



218 Series, 5 x 20 mm, Time-Lag (Slo-Blo®) Fuse



Description

5x20mm Time-Lag glass body cartridge fuse designed to IEC specification.











Features

- Designed to International (IEC) Standards for use globally
- Meets the IEC 60127-2, Sheet 3 specification for Time-Lag fuses
- Available in cartridge and axial lead form
- RoHS compliant and lead-free

Applications

Used as supplementary protection in appliance or utilization equipment to provide individual protection for components or internal circuits.

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|---|---|---|
|  | Cartridge Certificates: NBK120802-E10480 A&C Leaded Certificates: NBK120802-E10480 B&D | 1A – 5A 6.3A – 15A |
|  | Certificates: 2005010207145715 | 32mA – 6.3A |
|  | Certificates: SU05001-3005 SU05001-2008 SU05001-2009 | 32mA – 40mA 50mA – 800mA 1A – 10A |
|  | Recognised File: E10480 Guide: JDYX2 | 32mA – 16A |
|  | File: 029862 Acc. Class: LR1422-30 | 32mA – 15A |
|  | File: 9850004, 9843043, 811742, 304650, 416270 | 32mA – 6.3A |
|  | License: 40013496 | 32mA – 10A |
|  | License: 40016604 | 15A* |
|  | License: KM41462 | 80mA – 6.3A |
|  | | 32mA – 16A |

* Approval for Cartridge versions only

Electrical Characteristics

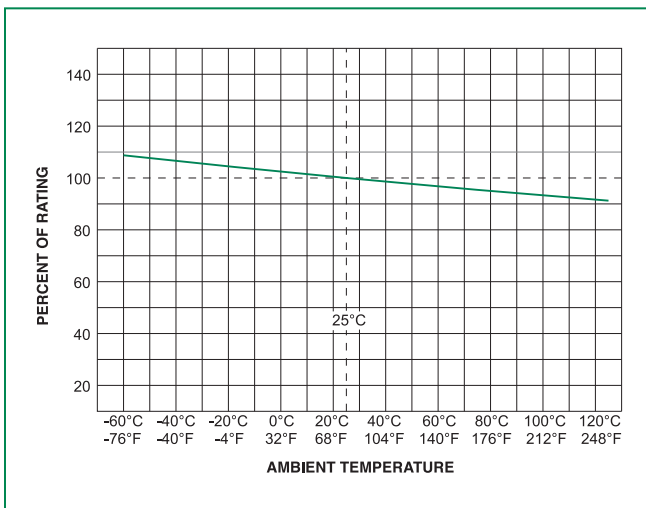
| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|-----------------------------|
| 150% | 32mA–100mA | 60 minutes, Minimum |
| | 125mA-6.3A | 60 minutes, Minimum |
| | 8A-15A | 30 minutes, Minimum |
| 210% | 32mA-100mA | 120 sec., Maximum |
| | 125mA-6.3A | 120 sec., Maximum |
| | 8A-15A | 120 sec., Maximum |
| 275% | 32mA-100mA | 200 ms., Min.; 10 sec. Max. |
| | 125mA-6.3A | 600 ms., Min.; 10 sec. Max. |
| | 8A-15A | 600 ms., Min.; 10 sec. Max. |
| 400% | 32mA-100mA | 40 ms., Min.; 3 sec. Max. |
| | 125mA-6.3A | 150 ms., Min.; 3 sec. Max. |
| | 8A-15A | 150 ms., Min.; 3 sec. Max. |
| 1000% | 32mA-100mA | 10 ms., Min.; 300 ms. Max. |
| | 125mA-6.3A | 20 ms., Min.; 300 ms. Max. |
| | 8A-15A | 20 ms., Min.; 300 ms. Max. |

