

**NOTE**



All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters. Unless otherwise specified, dimensions have a tolerance of  $\pm 0.13$  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 requirements for application of 4- and 6-Position Panel Mount Terminal Strips which snap onto panels inside equipment such as an HVAC unit. Each contact has a self-tapping No. 6 screw for wire termination and two parallel 6.35 mm FASTON\* blades to save space between circuits. These terminal strips are approved to accept solid and stranded copper conductors for factory wiring, but restricted to solid copper conductors for field wiring as described in Paragraph 3.3.A. Refer to Section 4, QUALIFICATIONS for approval agencies. Either the four or six contacts are secured in a housing that has two latches and two locator pins for snap-in panel assembly.

When corresponding with Tyco Electronics Personnel, use the terminology provided in this specification to help facilitate your inquiry for information. Basic terms and features of components are provided in Figure 1.

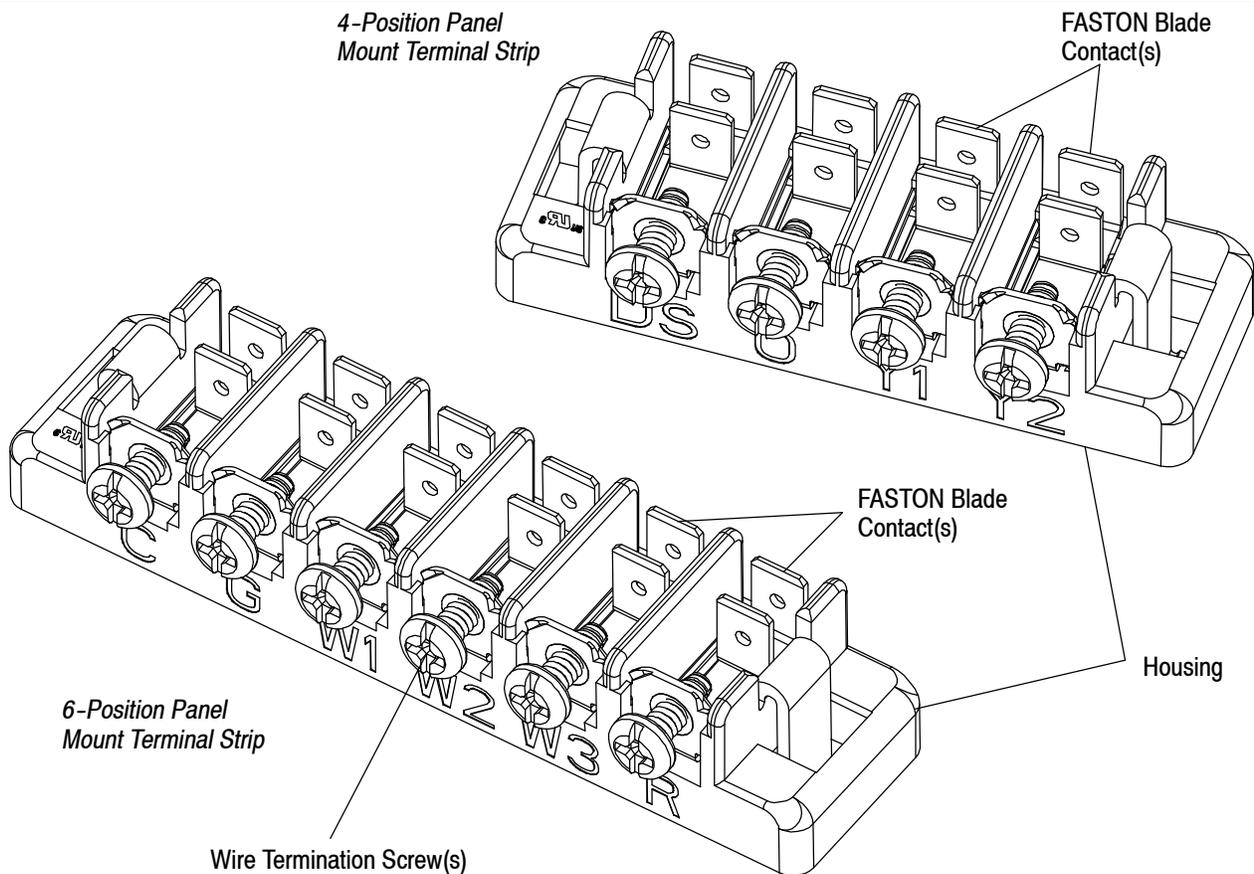


Figure 1

**2. REFERENCE MATERIAL**

**2.1. Revision Summary**

- Updated document to corporate requirements
- New logo and format

## 2.2. Customer Assistance

Reference Base Part Numbers 1811494, 1811495, and Product Code E299 are representative numbers of the 4- and 6-Position Panel Mount Terminal Strip. 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 Tyco Electronics Representative or, after purchase, by calling the Tooling Assistance Center or the Product Information numbers at the bottom of page 1.

## 2.3. Drawings

Customer Drawings for specific products are available from the responsible Tyco Electronics Engineering Department via the service network. The information contained in the Customer Drawings takes priority if there is a conflict with this specification or with any other technical documentation supplied by Tyco Electronics.

## 2.4. Specifications

Design Objective 108-2229 provides expected product performance and test information. Application Specifications 114-2084, 114-2161, and 114-2162 provide contact crimp information, termination requirements, and recommended tooling for various FASTON terminals which may be used with these terminal block assemblies. Contact the Product Information number at the bottom of page 1 for specific relationships of terminals and the terminal block assemblies.

