Special Application Fuses
Intrinsically Safe > Radial Leaded > PICO® 305 Series Fuse

PICO® 305 Series - 277V Intrinsically Safe Fuse

Description

The PICO® 305 Series Fuse offers a range of encapsulated fuses certified under UL 913, the standard for intrinsically safe electrical equipment, to operate in hazardous locations. Ideal for use in oil, gas, mine, chemical, and pharmaceutical process industries, the PICO 305 Series fuse was designed to limit the energy and temperature generated during its operation. The fuse design and its encapsulant are suitable for use in an intrinsically safe apparatus and associated apparatus for peak voltage not exceeding 375V.

Features

- High Interrupting Rating of 1500A
- Well suited for 277V applications
- Designed for operation in a range of hazardous environments
- Encapsulated and sealed (1mm minimum)
- RoHS Compliant
- Global hazardous location certifications

Applications

- Testing, measuring or processing electronic and electrical equipment
- Motor controllers
- Process control and automation
- Sensors
- Communication handsets
- Lighting
- Flow/gas meters

Electrical Characteristics for Series

<table>
<thead>
<tr>
<th>% of Ampere Rating</th>
<th>Opening Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>110%</td>
<td>4 Hours, Minimum</td>
</tr>
<tr>
<td>300%</td>
<td>10 Seconds, Maximum</td>
</tr>
<tr>
<td>1000%</td>
<td>0.002 Seconds, Maximum</td>
</tr>
</tbody>
</table>

Electrical Specifications by Items

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.050</td>
<td>.050</td>
<td></td>
<td>0.00019</td>
<td>9.202</td>
<td>9.010</td>
<td>12.00</td>
<td>x x x</td>
</tr>
<tr>
<td>0.080</td>
<td>.080</td>
<td></td>
<td>0.00035</td>
<td>6.031</td>
<td>5.963</td>
<td>8.19</td>
<td>x x x</td>
</tr>
<tr>
<td>0.100</td>
<td>.100</td>
<td></td>
<td>0.00070</td>
<td>2.709</td>
<td>2.668</td>
<td>5.00</td>
<td>x x x</td>
</tr>
<tr>
<td>0.160</td>
<td>.160</td>
<td></td>
<td>0.00202</td>
<td>2.297</td>
<td>2.292</td>
<td>3.00</td>
<td>x x x</td>
</tr>
<tr>
<td>0.200</td>
<td>.200</td>
<td></td>
<td>0.00288</td>
<td>1.935</td>
<td>1.839</td>
<td>2.68</td>
<td>x x x</td>
</tr>
<tr>
<td>0.250</td>
<td>.250</td>
<td></td>
<td>0.060050</td>
<td>1.268</td>
<td>1.105</td>
<td>1.60</td>
<td>x x x</td>
</tr>
<tr>
<td>0.500</td>
<td>.500</td>
<td></td>
<td>0.127400</td>
<td>0.392</td>
<td>0.368</td>
<td>0.46</td>
<td>x x x</td>
</tr>
<tr>
<td>0.750</td>
<td>.750</td>
<td></td>
<td>0.13448</td>
<td>0.219</td>
<td>0.196</td>
<td>0.27</td>
<td>x x x</td>
</tr>
</tbody>
</table>

Notes:
1) The fuse must be mounted so that creepage and clearance distances aren’t impaired in any way.
2) The fuse is suitable for use in intrinsically safe equipment and associated apparatus for voltage not exceeding 375V peak.
3) Maximum surface temperature rise at 170% rated current: <200mA = 80°C, 250mA = 84°C, 500mA = 56°C, and 750mA = 84°C.

© 2015 Littelfuse, Inc.
Specifications are subject to change without notice.
Revised: 12/04/15
Special Application Fuses
Intrinsically Safe > Radial Leaded > PICO® 305 Series Fuse

Product Characteristics

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Rating</strong></td>
<td><strong>Ambient Temperature</strong></td>
</tr>
<tr>
<td>≤ 0.200 A</td>
<td>-40°C to +50°C</td>
</tr>
<tr>
<td>0.250 A</td>
<td>-40°C to +46°C</td>
</tr>
<tr>
<td>0.500 A</td>
<td>-40°C to +74°C</td>
</tr>
<tr>
<td>0.750 A</td>
<td>-40°C to +46°C</td>
</tr>
</tbody>
</table>

Notes:
1) Any use of the 305 Series fuse outside of the ambient temperature ranges specified in the table is subject to additional investigation.
2) Specified ambient temperature range is for intrinsic safety certification.

Molding Material
Polyamide 6
CTI 175 volts minimum
Continuous Operating Temperature: 130°C

Thermal Shock
Withstands 5 cycles of -55°C to 125°C

Vibration
Per MIL-STD-202

Insulation Resistance (After Opening)
Greater than 10,000 ohms (at twice rated DC voltage)

Soldering Parameters

Wave Soldering
260°C, 10 seconds max.

Dimensions

Part Numbering System

0305 .050 M

SERIES
AMP CODE
Refer to Amp Code column in the Electrical Specifications table.

QUANTITY & PACKAGING CODE
M = Bulk pack, 1000 pcs
H = Bulk pack, 100 pcs
V = Bulk pack, 5 pcs

Average Time Current Curves

Temperature Rerating Curve

Notes:
1) Rerating depicted in this curve is in addition to the standard rerating of 25% for continuous operation.
2) The temperature rerating curve represents the nominal conditions. For questions about temperature rerating curve, please consult Littelfuse technical support for assistance.