

Molded Case Circuit Breakers

Magnetic Trip Only — ETI Motor Circuit Protector

Selection

Breaker Type	Ampere Rating	Instantaneous Trip Range ^②		Complete Circuit Breaker Without Lugs ^③		
		Minimum ^③	Maximum ^③	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	
125	500	1250	—	ED63A125		
SHIPPING:					3.8 lbs. each	
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■		
SHIPPING:					6 lbs. each	
FXD6^④ 600V AC 250V DC	150	400	800	—	FXD63L150■	
	150	800	1500	—	FXD63A150	
	150	1100	2500	—	FXD63H150	
	250	1100	2500	—	FXD63A250	
SHIPPING:					9 lbs. each	
CFD6^④ 600V AC 250V DC	150	400	800	—	CFD63L150■	
	150	800	1500	—	CFD63A150■	
	150	1100	2500	—	CFD63H150■	
	250	1100	2500	—	CFD63A250■	
SHIPPING:				12 lbs. each	12 lbs. each	
JXD6(A)^① 600V AC 250V DC	400	1250	2500	—	JXD63L400	
	400	2000	4000	JXD62H400■	JXD63H400	
SHIPPING:					16 lbs. each	20 lbs. each
CJD6^① 600V AC 250V DC	400	1250	2500	—	CJD63L400■	
	400	2000	4000	—	CJD63H400■	
SHIPPING:					29.5 lbs. each	31.5 lbs. each
LXD6(A)^① 600V AC 250V DC	600	2000	4000	LXD62L600■	LXD63L600■	
	600	3000	6000	—	LXD63H600	
SHIPPING:					16 lbs. each	20 lbs. each
CLD6^① 600V AC 250V DC	600	2000	4000	—	CLD63L600■	
	600	3000	6000	—	CLD63H600■	
SHIPPING:					31.5 lbs. each	
LMXD6^④ 600V AC 250V DC	800	2800	6000	—	LMXD63L800■	
	800	3200	8000	—	LMXD63A800	
SHIPPING:					35 lbs. each	
MXD6^④ 600V AC 250V DC	800	3000	6000	—	MXD63L800■	
	800	4000	8000	—	MXD63A800■	
	800	5000	10000	—	MXD63H800	
SHIPPING:					33 lbs. each	
CMD6^④ 600V AC 250V DC	800	3000	6000	—	CMD63L800■	
	800	4000	8000	—	CMD63A800■	
	800	5000	10000	—	CMD63H800■	
SHIPPING:					80 lbs. each	

Important Information

ETI interrupting ratings are determined through combination tests with properly sized overload relays and contactors.

⑤ 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.

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

① 2-pole available in 3-pole width only.

② When applied on DC Circuits — Trip levels will increase approximately +15 to 20%.

③ Tolerance -20%/+30% for lowest setting. All other set-

tings are -20%/+20%

④ For 2-pole application use outside poles of 3-pole circuit breaker.

Lug Information pages 17/120 to 17/122
Accessories pages 17/127 to 17/132
Application data pages 17/112 to 17/113

General

Protection of Motor Circuits

Molded case circuit breakers are used in motor circuits as a disconnecting means and for short-circuit protection. They should be used in conjunction with motor-running, over-current-protection devices, and should permit the motor to start without nuisance tripping from motor-inrush current. The circuit breaker should have a continuous-current rating of not less than 115% of the motor full-load current.

The recommended motor circuit protectors (Siemens ETI instantaneous only circuit breakers) listed have

continuous-current ratings of at least 115% of motor full-load currents. The trip-setting positions are approximately 11 times motor full-load currents. The suggested trip settings may have to be adjusted upward to no higher than 1300% of full-load current for non-design E type motors, and no greater than 1700% of full load current for design E motors, to allow for motor start-up due to inrush currents.

Breaker Mounted Immediately Ahead of Motor Starter

Siemens ETI motor circuit protectors are recommended for use in combination motor starters to provide selective short-circuit protection for the motor

branch circuit. The adjustable instantaneous-trip feature of the Siemens ETI motor circuit protector provides for a trip setting slightly above the peak motor-inrush current. With this setting, no delay is introduced in opening the circuit when a fault occurs. This circuit breaker has no time-delay trip element. Therefore it must be used in conjunction with, and immediately ahead of, the motor-running overcurrent protective device.

