

UL489 or UL1077?

What are your Circuit Protection Requirements?

An understanding of circuit types and circuit protection products is critical to ensure their proper application.
See NEC Sections 100, 430 and 409 for definitions.

The proper sizing of an overcurrent protection device is the responsibility of the customer and should be determined using the application standards of the NEC (National Electric Code), CEC (Canadian Electrical Code) or other applicable standards. Per fine print note of 2008 NEC Section 100 "A current in excess of rating may be accommodated by certain equipment and conductors for a given set of conditions. Therefore, the rules for overcurrent protection are specific for particular situations."

UL489 Branch Protection



UL1077 Supplementary Protection



What You Need to Know and Look For In Specifications

Certifications – Standards – Acceptance

UL489 Branch Protection

- UL489 Listed or Recognized
- CSA C22.2 No. 5
- International ratings available depending on breaker type

UL1077 Supplementary Protection

- UL Recognized under UL1077
- CSA 22.2 No. 285
- IEC 60947-2 or IEC 898

Function

- Opens automatically on Overload and Short Circuit when properly applied within its ratings
- Protects wire and cable against Overload and Short Circuit
- Opens automatically on Overload and Short Circuit
- Provides additional equipment protection where branch circuit protection is already provided or not required
- Not suitable for the protection of branch circuit conductors

Applications

- Branch circuit protection in control panels, panelboards, switchboards and motor control centers
- Motor overload and motor short circuit protection (UL489 Recognized motor circuit protectors) for control panels and motor control centers
- Used within appliances or other electrical equipment such as control circuits, control power transformers, relays, PLC I/O points and lighting circuits
- Ideal replacement for fuses that are applied as supplementary protection

Features

- Bolted down or DIN-rail mounted
- External handle mechanisms available
- Field mounted accessories
- Stand alone branch circuit protection
- Various levels of protection (curve type)
- High voltage and interruption levels (up to 100 kAIC @ 480V)
- DIN-Rail mounted
- Field mounted accessories
- Current limiting
- Various levels of protection (curve type)
- 10 kAIC @ 240 VAC
- 6 kAIC @ 277 VAC and 5 kAIC @ 480 VAC
- 10 kAIC @ 65 VDC

kAIC = thousands of Amps interrupt capacity

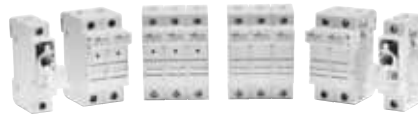
Summary

A Supplementary Protector can't Be used for Branch Circuit Protection.
Understanding the difference between Branch Circuit Protection and Supplementary Protection helps to ensure their proper use.

