

NOTE



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 Pluggable Bus Bar Cable-Mount and PCB-Mount Power Connectors as Receptacle side. All the connectors are designed to engage specified bus bar board system, and to mount with two termination type: Cable or PCB-mount version separately. Each connector consists of Power, Return, Ground and Sensor contact with spring feature and insulation housing. The Pluggable Bus Bar Cable-Mount and PCB-Mount Power Connector have Power, Return and Ground power contact and sensor contact. The Pluggable Bus Bar Cable-Mount and PCB-Mount Power Connector series are recommended to use in server, storage, data center, switch, etc.

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 and 2.

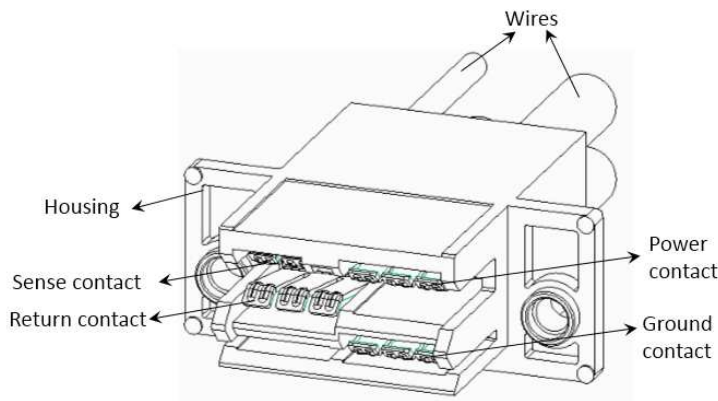


Figure 1 The Reference Product View of Pluggable Bus Bar Cable-mount Connector

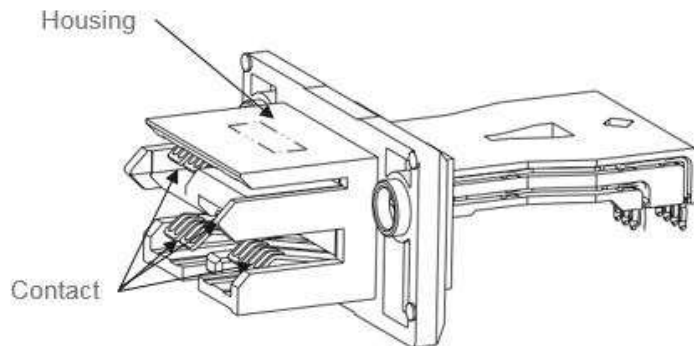


Figure 2 The Reference Product View of Pluggable Bus Bar PCB-mount Connector

2. REFERENCE MATERIAL

2.1. Revision Summary

Initial release of Application Specification include:

Expanded the product family with PCB mount version;

Customer Assistance

Reference Product Part Number in product code 1080 are representative of Pluggable Bus Bar Cable and PCB-Mount connector.

P/N: 2204526-1 Pluggable Bus Bar 25A Cable-mount conn.

P/N: 2204095-1 Pluggable Bus Bar 50A Cable-mount conn.

P/N: 2364125-1 Pluggable Bus Bar 80A Cable-mount conn.

P/N: 2204539-1 Pluggable Bus Bar 25A PCB-mount conn.

P/N: 2204288-1 Pluggable Bus Bar 50A PCB-mount conn.

P/N: 2364123-1 Pluggable Bus Bar 80A PCB-mount conn.

P/N: 2204600-1 Pluggable Bus Bar 125A PCB Screw-mount conn.

Use of these numbers will identify the product line and help you to obtain product and tooling information. Such information can be obtained through a local Representative, by visiting our website at www.te.com, or by calling PRODUCT INFORMATION at the numbers at the bottom of page 1.

2.2. 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.

2.3. Specifications

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

Product specification: 108-128019 Pluggable Bus Bar Cable-mount conn.

Product specification: 108-128022 Pluggable Bus Bar PCB-mount conn.

2.4. Standards

- EIA-364: Electrical Connector/Socket Test Procedures Including Environmental Classifications
- 109-197: Test Specification (TE Connectivity Test Specification vs EIA Test Methods)

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.

