

Small Dimension Time-Delay MDA Fuses



Features

- Compact dimensions 1/4" x 1-1/4", (6.3 mm x 32 mm)
- Ceramic tube construction with nickel-plated brass end caps
- Time-delay
- RoHS

Applications

- Supplemental protection for electronic applications

MDA Specifications

Voltage Rating: MDA - See table below

Ampere Rating: 0.5 - 20 Amps

Interrupting Rating: See table below

Environmental Data

Shock: 0.5A: MIL-STD-202, Method 213, Test Condition I;

1A thru 20A: MIL-STD-202, Method 207, (HI shock)

Vibration: 0.5A: MIL-STD-202, Method 201;

0.5A thru 20A: MIL-STD-202, Method 204, Test condition C (except 5g, 500 HZ)

Agency Approvals

- UL Listed product meets standard 248-14
- UL Listed Card: MDA 0.5-20A (Guide JDYX, File E19180)
- CSA Certification File 053787: MDA 0.5-15 (Class No. 1422-01)
- RoHS

| MDA Small Dimension Time-Delay Fuses | | | | | | | | | | | | | |
|--------------------------------------|------------|---------------|--------|-------------------------|--------|------------------------|----------------------------|--------------------|---------|----------------------|---------|-------|---------|
| Part Number | AMP Rating | Rated Voltage | | AC Interrupting Rating* | | DC Interrupting Rating | Melting I ² t** | Voltage Drop mv*** | Pcs/Pkg | Package Weight (lb.) | Price | | |
| | | AC Max | DC Max | 250V | 125V | | | | | | | 125V | |
| MDA-5 | 0.5 | 250V | — | 35A | 10000A | — | 2.3 | 1.42 | 5 | 0.0425 lb | \$16.50 | | |
| MDA1 | 1 | | | | | | 11.1 | 1.03 | | | \$16.50 | | |
| MDA2 | 2 | | | | | | 64.0 | 0.623 | | | \$16.50 | | |
| MDA3 | 3 | | | | | | 40.9 | 0.182 | | | \$11.00 | | |
| MDA4 | 4 | | | 134.0 | | | 0.162 | \$11.00 | | | | | |
| MDA5 | 5 | | | 345.9 | | | 0.145 | \$11.00 | | | | | |
| MDA8 | 8 | | | 944.0 | | | 0.134 | \$11.00 | | | | | |
| MDA10 | 10 | | | 1491.3 | | | n/a | \$11.00 | | | | | |
| MDA12 | 12 | | | 113.8 | | | 0.114 | \$11.00 | | | | | |
| MDA15 | 15 | | | 206.2 | | | 0.107 | \$11.00 | | | | | |
| MDA20 | 20 | | | 125V | | | 1500A | 10000A | | | 439.5 | 0.095 | \$11.00 |

*Note: Interrupting ratings were measured at 70% - 80% power factor on AC, and at a time constant described in UL 198L.

