

NUMBER <b>GS-20-0535</b>	TYPE <b>General Application Specification</b>	<b>Amphenol ICC</b>	
TITLE <b>Application Guide for BK100 Cable Connectors</b>		PAGE <b>1 of 9</b>	REVISION <b>D</b>
		AUTHORIZED BY <b>Dice Lee</b>	DATE <b>2023-06-15</b>
CLASSIFICATION <b>UNRESTRICTED</b>			

## 1.0 OBJECTIVE

This specification provides information and requirements regarding customer application of BK100. This specification is intended to provide general guidance for application process development. It is recognized that no single application process will work under all customer scenarios and that customers will develop their own application processes to meet their needs. However, if these application processes differ greatly from the one recommended, AICC cannot guarantee results.

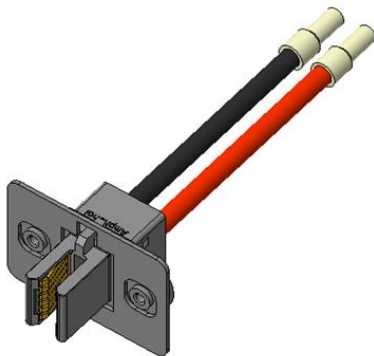
## 2.0 SCOPE

This specification provides information and requirements regarding customer application of BK100. These connectors provide a means of bringing high current from Bus bar conductors to cable.

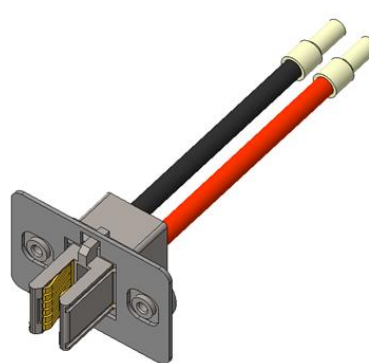
## 3.0 GENERAL

This document is meant to be an application guide. If there is a conflict between the product drawings and specifications, the drawings take precedence.

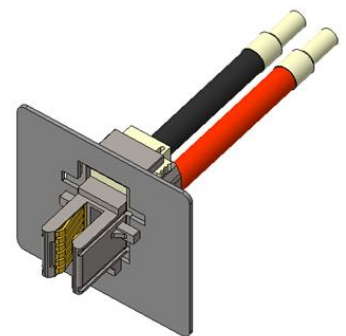
Enhanced Screw Mount Version



Screw Mount Version



Slide to Lock Version



## 4.0 DRAWINGS AND APPLICABLE DOCUMENTS

- AFCI PRODUCT SPECIFICATION: GS-12-1410,GS-12-1746
- AFCI PRODUCT DRAWINGS: 10142911, 10143222, 10143890,10146534
- APPLICATION MANUALS/INSTRUCTION SHEETS (IF NOT INCLUDED IN THIS DOCUMENT)

Product drawings and **AFCI's GS-12-1410** Product Specification are available at [www.fci.com](http://www.fci.com). In the event of a conflict between this application specification and the drawing, the drawing will take precedence. Customers are advised to refer to the latest revision level of AFCI product drawings for appropriate details.

## 5.0 APPLICATION REQUIREMENTS

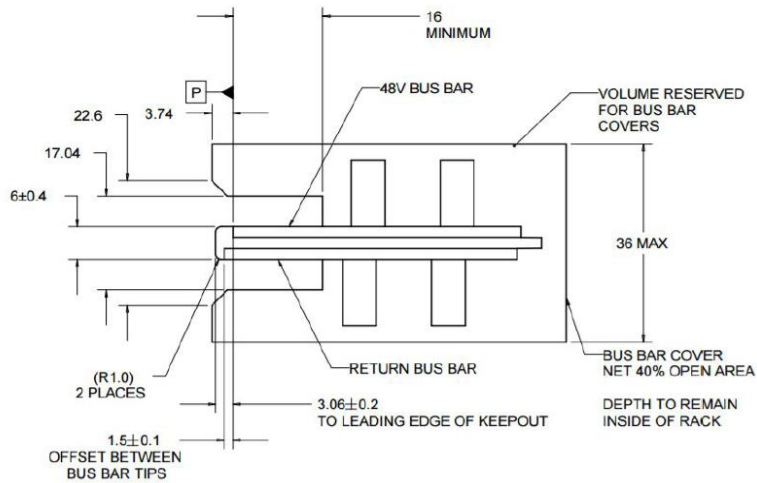
### 5.1 Connectors mating part (Bus bar)

