

Applications



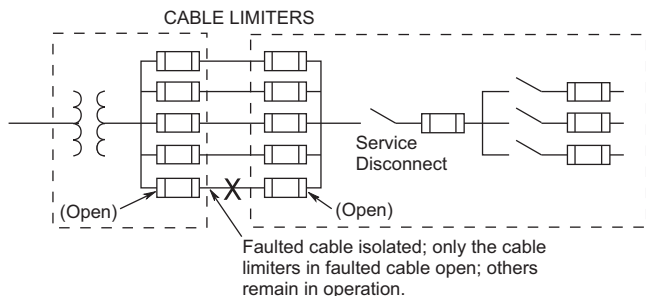
Cable Limiters

Cable limiters are distinguished from fuses by their intended purpose of providing only short circuit response: they are not designed to provide overload protection. Typically, cable limiters are selected based on conductor size. They are available in a wide range of types to accommodate the many conductor sizes, copper or aluminum conductors, and a variety of termination methods. There are two broad categories of cable limiters:

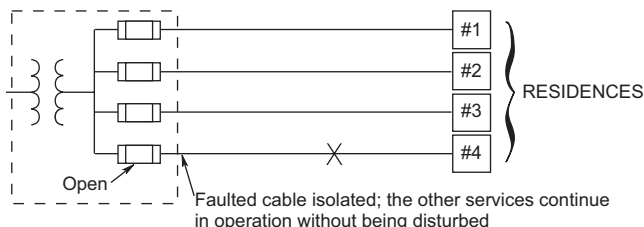
1. 600V or less rated-for large commercial, institutional and industrial applications.
2. 250V or less rated-for residential and light commercial applications .

In institutional, commercial, and industrial systems, cable limiters are used at both ends of each cable on three or more cables per phase applications between the transformer and switchboard, as illustrated in the diagram and photographs.

Commercial/Industrial Service Entrance With Multiple Cables Per Phase



In residential systems, the cable limiters are normally installed on a single cable per phase basis at the source end of the lateral feeder to each residence.



Residential Service Entrance With Single Cables Per Phase

Cable limiters may be located on the supply side of the service disconnecting means. The advantages of using cable limiters on the supply side of the service disconnect are multi-fold:

1. Isolation of one or more faulted cables. Only the affected cable(s) are removed from service by the cable limiters at each end opening, (assuming three or more cables per phase, with cable limiters on each end).
2. The isolation of a faulted cable permits the convenient scheduling of repair service.
3. The hazard of equipment burndown due to a fault on the line-side of the main overcurrent protective device is greatly reduced. Typically, without cable limiters, a fault between the transformer and service switchboard is given little or no protection.
4. Their current-limiting feature can be used to minimize arc-flash hazards by reducing the magnitude of the arc-flash current and the time of the arc-flash exposure. There are many different cable limiters available for cables from 12 AWG to 1,000 kcmil and many different type terminations. Below is the listing of those most commonly used.

Copper Cable Limiter — 600V

Catalog Symbol	Cable Size	Catalog Symbol	Cable Size
KCY	4 AWG	KCF	4/0 AWG
KCZ	3 AWG	KCH	250 kcmil
KCA	2 AWG	KCJ	350 kcmil
KCB	1 AWG	KCM	500 kcmil
KCC	1/0 AWG	KCV	600 kcmil
KCD	2/0 AWG	KCR	750 kcmil
KCE	3/0 AWG	KCS	1000 kcmil
Tubular Terminal and Offset Bolt-Type Terminal			
KQV	12 AWG	KDD	2/0 AWG
KQT	10 AWG	KDE	3/0 AWG
KFZ	8 AWG	KDF	4/0 AWG
KIG	6 AWG	KDH	250 kcmil
KDY	4 AWG	KDJ	350 kcmil
KDA	2 AWG	KDM	500 kcmil
KDB	1 AWG	KDU	600 kcmil
KDC	1/0 AWG	KDR	750 kcmil
Compression Connector Rod Terminal and Tubular Terminal			
KEX	4/0 AWG	KQO	350 kcmil
KFH-A	250 kcmil	KDT	500 kcmil
*Center Bolt-Type Terminal and Off-Set Bolt-Type Terminal			
KPF	4/0 AWG	KDP	500 kcmil
KFT	250 kcmil	KFM	750 kcmil
KEW	350 kcmil		

*Copper or aluminum cable; sizes of all other limiters pertain to copper only.