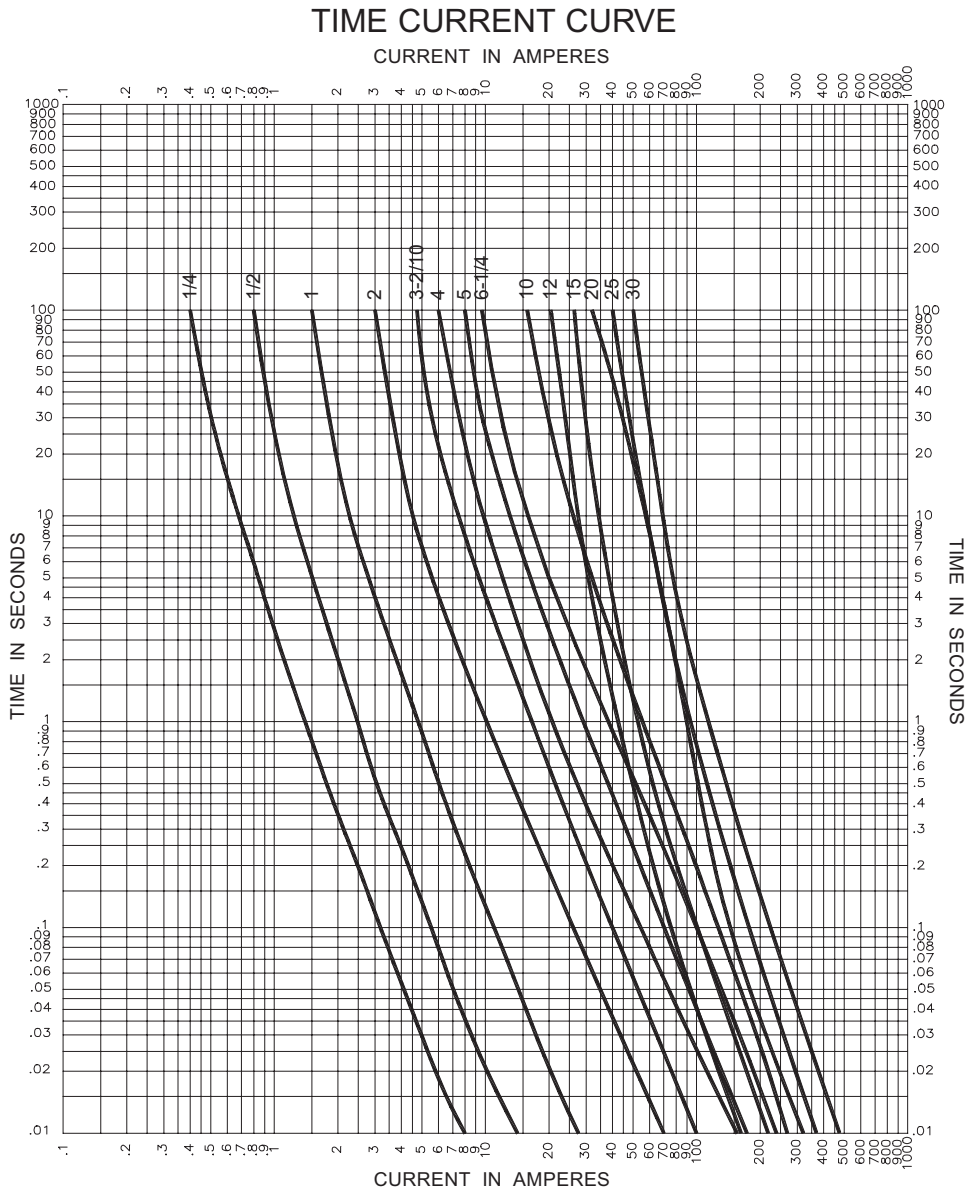
** Typical Melting I²t (A²Sec) - measured at listed interrupting rating and rated voltage (at 70% to 80% power factor on AC)

*** Typical Voltage Drop - measured at 25°C ± 3°C ambient temperature at rated current.

For mounting and wiring MDA fuses, see our DN-F6 Series fuse blocks in the Terminal Blocks and Wiring Solutions section.

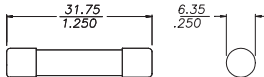
| CROSS REFERENCE | | | |
|-----------------|----------|--------------|------------|
| OLD EDISON | BUSSMANN | MERSEN GOULD | LITTELFUSE |
| BDA | MDA | None | 326 |

Small Dimension Time-Delay MDA Fuses



Dimensions

(mm/inches)



| MDA Electrical Characteristics | | |
|--------------------------------|-----------------|---------------------|
| Rated Current | % of Amp Rating | Opening Time |
| 0.5 to 20 Amps | 100 | None |
| | 135 | 60 minutes maximum |
| | 200 | 120 seconds maximum |



Selection Guide

Line Overview

The Edison family of fuses, fuse blocks and fuse holders is divided into two classes:

1. Current Limiting: Class CC, Class J, Class L, Class RK, Class T
2. General Purpose: Class M Midget and Small Dimension

