Cross Reference RA Part Number PN-169438

Types KD, HKD and KDC Electronic Circuit Breakers with Interchangeable Trip Units

Order as individual components: breaker frame, trip unit, rating plug, terminals.

Types KD, HKD and KDC Electronic Circuit Breakers with Interchangeable Trip Units—Three-Pole ①

	Circuit Breaker Frame Only			Digitrip RMS 310 Trip Unit Only ③				Digitrip 310 Rating Plug Only			
				Standard	Options					Adjustable Rating Plug	Standard Terminals Only
Max. Cont. Ampere Rating at 40°C ②	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	Adjustable Short Time Pickup with I^2t Short Delay Ramp	Independently Adjustable Short Time Pickup and Delay	Adjustable Short Time Pickup with I^2t Short Delay and Ground Fault Protection	Independently Adjustable Short Time Pickup and Delay and Ground Fault Protection	Ampere Rating	Fixed Rating Plug	Ampere Rating	See Page V4-T2-189 for Optional Terminals
	Catalog Number								Catalog Number		
125	KD3400F	HKD3400F	KDC3400F	KES3125LS	KES3125LSI	KES3125LSG	KES3125LSIG	70	1KES070T	70/90/100/125 A1KES125T1	TA300K ④
								90	1KES090T		TA300K ④
								100	1KES100T		TA300K ④
								110	1KES110T		TA300K ④
								125	1KES125T		TA300K ④
250	KD3400F	HKD3400F	KDC3400F	KES3250LS	KES3250LSI	KES3250LSG	KES3250LSIG	70	2KES070T	125/150/200/250 A2KES250T1	—
								100	2KES100T		—
								125	2KES125T		TA300K ④
								150	2KES150T		TA300K ④
								160	2KES160T		TA300K ④
								175	2KES175T		TA300K ④
								200	2KES200T		TA300K ④
								225	2KES225T		TA300K ④
								250	2KES250T		TA350K ④
400	KD3400F	HKD3400F	KDC3400F	KES3400LS	KES3400LSI	KES3400LSG	KES3400LSIG	200	4KES200T	200/250/300/400 A4KES400T1	TA300K ④
								225	4KES225T		TA300K ④
								250	4KES250T	200/240/260/280 A4KES200T5	TA300K ④
								300	4KES300T		TA300K ④
								350	4KES350T	320/340/360/380 A4KES300T5	TA350K ④
								400	4KES400T		3TA400K ⑤

Notes

① Three-pole KES Trip Units are for use in three-pole frames only.
② Ampere rating is established by rating plug.
③ For AC use only.
④ Individually packed.
⑤ 3TA400K and 4TA400K terminal kits contain one terminal for each pole and one terminal cover.

100% Rated Types CKD and CHKD Electronic Circuit Breakers

The NEC allows the breaker to be rated at 100% of its frame size in an assembly, provided that 90°C wire is applied at the 75°C ampacity. All 100% rated circuit breakers have electronic trip units.

