

Molded Case Circuit Breakers

ED-Frame Sentron Series Circuit Breaker

1, 2, & 3-pole; 15 to 125 Amperes



Ratings & Markings (UL 489 AIR Interrupting Ratings)

Breaker Type	RMS Symmetrical Amperes (kA)									
	Volts AC (50/60Hz)						Volts DC			
	120	240	277	347	480	600	125	250	500	600
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 (1-P)	–	–	–	30	–	–	–	30	–	–
ED6 (2, 3-P)	–	65	–	–	25	18	–	–	18 (3-P)	–
ED6 (3-P)	–	–	–	–	–	–	–	–	–	10
HED4 (1-P) (15-30A)	100	–	65	–	–	–	30	–	–	–
HED4 (1-P) (35-100A)	100	–	25	–	–	–	30	–	–	–
HED4 (2, 3P)	–	100	–	–	42	–	–	30 (2-P)	–	–
HHED6 (2, 3-P)	–	100	–	–	65	18	–	–	–	–
CED6 (2, 3-P)	–	200	–	–	200	100	–	50 (2-P)	30 (3-P)	–

Footnote: 600VDC for ED6 only

Dimensions

Breaker Type	Poles	Length	Width	Depth	D-1 (over handle)
ED2, ED4, ED6, HED4	1	6.35	1	3.92	4.56
	2	6.35	2	3.92	4.56
	3	6.35	3	3.92	4.56
HHED6	2	6.53	2	3.92	4.56
	3	6.53	3	3.92	4.56
CED6	2	9.58	2	3.92	4.56
	3	9.58	3	3.92	4.56

Trip Amperage	ED2 (1-P)	ED2 (2-P)	ED2 (3-P)	ED4 (1-P)	ED4 (2-P)	ED4 (3-P)	ED6 (1-P)	ED6 (2-P)	ED6 (3-P)	ED6 (3-P) 600V DC
15	ED21B015	ED22B015	ED23B015	ED41B015	–	ED43B015	ED61B015	–	–	ED63D015L
20	ED21B020	ED22B020	ED23B020	ED41B020	ED42B020	ED43B020	ED61B020	ED62B020	ED63B020	ED63D020L
25	ED21B025	ED22B025	ED23B025	ED41B025	ED42B025	ED43B025	ED61B025	ED62B025	ED63B025	ED63D025L
30	ED21B030	ED22B030	ED23B030	ED41B030	ED42B030	ED43B030	ED61B030	ED62B030	ED63B030	ED63D030L
35	ED21B035	ED22B035	ED23B035	ED41B035	ED42B035	ED43B035	ED61B035	–	ED63B035	ED63D035L
40	ED21B040	ED22B040	ED23B040	ED41B040	ED42B040	ED43B040	ED61B040	–	ED63B040	ED63D040L
45	ED21B045	ED22B045	ED23B045	ED41B045	ED42B045	ED43B045	ED61B045	–	ED63B045	ED63D045L
50	ED21B050	ED22B050	ED23B050	ED41B050	ED42B050	ED43B050	ED61B050	–	ED63B050	ED63D050L
60	ED21B060	ED22B060	ED23B060	ED41B060	ED42B060	ED43B060	ED61B060	–	ED63B060	ED63D060L
70	ED21B070	ED22B070	ED23B070	ED41B070	ED42B070	ED43B070	ED61B070	–	ED63B070	–
80	ED21B080	ED22B080	ED23B080	ED41B080	ED42B080	ED43B080	ED61B080	–	ED63B080	–
90	ED21B090	ED22B090	ED23B090	ED41B090	ED42B090	ED43B090	ED61B090	–	ED63B090	–
100	ED21B100	ED22B100	ED23B100	ED41B100	ED42B100	ED43B100	ED61B100	–	ED63B100	–
110	–	–	–	ED41B110	ED42B110	ED43B110	–	–	ED63B110	–
125	–	–	–	–	ED42B125	ED43B125	–	–	ED63B125	–

Trip Amperage	HED4 (1-P)	HED4 (2-P)	HED4 (3-P)	HHED6 (3-P)	CED6 (2-P)	CED6 (3-P)
15	HED41B015	HED42B015	HED43B015	HHED63B015A	CED62B015	CED63B015
20	HED41B020	HED42B020	HED43B020	HHED63B020	CED62B020	CED63B020
25	HED41B025	HED42B025	HED43B025	HHED63B025	–	–
30	HED41B030	HED42B030	HED43B030	HHED63B030	CED62B030	CED63B030
35	HED41B035	HED42B035	HED43B035	HHED63B035	–	–
40	HED41B040	HED42B040	HED43B040	HHED63B040	–	CED63B040
45	HED41B045	HED42B045	HED43B045	HHED63B045	–	–
50	HED41B050	HED42B050	HED43B050	HHED63B050	–	CED63B050
60	HED41B060	HED42B060	HED43B060	–	CED62B060	CED63B060
70	HED41B070	HED42B070	HED43B070	–	CED62B070	CED63B070
80	HED41B080	HED42B080	HED43B080	–	CED62B080	CED63B080
90	HED41B090	HED42B090	HED43B090	–	CED62B090	CED63B090
100	HED41B100	HED42B100	HED43B100	–	CED62B100	CED63B100
110	–	HED42B110	HED43B110	–	–	CED63B110
125	–	HED42B125	HED43B125	–	CED62B125	CED63B125