The fuse selection guide below is a general summary of the specifications included for each fuse type. This selection guide does not include the many variables that can exist for specific situations such as local codes, unusual temperature, or other operating conditions. When selecting fuses, be sure to comply with any applicable PUBLIC SAFETY standards that apply to Overcurrent Protection Devices (OPD).

| Edison Fuses Selection Guide and General Specifications | | | | | | | | | | | | | | |
|---|--|-------------------|---|-------------------|---|-------------------|--------------------------------|--------|--|---|---|---|--|--|
| Description | Current Limiting | | | | | | | | | | | | | |
| | Class J | | Class RK5 | | Class RK1 | | Class T | | Class L | | Class CC | | | |
| Fuse Type | Fast-Acting | Time-Delay | Time-Delay | | | | Extremely Fast-Acting | | Fast-Acting | Fast-Acting | Time-Delay | | | |
| Part Number | JHL | JDL | ECNR | ECSR | LENRK | LESRK | TJN | TJS | LCU | HCLR | HCTR | EDCC | | |
| Voltage Rating | 600VAC 450VDC | 600VAC 300VDC* | 250VAC 125 VDC* (1-200A) 250VDC* (201-600A) | 600VAC 300VDC* | 250VAC 125VDC* (10-60A) 250VDC* (70-600A) | 600VAC 300VDC* | 300VAC 160 VDC (15-600A) | 600VAC | 600V | 600VAC 300VDC (15-20A) | 600VAC | 600VAC 300VDC (0.5-2.25A) (20-30A) | | |
| Amp Rating | 1 - 600 | | 1 - 600 | 3 - 600 | 10 - 600 | 5 - 600 | 1 - 600 | | 601 - 1200 | 0.5 - 30 | 0.25 - 30 | 0.5 - 30 | | |
| Interrupting Rating | 200,000 RMS Symmetrical Amps | | | | | | | | | | | | | |
| Current Limiting | Class J | | Class RK5 | | Class RK1 | | Class T | | Class L | | Class CC | | | |
| Agency Approvals | UL Listed Class J Guide JDDZ File E162363 CSA Certified HRCI-J per C22.2, No. 248.8 File 700489 RoHS compliant | | UL Listed Class J Guide JDDZ File E162363 CSA Certified HRCI-J per C22.2, No. 248.8 File 700489 | | UL Listed, Class RK, Guide JDDZ, File E162363 CSA Certified HRCI-R per C22.2, No. 248.12, File 700489 (LENRK CSA File 053787) | | | | UL Listed, Class T, Guide JDDZ, File E162363 CSA Certified HRCI-T per C22.2, No. 248.12, File 53787, Class 1422-02 & 1422-82 | | UL Listed, Std. 248-10 CSA Certified, HRC-L C22.2 No. 248.10, Class 1422-02, File 53787 | | UL Listed to 248.4, Class CC, Guide JDDZ, File E162363, CSA certified HRCI-MISC per C22.2 No. 248.4, File 700489 | |
| Dimensions | See product specification pages. | | | | | | | | | ferrule (in): 13/32, length (in): 1-1/2 | | | | |

