Typical J-Frame Breaker

Contents

J-Frame (70–250 Amperes)

Product Description

- All Eaton's J-Frame circuit breakers are HACR rated
- J-Frame circuit breakers are available as individual components (frame, trip unit, terminals), or factory assembled complete breakers
- J-Frame circuit breakers with non-interchangeable trip units are suitable for reverse feed use

Catalog Number Selection

This information is presented only as an aid to understanding catalog numbers. It is not to be used to build catalog numbers for circuit breakers or trip units.

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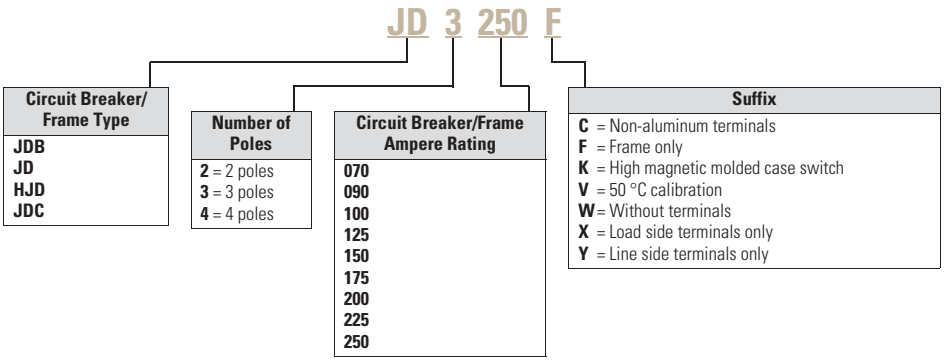
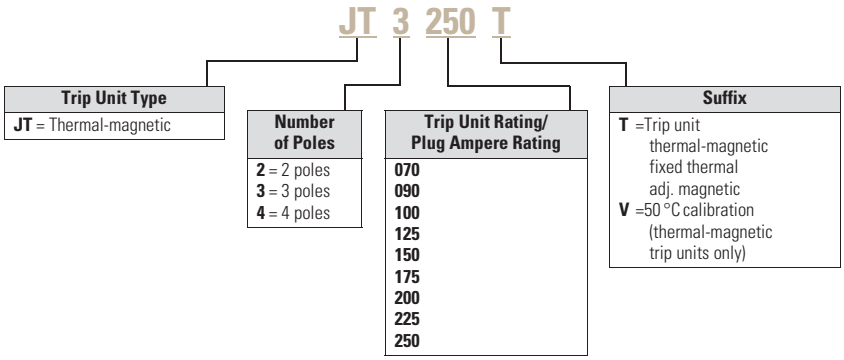
Circuit Breaker/Frame



Trip Unit



Product Selection

Types JD, HJD and JDC Thermal-Magnetic Circuit Breakers with Interchangeable Trip Units

Maximum Continuous Ampere Rating at 40 °C	Standard Interrupting Capacity 600 Vac Rated 35 kAIC at 480 Vac Factory Assembled Circuit Consisting of Frame, Trip Unit and Terminals ① Catalog Number	High Interrupting Capacity 600 Vac Rated 65 kAIC at 480 Vac Factory Assembled Circuit Consisting of Frame, Trip Unit and Terminals ① Catalog Number	Ultra High Interrupting Capacity Current Limiting 600 Vac Rated 100 kAIC at 480 Vac Factory Assembled Circuit Consisting of Frame, Trip Unit and Terminals ① Catalog Number	Thermal-Magnetic Trip Unit Only ① For Use with Standard or High or Ultra High Interrupting Frames Catalog Number	Standard Terminals Only See Page V4-T2-287 for Optional Terminals Catalog Number
Two-Pole					
70	**JD2070**	**HJD2070**	**JDC2070**	**JT2070T**	**TA250KB** ②
90	**JD2090**	**HJD2090**	**JDC2090**	**JT2090T**	
100	**JD2100**	**HJD2100**	**JDC2100**	**JT2100T**	
125	**JD2125**	**HJD2125**	**JDC2125**	**JT2125T**	
150	**JD2150**	**HJD2150**	**JDC2150**	**JT2150T**	
175	**JD2175**	**HJD2175**	**JDC2175**	**JT2175T**	
200	**JD2200**	**HJD2200**	**JDC2200**	**JT2200T**	
225	**JD2225**	**HJD2225**	**JDC2225**	**JT2225T**	
250	**JD2250**	**HJD2250**	**JDC2250**	**JT2250T**	
Three-Pole					
70	**JD3070**	**HJD3070**	**JDC3070**	**JT3070T**	**TA250KB** ②
90	**JD3090**	**HJD3090**	**JDC3090**	**JT3090T**	
100	**JD3100**	**HJD3100**	**JDC3100**	**JT3100T**	
125	**JD3125**	**HJD3125**	**JDC3125**	**JT3125T**	
150	**JD3150**	**HJD3150**	**JDC3150**	**JT3150T**	
175	**JD3175**	**HJD3175**	**JDC3175**	**JT3175T**	
200	**JD3200**	**HJD3200**	**JDC3200**	**JT3200T**	
225	**JD3225**	**HJD3225**	**JDC3225**	**JT3225T**	
250	**JD3250**	**HJD3250**	**JDC3250**	**JT3250T**	
Four-Pole ③④					
125	**JD4125**	**HJD4125**	**JDC4125**	**JT3125T**	**TA250KB** ②
150	**JD4150**	**HJD4150**	**JDC4150**	**JT3150T**	
175	**JD4175**	**HJD4175**	**JDC4175**	**JT3175T**	
200	**JD4200**	**HJD4200**	**JDC4200**	**JT3200T**	
225	**JD4225**	**HJD4225**	**JDC4225**	**JT3225T**	
250	**JD4250**	**HJD4250**	**JDC4250**	**JT3250T**	

