



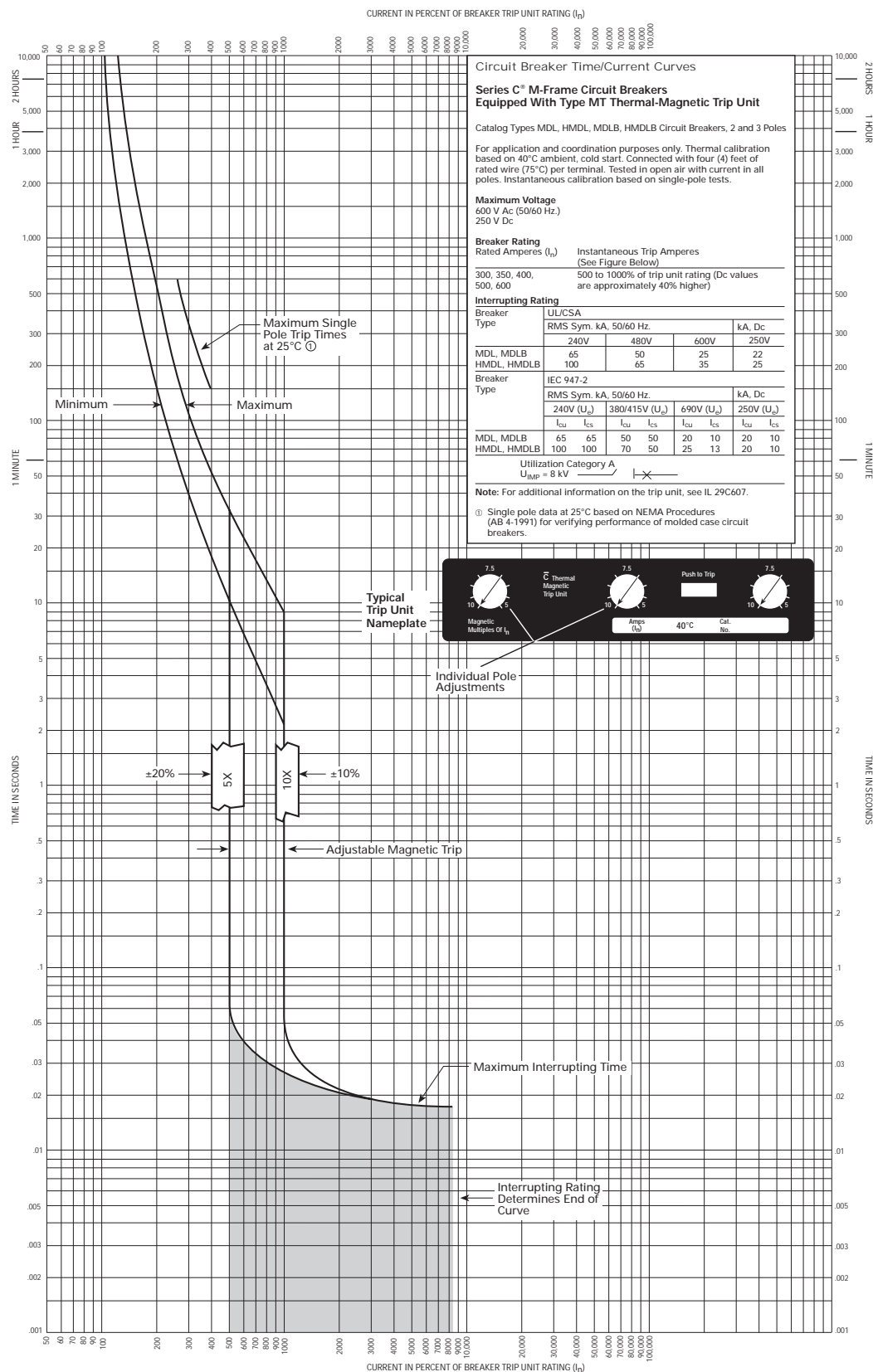
Series C[®] Molded Case Circuit Breakers M-Frame 300-800 Amperes

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Series C® Molded Case Circuit Breakers M-Frame 300-800 Amperes