* Self-certified DC ratings

| Edison Fuses Selection Guide and General Specifications | | | | | | | | | | | | | |
|---|--|-----------------|------------|-----------|--|--|---|---|-------------------------------|---|------------------------------|---|--|
| Description | General Purpose – Midget | | | | General Purpose – Small Dimension Electronic | | | | | | | | |
| | Fast-Acting | | Time-Delay | | Fast-Acting Ceramic | Fast-Acting Glass | | Medium Time-Delay Glass | Time-Delay Ceramic | Time-Delay Glass | Fast-Acting Glass | Time-Delay Glass | |
| Part Number | MCL | MOL | MEQ | MEN | ABC | AGC | GMA | GMC | MDA | MDL | S500 | S506 | |
| Voltage Rating | 600 VAC | 250 VAC | 500 VAC | 250 VAC | 250 VAC (0.5 to 30A) 125VDC: (0.5 to 30A) | 250VAC: (0.1 to 10A) 32VAC: (15 to 30A) | 250VAC (0.063 - 3A) 125VAC (4 - 15A) | 250VAC (0.5 - 3A) 125VAC (4 - 10A) | 250VAC 125VDC (20A) | 250VAC: (0.0625 to 8A) 32VAC: (10 to 20A) | 250VAC | 250VAC | |
| Amp Rating | 0.5 to 50 | 0.5 to 30 | 0.25 to 30 | 0.5 to 30 | 0.5 to 30 | 0.10 to 30 | 0.063 to 15 | 0.5 to 10 | 0.5 to 20 | 0.0625 to 20 | 0.032 to 10 | 0.25 to 6.3 | |
| Interrupting Rating | 100,000 RMS Amps | 10,000 RMS Amps | | | See specifications table on product pages | | | | | | | | |
| Current Limiting | N/A | | | | N/A | | | | | | | | |
| Agency Approvals | UL Listed to 248.14, File E162443 CSA Cert. C22.2 Part 59.2, LR 700489 | | | | UL Listed standard 248-14 UL Listed Guide and File nos. (ABC 0.25-20 A); (AGC 1/100-10 A) JDYX and E19180 UL Recognition Guide and File nos. (ABC 20-30A);(AGC 11-30) JDYX2 and E19180 CSA Certification Record No: 053787 C 000 and Class No: 1422 01 and 1422 30 | | | Designed to UL/CSA 248-14 UL Listed, Guide JDYX, File E19180 63mA-6A UL Recognition, Guide JDYX2, File E19180, 7A-15A CSA Certified, File 053787, C, 000, 63mA-6A Class 1422-01 | | UL Listed standard 248-14 UL Listed Card: MDA 2/10-20A, MDL 1/16-8A (Guide JDYX, File E19180 UL Recognized Card: MDA 25-30A MDL 9-30A (Guide JDYX2, File E19180) CSA Certification Card: MDA 2/10-15A (Class No. 1422-01) | | UL Recognized Guide JDYX2, File E19180 Semko Approval VDE Approval BSI Approval IMQ Approval RoHS compliant | |
| Dimensions | ferrule (in): 13/32 length (in): 1-1/2 | | | | 1/4" x 1-1/4", (6.3mm x 32mm) | | 0.197" x 0.788" (5mm x 20mm) | | 1/4" x 1-1/4", (6.3mm x 32mm) | | 0.197" x 0.788" (5mm x 20mm) | | |

DINnectors® Fuse Terminal Blocks

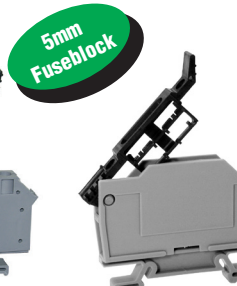
Fuse blocks are available for 1/4", 5mm, Class CC and mid-gate size fuses, either with or without a blown fuse LED. LED fuse blocks are polarity sensitive and are 35mm DIN-rail mountable. The hinge side is positive.



DN-F6 Series:
EURO S 10H/35



DN-F6L Series:
EURO S 10H/35



DN-F10 Series:
EURO S 4LH/35



DN-F10L Series:
EURO S 4LH/35

Ordering Information

| | Part Number | Pcs/Pkg | Price | Part Number | Pcs/Pkg | Price | Part Number | Pcs/Pkg | Price | Part Number | Pcs/Pkg | Price |
|---------------------|-------------|---------|----------|-------------|---------|---------|-------------|---------|----------|-------------|---------|---------|
| Gray Terminal Block | DN-F6 | 25 | \$105.00 | - | | | DN-F10 | 50 | \$169.00 | - | | |
| | DN-F6MN | 7 | \$23.00 | - | | | DN-F10MN | 10 | \$26.50 | - | | |
| 12-24 VAC/DC* | - | | | DN-F6L24 | 10 | \$60.00 | - | | | DN-F10L24 | 10 | \$59.00 |
| 110 VAC/DC* | - | | | DN-F6L110 | 10 | \$60.00 | - | | | DN-F10L110 | 10 | \$59.00 |
| 220 VAC/DC* | - | | | DN-F6L220 | 10 | \$60.00 | - | | | DN-F10L220 | 10 | \$59.00 |

