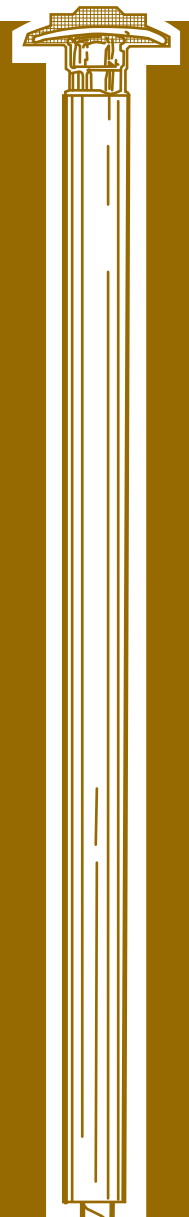


Selection Guide

For the Protection of
**OVERHEAD
DISTRIBUTION
TRANSFORMERS**

**S&C Positrol® Fuse Links
Outdoor Distribution**

Price \$7.50



S&C ELECTRIC COMPANY • Chicago
S&C ELECTRIC CANADA LTD. • Rexdale

DATA BULLETIN

350-110

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GENERAL

This data bulletin is a guide for the selection and application of S&C Positrol Fuse Links for installation in fuse cutouts on the primary side of overhead-type distribution transformers rated 5 kva through 500 kva single-phase or 15 kva through 1500 kva three-phase, and applied on systems having voltage ratings from 2.4 kv through 34.5 kv. The function of the fuse link in such applications is to provide protection for the transformer against the broadest possible range of secondary-side faults; to provide protection for the system against damaging fault currents; and to coordinate with source-side and load-side overcurrent protective devices. S&C Positrol Fuse Links are ideal for such duty not only because they are available in a broad selection of speeds, but more importantly, because they provide construction features and performance characteristics that are particularly advantageous for transformer-protection applications.

S&C Positrol Fuse Links incorporate nickel-chrome or helically-coiled silver or silver-copper eutectic fusible elements that are unaffected by mechanical shock or vibration, or by transient surges that may heat the element nearly to the severing point. Consequently, these fuse links are nondamageable—eliminating nuisance operations (sneakouts), as well as the need for “safety zones” or “setback allowances.” Nondamageability makes close fusing practical with S&C Positrol Fuse Links since there will not be troublesome departures from carefully engineered system coordination plans due to a damage-induced shift in the fuse link’s time-current characteristics. You therefore obtain not only maximum secondary-fault protection for the transformer, but also

enhanced backup protection in the event of incorrect functioning of secondary-side overcurrent protective devices.

In addition to being nondamageable, S&C Positrol Fuse Links incorporating silver or silver-copper eutectic fusible elements have exceptionally tight tolerances . . . typically half those of other fuse links . . . which means they can be counted on to clear faults faster. The tight tolerance is possible because of physical properties inherent in silver and silver-copper eutectic fusible-element materials, and also because S&C’s fusible-element wires are drawn through precision dies to exact cross sections and checked by laser micrometer to ensure TCC accuracy. These tight tolerances, combined with fuse-link nondamageability, allow selection of a minimum-size fuse-link ampere rating for each application, ensuring maximum protection and enhanced coordination.

S&C Positrol Fuse Links provide another plus in performance through test-validated superior capabilities in clearing secondary faults. The ability of a fuse cutout to interrupt such faults—particularly low-magnitude secondary-side faults with their severe transient recovery voltages (TRVs)—is determined primarily by the fuse link . . . not the cutout. Extensive full-scale testing through the full spectrum of secondary faults . . . with realistically severe TRVs . . . has proved the matchless performance of S&C Positrol Fuse Links whether applied in single-vented or double-vented cutouts. This outstanding performance is attributable to a controlled-burst-strength filament-wound fiberglass sheath that provides reliable circuit interruption for all levels of



secondary-fault currents on systems through 27 kv, and in single-phase-to-neutral applications on systems through 38 kv.

This publication provides easy-to-use tables for simplified selection of S&C Positrol Fuse Links for

distribution transformer protection. You need only refer to these tables to make the optimum fuse-link selection. Application factors reflected in fuse-link recommendations provided in the tables are discussed in detail in the next section, "The Fuse Selection Tables."

THE FUSE SELECTION TABLES

Introduction to the Fuse Selection Tables

Selection of a fuse-link ampere rating and speed characteristic for protection of overhead distribution transformers, as outlined in this publication, is but one aspect of the total protection program for a distribution system. It is necessary to consider not only the degree of protection afforded the distribution transformer, but also the degree of coordination between the transformer-primary fuse link and other source-side and load-side overcurrent protective devices. Therefore, fuse-link selections made on the basis of information given in this data bulletin must be checked to be sure that the fuse link selected also meets the requirements for coordination with other overcurrent protective devices.

A fuse link selected to protect an overhead distribution transformer should accommodate the anticipated normal transformer loading schedule—including daily or repetitive peak loads, and emergency peak loads—which has been established for a specific system. The fuse link selected should also withstand transformer inrush currents, including the combined effects of transformer magnetizing-inrush current and the energizing-inrush currents associated with connected loads—particularly following either a momentary or prolonged loss of source voltage. Finally, the fuse link selected should provide protection to the transformer against the broadest possible range of secondary-side faults.

The fuse selection tables presented in this publication are based on consideration of all of the aforementioned factors, and permit the direct selection of transformer-primary fuse links that will provide maximum protection to overhead distribution transformers. The tables list, for each transformer, the fuse-link ampere ratings and speeds that will accommodate the full range of loading levels normally encountered—including those that can be picked up under hot-load and cold-load conditions—and that will withstand the energizing-inrush currents

associated with each transformer shown. In addition, for each such fuse link, the degree of transformer protection provided by the primary-side fuse link is quantified using S&C's unique "Transformer Protection Index," which indicates the level of secondary-fault current down to which the fuse link will protect the transformer in accordance with the transformer short-time characteristic curve. You need only refer to these tables to select the optimal fuse-link ampere rating and speed to protect your transformer.

After the transformer-primary fuse-link ampere rating and speed characteristic have been selected as outlined in the section entitled "How to Use the Fuse Selection Tables" on page 48, compliance of the selection with coordination requirements should be verified. Then, it is only necessary to determine the appropriate fuse cutout type based on the voltage rating, short-circuit interrupting rating (considering the maximum anticipated available fault current at the fuse cutout location), and maximum ampere rating required. As can be seen from Table 21 on page 46, S&C Type XS Open Cutouts are offered in a number of voltage, short-circuit interrupting, and maximum ampere ratings, allowing you to economically match the fuse cutout to the load- and fault-current levels of your particular applications. The symmetrical short-circuit interrupting ratings listed in Table 21 are based on an X/R ratio of 8 or 12 (depending on the cutout voltage rating and interrupting current rating) as specified by ANSI Standards. Higher symmetrical interrupting ratings apply, of course, at locations where the X/R ratio is lower. The curves in Figure 2 on page 47 indicate the symmetrical ratings of Type XS Cutouts at other X/R ratios.

Basis for Listings in the Fuse Selection Tables

The fuse selection tables presented in this publication were developed in accordance with the application



THE FUSE SELECTION TABLES

principles previously mentioned. In applying these principles, it is necessary to make certain decisions and assumptions, all of which are outlined in detail below. For easy access to this information, it is arranged in the following sections in the same order as the subjects appear in the fuse selection tables.

Transformer self-cooled ratings. Table 22 on page 49 serves as an index to the fuse selection tables which are applicable to overhead-type distribution transformers rated 5 kva through 500 kva single-phase or 15 kva through 1500 kva three-phase, and applied on systems having voltage ratings from 2.4 kv through 34.5 kv. The fuse selection tables are also applicable to pad-mounted, compartmented-type distribution transformers in ratings through 167 kva single-phase or 500 kva three-phase.

Loading capability. Peak-load capability values are listed in the fuse selection tables for each fuse-link ampere rating based on three separate conditions: continuous peak-load, hot-load pickup, and cold-load pickup. These three capabilities are described below.

1. **Continuous peak-load capability . . .** ability of a transformer-primary fuse link to carry continuous peak-load current . . . applicable also to repetitive daily peak loads regardless of duration. The peak-load capability values listed in the selection tables are derived from the continuous peak-load capabilities of the fuse links, adjusted (reduced) to reflect a 40°C ambient temperature. A 40°C ambient temperature was used recognizing that the need for reliable, uninterrupted service provided by distribution transformers is most crucial on days when the load is highest—a condition usually coincident with summer peak loads and/or heat storms. Accordingly, even under such severe conditions of loading, an unnecessary fuse-link operation due to the high ambient temperature will be avoided. The fuse links listed can also accommodate emergency peak-load currents on a nonrepetitive basis. For information on continuous and emergency peak-load capabilities of S&C Positrol Fuse Links, refer to S&C Data Bulletin 350-190.

2. **Hot-load pickup capability . . .** ability of a fully preloaded transformer-primary fuse link to withstand the *multiple* inrush currents that occur when a source-side recloser operates in response to a fault. The inrush current associated with each recloser closing operation is assumed to be a combination of the transformer magnetizing-inrush current, plus the inrush currents associated with start-up of motor and lighting equipment (up to six times the pre-interruption load current). Two recloser operating sequences were evaluated: a two-fast, one-slow operating sequence and a two-fast, two-slow operating sequence.

For each sequence, there was no intentional time delay between the two instantaneous operations and a two-second time delay between the second and third operations. For the two-fast, two-slow operating sequence, a five-second time delay between the third and fourth operations was assumed. The hot-load pickup capability values listed in the tables represent the minimum value possible considering these two recloser operating sequences. In addition, the hot-load pickup capability values listed in the tables are based on the emergency peak-load capabilities of the fuse links, since the shorter durations associated with these capabilities are more appropriate for this calculation than are continuous capabilities.

3. **Cold-load pickup capability . . .** ability of a transformer-primary fuse link to withstand the overcurrents that occur due to the loss of load diversity following an extended outage (30 minutes or more). The "cold" fuse link will withstand the transformer magnetizing-inrush current, superimposed on the transient overcurrent associated with picking up cold, the maximum pre-outage load indicated by the values listed in the tables under this heading. The assumed cold-load current profile† is based on typical loading practices of residential-service distribution transformers, wherein a majority of peak loads as seen by these transformers are associated with central or large room-type air conditioners or electric heating equipment having cycling characteristics. The time-integrated heating effect of the cold-load current profile on the fuse link is assumed to be equivalent to the following multiples of pre-outage load current:

- 6X for one second;
- 3X for up to 10 seconds; and
- 2X for up to 15 minutes.

The cold-load pickup capability values listed in the tables are calculated using the minimum melting time-current characteristics of the fuse links, based on no preload.

The Transformer Protection Index. The Transformer Protection Index is provided in the fuse selection tables to allow you to evaluate the degree of transformer protection provided by the transformer-primary fuse-link ampere rating selected. There are two objectives that must be achieved in order to obtain a comprehensive level of protection for the transformer. First, the total clearing time-current characteristic curve of the fuse link should pass below and to the left of the ANSI Point of the appropriate transformer short-time characteristic curve, and second, the point at which the two curves

† Oliver Ramsaur, "A New Approach to Cold-Load Restoration," *Electrical World*, October 6, 1952.



intersect should be at as low a multiple of the transformer-primary full-load current as possible. The Transformer Protection Index indicates how well these two objectives are achieved. The presence of an index indicates that the first objective was achieved, whereas the absence of an index signifies that the fuse link does not provide protection for the transformer, since the total clearing time-current curve of the fuse link passes above and to the right of the ANSI Point. Accordingly, a smaller fuse-link ampere rating should be selected. The indexes indicate the magnitude of fault current—expressed as a percentage of the transformer full-load current—down to which the fuse link will operate to protect the transformer in accordance with the transformer short-time characteristic curve. Refer to Figure 1.

The indexes are listed in the fuse selection tables for commonly used transformer connections. For delta grounded-wye connected transformers, the indexes are based on a phase-to-ground secondary fault, which is the most demanding type of fault for this transformer connection from a protection standpoint. For delta-delta connected transformers, the indexes are based on a phase-to-phase secondary fault, which is the most demanding type of fault for this transformer connection from a protection standpoint. For single-phase transformers and three-phase grounded-wye grounded-wye connected transformers, the indexes should be based on a three-phase secondary fault. However, since the indexes for single-phase transformers and three-phase grounded-wye grounded-wye transformer connections (based on a three-phase secondary fault) are only slightly smaller (better) than the indexes determined for delta-delta connected transformers, for simplicity, only indexes for the delta-delta connected transformers have been listed in the fuse selection tables. For purposes of determining transformer protection indexes, it is assumed that transformers listed in the fuse selection tables larger than 500 kva three-phase are made up of three single-phase transformers, designated Category I in ANSI Standards.†

Ampere ratings. For each transformer kva rating, the fuse selection tables list a choice of fuse-link ampere ratings in each of four speed characteristics: S&C Standard Speed, TCC No. 123; S&C “K” Speed, TCC No. 165; S&C “T” Speed, TCC No. 170; and S&C “QR” Speed, TCC No. 166. The lowest ampere rating listed for each transformer kva rating and for each speed characteristic provides a minimum loading capability, for any of the three conditions evaluated, of at least 90% of the full-load current of the transformer.

† Category I transformers, as designated in ANSI Standard C57.12.00-1980, “General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers,” are those rated 5 kva through 500 kva single-phase, 15 kva through 500 kva three-phase.

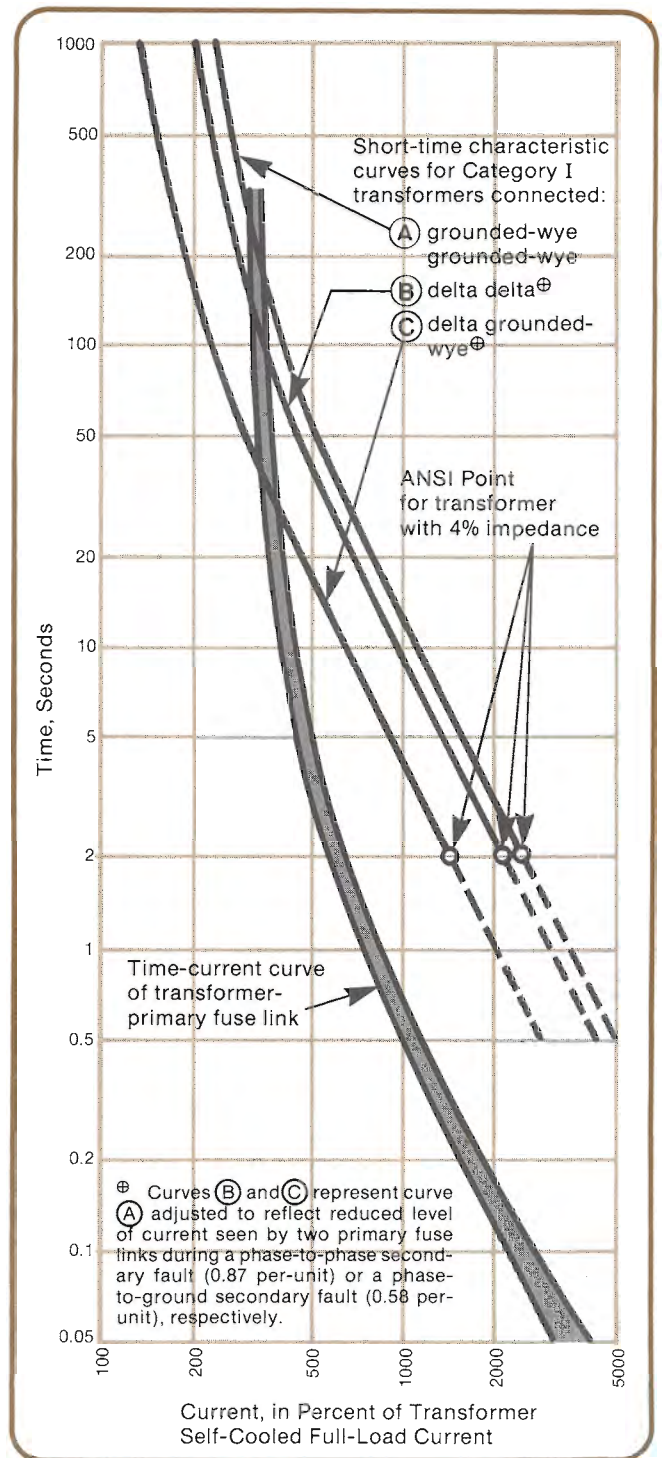


Figure 1. The Transformer Protection Index (TPI) indicates magnitude of fault current down to which primary fuse link will protect the transformer in accordance with short-time characteristic curves. For example, total clearing curve of primary fuse link intersects curve for delta grounded-wye connected transformer at 385% of the full load current, representing a TPI of 385%.