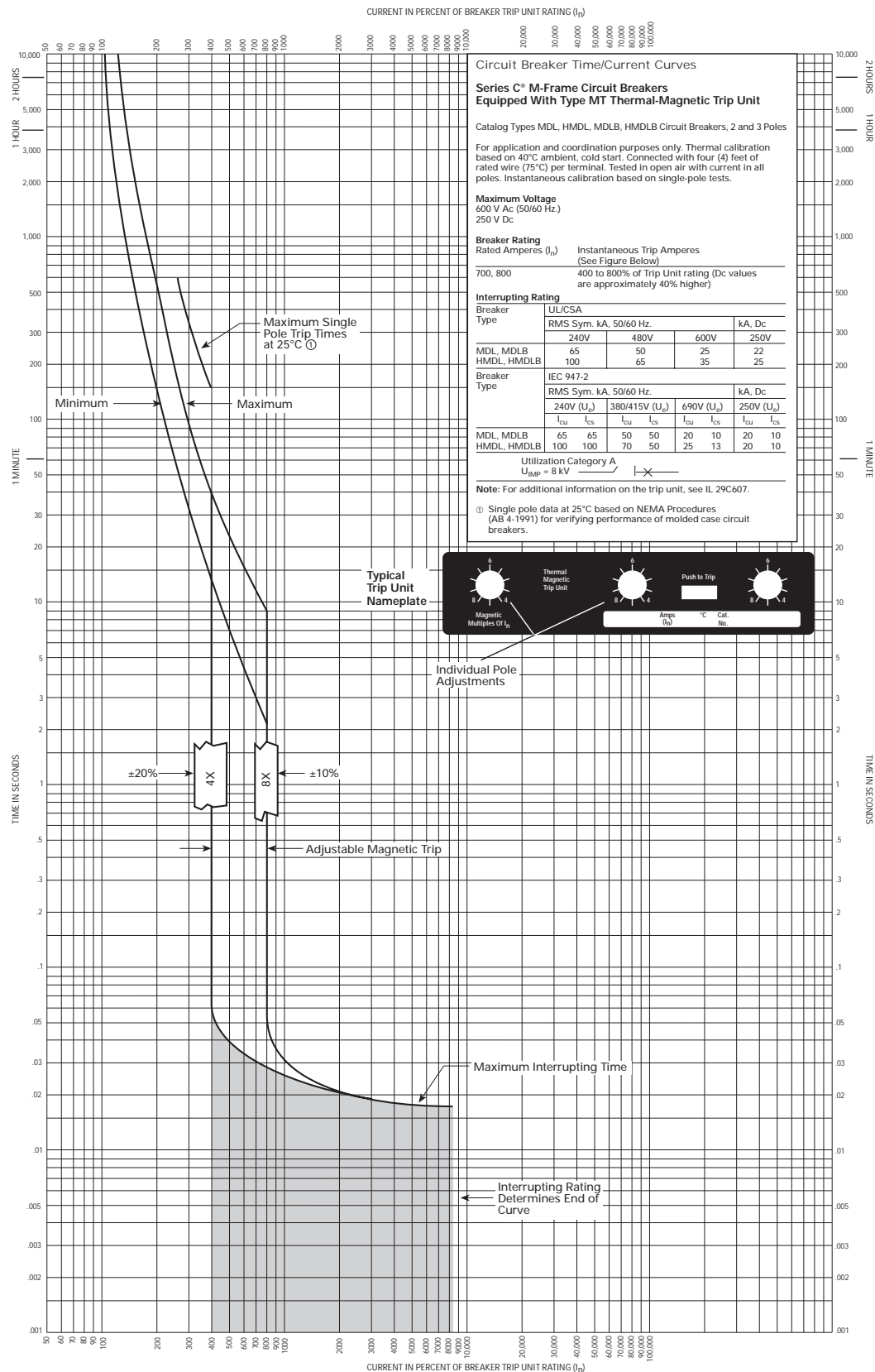
Cutler-Hammer

Types MDL, HMDL, MDLB, and HMDLB Equipped with Type MT Thermal-Magnetic Trip Unit,
300 to 600 Amperes



Curve No. SC-6911-98

Types MDL, HMDL, MDLB, and HMDLB Equipped with Type MT Thermal-Magnetic Trip Unit, 700 and 800 Amperes

