

## Surface Mount Terminal Blocks

974-D-SMD-DS | 5.00 mm (0.197 in) Spacing - 2-6 poles

### PICTURES



974-D-SMD-DS-04

### TECHNICAL INFORMATION

#### Description

5 mm pitch SMT screw terminal block with fixed terminal bodies. Supports 0.20 mm - 0.25mm co-planarity specification.

Rectangular flat leads

Wire entrance at 45 angle to PC Board

Inclined

#### Technical Data

**Center to Center Spacing:** 5.000 mm (0.197 in)

**Nominal Cross Section:** 2.5 mm<sup>2</sup> (3875 mils<sup>2</sup>)

**Wire Stripping Length:** 6.500 mm (0.256 in)

#### Bill of Materials

**Molding :** HT Polyamide,

**Color :** Black

**Temperature limits :**

**Short Time :** 260°C (500°F)

**Continuous :** 120°C (248°F)

**Low Limit :** -40°C (-40°F)

**Comparative Tracking Index :** CTI ? 600 V

**Oxygen Index Rating :** 35 %

**Average weight per pole:** 1.4 g

**Terminal Body:** Tin plated copper alloy

**Screw:** Clear chromate passivated, zinc plated, steel M3

#### Application

974-D-SMD-DS is a 5 mm pitch PCB terminal block offered as a SMT (surface mount technology) product for the re-flow soldering process. The inclined connection angle of 45 offers the advantage of the "one behind the other" location on PCB. The inclined connection angle makes also possible inclined wire insertion when various components are blocking the front of the connector. 974-D-SMD-DS connector is a solution for any situation when wire cannot be inserted in parallel direction to the PCB. The high temperature resistant housing material is specially designed in order to ensure optimum hot-air circulation during the re-flow soldering process. A condition to optimize the re-flow soldering process is to place the wire entry side of the connector in the direction of the hot air flow. The screw is captivated in the tower of the connector. Its top flat surface can be used as a pick and place surface. Deliverable in Tape and Reel.

**APPROVAL INFORMATION**

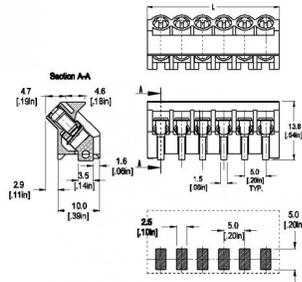
UL File No. E69841 | CSA File No. LR24322

Type	Current (A)	Voltage (V)	Application Group	AWG	Screw Tightening Torque
 974-D-SMD-DS 5.0 mm	20 10	300 300	B D	18-12 18-12	3.5 lbfin 3.5 lbfin
 974-D-SMD-DS 5.0 mm	20 10	300 300	B D	18-12 18-12	0.4 lbfin 0.4 lbfin

**International Approval Information**

Rated Impulse Withstand Voltage : 4000 V

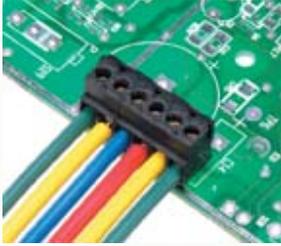
# TECHNICAL DRAWING



**Description :**

Length of Connector (L)

$L = \text{No. of Poles} \times \text{Center to Center Spacing} + 1.5\text{mm}$

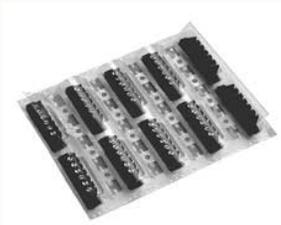
**SECTION A - SERIES SMT****Terminal Blocks for Printed Circuit Boards**

WECO is the industry leader in surface mount (SMT) connectors. Whether they are stock catalogue products or custom designed to customers' specifications, SMarTconn products are engineered to meet your dimensional, material, mounting, packaging, reliability and cost savings production requirements.

WECO offers two categories of solder-reflow process compatible products:

Genuine surface mount technology (SMT). The products have SMT leads that sit on surface mount solder pads. There are with no through-holes required in the printed circuit board (PCB).

Through-hole reflow (THR). The products have through-hole leads that penetrate the holes in the solder pads in the PCB.



WECO's genuine surface mount connectors have excellent coplanarity performances that consistently meet industrial requirements.

Our existing product line of genuine surface mount and through hole reflow connectors, terminal blocks and pinstrips consist of versions incorporating flat leads, gull wing leads, floating terminal bodies, floating pins, and integrated or removable pick-surfaces. All these products are meant for ease of installation into automated assembly processes. If you can apply the paste and reflow process some WECO SMT products can be soldered onto THR pads. Some products protect the solder joint from screw driving and wire pulling stresses. One innovation addresses coefficient of thermal expansion (CTE) mismatch and warped PCBs. If you have a need, WECO has a solution.



All connector moldings consist of a high heat resistant and self-extinguishing thermoplastic material. All SMarTconn products can be supplied in transfer tubes or on tape and reel, carrier tape for use with feeders and dispensers for automated pick and place machinery. The majority of the SMarTconn products are equipped with pick-and-place surfaces making the family adaptable to PCBA automation / robotic assembly processes. SMarTconn products are UL and CSA approved and can be approved with any appropriate international standard. A complete listing of approvals specifications may be found on the following pages. Complementary information can also be found on our web site: [www.weco.ca](http://www.weco.ca).

