Molded Case Circuit Breakers Industrial Circuit Breakers

Section 6

How to Order

Q-Line

- -Thermal Magnetic Circuit Breakers
- -Molded-Case Switches

The product number as shown in the following pages includes the complete breaker or switch. TQD and TJD breakers are complete with Cu/Al line and load lugs.

E 150 Line

- -Thermal Magnetic Circuit Breakers
- -Magnetic Circuit Breakers
- -Molded Case Switches

The product numbers as shown in the following pages include the complete breaker or switch. All devices listed come with Cu/Al line and load lugs. If line lugs are not required on a breaker, eliminate "WL" from product number; for molded case switches see page 6-3. Unless otherwise noted, all circuit breakers are UL listed in File E–11592. Molded case switches are UL listed in File E–57546.

J 600 Line

- -Thermal Magnetic Circuit Breakers
- -Magnetic Circuit Breakers
- -Molded Case Switches

These breakers are available with either noninterchangeable trip (designated Type TJJ) or interchangeable trip (designated Type TJK and THJK). Type TJJ product numbers include frame, trip, Cu/Al line, and load lugs factory assembled. If line lugs are not required on the breaker, eliminate "WL" from product number, and subtract price of line lugs from price of complete breaker.

TJK breakers are available in two frames, 400 ampere frame (125 to 400 amperes) and 600 ampere frame (250 to 600 amperes). Trip units are not interchangeable between frames.

"Complete Circuit Breaker" price includes frame, trip unit, Cu/Al line, and load lugs. Unit will be shipped unassembled unless order specifies "must be factory assembled." If line lugs are not required, eliminate "WL" from product number and subtract price of line lugs from price of complete breaker.

To order the frame, trip, and lugs separately, select the required components from table. Magnetic breakers must be ordered as components. A complete breaker consists of frame, trip, and one line and one load lug per pole.

Price of ordering "Complete Circuit Breaker" vs. frame, trip, and line and load lugs separately is the same.

Molded case switches can also be ordered as complete units (designated Type TJK---Y) or as separate components. They are UL listed only as complete units. To indicate required lugs, see page 6-3.

Unless otherwise noted, all circuit breakers are UL listed in File E-11592. Molded case switches are UL listed in File E-57546.



Q-Line Thermal Magnetic Circuit Breakers and Molded-Case Switches

Tri-Break™ Line

- —Integrally Fused Thermal Magnetic Circuit Breakers
- —Integrally Fused Magnetic Circuit Breakers
- —Integrally Fused Molded Case Switches

These breakers are available in three types. Type TB1 (15-100 amperes) product numbers include frame, trip, line and load lugs, and current limiters all factory assembled. TB6 (300 to 600 amperes) and TB8 (600 to 800 amperes) include frame, trip and limiters, factory assembled, but do not include line or load lugs. If line and load lugs are required, order separately. Unless otherwise noted, TB1, TB6, and TB8 breaker components are UL listed in File E-42263. Fused molded case switches are UL listed in File E-57546.

Mag-Break Line

-Magnetic only circuit breakers (motor circuit protectors)

These breakers are available only with noninterchangeable adjustable magnetic trip, in frame Types E, F, J, K, and Tri-Break™. All breakers are shipped factory assembled, complete with Cu/Al line and load lugs.

All magnetic only circuit breakers and limiters are UL Component Recognized in Files E–11592 and E–66390, respectively, unless otherwise noted.



Molded Case Circuit Breakers Industrial Circuit Breakers

Spectra[™] RMS

-Circuit Breakers

Determine the required breaker frame, IC rating, and load requirements. Select frame, trip unit (rating plug), and lug, if required, product numbers from the tables on pages 6-45 to 6-53. For Spectra[™] breakers with *micro*EntelliGuard[™] Trip Units refer to pages 6-54 through 6-61. Select field-mounted internal accessory product numbers, if required, on pages 6-67 and 6-68. Select field-mounted external accessory product numbers, if required, on pages 6-95 through 6-106 and pages 6-62 to 6-66 for Spectra[™] breakers with *micro*EntelliGuard[™] Trip Units. Order as separate items.