THE FUSE SELECTION TABLES

TABLE 1—Transformers Rated 2.4 Kv Three-Phase





S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 155-6					
Transformer Rating, Kva, Three-Phase ↓	Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
		Continuous Load	Hot-Load Pickup	Cold-Load Pickup				Continuous Load	Hot-Load Pickup	Cold-Load Pickup			
15	3.61	165	115	90	360	360	5	250	145	105	395	395	6K
		235	275	135	425	435	7	330	300	145	510	535	8K
		360	415	195	630	740	10	390	430	190	640	720	10K
		525	580	295	1090	—	15	525	580	255	940	1280	12K
30	7.22	180	190	95	300	305	10	195	100	95	305	305	10K
		265	290	145	455	485	15	265	225	125	410	430	12K
		345	400	195	635	715	20	305	325	160	515	565	15K
		430	485	230	790	1010	25	400	465	200	695	775	20K
45	10.8	175	190	100	305	305	15	205	150	105	325	345	15K
		230	270	130	410	425	20	270	265	135	435	460	20K
		285	325	155	510	530	25	325	370	170	550	620	25K
		345	390	190	620	690	30	360	415	215	750	890	30K
75	18.0	170	150	90	300	300	25	195	140	100	310	325	25K
		205	235	115	365	365	30	215	240	130	415	440	30K
		245	285	155	500	540	40	260	305	170	540	590	40K
		295	345	200	660	780	50	340	395	215	750	890	50K
112½	27.1	160	190	105	325	330	40	175	185	115	335	355	40K
		195	230	130	405	435	50	225	260	145	460	500	50K
		285	335	170	550	590	65	295	360	180	610	680	65K
		340	390	210	690	800	80	365	425	225	790	940	80K
150	36.1	145	165	100	305	310	50	170	165	105	325	355	50K
		215	250	125	400	415	65	220	260	135	445	470	65K
		255	290	155	490	530	80	275	320	170	570	620	80K
		290	345	200	645	740	100	305	345	200	730	850	100K
225	54.1	170	180	105	325	330	80	150	90	90	280	295	65K
		195	230	135	410	430	100	185	190	110	355	375	80K
		325	340	190	890	1080	125	205	230	135	450	480	100K
		390	415	225	1310	—	150	360	390	210	1090	1630	140K
300	72.2	145	170	100	305	315	100	150	170	100	330	345	100K
		240	255	140	610	700	125	270	290	160	740	870	140K
		290	310	170	860	1080	150	395	415	250	1880	—	200K
		365	415	220	1300	2150	200	—	—	—	—	—	—
500	120	175	175	100	420	490	150	165	155	95	410	435	140K
		220	250	135	620	730	200	240	250	150	840	1030	200K

① These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6							S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	
Contin- uous Load	Hot-Load Pickup	Cold-Load Pickup				Contin- uous Load	Hot-Load Pickup	Cold-Load Pickup				
200	235	135	445	500	6T	185	115	90	360	360	7QR	
270	305	185	590	750	8T	265	305	160	495	540	10QR	
330	390	235	870	—	10T	390	445	210	730	820	15QR	
415	470	280	1450	—	12T	525	610	285	1050	—	20QR	
135	115	90	250	280	8T	195	185	105	335	350	15QR	
165	195	115	350	385	10T	265	305	145	455	485	20QR	
210	235	140	450	520	12T	360	415	175	580	610	25QR	
275	335	190	590	860	15T	415	485	215	710	840	30QR	
140	155	95	280	300	12T	175	155	95	300	315	20QR	
185	220	125	355	390	15T	240	250	120	375	385	25QR	
230	270	155	480	580	20T	280	325	145	450	475	30QR	
305	360	210	710	1400	25T	350	405	195	650	740	40QR	
140	155	95	260	285	20T	210	220	115	365	380	40QR	
185	215	125	350	395	25T	270	310	145	495	530	50QR	
215	255	150	495	600	30T	340	400	185	630	680	60QR	
265	315	180	710	—	40T	415	475	240	800	1025	75QR	
145	170	100	285	325	30T	180	135	100	310	330	50QR	
175	210	120	400	470	40T	225	235	125	395	420	60QR	
215	250	150	550	690	50T	275	320	160	485	530	75QR	
305	360	210	750	—	65T	360	405	230	800	950	100QR	
135	160	90	290	315	40T	170	95	95	280	310	60QR	
160	190	115	375	435	50T	210	240	120	345	370	75QR	
225	270	155	510	600	65T	270	305	175	560	620	100QR	
265	305	180	690	—	80T	325	345	215	800	1000	125QR	
150	180	105	295	340	65T	180	195	115	340	370	100QR	
175	205	120	390	455	80T	220	230	145	465	520	125QR	
205	240	145	530	680	100T	260	275	150	930	1220	150QR	
135	150	90	270	305	80T	165	175	110	330	360	125QR	
150	180	105	355	415	100T	195	210	115	620	740	150QR	



THE FUSE SELECTION TABLES

TABLE 2—Transformers Rated 2.4 Kv Single-Phase^① or 4.16 Kv Three-Phase

S&C Positrol Fuse Link Speed			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1 ϕ and Δ - Δ Δ - Δ	Δ - Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1 ϕ and Δ - Δ Δ - Δ	Δ - Δ	
5	15	2.08	175	150	95	375	380	3	435	415	185	690	760	6K
			290	290	155	620	670	5						
			405	480	230	780	—	7						
			625	720	335	1700	—	10						
10	30	4.16	200	240	115	370	375	7	290	235	125	435	455	8K
			315	360	170	530	590	10						
			455	505	255	870	—	15						
			600	695	340	1450	—	20						
15	45	6.25	210	240	110	350	360	10	225	170	110	355	360	10K
			305	335	170	530	580	15						
			400	465	225	760	900	20						
			495	560	265	940	—	25						
25	75	10.4	185	200	100	310	315	15	210	170	110	345	365	15K
			240	280	135	415	440	20						
			300	335	160	520	540	25						
			355	405	195	640	710	30						
37½	112½	15.6	160	135	90	280	285	20	225	205	90	365	385	25K
			200	215	105	350	355	25						
			235	270	130	425	430	30						
			280	325	180	580	650	40						
50	150	20.8	180	180	100	315	315	30	190	180	110	355	370	30K
			210	245	135	425	450	40						
			255	300	170	550	610	50						
			370	430	220	750	900	65						
75	225	31.2	140	135	90	280	285	40	150	120	100	285	305	40K
			170	200	115	355	365	50						
			245	290	145	470	500	65						
			295	335	180	580	650	80						
100	300	41.6	185	195	110	345	355	65	190	200	115	375	395	65K
			220	250	135	420	450	80						
			250	300	175	550	610	100						
			420	445	245	1300	2200	125						
167	500	69.4	150	180	105	315	325	100	160	180	105	345	360	100K
			250	265	145	640	740	125						
			305	325	175	900	1200	150						
			380	430	230	1400	—	200						
250	750	104	170	125	100	370	420	125	190	200	110	475	510	140K
			200	215	115	500	600	150						
			255	290	155	750	900	200						

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



S&C "T" Speed—TCC No. 170-6							S&C "QR" Speed—TCC No. 166-6						
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes		
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ			
345	405	235	960	—	6T	175	150	95	375	380	3QR		
465	530	315	1800	—	8T	225	210	110	475	500	5QR		
						315	315	155	620	670	7QR		
						455	530	275	1000	—	10QR		
175	195	120	380	415	6T	230	265	135	415	450	10QR		
235	265	160	490	570	8T	335	385	180	610	670	15QR		
290	335	205	710	1150	10T	455	530	250	870	1300	20QR		
360	410	245	1050	—	12T	625	720	305	1150	—	25QR		
155	165	105	295	325	8T	150	125	90	265	275	10QR		
190	225	135	415	480	10T	225	250	120	400	415	15QR		
240	270	160	520	660	12T	305	350	165	550	580	20QR		
320	385	220	730	—	15T	415	480	205	680	760	25QR		
145	165	95	285	310	12T	185	175	100	310	325	20QR		
190	230	130	365	415	15T	250	270	120	385	395	25QR		
240	280	165	500	610	20T	290	335	150	455	495	30QR		
315	375	215	730	—	25T	365	425	205	660	750	40QR		
160	185	110	305	335	20T	190	180	100	305	315	30QR		
210	250	145	425	490	25T	245	280	135	430	455	40QR		
250	295	175	600	850	30T	315	360	170	580	640	50QR		
310	365	210	900	—	40T	390	460	215	750	840	60QR		
160	180	110	290	325	25T	185	155	100	310	325	40QR		
190	220	130	410	465	30T	235	255	125	425	450	50QR		
230	275	155	570	720	40T	295	345	160	530	570	60QR		
280	325	195	830	—	50T	360	415	205	660	780	75QR		
155	185	105	335	380	40T	195	170	110	335	355	60QR		
185	220	130	460	550	50T	240	275	140	405	440	75QR		
265	310	180	620	780	65T	310	350	200	670	760	100QR		
310	350	210	880	—	80T	380	400	250	980	1500	125QR		
140	165	95	310	360	50T	180	190	105	295	310	75QR		
195	235	135	420	485	65T	235	265	150	475	520	100QR		
230	265	155	560	740	80T	285	300	190	640	780	125QR		
265	310	185	800	—	100T	340	360	195	1410	—	150QR		
140	160	95	280	315	80T	170	180	110	345	370	125QR		
160	185	110	375	450	100T	205	215	120	660	800	150QR		



THE FUSE SELECTION TABLES

TABLE 3—Transformers Rated 4.8 Kv Three-Phase

S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva, Three-Phase ↓	Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	Δ-Δ X-X	Δ-X		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	Δ-Δ X-X	Δ-X	
15	1.80	200	200	110	430	440	3	500	495	215	810	980	6K
		335	335	180	740	830	5						
		465	555	270	940	—	7						
30	3.61	165	115	90	360	360	5	250	145	105	395	305	6K
		235	275	135	425	435	7						
		360	415	195	630	740	10						
		525	580	295	1090	—	15						
45	5.41	155	150	90	290	290	7	220	110	100	335	335	8K
		240	275	130	400	420	10						
		350	390	195	640	720	15						
		460	535	260	910	—	20						
75	9.02	210	235	120	370	380	15	210	130	100	330	335	12K
		275	320	155	490	530	20						
		345	390	185	610	680	25						
		410	465	225	760	980	30						
112½	13.5	185	195	105	325	330	20	215	170	105	345	355	20K
		230	260	120	400	405	25						
		275	310	150	490	500	30						
		325	375	210	690	820	40						
150	18.0	170	150	90	300	300	25	195	140	100	310	325	25K
		205	235	115	365	365	30						
		245	285	155	500	540	40						
		295	345	200	660	780	50						
225	27.1	160	190	105	325	330	40	175	185	115	335	355	40K
		195	230	130	405	435	50						
		285	335	170	550	590	65						
		340	390	210	690	800	80						
300	36.1	145	170	100	305	310	50	170	165	105	325	355	50K
		215	250	125	400	415	65						
		255	290	155	490	530	80						
		290	345	200	645	740	100						
500	60.1	155	135	95	290	290	80	165	145	100	315	335	80K
		175	210	120	365	380	100						
		290	310	170	770	900	125						
		350	375	200	1100	1550	150						
750	90.2	195	185	115	450	510	125	215	235	125	570	630	140K
		235	250	135	620	740	150						
		295	335	180	940	1190	200						
1000	120	175	175	100	420	490	150	165	155	95	410	435	140K
		220	250	135	620	730	200						

① These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	$\Delta-\Delta$ $\Delta-\Delta$	$\Delta-\Delta$ $\Delta-\Delta$		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	$\Delta-\Delta$ $\Delta-\Delta$	$\Delta-\Delta$ $\Delta-\Delta$	
400	465	270	1250	—	6T	200 260 365 530	200 260 365 610	110 125 180 315	430 560 740 1225	440 600 830 —	3QR 5QR 7QR 10QR
200 270 330 415	235 305 390 470	135 185 235 280	445 590 870 1450	500 750 — —	6T 8T 10T 12T	185 265 390 525	115 305 445 610	90 160 210 285	360 495 730 1050	360 540 820 —	7QR 10QR 15QR 20QR
135 180 220 275	105 205 260 315	90 120 155 185	270 355 495 660	295 395 590 1025	6T 8T 10T 12T	175 260 350 480	190 295 405 555	105 140 190 235	310 460 640 800	325 480 700 1050	10QR 15QR 20QR 25QR
135 165 220 275	135 190 265 320	95 110 155 190	260 345 445 610	285 380 510 1000	10T 12T 15T 20T	210 290 335 420	240 335 390 490	115 140 170 235	365 450 540 800	380 470 590 980	20QR 25QR 30QR 40QR
150 185 245 290	160 215 290 340	100 125 165 200	270 365 510 740	290 410 630 —	15T 20T 25T 30T	195 220 280 365	150 240 325 415	95 115 155 195	290 350 500 690	305 365 530 780	25QR 30QR 40QR 50QR
140 185 215 265	155 215 255 315	95 125 150 180	260 350 495 710	285 395 600 —	20T 25T 30T 40T	210 270 340 415	220 310 400 475	115 145 185 240	365 495 630 800	380 530 680 1025	40QR 50QR 60QR 75QR
145 175 215 305	170 210 250 360	100 120 150 210	285 400 550 750	325 470 690 —	30T 40T 50T 65T	180 225 275 360	135 235 320 405	100 125 160 230	310 395 485 800	330 420 530 950	50QR 60QR 75QR 100QR
135 160 225 265	160 190 270 305	90 115 155 180	290 375 510 690	315 435 600 —	40T 50T 65T 80T	170 210 270 325	95 240 305 345	95 120 175 215	280 345 560 800	310 370 620 1000	60QR 75QR 100QR 125QR
135 160 185	150 185 215	95 110 130	250 340 450	290 385 550	65T 80T 100T	160 195 235	145 210 250	105 130 135	305 415 800	335 460 1020	100QR 125QR 150QR

THE FUSE SELECTION TABLES

TABLE 4—Transformers Rated 4.16 Kv Single-Phase^① or 7.2 Kv Three-Phase

S&C Positrol Fuse Link Speed			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ	Δ-Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ	Δ-Δ	
5	15	1.20	200 300 500	195 300 500	110 165 270	435 670 1250	445 730 —	2 3 5	750	785	320	1550	—	6K
10	30	2.41	250 350 540	250 415 625	135 200 290	530 650 1130	560 760 —	5 7 10	375 500 580 790	340 520 665 875	160 220 285 380	590 810 1100 1970	640 990 — —	6K 8K 10K 12K
15	45	3.61	165 235 360 525	115 275 415 580	90 135 195 295	360 425 630 1090	360 435 740 —	5 7 10 15	250 330 390 525	145 300 430 580	105 145 190 255	395 510 640 940	395 535 720 1280	6K 8K 10K 12K
25	75	6.01	215 315 415 515	250 350 480 580	115 175 235 275	360 560 790 990	370 610 1010 —	10 15 20 25	235 315 365 485	190 305 415 565	115 150 190 240	370 510 650 880	375 550 740 1050	10K 12K 15K 20K
37½	112½	9.02	210 275 345 410	235 320 390 465	120 155 185 225	370 490 610 760	380 530 680 980	15 20 25 30	210 245 320 390	130 230 350 445	100 125 160 200	330 405 530 690	335 425 580 810	12K 15K 20K 25K
50	150	12.0	160 210 260 310	145 240 290 350	90 115 140 170	275 365 455 540	275 375 465 580	15 20 25 30	185 240 290 325	100 220 320 375	95 120 150 195	295 395 495 670	305 415 550 770	15K 20K 25K 30K
75	225	18.0	170 205 245 295	150 235 285 345	90 115 155 200	300 365 500 660	300 365 540 780	25 30 40 50	195 215 260 340	140 240 305 395	100 130 170 215	310 415 540 750	325 440 590 890	25K 30K 40K 50K
100	300	24.1	185 220 320 380	210 260 375 435	115 150 190 235	365 470 625 780	380 505 700 1000	40 50 65 80	160 195 255 330	115 230 295 405	95 130 160 200	305 385 530 710	315 415 580 810	30K 40K 50K 65K
167	500	40.1	130 190 230 260	120 210 260 310	90 115 140 180	270 360 435 570	275 370 465 640	50 65 80 100	150 200 245 275	120 215 285 310	95 120 150 180	285 395 495 635	300 415 535 720	50K 65K 80K 100K
250	750	60.1	155 175 290 350	135 210 310 375	95 120 170 200	290 365 770 1100	290 380 900 —	80 100 125 150	165 185 325 475	145 210 350 500	100 120 190 300	315 405 940 —	335 425 1250 —	80K 100K 140K 200K
333	1000	80.2	130 220 260 330	120 230 280 375	90 130 150 200	270 525 730 1100	275 600 880 —	100 125 150 200	135 245 355	120 260 375	90 145 225	290 655 1580	305 740 —	100K 140K 200K
500	1500	120	175 220	175 250	100 135	420 620	490 730	150 200	165 240	155 250	95 150	410 840	435 1030	140K 200K

① Phase-to-neutral or phase-to-phase.
② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).





THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ	
						200	195	110	435	445	2QR
						300	300	165	660	720	3QR
						390	390	190	880	1040	5QR
						550	550	270	1250	—	7QR
300	350	205	770	1175	6T	195	140	95	405	425	5QR
400	455	275	1125	—	8T	275	275	135	530	560	7QR
						395	455	235	800	1100	10QR
						580	665	315	1250	—	15QR
200	235	135	445	500	6T	185	115	90	360	360	7QR
270	305	185	590	750	8T	265	305	160	495	540	10QR
330	390	235	870	—	10T	390	445	210	730	820	15QR
415	470	280	1450	—	12T	525	610	285	1050	—	20QR
160	175	110	310	340	8T	160	145	95	280	295	10QR
200	235	140	430	510	10T	235	265	125	415	430	15QR
250	285	170	570	750	12T	315	365	170	570	610	20QR
335	400	230	800	—	15T	435	500	210	710	820	25QR
135	135	95	260	285	10T	210	240	115	365	380	20QR
165	190	110	345	380	12T	290	335	140	450	470	25QR
220	265	155	445	510	15T	335	390	170	540	590	30QR
275	320	190	610	1000	20T	420	490	235	800	980	40QR
165	195	115	315	345	15T	215	205	105	330	345	25QR
210	240	140	420	485	20T	250	290	130	400	415	30QR
275	325	190	600	820	25T	315	365	175	570	620	40QR
325	380	225	910	—	30T	410	465	220	800	950	50QR
140	155	95	260	285	20T	210	220	115	365	380	40QR
185	215	125	350	395	25T	270	310	145	495	530	50QR
215	255	150	495	600	30T	340	400	185	630	680	60QR
265	315	180	710	—	40T	415	475	240	800	1025	75QR
135	140	95	240	270	25T	205	190	110	355	375	50QR
160	190	115	335	380	30T	255	285	140	455	485	60QR
200	235	135	470	550	40T	310	355	180	550	620	75QR
240	285	170	650	900	50T	400	455	260	930	1200	100QR
145	170	100	325	375	50T	185	205	110	305	325	75QR
205	240	140	440	510	65T	240	275	155	490	540	100QR
240	275	165	590	810	80T	295	310	195	680	820	125QR
275	325	195	850	—	100T	350	375	205	1550	—	150QR
135	150	95	250	290	65T	160	145	105	305	335	100QR
160	185	110	340	385	80T	195	210	130	415	460	125QR
185	215	130	450	550	100T	235	250	135	800	1020	150QR
135	160	95	310	360	100T	145	155	100	290	320	125QR
						175	185	105	540	630	150QR



THE FUSE SELECTION TABLES

TABLE 5—Transformers Rated 4.8 Kv Single-Phase^① or 8.32 Kv Three-Phase

S&C Positrol Fuse Link Speed			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and 			Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and 		
5	15	1.04	230 345 575	230 345 575	125 190 315	500 790 1700	530 920 —	2 3 5	865	915	370	2300	—	6K
10	30	2.08	175 290 405 625	150 290 480 720	95 155 230 335	370 630 780 1700	375 680 — —	3 5 7 10	575 675 915	415 610 770	185 255 330	690 970 1390	760 1410 —	6K 8K 10K
15	45	3.12	190 270 415 610	185 320 480 670	105 155 225 340	410 495 750 1550	415 515 1070 —	5 7 10 15	290 385 450 610	215 370 510 670	125 170 220 290	455 590 760 1150	465 650 930 —	6K 8K 10K 12K
25	75	5.20	160 250 365 480	165 290 405 555	95 135 205 270	300 425 660 970	300 445 770 —	7 10 15 20	230 270 365 425	130 255 375 480	100 130 175 220	345 425 600 770	350 445 660 920	8K 10K 12K 15K
37½	112½	7.81	165 245 320 395	160 270 370 450	90 135 180 210	280 420 580 720	280 440 640 850	10 15 20 25	245 280 370 450	195 290 420 510	115 145 185 235	380 475 635 850	395 510 700 1050	12K 15K 20K 25K
50	150	10.4	185 240 300 355	200 280 335 405	100 135 160 195	310 415 520 640	315 440 540 710	15 20 25 30	210 280 335 375	170 285 385 430	110 140 175 225	345 455 580 780	365 485 650 940	15K 20K 25K 30K
75	225	15.6	160 200 235 280	135 215 270 325	90 105 130 180	280 350 425 580	285 355 430 650	20 25 30 40	185 225 250 300	105 205 290 350	90 115 150 195	300 365 485 640	305 385 520 720	20K 25K 30K 40K
100	300	20.8	180 210 255 370	180 245 300 430	100 135 170 220	315 425 550 750	315 450 610 900	30 40 50 65	190 225 295 385	180 265 340 470	110 145 185 235	355 455 620 830	370 485 700 1010	30K 40K 50K 65K
167	500	34.7	155 220 265 305	180 260 305 360	105 130 165 210	315 415 515 680	325 435 560 800	50 65 80 100	175 230 285 315	185 280 330 360	110 140 175 210	340 460 580 760	370 490 650 920	50K 65K 80K 100K
250	750	52.0	175 200 335 405	195 240 355 430	110 140 195 230	335 425 950 1400	345 455 1150 —	80 100 125 150	155 190 210 375	100 205 240 405	95 115 140 220	290 370 475 1150	305 390 510 —	65K 80K 100K 140K
333	1000	89.4	150 250 305 380	180 265 325 430	105 145 175 230	315 640 900 1400	325 740 1200 —	100 125 150 200	160 280 410	180 305 430	105 165 260	345 780 2030	360 930 —	100K 140K 200K
500	1500	104	170 200 255	125 215 290	100 115 155	370 500 750	420 600 900	125 150 200	190 275	200 290	110 175	475 1000	510 1310	140K 200K

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1 φ and Δ-Δ X-X	Δ-X		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1 φ and Δ-Δ X-X	Δ-X	
						230	230	125	500	530	2QR
						345	345	190	790	920	3QR
						450	450	220	1075	—	5QR
						635	635	315	1700	—	7QR
345	405	235	960	—	6T	175	150	95	370	375	3QR
465	530	315	1800	—	8T	225	210	110	475	500	5QR
						315	315	155	630	680	7QR
						455	530	275	1000	—	10QR
230	270	155	570	670	6T	210	185	105	410	415	7QR
310	350	210	770	1450	8T	305	350	185	580	660	10QR
385	450	270	1300	—	10T	450	510	245	860	1100	15QR
						610	705	330	1400	—	20QR
140	120	95	280	310	6T	185	205	110	325	340	10QR
185	210	125	365	410	8T	270	305	145	480	505	15QR
230	270	165	510	610	10T	365	425	200	660	740	20QR
290	325	195	680	1150	12T	500	575	245	830	1150	25QR
155	180	110	310	345	10T	180	145	95	310	320	15QR
190	220	130	405	455	12T	245	280	130	430	445	20QR
255	305	175	530	670	15T	335	385	165	530	560	25QR
320	370	220	750	—	20T	385	450	200	640	730	30QR
145	165	95	285	310	12T	185	175	100	310	325	20QR
190	230	130	365	415	15T	250	270	120	385	395	25QR
240	280	165	500	610	20T	290	335	150	455	495	30QR
315	375	215	730	—	25T	365	425	205	660	750	40QR
160	185	110	305	335	20T	190	180	100	305	315	30QR
210	250	145	425	490	25T	245	280	135	430	455	40QR
250	295	175	600	850	30T	315	360	170	580	640	50QR
310	365	210	900	—	40T	390	460	215	750	840	60QR
160	180	110	290	325	25T	185	155	100	310	325	40QR
190	220	130	410	465	30T	235	255	125	425	450	50QR
230	275	155	570	720	40T	295	345	160	530	570	60QR
280	325	195	830	—	50T	360	415	205	660	780	75QR
140	165	95	285	325	40T	175	115	95	300	315	60QR
165	195	115	385	450	50T	215	250	125	365	385	75QR
235	280	165	510	620	65T	280	315	180	590	650	100QR
275	315	185	700	—	80T	340	360	225	840	1100	125QR
160	185	110	310	355	65T	185	210	120	355	395	100QR
185	210	125	415	485	80T	225	240	150	485	550	125QR
210	250	150	560	770	100T	270	290	160	980	1300	150QR
140	160	95	280	315	80T	170	180	110	345	370	125QR
160	185	110	375	450	100T	205	215	120	660	800	150QR



THE FUSE SELECTION TABLES

TABLE 6—Transformers Rated 6.9 Kv Single-Phase^① or 12.0 Kv Three-Phase

S&C Positrol Fuse Link Speed →			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva ↓		Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ	
5	15	0.72	165	145	90	360	370	1						
			335	335	180	750	850	2						
			500	500	265	1270	—	3						
10	30	1.44	165	110	90	355	365	2						
			250	250	135	540	570	3						
			415	415	225	960	1350	5	625	640	265	1100	—	6K
			585	695	330	1500	—	7	835	900	365	1950	—	8K
15	45	2.17	165	130	90	360	365	3						
			275	275	150	600	640	5	415	390	180	660	730	6K
			385	460	220	740	1010	7	555	585	245	920	1250	8K
			600	695	320	1440	—	10	645	740	315	1280	—	10K
25	75	3.61	165	115	90	360	360	5						
			235	275	135	425	435	7	250	145	105	395	395	6K
			360	415	195	630	740	10	330	300	145	510	535	8K
			525	580	295	1090	—	15	390	430	190	640	720	10K
37½	112½	5.41	155	150	90	290	290	7						
			240	275	130	400	420	10	220	110	100	335	335	8K
			350	390	195	640	720	15	260	235	125	410	425	10K
			460	535	260	910	—	20	350	355	165	570	625	12K
50	150	7.22	180	190	95	300	305	10						
			265	290	145	455	485	15	195	100	95	305	305	10K
			345	400	195	635	715	20	265	225	125	410	430	12K
			430	485	230	790	1010	25	305	325	155	515	565	15K
75	225	10.8	175	190	95	305	305	15						
			230	270	130	405	420	20	205	150	105	325	345	15K
			285	325	150	505	525	25	270	265	130	435	460	20K
			345	390	190	620	680	30	325	370	165	550	620	25K
100	300	14.4	175	170	95	300	305	20						
			215	240	115	380	385	25	200	145	100	320	325	20K
			255	290	140	455	465	30	245	240	125	395	420	25K
			305	355	195	640	730	40	270	310	160	530	580	30K
167	500	24.1	185	210	115	365	380	40						
			220	260	150	470	505	50	160	115	95	305	315	30K
			320	375	190	625	700	65	195	230	125	385	415	40K
			380	435	235	780	1000	80	255	295	160	530	580	50K
250	750	36.1	145	165	100	305	310	50						
			215	250	125	400	415	65	170	165	105	325	355	50K
			255	290	155	490	530	80	220	260	135	445	470	65K
			290	345	200	645	740	100	275	320	165	570	620	80K
333	1000	48.1	160	130	95	300	305	65						
			190	220	115	365	380	80	165	140	100	320	335	65K
			220	260	150	470	505	100	205	235	125	405	425	80K
			365	385	210	740	800	125	230	260	150	525	560	100K
500	1500	72.2	145	170	100	305	315	100						
			240	255	140	610	700	125	150	170	100	330	345	100K
			290	310	165	860	1060	150	271	285	160	740	870	140K
			365	415	220	1300	—	260	385	415	250	1060	—	200K

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin- uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ Δ-Δ		Contin- uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ Δ-Δ	
						165	145	90	360	370	1QR
						335	335	180	750	850	2QR
						500	500	265	1270	—	3QR
						165	110	90	355	365	2QR
						250	250	135	540	570	3QR
						325	325	155	700	780	5QR
						460	455	225	960	1350	7QR
330	390	225	890	—	6T	165	130	90	360	365	3QR
445	510	305	1550	—	8T	215	190	105	450	475	5QR
						305	305	150	600	640	7QR
						440	510	265	920	—	10QR
200	235	135	445	500	6T	185	115	90	360	360	7QR
270	305	180	590	750	8T	265	305	160	495	540	10QR
330	390	235	870	—	10T	390	445	210	730	820	15QR
415	470	280	1450	—	12T	525	610	285	1050	—	20QR
135	105	90	270	295	6T	175	190	105	310	325	10QR
180	205	120	355	395	8T	260	295	140	455	480	15QR
220	260	155	495	590	10T	350	405	190	640	700	20QR
275	315	185	660	1025	12T	480	555	235	800	1050	25QR
135	115	90	250	280	8T	195	185	105	335	350	15QR
165	195	115	350	385	10T	265	305	140	455	485	20QR
210	235	140	450	520	12T	360	415	175	580	610	25QR
275	335	190	590	860	15T	415	485	215	710	840	30QR
140	155	95	280	300	12T	175	155	95	300	315	20QR
185	220	125	355	390	15T	240	250	115	375	385	25QR
230	270	155	485	580	20T	280	325	140	450	475	30QR
305	360	205	710	1400	25T	350	405	195	650	740	40QR
140	140	95	255	270	15T	180	115	90	270	280	25QR
175	200	115	330	365	20T	210	215	105	320	335	30QR
230	270	155	465	550	25T	265	305	145	455	485	40QR
270	320	190	650	1200	30T	340	390	185	630	700	50QR
135	140	95	240	270	25T	205	190	110	355	375	50QR
160	190	115	335	380	30T	255	285	140	455	485	60QR
200	235	135	470	550	40T	310	355	180	550	620	75QR
240	285	165	650	900	50T	400	455	255	930	1200	100QR
135	160	90	290	315	40T	170	95	95	280	310	60QR
160	190	110	375	435	50T	210	240	120	345	370	75QR
225	270	155	510	600	65T	270	305	170	560	620	100QR
265	305	180	690	—	80T	325	345	215	800	1000	125QR
170	200	115	345	390	65T	155	125	90	250	265	75QR
200	230	135	455	540	80T	200	230	130	390	420	100QR
230	270	160	620	1000	100T	245	260	160	540	620	125QR
						295	310	170	1125	1625	150QR
135	150	90	270	305	80T						
150	180	105	355	415	100T						