Technical Specifications

| | | | | | | | | | | | | |
|--------------------------|---|-----|----------|--------------------------|-----|----------|---------------------|-----|------------------|--------------------------|-----|------------------|
| Stripping Length | 12mm [0.47 in] | | | 12mm [0.47 in] | | | 10mm [0.39 in] | | | 10mm [0.39 in] | | |
| Tightening Torque | 0.8 N-m [10 lb-in] | | | 0.8 N-m [10 lb-in] | | | 0.6 N-m [5.3 lb-in] | | | 0.6 N-m [5.3 lb-in] | | |
| Density | 100/m [30 pcs/ft] | | | 100/m [30 pcs/ft] | | | 100/m [30 pcs/ft] | | | 100/m [30 pcs/ft] | | |
| UL Approval** | 600V | 30A | 20-6 AWG | 600V | 30A | 20-6 AWG | 300V | 15A | 24-10 AWG | 300V | 15A | 24-10 AWG |
| CSA Approval | 600V | 30A | 18-6 AWG | 600V | 30A | 18-6 AWG | 300V | 8A | 18-12 AWG | 300V | 8A | 18-12 AWG |
| VDE Approval | 750V | 8A | - | 750V | 8A | - | 500V | 8A | 4mm ² | 500V | 8A | 4mm ² |
| Fuse Size (not supplied) | 1 1/4" X 1/4" | | | 1 1/4" X 1/4" | | | 5x20mm-5x25mm | | | 5x20mm-5x25mm | | |
| Indicator Type | Non-indicating | | | LED blown fuse indicator | | | Non-indicating | | | LED blown fuse indicator | | |
| Operating Temperature | Ambient air temperature: -20°C to 85°C [-4°F to 185°F] / Relative humidity: 50% max at 40°C [104°F]; 90% max at 20°C [68°F] | | | | | | | | | | | |
| SCCR Rating | 10kA per Table SB4.1, 2009, UL 508A, Maximum short circuit current rating for unmarked components | | | | | | | | | | | |
| CE Conformity | CE (EN 60947-1 / 60947-7-3) | | | | | | | | | | | |
| Agency File # | UL E179129 / LR84816 | | | | | | | | | | | |