Notes

① Magnetic trip adjustable 5–10 times continuous ampere rating.
② Individually packed.
③ Fully rated neutral pole with no protection.
④ Neutral is in right pole.

Types JD, HJD and JDC Thermal-Magnetic Circuit Breakers—Frame Only

Standard Interrupting Capacity 600 Vac Rated 35 kAIC at 480 Vac	High Interrupting Capacity 600 Vac Rated 65 kAIC at 480 Vac	Ultra High Interrupting Capacity Current Limiting 600 Vac Rated 100 kAIC at 480 Vac
Catalog Number	Catalog Number	Catalog Number
Two-Pole		
JD2250F	HJD2250F	JDC2250F
Three-Pole		
JD3250F	HJD3250F	JDC3250F
Four-Pole		
JD4250F	HJD4250F	JDC4250F

Type JDB Thermal-Magnetic Circuit Breakers with Non-Interchangeable Thermal-Magnetic Trip Units Suitable for Reverse Feed Application

	600 Vac Rated, 250 Vdc Complete Circuit Breaker	
Maximum Continuous Ampere Rating at 40 °C	Without Line and Load Terminals Catalog Number	With Standard Line and Load Terminals Only Catalog Number
Two-Pole		
70	JDB2070W	JDB2070
90	JDB2090W	JDB2090
100	JDB2100W	JDB2100
125	JDB2125W	JDB2125
150	JDB2150W	JDB2150
175	JDB2175W	JDB2175
200	JDB2200W	JDB2200
225	JDB2225W	JDB2225
250	JDB2250W	JDB2250
Three-Pole		
70	JDB3070W	JDB3070
90	JDB3090W	JDB3090
100	JDB3100W	JDB3100
125	JDB3125W	JDB3125
150	JDB3150W	JDB3150
175	JDB3175W	JDB3175
200	JDB3200W	JDB3200
225	JDB3225W	JDB3225
250	JDB3250W	JDB3250

Molded Case Switches

Eaton's molded case switches are used as compact switches in applications requiring high current switching capabilities. Molded case switches are constructed of circuit breaker components and are of the high instantaneous automatic type. Molded case switches are listed in accordance with Underwriters Laboratories Standard UL 489.

Molded Case Switches

	600 Vac Maximum, 250 Vdc Complete Circuit Breaker Only Without Line and Load Terminals		Standard Terminals Only
Maximum Continuous Ampere Rating at 40 °C	Catalog Number	Suitable for Reverse Feed Use Catalog Number	See PageV4-T2-287 for Optional Terminals Catalog Number
Two-Pole			
250	JD2250KW	JDB2250KW	TA250KB ①
	HJD2250KW	HJDB2250KW	—
Three-Pole			
250	JD3250KW	JDB3250KW	TA250KB ①
	HJD3250KW	HJDB3250KW	—
Four-Pole			
250	JD4250KW	JDB4250KW	TA250KB ①
	HJD4250KW	HJDB4250KW	—

Notes

① Individually packed.

Molded case switches may open above 2500 amperes.