Cable Limiter Data Sheet No. 1042

Cable Limiter Specifications

Dimensional Data

Figure 1. Tube-to-Tube Terminals

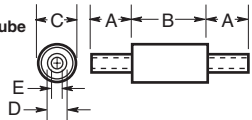


Figure 2. Tube-to-Offset Bolt Terminals

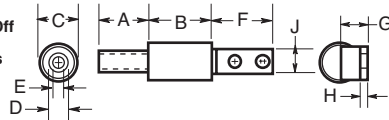


Figure 3. Compression Rod-to-Tube Terminals

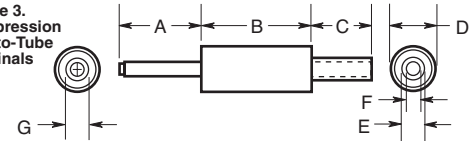
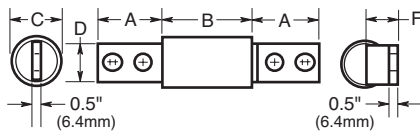
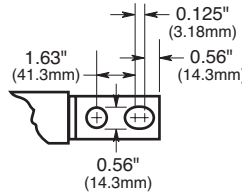


Figure 4. Center Bolt-to-Offset Bolt Terminals



Common Detail for Bolt Terminals



For 250Vac requirements please contact our Application Engineering department at 636-527-1270.