-Mag-Break Motor Circuit Protectors

Determine the required frame and ampere requirements. Select frame, trip unit (rating plug), and lug, if required, product numbers from the table on pages 6-91 through 6-92. Select accessories as noted above for circuit breakers. The same accessories are used with both circuit breakers and motor circuit protectors. Order as separate items.

—Molded Case Switches

Determine the required frame and ampere requirements. Select frame and lug, if required, product numbers from the table on page 6-90. Rating plugs are not used. Select accessories as noted above for circuit breakers. Internal accessories do not require dummy trips. The same accessories are used with both circuit breakers and molded case switches. Order as separate items.

Unless otherwise noted, all circuit breakers are UL listed in File E-11592. Molded case switches are UL listed in File E-57546. Field-Installable Internal Accessories are UL listed in File E-57253. Distribution Cable Accessories for *micro*EntelliGuard[™] Trip Units are UL listed in File E-57253.

Accessories

Order accessories from the appropriate table:

- Thermal Magnetic Circuit Breakers, Magnetic Circuit Breakers, and Molded Case Switches¹—pages 6-39 to 6-44 and 6-94 to 6-106.
- —Spectra™ RMS Breakers—pages 6-66 to 6-67 and 6-94 to 6-106.
- —Spectra™ RMS Breakers with *micro*EntelliGuard™ Trip Units pages 6-62 to 6-68, and 6-94 to 6-106.
- ¹Installation of accessories in molded case switches requires dummy trip; see page 6-44 for information. Dummy trip not required for Tri-Break™ or Q-Line molded case switches.



Spectra Circuit Breakers and Molded Case Switches

Molded Case Circuit Breaker and Switch Terminal Configuration Code

Order standard Cu/Al lugs by using suffix codes presented. Order lugs separately if special lugs are required. For optional lugs, see pages 6-103 and 6-104.

Breaker/Switch			Suffix		
Туре	Blank	WL	XL	X2	LL
DLT/DQT	Load Lugs Only	Line and Load Lugs	_	Line Lugs Only	No Lugs
Molded Case Breakers, Thermal Magnetic	Load Lugs Only	Line and Load Lugs	_	Load Lugs Only	No Lugs
Molded Case Switch	Line and Load Lugs	_	No Lugs	Line Lugs Only	Load Lugs Only
Spectra RMS™ Breakers	No Lugs			Order Lugs	Separately
Mine Duty™ Breakers	No Lugs			Order Lugs	Separately
Mag-Break™ Breakers	Line and Load Lugs	_	_	_	_



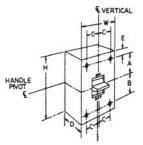
Molded Case Circuit Breakers

Section 6

Quick Reference Guide

Ratings do not apply to molded case switches.

The interruption ratings and voltages shown in the table are maximum ratings. A circuit breaker of the type given in the lefthand column may be applied at the given circuit voltage in any electrical distribution system where the available fault current at the load terminals of the breaker does not exceed the value in the table. That circuit breaker type may also be applied at intermediate values of circuit voltage provided the available fault current at the load terminals of the breaker does not exceed the value in the table for the higher value of voltage.





THQL 32015

Q-Line (UL file E-11592; Fixed Thermal Magnetic Trip Unit)