Lugs

Ampere Rating	No. of Poles	Catalog Number	Wire Range
Aluminum Body Lugs			
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, 6, HED4 30–60A	1	Load Side LD1E060	#10–#4 Cu/Al
ED2, 4, 6, HED4 70–100A	1	Load Side LD1E100	#6–#1/0 Cu/Al
ED2, 4, 6, HED4, HHED6 30–100A	2, 3	Load Side LN1E100	#10–1/0 Cu/Al
All 110, 125A	2, 3	Line/Load TA1E6125	#3–3/0 Cu #1–2/0 Al
Copper Body Lugs			
All 30–125A	1, 2, 3	Line/Load TC1ED6150 ^②	#10–1/0 Cu only
Compression Lugs			
All ED, HED, HHED, CED		CCE125	2/0

Molded Case Switch – Circuit Disconnect

Maximum Frame Amp Rating	2-Pole Catalog Number	3-Pole Catalog Number	Self-Protective Instantaneous Override $\pm 20\%$ ^③
125	ED22S100A	ED23S100A	1000
	ED42S100A	ED43S100A	1000
	ED42S125A	ED43S125A	1000
	ED62S100A	ED63S100A	1000
	–	ED63S125A	1000
	CED62S100A	CED63S100A	1000
	CED62S125A	CED63S125A	1000

① Molded case circuit breakers having a rated ampacity of 125 amperes or less are to be connected with 60 or 75°C wire. Circuit breakers having a rated ampacity greater than 125 amperes shall only be cabled with 75°C cable unless otherwise indicated on the circuit breaker label. Exceptions to this rule are outlined in article 110-14 C(1)(2) of the 2005 National Electrical Code.

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

③ Molded case switches up to R frame contain a self protecting instantaneous element, which may open circuit above their override set point.

Enclosures (Neutral Included)

Type	Catalog Number
1 (Surface)	E2N1S (15–100A)
1 (Flush)	E2N1F (15–100A)
3R	E2N3R (15–100A)
4–4X	ED6SS4 (15–125A)
7–9	EA (15–60A)
7–9	EB (70–100A)
12	E2N12 (15–100A)
1 (Surface)	CED6N1S ^②
1 (Flush)	CED6N1F ^②
3R	CED6N3R ^②
12	CED6N12 ^②

Magnetic Trip Only – ETI Motor Circuit Protector

Breaker Type	Ampere Rating	Instantaneous Trip Range ^①		Complete Circuit Breaker Without Lugs ^③	
		Minimum ^②	Maximum ^②	Catalog Number 2-Pole	Catalog Number 3-Pole
ED6-A 600V AC 250V DC	1	2.6	9	—	ED63A001
	2	7	22	—	ED63A002
	3	10	35	—	ED63A003
	5	16	54	—	ED63A005
	10	30	100	—	ED63A010
	25	55	180	—	ED63A025
	30	80	270	—	ED63A030
	40	115	375	—	ED63A040
	50	180	600	—	ED63A050
	100	315	1000	—	ED63A100
CED6-A 600V AC 250V DC	1	2.6	9	—	CED63A001
	2	7	22	—	CED63A002
	3	10	35	—	CED63A003
	5	16	54	—	CED63A005
	10	30	100	—	CED63A010
	25	55	180	—	CED63A025
	30	80	270	—	CED63A030
	40	115	375	—	CED63A040
	50	180	600	—	CED63A050
	100	315	1000	—	CED63A100
	125	500	1250	—	CED63A125

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch	1 Shunt Trip 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

① When applied on DC Circuits — Trip levels will increase approximately +15 to 20%.

② Tolerance -20%/+30% for lowest setting. All other settings are -20%/+20%

③ Connectors included when ordering by circuit breaker catalog number for HEM, ED and CED6 ETIs. Order ETI circuit breaker and lugs (2 per pole) separately for the FXD6, CFD6, MXD6, CMD6, JXD6, CJD6, LXD6 and CLD6 ETI's.

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	
–	24	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

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