Recommended material: Copper, solid blade

Material Thickness: 6.0±0.40 mm

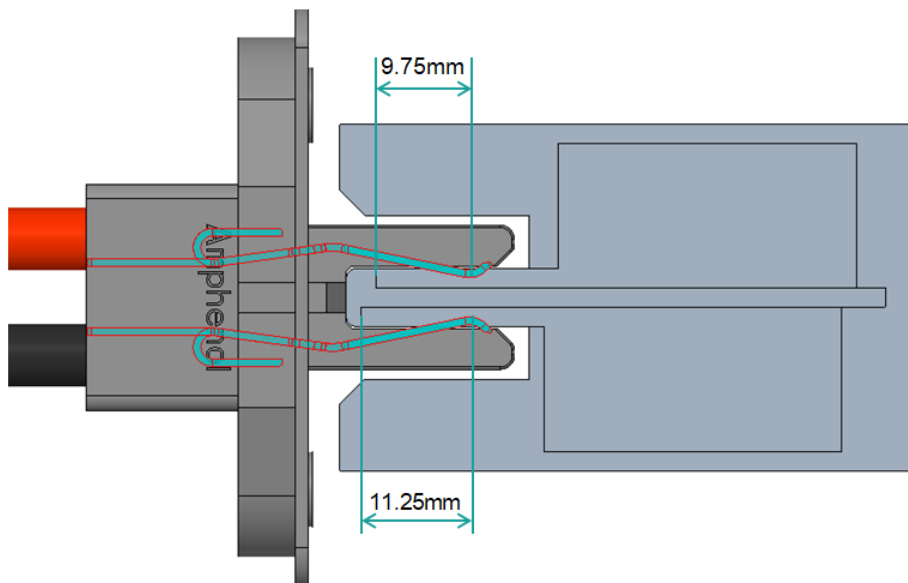
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Surface roughness in contact area: 1.6 µm maximum  
 Plating in contact area: 3 µm min Silver over 1.27 µm min Nickel  
 Bus bar misalignment: ± 2mm Maximum.  
 The Bus bar dimensions as shown in below:



## 5.2 Wipe distance

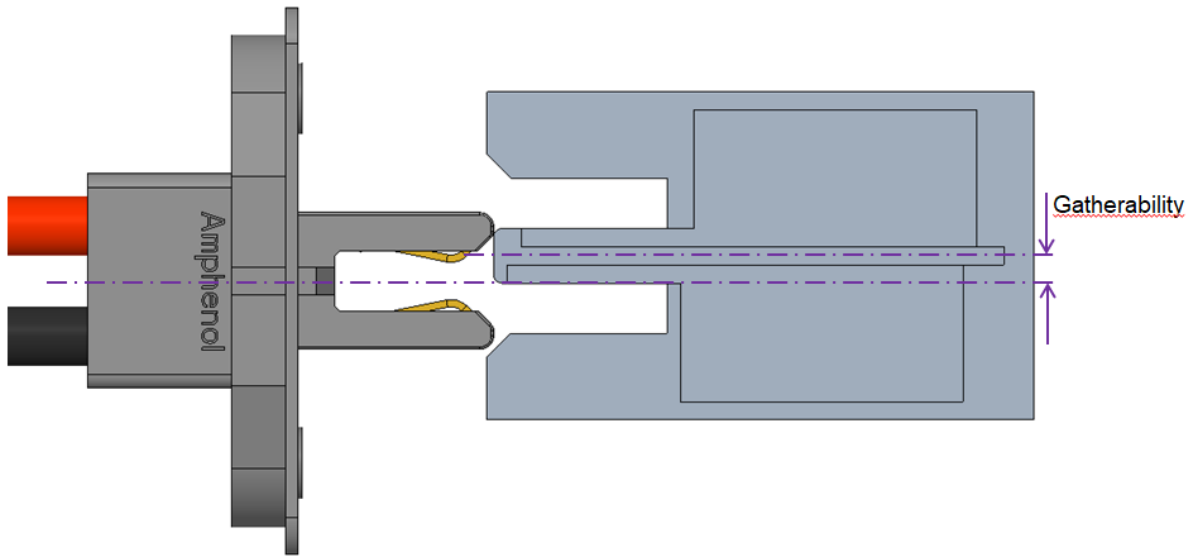
The wipe distance is 9.75mm for power Bus bar and 11.25mm for return Bus bar when the Bus bar is mated to the bottom of housing.



