

OCP IT Gear Power Cable Assembly



All numerical values are in metric units. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of ± 0.13 and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the application requirement of TE Connectivity OCP IT Gear Power Cable Assembly as Receptacle side. This power cable assembly consists of IT Gear cable contact, metal clip, insulation housing and cable ^[1]. TE Connectivity OCP IT Gear Power Cable Assembly is recommended to use in server, storage, data center, switch, etc., based on Open Rack V2.0 Standard, or other industrial equipment.

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

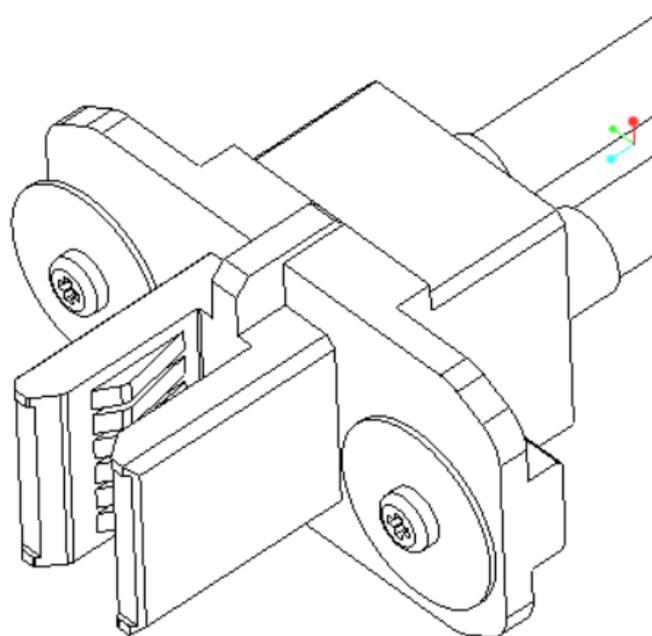
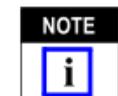


Figure 1 The Reference Product View of OCP IT Gear Power Cable Assembly



^[1] Optional Cable is from 3mm² to 13mm², other specification please contact local TE sales representative.

2. REFERENCE MATERIAL

2.1. Revision Summary

Initial release of Application Specification includes:
Updated document to corporate requirements.

2.2. Customer Assistance

Reference Product Part Number in product code V835 are representative of OCT IT Gear Power Cable Assembly.

TE P/N: 2311291-* OCT IT Gear Power Cable Assembly.

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, the information contained in the Customer Drawings takes priority.

2.4. Specifications

Production Specification as below provide expected product performance and test information.

108-152030 Product Specification of OCT IT Gear Power Cable Assembly.

501-152045 Qualification Test Report of OCT IT Gear Power Cable Assembly

2.5. Standards

- EIA-364: Electrical Connector/Socket Test Procedures Including Environmental Classifications
- 109-197: Test Specification (TE Connectivity Test Specification vs EIA Test Methods)
- Open Rack Standard V2.0, Open Compute Project

3. REQUIREMENTS

3.1. Safety

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

3.2. Material

The insulation housing is made of thermoplastics, and the contacts are made of high conductivity copper alloy, silver plating over nickel base-plated at product contact area, detail please refer to the customer drawing.

3.3. Storage

A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the cable connector material.

B. Shelf Life

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

A. Chemical Exposure

Do not store connector or components near any chemical listed below as they may cause stress corrosion cracking in the contacts.

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

3.4. Panel Board

A. Thickness

The recommend panel board thickness: 1.2mm.

B. Cutout

The panel must be cut using the dimensions provided on the customer drawing.

3.5. Panel Mounting

The cable assembly is mounted from rear panel. Then screw mounted into the hole of housing from the front of panel.

To secure with the panel, the cable assembly is designed to float in the panel cutout. The horizontal and vertical floating capability between connector and panel board is $\pm 2.0\text{mm}$ in mounted status.

Cable assembly is mounted from rear panel. Then screw mounted into the hole of housing from the front of panel.

When the cable assembly is mounted in panel board, the shoulder of screw must be tap on the flange of plastics hole.

3.6. Recommended Bus Bar Board

The cable assembly is designed to mate with Laminated Mating Bus Bar Board.

A. Material

For the optimum performance, the bus bar board must be made of highly conductive copper (101% @ 20°C [68°F] according to International Anneal Copper Standards[I.A.C.S.], such as C10100, C10200, C11000, etc.



The bus bar may NOT be made of aluminum

B. Plating

Mating Bus Bar Board: 3.0~8.9um [.000120 to .000350 inch] silver plating over 1.27~ 8.9 um [.000050 to .000350 inch] matte nickel base-plating on bus bar copper contact surface.

C. Bus Bar Board Design

The bus bar must be rigidly constructed and capable of preventing movement that could cause stubbing or misalignment of the contact with the bus bar.

Mating Bus Bar Board total thickness must be $6.0 \pm 0.20\text{mm}$, and the recommended middle insulation layer thickness is $1.0 \pm 0.05\text{mm}$.

D. Mating Edge Treatment:

The recommended guide chamfer feature of Mating Bus Bar Board is 2.0*2.0mm, 1.0*1.0mm min. per actual application.

The leading edge must have a full radius or a gradual taper to provide a lead-in and ease mating of the connector with the bus bar.

All the dimension shall be in accordance with customer specific application requirement.

Detail please refer to the below Bus Bar Figure.

