

Cable Limiters

Increase System Reliability
Decrease Downtime

PRODUCT GUIDE



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Mersen Cable Limiters

Increase system reliability and versatility with Mersen Cable Limiters.



Increase system reliability and versatility with Mersen Cable Limiters — designed for the protection of low voltage distribution networks, feeders and service entrance cables. Permitted by National Electric Code Article 230.82(1), cable limiters prevent service outages by isolating damaged cables ensuring continuity of customer power.

Install Mersen cable limiters in underground power distribution systems found in commercial, industrial, and residential applications. Cable limiters are designed for use in both radial and network type underground systems to reduce the hazards of unexpected downtime and maintenance. Mersen offers a full line of both 600VAC and 250VAC cable limiters, with the 600VAC product line being UL Listed for code compliance. Select the proper limiter for your application by choosing from seven available terminal combinations suitable for aluminum or copper wire sizes from 1 AWG up to 1000kcmil.

Customer Benefits

Cable limiters offer users an inexpensive solution to prevent costly downtime. Cable limiters isolate faulty cables and allow the remaining cables to keep your business up and running. Faulty cables can now be pulled and replaced during a scheduled or routine shutdown when power is not needed.

Applications and Installation

Three common cable limiter applications include:

1. Distribution network systems with three or more cables in parallel per phase

Install cable limiters on each end of each cable to allow for isolation of damaged cables. The limiters remove damaged cables from the circuit to maintain service.

2. Commercial and residential applications with multiple customers fed from one transformer

Install one cable limiter on the secondary of the utility transformer per cable run. Allow businesses and homes to maintain power if a fault may occur.

3. Secondary Ties

Protect circuits that connect two power sources or power supply points to prevent vaporization of cables under short circuit faults.

Application #1 - Three or More Conductors per Phase

For larger ampere rated systems it is common to use several smaller cables in parallel, instead of one large cable, to share a heavier load. For this application, cable limiters are installed on the secondary of the utility transformer and on the line side of the service entrance disconnect. It is important to install cable limiters on each end of each cable. In most cases the customer hired contractor is responsible for installing limiters at the utility transformer and on the line side of the service entrance disconnect at the building. If one cable experiences a fault, the faulty cable will be isolated from the network, allowing the remaining cables to maintain power to the system. The damaged cable can now be replaced during a scheduled shutdown when revenue gain or production is not at risk of downtime. Unexpected power loss can result in lost revenue.



Industrial

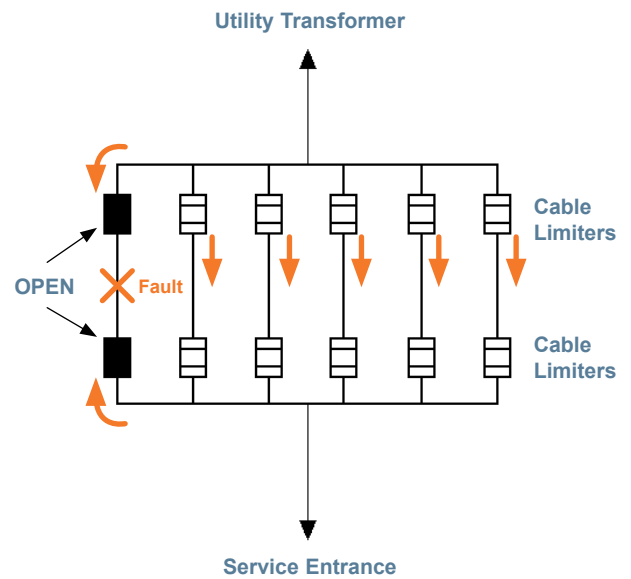
NEC Article 230.82(1) permits the installation of cable limiters on the supply side of the service entrance disconnect. Ensure system reliability, guarantee operation, reduce maintenance costs and prevent unexpected downtime. Benefit from using cable protection in all types of industries such as metal fabrication, wastewater, assembly, electronics, textile, oil and gas, pulp and paper, rubber, steel, aluminum, glass and chemical.

Mersen cable limiters are designed to withstand harsh environments and will not deteriorate from elements such as age, moisture or environmental surroundings. Mersen limiters are self-contained and self-protecting. Various termination offerings accommodate all types of installations.

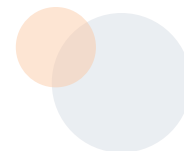
Commercial

Malls, strip malls, shopping centers, outlets, retail businesses, universities, government facilities, and office buildings are typical customers that benefit from the installation of cable limiters. Protect incoming power to the retail centers power distribution network. Construction work external to the facility is a major cause of damaged cables. Improperly marked dig sites, equipment malfunction and operator error can all result in potentially hazardous electrical faults. Protect commercial developments with cable limiters and prevent potential lost revenues to its tenants.

