

# Axial Lead and Cartridge Fuses

Designed to IEC Standard

**RoHS** **Pb** **5 x 20 mm** Time Lag Fuse (Slo-Blo®) Fuse 213 Series



- 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.
- Available in ratings of 0.200 to 6.3 amperes.
- RoHS compliant and Lead-Free version available, add XP suffix to standard catalog number

## ELECTRICAL CHARACTERISTICS (213 Series):

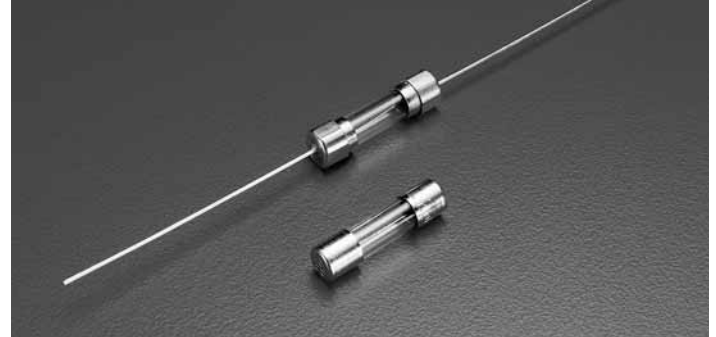
| % of Ampere Rating | Ampere Rating | Opening Time                                  |
|--------------------|---------------|-----------------------------------------------|
| 150%               | .032–6.3      | 60 minutes, <b>Minimum</b>                    |
|                    | 8 - 15        | 30 minutes, <b>Minimum</b>                    |
| 210%               | .032–15       | 2 minutes, <b>Maximum</b>                     |
| 275%               | .032–.100     | 0.2 sec., <b>Min.</b> ; 10 sec. <b>Max.</b>   |
|                    | .125–15       | 0.6 sec., <b>Min.</b> ; 10 sec. <b>Max.</b>   |
| 400%               | .032–.100     | .04 sec., <b>Min.</b> ; 3 sec. <b>Max.</b>    |
|                    | .125–15       | .15 sec., <b>Min.</b> ; 3 sec. <b>Max.</b>    |
| 1000%              | .032–.100     | .01 sec., <b>Min.</b> ; 0.3 sec. <b>Max.</b>  |
|                    | .125–15       | 0.02 sec., <b>Min.</b> ; 0.3 sec. <b>Max.</b> |

**INTERRUPTING RATINGS:** 35 amperes or 10 x rated current; (whichever is greater) to a maximum 100A @ 250 VAC, unity power factor.

## ORDERING INFORMATION:

RoHS compliant and Lead-Free version available, add XP suffix to standard catalog number

| 213 Surge Withstand      |               |                |                              |                           |
|--------------------------|---------------|----------------|------------------------------|---------------------------|
| Cartridge Catalog Number | Ampere Rating | Voltage Rating | Nominal Resistance Cold Ohms | Nominal Melting Pt A°Sec. |
| 0213.200                 | .200          | 250            | 1.60                         | 0.350                     |
| 0213.250                 | .250          | 250            | 1.05                         | 0.555                     |
| 0213.315                 | .315          | 250            | 0.848                        | 1.14                      |
| 0213.400                 | .400          | 250            | 0.535                        | 1.35                      |
| 0213.500                 | .500          | 250            | 0.370                        | 2.90                      |
| 0213.630                 | .630          | 250            | 0.275                        | 4.80                      |
| 0213.800                 | .800          | 250            | 0.165                        | 9.42                      |
| 0213.001                 | 1             | 250            | 0.117                        | 19.20                     |
| 0213.1.25                | 1.25          | 250            | 0.081                        | 27.15                     |
| 0213.01.6                | 1.6           | 250            | 0.055                        | 44.2                      |
| 0213.002.                | 2             | 250            | 0.044                        | 92.7                      |
| 0213.02.5                | 2.5           | 250            | 0.030                        | 138.0                     |
| 0213.3.15                | 3.15          | 250            | 0.022                        | 226.5                     |
| 0213.004                 | 4             | 250            | 0.017                        | 202                       |
| 0213.005.                | 5             | 250            | 0.011                        | 314                       |
| 0213.06.3                | 6.3           | 250            | 0.008                        | 600                       |



## ENVIRONMENTAL SPECIFICATIONS:

**Operating temperature:** -55°C to 125°C

**Thermal Shock:** MIL-STD-202F Method 107G, Test Condition B: (5 cycles -65°C to +125°C)

**Vibration:** MIL-STD-202F Method 201A

**Humidity:** MIL-STD-202F Method 103B, Test Condition A. high relative humidity (95%) and elevated temperature (40°C) for 240 hours.