C. 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

There are two kinds of panel thickness: 1.2mm and 1.52mm.

B. Cutout

The panel must be cut using the dimension provided on the customer drawing of Pluggable Bus Bar cable-mount and PCB-mount connector. Reference samples for recommended panel cutouts are shown in the below figure. Other detail please refer to customer drawing.

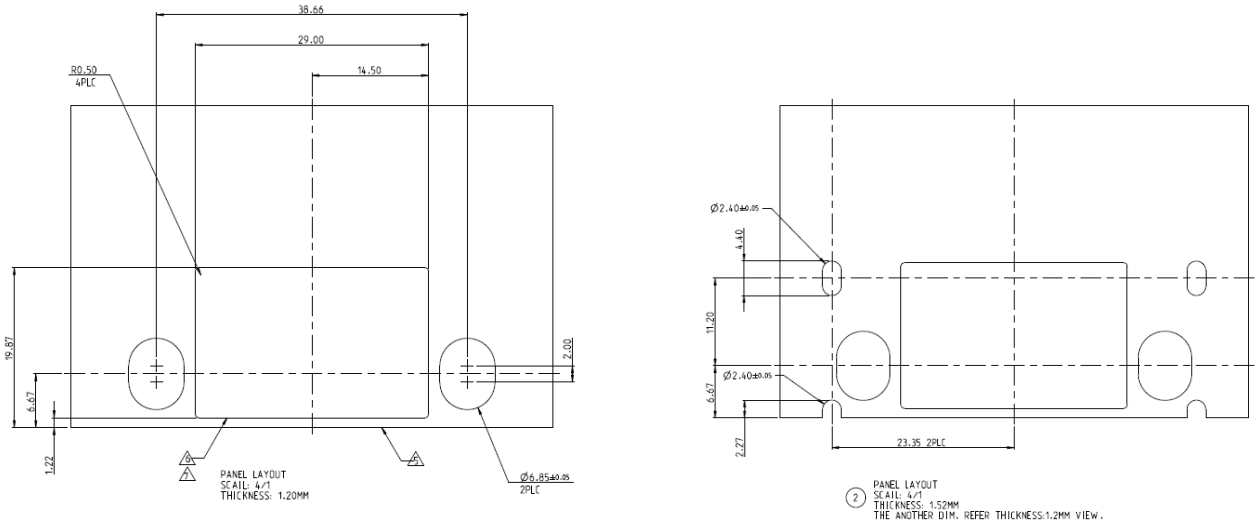


Figure 3 The recommended panel board layout view for Pluggable Bus Bar 50A/80A cable/PCB-mount conn.

⚠ CONNECTOR MATED TO PANEL FROM OPPOSITE SIDE.
⚠ NO BURRS ALLOWED ON OPPOSITE (MATING) SIDE.

