	Catalog Number	Catalog Number
<b>2-Pole 600V AC, 250V DC (3-Pole Width)</b>			
200	HJD62B200■	HJD62F400■	JD62T200■
225	HJD62B225■		JD62T225■
250	HJD62B250■		JD62T250■
300	HJD62B300■		JD62T300■
350	HJD62B350■		JD62T350■
400	HJD62B400■		JD62T400■

<b>3-Pole 600V AC, 500V DC<sup>①②⑤</sup></b>			
200	HJD63B200■	HJD63F400■	JD63T200■
225	HJD63B225■		JD63T225■
250	HJD63B250■		JD63T250■
300	HJD63B300■		JD63T300■
350	HJD63B350■		JD63T350■
400	HJD63B400■		JD63T400■

Type HHJD6, HHJXD6<sup>②④⑥</sup> **Black Label**

<b>2-Pole 600V AC (3-Pole Width)</b>			
200	HHJD62B200■	HHJD62F400■	JD62T200■
225	HHJD62B225■		JD62T225■
250	HHJD62B250■		JD62T250■
300	HHJD62B300■		JD62T300■
350	HHJD62B350■		JD62T350■
400	HHJD62B400■		JD62T400■

<b>3-Pole 600VAC</b>			
200	HHJD63B200■	HHJD63F400■	JD63T200■
225	HHJD63B225■		JD63T225■
250	HHJD63B250■		JD63T250■
300	HHJD63B300■		JD63T300■
350	HHJD63B350■		JD63T350■
400	HHJD63B400■		JD63T400■

Type CJD6-A<sup>⑤⑥</sup> **Fuseless Current Limiting** **Red Label**

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)		
Continuous Current Rating @ 40°C	2-Pole 600V AC/250V DC	3-Pole 600V AC/500V DC
	Catalog Number	Catalog Number
200	For 2-pole application use outside poles of 3-pole circuit breaker	CJD63B200■
225		CJD63B225■
250		CJD63B250■
300		CJD63B300■
350		CJD63B350■
400		CJD63B400■

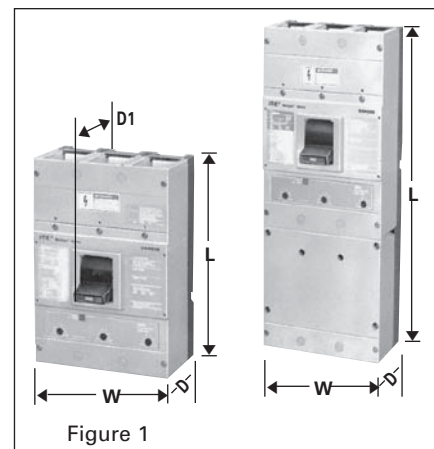


Figure 1

Dimensions (in inches)

Breaker Type	W	L	D	To Handle D1
Figure 1 JXD2-A, JXD6-A, JD6-A HJD6-A, HJXD6-A, HHJD6, HJD6, HJXD6, HHJXD6, JXD6-ETI <sup>®</sup> , SJD6, SHJD6	7.5	11	4	5.44
Figure 2 CJD6, CJD6-ETI <sup>®</sup> , SCJD6	7.5	17.86	4	5.44

Enclosures (Except SCJD6)

Type	Catalog Number
1	J6N1
3R	J6N3R
12	J6N12
4X	LD6SS4
7, 9 (200-250A)	EC4
7, 9 (300-400A)	EE
Neutral	W60992

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
<b>JXD2, JXD6, JD6, HJD6, HHJD6 Assembled Breaker (less terminals)</b>		
2	1	17.5
3	1	19.5
<b>JD6, HJD6, HHJD6 Frame Only</b>		
2	1	14
3	1	15.5
<b>JD6 Trip Unit Only</b>		
2	1	3.5
3	1	4
<b>CJD6 Complete Assembled Breaker (less terminals)</b>		
3	1	31.5

For inches / millimeters conversion, see Application Data section.

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

2-pole units available in 3-pole construction.

⑥ When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

④ For non-interchangeable 3-pole HJD6 or HHJD6 type circuit breaker change the prefix identifier to HJXD6 or HHJXD6. Price equals price of frame plus price of trip, e.g. price of HJXD63B400 equals price of HJD63F400 plus price of JD63T400. Order lugs separately.

③ JXD6-ETI, CJD6-ETI see page 7-74 for ordering information.

⑤ Type HJXD6, HHJXD6 Circuit Breakers are UL listed for reverse fed applications.

② CE applies to non-interchangeable type HJXD6-A only.

① HACR rated.