

# FREQUENTLY ASKED QUESTIONS CUTOUTS AND FUSE LINKS



## WHAT IS THE VOLTAGE RATING OF THE TYPE K FUSE LINK?

Fuse Links do not have a voltage rating. They have a Type or Speed Rating and a Continuous Current Rating. They are suitable for use in cutout fuse holders in electric distribution systems with system voltages up to and including 38 kV.

## WHAT IS THE DIFFERENCE BETWEEN THE SOLID HEAD AND REMOVABLE HEAD FUSE LINKS?

Solid head fuse links cannot be used in cutout fuse holders with arc shortening rods. Removable head links can be used in fuse holders with or without arc shortening rods. If not sure, best to supply removable head fuse links.

## WHAT IS THE RECOMMENDED TORQUE FOR THE TERMINAL WHEN CONNECTING COPPER LEADS TO A CUTOUT?

20 ft lbs. This is industry standard for 3/8" bronze connectors and this is the value in our cutout Installation and Maintenance Instructions.

## WHAT IS THE DIFFERENCE BETWEEN THE LINK BREAK AND LOAD BREAK CUTOUTS?

Both Link Break and Load Break cutouts can interrupt load currents. To interrupt load using a Link Break cutout, the lever on the Link Break cutout is pulled downward forcefully. This pulls apart the fuse link inside the fuse holder interrupting the load current and allowing the fuse holder to drop open. The fuse link must be replaced prior to closing in for each operation. To interrupt load using the Load Break cutout, the fuse holder is pulled away from the top contact. As this occurs, the current path diverts and is now through the auxiliary blade. As the fuse holder is pulled further away, the arc that forms will be then be extinguished in between the arc chutes. This prevents damage to fuse holder cap and top contact. No change of fuse link is necessary for each operation as the fuse link stays intact. So, if a high number of operations is expected, it may be more economical for the end user to select the Load Break cutout for their system application.

## WHAT IS THE INTERRUPT RATING OF THE TYPE K FUSE LINK?

Fuse Links do not have an interrupt rating. The interrupt rating is associated with the cutout and fuse link as a combined unit and is a function of the fuse holder design in which the fuse link is placed.

## CAN WE REPLACE OUR 100 A RATED FUSE HOLDER WITH THE 300 A SOLID BLADE?

Yes, the fuse holders and solid blades can be interchanged as long as they are within the same voltage class.

## DO CHANCE CUTOUTS HAVE BONE FIBER AS THE ARC QUENCHING MATERIAL?

No. All Chance cutouts use a synthetic liner material. Some of our competitors use bone fiber. We use synthetic liner material as the studies we have conducted show more consistent arc quenching than bone fiber. Bone fiber is susceptible to water absorption which can cause swelling and delamination of the liner. This may prevent fuse holder drop out as the swollen liner may bind the fuse link not allowing it to free itself from the fuse holder.

## WHAT IS THE FUSE LINK SPEED RATIO?

The Speed Ratio of a fuse link is ratio of the Minimum Melt Current at 0.1 second to the Minimum Melt Current at 300 seconds. Fast fuse links, like the Type K would have ratios between 6 and 8 and Slow fuse links like the Type T would have ratios between 10 and 13 for their various current ratings. Very Slow or Extra Slow fuse links like the SloFast can have ratios as high as 20 and even higher depending on the current rating.

## DOES CHANCE MAKE A DUAL VENT CUTOUT?

No. Dual Vent cutouts as the name suggests expel exhaust plasma from both the top and bottom of the fuse holder. The upward exhaust is not only detrimental to wildlife but can also cause flashover between the phases of the overhead HV lines. Also the dual vent design is not interchangeable with the S&C Type XS and ABB Type ICX cutouts so we phased out the dual vent design and now only make cutouts of solid cap, single vent design.

## WHAT TEST REPORTS DO YOU HAVE FOR FUSE LINKS?

For the Type K and Type T, we provide the Time Current Curves, Minimum Melt and Total Clear, and the Time Current/Melting tests. For the Type MS, QH, Standard Speed, and SloFast fuse links, we only provide the TCCs as these are not defined in the ANSI/IEEE C37 Series Standard.

## WHAT IS THE MECHANICAL ASSIST SPRING?

The mechanical assist spring is a torsional spring, attached to the trunnion, to aid drop out in corrosive environments where sticking may occur in between the fuse holder cap and top contact.

## CAN I USE A CHANCE FUSE HOLDER IN THE S&C CUTOUT MOUNTING?

Yes, the Chance Type C Cutout is interchangeable with S&C Type XS and ABB Type ICX Cutouts of the same voltage class. *NOTE: Interchangeability is not just "fit", but must be proved via performance testing.*

## WHAT IS AN ARC SHORTENING ROD?

An arc shorting rod is a copper rod that is attached to the fuse holder cap. This extension lowers the fuse link within the fuse tube making it possible to achieve higher interrupt ratings.

## DOES CHANCE MAKE A FUSE LINK SPECIFICALLY FOR TRANSFORMER PROTECTION?

Yes. The SloFast Fuse Link is designed specifically for transformer protection. The reason it is well suited for transformer protection is that the Time Current Curve of the SloFast fuse link more closely matches the transformer safe loading curve than the Time Current Curves of other types of fuse links. The SloFast fuse link has a dual element design and this unique design allows the end user to get full use of the transformers capability without subjecting it to damaging overloads for extended periods of time.

## CAN I USE A 65 A RATED FUSE LINK IN A 200 A RATED FUSE HOLDER?

No. 200 A rated fuse holders are only to use fuse links rated between 101 A and 200 A. The 100 A rated fuse holders are only to accept fuse links between 1 A and 100 A. This is because the inner diameter of the fuse holder is critical to the interruption of fault current. The 200 A fuse holder diameter is too large for use with fuse links less than 100 A and would not interrupt system faults properly.

## CAN I USE A 27KV 150 KV BIL CUTOUT ON A 34.5 KV SYSTEM?

Yes, but only if the system is single-phase to neutral or three-phase solidly-grounded wye, where the TRV does not exceed the maximum design voltage of 27 kV.

## WHAT IS THE DIFFERENCE BETWEEN AN OPEN FUSE LINK AND A UNIVERSAL STYLE FUSE LINK?

An open fuse link is not designed for use in a drop out fuse holder installed in a cutout mounting assembly. It is not enclosed for field application and is usually attached to some spring mechanism to assist in the pull apart during fault conditions. Universal style fuse links are designed for use in cutout fuse holders and must meet specific dimensions in the mechanical interchangeable requirements in the C34.42 Standard.

All Chance fuse links meet these requirements.

## IS ADDITIONAL CREEP OR LEAKAGE DISTANCE ON CUTOUT DESIGNS ONLY NECESSARY NEAR COASTAL AREAS?

No. While used mainly in coastal regions, high creep cutouts are often used in areas of high contamination. These areas may be far from coastal regions such as desert environments. Most Industrial areas and other areas with high levels of air borne contaminants require cutouts with high creep designs.



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