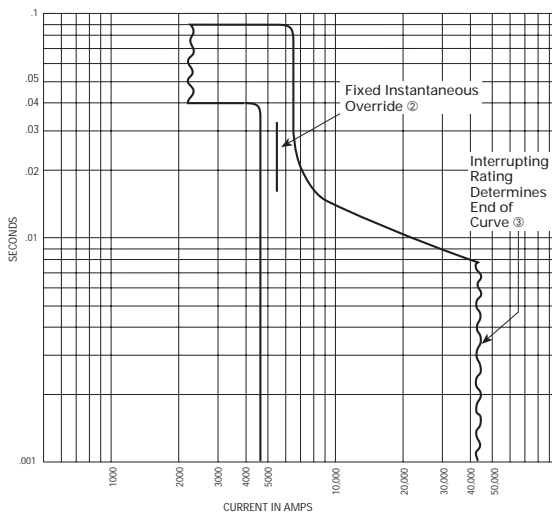
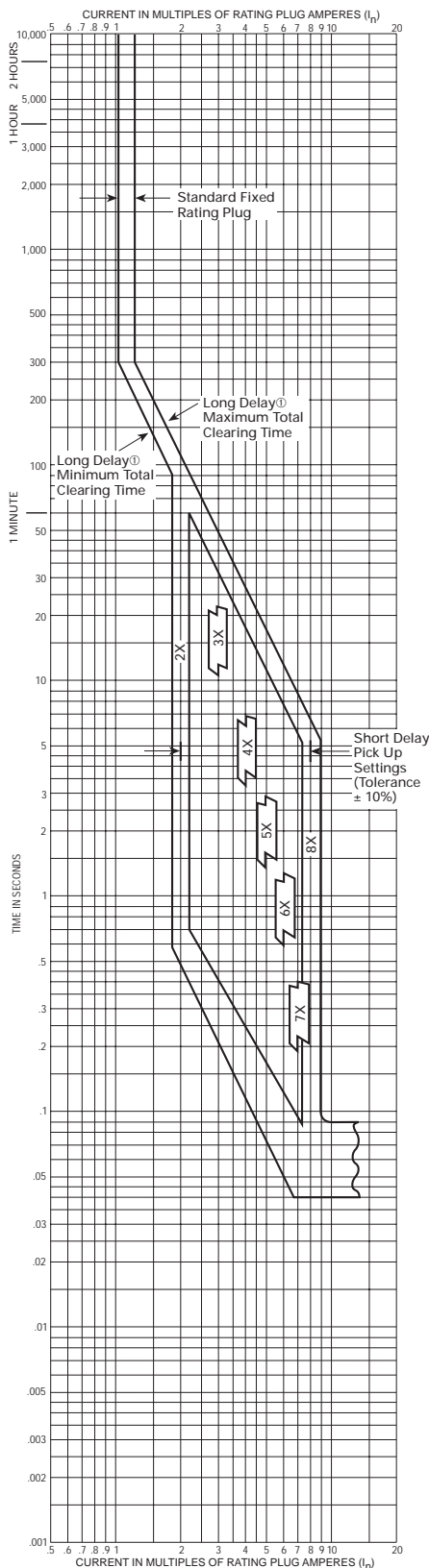