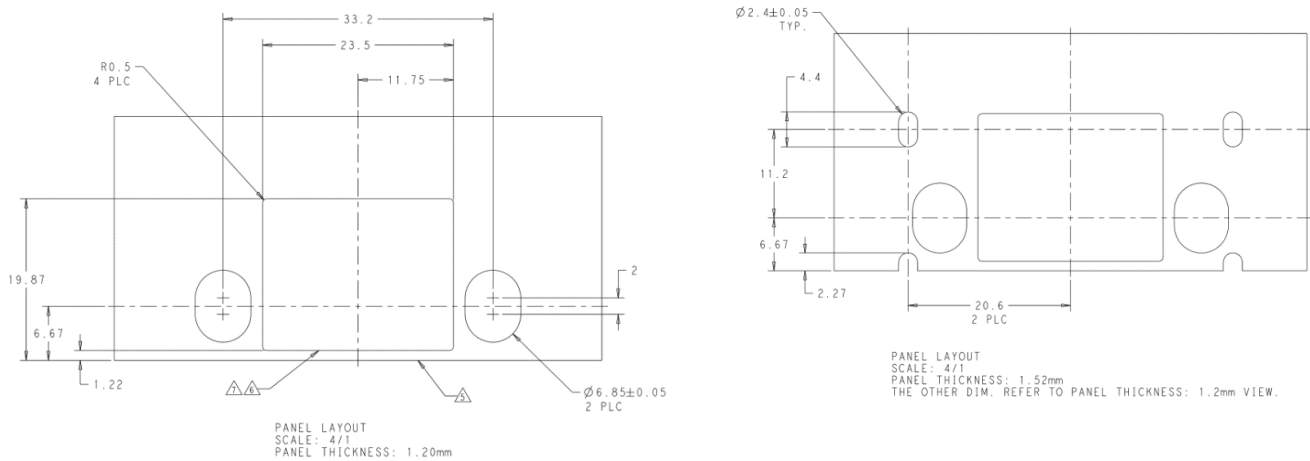


Figure 4 The recommended panel board layout view for Pluggable Bus Bar 25A cable/PCB-mount conn.

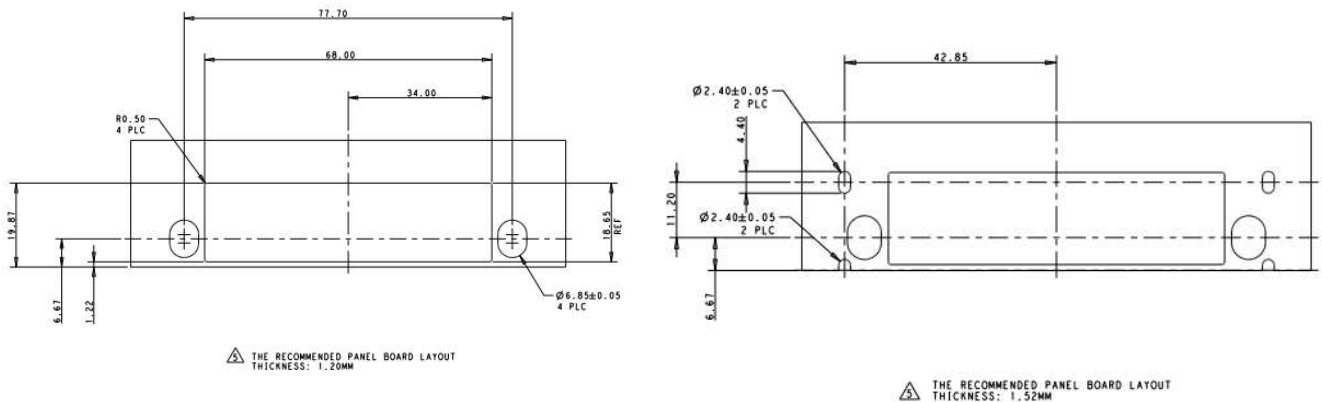


Figure 5 The recommended panel board layout view for Pluggable Bus Bar 125A PCB screw-mount conn

3.5. Panel Mounting

The connector is mounted from rear panel. Then self-screw mounted into the hole of housing from the front of panel, refer to the below Figure.

When to secure with the panel, Pluggable Bus Bar cable-mount and PCB-mount connector is designed to float in the panel cutout. The vertical floating capability between connector and panel board is $\pm 1.0\text{mm}$.

When the connector is mounted in panel board, the shoulder of screw must be tap on the flange of plastics hole. Detail please refer to the below Figure.

