

# High Current Limiter

## High Interrupting Capacity Back-up Current Limiting Fuse

### 15.5kV, 50A, 120kA

#### ELECTRICAL RATINGS

Voltage Class (kV)	2.8 - 38kV*
Continuous Current (A, rms, sym)	25A & 50A
Interrupting Rating (A, rms, sym)	80kA & 120kA
Max. peak let-thru	24kA & 39kA
Max. Let-Thru $I^2t$	250 & 500kA <sup>2</sup> s

**DESCRIPTION:** This product is an outgrowth of the CLiP® and PAF® product lines where duties of these devices rang up to 120kA in commercial ratings. The shunt fuses that perform the ultimate interruption for these products are designed to handle extreme fault power and fault energy absorption levels. They may also be used separately, without the triggered interrupter bus, whereby their operating duty is far less severe. These fuses are of non-standard size for their given ratings due to the higher interrupt energy requirements.

**APPLICATION:** A primary application of this fuse is expected to be in substations where their auxiliary power is derived from the tertiary winding of a large power transformer. Fault currents are often in excess of 60kA. While most commercially available current limiting fuses are limited to 50kA. Continuous currents are commonly in the 5 to 20 ampere continuous range or well within the range of the shunt fuse alone. Although tertiary windings are the most common applications, it can be used in other circuits with high fault currents and low continuous currents.



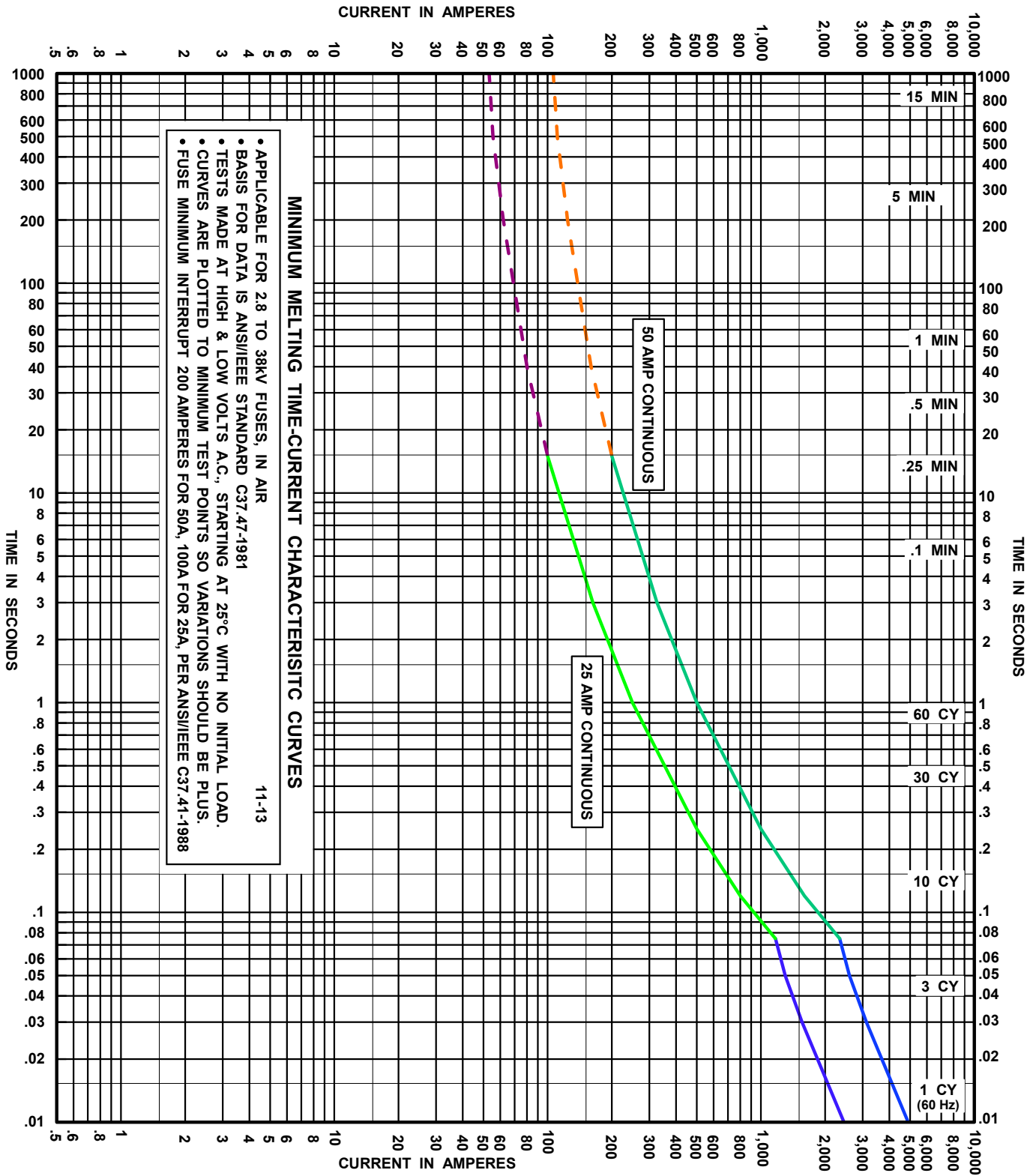
▲ G&W's High Current Limiters.

This is a back-up class of fuse that is meant to clear only the more extreme fault levels. It has a minimum clearing current of 100A (200A for 50A version) when tested per ANSI/IEEE C37.41. It is therefore intended to be used in conjunction with a lower rated (and less costly) device, which will clear the lower fault levels. A pole mounted cutout or expulsion-type power fuse is a typical device.

The concept is to clear the excessive currents with the High Current Limiter and lower currents with the cutout (or similar non-current-limiting device). Since the non-current-limiting device is designed to be able to endure the full asymmetrical crest of current up to that associated with its interrupt rating, the High Current Limiter must have a peak let-thru current of less than this value. Likewise, the let-thru  $I^2t$  must be less than the capabilities of the protected devices as well. The High Current Limiter will protect most non-current-limiting devices rated 10kA rms, symmetrical or higher, up to prospective fault levels of 120kA rms, symmetrical.

**MOUNTING:** Fuse mounting is simple with bolted bracket mount. It is placed in series with the protected device. Mounting supports can be provided by G&W Electric.

◀ 50A High Current Limiter.



**25 & 50 AMPERE, HIGH CURRENT BACK-UP LIMITER  
MINIMUM MELTING TIME-CURRENT CHARACTERISTIC CURVE**