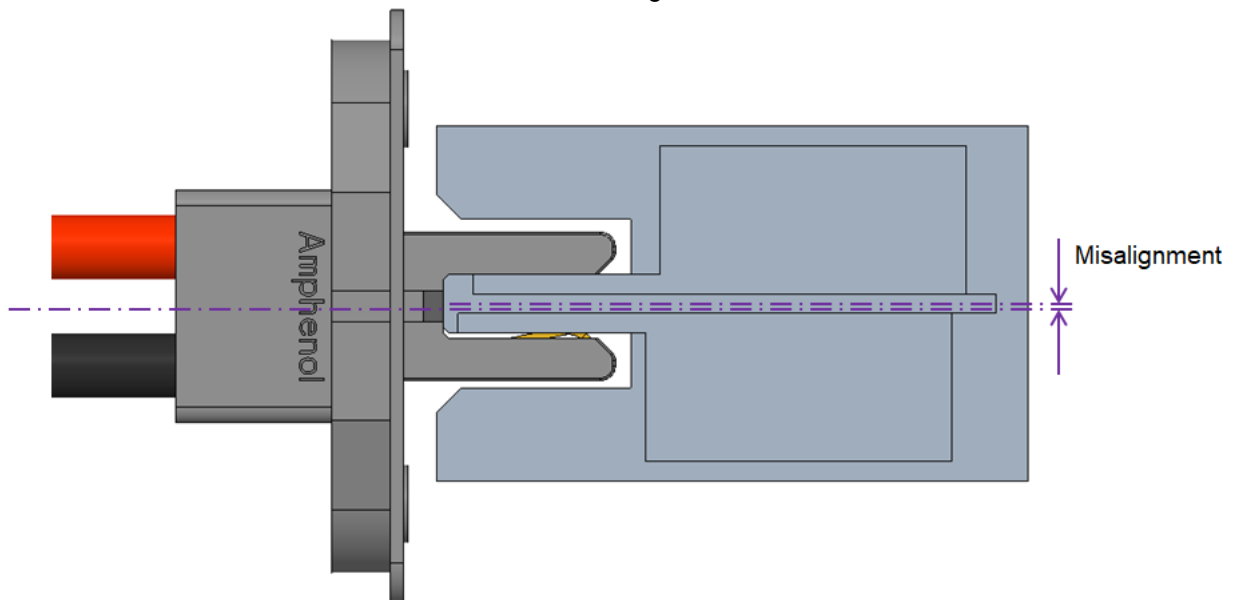
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### 5.3 Gatherability and Misalignment

When Bus bar is mating with connector, the gatherability is 3.025mm.



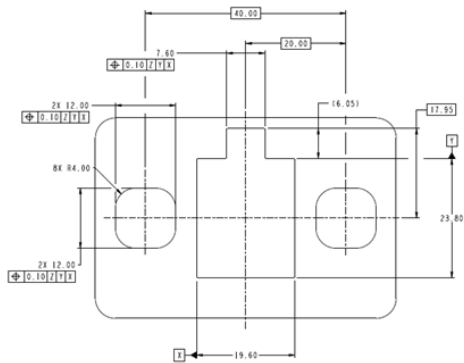
When Bus bar is mated with connector, the misalignment is 0.275mm



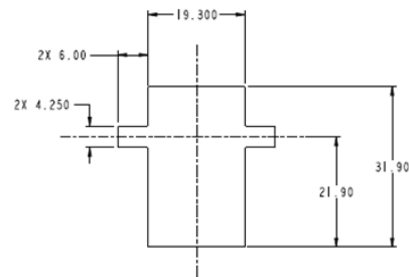
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## 5.4 Connector Panel layouts

### Screw Mount Layout



### Slide to Lock Layout

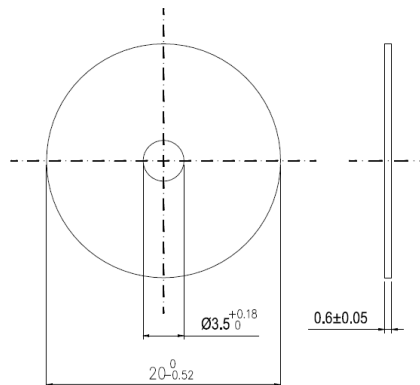


Panel Cutout Details For 2mm Float  
Panel Thickness  $1.35 \pm 0.45\text{mm}$

## 5.5 Connector Panel Hardware

### 5.5.1 Screw Mount Version

Screw: Standard M3 X 0.40mm X 9mm min pan head screw.  
Washer: AFCI PN: 10142858-001



### 5.5.2 Slide to Lock Version

No mounting hardware required.