Important: The information below does not apply to all motor applications: it is recommended that the user refer to the National Electrical Code (NEC) for specific needs.

Table 1 (When Breaker is Mounted Immediately Ahead of Motor Starter)

3-Phase Induction Type Motors (Siemens ETI motor circuit protectors for branch circuit use with alternating-current combination, full voltage motor starters).

Motor Full Load Amperes	Catalog Number	ETI Trip Setting		Motor Full Load Amperes	Catalog Number	ETI Trip Setting		Motor Full Load Amperes	Catalog Number	ETI Trip Setting	
		Adjustment	Amperes			Adjustment	Amperes			Adjustment	Amperes
.20 - .33 .34 - .45 .46 - .56 .57 - .68 .69 - .81	ED63A001 CED63A001	Low 2 3 4 High	2.6 4.5 6 7.5 9	8.84 - 14.22 14.23 - 19.60 19.61 - 24.99 25.00 - 28.83 28.84 - 34.00	ED63A040 CED63A040	Low 2 3 4 High	115 185 255 325 375	95.00 - 110.00 110.00 - 124.00 138.00 - 151.00 165.00 - 178.00 178.00 - 192.00 192.00 - 227.00	JXD63L400 CJD63L400	Low 2 4 6 7 High	1250 1430 1790 2140 2320 2500
.53 - .83 .84 - 1.14 1.15 - 1.45 1.46 - 1.68 1.69 - 2.00	ED63A002 CED63A002	Low 2 3 4 High	7 11 15 19 22	13.84 - 23.06 23.07 - 31.52 31.53 - 39.99 40.00 - 46.14 46.15 - 54.50	ED63A050 CED63A050	Low 2 3 4 High	180 300 410 520 600	154.00 - 176.00 176.00 - 198.00 220.00 - 242.00 264.00 - 285.00 285.00 - 308.00 308.00 - 326.00	JXD63H400 CJD63H400	Low 2 4 6 7 High	2000 2290 2860 3430 3710 4000
.76 - 1.29 1.30 - 1.75 1.76 - 2.29 2.30 - 2.68 2.69 - 3.18	ED63A003 CED63A003	Low 2 3 4 High	10 17 23 30 35	24.23 - 41.52 41.53 - 56.91 56.92 - 68.45 68.46 - 76.91 76.92 - 90.90	ED63A100 CED63A100	Low 2 3 4 High	315 540 740 890 1000	155.00 - 176.00 176.00 - 198.00 220.00 - 242.00 264.00 - 285.00 285.00 - 308.00 308.00 - 326.00	LXD63L600 CLD63L600	Low 2 4 6 7 High	2000 2290 2860 3430 3710 4000
1.23 - 1.99 2.00 - 2.75 2.76 - 3.52 3.53 - 4.14 4.15 - 4.90	ED63A005 CED63A005	Low 2 3 4 High	16 26 36 46 54	38.46 - 55.37 55.38 - 70.75 70.76 - 84.60 84.61 - 96.14 96.15 - 113.60	ED63A125 CED63A125	Low 2 3 4 High	500 720 920 1100 1250	231.00 - 264.00 264.00 - 292.00 330.00 - 362.00 395.00 - 428.00 428.99 - 462.00 462.00 - 490.00	LXD63H600 CLD63H600	Low 2 4 6 7 High	3000 3430 4290 5140 5570 6000
2.30 - 3.83 3.84 - 5.37 5.38 - 6.52 6.53 - 7.68 7.69 - 9.10	ED63A010 CED63A010	Low 2 3 4 High	30 50 70 85 100	30.76 - 35.37 35.38 - 39.99 44.51 - 49.23 53.84 - 58.45 58.46 - 63.06 63.07 - 74.50	FXD63L150 CFD63L150	Low 2 4 6 7 High	400 460 580 700 760 820	215.00 - 238.00 238.00 - 261.00 261.00 - 284.00 308.00 - 369.00 369.00 - 423.00 423.00 - 462.00 462.00 - 490.00	LMXD63L800	Low 2 3 5 6 7 High	2800 3100 3400 4000 4800 5500 6000
4.23 - 6.91 6.92 - 9.61 9.62 - 11.91 11.92 - 13.83 13.84 - 16.40	ED63A025 CED63A025	Low 2 3 4 High	55 90 125 155 180	61.53 - 69.22 69.23 - 76.91 84.61 - 92.29 100.00 - 108.00 108.00 - 115.00 115.00 - 136.00	FXD63A150 CFD63A150	Low 2 4 6 7 High	800 900 1100 1300 1400 1500	246.00 - 269.00 269.00 - 284.00 284.00 - 323.00 362.00 - 492.00 492.00 - 562.00 562.00 - 616.00 616.00 - 660.00	LMXD63A800	Low 2 3 5 6 7 High	3200 3500 3700 4700 6400 7300 8000
6.15 - 10.37 10.38 - 14.22 14.23 - 18.06 18.07 - 20.75 20.76 - 24.50	ED63A030 CED63A030	Low 2 3 4 High	80 135 185 235 270	85.00 - 100.00 100.00 - 115.00 131.00 - 146.00 162.00 - 177.00 177.00 - 192.00 192.00 - 227.00	FXD63A250 CFD63A250	Low 2 4 6 7 High	1100 1300 1700 2100 2300 2500	231.00 - 264.00 264.00 - 292.00 292.00 - 330.00 362.00 - 395.00 428.00 - 462.00 462.00 - 490.00	MXD63L800 CMD63L800	Low 2 3 5 7 High	3000 3430 3800 4710 5570 6000
								308.00 - 352.00 352.00 - 442.00 442.00 - 447.00 483.00 - 527.00 571.00 - 616.00 616.00 - 660.00	MXD63A800 CMD63A800	Low 2 3 5 7 High	4000 4570 5740 6280 7240 8000
								385.00 - 440.00 495.00 - 550.00 605.00 - 660.00 660.00 - 695.00	MXD63H800 CMD63H800	Low 3 5 6	5000 6430 7860 8575

