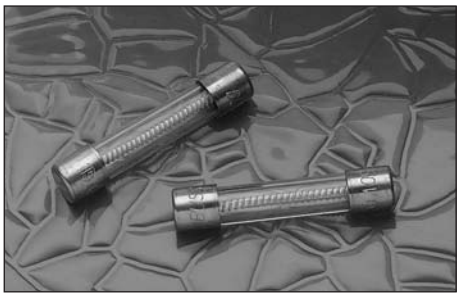
COOPER Bussmann

# ¼″ x 1 ¼″ Time-Delay, Glass Tube Fuses
## MDL Series

### Description
RoHS 2002/95/EC

- Time-delay
- Optional axial leads available
- ¼ x 1 ¼ (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 |
| 3-3/10 - 8A | 200% | 12 seconds minimum |

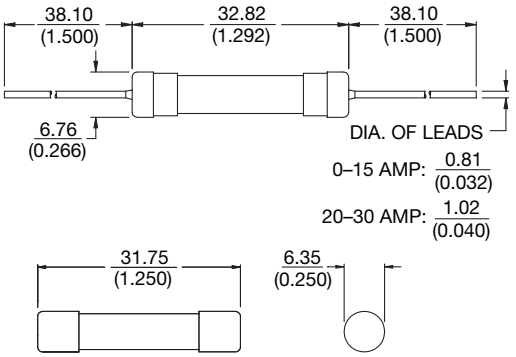
### Agency Information
- UL Listed Card: MDL 1/16 - 8A (Guide JDYX, File E19180)
- UL Recognized Card: MDL 9 - 30A (Guide JDYX2, File E19180)
- CSA Certification Card: MDL 1/16 - 8A (Class No. 1422-01)
- CSA Component Acceptance: MDL 9-30A (Class No. 1422-30)
- CE

### 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

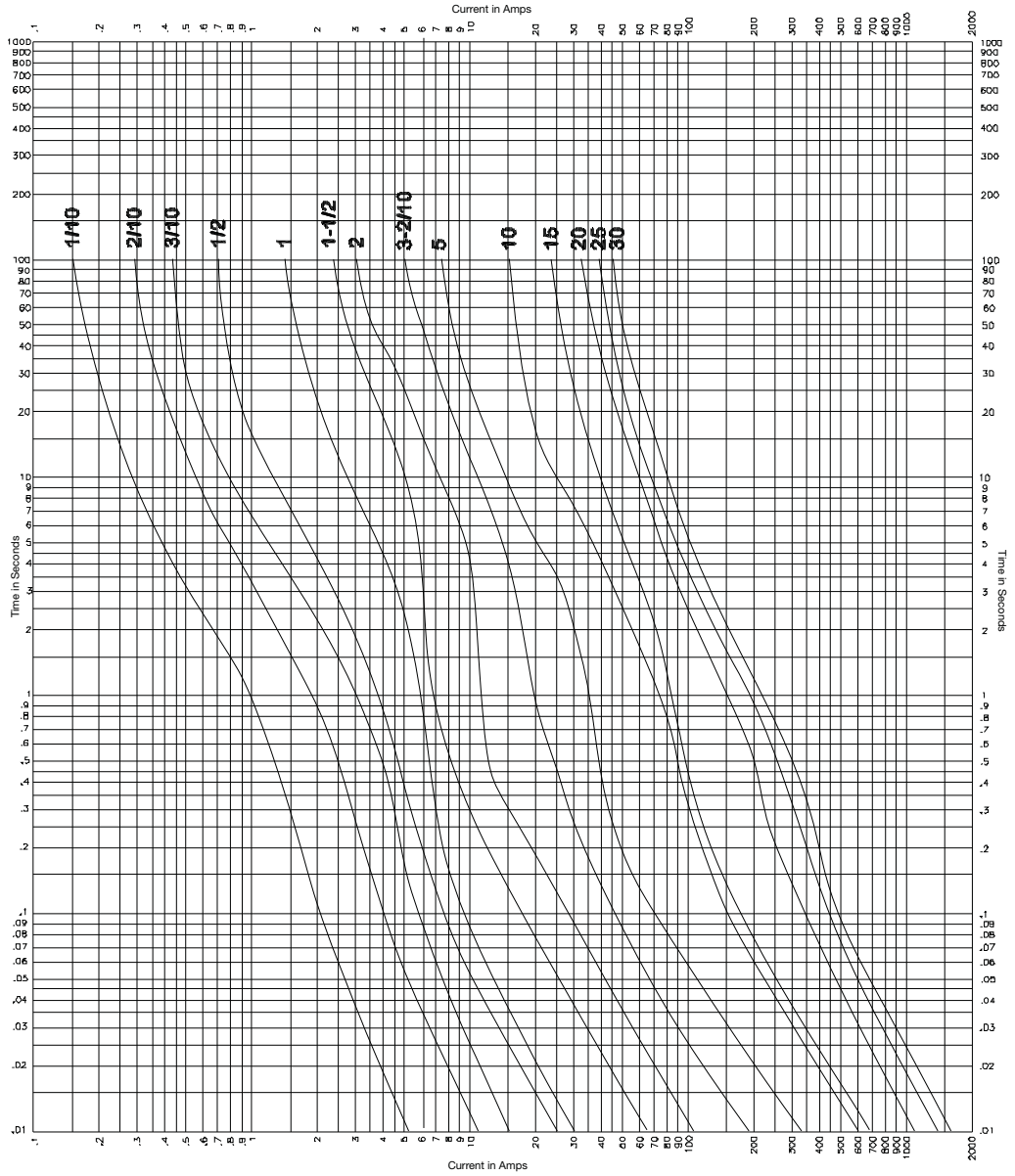



## Specifications

| Part Number | Voltage Rating Vac | AC Interrupting Rating* (amps)@ 250Vac | 125Vac | 32Vac | Typical DC Cold Resistance** (Ω) | Typical Melting I²t† AC | Typical Voltage Drop‡ |
|---|---|---|---|---|---|---|---|
| **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 I²t (A²Sec) (I²t 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** |
| **BK** | 100 fuses packed into a cardboard carton |
| **BK1** | 1,000 fuses packed into a cardboard carton |
| **BK8** | 8,000 fuses packed into a cardboard carton |

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

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