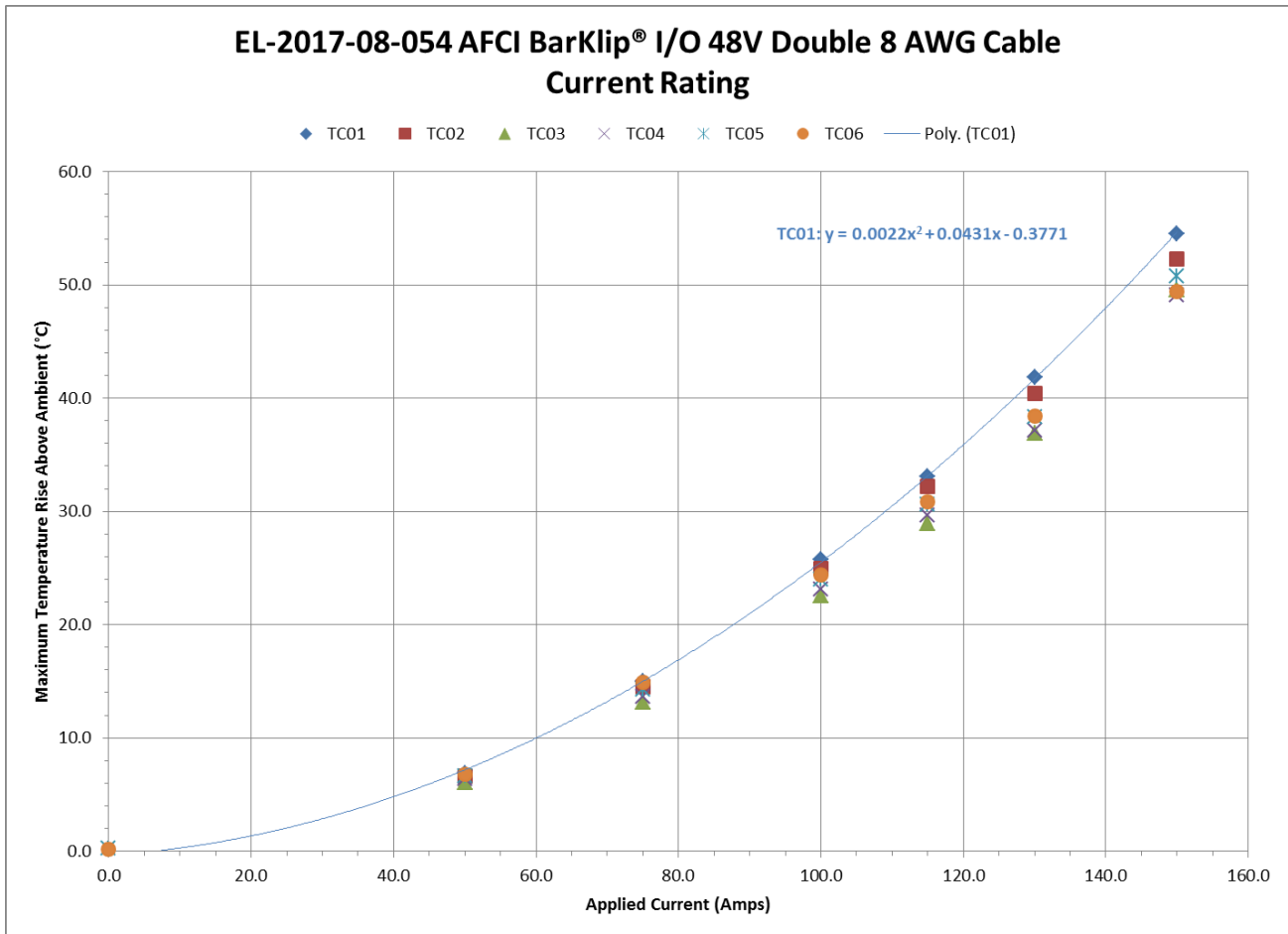
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Current Rating