THE FUSE SELECTION TABLES

TABLE 7—Transformers Rated 7.2 Kv Single-Phase^① or 12.47 Kv Three-Phase

S&C Positrol Fuse Link Speed		S&C Standard Speed—TCC No. 123-6							S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva	Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	
		Single-Phase	Three-Phase	Continuous Load	Hot-Load Pickup	Cold-Load Pickup		1 ϕ and Δ	1 ϕ and Δ	Continuous Load	Hot-Load Pickup	Cold-Load Pickup		1 ϕ and Δ
5	15	0.69	175	160	95	375	380	1						
			350	345	190	790	900	2						
			520	520	285	1380	—	3						
10	30	1.39	175	130	95	370	375	2						
			260	260	140	560	600	3						
			430	430	235	1020	—	5	645	670	280	1150	—	6K
									865	935	380	2170	—	8K
15	45	2.08	175	145	95	375	380	3						
			290	290	155	620	670	5						
			405	480	230	780	—	7	435	410	185	690	760	6K
			625	720	335	1700	—	10	575	610	255	970	1410	8K
									675	770	325	1390	—	10K
25	75	3.47	175	135	95	370	370	5						
			240	290	140	445	455	7	260	165	110	405	410	6K
			375	430	200	660	800	10	345	320	155	530	565	8K
			550	605	305	1160	—	15	405	450	195	670	760	10K
									550	605	260	1000	1450	12K
37½	112½	5.21	160	165	95	295	295	7						
			250	290	135	420	440	10	230	130	100	345	350	8K
			365	405	205	650	760	15	270	250	130	425	445	10K
			480	555	270	960	—	20	365	370	175	600	660	12K
									420	480	220	770	920	15K
50	150	6.94	185	205	100	315	315	10						
			275	300	155	475	510	15	200	120	100	320	320	10K
			360	420	205	660	760	20	275	240	130	430	455	12K
			445	505	240	820	1140	25	315	345	165	540	590	15K
												420	485	205
75	225	10.4	180	200	100	315	320	15						
			240	280	135	425	445	20	210	170	110	345	365	15K
			300	335	160	525	545	25	280	285	140	455	485	20K
			355	405	195	640	720	30	335	385	175	580	650	25K
									375	430	225	780	940	30K
100	300	13.9	180	185	100	315	315	20						
			225	250	120	395	395	25	210	160	105	335	345	20K
			265	300	145	475	490	30	250	255	130	410	445	25K
			315	365	205	670	770	40	280	325	170	550	610	30K
									340	395	220	730	850	40K
167	500	23.1	160	135	90	285	285	30						
			190	220	120	380	395	40	170	130	100	315	335	30K
			230	270	155	490	520	50	205	240	130	410	435	40K
			335	390	195	650	730	65	265	305	165	555	620	50K
									345	425	210	750	860	65K
250	750	34.7	155	180	105	315	325	50						
			220	260	130	415	435	65	175	185	110	340	370	50K
			265	300	165	515	560	80	230	280	140	460	490	65K
			305	360	210	680	800	100	285	330	175	580	650	80K
									315	360	210	760	920	100K
333	1000	46.3	165	145	100	310	315	65						
			200	225	120	380	395	80	175	155	105	335	350	65K
			225	270	155	490	530	100	215	250	130	420	445	80K
			380	400	220	1100	—	125	240	270	155	540	590	100K
									420	455	245	1400	—	140K
500	1500	69.4	150	180	105	315	325	100						
			250	265	145	640	740	125	160	180	105	345	360	100K
			305	325	175	900	1200	150	280	300	165	780	930	140K
			380	430	230	1400	—	200	410	430	260	2030	—	200K

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ	
						175	180	95	375	380	1QR
						350	345	190	790	900	2QR
						520	520	285	1380	—	3QR
						175	130	95	370	375	2QR
						260	260	140	560	600	3QR
						340	340	165	650	740	5QR
						475	475	235	1020	—	7QR
345	405	235	960	—	6T	175	145	95	375	380	3QR
465	530	315	1800	—	8T	225	205	110	475	500	5QR
						315	315	155	620	670	7QR
						455	530	275	1000	—	10QR
205	240	140	475	560	6T	190	135	95	370	370	7QR
280	315	190	640	880	8T	275	315	165	510	560	10QR
345	405	245	900	—	10T	405	460	220	760	880	15QR
						550	635	295	1100	—	20QR
140	120	95	280	310	6T	180	205	110	325	340	10QR
185	210	125	365	410	8T	270	305	145	480	505	15QR
230	270	165	510	610	10T	365	420	200	660	740	20QR
290	325	195	860	1150	12T	500	575	245	830	1150	25QR
140	130	95	260	285	8T	200	200	110	355	365	15QR
175	200	120	365	405	10T	275	315	150	485	510	20QR
215	245	145	470	560	12T	375	430	185	600	650	25QR
290	345	200	620	—	15T	430	505	225	740	900	30QR
145	165	95	285	310	12T	185	175	100	310	325	20QR
190	230	130	365	415	15T	250	270	120	385	395	25QR
240	280	165	500	610	20T	290	335	150	455	495	30QR
315	375	215	730	—	25T	365	420	205	660	750	40QR
145	155	100	265	285	15T	185	135	90	280	295	25QR
180	210	120	355	390	20T	215	230	110	345	355	30QR
235	280	160	490	600	25T	275	315	150	485	510	40QR
280	330	195	710	—	30T	355	405	190	670	750	50QR
145	150	95	255	285	25T	165	100	90	270	285	40QR
170	200	115	355	400	30T	210	210	115	375	395	50QR
210	245	140	495	600	40T	265	305	145	475	500	60QR
250	295	175	700	1075	50T	325	370	185	580	660	75QR
140	165	95	285	325	40T	175	115	95	300	315	60QR
165	195	115	385	450	50T	215	250	125	365	385	75QR
235	280	165	510	620	65T	280	315	180	590	650	100QR
275	315	185	700	—	80T	340	360	225	840	1100	125QR
175	210	120	365	415	65T	160	145	95	260	275	75QR
205	240	140	485	600	80T	210	240	135	420	455	100QR
240	280	165	670	—	100T	255	270	170	560	660	125QR
						305	325	175	1200	1300	150QR
140	160	95	285	325	80T	170	180	110	345	370	125QR
180	185	110	375	450	100T	203	215	120	460	800	150QR



THE FUSE SELECTION TABLES

TABLE 8—Transformers Rated 7.62 Kv Single-Phase^① or 13.2 Kv Three-Phase

S&C Positrol Fuse Link Speed			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1 ϕ and Δ - Δ	Δ - Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1 ϕ and Δ - Δ	Δ - Δ	
5	15	0.66	180	185	100	400	410	1						
			365	365	195	850	1000	2						
			545	550	295	1600	—	3						
10	30	1.31	185	155	100	400	405	2						
			275	275	150	600	650	3						
			460	455	250	1100	—	5	685	715	295	1300	—	6K
15	45	1.97	185	175	100	395	400	3						
			305	305	165	665	730	5						
			425	510	245	830	—	7	455	445	195	750	850	6K
25	75	3.28	185	160	100	395	395	5						
			255	305	145	465	485	7						
			395	455	210	700	890	10	275	195	120	435	440	6K
37½	112½	4.92	170	190	100	310	310	7						
			265	305	140	445	470	10						
			385	425	215	710	870	15	245	160	110	365	375	8K
50	150	6.56	510	590	285	1030	—	20	445	510	230	830	1020	15K
			200	230	105	335	345	10						
			290	320	160	510	550	15	215	150	105	340	345	10K
75	225	9.84	380	440	215	720	860	20	335	370	175	580	640	15K
			475	535	250	890	—	25	440	520	220	780	900	20K
			195	215	110	335	340	15						
100	300	13.1	255	295	145	450	475	20	295	310	145	485	525	20K
			315	355	170	560	590	25	355	405	185	630	720	25K
			375	425	210	690	810	30	395	455	235	860	1060	30K
167	500	21.9	190	210	110	335	340	20	220	185	110	360	375	20K
			235	265	125	415	420	25	265	280	140	445	490	25K
			280	320	155	500	520	30	300	345	180	600	680	30K
250	750	32.8	335	390	215	710	860	40	360	420	235	800	980	40K
			170	160	95	295	295	30						
			200	235	130	400	415	40	180	160	105	335	350	30K
333	1000	43.7	240	285	165	510	560	50	280	325	175	590	660	50K
			350	410	210	690	800	65	365	450	220	790	940	65K
			160	190	110	335	345	50						
500	1500	65.6	235	275	140	440	465	65	245	300	150	495	530	65K
			280	320	175	550	600	80	300	350	185	620	700	80K
			320	380	220	730	870	100	335	380	220	820	1020	100K
500	1500	65.6	175	170	105	325	335	65	185	180	110	355	375	65K
			210	240	130	400	415	80	225	265	140	450	485	80K
			240	285	165	515	560	100	250	285	165	580	645	100K
500	1500	65.6	400	425	235	1180	—	125	445	480	260	1600	—	140K
			160	190	110	335	345	100						
			265	280	155	690	780	125	150	100	90	285	300	80K
500	1500	65.6	320	345	185	970	1280	150	295	320	175	840	1040	140K
			405	455	245	1500	—	200	435	455	275	—	—	200K

① Phase-to-neutral, only.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ③ Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ③ Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X	
						180 365 545	185 365 550	100 195 295	400 850 1600	410 1000 —	1QR 2QR 3QR
						185 275 360 505	155 275 360 505	100 150 175 250	400 600 800 1100	405 650 910 —	2QR 3QR 5QR 7QR
365	425	250	1050	—	6T	185 240 335 480	175 235 335 560	100 115 165 290	395 500 655 1050	400 530 730 —	3QR 5QR 7QR 10QR
220 295 365	255 335 425	150 200 260	510 680 1050	590 1000 —	6T 8T 10T	200 290 425 580	165 335 490 670	100 175 230 315	395 550 800 1250	395 610 960 —	7QR 10QR 15QR 20QR
145 195 245 305	140 225 285 345	100 135 170 205	300 395 550 740	335 455 690 —	6T 8T 10T 12T	195 285 385 530	225 325 445 610	115 155 210 260	345 510 710 900	365 520 820 —	10QR 15QR 20QR 25QR
150 185 230 305	145 215 260 365	100 130 155 210	275 390 500 680	305 440 610 —	8T 10T 12T 15T	215 290 395 455	230 335 455 535	115 155 195 235	375 520 650 800	385 550 710 1050	15QR 20QR 25QR 30QR
150 205 255 335	175 245 295 395	105 140 175 230	305 390 540 810	335 450 720 —	12T 15T 20T 25T	195 265 305 385	200 295 355 445	105 130 155 215	330 405 495 710	345 425 530 830	20QR 25QR 30QR 40QR
155 190 250 300	170 220 295 350	105 130 170 210	285 375 530 760	305 425 660 —	15T 20T 25T 30T	200 230 290 375	165 255 335 425	95 120 160 200	300 365 520 720	310 375 550 830	25QR 30QR 40QR 50QR
150 180 220 265	165 210 260 310	105 125 150 185	270 375 530 750	300 430 620 —	25T 30T 40T 50T	175 225 280 340	130 235 330 395	95 120 155 195	290 395 510 610	305 415 530 710	40QR 50QR 60QR 75QR
145 175 250 295	175 205 295 335	100 125 170 200	305 435 570 810	355 510 700 —	40T 50T 65T 80T	185 230 295 360	145 260 335 380	105 130 190 240	315 385 630 900	345 415 710 1250	60QR 75QR 100QR 125QR
135 190 220 250	155 220 250 295	95 130 150 175	290 400 530 740	335 445 650 —	50T 65T 80T 100T	170 220 270 325	170 250 285 345	100 140 180 190	275 445 610 1320	295 485 740 2150	75QR 100QR 125QR 150QR
145 170	170 200	100 115	305 405	350 490	80T 100T	150 180 215	100 190 230	95 120 125	275 370 720	305 405 880	100QR 125QR 150QR



THE FUSE SELECTION TABLES

TABLE 9—Transformers Rated 7.96 Kv Single-Phase^① or 13.8 Kv Three-Phase

S&C Positrol Fuse Link Speed →			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X	
5	15	0.63	190 380 570	190 380 575	105 205 310	415 890 1750	425 1070 —	1 2 3						
10	30	1.26	190 285 475	175 285 480	105 155 260	415 630 1175	420 680 —	2 3 5	715	750	310	1420	—	6K
15	45	1.88	190 320 445	190 320 530	105 175 255	415 690 890	420 770 —	3 5 7	480 640 745	470 685 850	205 280 365	790 1130 1850	920 — —	6K 8K 10K
25	75	3.14	190 270 415 605	180 320 480 670	105 155 220 340	410 490 750 1510	415 510 1050 —	5 7 10 15	285 380 445 605	215 370 510 670	125 170 215 290	455 590 760 1150	465 650 930 —	6K 8K 10K 12K
37½	112½	4.71	180 275 405 530	205 320 445 615	105 150 225 300	330 470 750 1120	330 500 1000 —	7 10 15 20	255 295 405 465	180 300 425 530	115 145 195 240	385 475 670 880	395 505 760 1110	8K 10K 12K 15K
50	150	6.28	205 305 400 495	240 335 460 560	110 170 225 265	350 530 740 940	350 570 900 —	10 15 20 25	225 305 350 460	170 285 395 540	110 145 180 230	355 485 620 830	360 520 690 950	10K 12K 15K 20K
75	225	9.41	200 265 330 395	225 310 370 445	115 150 175 220	350 470 580 720	360 500 630 880	15 20 25 30	200 235 310 370	110 210 330 425	95 120 145 195	315 390 510 660	320 405 550 770	12K 15K 20K 25K
100	300	12.6	200 245 295 350	225 280 335 405	115 130 165 225	350 440 520 760	360 450 560 940	20 25 30 40	175 230 280 310	90 205 300 360	90 110 145 185	285 370 460 625	290 390 510 710	15K 20K 25K 30K
167	500	20.9	175 210 255 370	175 245 295 430	100 135 170 215	315 425 550 750	315 450 610 900	30 40 50 65	185 225 290 385	175 265 340 470	110 145 185 230	355 455 620 830	370 485 700 1010	30K 40K 50K 65K
250	750	31.4	140 170 245 295	130 200 285 335	90 115 145 180	280 345 460 570	280 355 490 630	40 50 65 80	150 195 255 315	120 225 310 365	95 125 155 195	285 390 520 665	305 415 570 750	40K 50K 65K 80K
333	1000	41.8	185 220 250 420	190 250 300 440	110 135 175 245	345 420 540 1270	350 440 600 —	65 80 100 125	145 190 235 265	100 200 275 300	90 115 145 175	270 375 475 610	295 395 510 680	50K 65K 80K 100K
500	1500	62.8	145 165 280 335	115 200 295 360	90 115 160 190	280 350 720 1030	280 360 840 1400	80 100 125 150	160 175 310	125 200 335	95 115 180	300 385 880	315 400 1100	80K 100K 140K

① Phase-to-neutral, only.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, [ⓐ] Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, [ⓐ] Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X	
						190	190	105	415	425	1QR
						380	380	205	890	1070	2QR
						570	575	310	1750	—	3QR
						190	175	105	415	420	2QR
						285	285	155	630	680	3QR
						375	375	180	850	990	5QR
						525	525	260	1175	—	7QR
385	445	260	1125	—	6T	190	190	105	415	420	3QR
						250	250	120	530	560	5QR
						350	350	175	690	770	7QR
						505	585	305	1150	—	10QR
230	270	155	570	670	6T	210	185	105	410	415	7QR
310	350	210	770	1450	8T	305	350	180	580	660	10QR
380	445	270	1300	—	10T	445	510	240	860	1100	15QR
						605	700	330	1400	—	20QR
155	155	105	325	360	6T	200	235	120	365	385	10QR
205	235	140	420	480	8T	295	340	160	540	570	15QR
255	295	180	600	770	10T	405	465	220	740	900	20QR
320	360	215	810	—	12T	550	635	270	950	—	25QR
155	160	105	290	320	8T	150	125	90	265	275	10QR
190	225	135	310	365	10T	225	250	120	390	415	15QR
240	270	160	530	660	12T	305	350	165	550	570	20QR
320	380	220	720	—	15T	415	480	205	670	750	25QR
130	120	90	250	275	10T	200	220	110	345	365	20QR
160	180	105	325	360	12T	275	315	135	430	445	25QR
215	255	145	425	480	15T	320	370	165	520	560	30QR
265	310	180	580	840	20T	405	465	225	750	900	40QR
160	185	110	295	320	15T	205	185	100	315	325	25QR
200	230	135	395	440	20T	240	275	125	380	395	30QR
260	310	180	550	710	25T	300	350	170	540	580	40QR
310	365	220	820	—	30T	390	445	210	750	870	50QR
160	180	110	290	325	25T	180	155	100	310	325	40QR
185	220	130	410	465	30T	235	255	125	425	450	50QR
230	270	155	570	720	40T	290	345	160	530	570	60QR
280	325	195	830	—	50T	360	410	205	660	780	75QR
155	180	105	330	375	40T	195	165	105	335	355	60QR
185	215	130	455	530	50T	240	275	135	405	440	75QR
260	310	180	600	750	65T	310	350	200	670	760	100QR
305	350	205	850	—	80T	375	400	250	980	1500	125QR
140	165	95	310	360	50T	180	190	105	295	310	75QR
195	230	135	420	485	65T	230	265	150	475	520	100QR
230	265	155	560	740	80T	280	300	185	640	780	125QR
265	310	185	800	—	100T	335	360	195	1410	—	150QR
130	140	90	245	270	65T	155	125	100	280	310	100QR
155	175	105	320	365	80T	190	200	125	385	425	125QR
175	205	125	425	510	100T	225	240	130	750	920	150QR