Electrical Characteristics

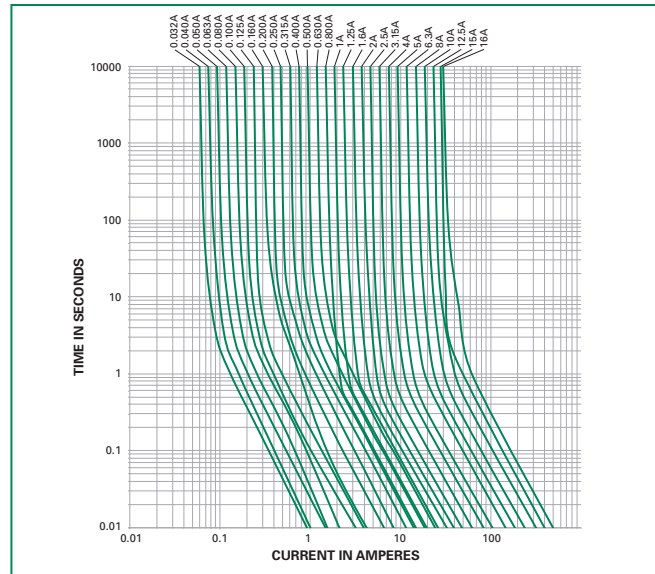
| Amp Code | Amp Rating (A) | Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I ² t (A ² sec) | Nominal Voltage Drop at Rated Current (mV) | Nominal Power Dissipation At Rated Current (W) | Agency Approvals | | | | | | | | | |
|----------|----------------|--------------------|---------------------|--------------------------------|---|--|--|------------------|-----|-----|-----|----|----|----|----|----|----|
| | | | | | | | | UL | CCC | CSA | IEC | UL | UL | UL | UL | UL | UL |
| .032 | 0.032 | 250 | 35 A @ 250 VAC | 48.2580 | 0.01100 | 5000 | 1.6 | | x | x | | x | x | x | x | x | |
| .040 | 0.04 | 250 | | 31.8620 | 0.01100 | 4000 | 1.6 | | x | x | | x | x | x | x | x | |
| .050 | 0.05 | 250 | | 21.2920 | 0.01700 | 3500 | 1.6 | | x | x | | x | x | x | x | x | |
| .063 | 0.063 | 250 | | 14.2680 | 0.02800 | 3000 | 1.6 | | x | x | | x | x | x | x | x | |
| .080 | 0.08 | 250 | | 9.0700 | 0.07500 | 2500 | 1.6 | x | x | x | | x | x | x | x | x | |
| .100 | 0.1 | 250 | | 6.0180 | 0.07900 | 2000 | 1.6 | x | x | x | | x | x | x | x | x | |
| .125 | 0.125 | 250 | | 4.2000 | 0.1465 | 1900 | 1.6 | x | x | x | | x | x | x | x | x | |
| .160 | 0.16 | 250 | | 3.7000 | 0.14400 | 1500 | 1.6 | x | x | x | | x | x | x | x | x | |
| .200 | 0.2 | 250 | | 1.6000 | 0.3410 | 1300 | 1.6 | x | x | x | | x | x | x | x | x | |
| .250 | 0.25 | 250 | | 1.0495 | 0.5405 | 1100 | 1.6 | x | x | x | | x | x | x | x | x | |
| .315 | 0.315 | 250 | | 0.8475 | 1.1100 | 1000 | 1.6 | x | x | x | | x | x | x | x | x | |
| .400 | 0.4 | 250 | | 0.5350 | 1.3250 | 900 | 1.6 | x | x | x | | x | x | x | x | x | |
| .500 | 0.5 | 250 | | 0.3700 | 2.8250 | 300 | 1.6 | x | x | x | | x | x | x | x | x | |
| .630 | 0.63 | 250 | | 0.2750 | 4.6750 | 250 | 1.6 | x | x | x | | x | x | x | x | x | |
| .800 | 0.8 | 250 | | 0.0813 | 3.370 | 150 | 1.6 | x | x | x | | x | x | x | x | x | |
| 001. | 1 | 250 | | 0.0613 | 6.730 | 150 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 1.25 | 1.25 | 250 | | 0.0446 | 12.650 | 150 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 01.6 | 1.6 | 250 | | 0.0336 | 23.350 | 150 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 002. | 2 | 250 | | 0.0293 | 14.450 | 150 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 02.5 | 2.5 | 250 | | 0.0219 | 23.250 | 120 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 3.15 | 3.15 | 250 | | 0.0173 | 38.150 | 100 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 004. | 4 | 250 | | 40 A @ 250 VAC | 0.0129 | 69.10 | 100 | 1.6 | x | x | x | x | x | x | x | x | |
| 005. | 5 | 250 | | 50 A @ 250 VAC | 0.0104 | 111.00 | 100 | 1.6 | x | x | x | x | x | x | x | x | |
| 06.3 | 6.3 | 250 | | 63 A @ 250 VAC | 0.0076 | 198.50 | 100 | 1.6 | x | x | x | x | x | x | x | x | |
| 008. | 8 | 250 | | 80 A @ 250 VAC | 0.0059 | 341.50 | 100 | 4 | | x | | x | x | x | | x | |
| 010. | 10 | 250 | 100 A @ 250 VAC | 0.0045 | 568.00 | 100 | 4 | | x | | x | x | x | | x | | |
| 12.5 | 12.5 | 250 | 63 A @ 250 VAC | 0.0034 | 889.00 | 100 | 4 | | | | x | x | | | x | | |
| 015. | 15 | 250 | 100 A @ 250 VAC | 0.0028 | 1405.00 | 100 | 4 | | | | x | x | x | | x* | | |
| 016. | 16 | 250 | 63 A @ 250 VAC | 0.0021 | 1955.00 | 100 | 4 | | | | | x | | | x | | |

