

1. INTRODUCTION

This specification covers the requirements for application of IDC Solklip 6mm² class 5 for Insulated wire Assembly used with metal-framed photovoltaic (PV) modules (or solar panels) and related products that require grounding for safety reasons. The IDC Solklip 6mm² class 5 for Insulated wire assembly consists of a slider, base, and a 10--32 self--captivating thread--cutting screw or 8--32 screw and hex nut or Keps nut.

The screw is used to mount the IDC Solklip to the frame (of the solar panel). The slider is used to hold the wire. The slider features a multi--dimensional curved wire slot that provides enhanced wire retention. The base is used to terminate the wire. The base features pointed lances that provide four points of contact to the frame for high reliability and anti--rotation of the IDC Solklip. The removal slot accepts the tip of a flat--head screwdriver which is used to disengage the slider. When the slider is disengaged, the wire can be removed, and the screw is exposed for removal.

When corresponding with TE Connectivity (TE) Personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.

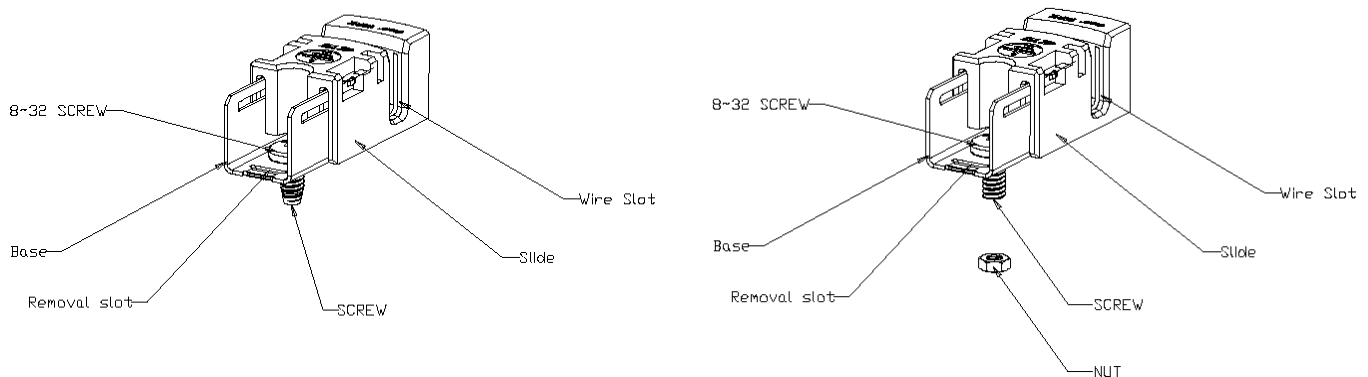


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

- Updated document to corporate requirements
- New logo

2.2. Customer Assistance

Reference Product Base Part Number 1971925 and Product Code G922 are representative of IDC SolKlip

Assembly. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such information can be obtained through a local TE Representative or, after purchase, by calling PRODUCT INFORMATION at the number at the bottom of this page.

2.3. Drawings

Customer Drawings for product part numbers are available from the service network. If there is a conflict between the information contained in the Customer Drawings and this specification or with any other technical documentation supplied, call PRODUCT INFORMATION at the number at the bottom of page 1.

2.4. Specifications

Product Specification 108-106114 provides product performance and test information for IDC Solklip Assembly.

2.5. Instructional Material

Instruction Sheets (408--series) provide product assembly instructions or tooling setup and operation procedures. Documents available which pertain to this product are:
IDC Solklip Assemblies 1971925

3. REQUIREMENTS

3.1. Material

The slider is made of polybutylene terephthalate (PBT), UL 94-5VA. The base is made of copper alloy plated with tin over nickel. Both type of screws and the nut are made of stainless steel.

3.2. Safety

Do not stack product shipping containers so high that the containers buckle or deform.

3.3. Storage

A. Shelf Life

The IDC Solklip should remain in the shipping containers until ready for use to prevent deformation. The IDC Solklip should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

B. Chemical Exposure

Do not store IDC Solklip near any chemical listed below as they may cause stress corrosion cracking in the grounding clip.

Alkalies	Ammonia	Citrates	Phosphates	Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur	Nitrites	Tartrates

3.4. Wire Selection and Preparation

The grounding clip accepts H07V-K, stranded wire, 6mm² class 5. The wire must not be nicked, cut, or scraped. There is no preparation required.