THE FUSE SELECTION TABLES

TABLE 10—Transformers Rated 8.32 Kv Single-Phase^① or 14.4 Kv Three-Phase

S&C Positrol Fuse Link Speed →			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ	Δ-Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ	Δ-Δ	
5	15	0.60	200	200	110	440	455	1						
			400	400	215	950	1200	2						
			600	600	325	2100	—	3						
10	30	1.20	200	195	110	435	445	2						
			300	300	165	660	720	3	750	785	320	1550	—	6K
			500	500	270	1250	—	5						
15	45	1.80	200	200	110	430	440	3						
			335	335	180	730	840	5	500	495	215	810	980	6K
			465	555	270	940	—	7	665	720	295	1200	—	8K
25	75	3.01	200	200	110	435	440	5	300	235	130	475	485	6K
			280	335	160	510	540	7	400	390	175	620	690	8K
			430	500	230	790	—	10	465	530	225	800	1010	10K
37½	112½	4.51	185	220	105	340	345	7	265	200	120	405	415	8K
			290	335	155	490	530	10	310	320	150	500	535	10K
			420	465	235	790	1200	15	420	445	200	710	830	12K
50	150	6.01	555	645	315	1210	—	20	490	555	255	950	1260	15K
			215	250	115	360	370	10	235	190	115	370	375	10K
			315	350	175	560	610	15	315	305	150	510	550	12K
75	225	9.02	415	480	235	790	1010	20	365	415	190	650	740	15K
			515	580	275	990	—	25	485	565	240	880	1050	20K
			210	235	120	370	380	15	210	130	100	330	335	12K
100	300	12.0	275	320	155	490	530	20	245	230	125	405	425	15K
			345	390	185	610	680	25	320	350	160	530	580	20K
			410	465	225	760	980	30	390	445	200	690	810	25K
167	500	20.0	160	145	90	275	275	15	185	100	95	295	305	15K
			210	240	115	365	375	20	240	220	120	395	415	20K
			260	290	140	455	465	25	290	320	150	495	550	25K
250	750	30.1	310	350	170	540	580	30	325	375	195	670	770	30K
			185	195	100	330	330	30	175	90	90	275	290	25K
			220	255	140	445	465	40	195	195	115	375	390	30K
333	1000	40.1	265	310	180	570	640	50	235	275	150	480	515	40K
			385	450	225	780	970	65	305	355	190	655	750	50K
			145	150	95	290	290	40	155	140	100	300	325	40K
500	1500	60.1	175	205	120	360	375	50	205	235	130	410	440	50K
			255	300	150	480	510	65	265	325	160	550	600	65K
			305	350	190	600	670	80	330	380	200	700	800	80K
500	1500	60.1	130	120	90	270	275	50	150	120	95	285	300	50K
			190	210	115	360	370	65	200	215	120	395	415	65K
			230	260	140	435	465	80	245	285	150	495	535	80K
500	1500	60.1	260	310	180	570	640	100	275	310	180	635	720	100K
			155	135	95	290	290	80	165	145	100	315	335	80K
			175	210	120	365	380	100	185	210	120	405	425	100K
500	1500	60.1	290	310	170	770	900	125	325	350	190	940	1250	140K
			350	375	200	1100	—	150						

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin- uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Contin- uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ	
						200 400 600	200 400 600	110 215 325	440 950 2100	455 1200 —	1QR 2QR 3QR
						200 300 390 550	195 300 390 550	110 165 190 270	435 660 880 1250	445 720 1040 —	2QR 3QR 5QR 7QR
400	465	270	1250	—	6T	200 260 365 530	200 260 365 610	110 125 180 315	430 560 730 1225	440 600 840 —	3QR 5QR 7QR 10QR
240 320 400	280 365 465	165 220 280	560 750 1300	660 — —	6T 8T 10T	220 315 465 630	200 365 530 730	110 190 250 340	435 600 900 1500	440 690 1200 —	7QR 10QR 15QR 20QR
160 215 265 335	165 245 310 375	110 145 190 225	340 445 630 880	380 510 850 —	6T 8T 10T 12T	210 310 420 575	245 355 490 665	135 170 245 300	380 560 780 1000	410 590 1000 —	10QR 15QR 20QR 25QR
160 200 250 335	175 235 285 400	110 140 170 230	310 430 570 800	340 510 750 —	8T 10T 12T 15T	160 235 315 435	145 265 365 500	95 125 170 210	280 415 570 710	295 430 610 820	10QR 15QR 20QR 25QR
135 165 220 275	135 190 265 320	95 110 155 190	260 345 445 600	285 380 510 1000	10T 12T 15T 20T	210 290 335 420	240 335 390 490	115 140 170 235	365 450 540 800	380 470 590 980	20QR 25QR 30QR 40QR
165 210 275 325	195 240 325 380	115 140 190 225	315 420 600 910	345 485 820 —	15T 20T 25T 30T	215 250 315 410	205 290 365 465	105 130 175 220	330 400 570 800	345 415 620 950	25QR 30QR 40QR 50QR
165 195 240 290	195 230 285 340	110 135 165 200	305 425 610 900	345 500 800 —	25T 30T 40T 50T	190 245 305 375	175 275 360 430	105 130 165 215	320 435 560 690	335 465 600 820	40QR 50QR 60QR 75QR
160 195 270 320	190 225 325 365	110 135 190 215	350 485 650 920	400 590 850 —	40T 50T 65T 80T	205 250 320 390	185 285 365 415	110 145 205 260	355 430 700 1025	375 465 800 1800	60QR 75QR 100QR 125QR
145 205 240 275	170 240 275 325	100 140 165 195	325 440 590 850	375 510 810 —	50T 65T 80T 100T	185 240 295 350	205 275 310 375	110 155 195 205	305 490 680 1550	325 520 820 —	75QR 100QR 125QR 150QR
135 160 185	150 185 215	95 110 130	250 340 450	290 385 550	65T 80T 100T	160 195 235	145 210 250	105 130 135	305 415 800	335 460 1020	100QR 125QR 150QR



THE FUSE SELECTION TABLES

TABLE 11—Transformers Rated 12.0 Kv Single-Phase^① or 20.8 Kv Three-Phase

S&C Positrol Fuse Link Speed →			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva ↓		Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X X-X		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X X-X	
5	15	0.42	285 570	290 575	155 310	640 1600	700 —	1 2						
10	30	0.83	290 435	290 430	155 235	640 1050	700 —	2 3						
15	45	1.25	190 290 480	180 290 480	105 155 260	415 630 1175	420 680 —	2 3 5	720	755	310	1420	—	6K
25	75	2.08	175 290 405 625	150 290 480 720	95 155 230 335	380 630 780 1700	385 680 — —	3 5 7 10	435 575 675	415 610 770	185 255 330	690 970 1390	760 1410 —	6K 8K 10K
37½	112½	3.12	190 270 415 610	185 320 480 670	105 155 225 340	415 495 750 1550	420 515 1070 —	5 7 10 15	290 385 450 610	215 370 510 670	125 170 220 290	455 590 760 1150	465 650 930 —	6K 8K 10K 12K
50	150	4.16	200 315 455 600	240 360 505 695	115 170 255 340	370 530 870 1450	375 590 — —	7 10 15 20	290 335 455 530	235 355 490 600	125 165 220 275	435 540 780 1040	455 590 940 1550	8K 10K 12K 15K
75	225	6.25	210 305 400 495	240 335 465 560	110 170 225 265	350 530 760 940	360 580 900 —	10 15 20 25	225 305 350 465	170 290 395 545	110 145 180 230	355 485 620 830	360 520 690 950	10K 12K 15K 20K
100	300	8.33	230 300 370 445	250 350 420 505	125 170 200 245	400 545 680 840	415 590 770 1200	15 20 25 30	230 265 350 420	165 265 390 480	110 135 175 220	360 445 590 790	370 475 650 940	12K 15K 20K 25K
167	500	13.9	180 225 265 315	185 250 305 365	100 120 145 205	315 395 475 670	320 400 495 770	20 25 30 40	210 250 280 340	160 255 325 395	105 130 170 220	335 410 550 730	345 445 610 850	20K 25K 30K 40K
250	750	20.8	180 210 255 370	180 245 300 430	100 135 170 220	315 425 550 750	315 450 610 900	30 40 50 65	190 225 295 385	180 265 340 470	110 145 185 235	355 455 620 830	370 485 700 1010	30K 40K 50K 65K
333	1000	27.8	160 190 275 330	185 225 325 380	100 130 165 205	315 395 530 660	320 420 570 760	40 50 65 80	170 220 290 355	175 255 355 415	110 140 175 220	330 445 600 765	350 485 660 910	40K 50K 65K 80K
500	1500	41.6	185 220 250 420	195 250 300 445	110 135 175 245	345 420 550 1300	355 450 610 —	65 80 100 125	145 190 240 265	100 200 275 300	95 115 145 175	270 375 475 610	295 395 510 680	50K 65K 80K 100K

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	1φ and Δ-Δ Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	1φ and Δ-Δ Δ-Δ	
						285	290	155	640	700	1QR
						570	575	310	1600	—	2QR
						290	290	155	640	700	2QR
						435	430	235	1050	—	3QR
						565	565	275	1475	—	5QR
						190	180	105	415	420	2QR
						290	290	155	630	680	3QR
						375	375	180	850	990	5QR
						530	530	260	1175	—	7QR
						175	150	95	380	385	3QR
						225	210	110	475	500	5QR
						315	315	155	630	680	7QR
						455	530	275	1000	—	10QR
345	405	235	960	—	6T	210	185	105	415	420	7QR
465	530	315	1800	—	8T	305	350	185	580	660	10QR
						450	510	245	860	1100	15QR
						610	705	330	1400	—	20QR
						175	195	120	380	415	10QR
						235	265	135	610	670	15QR
						290	335	180	870	1300	20QR
						360	455	250	1150	—	25QR
						360	410	305	1150	—	25QR
						155	165	90	265	275	10QR
						190	225	120	400	415	15QR
						240	270	165	550	580	20QR
						320	385	205	680	760	25QR
						145	160	90	290	300	15QR
						180	205	125	395	415	20QR
						240	290	155	490	520	25QR
						300	350	185	590	660	30QR
						145	155	90	280	295	25QR
						180	210	110	345	355	30QR
						235	280	150	485	510	40QR
						280	330	190	670	750	50QR
						160	180	100	310	325	40QR
						190	220	125	425	450	50QR
						230	275	160	530	570	60QR
						280	325	205	660	780	75QR
						140	160	95	300	320	50QR
						175	205	120	385	405	60QR
						210	245	155	465	510	75QR
						295	350	225	770	920	100QR
						140	165	105	300	320	75QR
						195	235	150	485	530	100QR
						230	265	190	640	780	125QR
						265	310	195	1410	—	150QR



THE FUSE SELECTION TABLES

TABLE 12—Transformers Rated 13.2 Kv Single-Phase^① or 22.9 Kv Three-Phase

S&C Positrol Fuse Link Speed			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1 ϕ and Δ - Δ	Δ - Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1 ϕ and Δ - Δ	Δ - Δ	
5	15	0.38	315	315	170	710	800	1						
10	30	0.76	315 475	315 475	170 255	710 1200	790 —	2 3						
15	45	1.13	210 320 530	210 315 530	115 170 285	460 710 1400	475 790 —	2 3 5	795	835	340	1800	—	6K
25	75	1.89	190 315 445	190 315 530	105 170 255	410 700 870	420 780 —	3 5 7	475 635 740	465 680 845	205 280 360	790 1130 1850	920 — —	6K 8K 10K
37½	112½	2.84	210 295 460	210 355 530	115 170 245	455 550 860	465 590 —	5 7 10	315 425 495 670	260 425 565 740	135 185 240 320	505 665 860 1350	520 750 1200 —	6K 8K 10K 12K
50	150	3.78	220 345 505 660	265 395 555 765	125 185 280 370	400 590 1000 1950	410 680 — —	7 10 15 20	240 315 370 505	125 280 405 550	100 140 180 240	375 480 600 890	375 510 670 1130	6K 8K 10K 12K
75	225	5.67	230 335 440 545	265 370 510 615	125 185 250 290	390 600 860 1100	400 670 1280 —	10 15 20 25	210 245 335 390	90 215 330 440	95 120 160 200	315 395 540 690	320 405 590 810	8K 10K 12K 15K
100	300	7.56	170 250 330 410	170 280 385 465	90 140 185 220	290 435 600 750	290 460 670 920	10 15 20 25	185 250 290 385	90 205 305 440	90 120 150 190	295 395 495 660	295 410 530 730	10K 12K 15K 20K
167	500	12.6	200 245 295 350	225 280 335 405	110 130 160 220	350 440 520 760	360 450 560 940	20 25 30 40	175 230 280 310	90 200 295 355	90 115 145 185	285 370 460 625	290 390 510 710	15K 20K 25K 30K
250	750	18.9	195 235 280 405	220 270 330 475	110 150 190 240	350 475 620 830	350 500 740 1120	30 40 50 65	185 205 250 325	120 220 290 375	95 125 160 205	295 395 510 710	310 415 550 810	25K 30K 40K 50K
333	1000	25.2	175 210 305 365	200 245 355 415	110 140 180 225	350 440 590 740	355 470 640 900	40 50 65 80	155 185 240 315	90 215 280 390	95 120 155 190	290 370 500 670	300 395 550 760	30K 40K 50K 65K
500	1500	37.8	140 205 245 280	145 235 280 330	95 120 150 190	290 380 470 610	290 395 500 690	50 65 80 100	160 210 260 290	145 240 305 330	100 130 160 190	310 425 535 690	335 445 580 800	50K 65K 80K 100K

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1 φ and Δ-Δ	Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1 φ and Δ-Δ	Δ-Δ	
						315 630	315 635	170 340	710 2100	800 —	1QR 2QR
						315 475 620	315 475 620	170 235 300	710 1200 1850	790 — —	2QR 3QR 5QR
						210 320 415 585	210 315 415 580	115 160 200 285	460 710 960 1400	475 790 1200 —	2QR 3QR 5QR 7QR
380	445	260	1125	—	6T	190 250 350 505	190 250 350 580	95 120 170 300	410 530 700 1150	420 560 780 —	3QR 5QR 7QR 10QR
255 340 425	295 390 495	175 230 300	610 830 1550	720 — —	6T 8T 10T	230 335 495 670	230 390 565 775	115 200 265 365	455 650 960 1750	465 750 1550 —	7QR 10QR 15QR 20QR
190 255 315 395	220 290 370 450	130 175 225 265	430 550 830 1350	480 690 — —	6T 8T 10T 12T	250 370 505 690	290 425 580 795	150 200 270 335	465 690 970 1400	505 770 — —	10QR 15QR 20QR 25QR
170 210 265 355	195 245 300 425	115 150 180 240	325 460 610 840	360 540 840 —	8T 10T 12T 15T	170 245 335 460	170 280 390 530	100 135 180 225	295 435 610 750	310 455 650 920	10QR 15QR 20QR 25QR
160 200 265 330	185 225 315 385	110 135 180 225	325 420 550 800	360 475 740 —	10T 12T 15T 20T	185 250 345 395	160 290 395 465	100 135 170 205	320 440 550 670	330 460 580 770	15QR 20QR 25QR 30QR
160 200 260 310	180 230 310 365	110 135 175 215	295 395 550 820	320 440 710 —	15T 20T 25T 30T	205 240 300 390	185 275 350 445	100 120 165 210	315 380 540 750	325 395 580 870	25QR 30QR 40QR 50QR
130 175 205 255	140 205 245 300	90 120 145 175	250 335 460 670	265 375 550 1000	20T 25T 30T 40T	200 260 325 395	200 295 380 455	110 140 180 230	345 475 600 750	365 510 650 940	40QR 50QR 60QR 75QR
155 190 230 325	180 225 270 385	110 130 160 225	315 440 610 830	350 510 800 —	30T 40T 50T 65T	195 240 300 385	170 265 340 435	105 135 170 245	340 430 515 880	355 455 590 1100	50QR 60QR 75QR 100QR
155 215 255 290	180 255 290 345	105 150 170 205	365 475 630 950	410 550 970 —	50T 65T 80T 100T	200 255 310 375	225 290 330 395	115 165 205 215	325 530 740 1700	345 580 920 —	75QR 100QR 125QR 150QR