* Approval for cartridge versions only

Temperature Derating Curve



Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

| Wave Parameter | Lead-Free Recommendation |
|---|--------------------------|
| Preheat: (Depends on Flux Activation Temperature) (Typical Industry Recommendation) | |
| Temperature Minimum: | 100° C |
| Temperature Maximum: | 150° C |
| Preheat Time: | 60-180 seconds |
| Solder Pot Temperature: | 260° C Maximum |
| Solder Dwell Time: | 2-5 seconds |

Recommended Hand-Solder Parameters:

Solder Iron Temperature: 350° C +/- 5° C
 Heating Time: 5 seconds max.

Note: These devices are not recommended for IR or Convection Reflow process.

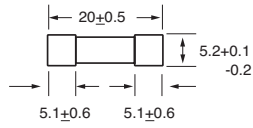
Product Characteristics

| | |
|--------------------------|--|
| Material | Body: Glass Cap: Nickel-plated Brass Leads: Tin-plated Copper |
| Terminal Strength | MIL-STD-202G, Method 211A, Test Condition A |
| Solderability | Reference IEC 60127 Second Edition 2003-01 Annex A |
| Product Marking | Cap1: Brand logo, current and voltage ratings Cap2: Agency approval marks |
| Packaging | Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel) |

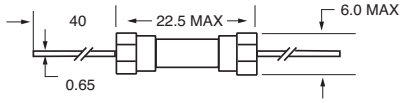
| | |
|------------------------------|---|
| Operating Temperature | -55°C to +125°C |
| Thermal Shock | MIL-STD-202G, Method 107G, Test Condition B (5 cycles, -65°C to +125°C) |
| Vibration | MIL-STD-202G, Method 201A |
| Humidity | MIL-STD-202G, Method 103B, Test Condition A (High RH (95%) and elevated temperature (40°C) for 240 hours) |
| Salt Spray | MIL-STD-202G, Method 101D, Test Condition B |

Dimensions

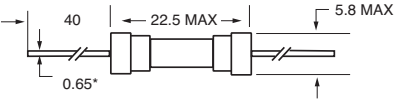
0218 000P



**0218.032 XEP
to
0218.100XEP**



**0218.125 XEP
to
0218016. XEP**

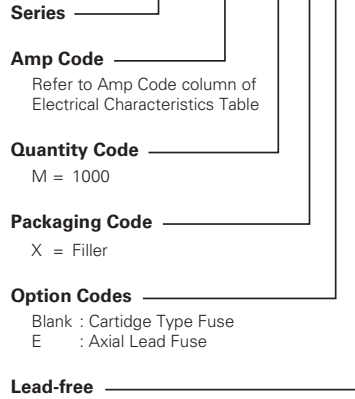


All dimensions in mm

Notes:
 * Ratings above 6.3A
 have 0.8 mm dia lead

Part Numbering System

0218 xxxx M X E P



Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|------------------|
| 218 Series | | | | |
| Bulk | N/A | 1000 | MX | N/A |
| Bulk | N/A | 1000 | MXE | N/A |
| Reel and Tape | EIA 296-E | 1000 | MRET1 | T1=52mm (2.062") |
| Bulk | N/A | 1000 | MXG | N/A |
| Bulk | N/A | 1000 | MXB | N/A |
| Bulk | N/A | 100 | HX | N/A |