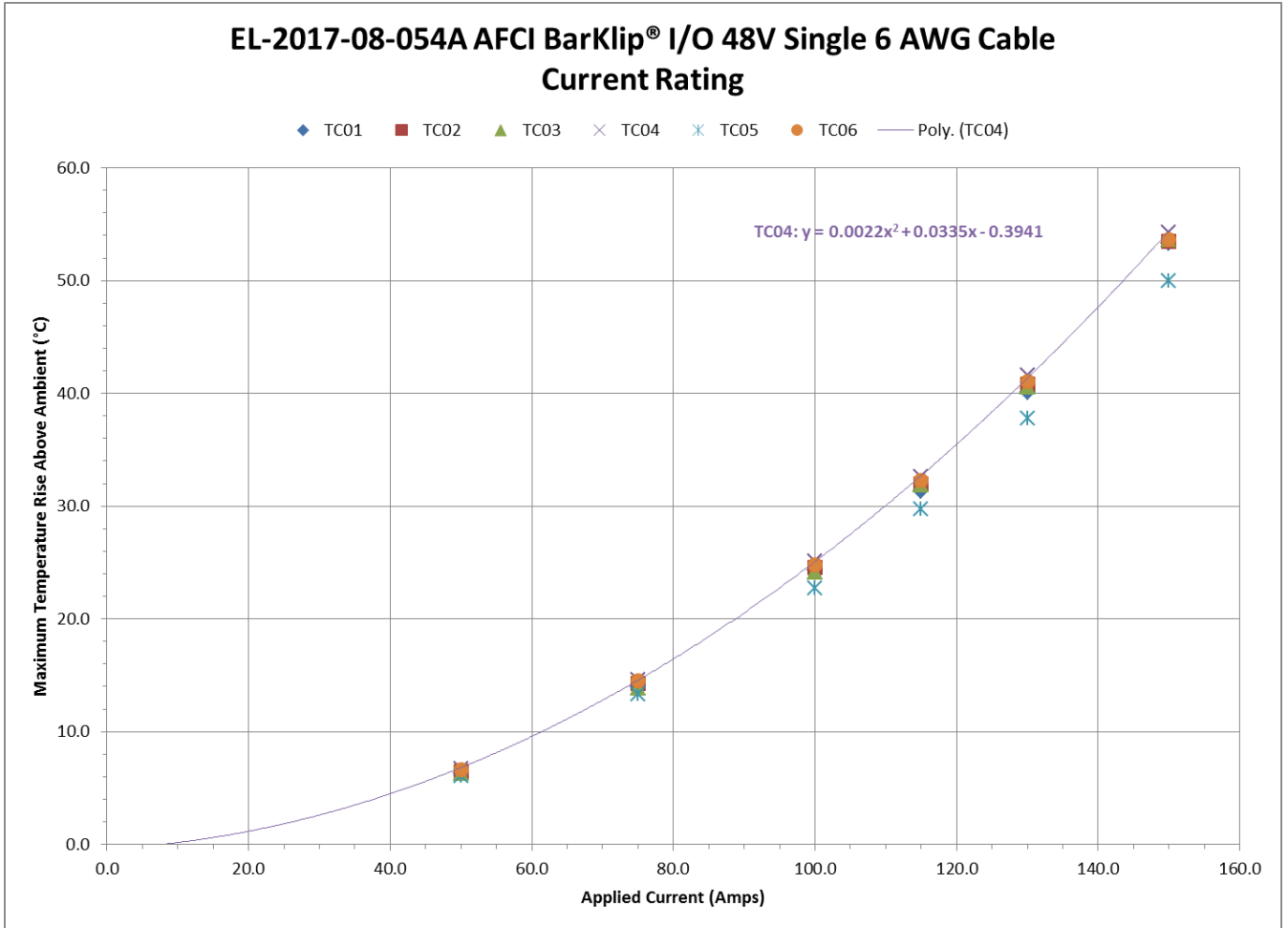
6.1 Current rating table:

Product Number	Connector Description	Wire Size (AWG)	Current Rating (A)
10142911-001LF	Screw Mount	Qty 1, 6AWG	75
10143890-001LF	Screw Mount	Qty 2, 8AWG	100