Note: To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

Accessories

| End Covers | | Included | | | Included | | | Included | | | Included | | |
|------------------------|-------------------------|-------------|---------|-------------------------|-------------|---------|-------------------------|-------------|---------|-------------------------|-------------|---------|---------|
| 35mm DIN Rail | 7.5 mm high | DN-R35S1 | 10 | \$31.50 | DN-R35S1 | 10 | \$31.50 | DN-R35S1 | 10 | \$31.50 | DN-R35S1 | 10 | \$31.50 |
| | | DN-R35S1-2 | 2 | \$10.00 | DN-R35S1-2 | 2 | \$10.00 | DN-R35S1-2 | 2 | \$10.00 | DN-R35S1-2 | 2 | \$10.00 |
| | 15mm high | DN-R35HS1 | 10 | \$56.00 | DN-R35HS1 | 10 | \$56.00 | DN-R35HS1 | 10 | \$56.00 | DN-R35HS1 | 10 | \$56.00 |
| DN-R35HS1-2 | | 2 | \$14.50 | DN-R35HS1-2 | 2 | \$14.50 | DN-R35HS1-2 | 2 | \$14.50 | DN-R35HS1-2 | 2 | \$14.50 | |
| End Brackets | DN-EB35 | 50 | \$45.00 | DN-EB35 | 50 | \$45.00 | DN-EB35 | 50 | \$45.00 | DN-EB35 | 50 | \$45.00 | |
| | DN-EB35MN | 20 | \$21.00 | DN-EB35MN | 20 | \$21.00 | DN-EB35MN | 20 | \$21.00 | DN-EB35MN | 20 | \$21.00 | |
| | DN-EB35-A | 50 | \$32.00 | DN-EB35-A | 50 | \$32.00 | DN-EB35-A | 50 | \$32.00 | DN-EB35-A | 50 | \$32.00 | |
| | DN-EB35-A-10 | 10 | \$8.75 | DN-EB35-A-10 | 10 | \$8.75 | DN-EB35-A-10 | 10 | \$8.75 | DN-EB35-A-10 | 10 | \$8.75 | |
| | DN-QEB35 | 50 | \$28.50 | DN-QEB35 | 50 | \$28.50 | DN-QEB35 | 50 | \$28.50 | DN-QEB35 | 50 | \$28.50 | |
| | DN-QEB35-10 | 10 | \$8.75 | DN-QEB35-10 | 10 | \$8.75 | DN-QEB35-10 | 10 | \$8.75 | DN-QEB35-10 | 10 | \$8.75 | |
| Angled Support Bracket | DN-ASB1 | 50 | \$56.00 | DN-ASB1 | 50 | \$56.00 | DN-ASB1 | 50 | \$56.00 | DN-ASB1 | 50 | \$56.00 | |
| Marking Tags | DN-L *** or DN-LT*** | 500/ 100 | various | DN-L *** or DN-LT*** | 500/ 100 | various | DN-L *** or DN-LT*** | 500/ 100 | various | DN-L *** or DN-LT*** | 500/ 100 | various | |

*Working voltage

**For copper wire only

***On lever arm

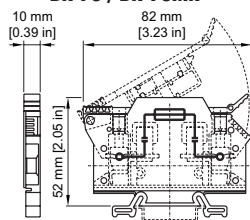
****On terminal body

Note: DN-F6 series fuse holders will accommodate the following AutomationDirect fuses: ABC, AGC, MDA and MDL Series.

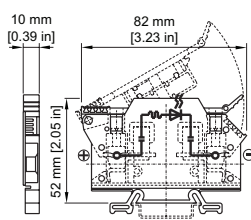
DN-F10 series fuse holders will accommodate the following AutomationDirect fuses: GMA, GMC, S500, and S506 Series.

For more information on accessories, see the DINnectors Accessories section of this chapter.

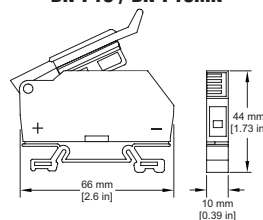
DN-F6 / DN-F6MN



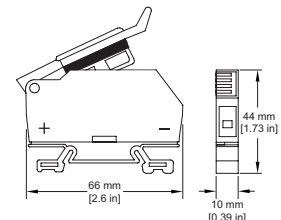
DN-F6L



DN-F10 / DN-F10MN



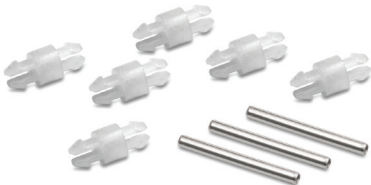
DN-F10L



Accessories



FP2

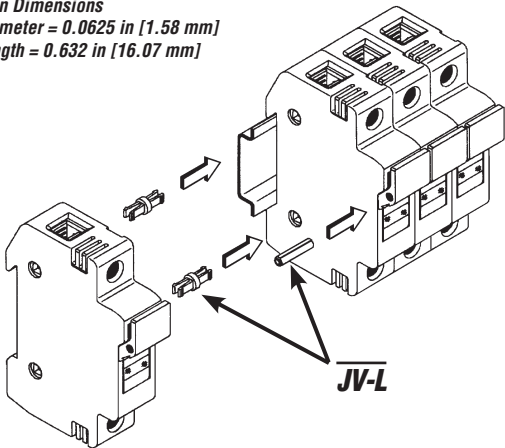


JV-L

| Accessories | | | |
|---|---|---------|---------|
| Part Number | Description | Pcs/Pkg | Price |
| FP-2 | Fuse puller for fuse dia. 13/32" - 13/16". Fuse type: 0-60A, 250V; 0-30A, 600V | 1 | \$19.50 |
| JV-L * <i>(Not Field Installable)</i> | Multi-pole connection kit to connect new design multiple Class CC and Midget Class fuse holders together. Kit consists of 6 connectors and 3 handle pins to connect up to 4 fuse holders. | | \$8.25 |