-SMT screw tightened terminal block with floating leads.

Its floating terminal bodies compensate for irregularities (non planarity and bumps) on the printed circuit board and thus promote high first pass yields and a low rate of open circuits. The same feature eliminates CTE mismatch with the PCB and thus promotes excellent in field reliability and the successful passing of thermal cycling testing. The product ships in cartons or in tape and reel with an integrated pick surface.

-SMT screw tightened terminal block with flat leads.

Flat contact leads (also known as gull wings leads) provide a large solder joint surface area that is isolated from the mechanical screw driving forces. Integrated, floating, solderable retention devices ensure in field reliability in thermal cycling. These retention devices protect against the human factors during in field use. They protect the solder joints from stresses induced by wire pulling. These solder joints have the strength and the shape required to make a consistently safe and reliable field-proven connections that meet application and regulatory requirements. The elevator-style-clamping mechanism allows an almost unlimited number of connections and disconnections of the wire. The product ships in cartons or in tape and reel with removable pick surfaces.

-SMT screw tightened terminal blocks with rigid leads

WECO's SMT designs are adapted for easy integration into your processes. Standoffs provide for good convective heat circulation

## SECTION A - SERIES SMT

for reliable soldering through the elimination of cold spots and also allow for a visual inspection of the solder joints. The main advantage of SMT terminal blocks is the ease that they can be reliably picked and placed onto the solder pads. The product ships in cartons or in tape and reel with removable or integrated pick surfaces.

### -SMT pinstrips for depluggable connections

This SMT pinstrip product plugs with a variety of wire harness or base mounted plugs. Insertion and extraction forces are custom adjusted to your needs. This genuine SMT product is designed to be soldered onto an SMT pad, but has been proven to solder well onto THR pads. The most popular version is 1.1 mm in diameter. A 1.3 mm version is also available. The patented (#6,224,399) "nail head" pin design ensures a secure and reliable contact with the printed circuit board. The excellent and robust co-planarity of this pinstrip allows it to be successfully manufactured, stored, transported and processed at yields approaching zero defects for this characteristic and its effects. The plugs isolate the solder joints from external wire pulling forces and screw driving torques. The product ships in cartons or in tape and reel with removable pick surfaces.

### -THR hang-through type pinstrips for depluggable connections

This THR pinstrip product plugs with a variety of wire harness or base mounted plugs. Insertion and extraction forces are custom adjusted to your needs. This pinstrips depluggable end goes through the PCB, to be connected with a plug on the opposite side. Its depluggable end and solderable end are the same. The best is to see it. It is 1.1 mm in diameter. The THR version is through hole for added strength and can be picked and placed, which is unusual for a through-hole (THR) device. It has an integrated pick surface and material performance that promote this. The plugs isolate the solder joints from external wire pulling forces and screw driving torques. The product ships in cartons or in tape and reel with integrated pick surfaces.

### -THR classic type pinstrips for depluggable connections

This THR pinstrip product plugs with a variety of wire harness or base mounted plugs. Insertion and extraction forces are custom adjusted to your needs. This is the future should you insist on through-hole. Available in different lengths they are 1.3 or 1.1 mm diameter on the plug end and 1.3, 1.1 or 1 mm diameter on the PCB end. This series replaces the 971-SLK through-hole wave (THW) products. They are suitable for wave soldering and for reflow soldering. The plugs isolate the solder joints from external wire pulling forces and screw driving torques. The product ships in cartons or in tape and reel with removable pick surfaces.

### -SMT gull wing lead horizontal socket header

This plug device is equipped with retention devices to firmly hold its mating plug. Flat contact leads (also known as gull wings leads) provide a large solder joint surface area that is isolated from the mechanical screw driving forces. Integrated, floating, solderable retention devices ensure in field reliability in thermal cycling. These retention devices protect against the human factors during in field use. They protect the solder joints from stresses induced by wire pulling. These solder joints have the strength and the shape required to make a consistently safe and reliable field-proven connections that meet application and regulatory requirements. The product ships in cartons or in tape.

### -SMT floating lead vertical socket header

This plug device is equipped with retention devices to firmly hold its mating plug. Its floating pins compensate for irregularities (non planarity and bumps) on the printed circuit board and thus promote high first pass yields and a low rate of open circuits. The same feature eliminates CTE mismatch with the PCB and thus promotes excellent in field reliability and the successful passing of thermal cycling testing. The product ships in cartons or in tape and reel with removable pick surfaces.

### -THR screw tightened terminal blocks

WECO's THR designs are adapted for easy integration into your processes. Standoffs provide for good convective heat circulation for reliable soldering through the elimination of cold spots and also allow for a visual inspection of the solder joints. The main advantage of through-hole terminal blocks is their reliable mechanical strength. This robustness is particularly important for applications exposed to harsh environments or strong vibrations such as mobile equipment, engine or motor compartments. The product ships in cartons or in tape and reel with removable or integrated pick surfaces.