6.2 T-Rise Charts:

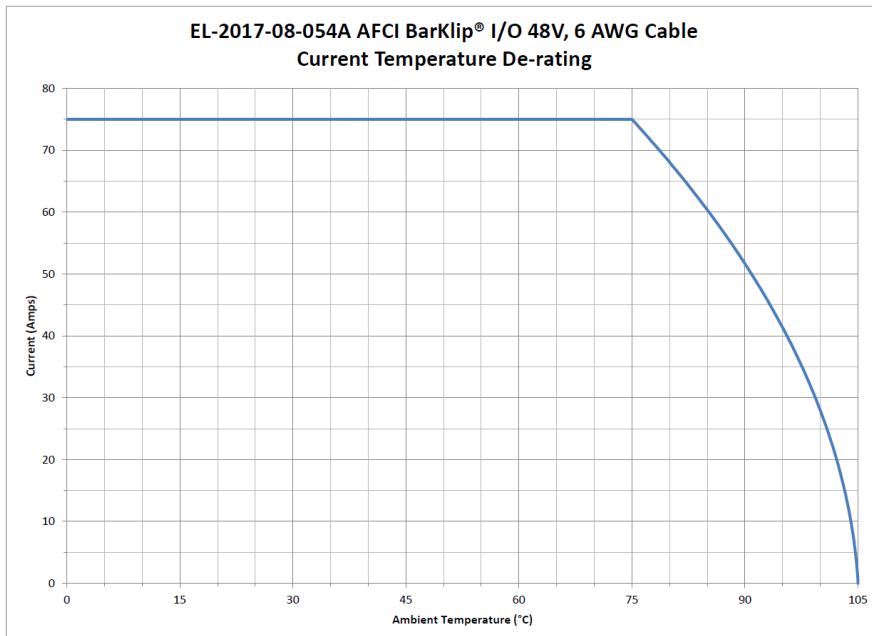
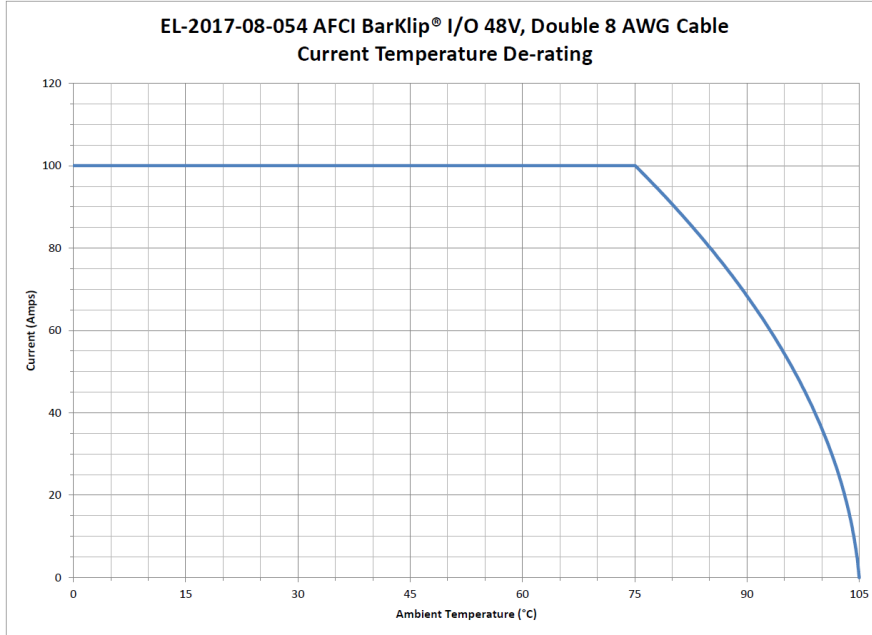