Ginneit			Maximum			UL Li	isted Int rms Sy	errupti mmetri	ng Ratir cal kA	ngs—										
Circuit Breaker	Ampere	No.	Voltage R				Vac				Vo	lc			Dim	ensions (i	in.)			Std.
Туре	Rating	Poles	ac	dc	120	120/240	240	277	480	600	125	250	н	W	D	Α	В	с	E	Pack
	15-50	1	120/240		_	10	-	_	_	_	_	_	3	3/4	2 3/8	_		_	_	10
TQ	15-60	2	120/240	-	-	10	-] -	_	_	_	-	5	1 1/2	2 3/8	_				5
TU001	15-50	1	120/240	_	_	10	_	_	_	_	_	_	3 9/32	1/2	2 3/8	_	_	_	_	100
THQP ¹	15-50	2	120/240	_	_	10	_	_	-	_	-	_	3 9/32	1	2 3/8	_	_	_	_	50
TO: /TOD /		1	120/240			5 ²	-							1						50
TQL/TQB/ TQC	10	2	120/240		-	5	5 ²	-	-		-	-	3 9/32	2	2 3/8	-	-	-	-	25
		3	240			-	5							3						15
THOL1	15-70	1	120/240			10	-							1						50
THOB ¹	15-125	2		-	-		10		-	-	-	-	3 9/32	2	2 3/8	-	-	-	-	25
THQC ¹	15-100	3	240			_								3						15
THHOB ¹	15-70	1	120/240			22	_	-						1						50
THHQE ¹	15-100	2		-	-		22	-	-	-	-	-	3 9/32	2	2 3/8	-	-	-	-	25
		3	240			_								3						15
	15-70	1	120/240		- -	22	22 - 22 -							1	-					50
THHQL ¹	15-125	2		-				-	-	-		3 9/32		2 3/8	-	-	-	-	25	
	15-100	3	240			_								3						15
TXQL ¹	15 30	1	120/240				65 -		-						1	0.7/0			-	50
TXQB ¹ TXQC ¹	15-30	2	240	-	-		65	-	-	-	-	-	3 9/32	2	2 3/8	-	-	-	-	25
	100-225	3	240 240			10	10							3 2 3/4				_		15
TQD ¹	100-225	3	240	-	-	10	10		-	-	-	-	6 9/16	4 1/8	2 5/8	2 7/16	2 7/16	11/16	27/32	1
	100-225	2	240			22	22							2 3/4				-		1
THQD ¹	100-225	3	240	-	-	-	22	-	-	-	-	-	6 9/16	4 1/8	2 5/8	2 7/16	2 7/16	11/16	27/32	1
	100 225	2	240			22	22					10		4 1/0				11/10		1
TJD	250-400	3	240	-	-	_	22	- 1	-	-	-	- 10	10 1/8	8 1/4	3 13/16	3 15/16	3 13/16	1 3/8	1 3/16	1
CB3 Ground	Fault, Equip	ment Grou	Ind Fault an	d Arc Fo	ult (UL F	ile E-51075;		 hermal	Magnet	tic Trip L	Jnit)									
THQL		1	120		10	_								1						10
THÒB THỌC	15-30			-			-	-	-	-	-	-	3 9/32		2 3/8	-	-	-	-	
GF, GFEP		2	120/240		-	10								2						10
THHQL THHQB GF	15-30	1	120	_	22	_	_	-	-	_	_	-	3 9/32	1	2 3/8	-	-	_	_	10
THQL THQB THQC AF	15-20	1	120/240	_	_	10	_	_	-	_	_	_	3 9/32	1	2 3/8	_	_	_	_	10
THHQL THHQB AF	15-20	1	120/240	_	_	22	_	_	-	_	-	_	3 9/32	1	2 3/8	_	-	_	_	10

¹UL listed as HACR (heating, air conditioning and refrigeration).

²Not UL listed.



6-6

Molded Case Circuit Breakers Q-Line Circuit Breakers Plug-in Circuit Breakers

TQL and THQL 120/240 Vac

# of	Ampere		120/240 Vac	
Poles	Rating	Wire Range ¹	Interrupting Rating	Product Number
1	104		5kA	TQL1110
1	15 ²	(1) 14-8 Cu/12-8 Al	10kA	THQL1115
1	20 ²	(1) 14-8 Cu/12-8 Al	10kA	THQL1120
1	25	(1) 14-8 Cu/12-8 Al	10kA	THQL1125
1	30	(1) 14-8 Cu/12-8 Al	10kA	THQL1130
1	35	(1) 8-3 Cu/8-3 Al	10kA	THQL1135
1	40	(1) 8-3 Cu/8-3 Al	10kA	THQL1140
1	45	(1) 8-3 Cu/8-3 Al	10kA	THQL1145
1	50	(1) 8-3 Cu/8-3 Al	10kA	THQL1150
1	60	(1) 8-3 Cu/8-3 Al	10kA	THQL1160
1	70	(1) 6-1/0 Cu/4-1/0 Al	10kA	THQL1170