Application Example



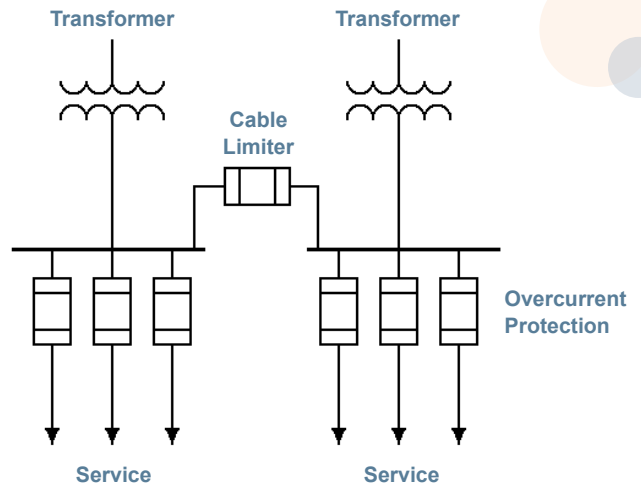
Recommended Product: Amp-Trap CP



Application #2 - Secondary Ties

NEC article 450.6(A)(3) states that any secondary tie, 600V or less nominal, shall be equipped with a protective device that will open under short-circuit conditions. Article 450.6(A)(3) permits the installation of a cable limiter as an acceptable method of meeting this requirement.

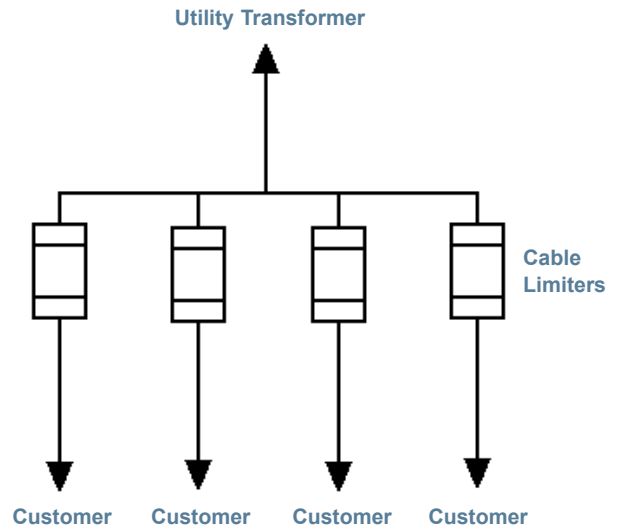
A secondary tie is a point in a circuit where two power sources or power supply points are connected, such as the secondary of two transformers. For example, this could be two individual transformers or a bank of transformers operating as a unit.



Recommended Product: Amp-Trap CP

Application #3 - Multiple Services Supplied by a Single Source

Multiple services such as residential developments, apartment buildings, and small commercial buildings consume lighter loads and are often fed from a single transformer. To prevent the entire neighborhood, apartment building or strip mall from experiencing an outage, cable limiters are installed on each cable run to each individual service. In the case of a cable fault, the faulty service will be isolated from the remaining customers. For this application only one cable limiter is required per cable run on the secondary of the utility transformer.



Recommended Product: Amp-Trap CP and 2CL



Amp-Trap® CP – 600VAC Cable Limiters

Approved 600VAC limiters for heavy commercial and industrial applications. Ideal for multiple cable runs per phase. Increase reliability and prevent unexpected downtime.

- UL Listed, File E305297
- 600VAC, 200kA IR
- Superior short circuit protection
- Cable sizes #2 – 1000kcmil
- Seven terminal combinations available
- Copper or Aluminum cable
- Optional heat shrink or molded rubber boots available



Amp-Trap® 2CL – 250VAC Cable Limiters

Approved 250VAC limiters for light commercial and residential applications. Protect underground cable runs from thermal damage caused by short circuits.

- Mersen Certified
- 250VAC, 200kA IR
- Superior short circuit protection
- Cable sizes #1 – 500kcmil
- Four terminal combinations available
- Copper or Aluminum Cable
- Shorter in length than standard 600VAC rated cable limiters



Installation information, including crimping tool recommendations, limiter performance characteristics and part numbers is available online at ep-us.mersen.com or by contacting your local sales representative.



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