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

CURRENT IN MULTIPLES OF RATING PLUG AMPERES (I_n)

Standard Fixed Rating Plug

Long Delay ① Maximum Total Clearing Time

Long Delay① Minimum Total Clearing Time

Short Delay Pick Up Settings (Tolerance ± 10%)

2X 3X 4X 5X 6X 7X 8X

TIME IN SECONDS

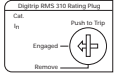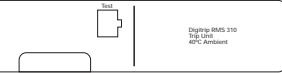CURRENT IN MULTIPLES OF RATING PLUG AMPERES (I_n)
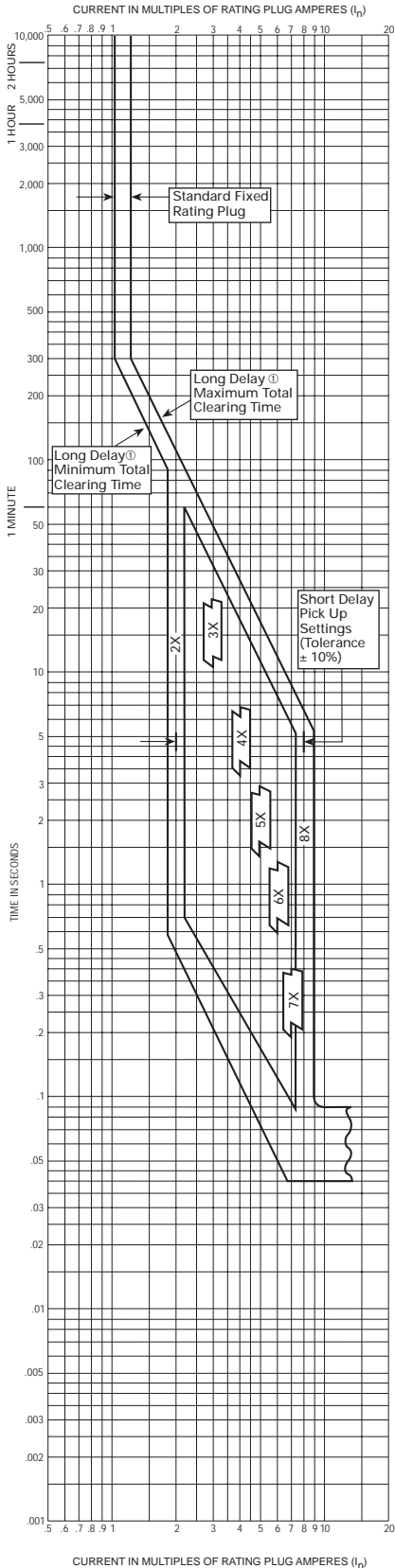
Circuit Breaker Time/Current Curves (Phase Current) ④

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

Catalog Types MES3800LS and MES3800LSG Digitrip RMS 310 Trip Units for use with Circuit Breaker Types MDL, HMDL, CMDL and CHMDL
3 Poles

Fixed Short Delay Time   **Typical Trip Unit Nameplate**

Digitrip RMS 310 Rating Plug — Cat. I_n — Push to Trip — Engaged — Remove

Short Delay Pickup x I_n

Test

Digitrip RMS 310 Trip Unit 40°C Ambient

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, CHMDL	100	65	35

Breaker Type	IEC 947-2					
	RMS Sym. kA, 50/60 Hz					
	240V (U_e)		380/415V (U_e)		690V (U_e)	
	I_{cu}	I_{cs}	I_{cu}	I_{cs}	I_{cu}	I_{cs}
MDL, MDLB, CMDL, CMDLB	65	65	50	50	20	10
HMDL, HMDLB, CHMDL, CHMDL	100	100	70	50	25	13

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 AB4-2003 publications.

Calibration response in short delay pick-up 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 pick-up 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°C to +55°C ambient. For possible continuous ampere derating for ambient above 40°C, refer to Cutler-Hammer.

② For high fault current levels a fixed instantaneous override is provided at 6800A. (Tolerance ±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.

Fixed Instantaneous Override ②

Interrupting Rating Determines End of Curve ③

SECONDS

CURRENT IN AMPERES

Curve No. SC-7204-99