Accessories Selection Guide and Ordering Information

Line and Load Terminals

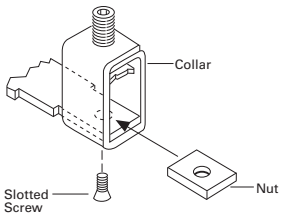
Eaton's line and load terminals provide wire connecting capabilities for specific ranges of continuous current ratings and wire types. All terminals comply with Underwriters Laboratories Standards UL 486A and UL 486B and CSA Standard C22.2 No. 65, or Electrical Bulletin 1165.

Unless otherwise specified, J-Frame circuit breaker line and load terminals are shipped separately for field installation.

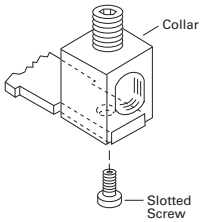
The bottom of the standard TA250KB terminal contains a recess that is positioned over the J-Frame circuit breaker terminal conductor.

Ordering Information

J-Frame circuit breakers use Cu/Al terminals as standard. When optional copper-only terminals are required, order by catalog number. Specify if factory installation is required.



T250KB Terminal



TA250KB Terminal (Standard)

Line and Load Terminals

Maximum Breaker Amperes	Terminal Body Material	Wire Type	AWG Wire Range/ No. Conductors	Metric Wire Range mm^2	Catalog Number
Standard Cu/Al Pressure Terminals					
250	Aluminum	Cu/Al	4–350 kcmil	25–185	**TA250KB**
Optional Cu Pressure Terminals					
250	Stainless Steel	Cu	4–350 kcmil	25–185	**T250KB**

Accessories

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Allowable Accessory Combinations

Different combinations of accessories can be supplied, depending on the types of accessories and the number of poles in the circuit breaker.

JD Frame Accessories

Description	Reference Page	Two-, Three-Pole Left	Center	Right	Four-Pole Left	Center	Right	Neutral
Internal Accessories (Only One Internal Accessory Per Pole)								
Alarm lockout (Make/Break)	**V4-T2-405**	❑	—	❑	❑	—	❑	—
Auxiliary switch (1A, 1B)	**V4-T2-407**	■	—	■	■	—	■	—
Auxiliary switch (2A, 2B)	**V4-T2-407**	■	—	■	■	—	■	—
Auxiliary switch and alarm switch combination	**V4-T2-409**	❑	—	❑	❑	—	❑	—
Shunt trip—standard	**V4-T2-412**	■	—	■	■	—	■	—
Shunt trip—low energy	**V4-T2-415**	■	—	■	■	—	■	—
Undervoltage release mechanism	**V4-T2-419**	■	—	■	■	—	■	—
External Accessories								
End cap kit	**V4-T2-440**	●	●	●	●	●	●	●
Plug nut	**V4-T2-441**	●	●	●	●	●	●	●
Control wire terminal kit	**V4-T2-441**	●	●	●	●	●	●	●
Multiwire connectors	**V4-T2-442**	●	●	●	●	●	●	●
Base mounting hardware	**V4-T2-443**	●	●	●	●	●	●	●
Terminal shields	**V4-T2-444**	●	●	●	●	●	●	●
Interphase barriers	**V4-T2-445**	●	●	●	●	●	●	●
Non-padlockable handle block	**V4-T2-446**	—	■	—	—	■	—	—
Padlockable handle block	**V4-T2-446**	—	■	—	—	■	—	—
Padlockable handle lock hasp	**V4-T2-447**	❑	—	❑	❑	—	❑	—
Cylinder lock	**V4-T2-447**	❑	—	❑	—	—	—	—
Key interlock kit	**V4-T2-448**	❑	—	❑	❑	—	❑	—
Sliding bar interlock—requires two breakers	**V4-T2-449**	●	●	●	—	—	—	—
Electrical (solenoid) operator	**V4-T2-451**	●	●	●	●	●	●	●
Plug-in adapters	**V4-T2-451**	●	●	●	●	●	●	●
Rear connecting studs	**V4-T2-453**	●	●	●	●	●	●	●
Panelboard connecting straps	**V4-T2-454**	●	●	●	●	●	●	●
Handle mechanisms	**V4-T2-534**	●	●	●	●	●	●	●
Handle extension	**V4-T2-546**	●	●	●	●	●	●	●
IQ Energy Sentinel	**V4-T2-456**	●	●	●	—	—	—	—
Modifications (Refer to Eaton)								
Special calibration	—	●	●	●	●	●	●	●
Moisture fungus treatment	**V4-T2-246**	●	●	●	●	●	●	●
Freeze-tested circuit breakers	—	●	●	●	●	●	●	●
Marine/naval application	—	●	●	●	●	●	●	●

