

Typical M-Frame Circuit Breaker



Contents

Description

	<i>Page</i>
Product Overview	V4-T2-116
Standards and Certifications	V4-T2-117
Quick Reference	V4-T2-118
G-Frame (15–100 Amperes)	V4-T2-121
F-Frame (10–225 Amperes)	V4-T2-135
J-Frame (70–250 Amperes)	V4-T2-153
K-Frame (70–400 Amperes)	V4-T2-161
L-Frame (125–600 Amperes)	V4-T2-185
M-Frame (300–800 Amperes)	
Catalog Number Selection	V4-T2-212
Product Selection	V4-T2-213
Accessories	V4-T2-218
Technical Data and Specifications	V4-T2-219
Dimensions and Weights	V4-T2-221
Motor Circuit Protectors (MCP)	V4-T2-256
N-Frame (400–1200 Amperes)	V4-T2-222
R-Frame (800–2500 Amperes)	V4-T2-237
Motor Protection Circuit Breakers (MPCB)	V4-T2-267
Type ELC Current Limiter Attachment (Size 0–4)	V4-T2-269
Current Limiting Circuit Breaker Module	V4-T2-270
Internal Accessories	V4-T2-273
External Accessories	V4-T2-306

M-Frame (300–800 Amperes)

Product Description

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

Standards and Certifications

- CE marked



2.3

Molded Case Circuit Breakers

Series C

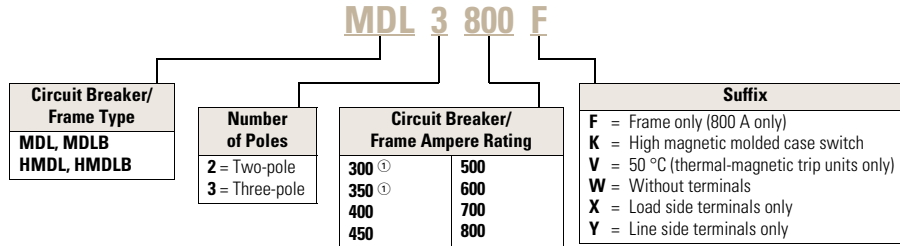
2

Catalog Number Selection

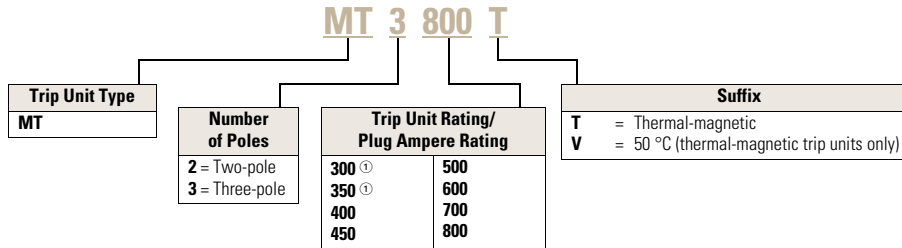
This information is presented only as an aid to understanding catalog numbers. It is not to be used to build catalog numbers for circuit breakers or trip units.