THE FUSE SELECTION TABLES

TABLE 13—Transformers Rated 13.8 Kv Single-Phase^① or 23.9 Kv Three-Phase

S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6							S&C "K" Speed—TCC No. 165-6						
Transformer Rating, Kva ↓		Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		
5	15	0.36	335	330	180	760	880	1							
10	30	0.72	165	140	90	360	370	1							
			335	330	180	750	850	2							
			500	495	265	1290	—	3							
15	45	1.09	220	220	120	480	500	2							
			330	330	180	740	830	3							
			550	550	300	1520	—	5	825	875	360	2050	—	6K	
25	75	1.81	200	200	110	430	440	3							
			330	330	180	730	840	5	495	490	215	810	980	6K	
			465	550	265	930	—	7	665	715	295	1200	—	8K	
37½	112½	2.72	220	220	120	480	495	5	330	280	140	530	550	6K	
			310	370	175	570	620	7	440	445	195	700	800	8K	
			480	550	255	920	—	10	515	590	250	920	1390	10K	
50	150	3.62	220	220	120	480	495	5	330	280	140	530	550	6K	
			310	370	175	570	620	7	440	445	195	700	800	8K	
			480	550	255	920	—	10	515	590	250	920	1390	10K	
50	150	3.62	165	115	90	360	360	5	250	145	105	395	395	6K	
			230	275	135	425	435	7	330	300	145	510	535	8K	
			360	415	195	630	740	10	385	430	190	640	720	10K	
50	150	3.62	525	580	295	1080	—	15	525	575	250	940	1280	12K	
			155	145	90	280	280	7	220	110	100	335	335	8K	
			240	275	130	400	415	10	255	235	125	410	425	10K	
75	225	5.44	350	385	195	620	710	15	350	350	165	570	625	12K	
			460	535	260	900	—	20	405	460	210	730	860	15K	
			180	190	95	300	300	10	195	95	95	305	305	10K	
100	300	7.25	260	290	145	450	475	15	260	225	125	410	430	12K	
			345	400	195	620	710	20	305	325	155	515	565	15K	
			430	485	230	770	980	25	400	465	200	695	775	20K	
167	500	12.1	155	145	90	275	275	15	180	100	95	295	305	15K	
			205	240	115	365	370	20	240	220	120	395	415	20K	
			255	290	135	450	460	25	290	315	150	495	550	25K	
167	500	12.1	305	350	170	540	580	30	320	375	195	670	770	30K	
			170	150	90	300	300	25	195	140	100	310	325	25K	
			205	230	115	365	365	30	215	235	130	415	440	30K	
250	750	18.1	245	280	155	495	530	40	260	305	170	540	590	40K	
			295	340	200	650	770	50	335	390	215	750	890	50K	
			180	210	115	360	370	40	160	110	95	305	315	30K	
333	1000	24.2	220	255	150	450	500	50	195	230	125	385	415	40K	
			320	375	190	620	690	65	250	295	160	530	580	50K	
			380	435	235	780	1000	80	330	405	200	710	810	65K	
500	1500	36.2	145	165	100	305	310	50	170	165	105	325	355	50K	
			215	250	125	400	415	65	220	260	135	445	470	65K	
			255	290	155	495	530	80	275	315	165	570	620	80K	
290	345	200	650	740	100	305	345	200	730	850	100K				

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ	
						335 665	330 660	180 360	760 2100	880 —	1QR 2QR
						165 335 500	140 330 495	90 180 265	360 750 1290	370 850 —	1QR 2QR 3QR
						220 330 430 605	220 330 430 605	120 180 210 300	480 740 1010 1520	500 830 1450 —	2QR 3QR 5QR 7QR
400	465	270	1250	—	6T	200 260 365 525	200 260 365 605	110 125 180 315	430 560 730 1225	440 600 840 —	3QR 5QR 7QR 10QR
265 355 440	310 405 515	180 245 310	650 900 1950	790 — —	6T 8T 10T	245 350 515 700	245 405 590 810	120 210 280 380	480 680 1000 2000	495 810 — —	7QR 10QR 15QR 20QR
200 270 330 415	230 305 385 470	135 180 235 280	445 590 870 1450	500 750 — —	6T 8T 10T 12T	185 260 385 525	115 305 440 605	90 155 210 285	360 495 730 1050	360 540 820 —	7QR 10QR 15QR 20QR
130 180 220 275	105 200 260 315	90 120 155 185	270 355 495 660	295 395 590 1025	6T 8T 10T 12T	175 255 350 480	190 295 405 550	105 140 190 235	310 455 630 800	325 480 700 1050	10QR 15QR 20QR 25QR
135 165 205 275	115 195 235 330	90 115 140 190	250 345 445 590	270 380 510 850	8T 10T 12T 15T	195 260 360 415	185 305 415 485	105 140 175 215	335 455 580 700	350 485 610 820	15QR 20QR 25QR 30QR
165 205 275 320	195 240 325 380	115 140 185 225	315 420 600 910	345 485 820 —	15T 20T 25T 30T	215 250 315 405	200 290 365 465	105 130 175 220	330 400 570 800	345 415 620 950	25QR 30QR 40QR 50QR
140 180 215 265	155 215 255 315	95 125 150 180	260 350 495 710	285 395 600 —	20T 25T 30T 40T	210 270 335 415	220 310 395 475	115 145 185 240	365 495 630 800	380 530 680 1025	40QR 50QR 60QR 75QR
135 160 200 240	140 190 235 280	95 115 135 170	240 335 470 650	270 380 550 900	25T 30T 40T 50T	200 250 310 400	190 285 355 455	110 140 180 260	355 455 550 930	375 485 620 1200	50QR 60QR 75QR 100QR
135 180 225 265	155 190 270 305	90 170 155 180	290 375 510 690	315 435 600 —	40T 50T 65T 80T	170 205 270 325	90 235 305 345	95 120 170 215	280 345 560 800	310 370 620 1000	50QR 75QR 100QR 125QR

THE FUSE SELECTION TABLES

TABLE 14—Transformers Rated 14.4 Kv Single-Phase^① or 24.9 Kv Three-Phase

S&C Positrol Fuse Link Speed →			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva ↓		Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ	
5	15	0.35	345	345	185	800	940	1						
10	30	0.70	170	160	95	375	380	1						
			345	345	190	800	900	2						
			515	520	285	1350	—	3						
15	45	1.04	230	230	125	500	520	2						
			345	345	190	790	900	3						
			575	575	315	1650	—	5	865	915	370	2300	—	6K
25	75	1.74	205	205	110	450	460	3						
			345	345	185	770	890	5	515	515	220	855	1070	6K
			485	575	275	980	—	7	690	745	305	1270	—	8K
37½	112½	2.61	230	230	125	500	510	5	345	300	150	550	580	6K
			320	385	185	590	640	7	460	470	205	740	860	8K
			500	575	270	970	—	10	535	615	260	970	1600	10K
50	150	3.48	170	135	95	370	370	5	260	165	110	405	410	6K
			240	290	140	440	450	7	345	320	155	530	565	8K
			375	430	200	650	780	10	400	450	195	670	760	10K
75	225	5.22	545	605	305	1140	—	15	545	605	260	1000	1450	12K
			160	165	95	295	295	7	230	130	100	345	350	8K
			250	290	135	420	435	10	270	250	130	425	445	10K
100	300	6.96	365	405	205	650	760	15	365	370	175	600	660	12K
			480	555	270	960	—	20	420	480	220	770	920	15K
			185	205	100	310	315	10	200	120	100	320	320	10K
167	500	11.6	275	300	155	470	500	15	275	240	130	430	455	12K
			360	415	205	650	740	20	315	345	165	540	590	15K
			445	505	240	810	1100	25	415	485	205	730	815	20K
250	750	17.4	165	160	90	280	280	15	190	120	100	310	325	15K
			215	250	120	375	385	20	250	235	125	410	435	20K
			265	300	140	465	480	25	300	335	155	515	575	25K
333	1000	23.1	320	360	175	560	610	30	335	390	200	700	810	30K
			180	170	95	315	315	25	200	160	105	325	335	25K
			215	240	120	375	380	30	225	255	135	425	455	30K
500	1500	34.8	255	295	160	510	560	40	270	315	175	560	610	40K
			305	355	205	670	830	50	350	410	220	780	940	50K
			160	135	90	280	280	30	170	130	100	315	335	30K
500	1500	34.8	190	220	120	380	390	40	205	235	130	410	435	40K
			230	265	155	480	520	50	265	305	165	555	620	50K
			335	390	195	640	720	65	345	425	210	750	860	65K
500	1500	34.8	150	180	105	315	320	50	175	180	110	340	370	50K
			220	260	130	410	425	65	230	280	140	460	490	65K
			265	300	165	500	540	80	285	330	175	580	650	80K
			300	360	210	670	780	100	315	360	210	760	920	100K

① Phase-to-neutral or phase-to-phase.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ Δ-Δ	Δ-Δ	
						345	345	185	800	940	1QR
						170	160	95	375	380	1QR
						345	345	190	800	900	2QR
						515	520	285	1350	—	3QR
						230	230	125	500	520	2QR
						345	345	190	790	900	3QR
						450	450	220	1075	—	5QR
						635	635	315	1650	—	7QR
415	485	280	1350	—	6T	205	205	110	450	460	3QR
						270	270	130	570	620	5QR
						380	380	185	770	890	7QR
						545	635	325	1325	—	10QR
275	320	190	680	880	6T	255	255	125	500	510	7QR
370	420	255	970	—	8T	365	420	220	720	880	10QR
						535	615	290	1075	—	15QR
205	240	140	475	540	6T	190	135	95	370	370	7QR
280	315	190	610	820	8T	275	315	165	510	560	10QR
345	405	245	940	—	10T	400	460	220	760	880	15QR
430	490	290	1850	—	12T	545	635	295	1100	—	20QR
140	120	95	280	310	6T	180	205	110	325	340	10QR
185	210	125	365	410	8T	270	305	145	480	505	15QR
230	270	165	510	610	10T	365	420	200	660	740	20QR
285	325	195	680	1150	12T	500	575	245	830	1150	25QR
140	130	95	260	285	8T	200	200	110	355	365	15QR
170	200	120	365	405	10T	275	315	150	485	510	20QR
215	245	145	470	560	12T	375	430	185	600	650	25QR
285	345	200	620	—	15T	430	505	225	740	900	30QR
170	205	120	325	360	15T	165	120	90	275	285	20QR
215	250	145	435	510	20T	225	220	110	345	355	25QR
285	335	195	630	900	25T	260	300	135	415	435	30QR
335	395	235	960	—	30T	330	380	180	590	650	40QR
145	165	100	265	285	20T	170	130	90	265	275	30QR
190	225	130	370	415	25T	220	240	120	370	390	40QR
225	265	155	500	620	30T	280	320	150	510	550	50QR
275	330	190	730	—	40T	350	415	195	650	710	60QR
145	150	95	255	285	25T	165	100	90	270	285	40QR
170	200	120	355	400	30T	210	210	115	375	395	50QR
210	245	140	495	600	40T	265	305	145	475	500	60QR
250	295	175	700	1075	50T	325	370	185	580	660	75QR
140	165	95	285	325	40T	175	115	95	300	315	60QR
165	195	115	385	450	50T	215	245	125	365	385	75QR
235	280	165	510	620	65T	280	315	180	530	650	100QR
275	315	185	700	—	80T	340	380	225	640	1100	125QR



THE FUSE SELECTION TABLES

TABLE 15—Transformers Rated 15.24 Kv Single-Phase^① or 26.4 Kv Three-Phase

S&C Positrol Fuse Link Speed			S&C Standard Speed—TCC No. 123-6						S&C "K" Speed—TCC No. 165-6					
Transformer Rating, Kva		Transformer Full-Load Current, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Single-Phase	Three-Phase		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X		Continuous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ X-X	Δ-X	
5	15	0.33	365	365	200	840	1000	1						
10	30	0.66	180 365 545	185 365 550	100 195 295	390 820 1500	400 960 —	1 2 3						
15	45	0.98	245 365 610	245 365 610	135 200 330	540 850 2000	570 1050 —	2 3 5						
25	75	1.64	220 365 510	220 365 610	120 200 295	475 830 1100	495 1020 —	3 5 7	550 730	555 795	235 325	930 1410	1300 —	6K 8K
37½	112½	2.46	245 340 530	245 405 610	130 195 285	530 640 1080	550 730 —	5 7 10	365 490 570 770	325 505 650 855	155 215 275 370	580 790 1050 1850	620 950 — —	6K 8K 10K 12K
50	150	3.28	185 255 395 580	160 305 455 640	100 145 210 325	395 470 710 1320	395 495 910 —	5 7 10 15	275 365 425 580	195 345 485 640	120 160 210 275	435 560 710 1070	440 610 840 1800	6K 8K 10K 12K
75	225	4.92	170 265 385 510	190 305 425 590	100 140 215 285	315 450 710 1050	315 475 880 —	7 10 15 20	245 285 385 445	160 280 400 510	110 140 185 230	365 455 640 830	380 480 720 1020	8K 10K 12K 15K
100	300	6.56	200 290 380 475	230 320 440 535	105 160 215 250	335 510 710 890	345 550 850 1600	10 15 20 25	215 290 335 440	150 265 370 520	105 140 175 220	340 460 580 790	345 480 650 890	10K 12K 15K 20K
167	500	11.0	175 225 280 335	185 265 320 385	95 130 150 185	300 400 495 610	305 420 520 670	15 20 25 30	200 265 320 355	145 265 365 410	105 130 165 210	325 430 540 740	345 460 610 870	15K 20K 25K 30K
250	750	16.4	190 225 270 325	195 255 310 380	100 125 170 220	335 400 550 730	335 405 600 930	25 30 40 50	175 215 240 285	90 185 275 335	90 110 140 185	280 345 460 600	285 365 495 660	20K 25K 30K 40K
333	1000	21.8	170 200 245 355	160 235 285 410	95 130 165 210	300 400 520 700	300 425 570 810	30 40 50 65	180 215 280 365	160 250 325 450	105 140 175 220	335 435 590 790	355 460 660 930	30K 40K 50K 65K
500	1500	32.8	160 235 280 320	190 275 320 380	110 140 175 220	335 445 550 720	345 465 600 880	50 65 80 100	145 185 245 300	95 205 300 350	95 120 150 185	270 365 495 630	290 395 530 700	40K 50K 65K 80K

① Phase-to-neutral, only.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6						S&C "QR" Speed—TCC No. 166-6					
Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)		Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ	Δ-Δ		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup	1φ and Δ-Δ	Δ-Δ	
						365	365	195	840	1000	1QR
						180	185	100	390	400	1QR
						365	365	195	820	960	2QR
						545	550	295	1500	—	3QR
						245	245	135	540	570	2QR
						365	365	200	850	1050	3QR
						480	480	230	1170	—	5QR
						675	670	330	2000	—	7QR
440	510	300	1580	—	6T	220	220	120	475	495	3QR
						285	285	140	610	670	5QR
						400	400	200	830	1020	7QR
						580	670	345	1550	—	10QR
295	340	200	750	1100	6T	190	130	90	385	415	5QR
395	445	270	1100	—	8T	270	270	130	530	550	7QR
						385	445	230	790	1020	10QR
						570	650	310	1200	—	15QR
220	255	150	510	580	6T	200	165	100	395	395	7QR
295	335	200	670	970	8T	290	335	175	550	610	10QR
365	425	260	1050	—	10T	425	490	230	810	970	15QR
						580	670	315	1230	—	20QR
145	140	100	305	340	6T	195	225	115	350	365	10QR
195	225	135	395	450	8T	285	325	155	510	540	15QR
245	285	170	560	700	10T	385	445	210	710	820	20QR
305	345	205	750	—	12T	530	610	260	890	1450	25QR
150	145	100	275	305	8T	215	230	115	375	390	15QR
185	215	130	385	440	10T	290	335	155	520	550	20QR
230	260	155	500	610	12T	395	455	195	640	700	25QR
305	365	210	670	—	15T	455	535	235	800	1050	30QR
135	150	90	265	290	12T	175	150	95	290	305	20QR
180	220	125	345	380	15T	235	245	115	365	375	25QR
225	265	155	460	550	20T	275	320	140	435	465	30QR
300	355	205	670	1180	25T	345	400	190	630	700	40QR
150	175	105	290	315	20T	185	155	95	285	295	30QR
200	240	135	400	460	25T	230	265	130	405	425	40QR
240	280	165	550	730	30T	300	340	160	550	610	50QR
295	350	200	810	—	40T	370	440	205	710	790	60QR
150	165	105	275	310	25T	175	130	95	290	310	40QR
180	210	125	385	440	30T	225	235	120	400	425	50QR
220	260	150	530	660	40T	280	330	155	510	540	60QR
265	310	185	760	—	50T	345	395	195	620	720	75QR
145	175	100	310	355	40T	185	145	105	315	340	60QR
175	205	125	425	510	50T	230	260	130	385	415	75QR
250	295	170	570	700	65T	295	335	190	630	710	100QR
295	335	200	790	—	80T	360	380	240	800	1020	125QR



THE FUSE SELECTION TABLES

TABLE 16—Transformers Rated 15.93 Kv Single-Phase^{①②}

S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6					S&C "K" Speed—TCC No. 165-6				
Transformer Rating, Kva, Single-Phase ↓	Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
		Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup			Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup		
5	0.31	385	380	210	880	1					
10	0.63	190	190	105	415	1					
		380	380	205	870	2					
		570	575	310	1470	3					
15	0.94	255	255	140	550	2					
		385	380	205	870	3					
25	1.57	230	230	125	500	3					
		380	380	205	850	5	575	585	245	950	6K
		535	635	305	1080	7	765	830	340	1370	8K
37½	2.35	255	255	140	550	5	385	350	165	600	6K
		355	425	205	660	7	510	530	225	810	8K
		555	635	295	1050	10	595	680	290	1050	10K
							810	890	385	1700	12K
50	3.14	190	180	105	415	5	285	215	125	455	6K
		270	320	155	495	7	380	370	170	580	8K
		415	480	220	730	10	445	510	215	730	10K
		605	670	340	1250	15	605	670	290	1080	12K
75	4.71	180	205	100	330	7	255	180	115	380	8K
		275	320	150	470	10	295	300	145	470	10K
		405	445	225	730	15	405	425	195	650	12K
		530	615	300	1050	20	465	530	240	830	15K
100	6.28	205	240	110	345	10	225	170	110	355	10K
		305	335	170	520	15	305	285	145	480	12K
		400	460	225	730	20	350	395	180	590	15K
		495	560	265	900	25	460	540	230	800	20K
167	10.5	180	200	100	315	15	210	165	110	345	15K
		240	275	135	425	20	275	280	135	445	20K
		295	335	160	520	25	335	380	175	560	25K
		355	400	195	630	30	370	430	225	760	30K
250	15.7	160	135	90	280	20	185	100	90	295	20K
		200	210	105	350	25	225	205	115	360	25K
		235	270	130	425	30	250	285	150	475	30K
		280	325	180	570	40	300	350	195	620	40K
333	20.9	175	175	100	315	30	185	175	110	345	30K
		210	245	135	420	40	225	265	145	445	40K
		255	295	170	530	50	290	340	185	610	50K
		370	430	215	720	65	385	470	230	820	65K
500	31.4	140	130	90	280	40	150	120	95	275	40K
		170	200	115	350	50	195	225	125	375	50K
		245	285	145	455	65	255	310	155	510	65K
		295	335	180	560	80	315	365	195	640	80K

① Phase-to-neutral or phase-to-phase.