## 2.5. Standards

The following CSA International and Underwriters Laboratories Inc. (UL) Standards are applicable to these terminal block assemblies:

| <u>Standard Number</u> | <u>Standard Title</u>   |
|------------------------|---|
| CSA 22.2               | No. 158-1987 Terminal Blocks, Industrial Products                         |
| UL 94                  | Tests for Flammability of Plastic Materials                               |
| UL 310                 | Standard for Electrical Quick Connect Terminals                           |
| UL 486E                | Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors |
| UL 1059                | Terminal Blocks   |

## 3. REQUIREMENTS

### 3.1. Storage

#### A. Ultraviolet Light

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

#### B. Shelf Life

The components should be used on a first in, first out basis to avoid storage contamination that could adversely affect electrical continuity.

#### C. Chemical Exposure

Do not store contacts near any chemicals listed below.

|          |            |          |            |          |                  |
|----------|------------|----------|------------|----------|------------------|
| Alkalies | Ammonia    | Citrates | Phosphates | Citrates | Sulfur Compounds |
| Amines   | Carbonates | Nitrites | Sulfides   | Nitrites | Tartrates        |

### 3.2. Materials

The housings are made from high-temperature polyamide. The screws are zinc-plated steel with trivalent chromium film overcoat, and the contacts are made of brass.

### 3.3. Wire Selection and Preparation

#### NOTE



*If using ring tongue or open spade terminals, refer to Application Specifications 114-2084, 114-2161, or 114-2162 for contact crimp information, termination requirements, and recommended tooling. If using stripped wire without terminals, refer to Paragraph 3.3.A and B and see Figure 2.*

#### A. Wire Selection

The wire termination screws will accept solid and stranded copper wire sizes 22 through 16 AWG in factory wiring, but field wiring is approved for solid wire only.

**B. Wire Preparation**

The wire strip length shall be  $12.7 \pm 1.6$  mm.



*DO NOT nick, scrape, or cut the wire conductor during the stripping operation. Wire to be tarnish-free, and attached to clamp block immediately after being stripped.*