Copper Cable Limiter — 600 Volts

Catalog Symbol	Cable Size	Dimensions in Inches									Dimensions in Millimeters								
		A	B	C	D	E	F	G	H	J	A	B	C	D	E	F	G	H	J
Tubular Terminals (Figure 1)																			
KCY	#4	1.25	2.88	1.06	0.31	0.25	—	—	—	—	31.8	73.0	27.0	7.9	6.4	—	—	—	—
KCZ	#3	1.25	2.88	1.06	0.34	0.28	—	—	—	—	31.8	73.0	27.0	8.7	7.1	—	—	—	—
KCA	#2	1.25	2.88	1.06	0.44	0.31	—	—	—	—	31.8	73.0	27.0	11.1	7.9	—	—	—	—
KCB	#1	1.25	2.88	1.06	0.34	0.34	—	—	—	—	31.8	73.0	27.0	11.9	8.7	—	—	—	—
KCC	1/0	1.5	2.625	1.25	0.52	0.39	—	—	—	—	38.1	73.0	31.8	13.1	9.9	—	—	—	—
KCD	2/0	1.63	2.625	1.25	0.44	0.70	—	—	—	—	41.3	73.0	31.8	14.3	11.1	—	—	—	—
KCE	3/0	1.63	3.63	1.44	0.61	0.48	—	—	—	—	41.3	92.1	36.5	15.5	12.3	—	—	—	—
KCF	4/0	1.75	3.63	1.44	0.34	0.55	—	—	—	—	44.5	92.1	36.5	17.5	14.0	—	—	—	—
KCH	250 MCM	1.88	3.63	1.44	0.75	0.28	—	—	—	—	47.6	92.1	36.5	19.0	15.1	—	—	—	—
KCJ	350 MCM	2.0	3.63	1.63	0.88	0.70	—	—	—	—	50.8	92.1	41.3	22.2	17.9	—	—	—	—
†KCM	500 MCM	2.88	3.078	1.88	1.06	0.83	—	—	—	—	73.0	92.1	47.6	27.0	21.0	—	—	—	—
KCR	750 MCM	3.5	3.75	2.5	1.31	1.06	—	—	—	—	88.9	92.1	63.5	33.3	27.0	—	—	—	—
KCS	1000 MCM	5.0	3.75	2.5	1.56	1.22	—	—	—	—	127.0	95.2	63.5	39.7	31.0	—	—	—	—
Tubular Terminal and Offset Bolt-Type Terminal (Figure 2)																			
KQV	#12	1.25	2.88	1.06	0.19	0.125	3.31	0.72	0.19	1.125	31.8	73.0	27.0	4.8	3.2	84.1	18.3	4.8	28.6
KQT	#10	1.25	2.88	1.06	0.23	0.14	3.31	0.72	0.19	1.125	31.8	73.0	27.0	6.0	3.6	84.1	18.3	4.8	28.6
KFZ	#8	1.25	2.88	1.06	0.23	0.16	3.31	0.72	0.19	1.125	31.8	73.0	27.0	6.0	4.0	84.1	18.3	4.8	28.6
KIG	#6	1.25	2.88	1.06	0.31	0.16	3.31	0.72	0.19	1.125	31.8	73.0	27.0	7.9	4.0	84.1	18.3	4.8	28.6
KDY	#4	1.25	2.88	1.06	0.31	0.25	3.31	0.72	0.19	1.125	31.8	73.0	27.0	7.9	6.4	84.1	18.3	4.8	28.6
KDA	#2	1.25	2.88	1.06	0.44	0.31	3.31	0.72	0.19	1.125	31.8	73.0	27.0	11.1	7.9	84.1	18.3	4.8	28.6
KDB	#1	1.25	2.88	1.06	0.47	0.34	3.31	0.72	0.19	1.125	31.8	73.0	27.0	11.9	8.7	84.1	18.3	4.8	28.6
KDC	1/0	1.5	2.625	1.25	0.52	0.39	3.38	0.88	0.25	1.125	38.1	92.1	31.8	13.1	9.9	85.7	22.2	6.4	28.6
KDD	2/0	1.63	2.625	1.25	0.56	0.44	3.38	0.88	0.25	1.125	41.3	92.1	31.8	14.3	11.1	85.7	22.2	6.4	28.6
KDE	3/0	1.63	3.63	1.44	0.61	0.48	3.38	0.97	0.25	1.125	41.3	92.1	36.5	15.5	12.3	85.7	22.2	6.4	28.6
KDF	4/0	1.75	3.63	1.44	0.69	0.55	3.38	0.97	0.25	1.125	44.5	92.1	36.5	17.5	13.9	85.7	22.2	6.4	28.6
KDH	250 MCM	1.88	3.63	1.44	0.75	0.28	3.38	0.97	0.25	1.125	47.6	92.1	36.5	19.0	15.1	85.7	24.6	6.4	28.6
KDJ	350 MCM	2.0	3.63	1.63	0.88	0.70	3.38	1.06	0.25	1.125	50.8	92.1	41.3	22.2	17.8	85.7	27.0	6.4	28.6
†KDM	500 MCM	2.88	3.078	1.88	1.06	0.83	3.38	1.19	0.25	1.63	73.0	92.1	47.6	27.0	21.0	85.7	30.2	6.4	41.3
KDR	750 MCM	3.5	3.75	2.5	1.31	1.06	3.5	1.5	0.25	2.0	88.9	95.2	63.5	33.3	27.0	88.9	38.1	6.4	50.8
Compression Connector Rod Terminal and Tubular Terminal (Figure 3)																			
KEX	4/0	2.5	3.63	1.75	1.44	0.69	0.55	0.5	—	—	63.5	92.1	44.5	36.5	17.5	13.9	12.7	—	—
KFH-A	250 MCM	2.5	3.63	1.88	1.44	0.75	0.28	0.56	—	—	63.5	92.1	47.6	36.5	19.0	15.1	14.3	—	—
KQO	350 MCM	2.5	3.63	2.0	1.63	0.88	0.70	0.81	—	—	63.5	92.1	50.8	41.3	22.2	17.8	20.6	—	—
KDT	500 MCM	2.5	3.08	2.88	1.88	1.06	0.83	0.81	—	—	63.5	92.1	73.0	47.6	27.0	21.0	20.6	—	—
*Center Bolt-Type Terminal and Offset Bolt-Type Terminal (Figure 4)																			
KPF	4/0	3.38	3.63	1.44	1.125	1.125	0.97	—	—	—	85.7	92.1	36.5	28.6	28.6	24.6	—	—	—
KFT	250 MCM	3.38	3.63	1.44	1.125	1.125	0.97	—	—	—	85.7	92.1	36.5	28.6	28.6	24.6	—	—	—
KEW	350 MCM	3.38	3.63	1.63	1.125	0.97	1.06	—	—	—	85.7	92.1	41.3	28.6	28.6	27.0	—	—	—
KDP	500 MCM	3.38	3.078	1.88	1.5	1.63	1.19	—	—	—	85.7	92.1	47.6	38.1	41.3	30.2	—	—	—
KFM	750 MCM	3.5	3.75	2.5	2.0	2.0	1.5	—	—	—	88.9	95.3	63.5	50.8	50.8	38.1	—	—	—

*Copper or aluminum cable; sizes of all other limiters pertain to copper only.

†Available with molded rubber boot "B".

-V suffix - Heat shrink tube available on several Part Nos.