Note: Lowest instantaneous settings have a -20%/+30% tolerance and all other settings have a -20%/+20% tolerance.

Molded Case Circuit Breakers

Adjustable Installments 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
ED6	1	2.6	4.5	6	7.5	—	—	—	9	ED63A001	—	—
	2	7	11	15	19	—	—	—	22	ED63A002	—	—
	3	10	17	23	30	—	—	—	35	ED63A003	—	—
	5	16	26	36	46	—	—	—	54	ED63A005	—	—
	10	30	50	70	85	—	—	—	100	ED63A010	—	—
	25	55	90	125	155	—	—	—	180	ED63A025	—	—
	30	80	135	185	235	—	—	—	270	ED63A030	—	—
	40	115	185	255	325	—	—	—	375	ED63A040	—	—
	50	180	300	410	520	—	—	—	600	ED63A050	—	—
	100	315	540	740	890	—	—	—	1000	ED63A100	—	—
	125	500	720	920	1100	—	—	—	1250	ED63A125	—	—
	CED6	1	2.6	4.5	6	7.5	—	—	—	9	CED63A001	—
2		7	11	15	19	—	—	—	22	CED63A002	—	—
3		10	17	23	30	—	—	—	35	CED63A003	—	—
5		16	26	36	46	—	—	—	54	CED63A005	—	—
10		30	50	70	85	—	—	—	100	CED63A010	—	—
25		55	90	125	155	—	—	—	180	CED63A025	—	—
30		80	135	185	235	—	—	—	270	CED63A030	—	—
40		115	185	255	325	—	—	—	375	CED63A040	—	—
50		180	300	410	520	—	—	—	600	CED63A050	—	—
100		315	540	740	890	—	—	—	1000	CED63A100	—	—
125		500	720	920	1100	—	—	—	1250	CED63A125	—	—
FXD6-A		70	600	640	690	730	770	810	850	900	—	FXD62B070
	80	600	640	690	730	770	810	850	900	—	FXD62B080	FXD63B080
	90	600	640	690	730	770	810	850	900	—	FXD62B090	FXD63B090
	100	700	770	840	920	990	1060	1140	1200	—	FXD62B100	FXD63B100
	110	700	770	840	920	990	1060	1140	1200	—	FXD62B110	FXD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	FXD62B125	FXD63B125
	150	400	460	520	580	640	700	760	820	—	—	—
	150	800	900	1000	1100	1200	1300	1400	1500	—	FXD63L150	—
	150	1100	1300	1500	1700	1900	2100	2300	2500	—	FXD63A150	FXD63B150
	175	900	1060	1210	1370	1520	1780	1930	2000	—	FXD63H150	—
	200	900	1060	1210	1370	1520	1780	1930	2000	—	—	—
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	—	—
250	1100	1300	1500	1700	1900	2100	2300	2500	—	FXD63A250	FXD63B250	
FD6-A	70	600	640	690	730	770	810	850	900	—	FD62B070	FD63B070
	80	600	640	690	730	770	810	850	900	—	FD62B080	FD63B080
	90	600	640	690	730	770	810	850	900	—	FD62B090	FD63B090
	100	700	770	840	920	990	1060	1140	1200	—	FD62B100	FD63B100
	110	700	770	840	920	990	1060	1140	1200	—	FD62B110	FD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	FD62B125	FD63B125
	150	800	900	1000	1100	1200	1300	1400	1500	—	FD62B150	FD63B150
	175	900	1060	1210	1370	1520	1780	1930	2000	—	FD62B175	FD63B175
	200	900	1060	1210	1370	1520	1780	1930	2000	—	FD62B200	FD63B200
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	FD62B225	FD63B225