Curve No. SC-6912-98

Series C® Molded Case Circuit Breakers M-Frame 300-800 Amperes

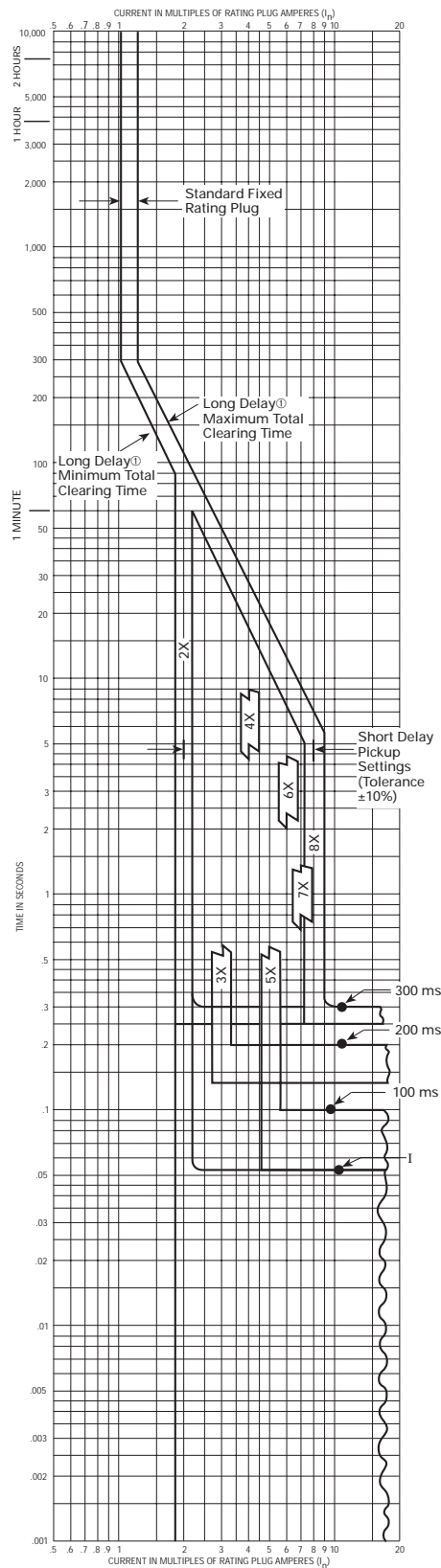
Cutler-Hammer

Types MDL, HMDL, CMDL, and CHMDL Equipped with Type MES Digitrip RMS 310 Trip Units, Types MES3800LS and MES3800LSG



Curve No. SC-7204-99

Types MDL, HMDL, CMDL, and CHMDL Equipped with Type MES Digitrip RMS 310 Trip Units, Types MES3800LSI and MES3800LSIG



Circuit Breaker Time/Current Curves (Phase Current) ^④

Series C® M-Frame Circuit Breakers Equipped With Type MES Digitrip RMS 310 Trip Units

Catalog Types MES3800LSI and MES3800LSIG Digitrip RMS 310 Trip Units for use with Circuit Breaker Types MDL, HMDL, CMDL, CHMDL
3 Poles

Adjustable Short Delay Time

Typical Trip Unit Nameplate



Available Rating Plugs

Ampere Rating (I_n)	Type	Rating Plug Catalog Number	Short Delay Pickup Range Amperes
800	Fixed	8MES800T	1600-6400
700	Fixed	8MES700T	1400-5600
600	Fixed	8MES600T	1200-4800
500	Fixed	8MES500T	1000-4000
450	Fixed	8MES450T	900-3600
400	Fixed	8MES400T	800-3200
400/500/600/800	Adjustable	A8MES800T1	800-6400

Interrupting Rating

Breaker Type	UL/CSA		
	RMS Sym. kA, 50/60 Hz		
	240V	480V	600V
MDL, MDLB, CMDL, CMDLB	65	50	25
HMDL, HMDLB, CHMDL, CHMDLB	100	65	35

Breaker Type	IEC 947-2		
	RMS Sym. kA, 50/60 Hz		
	240V (I_n)	380/415V (I_n)	690V (I_n)
	I_{cu}	I_{cs}	I_{cu}
MDL, MDLB, CMDL, CMDLB	65	65	50
HMDL, HMDLB, CHMDL, CHMDLB	100	100	70

Utilization Category A

$U_{imp} = 8kV$

Notes

Digitrip RMS 310 trip units are suitable for functional field testing with test kit Cat. No. STK2. For field testing using primary injection methods, follow NEMA AB4-1991 publications.

Calibration response in short delay pickup range is same for 1, 2 or 3 poles in series.

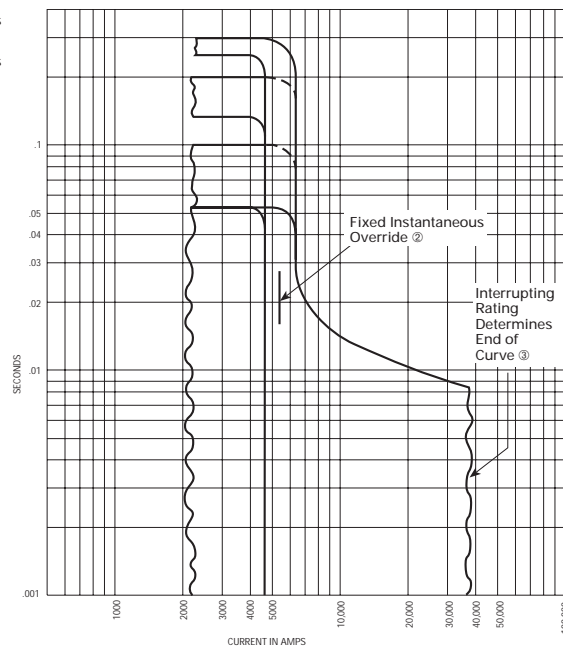
There is a memory effect that can act to shorten the long delay. The memory effect comes into play if a current above the long delay pickup value exists for a time and then is cleared by the tripping of a downstream device or the circuit breaker itself. A subsequent overload will cause the circuit breaker to trip in shorter time than normal. The amount of time delay reduction is inverse to the amount of time that has elapsed since the previous overload. Approximately five minutes is required between overloads to completely reset the memory.