THQL 120/240 Vac, with Factory Installed Shunt

# of	Ampere	120/240 Vac				
Poles	Rating	Wire Range ¹	Interrupting Rating	Product Number		
1	15	(1) 14-8 Cu/12-8 Al	10kA	THQL1115ST1		
1	20	(1) 14-8 Cu/12-8 Al	10kA	THQL1120ST1		
1	30	(1) 14-8 Cu/12-8 Al	10kA	THQL1130ST1		
1	35	(1) 8-3 Cu/8-3 Al	10kA	THQL1135ST1		
1	40	(1) 8-3 Cu/8-3 Al	10kA	THQL1140ST1		
1	45	(1) 8-3 Cu/8-3 Al	10kA	THQL1145ST1		
1	50	(1) 8-3 Cu/8-3 Al	10kA	THQL1150ST1		

TQL and THQL 120/240 Vac, Internal Common Trip

# of	Ampere		120/240 Vac	
Poles	Rating	Wire Range ¹	Interrupting Rating	Product Number
2	104		5kA	TQL2110
2	15	(1) 14-8 Cu/12-8 Al	10kA	THQL2115
2	20	(1) 14-8 Cu/12-8 Al	10kA	THQL2120
2	25	(1) 14-8 Cu/12-8 Al	10kA	THQL2125
2	30	(1) 14-8 Cu/12-8 Al	10kA	THQL2130
2	35	(1) 8-3 Cu/8-3 Al	10kA	THQL2135
2	40	(1) 8-3 Cu/8-3 Al	10kA	THQL2140
2	45	(1) 8-3 Cu/8-3 Al	10kA	THQL2145
2	50	(1) 8-3 Cu/8-3 Al	10kA	THQL2150
2	60	(1) 8-3 Cu/8-3 Al	10kA	THQL2160
2	70	(1) 6-1/0 Cu/4-1/0 Al	10kA	THQL2170
2	80	(1) 6-1/0 Cu/4-1/0 Al	10kA	THQL2180
2	90	(1) 6-1/0 Cu/4-1/0 Al	10kA	THQL2190
2	100	(1) 6-1/0 Cu/4-1/0 Al	10kA	THQL21100
2	110	(1) 2-2/0 Cu/2-2/0 Al	10kA	THQL21110
2	125	(1) 2-2/0 Cu/2-2/0 Al	10kA	THQL21125 ³

THQP 120/240 Vac

# of Poles	Ampere Rating	Wire Range ¹	120/240 Vac Interrupting Rating	Product Number
	2	2		
1	15	14-8 Cu/12-8 Al	10kA	THQP115
1	20	14-8 Cu/12-8 Al	10kA	THQP120
1	25	14-8 Cu/12-8 Al	10kA	THQP125
1	30	8-4 Cu/8-4 Al	10kA	THQP130
1	35	8-4 Cu/8-4 Al	10kA	THQP135
1	40	8-4 Cu/8-4 Al	10kA	THQP140
1	45	8-4 Cu/8-4 Al	10kA	THQP145
1	50	8-4 Cu/8-4 Al	10kA	THQP150

THQP 120/240 Vac, Internal Common Trip

# of	Ampere		120/240 Vac		
Poles	Rating	Wire Range ¹	Interrupting Rating	Product Number	
2	15	14-8 Cu/12-8 Al	10kA	THQP215	
2	20	14-8 Cu/12-8 Al	10kA	THQP220	
2	25	14-8 Cu/12-8 Al	10kA	THQP225	
2	30	8-4 Cu/8-4 Al	10kA	THQP230	
2	35	8-4 Cu/8-4 Al	10kA	THQP235	
2	40	8-4 Cu/8-4 Al	10kA	THQP240	
2	45	8-4 Cu/8-4 Al	10kA	THQP245	
2	50	8-4 Cu/8-4 Al	10kA	THQP250	

 $^1\mathrm{Solid}$ or stranded for 14-10 AWG.

 2 UL listed as SWD (Switching Duty) rated. Suitable for switching 120 Vac fluorescent lighting loads.

³Recommended for use as main or submain breaker only.

⁴Not UL listed.

UL listed as HACR (heating, air conditioning and refrigeration).





THQL1120

THQL1130ST1



THQP130



THQP230