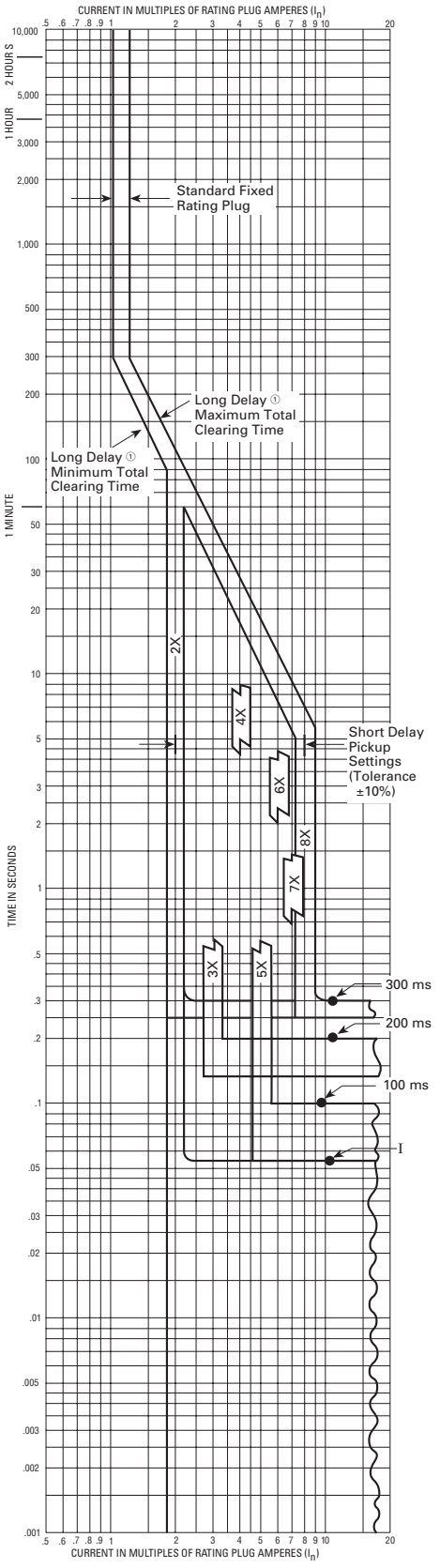
100% Rated Types CKD and CHKD Electronic Circuit Breakers—Three Pole

	Circuit Breaker Frame Only		Digitrip RMS 310 Trip Unit Only				Digitrip 310 Rating Plug Only			
			Standard	Options					Adjustable Rating Plug	Standard Terminals Only
Maximum Continuous Ampere Rating at 40°C	Standard Interrupting Capacity 35 kAIC at 480 Vac	High Interrupting Capacity 65 kAIC at 480 Vac	Adjustable Short Time Pickup with I^2t Short Delay Ramp	Independently Adjustable Short Time Pickup and Delay	Adjustable Short Time Pickup with I^2t Short Delay and Ground Fault Protection	Independently Adjustable Short Time Pickup and Delay and Ground Fault Protection	Ampere Rating	Fixed Rating Plug	Ampere Rating	See Page V4-T2-189 for Optional Terminals
	Catalog Number							Catalog Number		
125	CKD3400F	CHKD3400F	KES3125LS	KES3125LSI	KES3125LSG	KES3125LSIG	70	1KES070T	70/90/100/125 A1KES125T1	TA300K ①
							90	1KES090T		TA300K ①
							100	1KES100T		TA300K ①
							110	1KES110T		TA300K ①
							125	1KES125T		TA300K ①
							125	1KES125T		TA300K ①
250	CKD3400F	CHKD3400F	KES3250LS	KES3250LSI	KES3250LSG	KES3250LSIG	70	2KES070T	125/150/200/225 A2KES250T1	
							100	2KES100T		TA300K ①
							125	2KES125T		TA300K ①
							150	2KES150T		TA300K ①
							160	2KES160T		TA300K ①
							175	2KES175T		TA300K ①
							200	2KES200T		TA300K ①
							225	2KES225T		TA300K ①
							250	2KES250T		TA350K ①
400	CKD3400F	CHKD3400F	KES3400LS	KES3400LSI	KES3400LSG	KES3400LSIG	200	4KES200T	200/250/300/400 A4KES400T1	TA300K ①
							225	4KES225T		TA300K ①
							250	4KES250T	220/240/260/280 A4KES200T5	TA350K ①
							300	4KES300T		TA350K ①
							350	4KES350T	320/340/360/380 A4KES300T5	TA350K ①
							400	4KES400T		3TA400K ②

Notes

① Individually packed.

② 3TA400K terminal kit contains one terminal for each pole and one terminal cover.

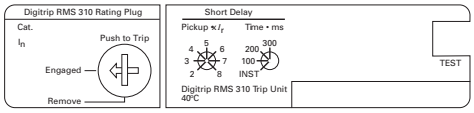


Circuit Breaker Time/Current Curves (Phase Current) ④

Series C® K-Frame Circuit Breakers
Equipped With Type KES Digitrip RMS 310 Trip Units

Catalog Types KES3125LSI, KES3125LSIG Digitrip RMS 310 Trip Units for use with Circuit Breaker Types KD, HKD, CKD, and CHKD, 125A. max.