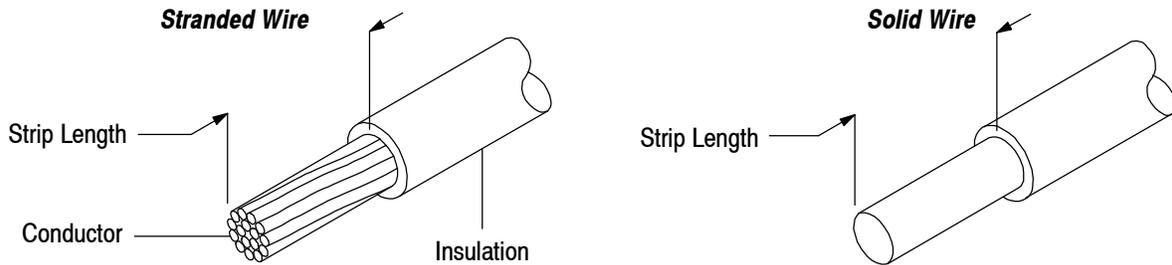


Figure 2

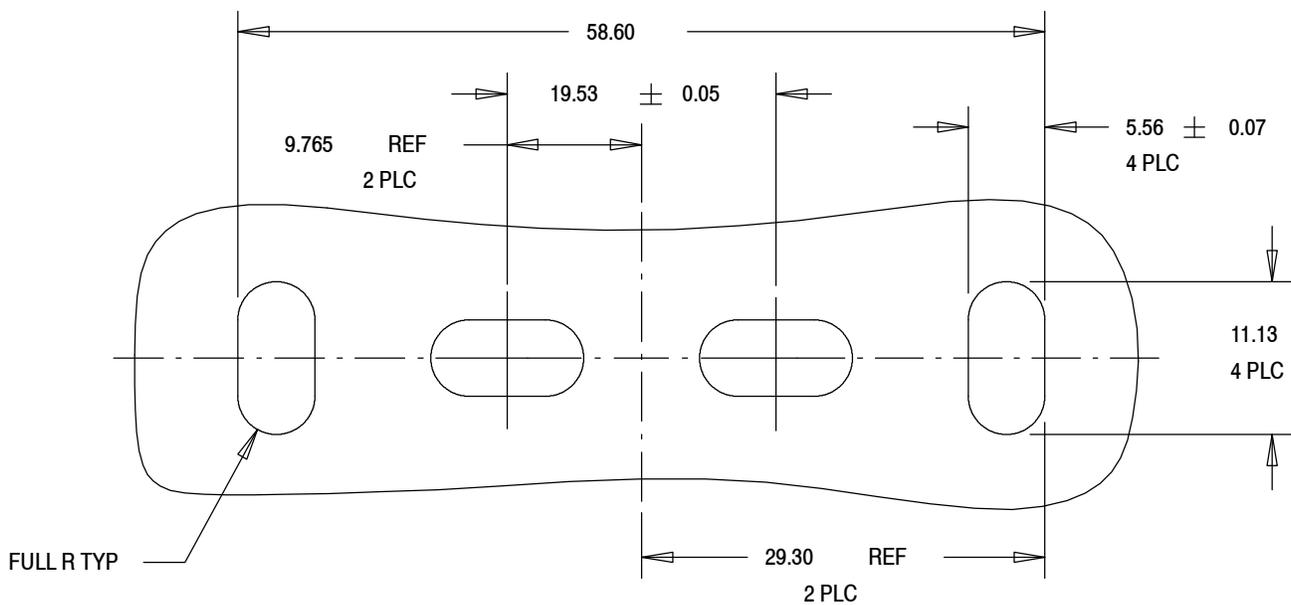
**3.4. Panel Cutout**

**A. Hole Layout**

The mounting panel hole layout for the 4- and 6-position terminal strips is provided in Figure 3.



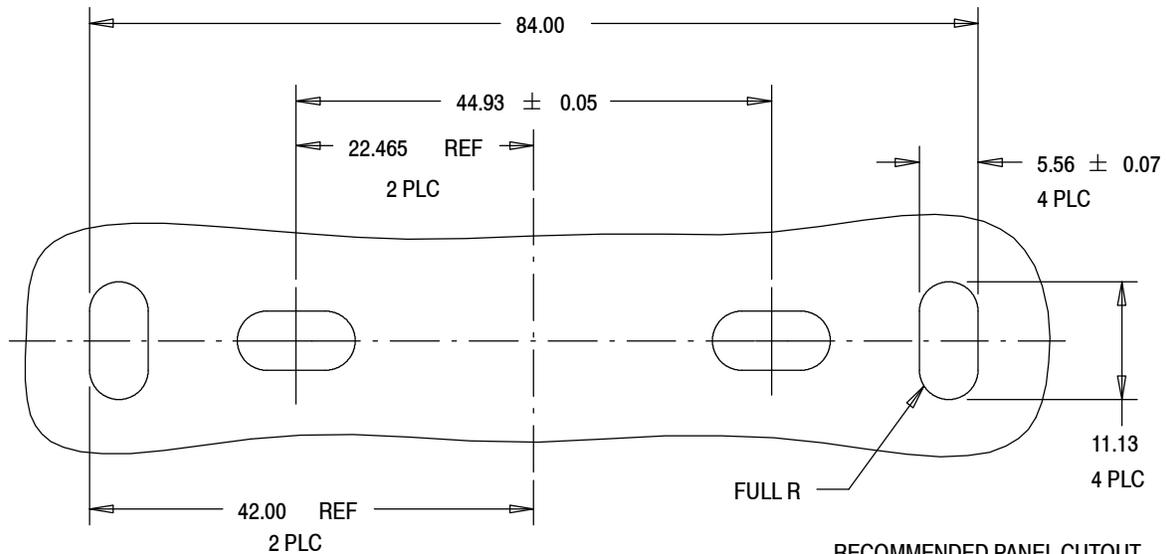
*When selecting a location for the assembly, the wire bend radius specified by the wire manufacturer must be considered. Also, to permit attachment of the wire, there should be sufficient slack between the wire end and any strain relief.*