^① Curve accuracy applies from $-20^{\circ}C$ to $+55^{\circ}C$ ambient. For possible continuous ampere derating for ambient above $40^{\circ}C$, refer to Cutler-Hammer.

^② For high fault current levels a fixed instantaneous override is provided at 5500A. (Tolerance $\pm 15\%$).

^③ The end of the curve is determined by the interrupting rating of the circuit breaker. See above tabulation.

^④ For ground fault time/current curves see SC-6914-98.

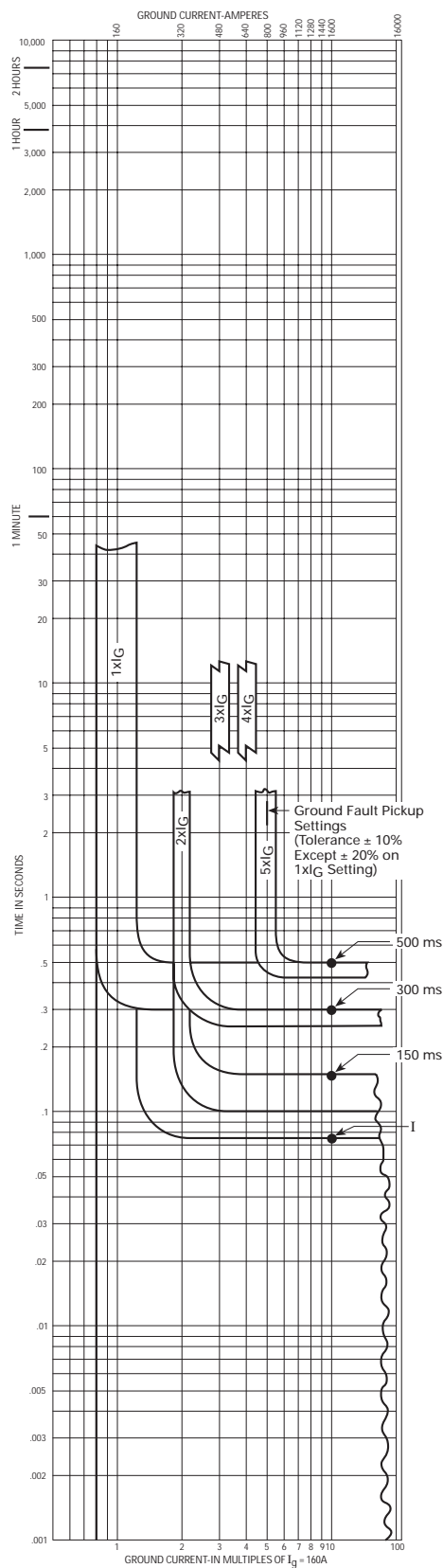


Curve No. SC-6913-98

Series C® Molded Case Circuit Breakers M-Frame 300-800 Amperes

Cutler-Hammer

Types MDL, HMDL, CMDL, and CHMDL Equipped with Type MES Digtirip RMS 310 Trip Units, Ground Fault Protection

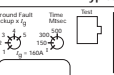
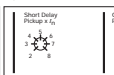
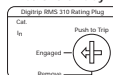


Circuit Breaker Time/Current Curves (Ground Current) ①

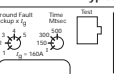
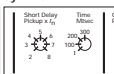
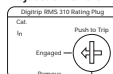
Series C® M-Frame Circuit Breakers Equipped With Type MES Digtirip RMS 310 Trip Units for Ground Fault Protection

Catalog Types MES3800LSG and MES3800LSIG Digtirip RMS 310 Trip Units for use with Circuit Breaker Types MDL, KMDL, CMDL, CHMDL

Fixed Short Delay Time



Adjustable Short Delay Time



Notes

Curve accuracy applies from $-20^{\circ}C$ to $+55^{\circ}C$ ambient. For possible continuous ampere derating for ambient above $40^{\circ}C$, refer to Cutler-Hammer.

Digtirip RMS 310 trip units are suitable for functional field testing with test kit Cat. No. STK2. For field testing using primary injection methods, follow NEMA publication (AB4-1991).

① For phase time/current curves see:

- SC-5653-93
- SC-5654-93
- SC-5657-93
- SC-5658-93