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



Available Rating Plugs

Ampere Rating (I_n)	Type	Catalog Number	Short Delay Pickup Range Amperes
125	Fixed	1KES 125T	250–1000
110	Fixed	1KES 110T	220–880
100	Fixed	1KES 100T	200–800
90	Fixed	1KES 90T	180–720
70	Fixed	1KES 70T	140–560
70, 90, 100, 125	Adjustable	A1KES 125T1	140–1000

Interrupting Ratings – 50/60 Hz
RMS Sym. Amperes (kA)

Breaker Type	UL/CSA 240V	480V	600V
KD, CKD	65	35	25
HKD, CHKD	100	65	35

Breaker Type	IEC 947-2 240V	380V	415V
KD, CKD	65	40	40
HKD, CHKD	100	65	65

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 publication AB-4-1991.

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°C to +55°C ambient. For possible continuous ampere derating for ambient above 40°C, refer to Eaton.

② For high fault current levels, a fixed instantaneous override is provided at 4000A (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 curve, see SC-5652-93.

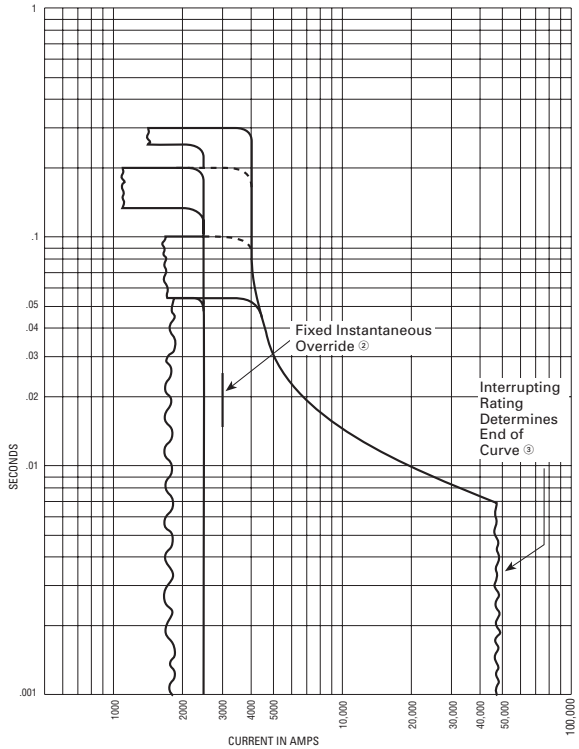
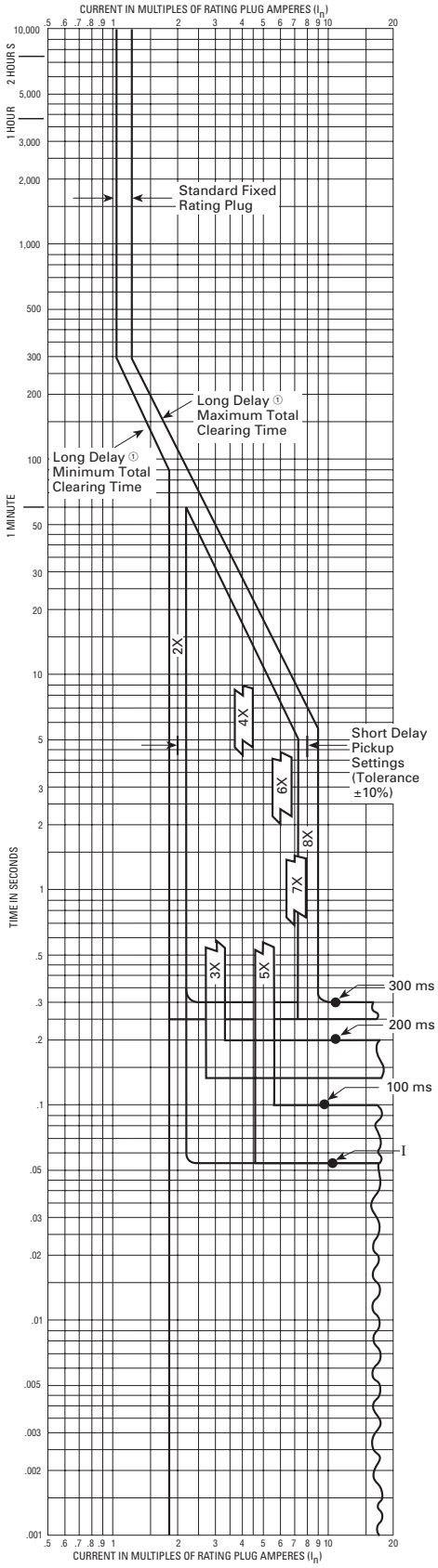