② S&C Positrol Fuse Links of the listed ampere ratings are applicable for use with distribution fuse cutouts rated 27 kv maximum design for *single-phase applications* on 15.93/27.6 Gr-Y-kv systems with the transformer primary connected phase-to-neutral. For phase-to-phase and three-phase transformer-protection applications on 15.93/27.6 Gr-Y-kv systems—all connections—S&C Power Fuses, Type SMD-20, rated 38 kv maximum design are recommended.

③ These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6					S&C "QR" Speed—TCC No. 166-6				
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup			Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup		
					385	380	210	880	1QR
					190	190	105	415	1QR
					380	380	205	870	2QR
					570	575	310	1470	3QR
					255	255	140	550	2QR
					385	380	205	870	3QR
					500	500	240	1170	5QR
460	535	310	1380	6T	230	230	125	500	3QR
					300	300	145	640	5QR
					420	420	205	850	7QR
					605	700	365	1420	10QR
305	355	210	750	6T	200	150	95	405	5QR
415	465	280	1030	8T	280	280	140	550	7QR
					405	465	240	800	10QR
					595	680	320	1180	15QR
230	270	155	510	6T	210	185	105	415	7QR
310	350	210	670	8T	305	350	180	560	10QR
380	445	270	1000	10T	445	510	240	820	15QR
					605	700	330	1200	20QR
155	155	105	310	6T	200	235	120	355	10QR
205	235	140	400	8T	295	340	160	530	15QR
255	295	180	560	10T	405	465	220	730	20QR
320	360	215	740	12T	550	635	270	910	25QR
155	160	105	280	8T	150	125	90	260	10QR
190	225	135	390	10T	225	250	120	385	15QR
240	270	160	510	12T	305	350	165	530	20QR
320	380	220	670	15T	415	480	205	660	25QR
145	165	95	280	12T	180	170	100	300	20QR
190	230	130	360	15T	250	265	120	380	25QR
240	275	160	480	20T	285	335	145	455	30QR
315	375	215	680	25T	365	420	200	650	40QR
125	120	90	225	15T	190	175	100	295	30QR
160	185	110	300	20T	240	280	135	415	40QR
210	250	145	400	25T	310	355	170	570	50QR
250	295	175	560	30T	390	460	215	720	60QR
160	180	110	280	25T	180	155	100	295	40QR
185	220	130	385	30T	235	255	125	410	50QR
230	270	155	540	40T	290	345	160	520	60QR
280	325	195	750	50T	360	410	205	630	75QR
155	180	105	305	40T	195	165	105	320	60QR
185	215	130	430	50T	240	275	135	395	75QR
260	310	180	570	65T	310	350	200	640	100QR
305	350	205	780	80T	375	400	250	920	125QR



THE FUSE SELECTION TABLES

TABLE 17—Transformers Rated 19.92 Kv Single-Phase^{①②}

S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6					S&C "K" Speed—TCC No. 165-6				
Transformer Rating, Kva, Single-Phase ↓	Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^③ Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^③ Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
		Continuous Load	Hot-Load Pickup	Cold-Load Pickup			Continuous Load	Hot-Load Pickup	Cold-Load Pickup		
5	0.25	480	480	260	1150	1					
10	0.50	240	240	130	530	1					
		480	480	260	1160	2					
15	0.75	320	320	175	710	2					
		480	480	260	1140	3					
25	1.26	190	175	105	410	2					
		285	285	155	620	3					
		475	480	260	1110	5	715	750	310	1280	6K
		665	795	385	1800	7	950	1035	425	2400	8K
37½	1.88	190	190	105	415	3					
		320	320	175	700	5	480	470	205	770	6K
		445	530	255	850	7	640	685	280	1080	8K
		690	795	370	1630	10	745	850	365	1500	10K
50	2.51	240	240	130	520	5	360	315	155	565	6K
		335	400	190	610	7	480	490	210	740	8K
		520	600	280	960	10	560	635	270	970	10K
							755	835	360	1500	12K
75	3.77	225	265	130	400	7	240	125	105	375	6K
		345	400	185	580	10	320	280	140	475	8K
		505	560	280	940	15	370	410	180	590	10K
		665	770	375	1500	20	505	555	240	850	12K
100	5.02	165	180	95	305	7	240	150	105	360	8K
		260	300	140	435	10	280	270	135	445	10K
		380	420	210	670	15	380	390	180	610	12K
		500	580	280	950	20	440	500	225	780	15K
167	8.38	225	250	125	390	15	225	165	110	360	12K
		300	345	170	520	20	265	260	135	440	15K
		370	420	195	650	25	345	385	170	580	20K
		440	500	245	800	30	420	480	215	750	25K
250	12.6	200	225	115	350	20	175	90	90	280	15K
		245	280	130	440	25	230	205	115	370	20K
		295	335	165	520	30	280	300	145	450	25K
		350	405	225	730	40	310	360	185	610	30K
333	16.7	185	185	100	330	25	210	175	110	335	25K
		220	250	120	400	30	235	270	140	450	30K
		265	305	170	540	40	280	330	185	580	40K
		315	370	215	700	50	365	425	230	800	50K
500	25.1	175	205	110	350	40	155	90	95	285	30K
		210	245	140	435	50	185	215	120	360	40K
		305	360	180	580	65	245	285	155	490	50K
		365	420	225	730	80	320	390	195	650	65K

① Phase-to-neutral, only.

② S&C Positrol Fuse Links of the listed ampere ratings are applicable for use with distribution fuse cutouts rated 27 kv maximum design for single-phase applications on 19.92/34.5 Gr-Y-kv systems with the transformer primary connected phase-to-neutral. For phase-to-phase and three-phase transformer-protection applications on 19.92/34.5 Gr-Y-kv systems—all connections—S&C Power Fuses, Type SMD-20, rated 38 kv maximum design are recommended.

③ These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).

THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6					S&C "QR" Speed—TCC No. 166-6				
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup			Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup		
					480	480	260	1150	1QR
					240	240	130	530	1QR
					480	480	260	1160	2QR
					720	715	390	2500	3QR
					320	320	175	710	2QR
					480	480	260	1140	3QR
					625	625	305	1600	5QR
					190	175	105	410	2QR
					285	285	155	620	3QR
					375	375	180	820	5QR
					525	525	260	1110	7QR
385	445	260	1025	6T	190	190	105	415	3QR
515	585	350	1750	8T	250	250	120	520	5QR
					350	350	175	700	7QR
					505	585	305	1075	10QR
285	335	195	690	6T	185	120	90	375	5QR
385	440	265	930	8T	265	265	130	520	7QR
480	560	335	1650	10T	380	440	225	730	10QR
					560	635	300	1075	15QR
190	225	130	415	6T	250	290	150	455	10QR
255	290	175	530	8T	370	425	200	670	15QR
320	370	225	770	10T	505	585	275	930	20QR
400	450	270	1050	12T	690	795	340	1200	25QR
145	130	100	285	6T	190	220	115	335	10QR
195	220	130	375	8T	280	320	150	495	15QR
240	280	170	520	10T	380	440	205	680	20QR
300	340	200	690	12T	520	600	255	840	25QR
145	155	100	280	10T	165	110	90	285	15QR
180	205	120	375	12T	225	265	125	390	20QR
240	285	165	475	15T	310	360	150	485	25QR
300	345	200	650	20T	360	420	185	580	30QR
160	185	110	290	15T	205	185	100	310	25QR
200	230	135	380	20T	240	275	125	375	30QR
260	310	180	530	25T	300	350	170	530	40QR
310	365	220	740	30T	390	445	210	730	50QR
150	175	100	285	20T	180	145	95	275	30QR
200	235	135	375	25T	230	255	125	385	40QR
235	275	165	520	30T	295	335	160	530	50QR
285	340	195	750	40T	365	430	200	680	60QR
155	185	110	300	30T	195	170	105	330	50QR
190	225	130	420	40T	245	265	135	420	60QR
230	270	160	570	50T	300	345	170	490	75QR
325	385	225	770	65T	385	440	245	850	100QR

THE FUSE SELECTION TABLES

TABLE 18—Transformers Rated 22.9 Kv Single-Phase^①

S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6					S&C "K" Speed—TCC No. 165-8				
Transformer Rating, Kva, Single-Phase ↓	Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
		Continuous Load	Hot-Load Pickup	Cold-Load Pickup			Continuous Load	Hot-Load Pickup	Cold-Load Pickup		
5	0.22	545	550	295	1380	1					
10	0.44	275 545	275 550	150 295	600 1350	1 2					
15	0.66	180 365 545	185 365 550	100 195 295	395 820 1350	1 2 3					
25	1.09	220 330 550	220 330 550	120 180 300	475 720 1320	2 3 5	825	870	355	1550	6K
37½	1.64	220 365 510	220 365 610	120 200 295	470 790 980	3 5 7	550 730 855	555 795 975	235 325 415	890 1280 2000	6K 8K 10K
50	2.18	165 275 385 595	125 275 460 685	90 150 220 320	355 590 710 1180	3 5 7 10	415 550 640	385 580 735	175 245 315	650 880 1170	6K 8K 10K
75	3.28	185 255 395 580	165 305 460 640	100 145 210 325	395 465 680 1120	5 7 10 15	275 365 425 580	195 350 485 640	120 160 210 275	425 550 680 1000	6K 8K 10K 12K
100	4.37	190 295 435 570	230 345 480 665	110 160 245 320	350 500 780 1130	7 10 15 20	275 320 435 505	215 335 465 570	120 155 210 260	410 510 710 910	8K 10K 12K 15K
167	7.29	180 260 345 425	185 290 400 480	95 145 195 225	295 445 600 740	10 15 20 25	190 260 300 400	95 220 325 460	95 125 155 195	305 405 500 660	10K 12K 15K 20K
250	10.9	175 230 285 340	185 265 320 385	95 130 150 190	295 395 485 580	15 20 25 30	200 265 320 360	150 265 365 410	105 130 165 215	325 425 530 710	15K 20K 25K 30K
333	14.5	170 215 255 305	165 240 290 350	95 115 140 195	300 375 450 610	20 25 30 40	200 240 270 325	140 235 310 380	100 125 160 210	320 385 510 670	20K 25K 30K 40K
500	21.8	170 200 245 355	160 235 285 410	95 130 165 210	300 400 500 670	30 40 50 65	180 215 280 365	160 250 325 450	105 140 175 220	330 425 570 770	30K 40K 50K 65K

① Phase-to-phase, only.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6					S&C "QR" Speed—TCC No. 166-6				
Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ① Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup			Contin-uous Load	Hot-Load Pickup	Cold-Load Pickup		
					545	550	295	1380	1QR
					275	275	150	600	1QR
					545	550	295	1350	2QR
					180	185	100	395	1QR
					365	365	195	820	2QR
					545	550	295	1350	3QR
					710	715	345	1950	5QR
					220	220	120	475	2QR
					330	330	180	720	3QR
					430	430	210	960	5QR
					605	605	300	1320	7QR
440	515	300	1250	6T	220	220	120	470	3QR
					285	285	140	600	5QR
					400	405	200	790	7QR
					580	670	345	1300	10QR
330	385	225	820	6T	165	125	90	355	3QR
445	505	305	1160	8T	215	185	105	435	5QR
					305	300	150	590	7QR
					435	505	260	860	10QR
220	255	150	485	6T	200	165	100	395	7QR
295	335	200	620	8T	290	335	175	530	10QR
365	425	260	920	10T	425	490	230	770	15QR
455	520	310	1430	12T	580	670	315	1100	20QR
165	180	110	340	6T	215	250	130	385	10QR
220	250	150	440	8T	320	365	175	560	15QR
275	320	195	620	10T	435	505	235	790	20QR
345	390	230	820	12T	595	685	290	990	25QR
135	110	90	240	8T	190	180	105	325	15QR
165	190	115	325	10T	260	300	140	450	20QR
205	235	140	425	12T	355	410	175	550	25QR
275	330	190	550	15T	410	480	210	670	30QR
140	150	95	265	12T	175	150	95	285	20QR
185	220	125	340	15T	240	245	115	355	25QR
230	265	155	445	20T	275	320	140	430	30QR
305	355	205	630	25T	350	405	195	610	40QR
140	140	95	250	15T	180	115	90	265	25QR
170	200	115	320	20T	205	210	105	315	30QR
230	270	155	440	25T	260	300	145	450	40QR
270	315	190	610	30T	340	385	185	610	50QR
150	170	105	270	25T	175	130	95	280	40QR
180	210	125	365	30T	225	235	120	385	50QR
220	260	150	510	40T	280	330	155	495	60QR
265	310	185	710	50T	345	395	195	600	75QR



THE FUSE SELECTION TABLES

TABLE 19—Transformers Rated 23.9 Kv Single-Phase^①

S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6					S&C "K" Speed—TCC No. 165-6				
Transformer Rating, Kva, Single-Phase ↓	Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
		Continuous Load	Hot-Load Pickup	Cold-Load Pickup			Continuous Load	Hot-Load Pickup	Cold-Load Pickup		
5	0.21	570	575	310	1500	1					
10	0.42	285 570	285 575	155 310	630 1420	1 2					
15	0.63	190 380 570	190 380 575	105 205 310	410 850 1420	1 2 3					
25	1.05	230 345 570	230 345 575	125 185 310	495 760 1420	2 3 5	910	910	370	1680	6K
37½	1.57	230 380 535	230 380 635	125 205 310	490 840 1060	3 5 7	575 765 890	585 830 1020	245 340 435	950 1370 2300	6K 8K 10K
50	2.09	170 285 400 620	145 285 480 715	95 155 230 335	370 620 740 1270	3 5 7 10	430 575 670	410 610 765	185 255 325	680 930 1220	6K 8K 10K
75	3.14	190 270 415 605	180 320 480 670	105 155 220 340	410 485 710 1200	5 7 10 15	285 380 445 605	215 370 510 670	125 170 215 290	445 570 720 1050	6K 8K 10K 12K
100	4.18	200 310 455 600	240 360 500 695	115 165 255 335	365 520 820 1200	7 10 15 20	215 285 335 455	90 235 355 490	90 125 165 215	335 425 530 740	6K 8K 10K 12K
167	6.99	185 270 360 445	205 300 415 500	100 150 200 235	310 465 630 780	10 15 20 25	200 270 315 415	120 240 345 485	100 130 165 205	320 425 530 710	10K 12K 15K 20K
250	10.5	180 240 295 350	200 275 335 400	100 135 155 195	310 415 510 620	15 20 25 30	210 275 335 370	165 280 380 430	110 135 175 220	340 445 550 740	15K 20K 25K 30K
333	13.9	180 225 265 315	185 250 300 365	100 120 145 205	310 390 465 640	20 25 30 40	210 250 280 340	160 255 325 395	105 130 170 220	335 405 540 710	20K 25K 30K 40K
500	20.9	175 210 255 370	175 245 295 430	100 135 170 215	310 415 520 700	30 40 50 65	185 225 290 385	175 265 340 470	110 145 185 230	345 445 600 810	30K 40K 50K 65K