**Salt Spray:** MIL-STD-202F Method 101D, Test Condition B

## PHYSICAL SPECIFICATIONS:

**Material:** Body: Glass

Cap: Nickel Plated Brass

Leads: Tin Plated Copper

**Terminal Strength:** MIL-STD-202F Method 211A, Test Condition A

**Solderability:** Reference IEC 60127 Second Edition 2003-01 Annex A

**Product Marking:** Cap 1: current and voltage rating.

Cap 2: Agency approval markings.

**Packaging:** Available in Bulk (v=5, H=100, M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel).

# Axial Lead and Cartridge Fuses

Designed to IEC Standard

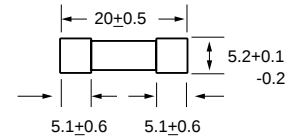
**RoHS** **Pb** **5 x 20 mm** Time Lag Fuse (Slo-Blo®) Fuse 213 Series



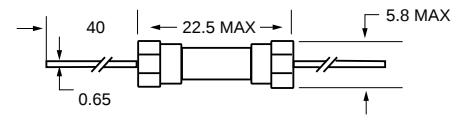
## Agency Approvals

| Agency Approvals                                                                 |                                                                                     | Ampere Range       |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|
|  | Certificate No. Cartridge<br>NBK120802-E10480 A&C<br>Leaded<br>NBK120802-E10480 B&D | 1A – 6.3A          |
|  | Certificate No. 2002010207007597<br>2003010207045592                                | 200mA – 6.3A<br>5A |
|  | Recognised File No. E10480<br>Guide No. JDYX2                                       | 200mA – 6.3A       |
|  | File No. 029862<br>Acc. Class No. LR1422-30                                         |                    |
|  | Licence No. KM41462                                                                 |                    |
|  | File No. 9905092, 9923025,<br>304515                                                |                    |
|  |                                                                                     |                    |

**0213 000<sup>2</sup>**



**0213 000 XE<sup>1</sup>**

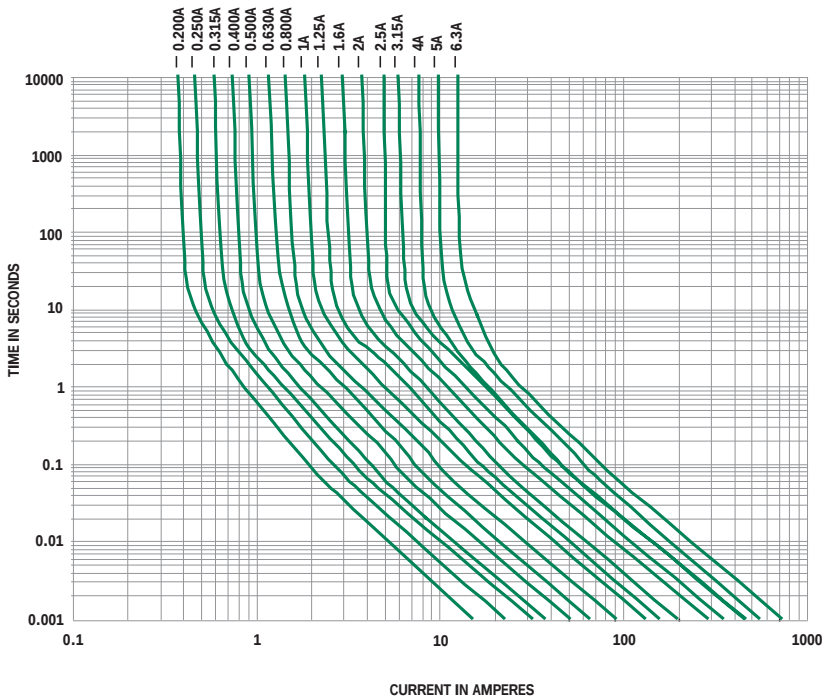


All dimensions in mm

### Notes:

- \* Ratings above 6.3A have 0.8 mm dia lead
- 1 For RoHS compliant parts replace XE with XEP
- 2 For RoHS compliant parts add suffix 'XP'

## Average Time Current Curves



# Axial Lead and Cartridge Fuses

Designed to IEC Standard

**RoHS** **Pb** **5 x 20 mm** Time Lag Fuse (Slo-Blo®) Fuse 218 Series



- 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.
- Available in ratings of 0.032 to 15 amperes.
- RoHS compliant and Lead-Free version available, add XP suffix to standard catalog number