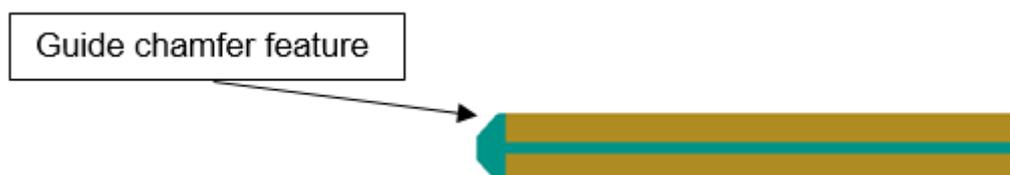


Figure 2. Recommended guide chamfer feature(2.0*2.0mm) view of Laminated Mating Bus Bar Board

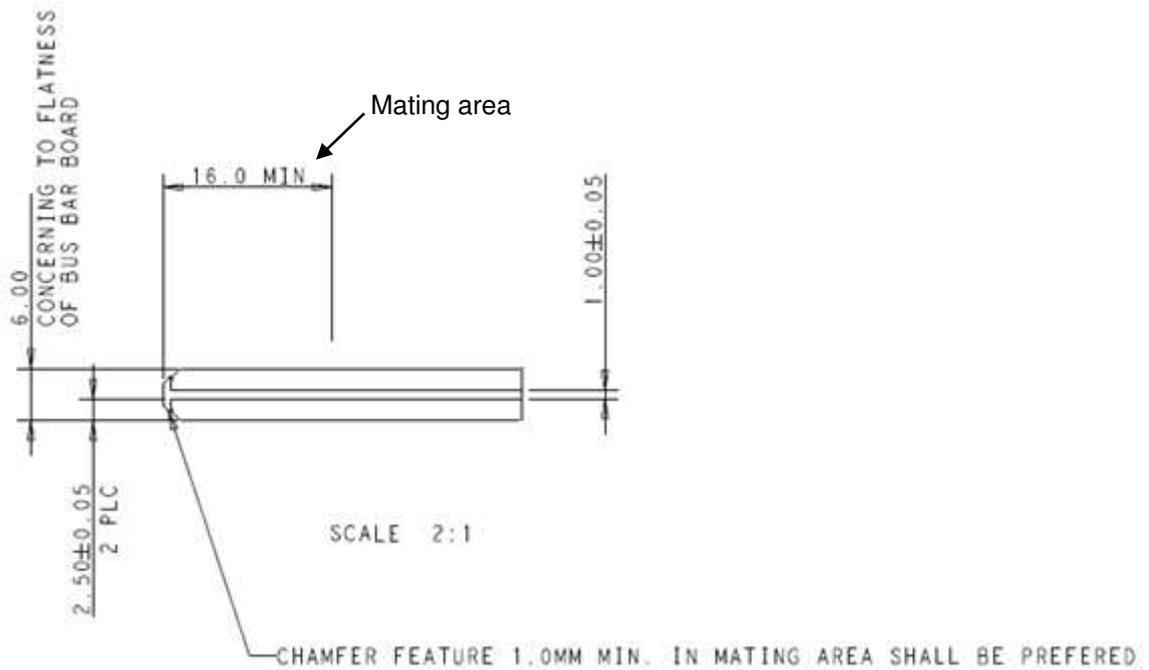


Figure 3. Laminated Mating Bus Bar Board View.

3.7. Mating

A. Mating Length

Product mating length is 16mm max.

B. Misalignment

When mating, misalignment capability is +/-2mm.

3.8. Repair

This cable assembly is not repairable. Damaged or defective assembly must not be used.

4. VISUAL AID

The below illustration shows a typical application of this cable assembly. This illustration could 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.

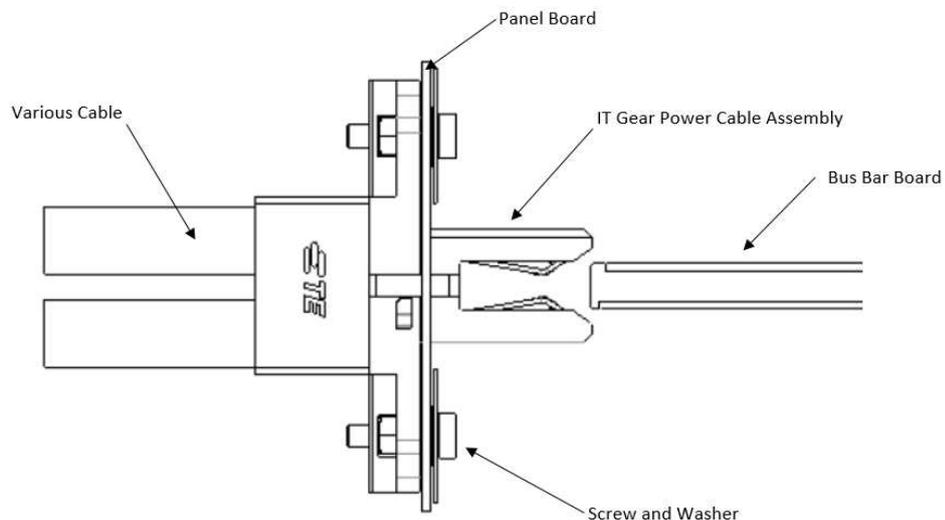


Figure 4. Visual Aid of TE Connectivity OCP IT Gear Power Cable Assembly