MDL Frame with Thermal-Magnetic Trip Unit Technology

Thermal-Magnetic Breakers and Frame ①

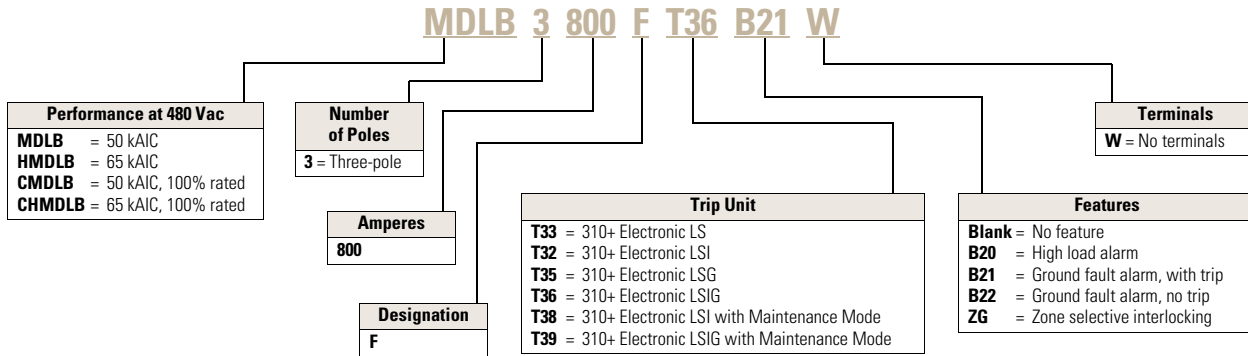


Thermal-Magnetic Trip Unit ①

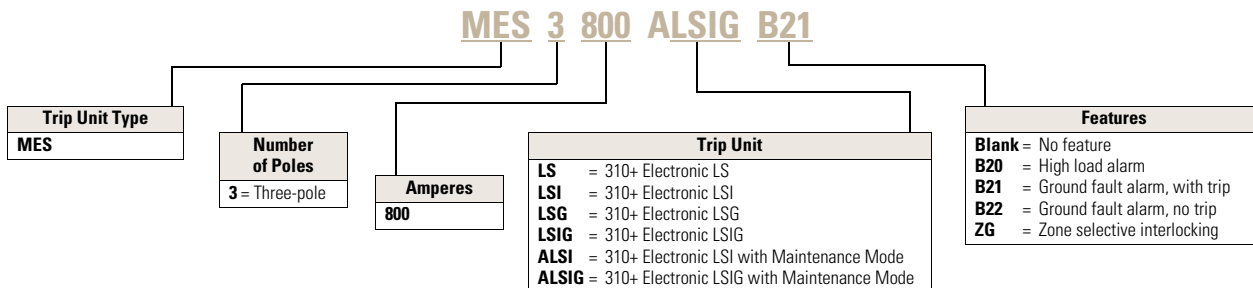


MDL Frame with 310+ Electronic Trip Unit Technology

310+ Circuit Breaker



310+ Electronic Trip Unit ①



Note

① Frames are the same for thermal-magnetic or 310+ electronic trip units, e.g., MDL3800F, HMDL3800F, etc.

Product Selection

Types MDL and HMDL Thermal-Magnetic Circuit Breakers with Interchangeable Trip Units—Two-Pole

Maximum Continuous Ampere Rating at 40 °C	Standard Interrupting Capacity 600 Vac Rated 50 kAIC at 480 Vac		High Interrupting Capacity 600 Vac Rated 65 kAIC at 480 Vac		Thermal-Magnetic Trip Unit Only	Standard Terminals Only ^① See Page V4-T2-217 for Optional Terminals Catalog Number
	Factory Assembled Circuit Consisting of Frame, Trip Unit and Terminals		Factory Assembled Circuit Consisting of Frame, Trip Unit and Terminals		For Use with Standard or High or Ultra High Interrupting Frames Magnetic Trip Range is 5–10 Up Through 600 A; 4–8 on 700 and 800 A x Continuous Ampere Rating Catalog Number	
	Catalog Number	Frame Only Catalog Number	Catalog Number	Frame Only Catalog Number		
300	MDL2300	MDL2800F	HMDL2300	HMDL2800F	MT2300T	TA700MA1
350	MDL2350		HMDL2350		MT2350T	TA700MA1
400	MDL2400		HMDL2400		MT2400T	TA700MA1
450	MDL2450		HMDL2450		MT2450T	TA700MA1
500	MDL2500		HMDL2500		MT2500T	TA700MA1
600	MDL2600		HMDL2600		MT2600T	TA700MA1
700	MDL2700		HMDL2700		MT2700T	TA700MA1
800	MDL2800		HMDL2800		MT2800T	TA800MA2

Types MDL and HMDL Thermal-Magnetic Circuit Breakers with Interchangeable Trip Units—Three-Pole

Maximum Continuous Ampere Rating at 40 °C	Standard Interrupting Capacity 600 Vac Rated 50 kAIC at 480 Vac		High Interrupting Capacity 600 Vac Rated 65 kAIC at 480 Vac		Thermal-Magnetic Trip Unit Only	Standard Terminals Only ^① See Page V4-T2-217 for Optional Terminals Catalog Number
	Factory Assembled Circuit Consisting of Frame, Trip Unit and Terminals		Factory Assembled Circuit Consisting of Frame, Trip Unit and Terminals		For Use with Standard or High or Ultra High Interrupting Frames Magnetic Trip Range is 5–10 Up Through 600 A; 4–8 on 700 and 800 A x Continuous Ampere Rating Catalog Number	
	Catalog Number	Frame Only Catalog Number	Catalog Number	Frame Only Catalog Number		
300	MDL3300	MDL3800F	HMDL3300	HMDL3800F	MT3300T	TA700MA1
350	MDL3350		HMDL3350		MT3400T	TA700MA1
400	MDL3400		HMDL3400		MT3400T	TA700MA1
450	MDL3450		HMDL3450		MT3450T	TA700MA1
500	MDL3500		HMDL3500		MT3500T	TA700MA1
600	MDL3600		HMDL3600		MT3600T	TA700MA1
700	MDL3700		HMDL3700		MT3700T	TA700MA1
800	MDL3800		HMDL3800		MT3800T	TA800MA2

Note

^① Two terminals are required per pole.