## ELECTRICAL CHARACTERISTICS (218 Series):

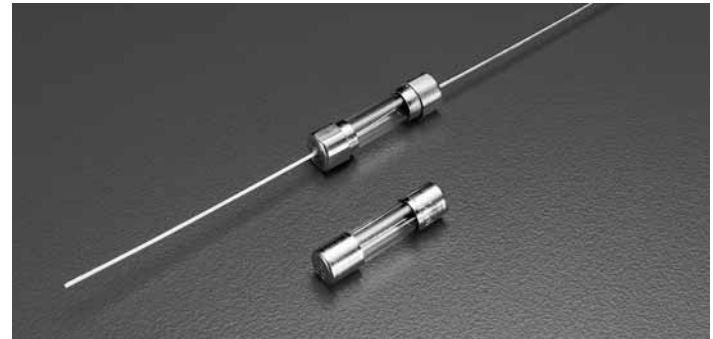
| % of Ampere Rating | Ampere Rating | Opening Time                                  |
|--------------------|---------------|-----------------------------------------------|
| 150%               | .032–6.3      | 60 minutes, <b>Minimum</b>                    |
|                    | 8 - 15        | 30 minutes, <b>Minimum</b>                    |
| 210%               | .032–15       | 2 minutes, <b>Maximum</b>                     |
| 275%               | .032–.100     | 0.2 sec., <b>Min.</b> ; 10 sec. <b>Max.</b>   |
|                    | .125–15       | 0.6 sec., <b>Min.</b> ; 10 sec. <b>Max.</b>   |
| 400%               | .032–.100     | .04 sec., <b>Min.</b> ; 3 sec. <b>Max.</b>    |
|                    | .125–15       | .15 sec., <b>Min.</b> ; 3 sec. <b>Max.</b>    |
| 1000%              | .032–.100     | .01 sec., <b>Min.</b> ; 0.3 sec. <b>Max.</b>  |
|                    | .125–15       | 0.02 sec., <b>Min.</b> ; 0.3 sec. <b>Max.</b> |

**INTERRUPTING RATINGS:** 35 amperes or 10 x rated current; (whichever is greater) to a maximum 100A @ 250 VAC, unity power factor.

## ORDERING INFORMATION:

RoHS compliant and Lead-Free version available, add XP suffix to standard catalog number

| 218                      |               |                |                              |                                                      |
|--------------------------|---------------|----------------|------------------------------|------------------------------------------------------|
| Cartridge Catalog Number | Ampere Rating | Voltage Rating | Nominal Resistance Cold Ohms | Nominal Melting I <sup>2</sup> t A <sup>2</sup> Sec. |
| 218.032                  | .032          | 250            | 58.45                        | 0.00305                                              |
| 218.040                  | .040          | 250            | 35.70                        | 0.0055                                               |
| 218.050                  | .050          | 250            | 23.30                        | 0.0071                                               |
| 218.063                  | .063          | 250            | 18.1                         | 0.012                                                |
| 218.080                  | .080          | 250            | 12.6                         | 0.0265                                               |
| 218.100                  | .100          | 250            | 8.95                         | 0.0495                                               |
| 218.125                  | .125          | 250            | 4.41                         | 0.150                                                |
| 218.160                  | .160          | 250            | 2.44                         | 0.225                                                |
| 218.200                  | .200          | 250            | 1.60                         | 0.350                                                |
| 218.250                  | .250          | 250            | 1.05                         | 0.555                                                |
| 218.315                  | .315          | 250            | 0.848                        | 1.14                                                 |
| 218.400                  | .400          | 250            | 0.535                        | 1.35                                                 |
| 218.500                  | .500          | 250            | 0.370                        | 2.90                                                 |
| 218.630                  | .630          | 250            | 0.275                        | 4.80                                                 |
| 218.800                  | .800          | 250            | 0.073                        | 1.99                                                 |
| 218.001                  | 1             | 250            | 0.055                        | 3.33                                                 |
| 218.1.25                 | 1.25          | 250            | 0.042                        | 5.80                                                 |
| 218.01.6                 | 1.6           | 250            | 0.032                        | 10.61                                                |
| 218.002                  | 2             | 250            | 0.029                        | 14.80                                                |
| 218.02.5                 | 2.5           | 250            | 0.022                        | 23.85                                                |
| 218.03.15                | 3.15          | 250            | 0.017                        | 39.20                                                |
| 218.004                  | 4             | 250            | 0.013                        | 70.95                                                |
| 218.005                  | 5             | 250            | 0.010                        | 114.0                                                |
| 218.06.3                 | 6.3           | 250            | 0.0075                       | 204.0                                                |
| 218.008                  | 8             | 250            | 0.0059                       | 350.5                                                |
| 218.010                  | 10            | 250            | 0.0045                       | 583.0                                                |
| 218.015                  | 15            | 250            | 0.0030                       | 1441.0                                               |



## ENVIRONMENTAL SPECIFICATIONS:

**Operating temperature:** -55°C to 125°C

**Thermal Shock:** MIL-STD-202F Method 107G, Test Condition B: (5 cycles -65°C to +125°C)

**Vibration:** MIL-STD-202F Method 201A

**Humidity:** MIL-STD-202F Method 103B, Test Condition A. high relative humidity (95%) and elevated temperature (40°C) for 240 hours.

