

## Surface Mount Terminal Blocks

140-A-126-SMD | 5.00 mm (0.197 in) Spacing - 2-12 poles

### PICTURES



140-A-126-SMD

### TECHNICAL INFORMATION

#### Description

140-A-126-SMD is an elevator style 5 mm pitch terminal block suitable for SMT (surface mount technology) applications. Flat contact leads provide a large surface area for reliable solder joints. The solder retention devices (SMT anchors) provide high retention force for the terminal block to the PCB. The SMT anchors being mobile within the plastic housing (floating) they ensure a total adaptation to the planar variations of the PCB. This adds to the retention force of the connector to the PCB meanwhile eliminating the CTE (Coefficient of Thermal Expansion) mismatch. The most significant benefit of this design is the protection it provides to the solder joints against stresses encountered in field-installations.

Material will handle reflow temperatures well without deforming or melting. Product packaging is suitable to pick place automated assembly.

German Utility Patent 20 2005 014 667.6

Rectangular flat leads

Wire entrance parallel to PC Board

Horizontal version

Typical peel off forces: 30 kg on any devices (depending on soldering process)

Typical PCB retention force of anchoring elements against peel off force is 66 lbs (30 kg).

#### Technical Data

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

**Nominal Cross Section:** 1.5 mm<sup>2</sup> (2325 mils<sup>2</sup>)

**Wire Stripping Length:** 6.000 mm (0.236 in)

**Bill of Materials**

**Molding :** HT Polyamide, Self extinguishing UL 94, V-0  
**Color :** Black  
**Temperature limits :**  
     **Short Time :** 260°C (500°F)  
     **Continuous :** 105°C (221°F)  
**Temperature Limits :** -40C (-40F) up to 150C (302F)  
**Comparative Tracking Index :** CTI ? 600 V  
**Oxygen Index Rating :** 35 %



**Average weight per pole:** 1.2 g  
**Screw:** Slotted head, zinc plated blue passivated, steel substrate M3  
**Retention device:** Tin plated copper alloy  
**Terminal Body:** Nickel plated copper alloy  
**Current bar:** Tin plated copper alloy

**Application**

You can now convert one more component on your board to a genuine surface mount. You can increase packaging and component density, use both sides of the PCB, reduce and eliminate set-up costs and simplify and streamline your processes. This terminal block features an integrated pick area that allows this product to be picked-and-placed without any additional changes to your process. Its floating anchors (retention elements) compensate for irregularities (non planarity and bumps) on the printed circuit. Its floating anchors (retention elements) compensate for irregularities (non planarity and bumps) on the printed circuit board. The same feature eliminates CTE mismatch with the PCB and thus eliminates stresses on the anchor solder joints thus assuring a long life.

**APPROVAL INFORMATION**

UL File No. E69841 | CSA File No. LR24322

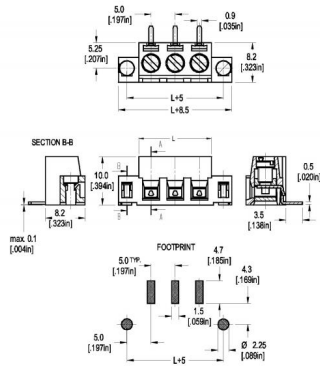
Type	Current (A)	Voltage (V)	Application Group	AWG	Screw Tightening Torque
 140-A-126-SMD 5.0 mm	10	300	B, D	30-14	4.5 lbfin
 140-A-126-SMD 5.0 mm	15	300	B	30-14	0.51 lbfin

\*UL current rating 20A for factory wiring only.

**International Approval Information**

**Rated Impulse Withstand Voltage :** 2500 V

**TECHNICAL DRAWING**



**Description :**

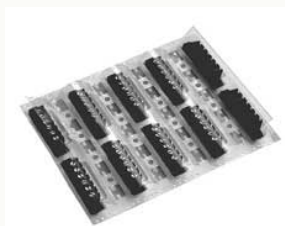
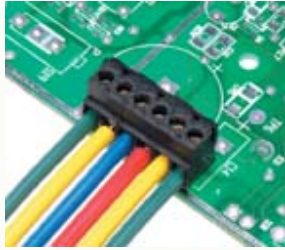
Length of Connector (L)

L = No. of Poles x Center to Center Spacing

Recommended Stencil Thickness: 0.15 to 0.20 mm (0.006 to 0.008 in.)

**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.