3.5. Spacing

Care must be used to avoid interference between adjacent IDC Solklip and other components for removal of the grounding clip

3.6. Installation

A. Mounting IDC Solklip to Frame

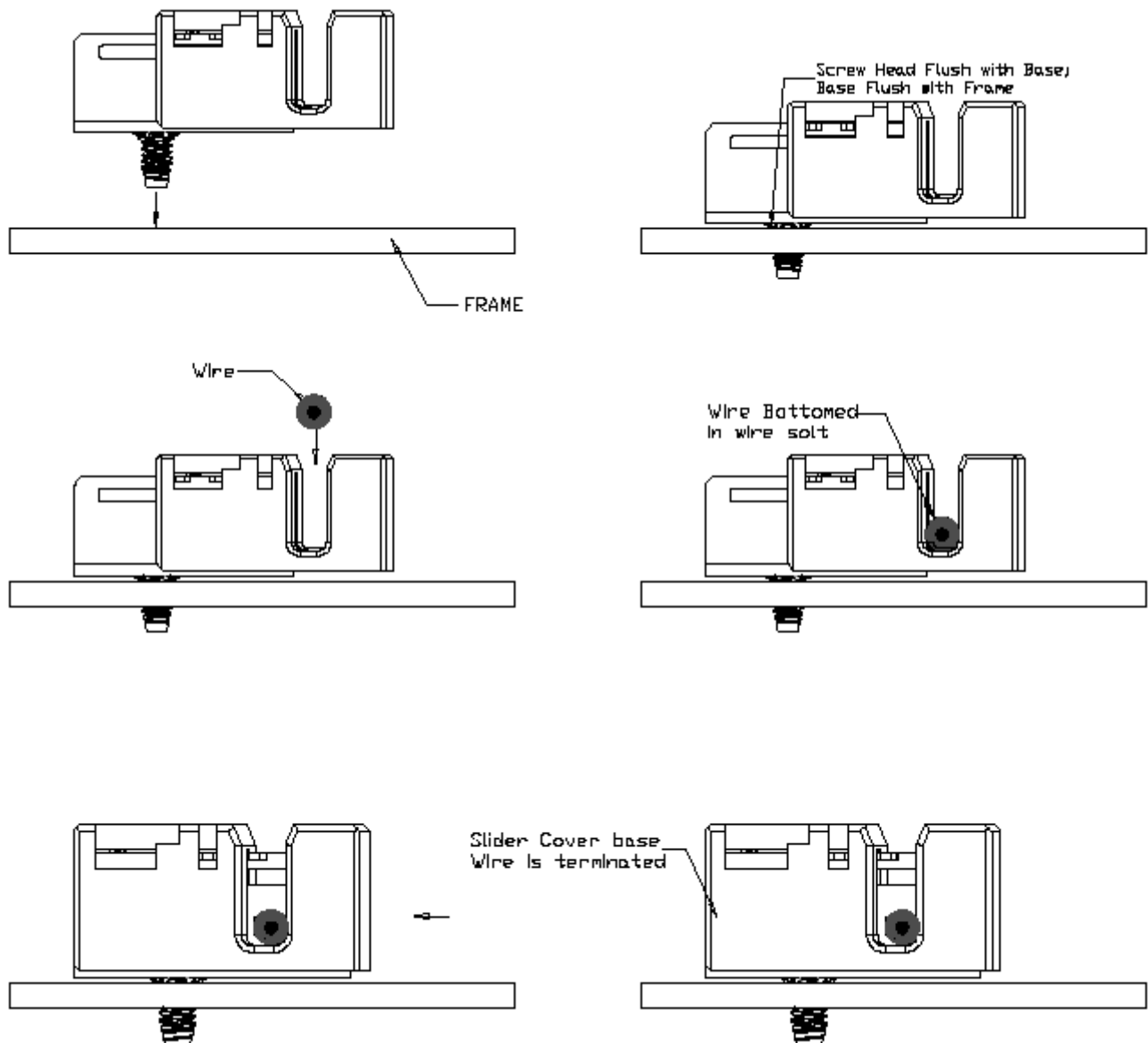
The IDC Solklip must be placed onto the frame so that the screw straddles a pre--drilled hole. Optimized hole size based on frame thickness and recommended screw tightening torque is given in Figure 2.