*Note: Will not work with retired design fuse holders shipped before November 1, 2009.
Roll pin punch or installation tool is required to install handle pins (Tool not sold by Automationdirect.com).

Handle Pin Dimensions
 Diameter = 0.0625 in [1.58 mm]
 Length = 0.632 in [16.07 mm]



Cross Reference Guide



| CROSS REFERENCE GUIDE By manufacturers type reference or series number. Ampere ratings must be added for ordering purposes. | | | | | | | | |
|--|-------------------------|---------|---------------------------|------------------|-----------|------------------|-----------|------------|
| FUSE TYPE | | VOLT | EDISON | BRUSH/ DORMAN | BUSSMANN | MERSEN/ GOULD | GEC/CEFCO | LITTELFUSE |
| UL CLASS CURRENT LIMITING FUSES (CSA CLASS) | | | | | | | | |
| CC (HRCl-CC) | Time-Delay | 600 | EDCC | – | LP-CC | ATDR | – | CCMR |
| | Time-Delay | 600 | HCTR | – | FNQ-R | ATQR | – | KLDR |
| | Fast-Acting | 600 | HCLR | HCLR | KTK-R | ATMR | CTK-R | KLKR |
| RK1 | Time-Delay Dual Element | 250 | LENRK | – | LPN-RK-SP | A2DR | – | LLNRK |
| | | 600 | LESRK | – | LPS-RK-SP | A6DR | – | LLSRK |
| RK5 | Time-Delay Dual Element | 250 | ECNR | – | FRN-R | TR | – | FLNR |
| | | 600 | ECSR | – | FRS-R | TRS | – | FLSR |
| J | Time-Delay Dual Element | 600 | JDL | – | LPJ | AJT | – | JTD |
| | High-Speed AC Drive | 600 | JHL | – | DFJ | HSJ | – | – |
| T | Extremely Fast-Acting | 300 | TJN | – | JJN | A3T | – | JLLN |
| | | 600 | TJS | – | JJS | A6T | – | JLLS |
| UL CLASS GENERAL PURPOSE FUSES | | | | | | | | |
| Midget | Fast-Acting | 600 | MCL | MCL | KTK | ATM | CTK | KLK |
| | | 250 | MOL | MOL | BAF/BAN | OTM | – | BLF |
| | Time-Delay | 500 | MEQ | MEQ | FNQ | ATQ | – | FLQ |
| | | 250 | MEN | MEN | FNM | TRM | – | FLM |
| 1/4" x 1-1/4" Ceramic | Fast-Acting | 250/125 | ABC | ABC | ABC | GAB | – | 314 |
| 1/4" x 1-1/4" Glass | | 250/32 | AGC | AGC | AGC | GGC | – | 312 |
| 1/4" x 1-1/4" Ceramic | Time-Delay | 250 | MDA | MDA | MDA | – | – | 326 |
| 1/4" x 1-1/4" Glass | | 250/32 | MDL | MDL | MDL | GDL | – | 313 |
| 5x20 mm Glass | Fast-Acting | 250/125 | GMA | GMA | GMA | GGM | – | 235 |
| | Medium Time-Delay | 250/125 | GMC | GMC | GMC | GSC | – | – |
| 5x20 mm Glass | Fast-Acting | 250 | S500 | BDB | GDB | GSB | – | 217 |
| | Time-Delay | 250 | S506 | BDC | GDC | GDG | – | 218 |
| Fuse Puller | | | | | | | | |
| Fuse Puller FP-2 | | – | old - 38072 new - FP-2 | – | FP-2 | – | – | – |