Figure 11. Series C Types KD, CKD, HKD, CHKD Circuit Breakers Equipped with Type KES Digitrip RMS 310 Trip Units, Types KES3125LSI, KES3125LSIG

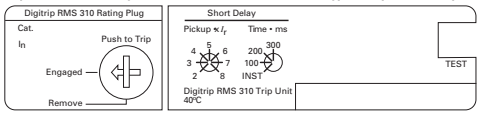


Circuit Breaker Time/Current Curves (Phase Current) ④

Series C® K-Frame Circuit Breakers Equipped With Type KES Digitrip RMS 310 Trip Units

Catalog Types KES3125LSI, KES3125LSIG Digitrip RMS 310 Trip Units for use with Circuit Breaker Type KDC, 125A. max.

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



Available Rating Plugs

Ampere Rating (I_n)	Type	Catalog Number	Short Delay Pickup Range Amperes
125	Fixed	1KES 125T	250–1000
110	Fixed	1KES 110T	220–880
100	Fixed	1KES 100T	200–800
90	Fixed	1KES 90T	180–720
70	Fixed	1KES 70T	140–560
70, 90, 100, 125	Adjustable	A1KES 125T1	140–1000

Interrupting Ratings – 50/60 Hz RMS Sym. Amperes (kA)

Breaker Type	UL/CSA 240V	480V	600V
KDC	200	100	50

Breaker Type	IEC 947-2 240V	380V	415V
KDC	200	100	100

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 publication AB-4-1991.

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 –20ºC to +55ºC ambient. For possible continuous ampere derating for ambient above 40ºC, refer to Eaton.

② For high fault current levels, a fixed instantaneous override is provided at 4000A (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 curve, see SC-5652-93.