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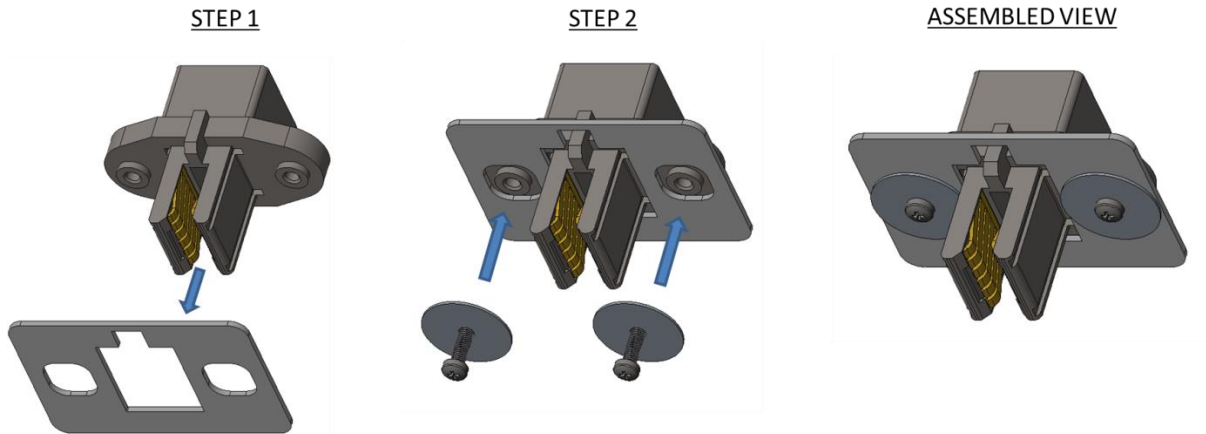
6.4 Current temperature de-rating curve:



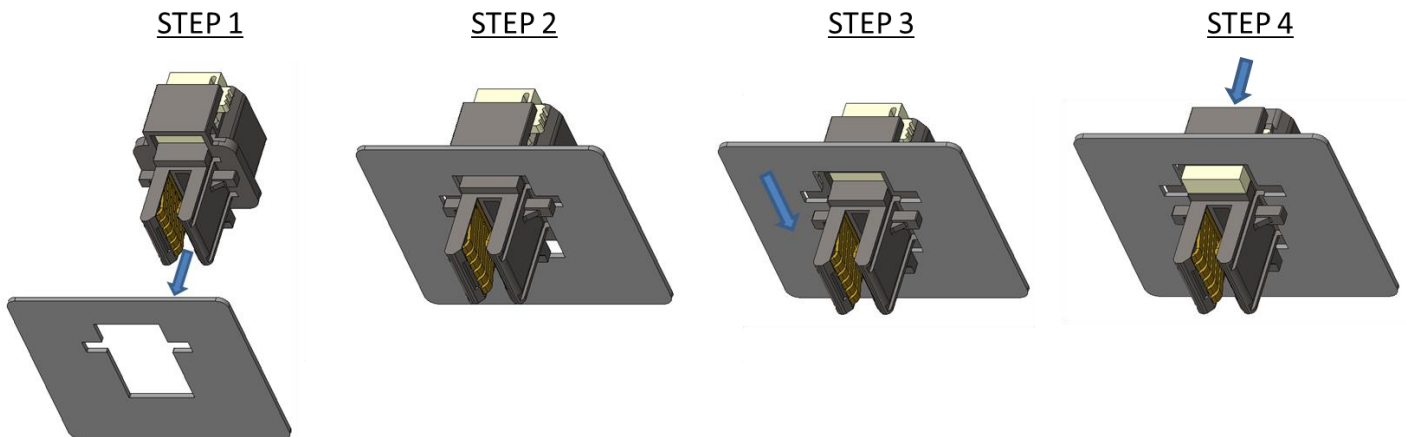
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## 6.0 APPLICATION PROCEDURE

Screw Mount Connector: Mount connector in panel by applying the washer and screw as seen below.  
Screw torque requirements: MIN = 4.0 in-lbf or 0.45 N-m    MAX = 6.00 in-lbf or 0.68 N-m



Slide to Lock Connector: Mount connector in panel by using the build in latch block.





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**7.0 RECORD RETENTION**

<u>REV</u>	<u>PAGE</u>	<u>DESCRIPTION</u>	<u>EC#</u>	<u>DATE</u>
B	7	Screw torque requirements added	ECN-ELX-V-29695-1	3-27-2018
C	2&3	Adding 5.2,5.3	ECN-ELX-DG-33723- 1 OR:wt.epm.EPML	5-29-2019
D	3	Updated 5.3 gatherability and misalignment	ECR-ELX-N -48517- 1 OR:wt.epm.EPML	06-15-2023