

# 1/4" x 1 1/4" Time-Delay, Glass Tube Fuses MDL Series

## Description

- Time-delay
- Optional axial leads available
- 1/4" x 1 1/4" (6.4 x 31.7mm) physical size
- Glass tube, nickel-plated brass endcap construction
- UL Listed product meets standard 248-14



| Electrical Characteristics |                 |                     |
|----------------------------|-----------------|---------------------|
| Rated Current              | % of Amp Rating | Opening Time        |
| 1/16 - 30A                 | 100%            | None                |
|                            | 135%            | 60 minutes maximum  |
|                            | 200%            | 120 seconds maximum |
| 1/16 - 3A                  | 200%            | 5 seconds minimum   |
| 3-2/10 - 8A                | 200%            | 12 seconds minimum  |

## Agency Information

- UL Listed Card: MDL 1/16 - 8A (Guide JDYX, File E19180)
- UL Recognized Card: MDL 9 - 30A (Guide JDYX2, File E19180)
- CSA Certification Card: MDL 1/16 - 8A (Class No. 1422-01)
- CSA Component Acceptance: MDL 9-30A (Class No. 1422-30)
- CE

## Environmental Data

- Shock: 1A thru 30A – MIL-STD-202, Method 207, (HI Shock)
- Vibration: 1/4A thru 30A – MIL-STD-202, Method 204, Test Condition C (Except 5g, 500HZ)

## Ordering

Specify packaging code

- Insert packaging code prefix before part number. E.g., BK (or BK1)-MDL-5-R

Specify option codes if desired

- For axial leads, insert "V" between catalog series and amp rating. E.g., BK-MDL-V-5-R

- For board washable, insert "B" between catalog series and amp rating. E.g., BK-MDL-B-5-R
- For axial leads and board washable, insert "B" then "V" between catalog series and amp rating. E.g., BK-MDL-BV-5-R

## Dimensions - mm (in)

Drawing Not to Scale



## Specifications

| Part Number | Voltage Rating Vac | AC Interrupting Rating* (amps)@ |        |       | Typical DC Cold Resistance** (Ω) | Typical Melting I <sup>2</sup> t† AC | Typical Voltage Drop‡ |
|-------------|--------------------|---------------------------------|--------|-------|----------------------------------|--------------------------------------|-----------------------|
|             |                    | 250Vac                          | 125Vac | 32Vac |                                  |                                      |                       |
| MDL-1/16-R  | 250                | 35                              | 10000  | -     | 45.6                             | 0.0046                               | 2.79                  |
| MDL-1/10-R  | 250                | 35                              | 10000  | -     | 15.68                            | 0.0420                               | 1.95                  |
| MDL-1/8-R   | 250                | 35                              | 10000  | -     | 12.238                           | 0.0422                               | 1.52                  |
| MDL-3/16-R  | 250                | 35                              | 10000  | -     | 4.81                             | 0.116                                | 1.05                  |
| MDL-2/10-R  | 250                | 35                              | 10000  | -     | 5.234                            | 0.314                                | 0.972                 |
| MDL-1/4-R   | 250                | 35                              | 10000  | -     | 3.208                            | 0.447                                | 0.965                 |
| MDL-3/10-R  | 250                | 35                              | 10000  | -     | 2.046                            | 0.412                                | 0.808                 |
| MDL-3/8-R   | 250                | 35                              | 10000  | -     | 1.567                            | 0.982                                | 1.46                  |
| MDL-1/2-R   | 250                | 35                              | 10000  | -     | 0.943                            | 1.656                                | 1.27                  |
| MDL-3/4-R   | 250                | 35                              | 10000  | -     | 0.397                            | 4.343                                | 1.01                  |
| MDL-1-R     | 250                | 35                              | 10000  | -     | 0.273                            | 11.498                               | 0.995                 |
| MDL-1-1/4-R | 250                | 100                             | 10000  | -     | 0.205                            | 86.2                                 | 0.722                 |
| MDL-1-1/2-R | 250                | 100                             | 10000  | -     | 0.156                            | 22.7                                 | 0.721                 |
| MDL-2-R     | 250                | 100                             | 10000  | -     | 0.116                            | 62.3                                 | 0.644                 |
| MDL-2-1/4-R | 250                | 100                             | 10000  | -     | 0.096                            | 49.6                                 | 0.535                 |
| MDL-2-1/2-R | 250                | 100                             | 10000  | -     | 0.081                            | 63.1                                 | 0.410                 |
| MDL-3-R     | 250                | 100                             | 10000  | -     | 0.057                            | 67.5                                 | 0.345                 |
| MDL-4-R     | 250                | 200                             | 10000  | -     | 0.038                            | 19.3                                 | 0.187                 |
| MDL-5-R     | 250                | 200                             | 10000  | -     | 0.025                            | 32.0                                 | 0.160                 |
| MDL-6-R     | 250                | 200                             | 10000  | -     | 0.022                            | 37.4                                 | 0.155                 |
| MDL-6-1/4-R | 250                | 200                             | 10000  | -     | 0.02                             | 38.7                                 | 0.152                 |
| MDL-7-R     | 250                | 200                             | 10000  | -     | 0.018                            | 42.7                                 | 0.140                 |
| MDL-8-R     | 250                | 200                             | 10000  | -     | 0.015                            | 47.8                                 | 0.119                 |
| MDL-9-R     | 32                 | -                               | -      | 1000  | 0.012                            | 51.5                                 | 0.124                 |
| MDL-10-R    | 32                 | -                               | -      | 1000  | 0.01                             | 64.4                                 | 0.114                 |
| MDL-15-R    | 32                 | -                               | -      | 1000  | 0.005                            | 354.0                                | 0.130                 |
| MDL-20-R    | 32                 | -                               | -      | 1000  | 0.004                            | 2914.0                               | 0.530                 |
| MDL-25††    | 32                 | -                               | -      | 1000  | 0.01225                          | 15221.0                              | 0.30                  |
| MDL-30††    | 32                 | -                               | -      | 1000  | 0.0011                           | 15581.0                              | 0.40                  |