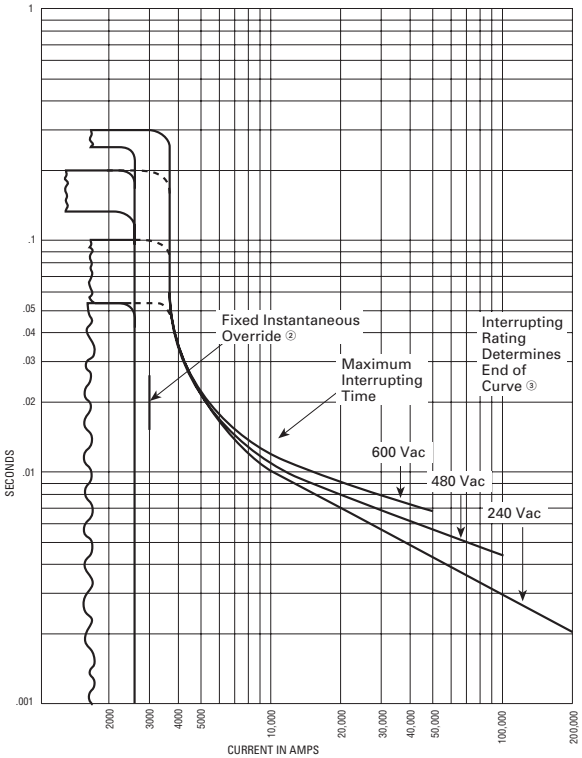
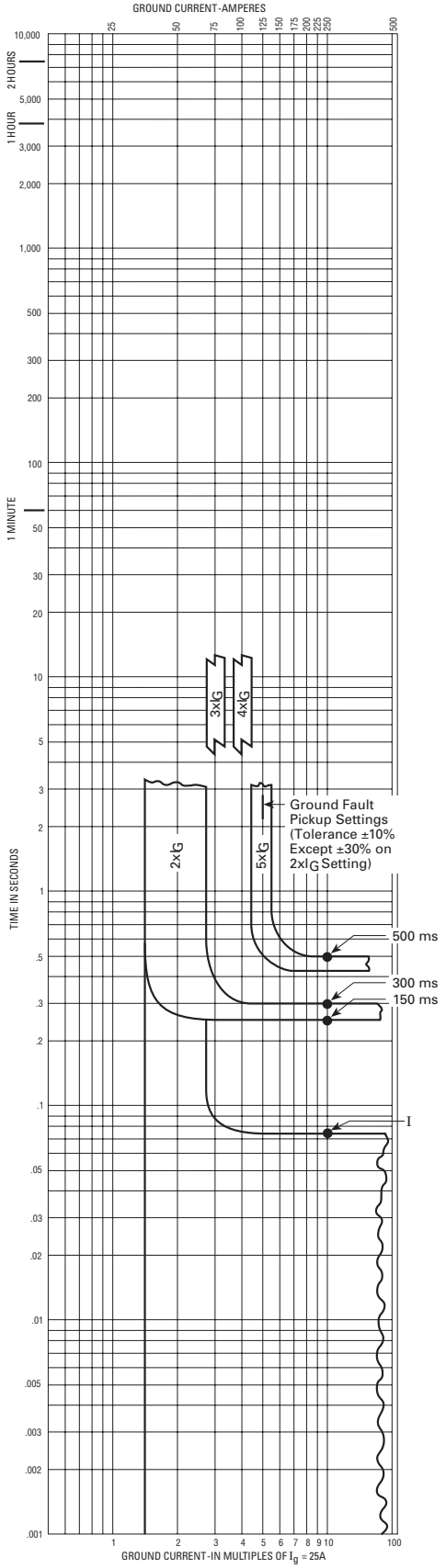


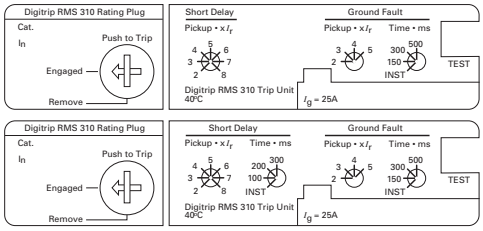
Figure 13. Series C Type KDC Circuit Breakers Equipped with Type KES Digitrip RMS 310 Trip Units, Types KES3125LSI, KES3125LSIG



Circuit Breaker Trip/Current Curves (Ground Current) ①

Series C® K-Frame Circuit Breakers
Equipped With Type KES Digitrip RMS 310 Units
For Ground Fault Protection

Type Digitrip RMS 310 Trip Unit for use with Circuit Breaker Types KD, HKD, KDC, CKD, and CHKD
For use with Trip Unit Catalog Numbers
KES3125LSG
KES3125LSIG



Notes
Curve accuracy applies from –20°C to +55°C ambient. For possible continuous ampere derating for ambient above 40°C, refer to Eaton.

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 publication AB-4-1991.

① For phase time/current curves, see SC-5642-93, SC-5643-93, SC-5648-93, or SC-5649-93.

Figure 14. Series C Type KDC Circuit Breakers Equipped with Type KES Digitrip RMS 310 Trip Units, Ground Fault Protection (KES3125LSG, KES3125LSIG)