The head of the screw must be flush with the base and the base must be flush with the frame. For the IDC Solklip assembly with the 8--32 screw and hex nut or Keps nut, the nut must be tight. Refer to Figure 3 for mounting of the grounding clip.

SCREW SIZE	FRAME		Drill Size	SCREW TIGHTENING TORQUE(Nm)
	thickness	Hole Size		
10-32 (thread-cutting screw)	1.3	4.09	20	2.3+0.5/-0.2
	2.8	4.22	19	
	4.7	4.37	11/64	
	6.4	4.50	16	
8-32 (screw and nut)	6.6	4.09-4.83	-	1.7+0.5/-0.2

Figure 2

IDC Solklip with 10~32 thread-cutting screw



IDC Solclip with 8-32 screw and nut

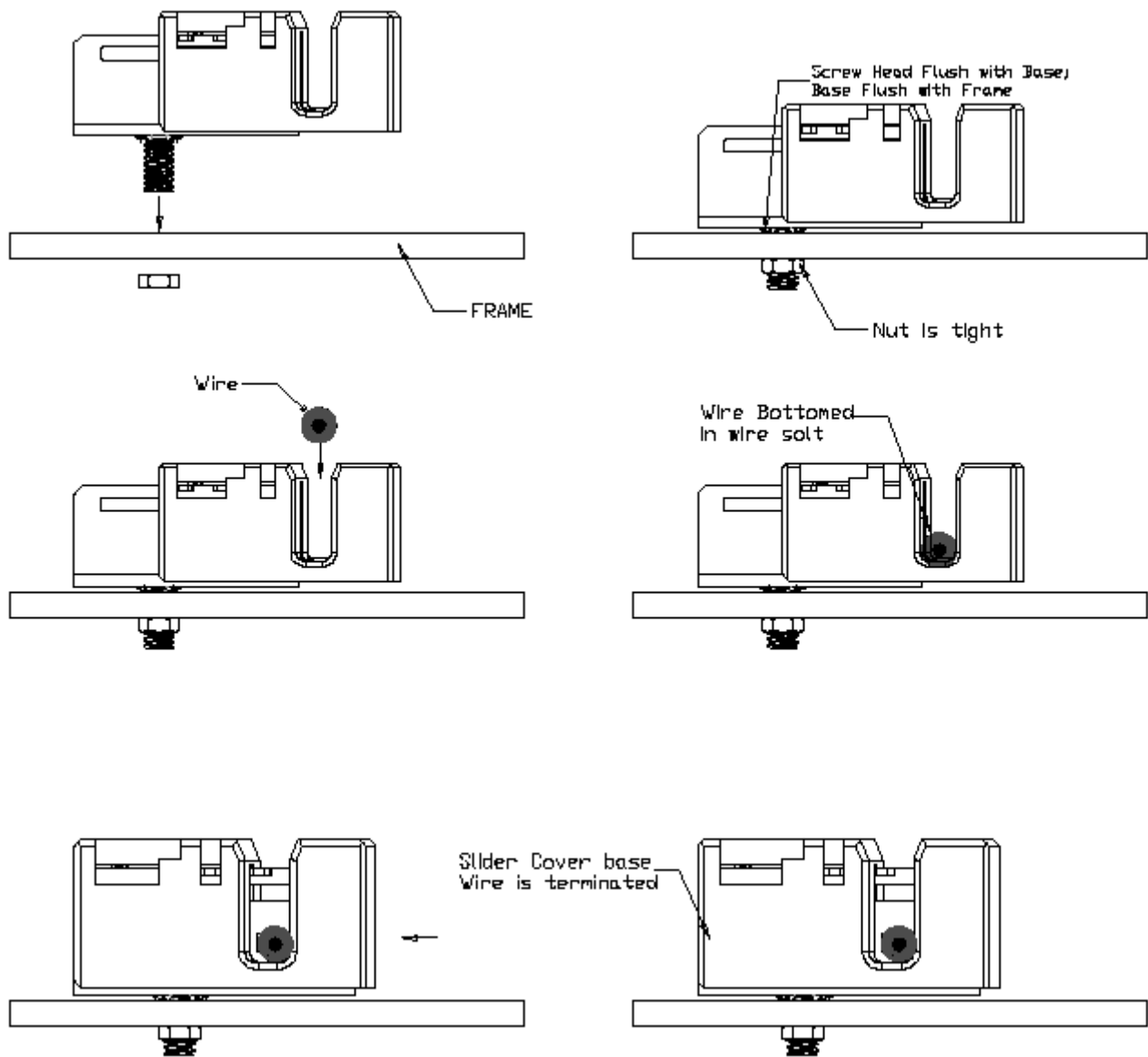


Figure 3

B. Wire Placement

The wire must be bottomed in the wire slot (the wire slot will cause the wire to form a slight curve). Refer to Figure 3.

C. Terminating the Wire

The slider must be engaged by pliers or other tools (slider covers the base). Refer to Figure 3.

3.7. Removal

The wire can be removed from the grounding clip when the slider is disengaged (slider and screw are exposed). The screw must be loosened before the grounding clip can be removed from the frame.