310+ Electronic Trip Unit Accessories

Description	Catalog Number
Electronic portable test kit	MTST230V ①
Trip unit tamper protection wire seal	5108A03H01
External neutral sensor	LGFACT600 ②
Breaker-mount cause-of-trip indication	TRIP-LED
Breaker-mount ammeter module	DIGIVIEW
Remote-mount ammeter module	DIGIVIEWR06 ③

Technical Data and Specifications

UL 489/CSA Interrupting Capacity Ratings ④

Circuit Breaker Type	Number of Poles	Interrupting Capacity (kA Symmetrical Amperes)			Volts DC ⑤⑥
		Volts AC (50/60 Hz)			
		240	480	600	250
MDL, MDLB	2, 3	65	50	25	22
CMDL	2, 3	65	50	25	—
HMDL, HMDLB	2, 3	100	65	35	25
CHMDL	2, 3	100	65	35	—

IEC 947-2 Interrupting Capacity Ratings ④

Circuit Breaker Type	Number of Poles	Interrupting Capacity rms (kA Symmetrical Amperes) $I_{cu} \neq I_{cs}$			Volts DC ⑤⑥
		Volts AC (50/60 Hz)			
		240	415	690	250
MDL, MDLB	2, 3	65/65	50/50	20/10	20/10
CMDL	2, 3	65/65	50/50	20/10	—
HMDL, HMDLB	2, 3	100/100	70/50	25/13	20/10
CHMDL	2, 3	100/100	70/50	25/13	—

Notes

- ① MTST230V applies to 100–230 Vac.
- ② Included with all LD LSG and LSG trip units and breakers.
- ③ Includes 6 ft cable for remote mounting; NEMA 3R rated.
- ④ Utilization Category A circuit breakers.
- ⑤ Two-pole or two poles of three-pole circuit breaker. Thermal-magnetic trip units only, MDL, HMDL breakers with electronic trip unit are not DC rated.
- ⑥ Time constant is 3 milliseconds minimum at 10 kA and 8 milliseconds at 22 kA.

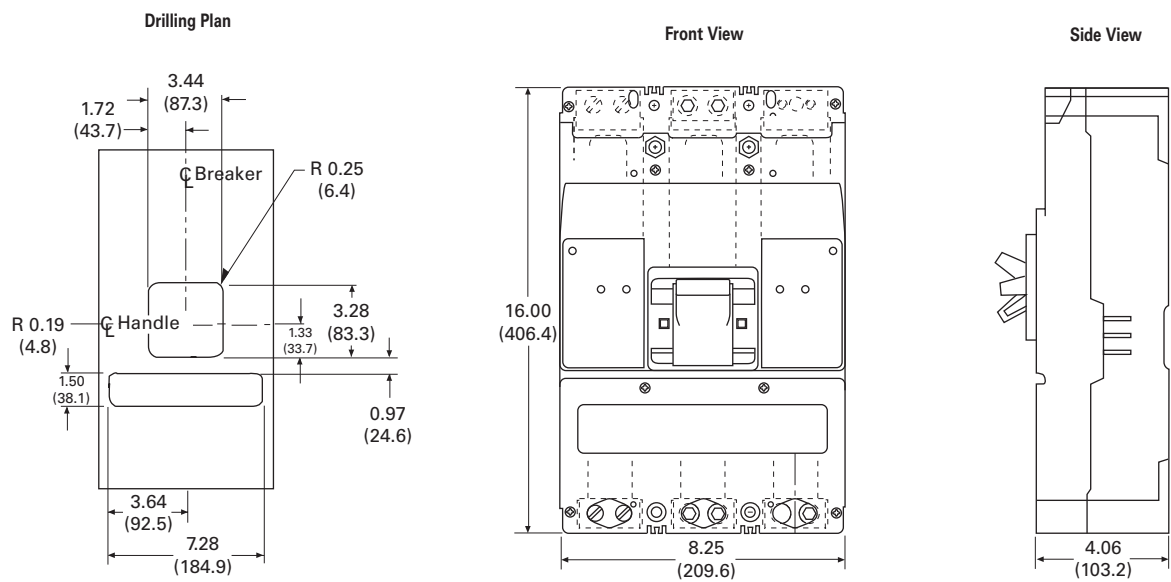
Dimensions and Weights

Dimensions in Inches (mm)

MD Frame

Number of Poles	Width	Height	Depth
2, 3	8.25 (209.6)	16.00 (406.4)	4.06 (103.1)

MDL-Frame, Two- and Three-Pole



Approximate Shipping Weight, Lbs (kg)

MD Frame

Breaker Type	Complete Breaker		Frame Only		Trip Unit ①	
	Two-Pole	Three-Pole	Two-Pole	Three-Pole	Two-Pole	Three-Pole
MDL, HMDL (T/M T.U.)	26.5 (12.0)	29.0 (13.2)	24.5 (11.1)	26.0 (11.8)	2.5 (1.1)	3.0 (1.4)
MDL, HMDL (Elec. T.U.)	—	30.0 (13.6)	—	26.0 (11.8)	—	4.0 (1.8)

Note

① Thermal-magnetic only.