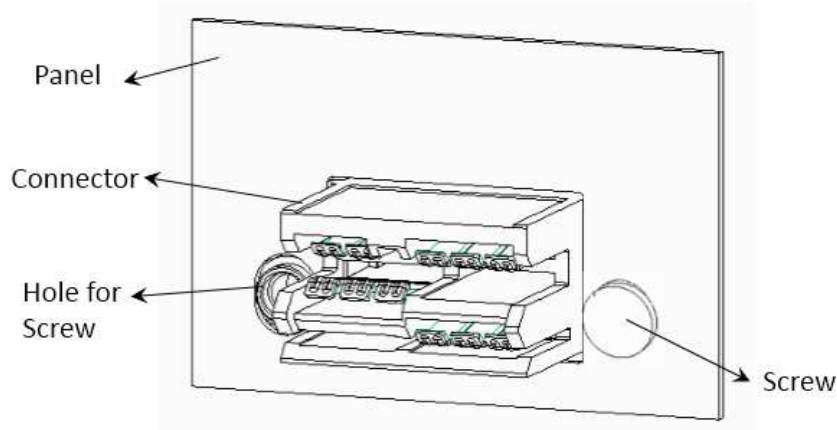


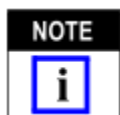
Figure 6

3.6. Recommended 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 {IACS}), such as C10100, C10200, C11000, etc.

The recommended plating specification: 3.0~8.9um [.000120 to .000350 inch] silver plating over 1.27~2.54 um [.000050 to .000100 inch] nickel base-plating on bus bar copper contact surface.



The bus bar may NOT be made of aluminum NOR may it be tin plated

B. 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.

Thickness: Bus Bar Board thickness must be 0.04±0.002 inch [1.0±0.05 mm], and the middle insulation layer thickness must be 0.06 inch [1.524mm].

Bus Bar Board system design, please refer to the below reference view.

Mating edge treatment: 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.

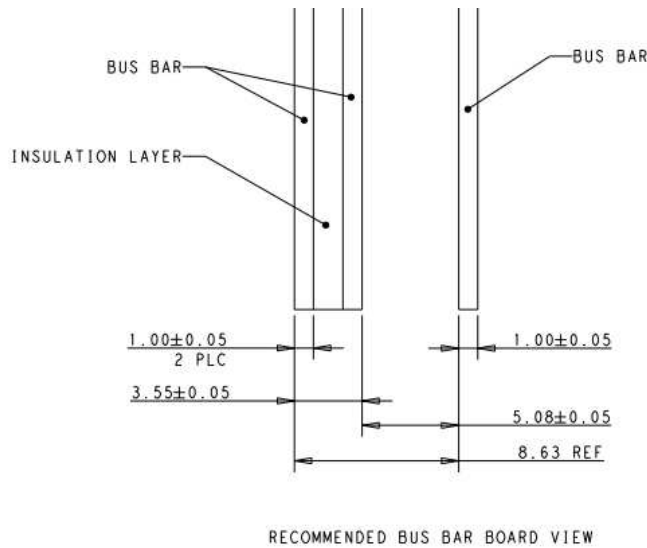


Figure 7 Bus Bar Board System View

3.7. Recommended PCB Specification

Pluggable Bus Bar PCB-mount connector have two version: Press-Fit, and Screw-mount. The recommended PCB specification of Pluggable Bus Bar PCB press-fit or screw-mount connector, please refer to the customer drawing, and for the screw-mount connector, such as P/N: 2204600-1, as below figure 7. The screw's spec and recommended torque force is #8-32, 20 kfg.cm.

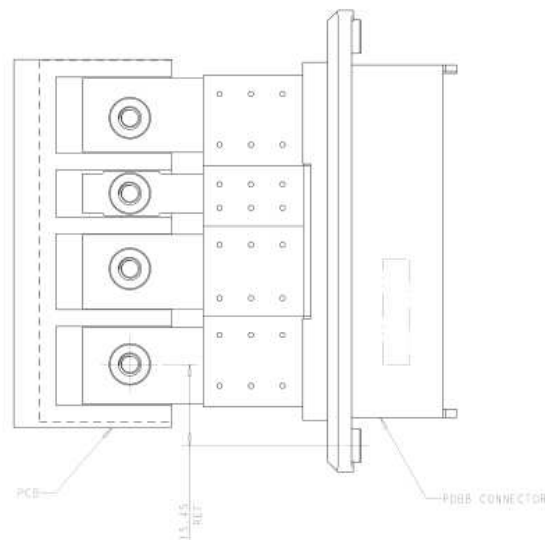


Figure 8. Reference Product View of Pluggable Bus Bar 125A PCB Screw-mount conn. P/N: 2204600-1

3.8. Mating

A. Polarization

For the floating panel-mount cable receptacle, polarization is provided by the feature of housing. Detail see Figure 3 (feature “hole for screw”)

B. Mating Length

Contact mating lengths is 5.5mm for sense contact. 7.5mm for power contact. 8.5mm for return contact, 9.5mm for Ground contact.