**IMPORTANT** PANEL BURR SIDE TO BE OPPOSITE OF CONNECTOR MOUNTING SURFACE

RECOMMENDED PANEL CUT-OUT  
4-POSITION TERMINAL STRIP  
PANEL THICKNESS: 0.86mm-1.06mm

Figure 3 (cont'd)



RECOMMENDED PANEL CUTOUT  
6-POSITION TERMINAL STRIP  
PANEL THICKNESS: 0.86mm-1.06mm

**IMPORTANT** PANEL BURR SIDE TO BE OPPOSITE OF CONNECTOR MOUNTING SURFACE

Figure 3 (end)

**B. Attaching Mounting Hardware**

No attaching mounting hardware is required for this product line.

**3.5. Terminal and Wire Application**

The connecting wire can be attached to the terminal block assembly as bare wire at the screw end, or with a terminal attached for the blade/tab ends. For use of terminals with the wire, refer to Application Specifications designed for FASTON 250 Series receptacles requiring a tab thickness of 0.81 mm.

**3.6. Checking Installed Assembly**

Figure 4 shows how a typical terminal strip should look with wires and/or FASTON receptacles inserted for a completed assembly.

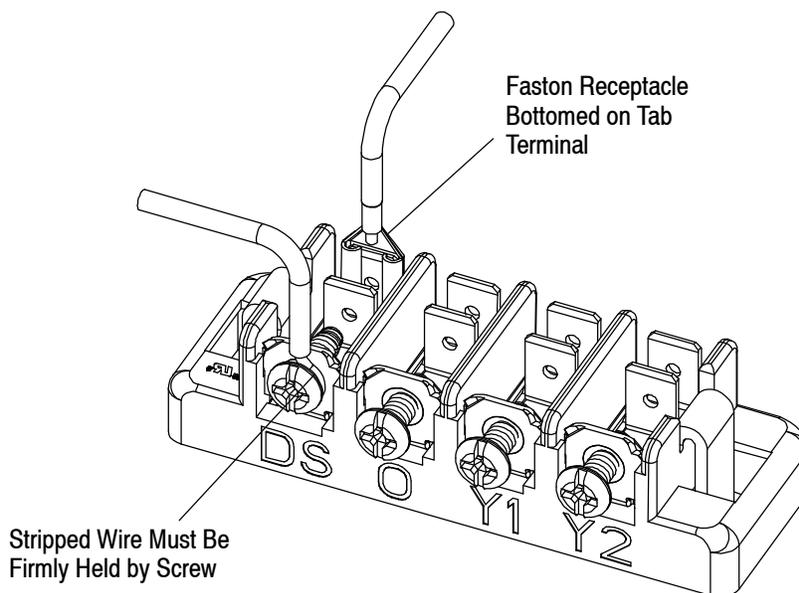


Figure 4

### 3.7. Repair/Replacement



*Damaged terminals may not be used or reterminated. If a damaged terminal is evident, it must be removed and replaced with a new one.*