\* Interrupting Ratings (Interrupting ratings were measured at 70% - 80% power factor on AC)

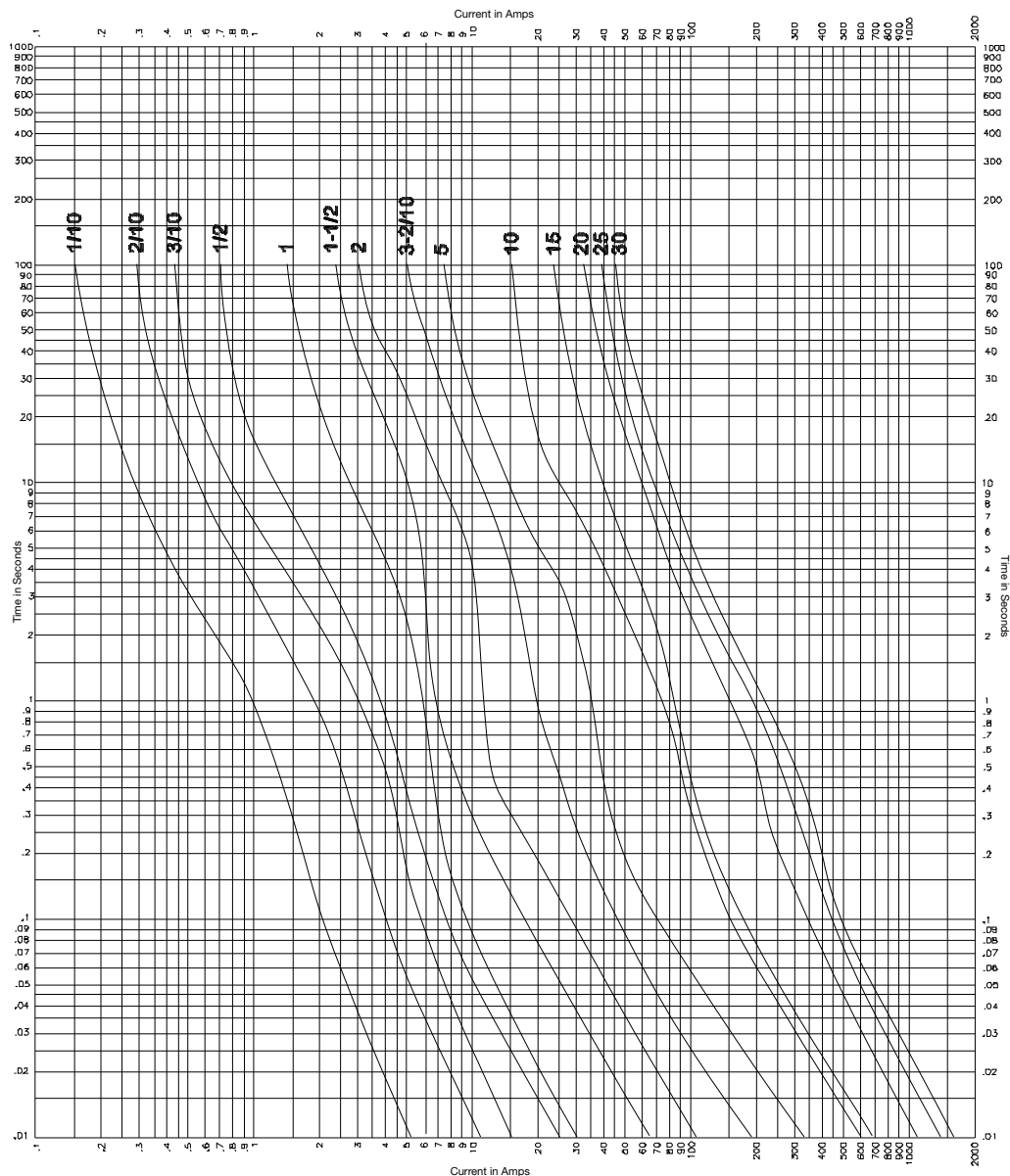
\*\* DC Cold Resistance (Measured at ≤10% of rated current)

† Typical Melting I<sup>2</sup>t (A<sup>2</sup>Sec) (I<sup>2</sup>t was measured at listed interrupting rating and rated voltage.)

‡ Typical Voltage Drop (Voltage drop was measured at 25°C±3°C ambient temperature at rated current)

†† MDL-25 & MDL-30 not available in RoHS compliant construction.

# Time-Current Curve



## Packaging Code

| Packaging Code | Description                                |
|----------------|--------------------------------------------|
| <b>BK</b>      | 100 fuses packed into a cardboard carton   |
| <b>BK1</b>     | 1,000 fuses packed into a cardboard carton |
| <b>BK8</b>     | 8,000 fuses packed into a cardboard carton |

## Option Code

| Option Code | Description                                                        |
|-------------|--------------------------------------------------------------------|
| <b>B</b>    | Sealed to withstand aqueous cleaning (Board Washable)              |
| <b>V</b>    | Axial leads - copper tinned wire with nickel plated brass overcaps |

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