C. Misalignment

When mating connectors, up-and-down misalignment capability is 1.5mm.

D. Mating/Un-mating Force

Please refer to Product Specification 108-*, Mating/Un-mating force.

3.9. Crimp Data: other Crimp information refer to 114-18022.

Pluggable Bus Bar Cable-Mount Power Connectors, the crimp information is as below:

	Crimp width (mm)	Crimp height (mm)	Insulation width (mm)	Cable Size data
8 AWG	4.32mm	3.1±0.05	5.59	7/95/36
18 AWG	2.20mm	1.6±0.05	3.05	16/30
12 AWG	2.54mm	2.7±0.05	4.95	/

3.10. Repair

These connectors are not repairable. Damaged or defective connectors must not be used.

4. TOOLING

A No. 2 cross-recessed screwdriver can be used to install the self-screw into the hole of housing for the lock connector on the panel.

5. VISUAL AID

The below illustration shows a typical application of Pluggable Bus Bar Cable-mount and PCB-mount Connector. 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.

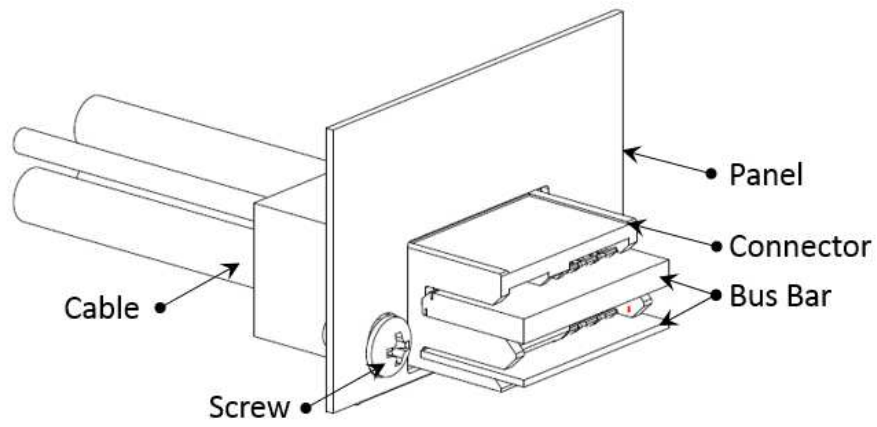


Figure 9 Visual Aid of Pluggable Bus Bar Cable-mount Connector

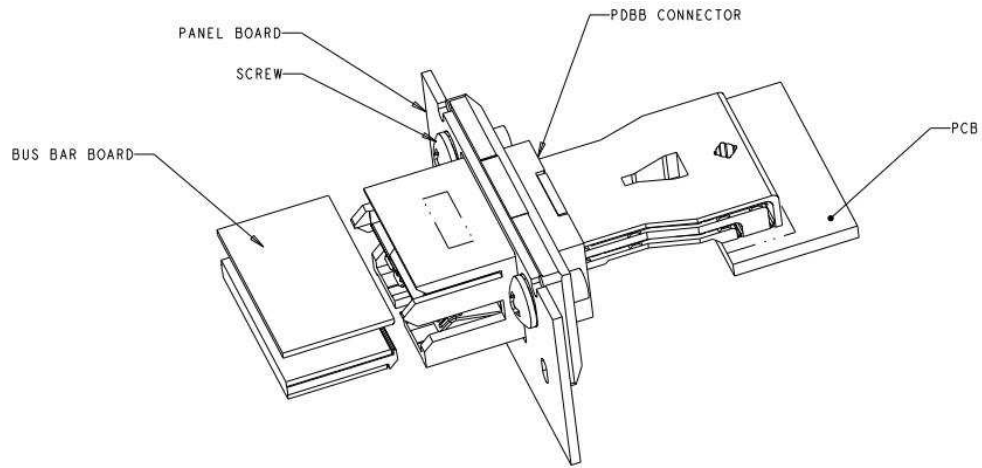


Figure 10 Visual Aid of Pluggable Bus Bar PCB-mount Connector