① Phase-to-phase, only.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

TABLE 20—Transformers Rated 24.9 Kv Single-Phase^①

S&C Positrol Fuse Link Speed →		S&C Standard Speed—TCC No. 123-6					S&C "K" Speed—TCC No. 165-6				
Transformer Rating, Kva, Single-Phase ↓	Transformer Full-Load Current, Amperes ↓	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability, ^② Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
		Continuous Load	Hot-Load Pickup	Cold-Load Pickup			Continuous Load	Hot-Load Pickup	Cold-Load Pickup		
5	0.20	600	600	325	1600	1					
10	0.40	300	300	165	670	1					
		600	600	325	1550	2					
15	0.60	200	200	110	435	1					
		400	400	215	910	2					
		600	600	325	1570	3					
25	1.00	240	240	130	520	2					
		360	360	195	790	3					
		600	600	325	1520	5	900	950	385	1850	6K
37½	1.51	240	240	130	510	3					
		395	400	215	870	5	595	610	255	990	6K
		555	665	320	1100	7	795	865	350	1450	8K
50	2.01										
		180	165	95	380	3					
		300	300	160	640	5	450	435	190	710	6K
		420	500	240	770	7	595	635	265	970	8K
75	3.01	645	745	345	1320	10	695	795	340	1300	10K
		200	200	110	430	5	300	230	130	470	6K
		280	330	160	510	7	400	390	175	600	8K
100	4.02	430	500	230	750	10	465	530	225	770	10K
		630	695	350	1320	15	630	695	300	1130	12K
		210	250	120	385	7	225	85	95	355	6K
		325	375	175	540	10	300	250	130	450	8K
167	6.71	475	525	265	860	15	350	375	170	550	10K
		620	720	350	1280	20	475	515	225	780	12K
		195	220	105	325	10	210	140	100	325	10K
		285	315	160	490	15	285	260	135	440	12K
250	10.0	375	435	210	670	20	330	360	170	550	15K
		460	525	245	820	25	430	510	215	730	20K
		190	210	105	325	15	220	185	115	360	15K
		250	290	140	435	20	290	300	145	470	20K
333	13.4	310	350	165	540	25	350	400	180	590	25K
		370	420	205	650	30	390	450	235	810	30K
		185	200	105	325	20	215	175	105	345	20K
		230	260	125	405	25	260	270	135	420	25K
500	20.1	275	315	155	485	30	290	335	175	570	30K
		330	380	210	670	40	350	410	230	740	40K
		185	195	100	325	30	175	85	90	275	25K
		220	255	140	430	40	195	195	115	365	30K
500	20.1	265	310	180	550	50	235	275	150	465	40K
		385	450	225	740	65	305	355	190	630	50K

① Phase-to-phase, only.

② These values reflect the inherent peak-load capabilities of the fuse links themselves—not the peak-load capabilities of the transformers which, in many cases, are much lower. For derivation of these values, see text, page 4.

Note: Refer to "How to Use the Fuse Selection Tables" on page 48 (foldout).



THE FUSE SELECTION TABLES

S&C "T" Speed—TCC No. 170-6					S&C "QR" Speed—TCC No. 166-6				
Fuse-Link Peak-Load Capability,Ⓢ Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes	Fuse-Link Peak-Load Capability,Ⓢ Percent of Transformer Kva Rating			Transformer Protection Index, Percent of Transformer Kva Rating (see text, page 4)	Fuse-Link Rating, Amperes
Continuous Load	Hot-Load Pickup	Cold-Load Pickup			Continuous Load	Hot-Load Pickup	Cold-Load Pickup		
					600	600	325	1600	1QR
					300	300	165	670	1QR
					600	600	325	1550	2QR
					200	200	110	435	1QR
					400	400	215	910	2QR
					600	600	325	1570	3QR
					240	240	130	520	2QR
					360	360	195	790	3QR
					470	470	225	1070	5QR
					660	655	325	1520	7QR
475	560	325	1480	6T	240	240	130	510	3QR
					310	310	150	660	5QR
					435	440	215	870	7QR
					630	730	375	1500	10QR
360	420	245	910	6T	180	165	95	380	3QR
485	550	330	1380	8T	235	225	115	475	5QR
					330	330	160	640	7QR
					475	550	285	960	10QR
240	280	165	540	6T	220	200	110	430	7QR
320	365	220	710	8T	315	365	190	580	10QR
400	465	280	1070	10T	465	530	250	860	15QR
500	565	335	2000	12T	630	730	340	1270	20QR
180	205	120	375	6T	235	275	140	425	10QR
240	275	165	485	8T	350	400	190	620	15QR
300	350	210	690	10T	475	550	255	870	20QR
375	425	250	940	12T	645	745	315	1100	25QR
145	140	100	265	8T	210	220	115	360	15QR
180	210	125	365	10T	285	330	155	495	20QR
225	255	150	470	12T	385	450	190	610	25QR
300	360	205	610	15T	445	525	230	740	30QR
150	170	100	295	12T	190	190	105	320	20QR
200	240	140	375	15T	260	285	125	395	25QR
250	290	170	500	20T	300	350	155	475	30QR
330	390	225	720	25T	380	440	210	680	40QR
150	165	105	270	15T	195	155	95	285	25QR
185	215	130	350	20T	225	245	115	345	30QR
245	290	170	485	25T	285	330	155	485	40QR
290	345	205	680	30T	365	420	200	670	50QR
165	190	110	290	25T	190	175	105	310	40QR
195	230	135	405	30T	245	275	130	430	50QR
240	285	165	570	40T	305	360	165	550	60QR
290	340	200	800	50T	375	430	215	660	75QR



THE FUSE SELECTION TABLES

TABLE 21—S&C Type XS Open Cutouts (for use with S&C Positrol Fuse Links)—Summary of Available Ratings

System Voltage, Kv ↓	60-Hertz ^① Short-Circuit Interrupting Rating, ^② Amperes Rms, Asymmetrical ^③ and Symmetrical ^④ (one-shot rating, where applicable, shown in parentheses)											
	Cutout Continuous Rating →	100 AMPERES						200 AMPERES				
Style →	EXTRA-HEAVY-DUTY ^⑤			ULTRA-HEAVY-DUTY ^⑥			HEAVY-DUTY ^⑦					
Cutout Voltage Rating—Kv, Nom. →	14.4	25	25	14.4	25	25	25	25	25	7.2	14.4	14.4
Cutout Voltage Rating—Kv, Max Des. →	15	27	27	15	27	27	27	27	27	7.8	15	15
Cutout Voltage Rating—Kv, BIL →	95	125	150	95	125	150	150	150	150	95	125	150
Leakage Distance to Ground, Minimum, inches →	8½	11	17	8½	11	17 [Ⓢ]	17 [Ⓢ]	26 [Ⓢ]	26 [Ⓢ]	8½	11	17
Catalog Number →	89021R8	89022R8	89042R8	89031R8	89032R8	89052R8	89033R8	89053R8	89071R8	89072R8	89092R8	
4.16 thru 7.2										12 000 8 600		
4.16 thru 14.4	10 000 (12 000)▼ 7 100 (8 600)▼	8 000 5 300	8 000 5 300	16 000 10 600	12 000 (16 000)* 8 000 (10 600)*	12 000 (16 000)* 8 000 (10 600)*						
8.32 [Ⓢ] thru 12.47 [Ⓢ]										12 000 8 600		
8.32 thru 14.4											10 000 7 100	10 000 7 100
16.5 thru 24.9		8 000 5 300	8 000 5 300		12 000 (16 000)* 8 000 (10 600)*	12 000 (16 000)* 8 000 (10 600)*	12 000 8 000					
20.8 [Ⓢ] thru 24.9 [Ⓢ]											10 000 7 100	10 000 7 100
26.4 [Ⓢ] thru 34.5 [Ⓢ]			8 000 5 300		12 000 (16 000)* 8 000 (10 600)*	12 000 8 000						
26.4 [▲] thru 34.5 [▲]								12 000 8 000				

- ① Consult the nearest S&C Sales Office for 50-hertz ratings.
- ② Asymmetrical and symmetrical ratings are given for each catalog number in each applicable system-voltage range. In each case, the asymmetrical rating is given first (in bold-face type) and the symmetrical rating second (in light-face type). Ratings in parentheses are the associated one-shot ratings (see Note *).
- ③ Nominal asymmetrical ratings are based on total available short-circuit current of the circuit including the dc component, in accordance with ANSI Standards.
- ④ Symmetrical ratings assigned are based on available symmetrical short-circuit current at locations where X/R ratio is equal to 8 (for Cutout Catalog Numbers 89021R8, 89071R8, 89072R8, and 89092R8) or 12 (for all other overhead—pole-top style cutouts) ANSI Standard C37.41-1981 specifies these X/R ratios, as applicable, depending on cutout voltage rating and interrupting current rating.
- ⑤ Uses either nonremovable or removable buttonhead fuse links.
- ⑥ Uses removable buttonhead fuse links only.

- ⑦ Cutout Catalog Number 89071R8 uses removable buttonhead fuse links only. Cutouts, Catalog Numbers 89072R8 and 89092R8, use either nonremovable or removable buttonhead fuse links.
 - Applicable for protection of single-phase-to-neutral circuits (lines or transformers) only, where the leakage distance to ground meets user's requirements.
 - ▲ Applicable for protection of single-phase-to-neutral circuits (lines or transformers) only.
 - ▼ One-shot rating, based on replacement of cutout tube only.
 - * One-shot rating, based on replacement of cutout tube only. In applications where fuse links rated 75 amperes and above are used in this cutout, the one-shot rating is based on the use of S&C Extra-Performance Style Positrol Fuse Links.
 - ◆ Approximate fuse-tube length, top of fuse-tube cap to bottom of the fuse tube: 14¼ inches.
 - Ⓢ Approximate fuse-tube length, top of fuse-tube cap to bottom of fuse tube: 18¼ inches.
 - § Meets 170-kv BIL rating requirement of IEC Publication 282-2.



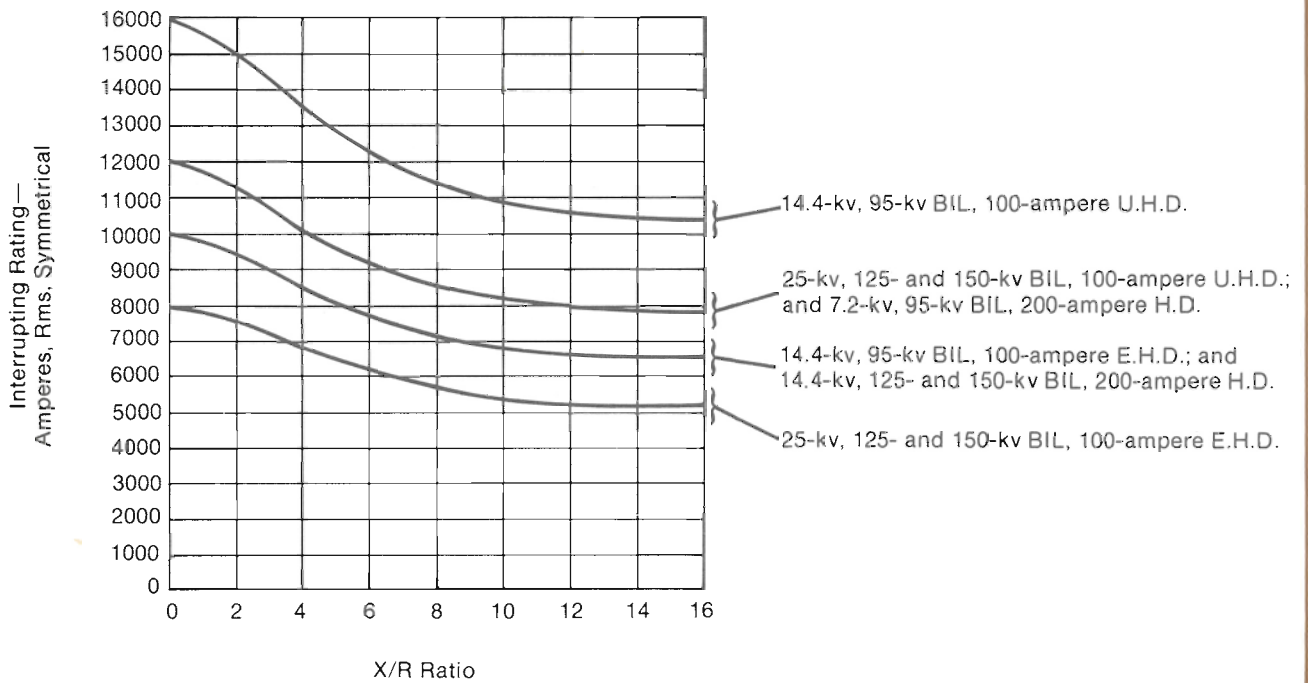


Figure 2. Symmetrical interrupting ratings for S&C Type XS Open Cutouts at various X/R ratios.



How to Use the Fuse Selection Tables

STEP 1. Locate the appropriate selection table, based on the applicable transformer kv rating. Refer to page 49 for index to selection tables.

STEP 2. Enter the table in the column corresponding to the fuse-link speed characteristic under consideration. Read down the table in this column, stopping in the section corresponding to the transformer kva rating. Find the first line in this section for which the peak-load capability values listed in all three columns—"Continuous Load," "Hot-Load Pickup," and "Cold-Load Pickup"—equal or exceed the peak loading values specified in the schedule of transformer loading which has been established for your system. Note that a smaller fuse-link ampere rating can often be selected, thereby providing protection against a broader range of secondary-side faults, if it is feasible to forego complete cold-load pickup capability by sequentially restoring segmented load.

STEP 3. In the line selected in Step 2, and in the "Transformer Protection Index . . ." column corresponding to the transformer connection, determine the

Transformer Protection Index (TPI). If there is no TPI in this line, then the fuse-link ampere rating listed will not provide protection for the transformer in accordance with the transformer short-time characteristic curve. The use of a smaller ampere rating in this speed is recommended, provided that the peak-load capability values listed are sufficient for the application. Alternately, you may wish to consider using a fuse link with a different speed characteristic.

STEP 4. Read across the table to the right in the line selected in Step 3 to determine the recommended fuse-link ampere rating. For this ampere rating and speed characteristic, verify that proper coordination exists between the transformer-primary fuse link and protective devices located on the primary side of the transformer as well as those on the secondary side of the transformer (if applicable).

STEP 5. Select the appropriate S&C Type XS Open Cutout based on the system voltage, interrupting duty, and maximum continuous current required. Refer to Table 21 on page 46.



TABLE 22—Index to Selection Tables

Transformer Rating, Kv			Table Number	Page Number
Single-Phase		Three-Phase		
Phase-to-Neutral	Phase-to-Phase			
2.4	2.4	2.4	1	6 and 7
		4.16	2	8 and 9
		4.8	3	10 and 11
4.16 4.8 6.9	4.16 4.8 6.9	7.2	4	12 and 13
		8.32	5	14 and 15
		12.0	6	16 and 17
7.2 7.62 7.96	7.2	12.47	7	18 and 19
		13.2	8	20 and 21
		13.8	9	22 and 23
8.32 12.0 13.2	8.32 12.0 13.2	14.4	10	24 and 25
		20.8	11	26 and 27
		22.9	12	28 and 29
13.8 14.4 15.24	13.8 14.4	23.9	13	30 and 31
		24.9	14	32 and 33
		26.4	15	34 and 35
15.93 19.92	15.93		16	36 and 37
			17	38 and 39
	22.9	18	40 and 41	
	23.9 24.9		19 20	42 and 43 44 and 45
	34.5	27.6 34.5	§ †	

§ Refer to footnote ② in Table 16.

† Refer to footnote ② in Table 17.

Note: See over for "How to Use the Fuse Selection Tables" on page 48. For your convenience, these instructions should be left folded out for ready reference while using the fuse selection tables.





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