## Fuse Informations

What are fuses?? They are protectors that prevent damage to electronic and electrical equipment. Fuses allow electric current to pass through them until the amount of current goes over the fuses rating. At the time, the fuse Blows and stop the flow of electric current. Fuses are rated in in amperes, the unit of measure for electric current.

Fast-ACTING / SLOW BLOW. Fast Acting fuses react quickly to current overloads. Slow Blow fuses are less sensitive to start-up surge and protect against long-term overlaods

Fuse is a Saftey devices components. Always replace a blown fuse with the same type replace fast acting with fast acting, slow blow with slow blow. Slow Blow fuse are less sensitve to start-up the protection against longterm overloads.
Thera are four basic types of fuse: Slow-Blow/ Time LAG - Dual Element slow blow fuses / Fast-acting / Very fast Acting fuses.

A major type of slow blow fuse is the dual element fuse. This fuse consists of a short circuit strip and a soldered joint, spring connection. During overloads conditions, the soldered joints gets hot enough to melt and the spring shears the junction loose. Under short circuits conduitions the short circuit elements opersates to open the circuit. All dual-Elements fuses are considered to be slow blow, but not all slow blow fuses are dual elements.

Slow-blow fuses are ideal for circuits with a transient surge or power inrush. There circuits include: motors, transformers, incandescant lamps and capacitive loads.
This inrush can be 20 times the normal current level. When using fast-acting, single elements type fuses, it is neccessary to rate fuse at $150 \%$ to $300 \%$ of thre circuits full load curent. With this rating rule inrush may cause nuisance openings.
Slow Blow fuses allow close rating of the fuse without nuisance opening. Typically rate the slow-blow fuses from $125 \%$ to $150^{\circ}$ of the circuits full load process.
Fast-Acting fuses have no intentional built in slow-blow and are used in circuits without transient inrush Amp.
Very fast-acting fuses often have silver links. Because of the fuses current limiting ability, there fuses are frequently used to protect semiconductor circuits.

The current carrying capacity of a fuse: The nominal value upon which all performance characteristics of a fuse are based.
( Overcurrent) A condition which exits on a electrical circuit when the normals current is exceeded.
Overcurrents take on two separate characteristics overloads and short circuits.
(Overload) Can be classified as an overcurrent which exceeds the normal full load current of a circuit. Also characteristics of this type of overcurrent is that it does not leave the normal current carrying path of the circuit. That is it flows from the source, through the conductors, through the load, back through the conductors, to the source again.
(Voltage Rating) For general circuit protection, the voltage rating on the fuse should be equal to, or greater than the circuit voltage of the circuit in which the fuse is applied. Exceeding the voltage rating of a fuse impairs ist ability to clear an overload or short circuit safely. Fuse can be used at any voltage below the fuse voltage rating; a 250 V fuse can be used in 125 V circuits.
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EDCON has carefull prepared the webside
specifications contained herein. These specifications are for reference only, any inaccuracies may be due to typographical errors or changes made after the publications on our webside.
Cross Reference charts BUSSMANN / LITTLEFUSE / TELFUSE / BEL FUSE
Testing standards and equipment utilized for UL, CSA, METI, and IEC ... etc. Approvals (Specificy fuse type desired.

EDCON Components are guaranteed to be free form defects in material and workmanship for a reasonable period of time after delivery. Our öiability shall be limited to replacement to defective material only. Either seller or manufacturer shall be liable for any injury, loss or damage, direct or consequential, rising out of the use of or the inability to use the products for his intended use, user assumes all risk and liability whatsoever in connection therewith.

| DRW: | Jason | CHKD | Jules | MATL: | Wu | DATE | 16.09 .2009 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| APPD: | Join |  |  | FINISH | Shieh | Sheet | 1 from 3 |

Technical Specifications

Operating Temperature:
Shock:
Vibration:
Salt Spray:
Insulation Resistance:
Resistance to Solder Heat:
Thermal Shock:
Interrrupting Ratings:

Materials:

Packaging:
. $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}$
MIL-STD-202, Method 213, Test Condition 1
(Shaw toth)
MIL-STD-202, Method 201,
( $10-55 \mathrm{~Hz} \times 3$ axis/no load
MIL-STD-202, Method 101, Test Condition B (48hrs)
MIL-STD-202, Method 101, Test Condition A (After Openeing) 10.000 Ohms minimum
MIL-STD-202, Method 210, Test Condition F (10sec, at $260^{\circ} \mathrm{C}$ )
MIL-STD-202, Method 107, Test Condition B ( $-65^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}$ )
35 amperes or $10 \times$ rated current whichever is greater at 250 V AC/DC

Glass Body / Nickel Plated Brass Caps

Bulk 100 / 1000PCS per Bag

| Rated Current | $\mathbf{1 , 5} \mathbf{~ I n}$ | $\mathbf{2 , 1} \mathbf{~ I n}$ | 2,75 In |  | $\mathbf{4}$ In |  | $\mathbf{1 0}$ In |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Min. | Max. | Min. | Max. | Min. | Max. | Max. |
| 400 mA | 60 Min. | 30 Min. | 50 sec | 2 ms | 10 ms | 300 ms | 20 ms |


| Serie | Ampere <br> Rating (In) | Voltage <br> Rating (V) | Nominal <br> Resistance <br> Cold Ohms | Voltage <br> Drop (mV) <br> MAX. | Nominal <br> Melting I $\mathbf{2 t}$ <br> $\mathbf{A}^{\mathbf{2}} \mathbf{s e c}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $R 41001$ | 400 mA | 250 V | 0,295 | 300 | 0,08 |

## Mechanical Dimension



|  |  |  |  |  |  | IEC EUROPEAN Standard Glass Fuses Quick Acting 5x20mm |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Part No.: | R41001-0A400 |
|  |  |  |  |  |  | Customer: |  |
| DRW: | Jason | CHKD | Jules | MATL: | Wu | DATE | 16.09.2009 |
| APPD: | Join |  |  | FINISH | Shieh | Sheet | 2 from 3 |



Approvals

| cac | Si | (D) | $\mathrm{VE}$ | $\square$ | (F) | K EMA | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | YES |  | YES |  |  |  | YES |


| (U) | VCI | PSE | CCC |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| YES |  |  | YES |  |  |  |  |

## Ordering Information


$\left.\begin{array}{l|l|l|l|l|l|}\hline \text { IEC EUROPEAN Standard Glass } \\ \text { Fuses Quick Acting 5x20mm }\end{array}\right]$