	250	1100	1300	1500	1700	1900	2100	2300	2500	—	FD62B250	FD63B250
	HFD6	70	600	640	690	730	770	810	850	900	—	HFD62B070
80		600	640	690	730	770	810	850	900	—	HFD62B080	HFD63B080
90		600	640	690	730	770	810	850	900	—	HFD62B090	HFD63B090
100		700	770	840	920	990	1060	1140	1200	—	HFD62B100	HFD63B100
110		700	770	840	920	990	1060	1140	1200	—	HFD62B110	HFD63B110
125		800	900	1000	1100	1200	1300	1400	1500	—	HFD62B125	HFD63B125
150		800	900	1000	1100	1200	1300	1400	1500	—	HFD62B150	HFD63B150
175		900	1060	1210	1370	1520	1780	1930	2000	—	HFD62B175	HFD63B175
200		900	1060	1210	1370	1520	1780	1930	2000	—	HFD62B200	HFD63B200
225		1100	1300	1500	1700	1900	2100	2300	2500	—	HFD62B225	HFD63B225
250		1100	1300	1500	1700	1900	2100	2300	2500	—	HFD62B250	HFD63B250
HHFD6		70	600	640	690	730	770	810	850	900	—	—
	80	600	640	690	730	770	810	850	900	—	—	HHFD63B080
	90	600	640	690	730	770	810	850	900	—	—	HHFD63B090
	100	700	770	840	920	990	1060	1140	1200	—	—	HHFD63B100
	110	700	770	840	920	990	1060	1140	1200	—	—	HHFD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	—	HHFD63B125
	150	800	900	1000	1100	1200	1300	1400	1500	—	—	HHFD63B150
	175	900	1060	1210	1370	1520	1780	1930	2000	—	—	HHFD63B175
	200	900	1060	1210	1370	1520	1780	1930	2000	—	—	HHFD63B200
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	—	HHFD63B225
	250	1100	1300	1500	1700	1900	2100	2300	2500	—	—	HHFD63B250
	CFD6	70	600	640	690	730	770	810	850	900	—	CFD62B070
80		600	640	690	730	770	810	850	900	—	CFD62B080	CFD63B080
90		600	640	690	730	770	810	850	900	—	CFD62B090	CFD63B090
100		700	770	840	920	990	1060	1140	1200	—	CFD62B100	CFD63B100
110		700	770	840	920	990	1060	1140	1200	—	CFD62B110	CFD63B110
125		800	900	1000	1100	1200	1300	1400	1500	—	CFD62B125	CFD63B125
150		400	460	520	580	640	700	760	820	—	—	—
150		800	900	1000	1100	1200	1300	1400	1500	—	CFD63L150	—
150		1100	1300	1500	1700	1900	2100	2300	2500	—	CFD63A150	CFD63B150
175		900	1060	1210	1370	1520	1780	1930	2000	—	CFD63H150	—
200		900	1060	1210	1370	1520	1780	1930	2000	—	—	—
225		1100	1300	1500	1700	1900	2100	2300	2500	—	—	—
250	1100	1300	1500	1700	1900	2100	2300	2500	—	CFD63A250	CFD63B250	

Note: Tolerances for instantaneous trip points meet UL 489 (7.3). Nominal AC instantaneous trip points are given in the tables. For DC instantaneous trip points, add 15% to nominal values.

Instantaneous trip adjustment is made through the breaker cover on all frame breakers. To change instantaneous trip point on circuit breaker, depress indicating knob, then rotate to desired position.

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