### 4. QUALIFICATIONS

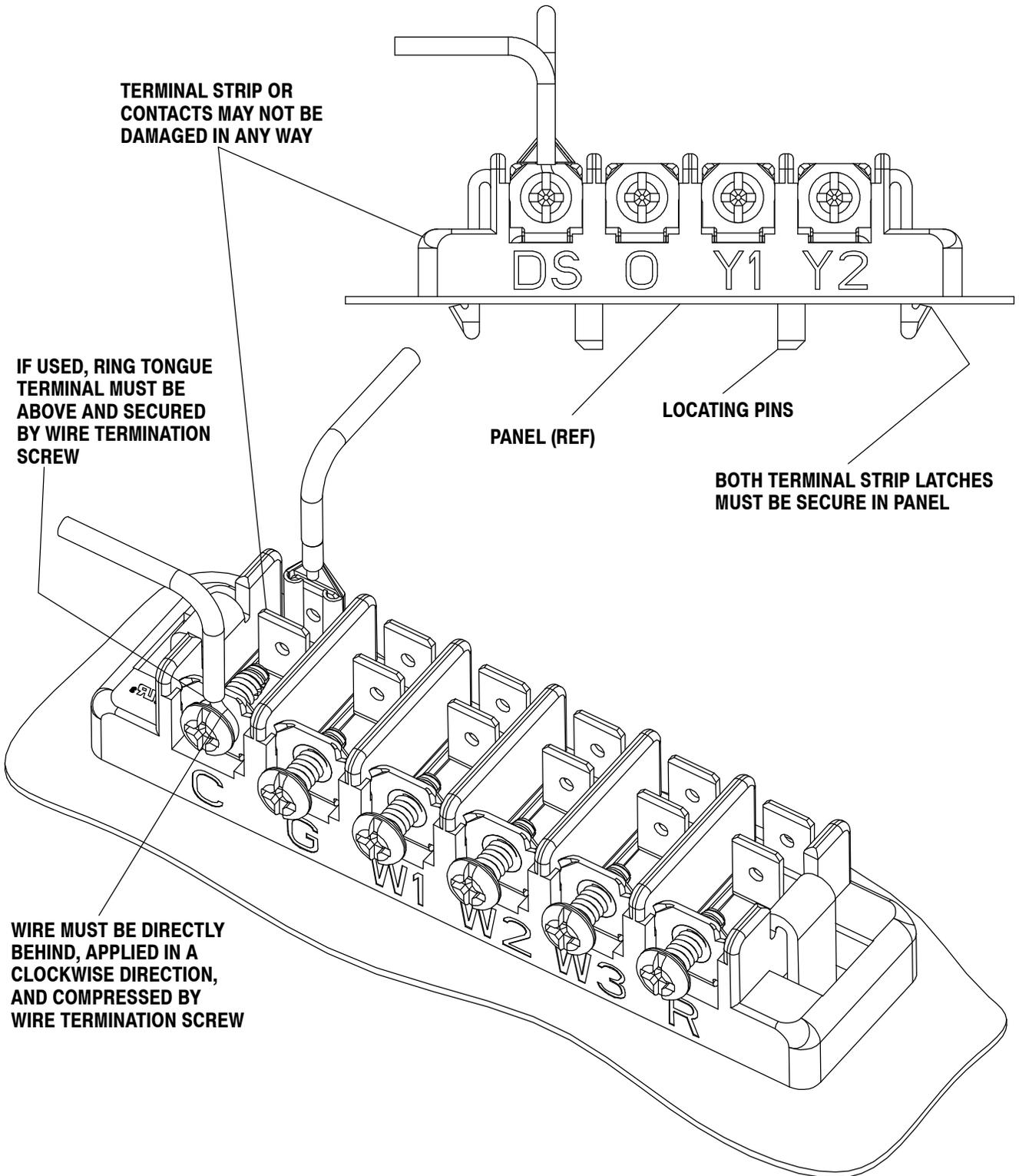
The 4- and 6-Position Panel Mount Terminal Strips are Recognized to U.S. and Canadian requirements under the Component Recognition Program of Underwriters Laboratories Inc. in File E60677.

### 5. TOOLING

Refer to the application specifications listed in Paragraph 2.4 for termination and application tooling for the terminals.

**6. VISUAL AID**

Figure 5 shows a typical application of a 4- and 6-Position Panel Mount Terminal Strip. 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.



**FIGURE 5. VISUAL AID**