The IDC Solklip can be re-used up to 5 times after proper removals (the 8--32 screw and hex nut or Keps nut can be re-used; however, the thread-cutting screw must be replaced). The thread-cutting screw can't be re-used after removing the grounding clip from the frame.

3.8. Repair

The IDC Solklip is not repairable. Discard any defective or damaged IDC Solklip.

4. QUALIFICATION

IDC Solklip Assembly is reference 108-106114.

5. TOOLING

A drill bit is required for drilling the frame holes (specific drill sizes are given in Figure 2).

A No. 2 cross-recessed screwdriver must be used to secure (and remove) the screw of the IDC Solklip to (and from) the frame. For the IDC Solklip with the 8--32 screw and hex nut or Keps nut, a 3/8--in. wrench must be used to secure (and remove) the nut of the IDC Solklip to (or from) the frame. The slider can be engaged by channel lock pliers. A flat-head screw driver must be used to disengage the slider.

6. VISUAL AID

Figure 4 shows a typical application of IDC Solklip Assembly. This illustration should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

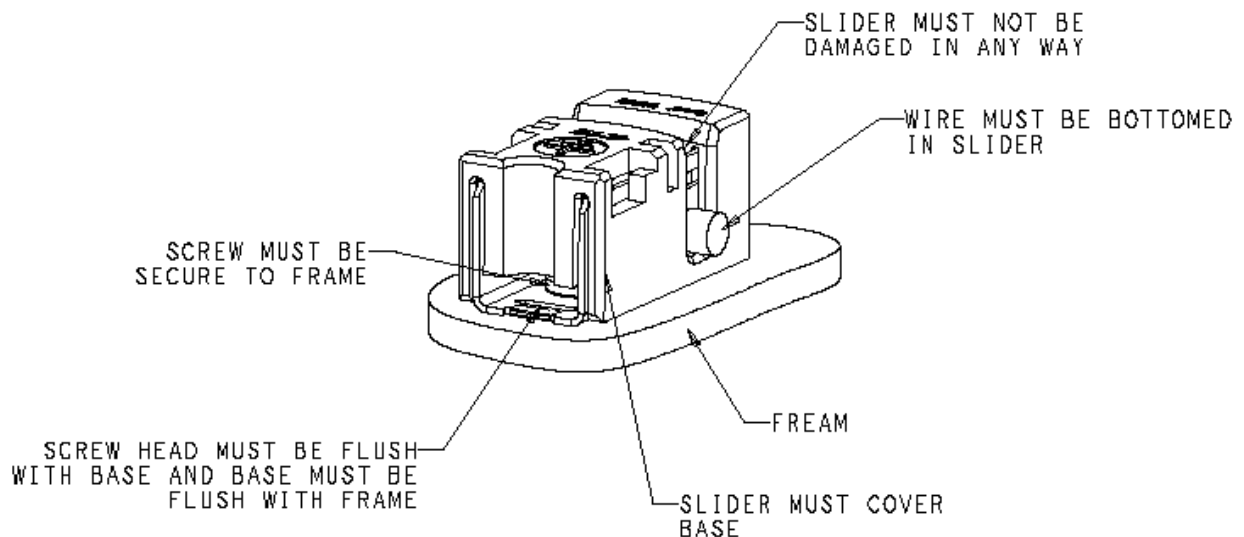


Figure 4