Our Fuses at a Glance



Fuse



Fuse Holders



Fuse Block

Fuse Series	Class	Amperage Range	Description	Application
JDL	J	1A to 600A	Most popular current limiting dual element time delay fuses available. Small physical size and high performance characteristics makes the class J ideal for any space limited applications	All general purpose circuits with high inrush inductive loads including motor branch circuits and transformers. Also suited for lighting loads. Recommended for type 2 (no damage) protection of IEC style motors, starters, and contactors.
JHL	J	1A to 600A	JHL Class J fuses combine the performance of high-speed semiconductor fuses and the convenience of Class J branch-circuit fuses in one small package. Ideal for AC and DC drives and controllers.	AC and DC drives, electronic motor controllers, power semiconductor devices that utilize diodes, GTOs, SCRs, or SSRs.
ECNR	RK5	1A to 600A	The dual element time delay characteristics of these fuses typically allows them to be sized closer to the running ampacity of inductive loads to reduce cost and improve over current protection.	Use in AC power distribution system mains, feeders, and branch circuits. Recommended for high inrush inductive loads, like motors and transformers, and non inductive loads like lighting, and heating loads.
ECSR		3A to 600A		
LENRK	RK1	10A to 600A	These dual element time delay fuses have upto 40% more current limitation and up to 350% more I2t limitation under fault conditions than the ECNR and ECSR fuses, reducing the potential for damage.	Use in AC power distribution system mains, feeders, and branch circuits. Recommended for high inrush inductive loads, like motors and transformers, and non inductive loads like lighting, and heating loads.
LESRK		5A to 600A		
TJN	T	1A to 600A	These fuses are extremely fast-acting fuses in a compact, space-saving size.	These fuses are ideal as the main fuse protection for panel boards, load centers, meter stacks, and AC drives.
TJS				
HCLR	CC	0.5A to 30A	Fast acting characteristics with 200kA Interrupting Rating, and compact design are an excellent choice for inductive loads as well as resistive loads	Recommended for branch circuit protection, resistive heating loads, and lighting loads
HCTR	CC	0.25A to 30A	Time delay characteristics with 200kA Interrupting Rating, and compact design are an excellent choice for high inductive loads. Meets the requirements of the NEC® 430.72 and UL508	Recommended for Motor Branch protection, short circuit protection required by NEC® 430.52 and for Primary protection for control transformer loads.
EDCC	CC	0.5A to 30A	Low peak design was developed specifically for motor protection. Provides excellent current limiting capabilities up to 200kA 600VAC	Recommended for small horsepower motor circuits. Can provide Type 2 coordinated protection for IEC or NEMA starters/contactors
MCL	Midget	0.5A to 50A	Provides supplemental protection to end-use equipment with a 100kA interruption rating, 600VAC. Fast acting design responds quickly to both overloads and short-circuit protection	Recommended for control circuits, street lighting, HID lighting, and electronic equipment protection
MOL	Midget	0.5A to 30A	Provides supplemental protection to end-use equipment with a 10,000A interruption rating, economical laminated paper tube	Recommended to use as supplemental protection for non inductive control loads and lighting circuits
MEQ	Midget	0.25 to 30A	Provides supplemental protection to high inrush loads. has a 10,000A interruption rating, 500VAC. Fiber tube construction.	Recommended to use as supplemental protection for inductive control loads such as transformers and solenoids.
MEN	Midget	0.5A to 30A	Provides supplemental protection to high inrush loads. has a 10,000A interruption rating, fiber tube construction. Dual element allows harmless inductive surges to pass without opening.	Recommended to use as supplemental protection for inductive control loads such as transformers and solenoids, and other high inrush electronics circuits.
ABC	1 1/4" x 1/4" Ceramic	0.5A to 30A	Fast acting 1/4" x 1-1/4" ceramic tube construction. Small dimension electronic fuses.	Recommended as supplemental protection for electronic applications
AGC	1 1/4" x 1/4" Glass	0.5A to 30A	Fast acting 1/4" x 1-1/4" glass tube construction. Small dimension electronic fuses.	Recommended as supplemental protection for electronic applications
GMA	5mm x 20mm Glass	0.063A to 15A	Fast acting 5mm x 20mm glass tube construction. Small dimension electronics fuses.	Recommended as supplemental protection for electronic applications
GMC	5mm x 20mm Glass	0.5A to 10A	Medium Time Delay 5mm x 20mm glass tube construction. Small dimension electronics fuses.	Recommended as supplemental protection for electronic applications
MDA	1 1/4" x 1/4" Ceramic	0.5A to 20A	Time Delay 1/4" x 1-1/4" ceramic tube construction. Small dimension electronics fuses.	Recommended as supplemental protection for electronic applications
MDL	1 1/4" x 1/4" Glass	0.0625A to 20A	Time Delay 1/4" x 1-1/4" glass tube construction. Small dimension electronics fuses.	Recommended as supplemental protection for electronic applications
S500	5mm x 20mm Glass	0.032A to 10A	Fast acting 5mm x 20mm glass tube construction. Small dimension electronics fuses.	Recommended as supplemental protection for electronic applications
S506	5mm x 20mm Glass	0.25A to 6.3A	Time Delay 5mm x 20mm glass tube construction. Small dimension electronics fuses.	Recommended as supplemental protection for electronic applications