**Salt Spray:** MIL-STD-202F Method 101D, Test Condition B

## PHYSICAL SPECIFICATIONS:

**Material:** Body: Glass

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Leads: Tin Plated Copper

**Terminal Strength:** MIL-STD-202F Method 211A, Test Condition A

**Solderability:** Reference IEC 60127 Second Edition 2003-01 Annex A

**Terminal strength:** MIL-STD-202F Method 211A, Test Condition A

**Product Marking:** Cap 1: current and voltage rating.  
Cap 2: Agency approval markings.

**Packaging:** Available in Bulk (v=5, H=100, M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel).

# Axial Lead and Cartridge Fuses

Designed to IEC Standard

**RoHS** **Pb** **5 x 20 mm** Time Lag Fuse (Slo-Blo®) Fuse 218 Series

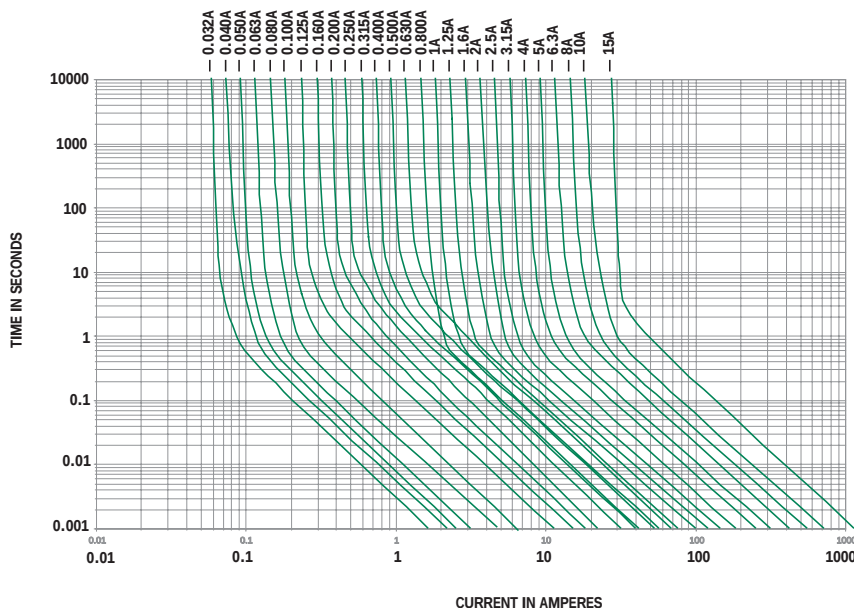


## Agency Approvals

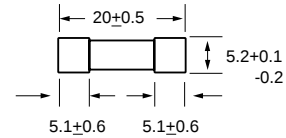
| Agency Approvals                                                                   |                                                                                     | Ampere Range                            |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------|
|    | Certificate No. Cartridge<br>NBK120802-E10480 A&C<br>Leaded<br>NBK120802-E10480 B&D | 1A – 15A                                |
|    | Certificate No. 2002010207007596                                                    | 32mA – 6.3A                             |
|    | Certificate No. SU05001-3005<br>SU05001-2008<br>SU05001-2009                        | 32mA – 40mA<br>50mA – 800mA<br>1A – 10A |
|    | Recognised File No. E10480<br>Guide No. JDYX2                                       | 32mA – 15A                              |
|    | File No. 029862<br>Acc. Class No. LR1422-30                                         |                                         |
|    | Licence No. KM41462                                                                 | 80mA – 6.3A                             |
|  | File No. 9850004, 9840179,<br>9446070, 9708209,<br>9843043, 312377 & 304650         | 32mA – 6.3A                             |
|  |                                                                                     | 32mA – 15A                              |

**Note:** 8A and 10A are under consideration by IEC(125V).

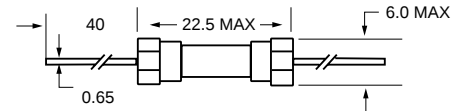
## Average Time Current Curves



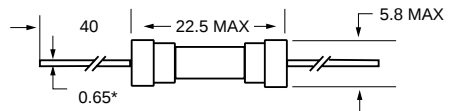
**0218 000<sup>2</sup>**



**0218.032 XE<sup>1</sup>**  
to  
**0218.100XE<sup>1</sup>**



**0218.125 XE<sup>1</sup>**  
to  
**0218015. XE<sup>1</sup>**



All dimensions in mm

Notes:

\* Ratings above 6.3A

have 0.8 mm dia lead

1 For RoHS compliant parts

replace XE with XEP

2 For RoHS compliant parts

add suffix 'XP'