Legend

■ Applicable in indicated pole position
❑ May be mounted on left or right pole—not both
● Accessory available/modification available

Technical Data and Specifications

UL 489 Interrupting Capacity Ratings

Circuit Breaker Type	Number of Poles	Interrupting Capacity (kA Symmetrical Amperes) Volts AC (50/60 Hz) 240	480	600	Volts DC 125	250 ①②
JDB	2, 3	65	35	18	—	10
JD	2, 3, 4	65	35	18	—	10
HJD	2, 3, 4	100	65	25	—	22
JDC ③	2, 3, 4	200	100	35	—	22

IEC 157-1 (P1) Interrupting Capacity Ratings

Circuit Breaker Type	Number of Poles	Interrupting Capacity (kA Symmetrical Amperes) Volts AC (50/60 Hz) 240	380	415	600	Volts DC 125	250 ①②
JD	2, 3, 4	65	35	35	—	—	10
HJD	2, 3, 4	100	65	65	—	—	22
JDC	2, 3, 4	200	100	100	—	—	22

UL 489 Current Limiting Data

Frame	Circuit	Ip (kA)	I^2T (10^6A^2S)
JDC	240 V/200 kA	42.6	1.36
JDC	480 V/100 kA	40.0	3.00
JDC	600 V/35 kA	31.9	3.10

Notes

① Two-pole circuit breaker or two outside poles of three-pole circuit breaker.
② Time constant is 3 milliseconds minimum at 10 kA and 8 milliseconds minimum at 22 kA.
③ Current limiting.

Dimensions and Weights

Approximate Dimensions in Inches (mm)

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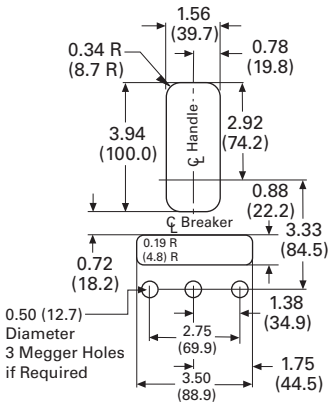
JD Frame

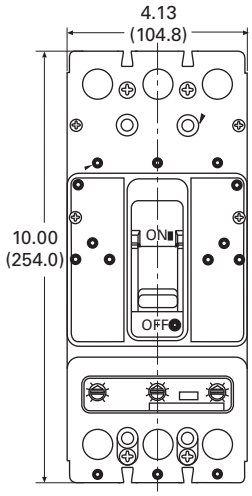
Number of Poles	Width	Height	Depth
2, 3	4.13 (105.0)	10.00 (254.0)	4.06 (104.1)
4	5.50 (139.7)	10.00 (254.0)	4.06 (104.1)

JD-Frame, Three-Pole

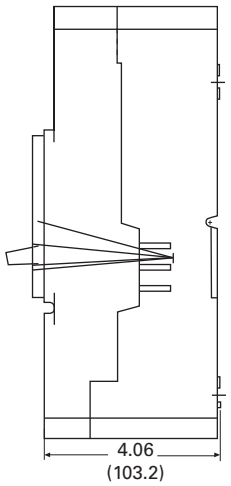
Front View Cutout



Front View



Side View



Approximate Shipping Weight in Lbs (kg)

JD Frame

Breaker Type	Complete Breaker			Frame Only			Trip Unit		
	Two-Pole	Three-Pole	Four-Pole	Two-Pole	Three-Pole	Four-Pole	Two-Pole	Three-Pole	Four-Pole
JDB	11.25 (5.1)	12.50 (5.7)	—	—	—	—	—	—	—
JD	11.25 (5.1)	12.50 (5.7)	13.25 (6.0)	9.00 (4.1)	10.00 (4.5)	10.50 (4.8)	2.00 (0.9)	2.00 (0.9)	2.25 (1.0)
HJD	11.25 (5.1)	12.50 (5.7)	13.25 (6.0)	9.00 (4.1)	10.00 (4.5)	10.50 (4.8)	2.00 (0.9)	2.00 (0.9)	2.25 (1.0)
JDC	12.25 (5.6)	13.50 (6.1)	14.25 (6.5)	10.00 (4.5)	11.00 (5.0)	11.50 (5.2)	2.00 (0.9)	2.00 (0.9)	2.25 (1.0)